

**TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4 X 4,
LIGHT MEDIUM TACTICAL VEHICLES (LMTV)
VOLUME NO. 5 OF 5**

MODEL	NSN	EIC	
TRK, CAR., LMTV, M1078 W/WN W/O WN	2320-01-360-1898 2320-01-354-3385	BHH BHD	HOW TO USE THIS MANUAL PAGE iii
TRK, VAN, LMTV, M1079 W/WN W/O WN	2320-01-360-1891 2320-01-354-3384	BHG BHE	SPECIAL PURPOSE KITS MAINTENANCE PAGE 20-1
TRK, CHAS, LMTV, M1080	2320-01-353-9098	BHC	ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL MAINTENANCE PAGE 21-1
TRK, CAR., LMTV, AIR DROP, M1081 W/WN W/O WN	2320-01-360-1899 2320-01-355-3064	BHJ BHF	ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE PAGE 22-1
			AIR SYSTEM MAINTENANCE PAGE 23-1
			GAGES (NON-ELECTRICAL) MAINTENANCE PAGE 24-1

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND THE AIR FORCE

JUNE 1998

WARNING SUMMARY

WARNING

EXHAUST GASES CAN KILL

1. **DO NOT** operate your vehicle engine in an enclosed area.
2. **DO NOT** idle vehicle engine with cab windows closed.
3. **DO NOT** drive vehicle with inspection plates or covers removed.
4. **BE ALERT** at all times for exhaust odors.
5. **BE ALERT** for exhaust poisoning symptoms, they are:
 - Headache
 - Dizziness
 - Sleepiness
 - Loss of Muscular Control
6. **IF YOU SEE** another person with exhaust poisoning symptoms:
 - Remove person from area.
 - Expose to open air.
 - Keep person warm.
 - Do not permit person to move.
 - Administer cardiopulmonary resuscitation, if necessary.*

* For cardiopulmonary resuscitation, refer to FM 21-11.

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Batteries can explode from a spark. Battery acid is harmful to skin and eyes. Always wear eye protection and rubber gloves when working with batteries.

WARNING

Battery acid (electrolyte) is extremely harmful. Always wear safety goggles and rubber gloves, and do not smoke when performing maintenance on batteries. Injury will result if acid contacts skin or eyes. Wear rubber apron to prevent clothing being damaged.

WARNING SUMMARY (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 degrees F (38 degrees C) and for Type II is 130 degrees F (50 degrees C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

After Nuclear, Biological, or Chemical (NBC) exposure of vehicle, all air filters shall be handled with extreme caution. Unprotected personnel may experience serious injury or death if residual toxic agents or radioactive material are present. If vehicle is exposed to chemical or biological agents, servicing personnel shall wear protective mask, hood, protective overgarments, and chemical protective gloves and boots in accordance with FM-3-4. All contaminated air filters shall be placed in double-lined plastic bags and moved swiftly to a segregation area away from the worksite. The same procedure applies for radioactive dust contamination. The Company NBC team should measure radiation prior to filter removal to determine extent of safety procedures required per the NBC Annex to the unit Standard Operating Procedures (SOP). The segregation area in which the contaminated air filters are temporarily stored shall be marked with appropriate NBC placards. Final disposal of contaminated air filters shall be in accordance with local SOP. Decontamination operation shall be in accordance with FM-3-5 and local SOP. Failure to comply may result in serious injury or death to personnel.

WARNING

Diesel fuel is flammable. Do not fill fuel tank with engine running, while smoking, or when near an open flame. Never overfill the tank or spill fuel. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

WARNING

Use care when removing/installing springs. Springs are under tension and can act as projectiles when being removed. Failure to comply can cause injury to personnel.

WARNING

Retaining rings are under tension and can act as projectiles when released causing severe eye injury. Use care when removing retaining rings. Failure to comply may result in injury to personnel.

WARNING

Ensure exhaust system is cool before performing maintenance. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

WARNING

Do not operate LMTV vehicle with muffler removed. Toxic exhaust fumes may enter cab, resulting in serious injury or death to personnel.

WARNING

Do not work on fuel system when engine is hot; fuel can be ignited by a hot engine.

WARNING SUMMARY (CONT)

WARNING

Post signs that read "NO SMOKING WITHIN 50 FEET" when working with open fuel, fuel lines or fuel tanks. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Exhaust pipe, transmission oil lines, and transmission scavenge pump hose may be hot to the touch. Extreme care should be taken when checking exhaust pipe, transmission oil lines, and transmission scavenge pump hose for leaks. Failure to comply may result in injury to personnel.

WARNING

Compressed air used for cleaning purposes will not exceed 30 psi (207 Kpa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc). Failure to comply may result in injury to personnel.

WARNING

Wheel drum weighs approximately 90 lb (41 Kg). Use the aid of an assistant to help remove wheel drum. Failure to comply may result in injury to personnel.

WARNING

Wheel drum weighs approximately 90 lb (41 kg). Use the aid of an assistant to help install wheel drum. Failure to comply may result in injury to personnel.

WARNING

Brake shoes may be covered with dust. Breathing this dust may be harmful to your health. Do not use compressed air to clean brake shoes. Wear a filter mask approved for use against brake dust. Failure to comply may result in injury to personnel.

WARNING

Cage spring brake before air chamber is removed or severe injury to personnel will occur.

WARNING

Ensure air chamber is caged prior to installation. Failure to comply may result in injury to personnel.

WARNING

Ensure that tire is totally deflated before removing self-locking nuts. Failure to comply may result in serious injury or death to personnel.

WARNING

Spring brakes must be caged before attempting replacement of a rear axle wheel stud. Failure to comply may result in severe injury to personnel.

WARNING

Wear protective goggles to protect against possible injury from release of high pressure air. Failure to comply may result in injury to personnel.

WARNING

Prolonged contact with lubricating oil (MIL-L-2104) may cause a skin rash. Skin and clothing that come in contact with lubricating oil should be thoroughly washed immediately. Saturated clothing should be removed immediately. Areas in which lubricating oil is used should be well ventilated to keep fumes to a minimum. Failure to comply may result in injury to personnel.

WARNING

Hydraulic fluid (MIL-H-5606) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

WARNING

Wire rope can become frayed or contain broken wires. Wear heavy leather-palmed gloves when handling wire rope. Frayed or broken wires can injure hands. Failure to comply may result in injury to personnel.

WARNING

Never let moving wire rope slide through hands, even when wearing gloves. A broken wire could cut through gloves and cut hands.

WARNING SUMMARY (CONT)

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when drilling holes. Failure to comply may result in injury to personnel.

WARNING

Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

WARNING

Use extreme caution when working around moving cable. Failure to do so may result in serious injury to personnel.

WARNING

Caution must be exercised while cab is raised. Ensure that locking mechanism is functioning properly before proceeding. Failure to comply may result in death or serious injury to personnel and damage to equipment.

WARNING

Coolant may be very hot and under pressure from engine operation. Ensure engine is cool before performing maintenance. Failure to comply may result in injury to personnel.

WARNING

Do not remove oil filter while engine is hot. Failure to comply may result in injury to personnel.

WARNING

Sling spreader weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Remove all loose equipment from van body. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Van body weighs approximately 3,360 lbs (1525 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel.

WARNING

Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.

WARNING

Center of gravity will change depending on equipment installed in van body. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Pod frame weighs approximately 80 lbs (36 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Do not install pod frame on van body for 72 hours after installing blind rivet nuts and spacers. Failure to comply may result in injury to personnel and/or damage to equipment.

WARNING

Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.

WARNING SUMMARY (CONT)

WARNING

RH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

LH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Wear appropriate eye protection when handling fluorescent lamps. Failure to comply may result in injury to personnel.

WARNING

Heavy objects/loads, such as tool boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1079 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

Always keep in mind, when placing items inside the M1079 van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

WARNING

Extreme care must be taken when lowering gravel deflector. Coolant hoses could be pulled loose. Failure to comply could result in serious eye injury.

WARNING

- Do not open coolant fill cap if temperature reads above 110°F (43°C). Steam or hot coolant is under pressure. Failure to comply may result in injury to personnel.
- Pressure in reservoir tank must be released before removing cap. Failure to comply may result in injury to personnel.

WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to install 200 amp alternator. Failure to comply may result in injury to personnel.

WARNING

Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use an assistant when removing LMHC boom assembly. Failure to comply may result in injury to personnel.

WARNING SUMMARY (CONT)

WARNING

Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

WARNING

Use care when removing/installing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

WARNING

Air conditioner weighs approximately 300 lbs (136 kg). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

WARNING

Ensure cargo bed is free of equipment and debris, and is not warped or damaged in any way. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

CHANGE
NO. 3

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington, D.C., 10 February 2006

TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4x4,
LIGHT MEDIUM TACTICAL VEHICLE
(LMTV)

VOLUME NO. 5 OF 5

TM 9-2320-365-20-5, 17 June 1998, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the out margin of the page.
3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

Remove Pages

Insert Pages

None

Change 3 Transmittal/ Change 3 Authentication

A and B

A and B

B-1 thru B-19/(B-20 Blank

B-1 thru B-20

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:



SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0601912

By Order of the Secretary of the Air Force:

JOHN P. JUMPER
General, United States Air Force
Chief of Staff

Official:

GREGORY S. MARTIN
General, United States Air Force
Commander, Air Force Materiel Command

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 380934, requirements for Family of Medium Tactical Vehicles (FMTV) TM 9-2320-365-20-5.

**CHANGE
NO. 2**

**HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE**
Washington, D.C., 20 August 2005

**TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4x4,
LIGHT MEDIUM TACTICAL VEHICLE
(LMTV)**

VOLUME NO. 5 OF 5

TM 9-2320-365-20-5, 17 June 1998, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the out margin of the page.
3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

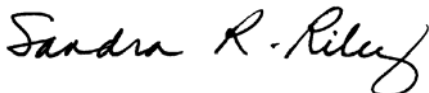
Remove Pages	Insert Pages	Remove Pages	Insert Pages
e thru h	e thru h	H-15 thru H-21/ (H-22 Blank)	H-15 thru H-21/ (H-22 Blank)
none	A and B	K-1 thru K-4	K-1 thru K-4
none	Change 2 Authentication Sheet	INDEX-1 thru INDEX-6	INDEX-1 thru INDEX-6
20-1 and 20-2	20-1 and 20-2	FO-1 FP-3/(FP-4 Blank)	FO-1 FP-3/(FP-4 Blank)
20-185 thru 20-188	20-185 thru 20-188	FO-1 FP-61/(FP-62 Blank)	FO-1 FP-61/(FP-62 Blank)
none	20-188.1 and 20-188.2	Metric Conversion Chart	Metric Conversion Chart
20-189 thru 20-204	20-189 thru 20-204	/PIN	/PIN
none	20-204.1 and 20-204.2		
20-205 thru 20-220	20-205 thru 20-220		
none	20-220.1 and 20-220.2		
20-221 thru 20-224	20-221 thru 20-224		
20-237 thru 20-250	20-237 thru 20-250		
20-255 and 20-256	20-255 and 20-256		
none	20-256.1 thru 20-256.8		
20-257 thru 20-260	20-257 thru 20-259/ (20-260 Blank)		
20-261 and 20-262	none		
20-263 and 20-264	20-263 and 20-264		
20-481 thru 20-486	20-481 thru 20-486		
none	20-486.1/(20-486.2 Blank)		
20-487 and 20-488	20-487 and 20-488		
none	20-489 thru 20-556		
21-7 and 21-8	21-7 and 21-8		
none	21-8.1 and 21-8.2		
21-9 and 21-10	21-9 and 21-10		
B-5 and B-6	B-5 and B-6		
B-17 thru B-19/ (B-20 Blank)	B-17 thru B-19/ (B-20 Blank)		
C-1 thru C-4	C-1 thru C-4		
D-1 and D-2	D-1 and D-2		
D-5 and D-6	D-5 and D-6		
G-1 thru G-11/ (G-12 Blank)	G-1 thru G-11/ (G-12 Blank)		
H-1 thru H-12	H-1 thru H-12		

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:



SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army
0501302

By Order of the Secretary of the Air Force:

JOHN P. JUMPER
General, United States Air Force
Chief of Staff

Official:

GREGORY S. MARTIN
General, United States Air Force
Commander, Air Force Materiel Command

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 380934,
requirements for TM 9-2320-365-20-5.

Washington, D.C., 1 July 2003

**CHANGE
NO. 1**

**TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
UNIT MAINTENANCE
M1078 SERIES, 2 1/2-TON, 4x4,
LIGHT MEDIUM TACTICAL VEHICLE
(LMTV)**

VOLUME NO. 5 OF 5

TM 9-2320-365-20-5, 17 June 1998, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed material is indicated by a vertical bar in the out margin of the page.
3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

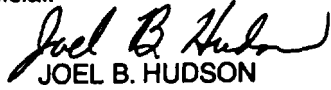
Remove Pages	Insert Pages	Remove Pages	Insert Pages
i and j	i and j	none	E-21 and E-22
none	A and B	G-1 thru G-10	G-1 thru G-10
i thru iv	i thru iv	none	G-11/(G-12 Blank)
none	v/(vi Blank)	H-1 thru H-8	H-1 thru H-8
20-1 and 20-2	20-1 and 20-2	H-17 thru H-21/ (H-22 Blank)	H-17 thru H-21/ (H-22 Blank)
none	20-2.1/(20-2.2 Blank)	none	K-1 thru K-K-4
20-3 and 20-4	20-3/(20-4 Blank)	INDEX-1 thru INDEX-6	INDEX-1 thru INDEX-6
20-5 thru 20-184	none	INDEX-7/(INDEX-8 Blank)	none
20-281 and 20-282	20-281/(20-282 Blank)	DA Form 2028-2 Sample	DA Form 2028 Sample
20-283 thru 20-312	none	DA Form 2028-2	DA Form 2028
20-313 and 20-314	(20-313 Blank)/20-314	DA Form 2028-2	DA Form 2028
20-315 thru 20-318	20-315 thru 20-318	DA Form 2028-2	DA Form 2028
20-327 thru 20-334	20-327 thru 20-334	DA Form 2028-2	DA Form 2028
20-343 and 20-344	20-343 and 20-344	FO-1 FP-1/(FP-2 Blank)	FO-1 FP-1/(FP-2 Blank)
20-347 and 20-354	20-347 and 20-354	thru FP-19/(FP-20 Blank)	thru FP-19/(FP-20 Blank)
20-465 and 20-466	20-465 and 20-466	FO-1 FP-23/(FP-24 Blank)	FO-1 FP-23/(FP-24 Blank)
20-471 thru 20-476	20-471 thru 20-476	FO-1 FP-27/(FP-28 Blank)	FO-1 FP-27/(FP-28 Blank)
20-481 thru 20-488	20-481 thru 20-488	thru FP-61/(FP-62 Blank)	thru FP-61/(FP-62 Blank)
21-1 thru 21-12	21-1 thru 21-12	FO-1 FP-65/(FP-66 Blank)	FO-1 FP-65/(FP-66 Blank)
22-1 and 22-2	22-1 and 22-2	and FP-67/(FP-68 Blank)	and FP-67/(FP-68 Blank)
23-1 thru 23-4	23-1 thru 23-4	Metric Conversion Chart	Metric Conversion Chart
23-9 thru 23-20	23-9 thru 23-20	Cover	Cover
23-23 thru 23-28	23-23 thru 23-28		
23-31 and 23-32	23-31 and 23-32		
none	23-32.1 and 23-32.2		
23-33 and 23-34	23-33 and 23-34		
none	23-35 and 23-36		
24-1 and 24-2	24-1 and 24-2		
A-1 thru A-4	A-1 thru A-4		
B-13 thru B-20	B-13 thru B-19/(B-20 Blank)		
C-3 and C-4	C-3 and C-4		
D-1 thru D-5/(D-6 Blank)	D-1 thru D-6		
E3 and E4	E3 and E4		

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

JOHN M. KEANE
General, United States Army
Chief of Staff

Official:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0110106

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 380934, requirements for TM 9-2320-365-20-5.

LIST OF EFFECTIVE PAGES

Insert latest changed pages. Destroy superseded pages.

NOTE: New or changed material is indicated by a vertical bar in the outer margin of the page.

Dates of issue for original and changed pages are:
 Original0..... 17 June 1998
 Change1..... 1 July 2003
 Change2.....20 August 2005
 Change3.....10 February 2006

THE TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 648, CONSISTING OF THE FOLLOWING:

Page No.	*Change No.	Page No.	*Change No.	Page No.	*Change No.
Cover	1	20-257 thru 20-259.....	2	21-14 Blank.....	0
Blank	0	20-260 Blank	2	22-1	1
a thru e.....	0	20-261 and 20-262 Deleted	2	22-2 thru 22-5	0
f.....	2	20-263	2	22-6 Blank.....	0
g.....	0	20-264 thru 20-280.....	0	23-1	1
h.....	2	20-281	1	23-2.....	0
i.....	1	20-282 Blank	1	23-3 and 23-4	1
j.....	0	20-283 thru 20-312 Deleted	1	23-5 thru 23-8	0
A and B	3	20-313 Blank	1	23-9 thru 23-11	1
i thru iv	1	20-314	1	23-12.....	0
v Added.....	1	20-315 thru 20-318.....	1	23-13.....	1
vi Blank Added.....	1	20-319 thru 20-326.....	0	23-14.....	0
20-1.....	1	20-327 thru 20-330.....	1	23-15 and 23-16	1
20-2.....	2	20-331	0	23-17	0
20-2.1 Added	1	20-332	1	23-18.....	1
20-2.2 Blank Added	1	20-333	0	23-19.....	0
20-3.....	1	20-334	1	23-20.....	1
20-4 Blank.....	1	20-335 thru 20-343.....	0	23-21 and 23-22	0
20-5 thru 20-184 Deleted.....	1	20-344	1	23-23.....	1
20-185.....	0	20-345 thru 20-347.....	0	23-24 and 23-25	0
20-186 thru 20-188	2	20-348 and 20-349.....	1	23-26.....	1
20-188.1 and 20-188.2		20-350 and 20-351	0	23-27.....	0
Added	2	20-352 thru 20-354.....	1	23-28.....	1
20-189 thru 20-198	2	20-355 thru 20-464.....	0	23-29 and 23-30	0
20-199.....	0	20-465 and 20-466.....	1	23-31 and 23-32	1
20-200 thru 20-204	2	20-467 thru 20-471.....	0	23-32.1 and 23-32.2 Added	1
20-204.1 and 20-204.2		20-472 thru 20-475.....	1	23-33 and 23-34	1
Added	2	20-476 thru 20-480.....	0	23-35 and 23-36 Added	1
20-205 thru 20-220	2	20-481 thru 20-486.....	2	24-1	1
20-220.1 and 20-220.2		20-486.1 Added.....	2	24-2.....	0
Added	2	20-486.2 Blank Added.....	2	A-1	0
20-221 thru 20-223	2	20-487 and 20-488.....	2	A-2 and A-3.....	1
20-224 thru 20-236	0	20-489 thru 20-556 Added	2	A-4	0
20-237 thru 20-250	2	21-1 thru 21-7	1	B-1	3
20-251 thru 20-255	0	21-8	2	B-2	0
20-256.....	2	21-8.1 and 21-8.2 Added	2	B-3 thru B-20	3
20-256.1 thru 20-256.8		21-9	2	C-1	0
Added	2	21-10 and 21-11	1	C-2 thru C-4	2
		21-12 and 21-13.....	0		

* Zero in this column indicates an original page.

LIST OF EFFECTIVE PAGES (CONT)

Insert latest changed pages. Destroy superseded pages.

Page No.	*Change No.	Page No.	*Change No.	Page No.	*Change No.
D-1	1	FO-1 FP-13	1	FO-1 FP-63	0
D-2	2	FO-1 FP-14 Blank	0	FO-1 FP-64 Blank	0
D-3 thru D-5	1	FO-1 FP-15	1	FO-1 FP-65	1
D-6	2	FO-1 FP-16 Blank	0	FO-1 FP-66 Blank	0
E-1 and E-2	0	FO-1 FP-17	1	FO-1 FP-67	1
E-3 and E-4	1	FO-1 FP-18 Blank	0	FO-1 FP-68 Blank	0
E-5 thru E-20	0	FO-1 FP-19	1	FO-2 FP-1	0
E-21 and E-22 Added	1	FO-1 FP-20 Blank	0	FO-2 FP-2 Blank	0
F-1 thru F-8	0	FO-1 FP-21	0	FO-2 FP-3	0
G-1	2	FO-1 FP-22 Blank	0	FO-2 FP-4 Blank	0
G-2	1	FO-1 FP-23	1	FO-2 FP-5	0
G-3 thru G-7	2	FO-1 FP-24 Blank	0	FO-2 FP-6 Blank	0
G-8	1	FO-1 FP-25	0	FO-2 FP-7	0
G-9 thru G-11	2	FO-1 FP-26 Blank	0	FO-2 FP-8 Blank	0
G-12 Blank Added	1	FO-1 FP-27	1	FO-3 FP-1	0
H-1 thru H-6	2	FO-1 FP-28 Blank	0	FO-3 FP-2 Blank	0
H-7	0	FO-1 FP-29	1	FO-3 FP-3	0
H-8 thru H-10	2	FO-1 FP-30 Blank	0	FO-3 FP-4 Blank	0
H-11	0	FO-1 FP-31	1	FO-3 FP-5	0
H-12	2	FO-1 FP-32 Blank	0	FO-3 FP-6 Blank	0
H-13 thr H-15	0	FO-1 FP-33	1	FO-4 FP-1	0
H-16 thru H-18	2	FO-1 FP-34 Blank	0	FO-4 FP-2 Blank	0
H-19	1	FO-1 FP-35	1	FO-4 FP-3	0
H-20 and H-21	2	FO-1 FP-36 Blank	0	FO-4 FP-4 Blank	0
H-22 Blank	0	FO-1 FP-37	1	FO-5 FP-1	0
J-1	0	FO-1 FP-38 Blank	0	FO-5 FP-2 Blank	0
J-2 Blank	0	FO-1 FP-39	1	FO-5 FP-3	0
K-1 Added	1	FO-1 FP-40 Blank	0	FO-5 FP-4 Blank	0
K-2 and K-3	2	FO-1 FP-41	1	FO-5 FP-5	0
K-4 Added	1	FO-1 FP-42 Blank	0	FO-5 FP-6 Blank	0
INDEX-1	1	FO-1 FP-43	1		
INDEX-2 and INDEX-3	2	FO-1 FP-44 Blank	0		
INDEX-4	1	FO-1 FP-45	1		
INDEX-5	2	FO-1 FP-46 Blank	0		
INDEX-6	1	FO-1 FP-47	1		
INDEX-7 Deleted	1	FO-1 FP-48 Blank	0		
INDEX-8 Blank Deleted	1	FO-1 FP-49	1		
Glossary-1 and Glossary-2	0	FO-1 FP-50 Blank	0		
FO-1 FP-1	1	FO-1 FP-51	1		
FO-1 FP-2 Blank	0	FO-1 FP-52 Blank	0		
FO-1 FP-3	2	FO-1 FP-53	1		
FO-1 FP-4 Blank	0	FO-1 FP-54 Blank	0		
FO-1 FP-5	1	FO-1 FP-55	1		
FO-1 FP-6 Blank	0	FO-1 FP-56 Blank	0		
FO-1 FP-7	1	FO-1 FP-57	1		
FO-1 FP-8 Blank	0	FO-1 FP-58 Blank	0		
FO-1 FP-9	1	FO-1 FP-59	1		
FO-1 FP-10 Blank	0	FO-1 FP-60 Blank	0		
FO-1 FP-11	1	FO-1 FP-61	2		
FO-1 FP-12 Blank	0	FO-1 FP-62 Blank	0		

* Zero in this column indicates an original page.

TECHNICAL MANUAL HEADQUARTERS
 NO. 9-2320-365-20-5

DEPARTMENTS OF THE ARMY
 AND THE AIR FORCE
 Washington, D.C., 17 June 1998

TECHNICAL ORDER
 NO. 36A12-1B-1095-2-5

**Unit Maintenance Manual
 M1078 SERIES, 2 1/2-TON, 4 x 4,
 LIGHT MEDIUM TACTICAL VEHICLES (LMTV)
 VOLUME NO. 5 OF 5**

MODEL	NSN	EIC
TRK, CAR., LMTV, M1078 W/WN W/O WN	2320-01-360-1898 2320-01-354-3385	BHH BHD
TRK, VAN, LMTV, M1079 W/WN W/O WN	2320-01-360-1891 2320-01-354-3384	BHG BHE
TRK, CHAS, LMTV, M1080	2320-01-353-9098	BHC
TRK, CAR., LMTV, AIR DROP, M1081 W/WN W/O WN	2320-01-360-1899 2320-01-355-3064	BHJ BHF

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is <http://aeprs.ria.army.mil>. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or Email your letter or DA Form 2028 direct to: AMSTA-LC-CI/TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

TABLE OF CONTENTS

	Page
HOW TO USE THIS MANUAL	ii
CHAPTER 20 SPECIAL PURPOSE KITS MAINTENANCE	20-1
Section I Introduction	20-2
Section II Maintenance Procedures.....	20-3

TABLE OF CONTENTS (CONT)

	Page
CHAPTER 21 ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL MAINTENANCE	21-1
Section I Introduction.....	21-1
Section II Maintenance Procedures	21-2
CHAPTER 22 ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE	22-1
Section I Introduction.....	22-1
Section II Maintenance Procedures	22-2
CHAPTER 23 AIR SYSTEM MAINTENANCE	23-1
Section I Introduction.....	23-1
Section II Maintenance Procedures	23-2
CHAPTER 24 GAGES (NON-ELECTRICAL) MAINTENANCE	24-1
Section I Introduction.....	24-1
Section II Maintenance Procedures	24-2
APPENDIXES	
A. REFERENCES	A-1
B. MAINTENANCE ALLOCATION CHART	B-1
C. TOOLS IDENTIFICATION LIST	C-1
D. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST	D-1
E. ILLUSTRATED LIST OF MANUFACTURED ITEMS	E-1
F. TORQUE LIMITS	F-1
G. MANDATORY REPLACEMENT PARTS	G-1
H. LUBRICATION ORDER.....	H-1
J. ADDITIONAL AUTHORIZATION LIST (AAL).....	J-1
K. TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART.....	K-1
SUBJECT INDEX.....	Index-1
GLOSSARY	Glossary-1

LIST OF ILLUSTRATIONS

Figure No.	Figure Title	Page
23-1.	Primary Air Supply Hose Locations	23-3
23-2.	Central Tire Inflation System (CTIS) Air Hose Locations.....	23-5
23-3.	Air Transportability Air Hose Locations.....	23-9
E-1.	Brake Adjusting Tool Support.....	E-4
E-2.	Brake Plunger Seal Driver	E-5

LIST OF ILLUSTRATIONS (CONT)

Figure No.	Figure Title	Page
E-3.	Cab Support Tool Strut and Cab Rest	E-6
E-4.	Cab Support Tool Seat	E-7
E-5.	Cab Support Tool Seat Layout	E-8
E-6.	Cab Support Tool Assembly	E-9
E-7.	Headlight Adjustment Screen	E-10
E-8.	Lanyard Assembly	E-17
E-9.	CTIS Seal Driver	E-19
E-10.	Wheel Hub Grease Seal Driver	E-20
E-11.	Purge Valve Tool	E-22

LIST OF TABLES

Table No.	Table Title	Page
23-1.	Primary Air Supply Hose Locations	23-3
23-2.	Central Tire Inflation System (CTIS) Air Hose Locations	23-5
23-3.	Air Transportability Air Hose Locations	23-9
E-1.	Pneumatic Tube Lengths	E-13
E-2.	Non-Metallic Electrical Cable Conduit Lengths	E-15
F-1.	Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts	F-2
F-2.	Dry Torque Limits for SAE and ANSI Prevailing Torque Nuts	F-4
F-3.	Dry Torque Limits for Metric Screws and Free Spinning Nuts	F-6
F-4.	Dry Torque Limits for Metric Prevailing Torque Nuts	F-6
F-5.	Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts	F-7

HOW TO USE THIS MANUAL

OVERVIEW

This technical manual (TM) is provided to help you maintain the LMTV at the Unit Maintenance level. Because of its size, it is divided into five volumes. Volume 5 contains the following major sections in order of appearance:

- **WARNING SUMMARY.** Provides a summary of the most important warnings that apply throughout the manual.
- **CHAPTER 20, SPECIAL PURPOSE KITS MAINTENANCE**
- **CHAPTER 21, ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL MAINTENANCE**
- **CHAPTER 22, ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE**
- **CHAPTER 23, AIR SYSTEM MAINTENANCE**
- **CHAPTER 24, GAGES (NON-ELECTRICAL) MAINTENANCE**
- **APPENDIX A, REFERENCES.** Lists publications used with the LMTV.

OVERVIEW (CONT)

- **APPENDIX B, MAINTENANCE ALLOCATION CHART.** The maintenance allocation chart denotes the level of maintenance which performs specific maintenance tasks and the time required. It also lists tools and special tools required for each task.
- **APPENDIX C, TOOLS IDENTIFICATION LIST.** Lists equipment used in the performance of maintenance and references publications which contain information regarding the equipment.
- **APPENDIX D, EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.** Lists expendable and durable items used in the performance of maintenance.
- **APPENDIX E, ILLUSTRATED LIST OF MANUFACTURED ITEMS.** Illustrates and describes items that must be fabricated from bulk materials for repair of the LMTV.
- **APPENDIX F, TORQUE LIMITS.** Lists the standard torque values for specific attaching hardware.
- **APPENDIX G, MANDATORY REPLACEMENT PARTS.**
- **APPENDIX H, LUBRICATION ORDER.**
- **APPENDIX J, ADDITIONAL AUTHORIZATION LIST (AAL).**
- **APPENDIX K, TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART.**
- **SUBJECT INDEX.** Lists important subjects contained in volume 5 in alphabetical order and gives the associated paragraph number.

FINDING INFORMATION

There are several ways to find the information you need in this manual. They are as follows:

- **FRONT COVER INDEX.** The front cover index contains a list of the most important topics contained in each volume. It features a black box at the right edge of the cover which corresponds with a black box on the page containing the topic. The topics listed on the front cover are highlighted in the table of contents with a box.
- **TABLE OF CONTENTS.** Lists chapters, sections, appendixes, and indexes with page numbers in order of appearance.
- **CHAPTER INDEXES.** List paragraphs contained in the individual chapters with paragraph and page numbers in order of appearance.
- **SYMPTOM INDEX.** Lists malfunctions contained in the troubleshooting table with page numbers in order of appearance.

TROUBLESHOOTING

Troubleshooting is contained in chapter 2. When a malfunction occurs, look at the symptom index for the vehicle troubleshooting table in chapter 2. Find the malfunction in the index. Turn to the page number listed for the malfunction in the troubleshooting table. Perform the steps required to correct the malfunction. If you can't find the malfunction, or the malfunction is not corrected, notify your supervisor.

- **SCHEDULED MAINTENANCE.** Your scheduled maintenance is located in Volume 1, table 2-1, PMCS. These checks and services are mandatory at the intervals listed. Always follow the **WARNINGS** and **CAUTIONS**.
- **UNSCHEDULED MAINTENANCE.** Unscheduled maintenance is located in chapters 3 through 24. The PMCS and troubleshooting tables often reference you to these procedures. When you perform maintenance, look over the entire procedure before starting. Make sure you have the necessary tools and materials at hand. Always follow the **WARNINGS** and **CAUTIONS**.

FOLLOW THESE GUIDELINES WHEN USING THIS MANUAL:

- Become familiar with the entire maintenance procedure before beginning a maintenance task.
- Read all **WARNINGS** and **CAUTIONS** before performing any procedures.

CHAPTER 20 SPECIAL PURPOSE KITS MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	20-2
20-1. INTRODUCTION	20-2
Section II. MAINTENANCE PROCEDURES	20-3
20-2. DELETED	
20-3. DELETED	
20-4. DELETED	
20-5. DELETED	
20-6. DELETED	
20-7. DELETED	
20-8. DELETED	
20-9. DELETED	
20-10. DELETED	
20-11. DELETED	
20-12. DELETED	
20-13. DELETED	
20-14. DELETED	
20-15. DELETED	
20-16. DELETED	
20-17. DELETED	
20-18. DELETED	
20-19. DELETED	
20-20. DELETED	
20-21. DELETED	
20-22. DELETED	
20-23. DELETED	
20-24. DELETED	
20-25. DELETED	
20-26. DELETED	
20-27. DELETED	
20-28. DELETED	
20-29. DELETED	
20-30. DELETED	
20-31. DELETED	
20-32. DELETED	
20-33. DELETED	
20-34. DELETED	
20-35. DELETED	
20-36. DELETED	
20-37. DELETED	
20-38. DELETED	
20-39. DELETED	
20-40. DELETED	
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL	20-185
20-42. M1079 HEATER POWER CABLE REPLACEMENT	20-221
20-43. M1079 HEATER CONTROL CABLE REPLACEMENT	20-225

20-44. M1079 HEATER THERMOSTAT REPLACEMENT	20-229
20-45. M1079 HEATER THERMOSTAT CABLE REPLACEMENT	20-232
20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT	20-237
20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT	20-251
20-48. M1079 HEATER FUEL PUMP REPLACEMENT	20-256
20-49. M1079 HEATER FUEL PUMP POWER CABLE REPLACEMENT	20-259
20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT	20-264
20-51. M1079 HEATER REPLACEMENT	20-275
20-52. DELETED	
20-53. DELETED	
20-54. 200 AMP ALTERNATOR KIT INSTALLATION	20-314
20-55. 200 AMP ALTERNATOR KIT REMOVAL	20-334
20-56. 200 AMP ALTERNATOR REPLACEMENT	20-349
20-57. 200 AMP VOLTAGE REGULATOR REPLACEMENT	20-355
20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT	20-358
20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT	20-365
20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD CABLE REPLACEMENT	20-369
20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT	20-373
20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD CABLE REPLACEMENT	20-377
20-63. BATTERY TO 200 AMP TERMINAL BLOCK 12 VDC CABLE ASSEMBLY REPLACEMENT	20-381
20-64. BATTERY TO 200 AMP TERMINAL BLOCK 24 VDC CABLE ASSEMBLY REPLACEMENT	20-383
20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT	20-386
20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC BATTERY CABLE REPLACEMENT	20-393
20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY CABLE REPLACEMENT	20-397
20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT	20-401
20-69. 200 AMP TERMINAL BLOCK REPLACEMENT	20-407
20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY	20-415
20-71. LIGHT MATERIAL HANDLING CRANE (LMHC) REPLACEMENT	20-421
20-72. LIGHT MATERIAL HANDLING CRANE (LMHC) WEIGHT BLOCK AND WIRE ROPE REPLACEMENT/REPAIR	20-424
20-73. LIGHT MATERIAL HANDLING CRANE (LMHC) WINCH REPLACEMENT/REPAIR	20-427
20-74. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM REPLACEMENT	20-445
20-75. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM SHEAVE REPLACEMENT	20-448
20-76. LIGHT MATERIAL HANDLING CRANE (LMHC) TURRET REPLACEMENT	20-451
20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR	20-453
20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR	20-458
20-79. TROOP TRANSPORT ALARM CABLE ASSEMBLY REPLACEMENT	20-465
20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT	20-467
20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL	20-471
20-82. M1079 A/C POWER CABLE REPLACEMENT	20-477
20-83. AMBER WARNING LIGHT ASSEMBLY REPAIR	20-478
20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT INSTALLATION/REMOVAL	20-481
20-85. DIGITIZATION KIT REMOVAL	2-489
20-86. DIGITIZATION KIT INSTALLATION	20-500
20-87. DIGITIZATION KIT CIRCUIT BREAKER REPLACEMENT/INSTALLATION	20-512
20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION	20-515
20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR	20-527
20-90. DIGITIZATION KIT AFT STORAGE BOX REPLACEMENT/REPAIR	20-538
20-91. DIGITIZATION KIT DRIVER'S STORAGE BOX REPLACEMENT/REPAIR	20-545
20-92. DIGITIZATION KIT CO-DRIVER'S SEAT REPLACEMENT/REPAIR	20-548
20-93. RH CONVEX MIRROR INITIAL INSTALLATION	20-550
20-94. CONVEX MIRROR INITIAL ISNTALLATION	20-554
20-95. RIM COVER INITIAL INSTALLATION	20-556

Section I. INTRODUCTION

20-1. INTRODUCTION

This chapter contains maintenance instructions for replacing, repairing, and installing special purpose kit components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

20-2. DELETED

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL.

This task covers:

- a. Installation
- b. Removal
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

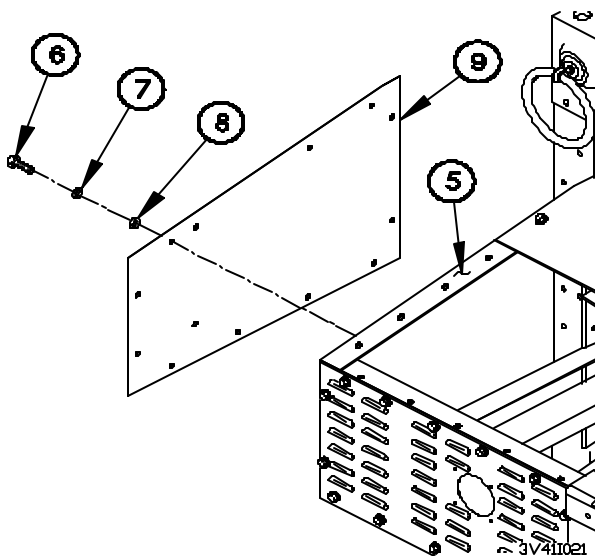
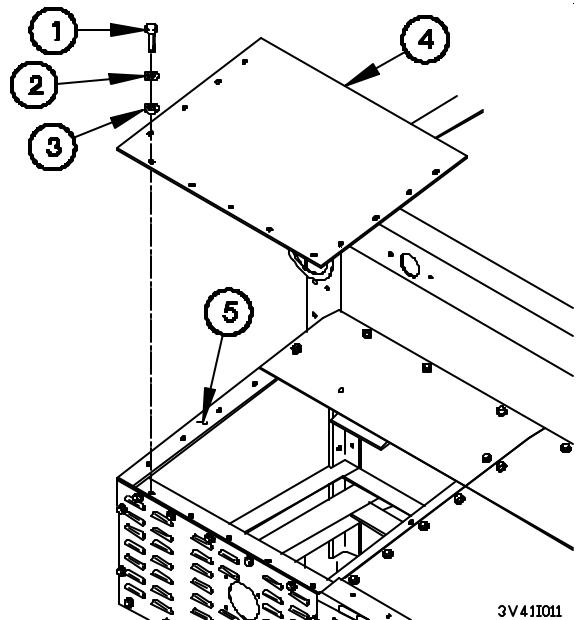
- Lockwasher (44) (Item 82, Appendix G)
- Lockwasher (18) (Item 84, Appendix G)
- Lockwasher (12) (Item 76, Appendix G)
- Sealant, Pipe, Teflon (Item 58, Appendix D)

Personnel Required

(2)

a. Installation.

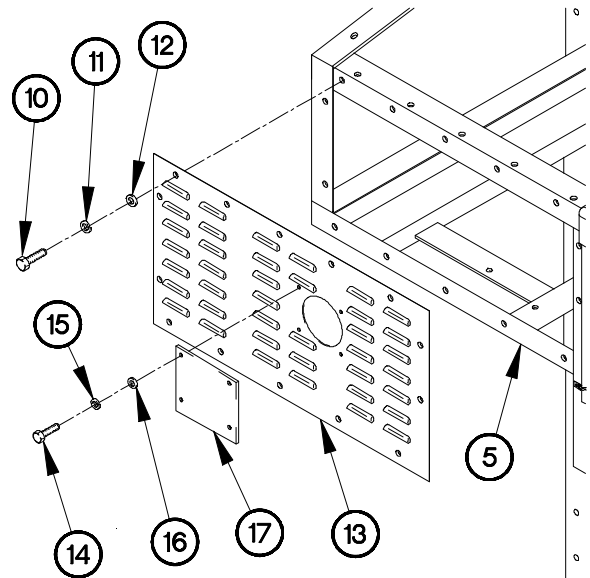
- (1) Remove 13 screws (1), lockwashers (2), washers (3), and curbside top front panel (4) from pod frame (5). Discard lockwashers.



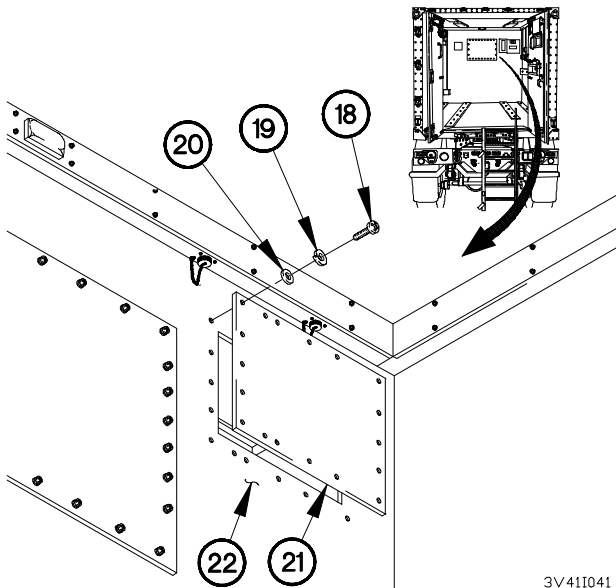
- (2) Remove 13 screws (6), lockwashers (7), washers (8), and curbside panel (9) from pod frame (5). Discard lockwashers.

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (3) Remove 14 screws (10), lockwashers (11), washers (12), and curbside front panel (13) from pod frame (5). Discard lockwashers.
- (4) Remove four screws (14), lockwashers (15), washers (16), and cover plate (17) from curbside front panel (13). Discard lockwashers.
- (5) Retain cover plate (17) for future use.



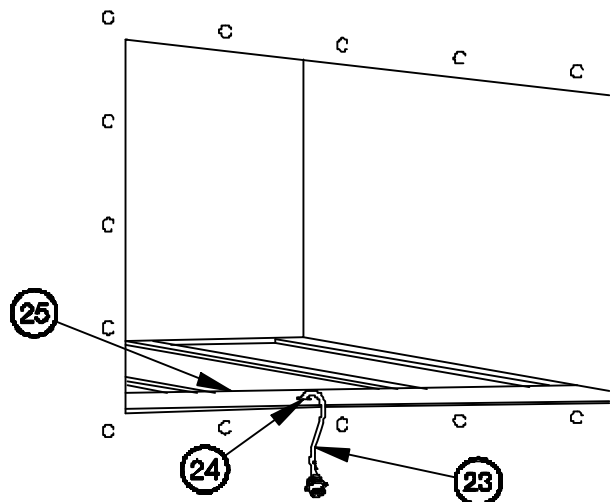
3V411031



3V411041

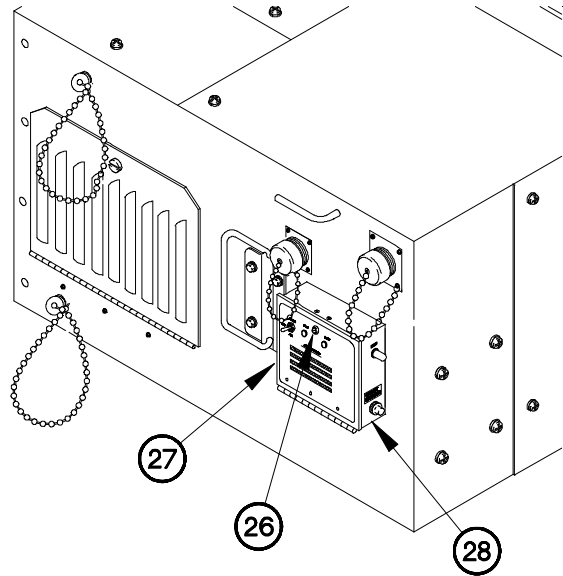
- (6) Remove 18 screws (18), lockwashers (19), washers (20), and cover (21) from inside front van body wall (22). Discard lockwashers.
- (7) Retain cover (21) for future use.

- (8) Route heater fuel pump cable (23) through hole (24) in pod panel (25).

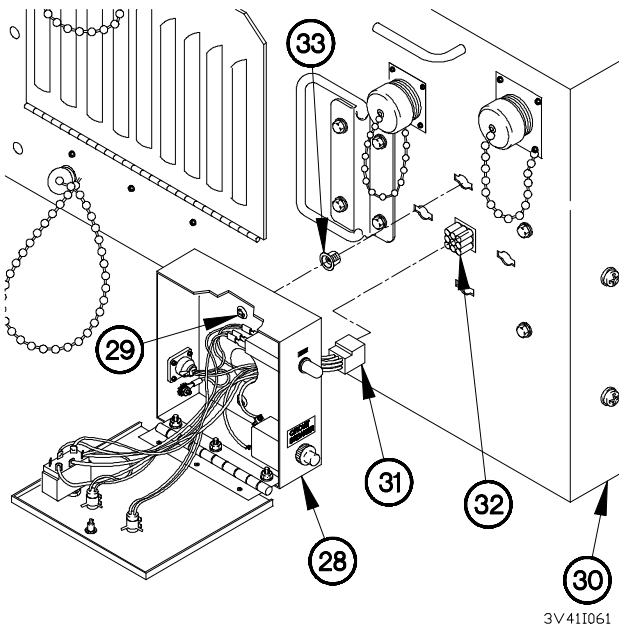


3V41155

- (9) Unlatch screw (26) on door (27).
- (10) Open door (27) on heater control unit (28).



3V41I051



3V41I061

- (11) Unlatch two screws (29) on heater control unit (28).
- (12) Remove heater control unit (28) from heater (30).

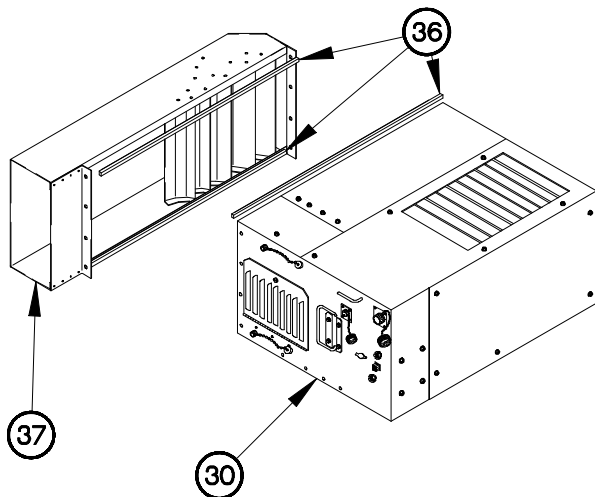
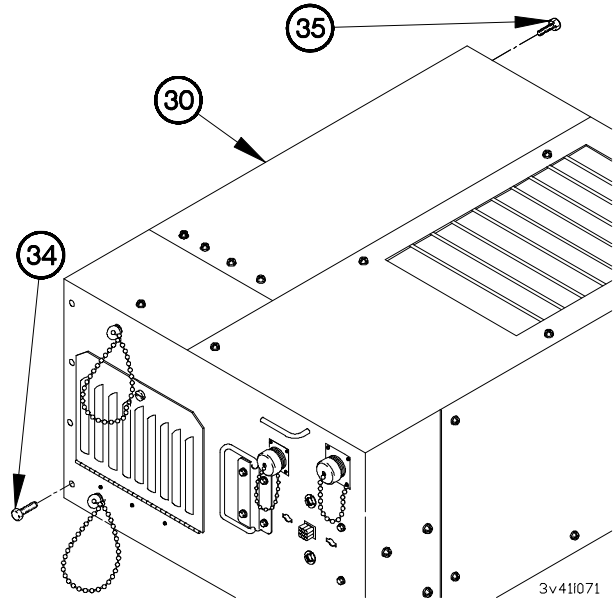
NOTE

Tag connectors and connection points prior to disconnecting.

- (13) Disconnect connector P4 (31) from connector J4 (32).
- (14) Remove two twist locks (33) from heater (30).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (15) Remove eight screws (34) from heater (30).
- (16) Remove eight screws (35) from heater (30).
- (17) Retain screws (34 and 35) for future use.



- (18) Apply silicone rubber sponge tape (36) to mating surfaces of heater duct (37) and heater (30).

WARNING

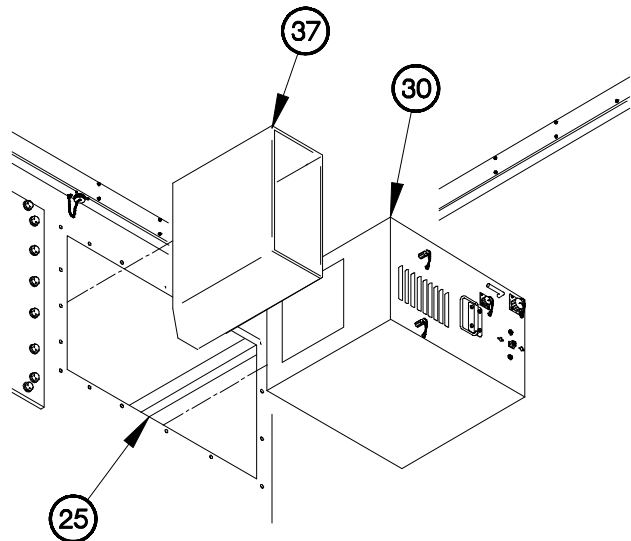
Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

CAUTION

Use caution when installing heater. Heater fuel pump power cable installed. Failure to comply may cause damage to equipment.

NOTE

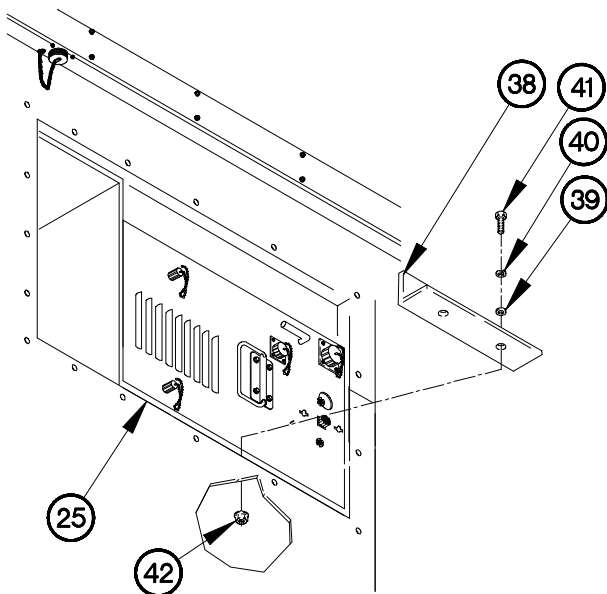
Steps (19) through (24) require the aid of an assistant.



3v411081

(19) Position heater (30) on pod panel (25).

(20) Position heater duct (37) on pod panel (25).

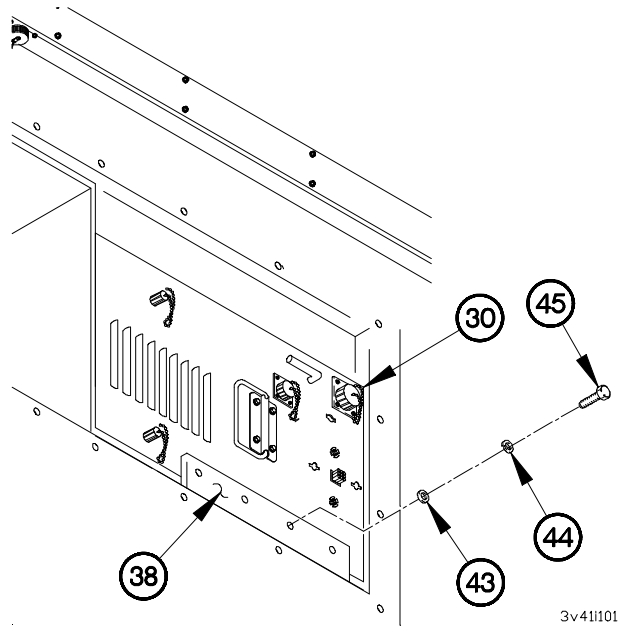


3v411091

(21) Position bracket (38) on pod panel (25) with two washers (39), lockwashers (40), screws (41), and self-locking nuts (42).

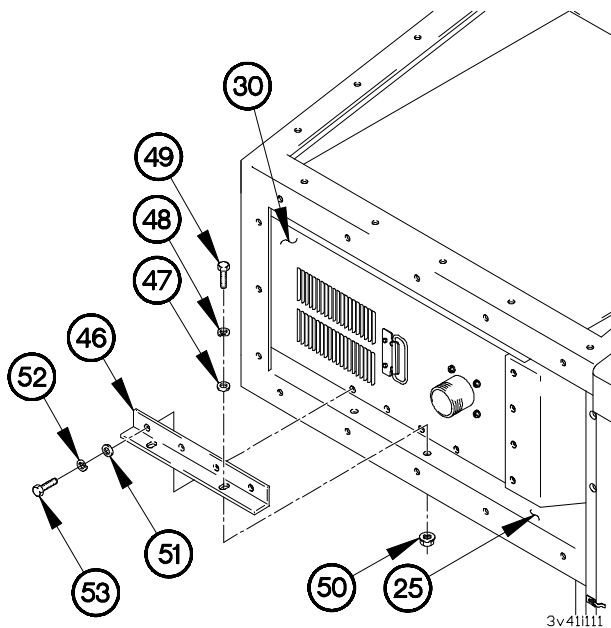
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(22) Install bracket (38) on heater (30) with four washers (43), lockwashers (44), and screws (45).



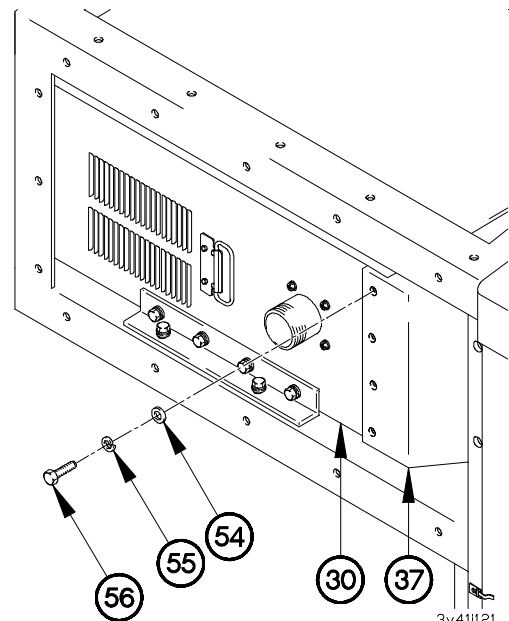
3v411101

(23) Position bracket (46) on pod panel (25) with two washers (47), lockwashers (48), screws (49), and self-locking nuts (50).



3v411111

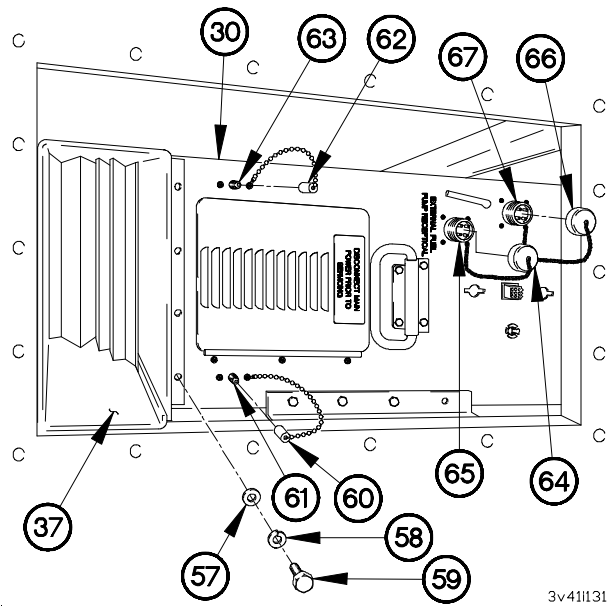
(24) Install bracket (46) on heater (30) with four washers (51), lockwashers (52), and screws (53).



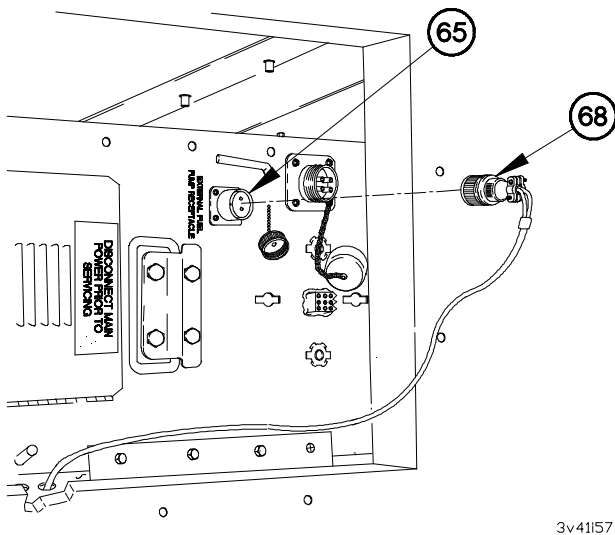
3v411121

(25) Install heater duct (37) on heater (30) with four washers (54), lockwasher (55), and screws (56).

- (26) Install heater duct (37) on heater (30) with four washers (57), lockwashers (58), and screws (59).
- (27) Remove dust cap (60) from fuel overflow port (61).
- (28) Remove dust cap (62) from fuel inlet port (63).
- (29) Remove dust cap (64) from heater fuel pump power cable connector (65).
- (30) Remove dust cap (66) from heater power connector (67).



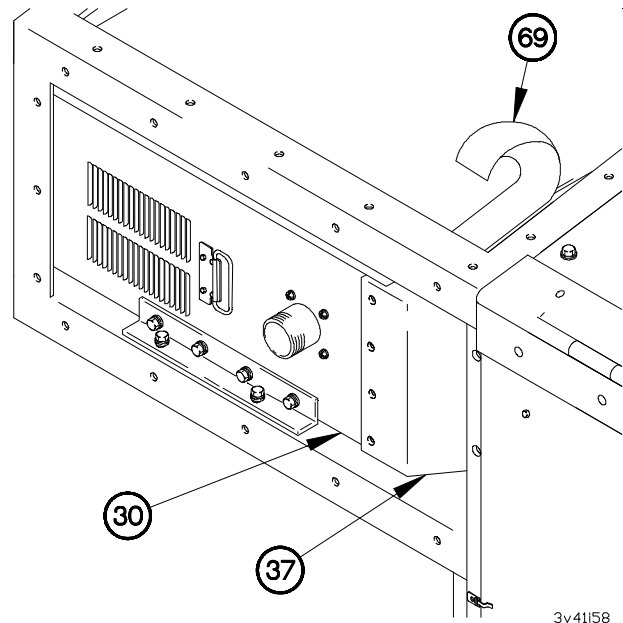
3v41131



3v41157

- (31) Connect connector J314 (68) to heater fuel pump power cable connector (65).

- (32) Apply pressure sensitive tape (69) over seam between heater duct (37).



3v41158

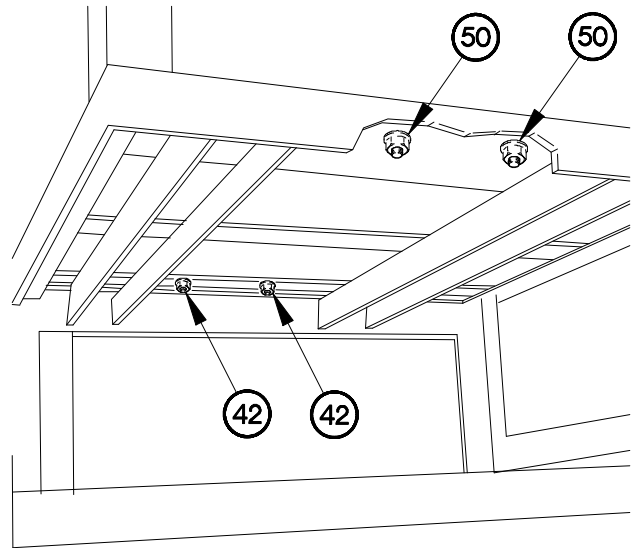
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

NOTE

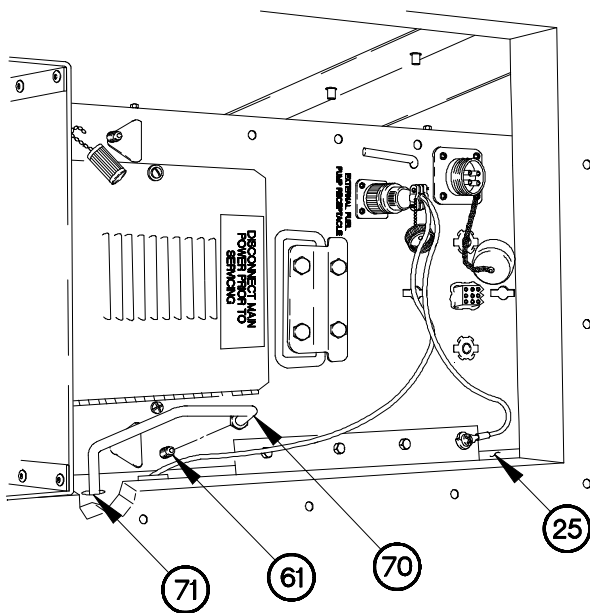
Steps (33) and (34) require the aid of an assistant.

(33) Tighten two self-locking nuts (42).

(34) Tighten two self-locking nuts (50).



3v411151



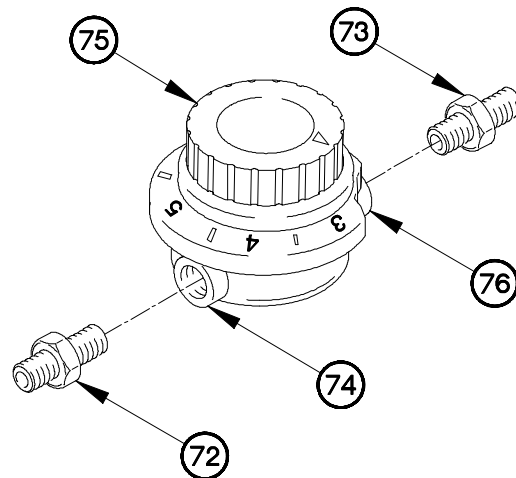
3V411161

- o (35) Route fuel tube (70) through hole (71) in pod panel (25).
- o (36) Install fuel tube (70) on fuel overflow port (58).

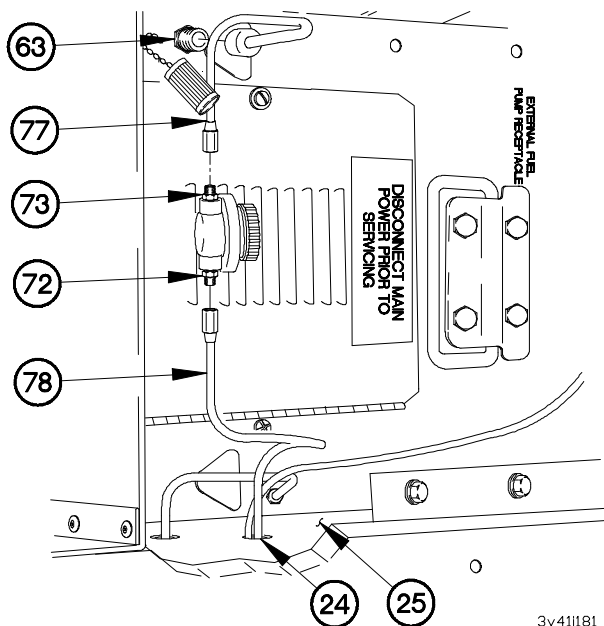
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (37) Apply sealing compound to threads of fittings (72 and 73).
- (38) Install fitting (72) in inlet port (74) of fuel regulator (75).
- (39) Install fitting (73) in outlet port (76) of fuel regulator (75).



3V411171

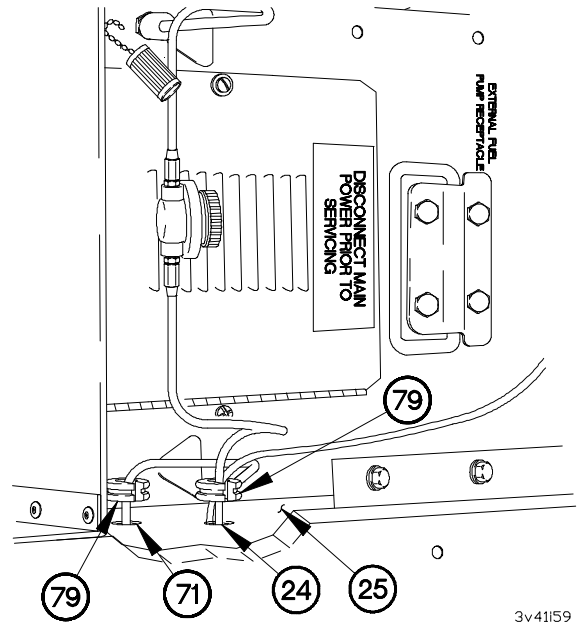


3V411181

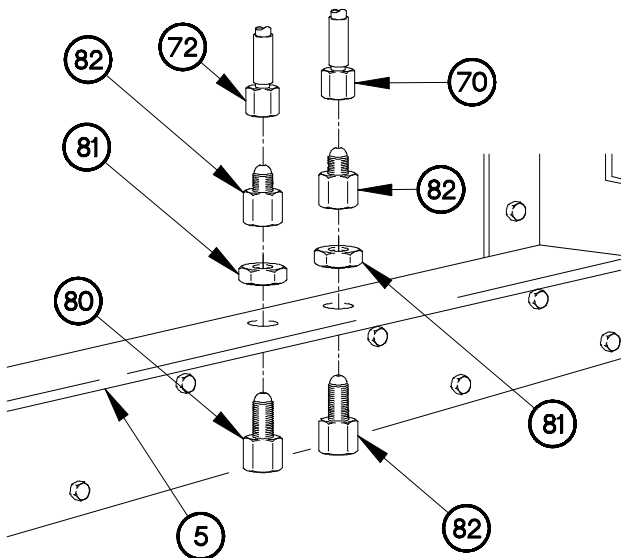
- (40) Install fuel tube (77) on fuel inlet port (63).
- (41) Route fuel tube (78) through hole (24) in pod panel (25).
- (42) Install fuel tubes (77 and 78) on fittings (72 and 73).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (43) Cut grommets (79) prior to installation.
- (44) Install two grommets (79) in holes (24 and 71) on pod panel (25).



3V41159



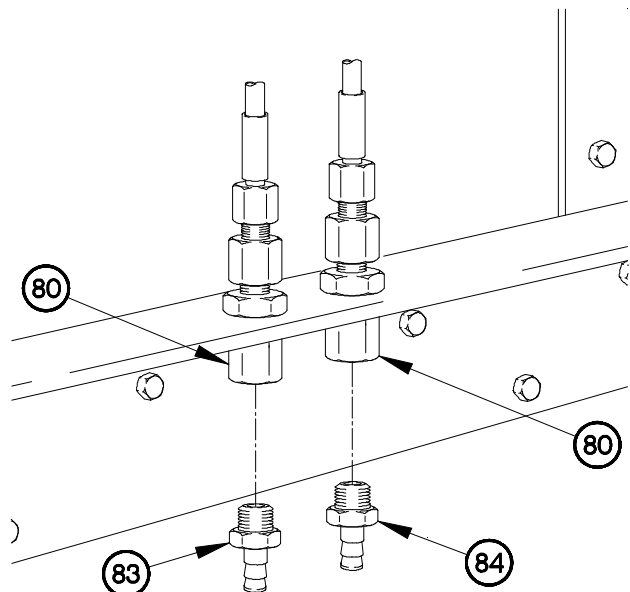
3V411191

- (45) Install two fittings (80) on pod frame (5) with two nuts (81).
- (46) Install two adapters (82) on fittings (80).
- (47) Install fuel tubes (78 and 70) on two adapters (82).

WARNING

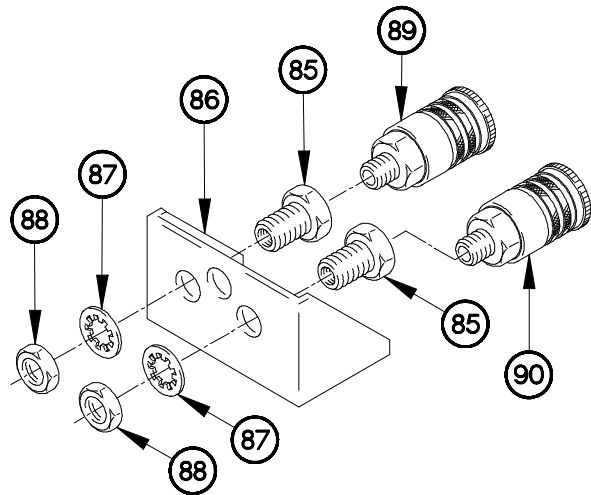
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (48) Apply sealing compound to threads of fittings (83 and 84).
- (49) Install fittings (83 and 84) on two fittings (80).



3V411201

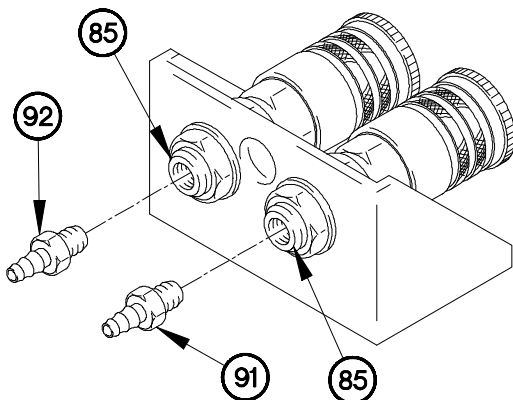
- (50) Install two bushings (85) on bracket (86) with two lockwashers (87) and nuts (88).
- (51) Install quick connect fittings (89 and 90) on two bushings (85).



3V411211

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



- (52) Apply sealing compound to threads of fittings (91 and 92).

- (53) Install fitting (91 and 92) in two bushings (85).

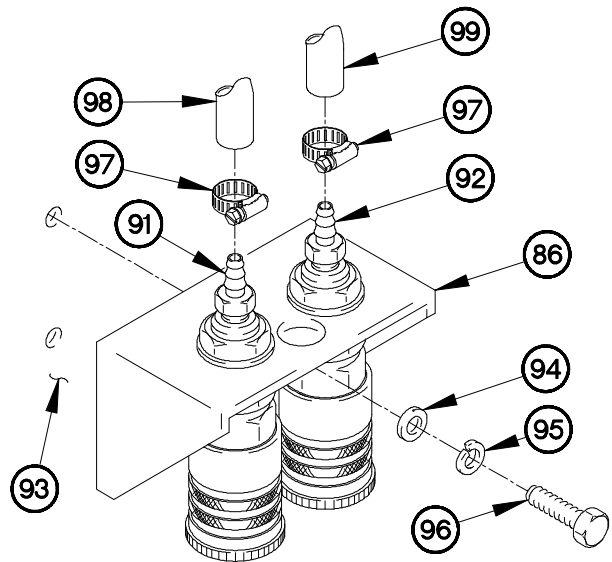
3V411221

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

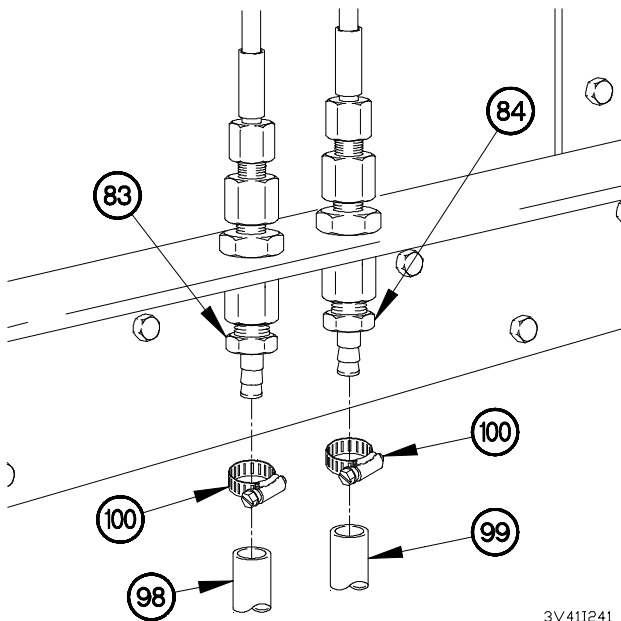
(54) Install bracket (86) on outside front van body wall (93) with two washers (94), lockwashers (95), and screws (96).

(55) Position two clamps (97) on hoses (98 and 99).

(56) Install hoses (98 and 99) on fitting (91 and 92) with two clamps (97).



3V411231



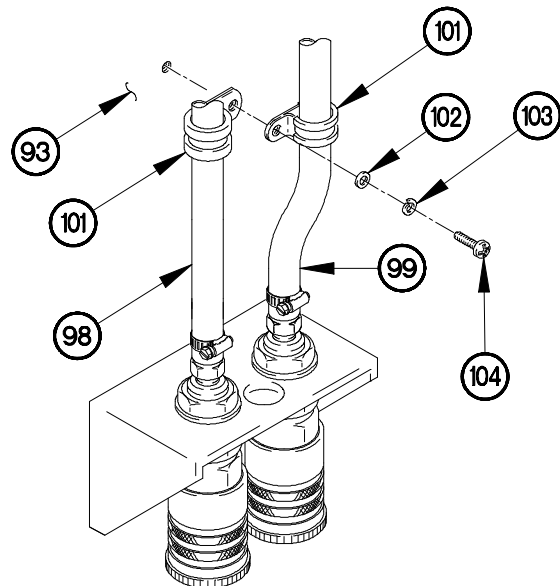
3V411241

(57) Position two clamps (100) on hoses (98 and 99).

(58) Install two hoses (98 and 99) on fittings (83 and 84) with two clamps (100).

(59) Position six clamps (101) on hoses (98 and 99).

(60) Install six clamps (101) on outside front van body wall (93) with three washers (102), lockwashers (103), and screws (104).

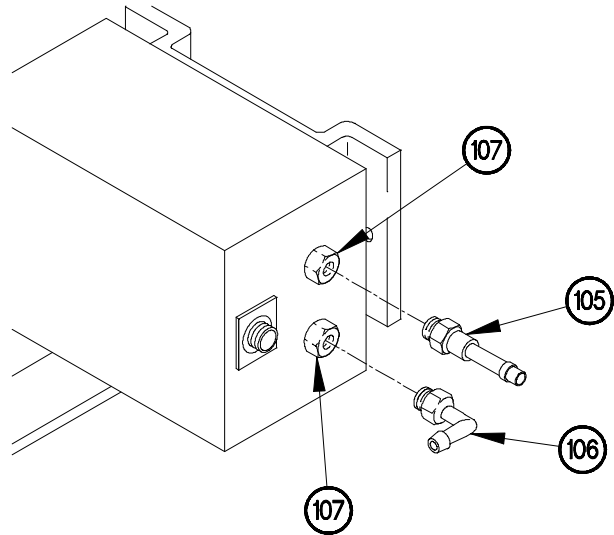


3V411251

WARNING

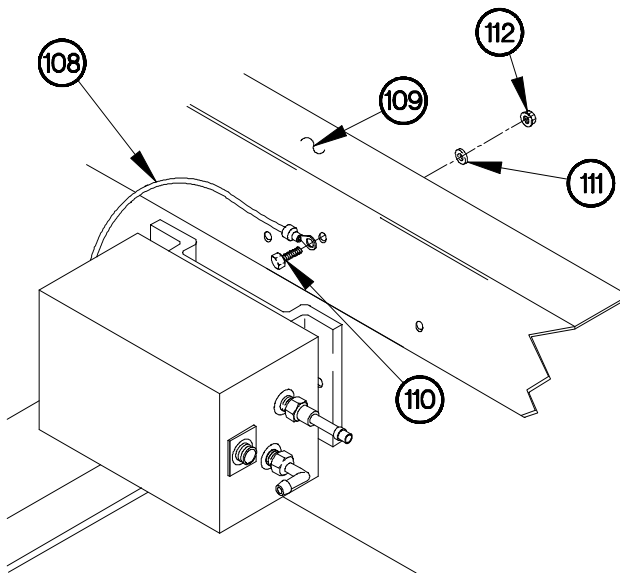
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To prevent injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (61) Apply sealing compound to threads of fitting (105) and 90 degree fitting (106).
- (62) Install fitting (105) and 90 degree fitting (106) in EMI shielded heater fuel pump couplings (107).



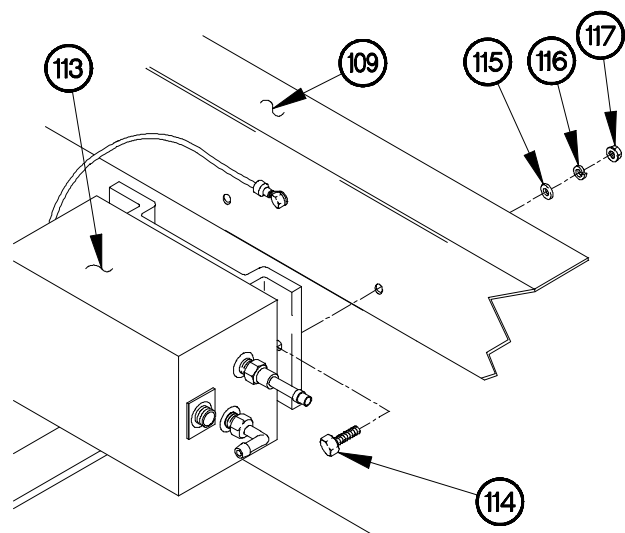
3v41i60

- (63) Install EMI shielded fuel pump ground wire (108) to sub frame (109) with screw (110), washer (111), and locknut (112).



3v41i61

- (64) Install EMI shielded fuel pump assembly (113) on sub frame (109) with two screws (114), washer (115), lockwasher (116), and nuts (117).



3v41i62

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

WARNING

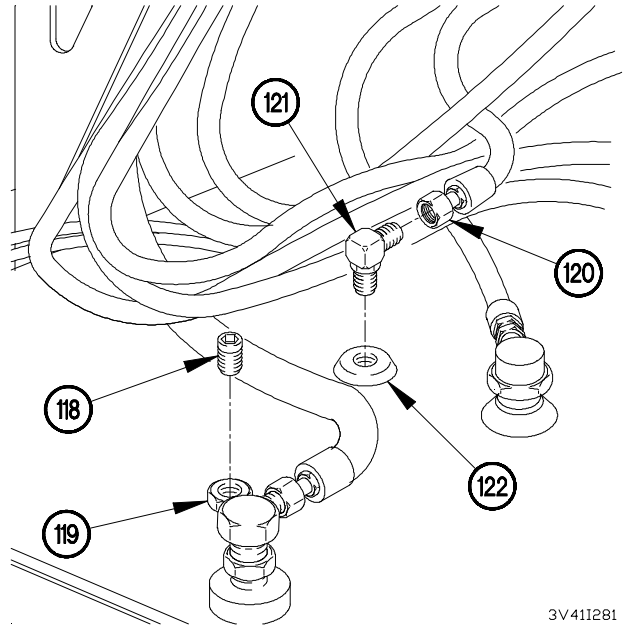
Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

- (65) Remove plug (118) from auxiliary supply port (119).
- (66) Retain plug (118) for future use.

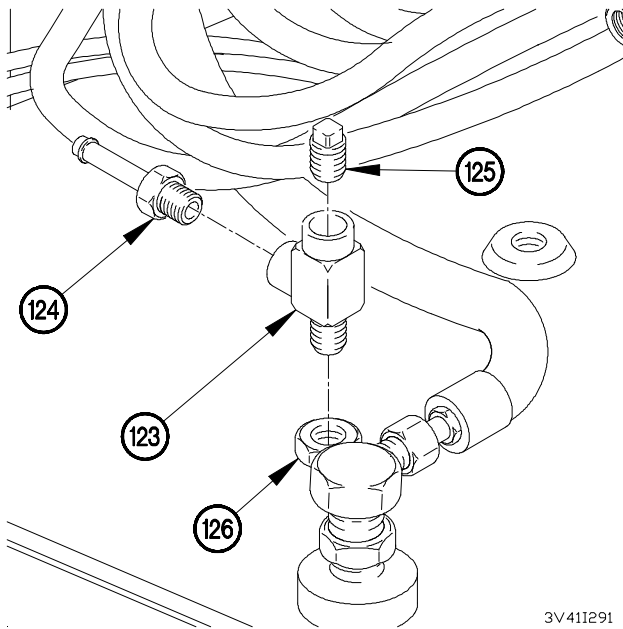
NOTE

Remove plastic cable ties as required.

- (67) Disconnect fuel hose (120) from 90-degree return fitting (121).
- (68) Remove 90-degree return fitting (121) from fuel tank (122).



3V411281



3V411291

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To prevent injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

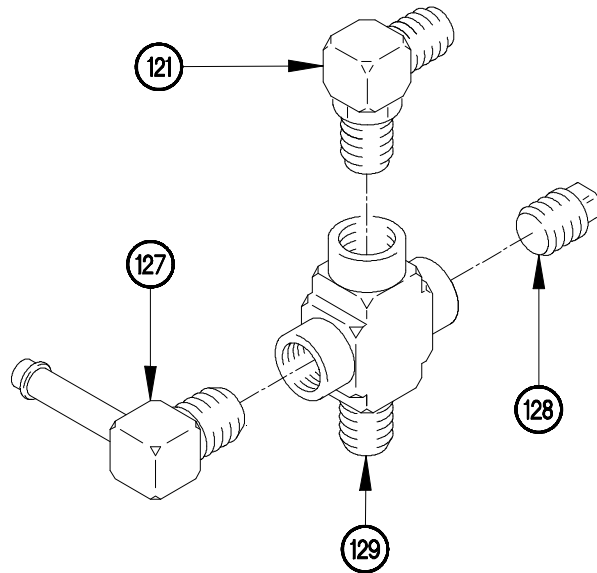
- (69) Apply sealing compound to threads of run tee fitting (123), fitting (124), and plug (125).
- (70) Install run tee fitting (123) in auxiliary supply port (126).
- (71) Install fitting (124) and plug (125) on run tee fitting

(123).

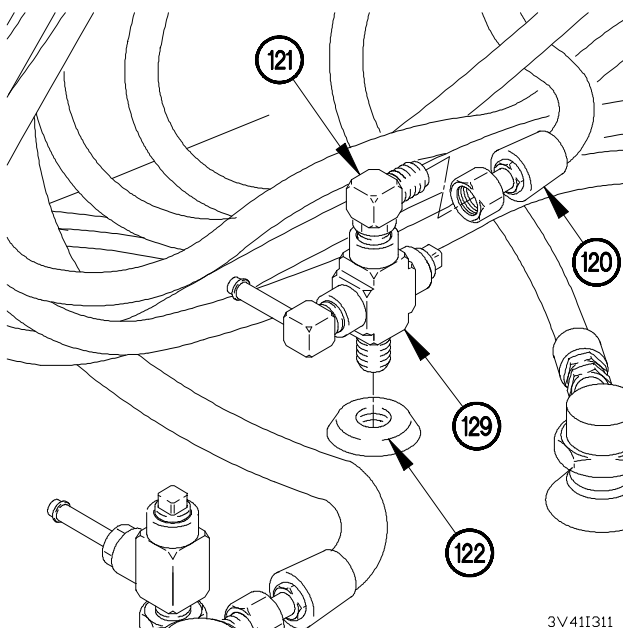
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To prevent injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (72) Apply sealing compound to threads of 90-degree return fitting (127), 90-degree fitting (121), plug (128), and four-way fitting (129).
- (73) Install 90-degree return fitting (127), 90-degree fitting (121), and plug (128) on four-way fitting (129).



3V41I301



3V41I311

- (74) Install four-way fitting (129) on fuel tank (122).

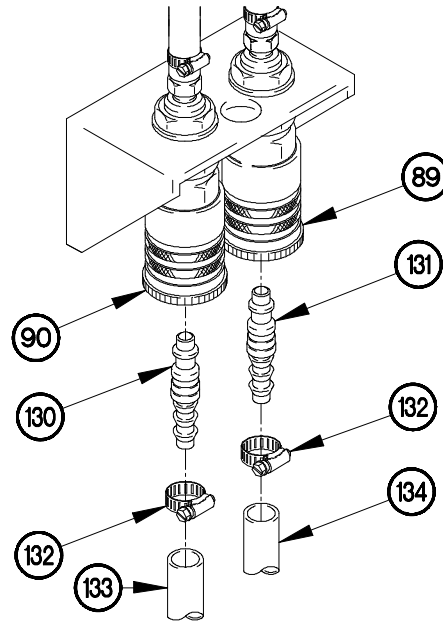
NOTE

Install plastic cable ties as required.

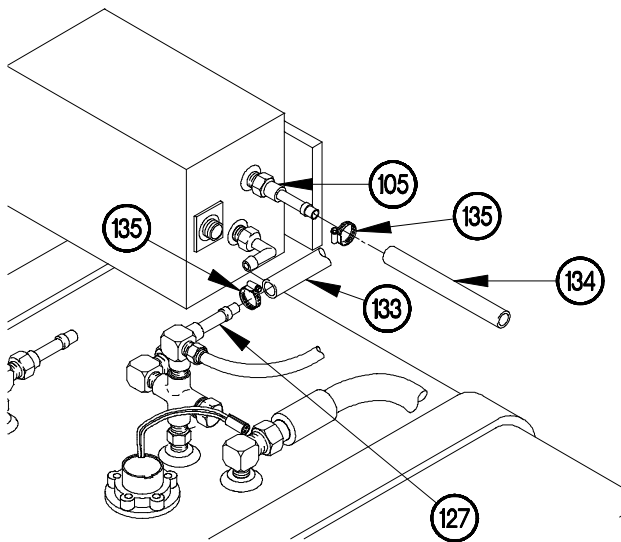
- (75) Connect fuel hose (120) to 90-degree return fitting (121).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (76) Connect fitting (130 and 131) to quick connect fittings (90 and 89).
- (77) Position two clamps (132) on hoses (133 and 134).
- (78) Install hoses (133 and 134) on fittings (130 and 131) with two clamps (132).



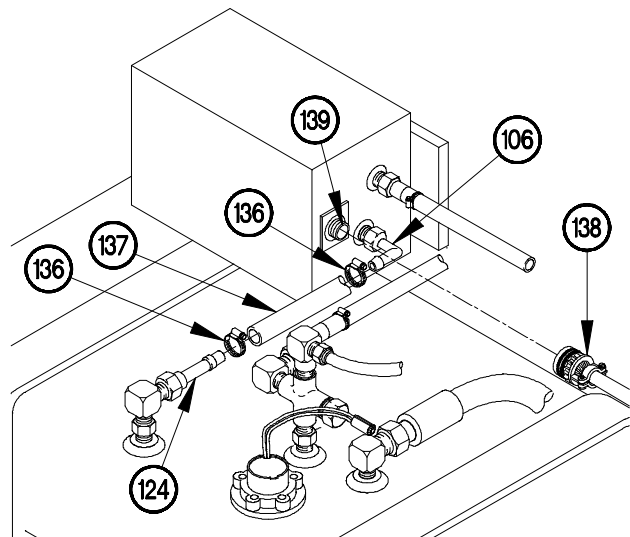
3V411321



3v41163

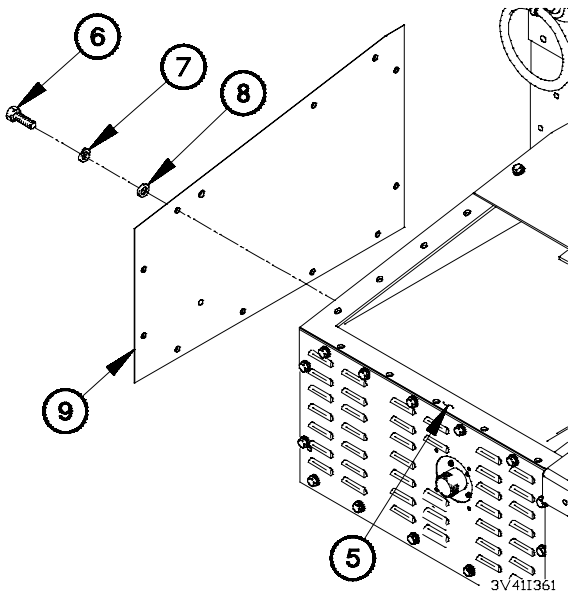
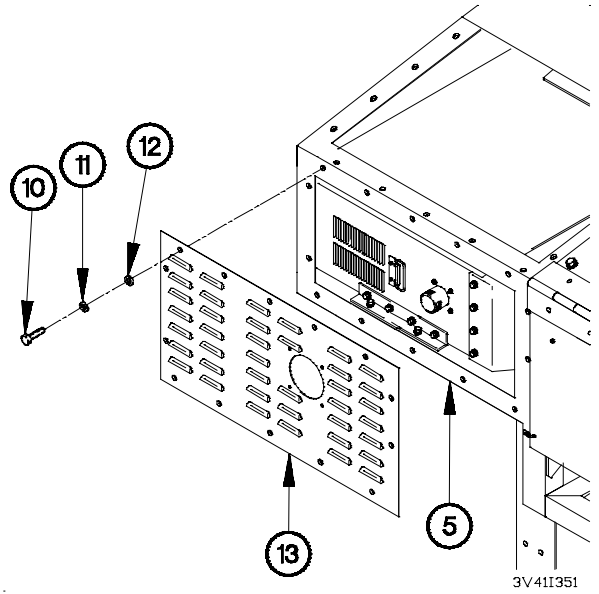
- (79) Position two clamps (135) on hoses (133 and 134).
- (80) Install hoses (133 and 134) on fittings (105 and 127) with two clamps (135).

- (81) Position two clamps (136) on hose (137).
- (82) Install hose (137) on fittings (106 and 124) with two clamps (136).
- (83) Connect connector P310 (138) to heater fuel pump connector (139).

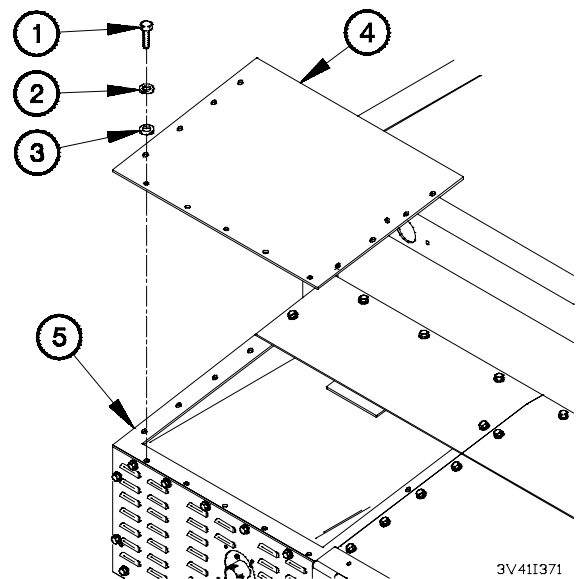


3v41164

(84) Install curbside front panel (13) on pod frame (5) with 14 washers (12), lockwashers (11), and screws (10).



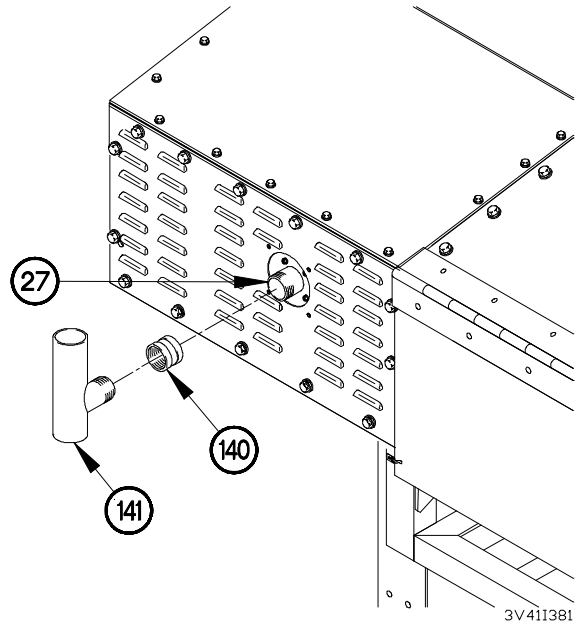
(85) Install curbside panel (9) on pod frame (5) with 13 washers (8), lockwashers (7), and screws (6).



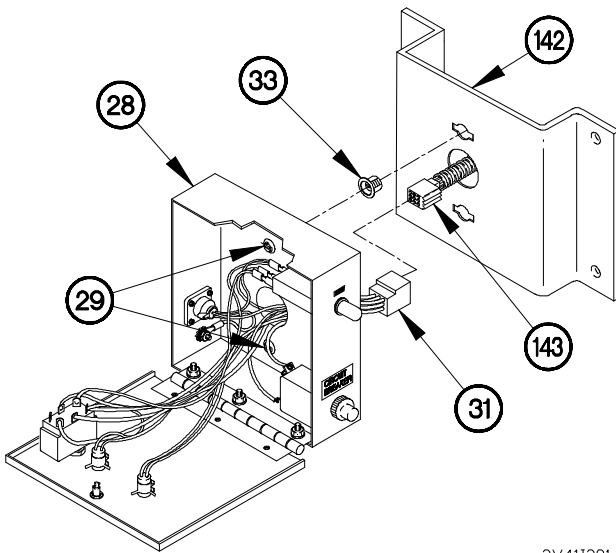
(86) Install curbside top front panel (4) on pod frame (5) with 13 washers (3), lockwashers (2), and screws (1).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (87) Install coupler (140) on heater (27).
- (88) Install exhaust pipe (141) on coupler (140).



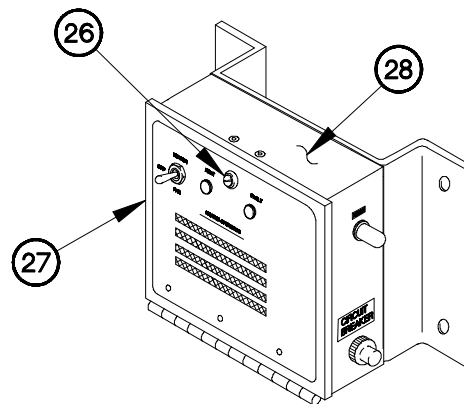
3V411381



3V411391

- (89) Install two twist locks (33) on bracket (142).
- (90) Position heater control unit (28) on bracket (142).
- (91) Latch two screws (29) on heater control unit (28).
- (92) Connect connector J4A (143) to connector P4 (31).

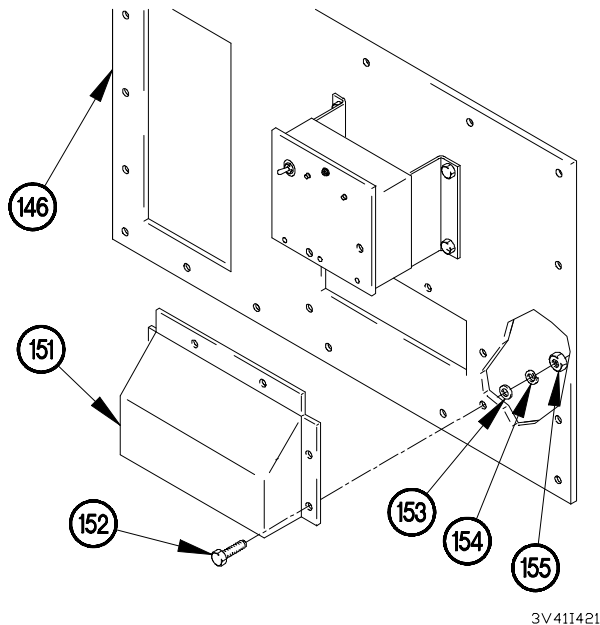
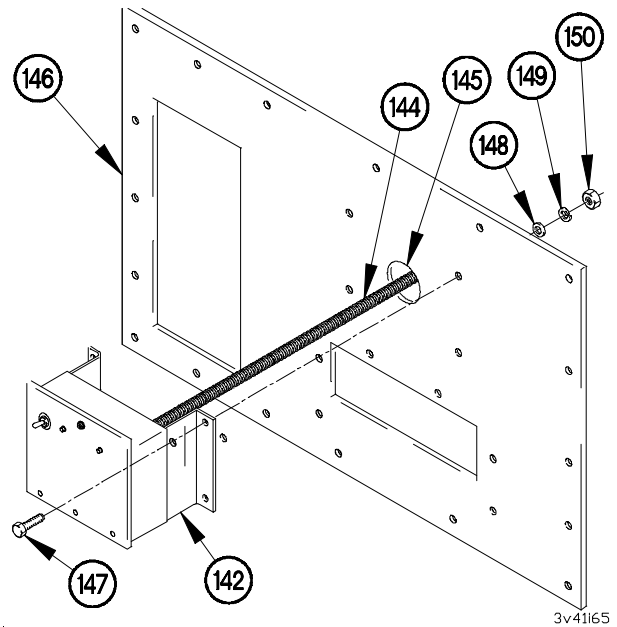
- (93) Close door (27) on heater control unit (28).
- (94) Latch screw (26) on door (27).



3V411401

(95) Route heater control cable (144) through hole (145) in heater cover (146).

(96) Install bracket (142) on heater cover (146) with four screws (147), washers (148), lockwashers (149), and nuts (150).



(97) Install hood (151) on heater cover (146) with six screws (152), washers (153), lockwashers (154), and nuts (155).

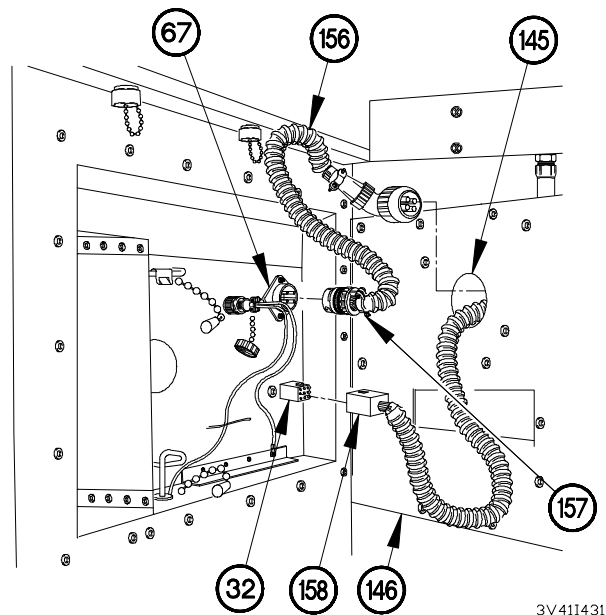
(98) Route heater power cable (156) through hole (145) in heater cover (146).

NOTE

Steps (99) and (100) require the aid of an assistant.

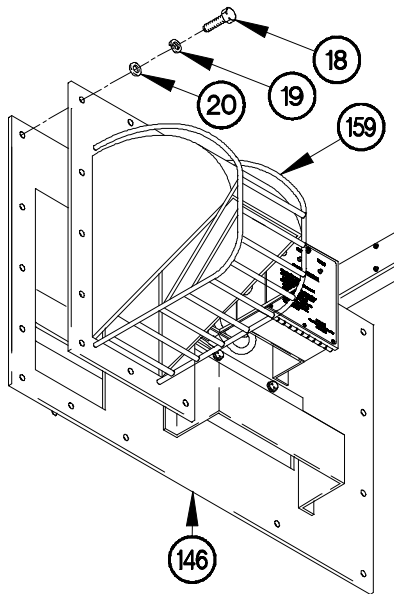
(99) Connect connector J244A (157) to heater power connector (67).

(100) Connect connector P4A (158) to connector J4 (32).



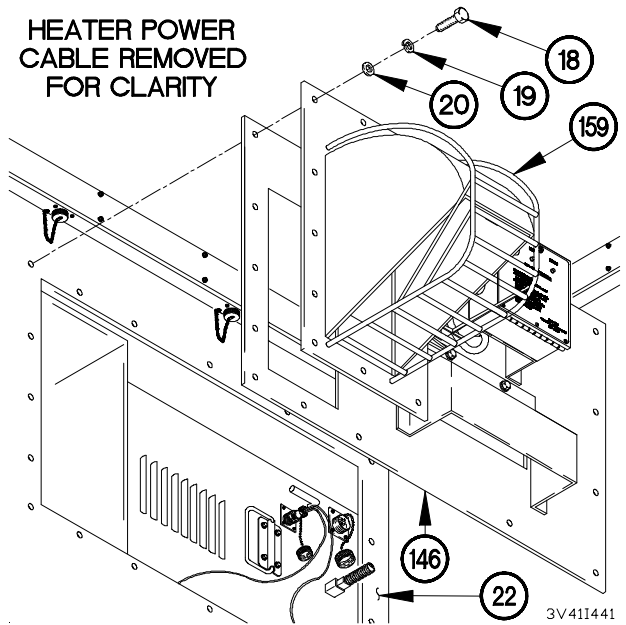
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(101) Install heater cover (146) on inside front van body wall (22) with heater deflector (159), 18 washers (20), lockwashers (19), and screws (18).



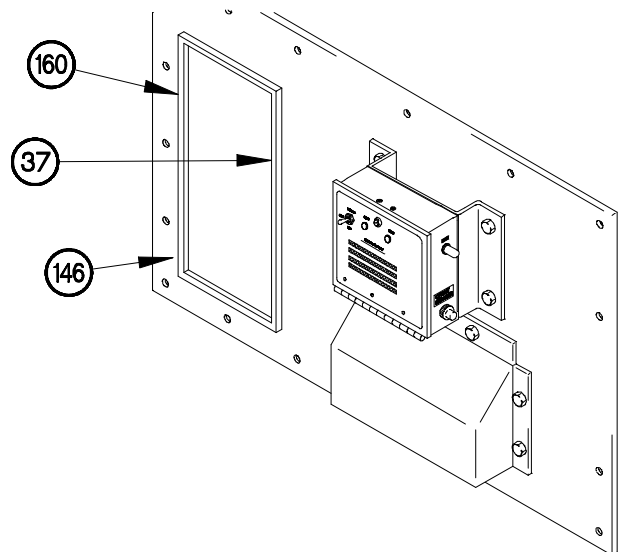
3v41167

(103) Apply half the width of the silicone rubber sponge tape (160) to the inside edge of the heater duct (37) fold tape over to cover outside edge of heater cover (146).



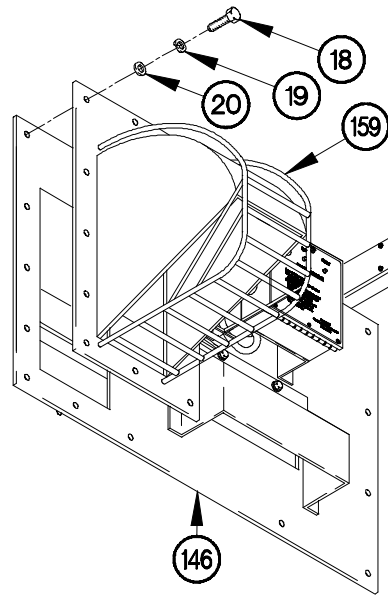
3V411441

(102) Remove nine screws (18), lockwashers (19), washers (20), and heater deflector (159) from heater cover (146)

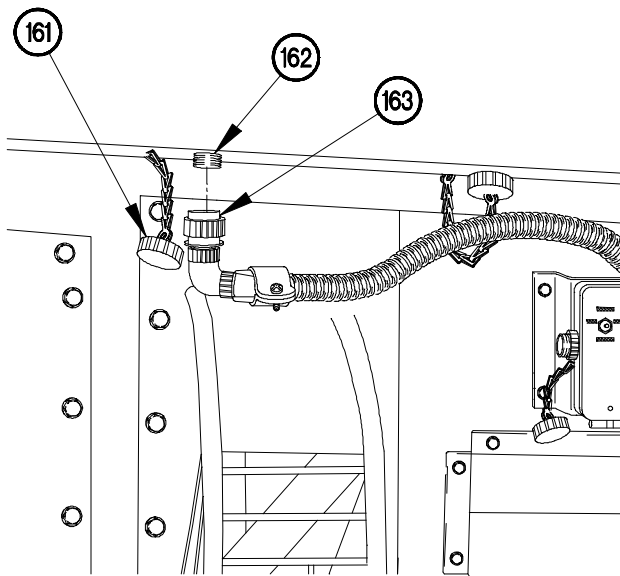


3v41168

(104) Install heater deflector (159) with nine washers (20), lockwashers (19), and screws (18) on heater cover (146)



3v41167



3v41166

(105) Remove dust cap (161) from heater connector (162).

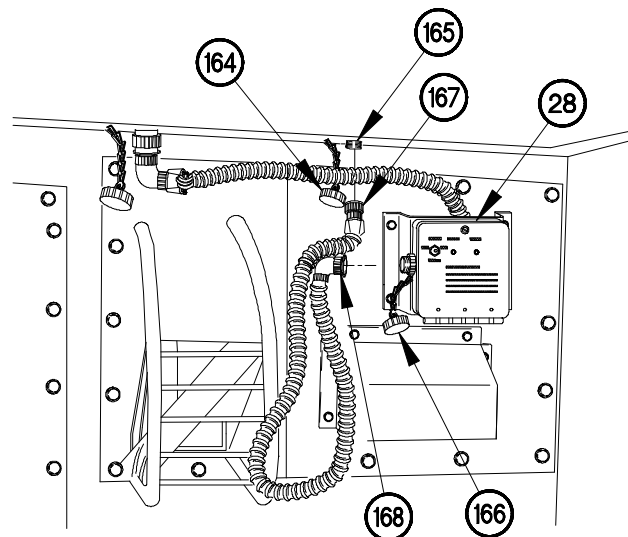
(106) Connect connector P244 (163) to heater connector (162).

(107) Remove dust cap (164) from thermostat connector (165).

(108) Remove dust cap (166) from heater control unit (28).

(109) Connect connector J245 (167) to thermostat connector (165).

(110) Connect connector P245A (168) to heater control unit (28).

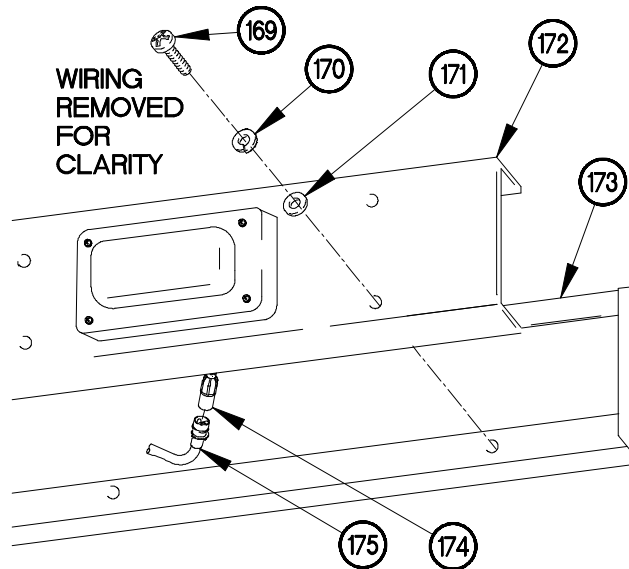


3v411461

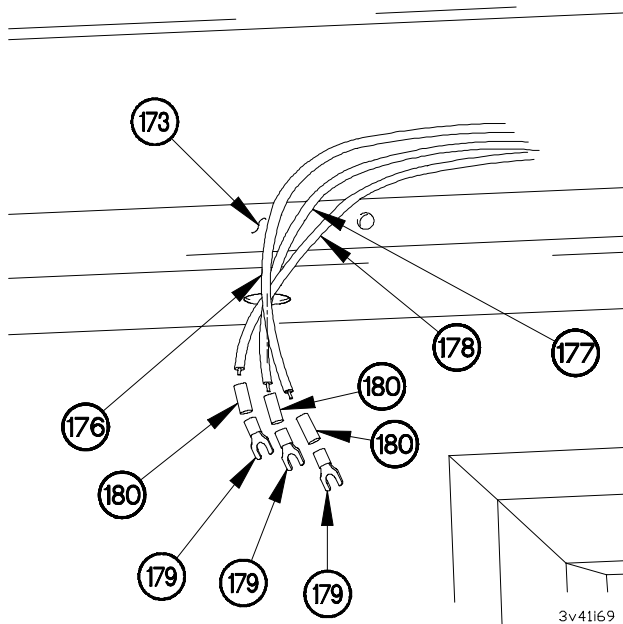
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(111) Remove 12 screws (169), lockwashers (170), washers (171), and cover (172) from raceway (173). Discard lockwashers.

(112) Disconnect connector J165 (174) from connector P165 (175).



3V411471



3v41169

(113) Remove wires 1499R (176), 3086C (177), and 401 (178) from raceway (173).

(114) Strip insulation from wire 1499R (176), wire 3086C (177), and wire 401 (178) the depth of terminal well (179).

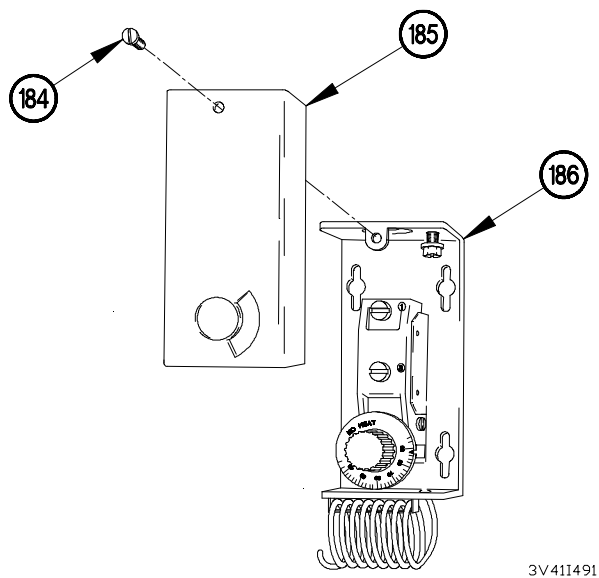
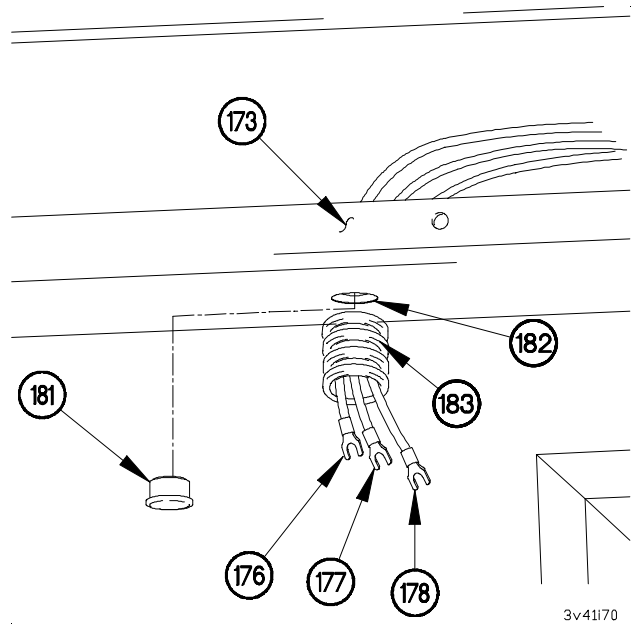
(115) Slide insulator (180) over wires (176, 177, and 178).

(116) Insert wire (176, 177, and 178) in terminal well (179).

(117) Crimp terminal well (179) on wire (176, 177, and 178).

(118) Slide insulator (180) over crimped terminal well (179).

- (119) Remove plug (181) from raceway (173).
- (120) Retain plug (181) for future use.
- (121) Route wire 1499R (176), wire 3086C (177), and wire 401 (178) through hole (182) in raceway (173).
- (122) Position convoluted tubing (183) over wires (176, 177, and 178).
- (123) Install convoluted tubing (183) in hole (182) in raceway (173).



- (119) Remove screw (184) and cover (185) from thermostat (186).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

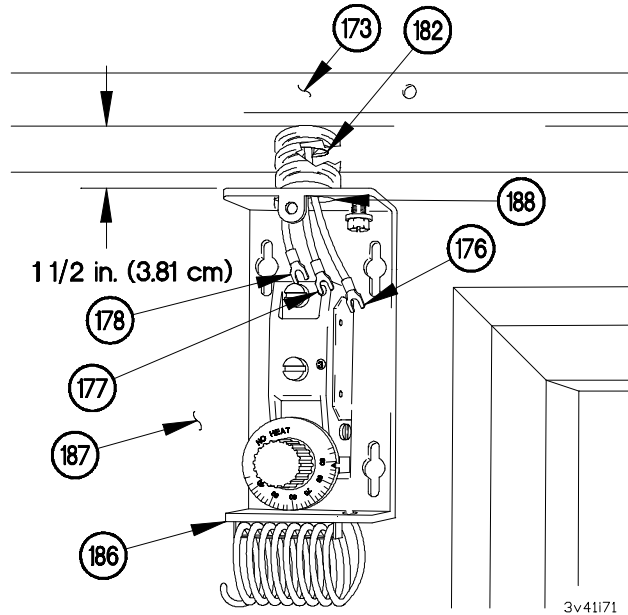
NOTE

Steps (125) and (126) apply to initial installation.

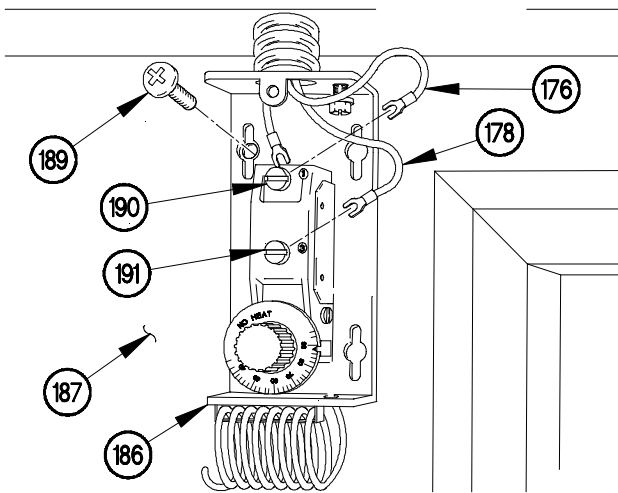
(125) Position thermostat (186) centered and 1 1/2 in. (3.81 cm) below hole (182) in raceway (173).

(126) Match drill two holes in inside left van body wall (187).

(127) Route wire 1499R (176), wire 3086C (177), and wire 401 (178) through hole (188) in thermostat (186).



3v41171



3v41172

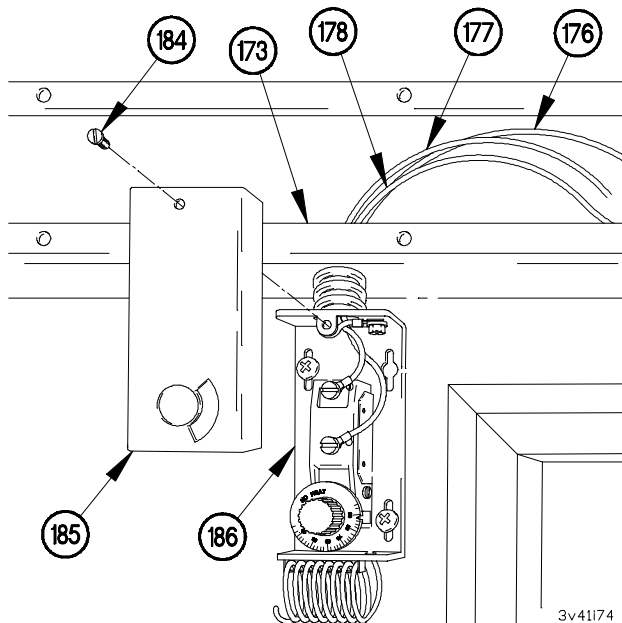
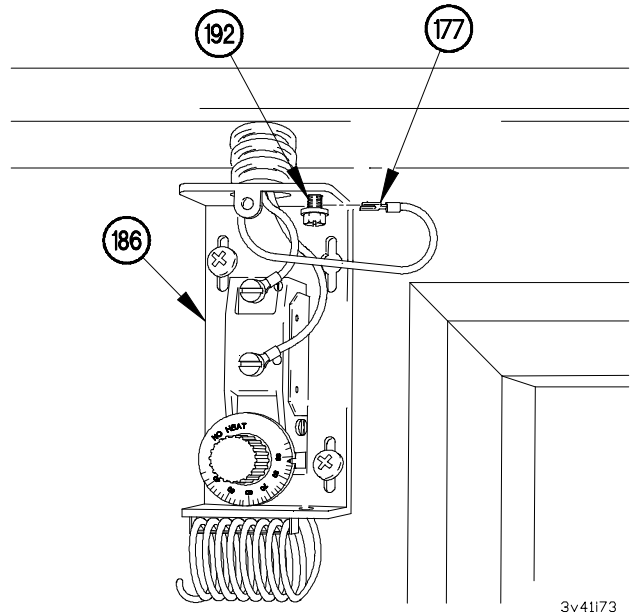
(128) Install thermostat (186) on inside left van body wall (187) with two screws (189).

(129) Loosen screws (190 and 191) on thermostat (186).

(130) Position wire 1499R (176) and wire 401 (178) on thermostat (186).

(131) Tighten screws (190 and 190) on thermostat (186).

- (132) Loosen screw (192) on thermostat (186).
- (133) Position wire 3086C (177) on thermostat (186).
- (134) Tighten screw (192) on thermostat (186).

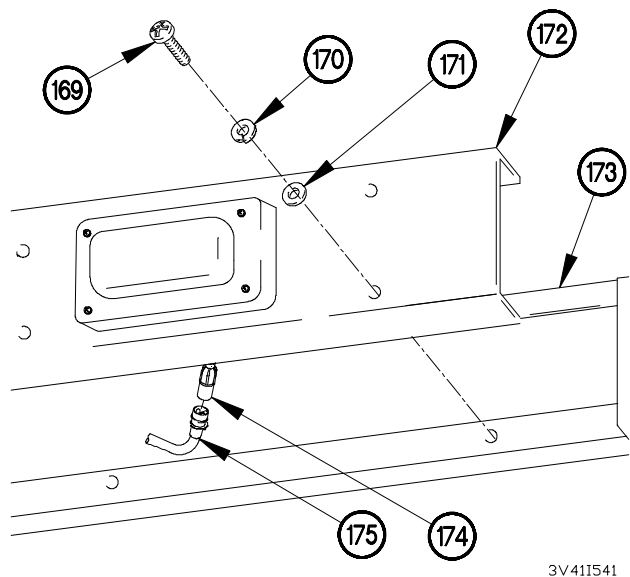


NOTE

Install plastic cable ties as required.

- (135) Pull slack from wire 1499R (176), wire 3086C (177) and wire 401 (178) into raceway (173) and secure in place.
- (136) Install cover (185) on thermostat (186) with screw (184).

- (137) Connect connector J165 (174) to connector P165 (175).
- (138) Install cover (172) on raceway (173) with 12 washers (171), lockwashers (170), and screws (169).
- (139) Operate heater and check for proper operation (TM 9-2320-365-10).



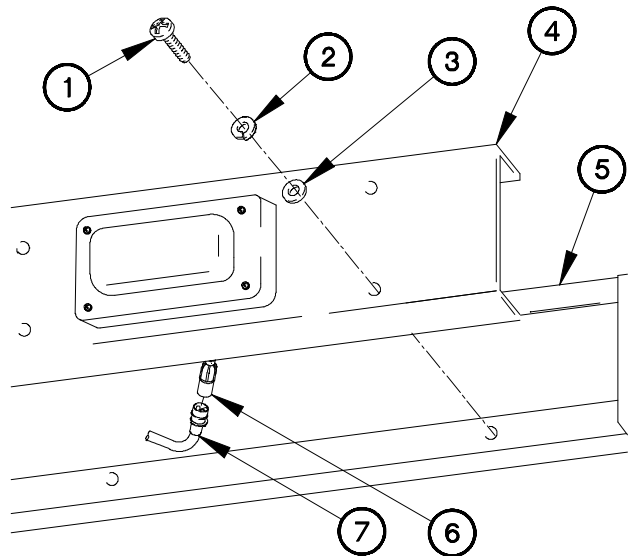
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

b. Removal.

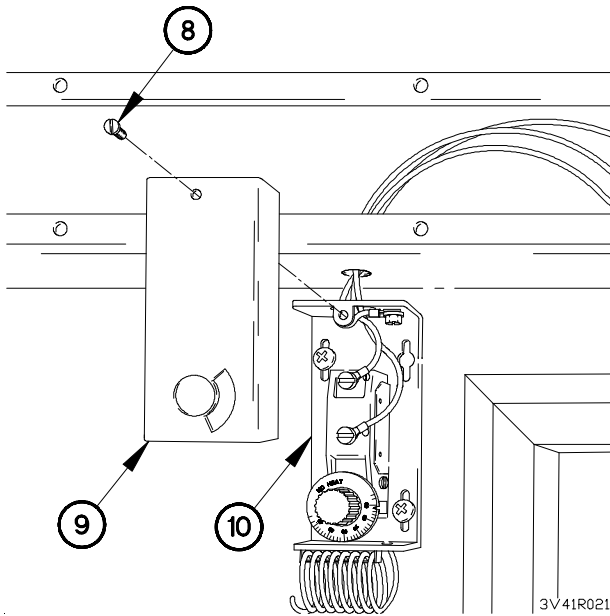
NOTE

Store all removed parts in kit package.

- (1) Remove 12 screws (1), lockwashers (2), washers (3), and cover (4) from raceway (5). Discard lockwashers.
- (2) Disconnect connector J165 (6) from connector P165 (7).



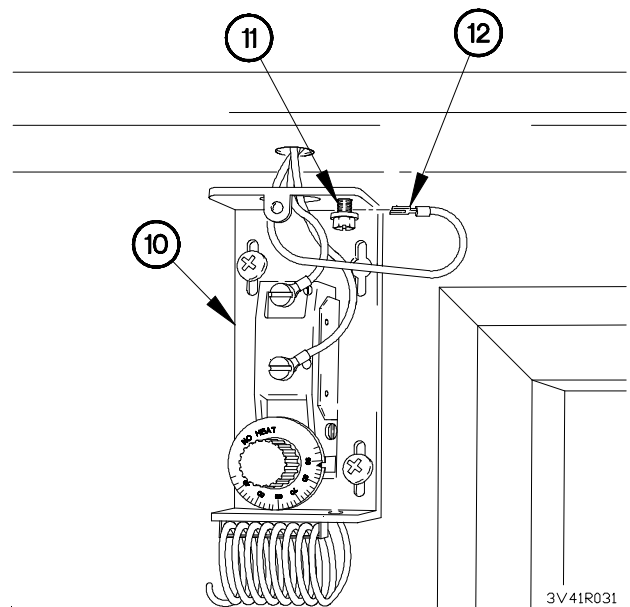
3V41R011



3V41R021

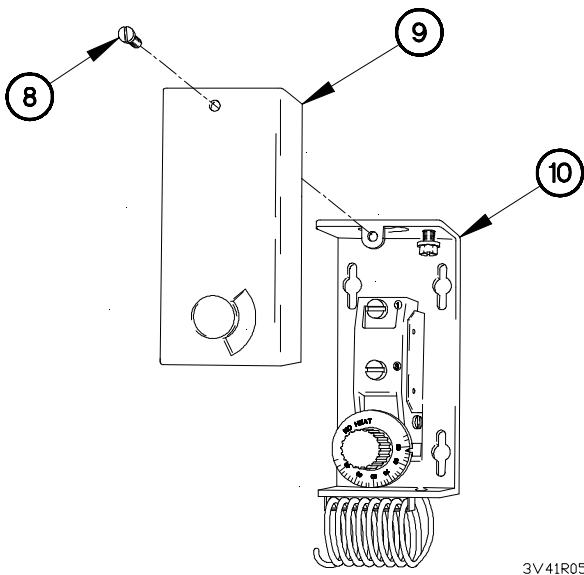
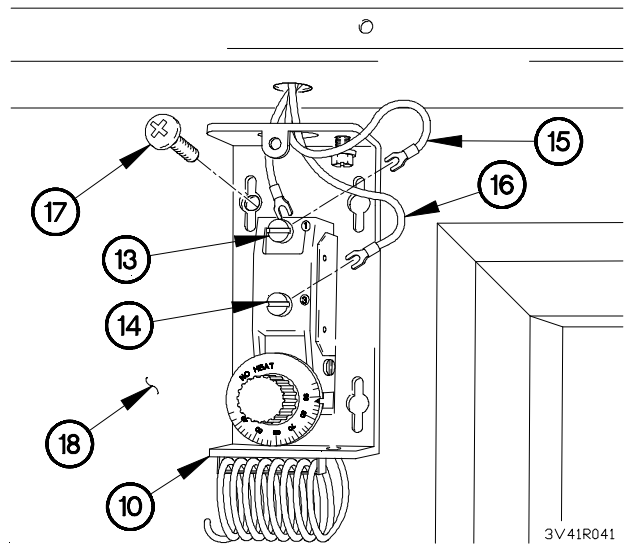
- (3) Remove screw (8) and cover (9) from thermostat (10).

- (4) Loosen screw (11) on thermostat (10).
- (5) Remove wire 3086C (12) from thermostat (10).



3V41R031

- (6) Loosen screws (13 and 14) on thermostat (10).
- (7) Remove wire 1499R (15) and wire 401 (16) from thermostat (10).
- (8) Remove two screws (17) and thermostat (10) from inside left van body wall (18), and convoluted tubing (19).

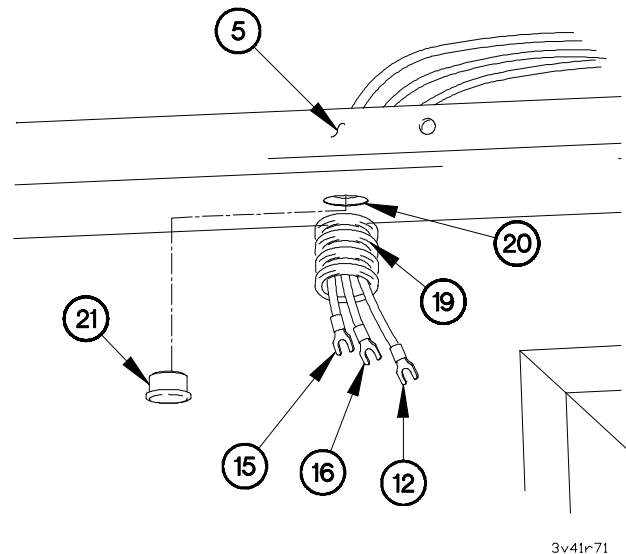


- (9) Install cover (9) on thermostat (10) with screw (8).

NOTE

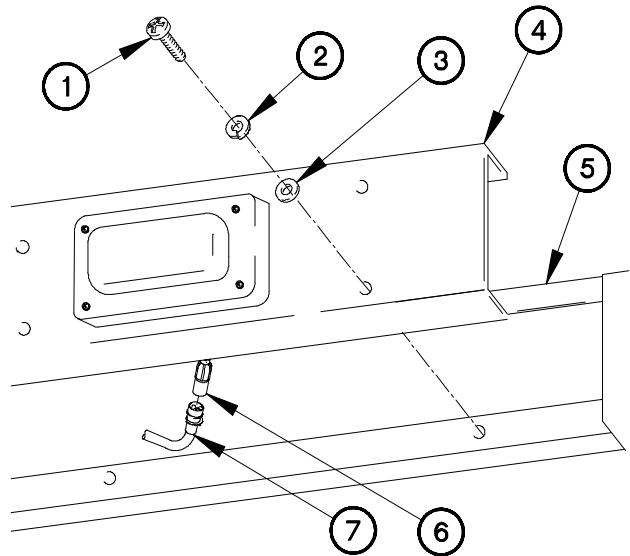
Remove plastic cable ties as required.

- (10) Pull wire 1499R (15), wire 3086C (12), and wire 401 (16) into raceway (5).
- (11) Remove convoluted tubing (19) from raceway hole (20).
- (12) Install plug (21) on raceway (5).

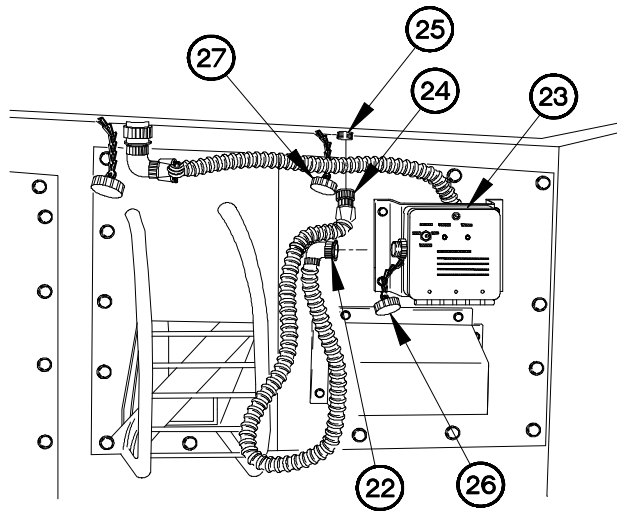


20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (13) Connect connector J165 (6) to connector P165 (7).
- (14) Install cover (4) on raceway (5) with 12 washers (3), lockwashers (2), and screws (1).



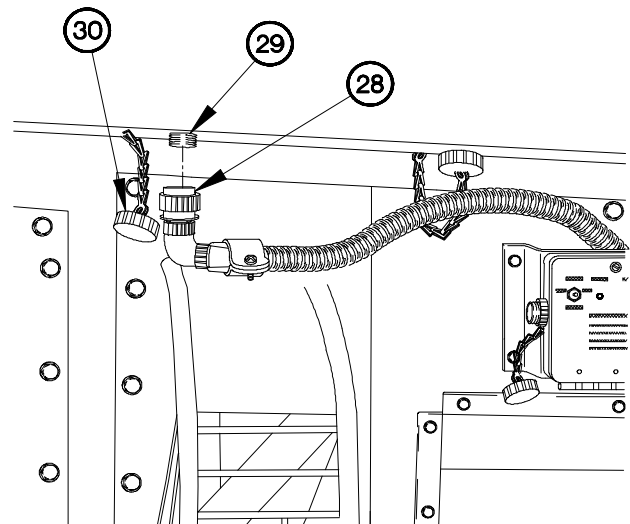
3V41R071



3v41r081

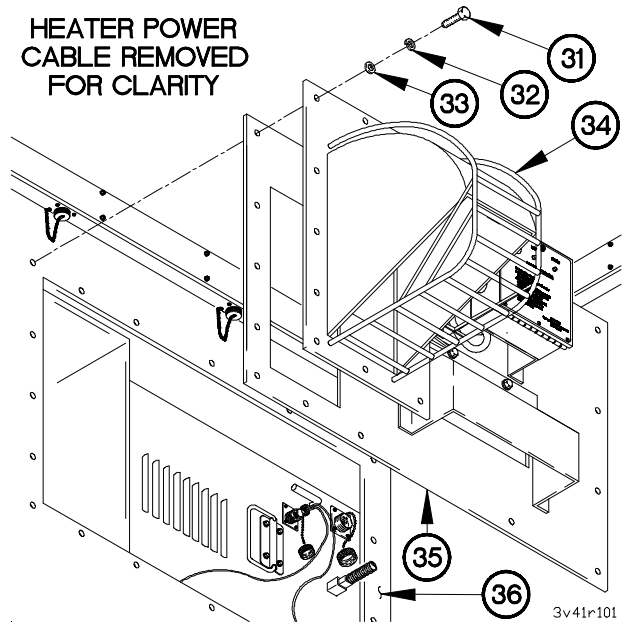
- (15) Disconnect connector P245A (22) from heater control unit (23).
- (16) Disconnect connector J245 (24) from thermostat connector (25).
- (17) Install dust cap (26) on heater control unit (23).
- (18) Install dust cap (27) on thermostat connector (25).

- (19) Disconnect connect P244 (28) from heater connector (29).
- (20) Install dust cap (30) on heater connector (29).



3v41r72

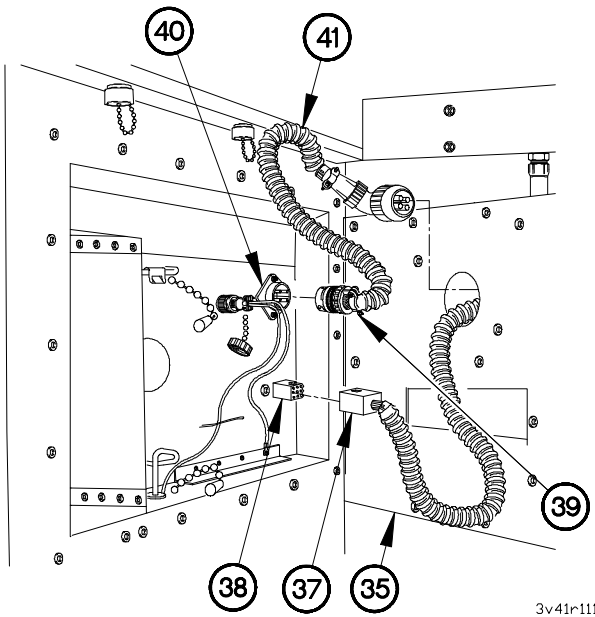
- (21) Remove 18 screws (31), lockwashers (32), washers (33), heater deflector (34), and heater cover (35) from inside front van body wall (36). Discard lockwashers.



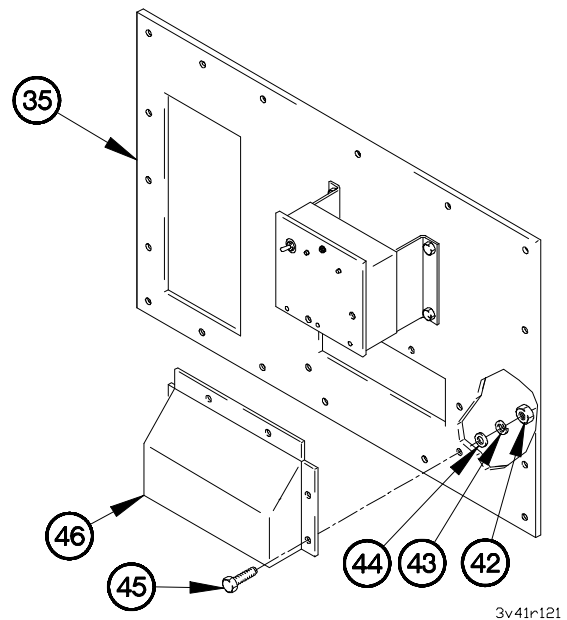
NOTE

Tag connectors and connection points prior to disconnecting.

- (22) Disconnect connect P4A (37) from connector J4 (38).
- (23) Disconnect connector J244A (39) from heater power cable connector (40).
- (24) Remove heater power cable (41) from heater cover (35).

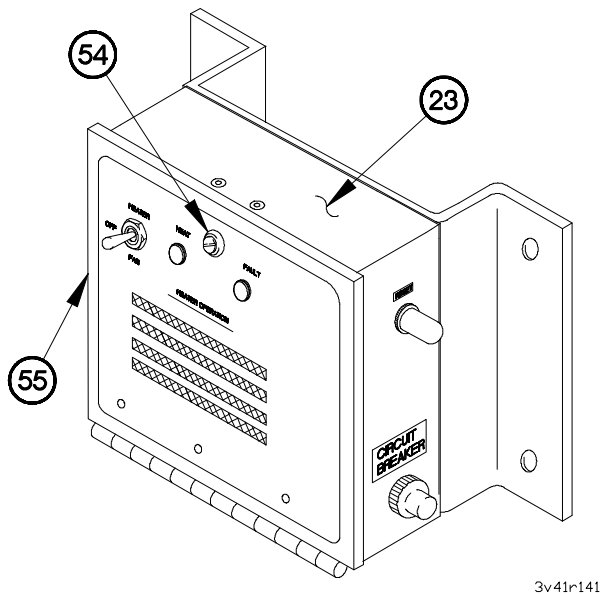
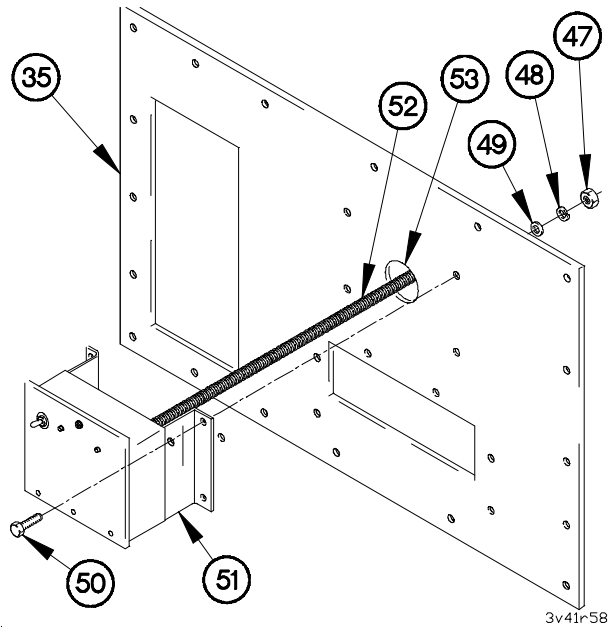


- (25) Remove six nuts (42), lockwashers (43), washers (44), screws (45), and hood (46) from heater cover (35).



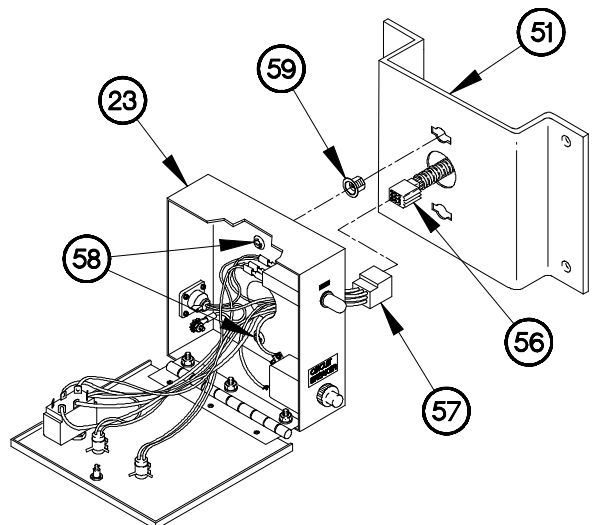
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (26) Remove four nuts (47), lockwashers (48), washers (49), screws (50), and bracket (51) from heater cover (35).
- (27) Route heater control cable (52) through hole (53) in heater cover (35).



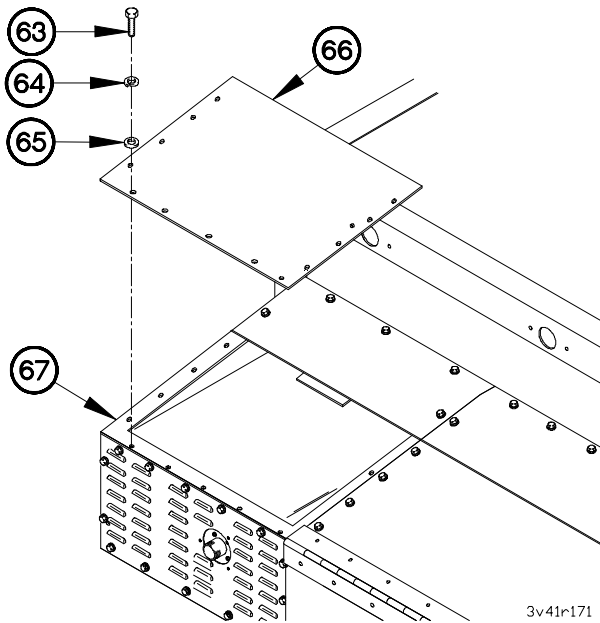
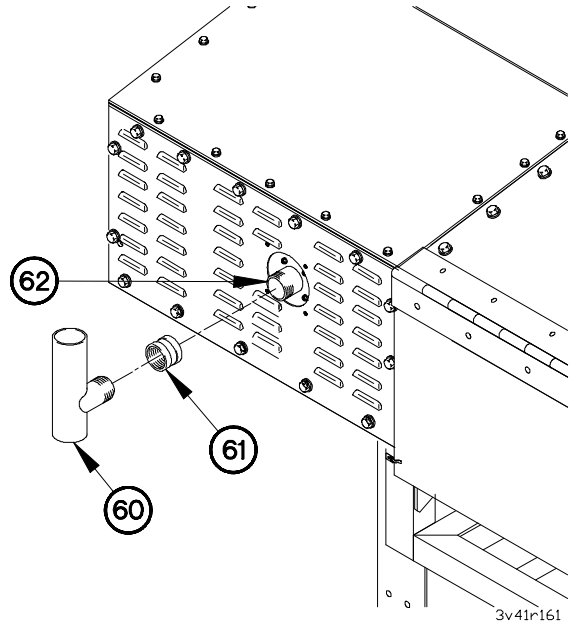
- (28) Unlatch screw (54) on door (55).
- (29) Open door (55) on heater control unit (23).

- (30) Disconnect connector J4A (56) from connector P4 (57).
- (31) Unlatch two screws (58) on heater control unit (23).
- (32) Remove heater control unit (23) from bracket (51).
- (33) Remove two twist locks (59) from bracket (51).



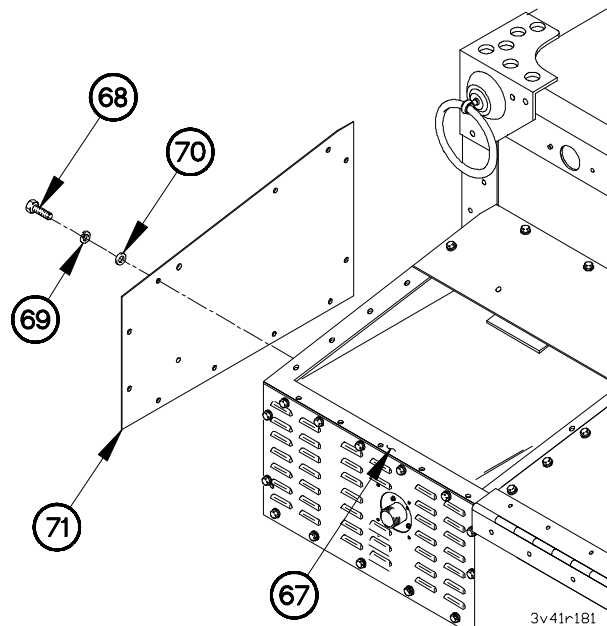
(34) Remove exhaust pipe (60) from coupler (61).

(35) Remove coupler (61) from heater (62).



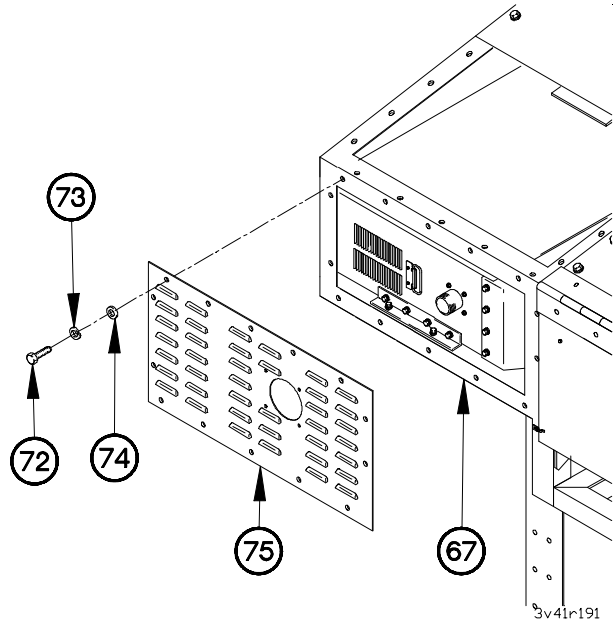
(36) Remove 13 screws (63), lockwashers (64), washers (65), and curbside top front panel (66) from pod frame (67). Discard lockwashers.

(37) Remove 13 screws (68), lockwashers (69), washers (70), and curbside panel (71) from pod frame (67). Discard lockwashers.



20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

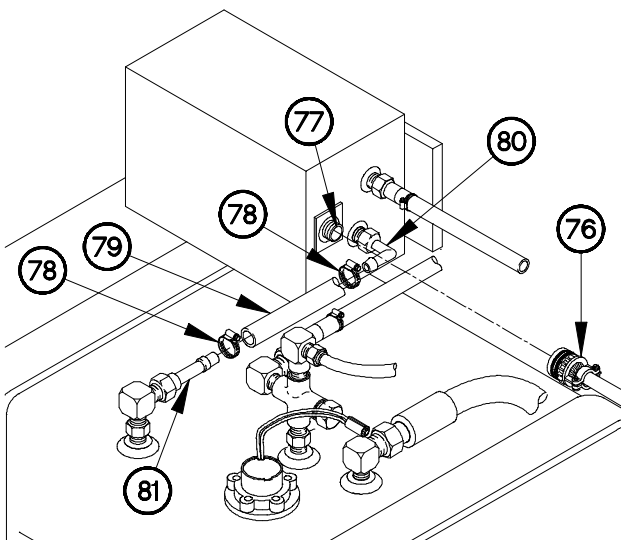
- (38) Remove 14 screws (72), lockwashers (73), washers (74), and curbside front panel (75) from pod frame (67). Discard lockwashers.



- (39) Disconnect heater fuel pump connector (76) from connector P310 (77).

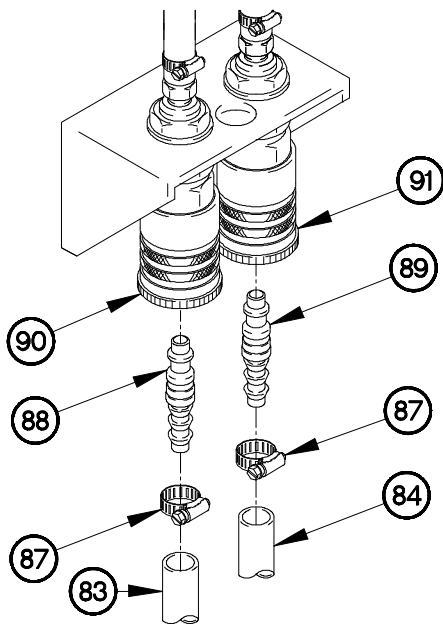
WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.



- (40) Loosen two clamps (78) on hose (79).
 (41) Remove hose (79) and two clamps (78) from fittings (80 and 81).

- (42) Loosen two clamps (82) on hoses (83 and 84).
- (43) Remove hoses (83 and 84) and two clamps (82) from fitting (85 and 86).

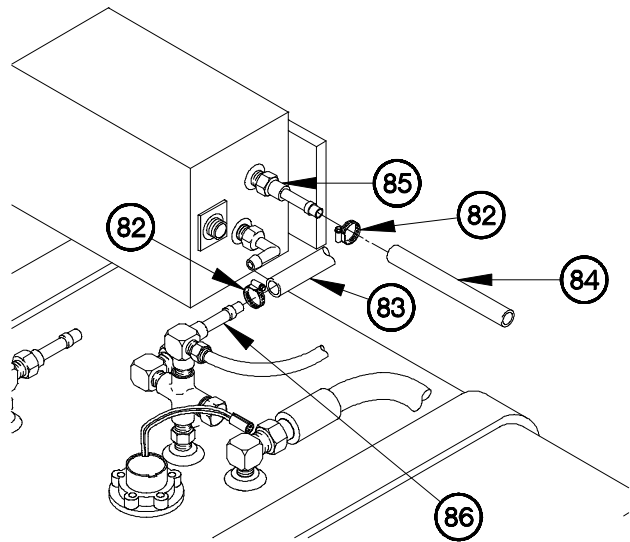


3v41r221

NOTE

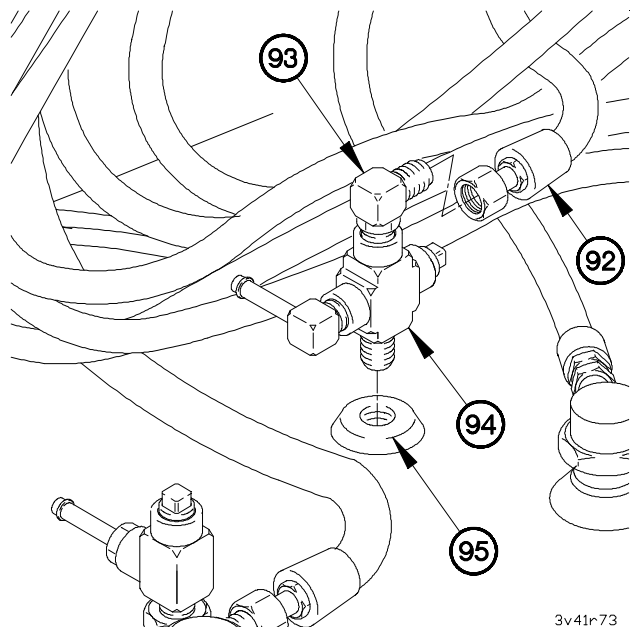
Remove plastic cable ties as required.

- (47) Disconnect fuel hose (92) from 90-degree return fitting (93).
- (48) Remove four-way fitting (94) from fuel tank (95).



3v41r60

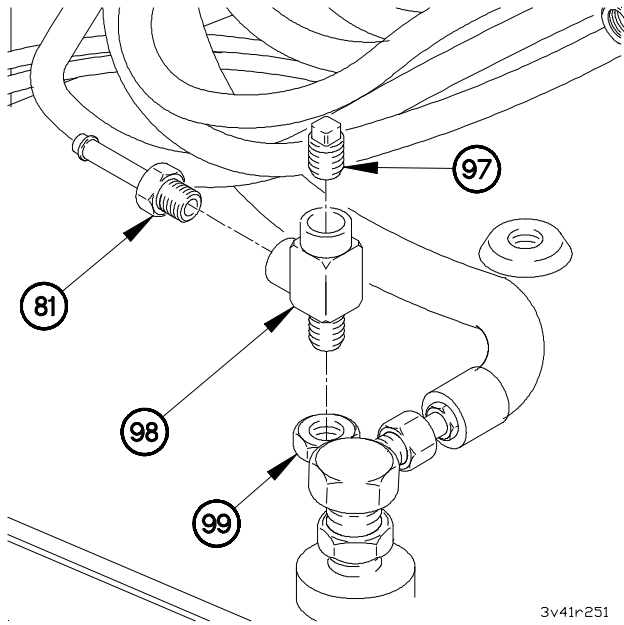
- (44) Loosen two clamps (87) on hoses (83 and 84).
- (45) Remove hoses (83 and 84) and two clamps (87) from fittings (88 and 89).
- (46) Disconnect fittings (88 and 89) from quick connect fittings (90 and 91).



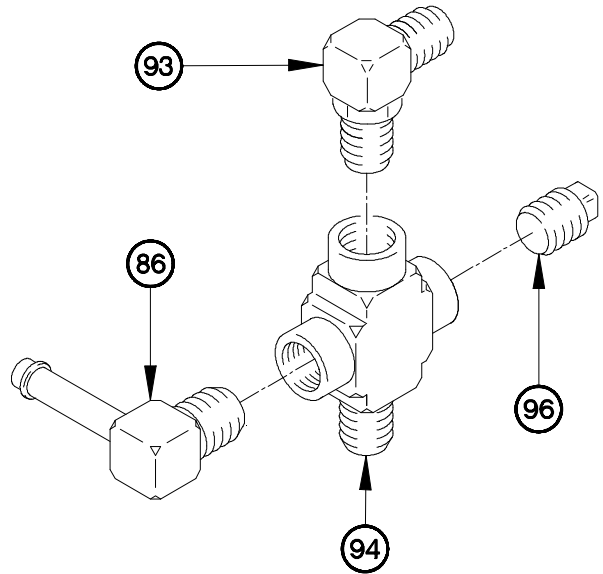
3v41r73

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(49) Remove 90-degree return fitting (93), 90-degree fitting (86), and plug (96) from four-way fitting (94).



3v41r251



3v41r241

(50) Remove fitting (81) and plug (97) from run tee fitting (98).

(51) Remove run tee fitting (98) from auxiliary supply port (99).

WARNING

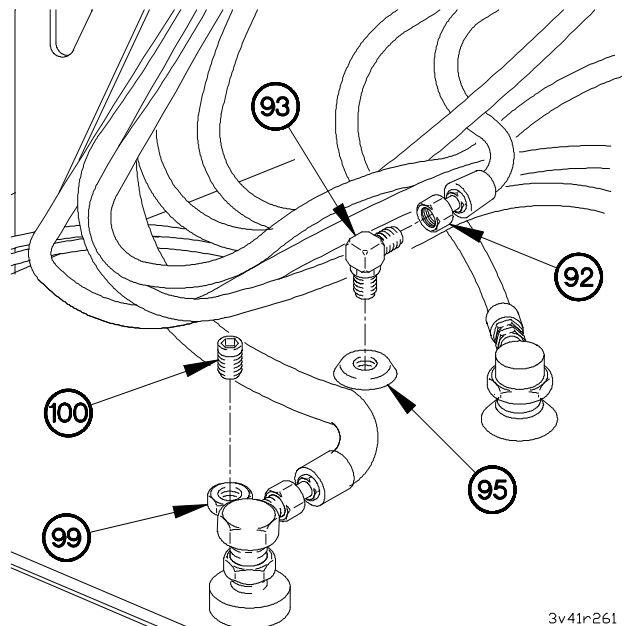
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(52) Apply sealing compound to threads of 90-degree return fitting (93) and plug (100).

(53) Install 90-degree return fitting (93) on fuel tank (95).

(54) Connect fuel hose (92) to 90-degree return fitting (93).

(55) Install plug (100) in auxiliary supply port (99).

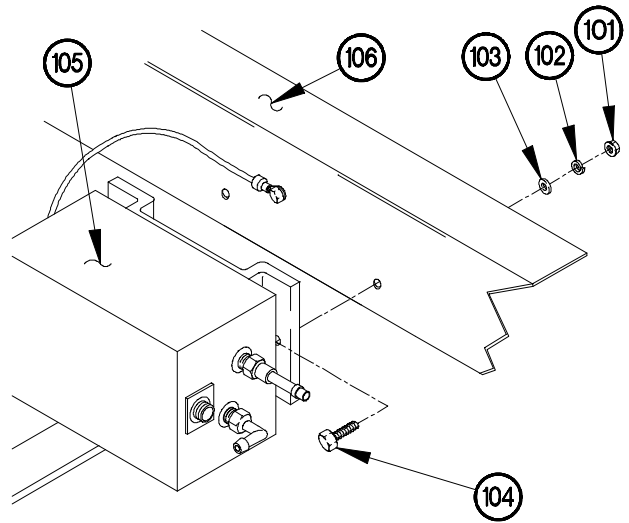


3v41r261

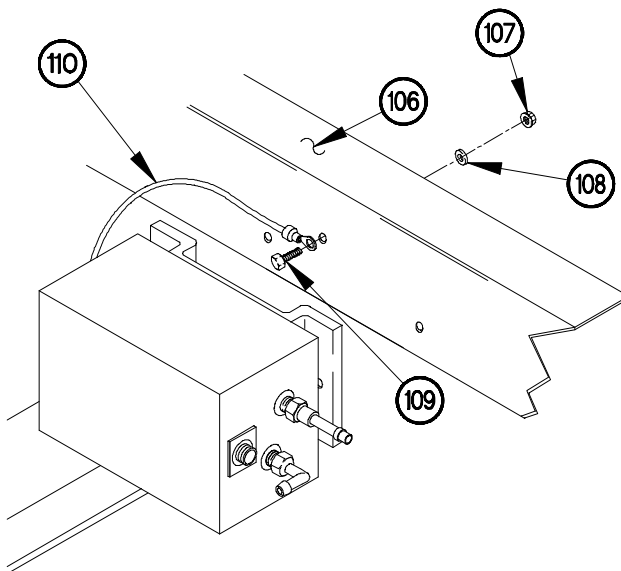
NOTE

Step (56) requires the aid of an assistant.

- (56) Remove two nuts (101), lockwashers (102), washers (103), screws (104), and EMI Shielded fuel pump assembly (105) from sub-frame (106). Discard lockwashers.



3v41r61

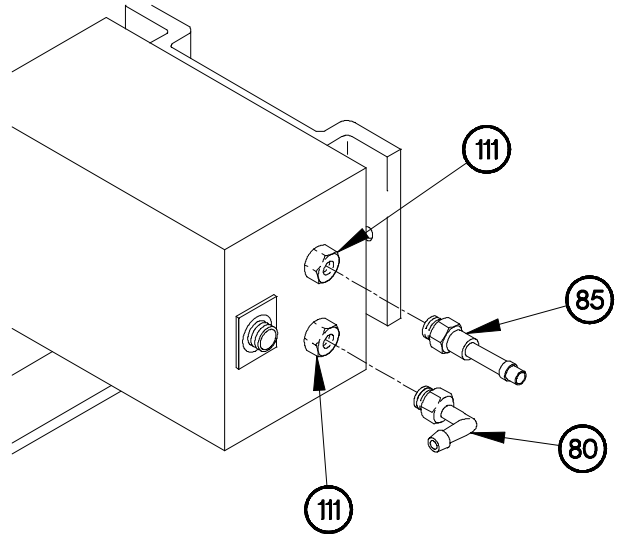


3v41r62

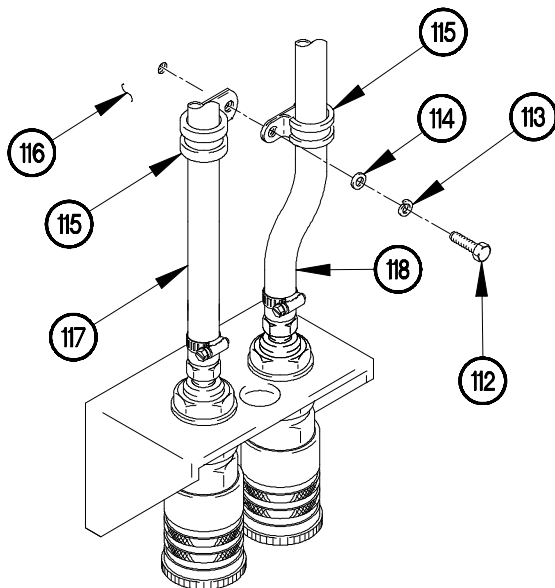
- (57) Remove locknut (107), washer (108), screw (109), and EMI shielded fuel pump ground wire (110) from sub frame (106).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(58) Remove fittings (85) and 90-degree fitting (80) from EMI shielded fuel pump couplings (111).



3v41r63

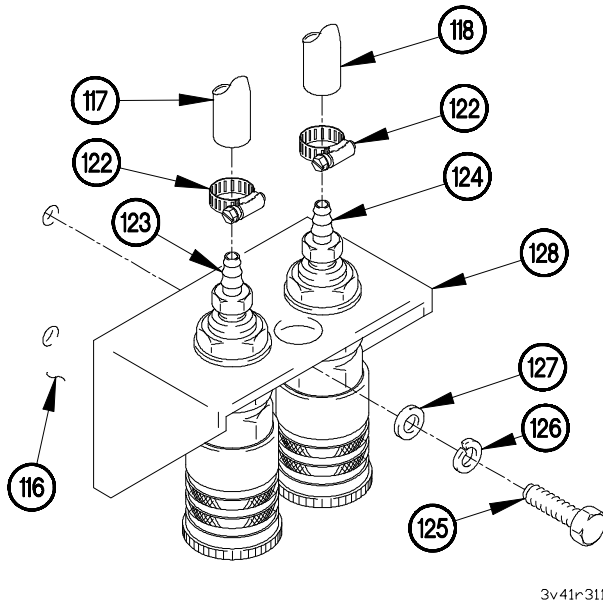
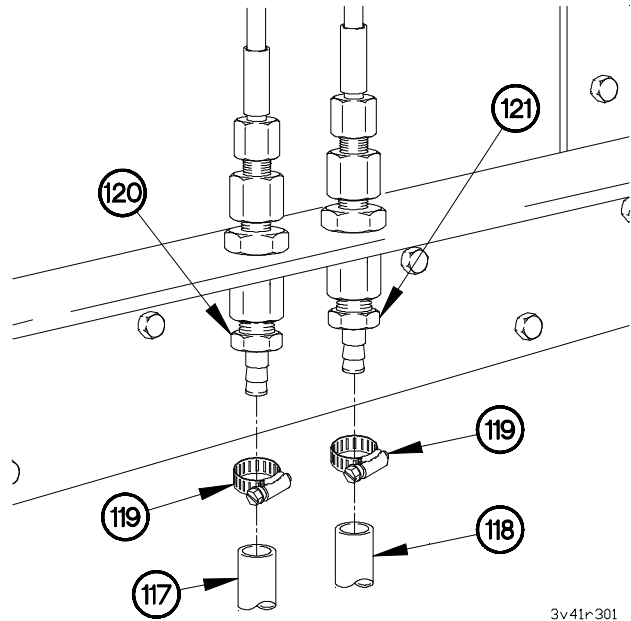


3v41r291

(59) Remove three screws (112), lockwashers (113), washers (114), and six clamps (115) from outside front van body wall (116). Discard lockwashers.

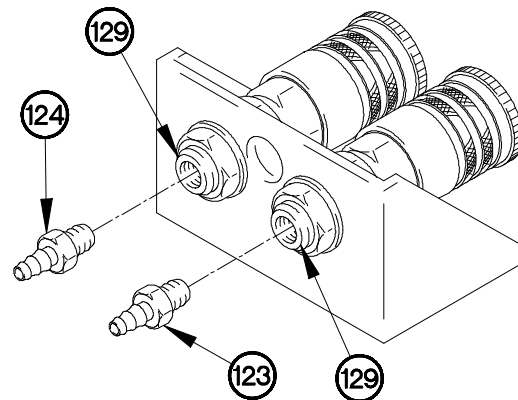
(60) Remove six clamps (115) from hoses (117 and 118).

- (61) Loosen two clamps (119) on hoses (117 and 118).
- (62) Remove hoses (117 and 118) and clamps (119) from fittings (120 and 121).



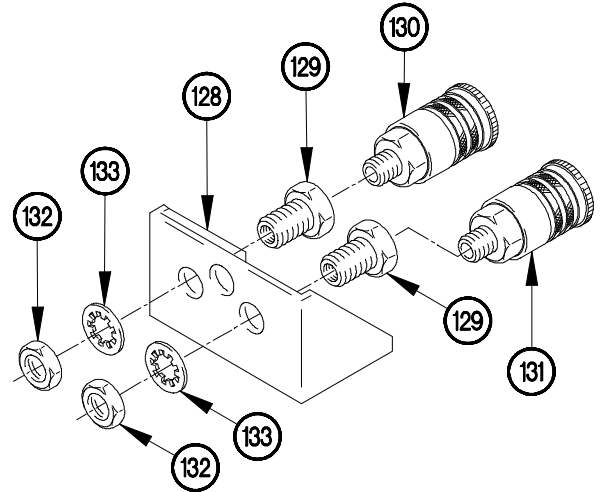
- (63) Loosen two clamps (122) on hoses (117 and 118).
- (64) Remove hoses (117 and 118) and clamps (122) from fittings (123 and 124).
- (65) Remove two screws (125), lockwashers (126), washers (127), and bracket (128) from outside front van body wall (116).

- (66) Remove fittings (123 and 124) from two bushings (129).



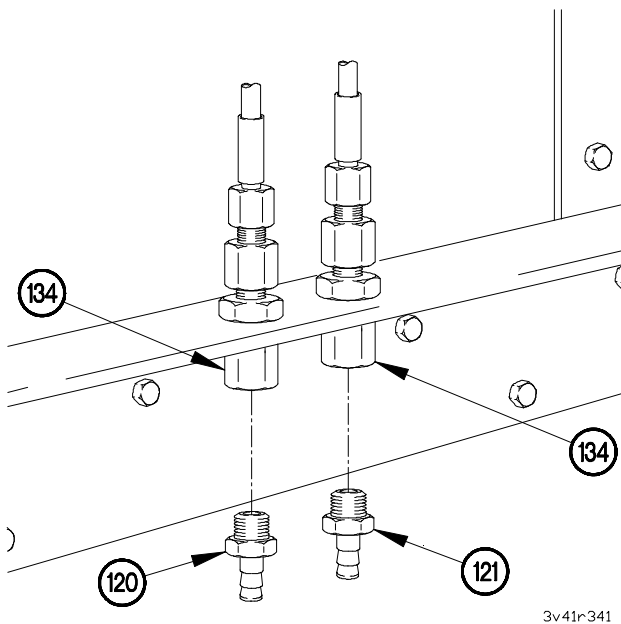
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (67) Remove quick connect fittings (130 and 131) from two bushings (129).
- (68) Remove two nuts (132), lockwashers (133), and bushings (129) from bracket (128). Discard lockwashers.



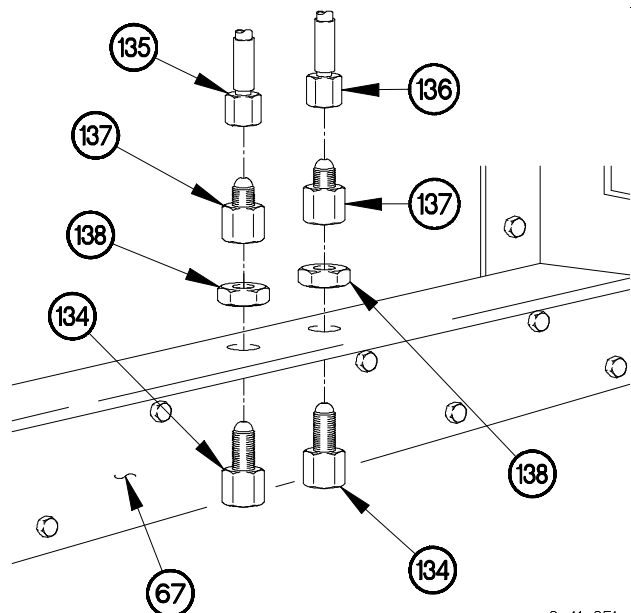
3v41r331

- (69) Remove fitting (120 and 121) from two fittings (134).



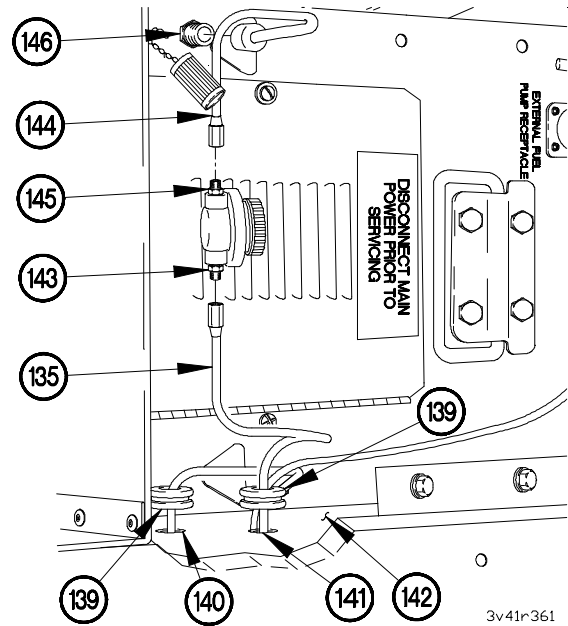
3v41r341

- (70) Remove fuel tubes (135 and 136) from two adapters (137).
- (71) Remove two adapters (137) from fittings (134).
- (72) Remove two nuts (138) and fittings (134) from pod frame (67).

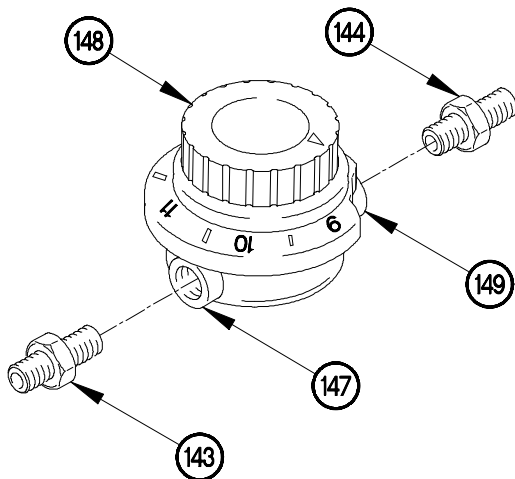


3v41r351

- (73) Remove two grommets (139) from holes (140 and 141) pod panel (142).
- (74) Remove fuel tube (135) from fitting (143).
- (75) Remove fuel tube (144) from fitting (145).
- (76) Remove fuel tube (135) from pod panel (142).
- (77) Remove fuel tube (144) from fuel inlet port (146).



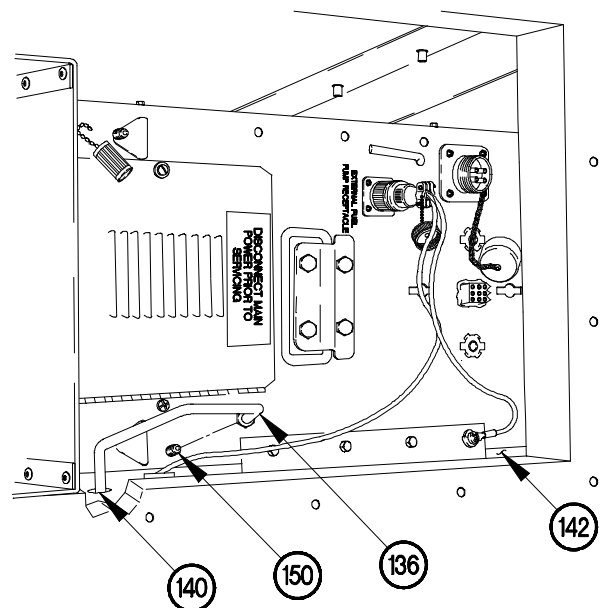
3v41r361



3v41r371

- (78) Remove fitting (143) from outlet port (147) of fuel regulator (148).
- (79) Remove fitting (144) from inlet port (149) of fuel regulator (148).

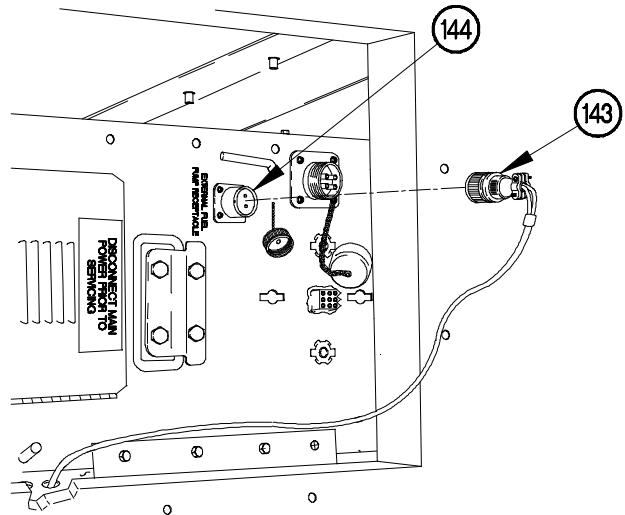
- (80) Remove fuel tube (136) from fuel overflow port (150).
- (81) Remove fuel tube (136) from hole (140) in pod panel (142).



3v41r64

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(82) Disconnect connector J314 (151) from heater fuel pump power cable connector (152).



3v41r65

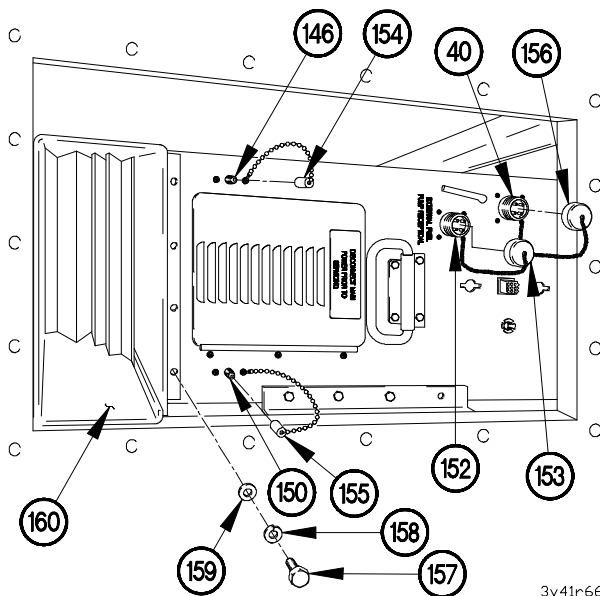
(83) Install dust cap (153) on heater fuel pump power cable connector (152).

(84) Install dust cap (154) on fuel inlet port (146).

(85) Install dust cap (155) on fuel overflow port (150).

(86) Install dust cap (156) on heater power cable connector (40).

(87) Remove four screws (157), lockwashers (158), and washers (159) from heater duct (160). Discard lockwashers.

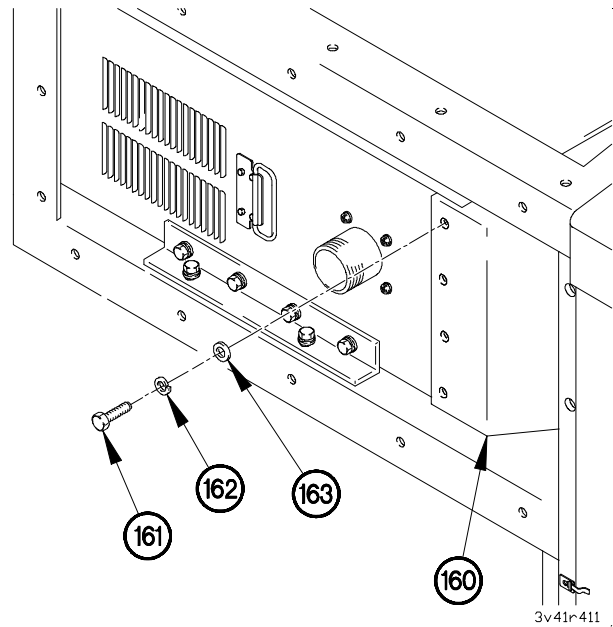


3v41r66

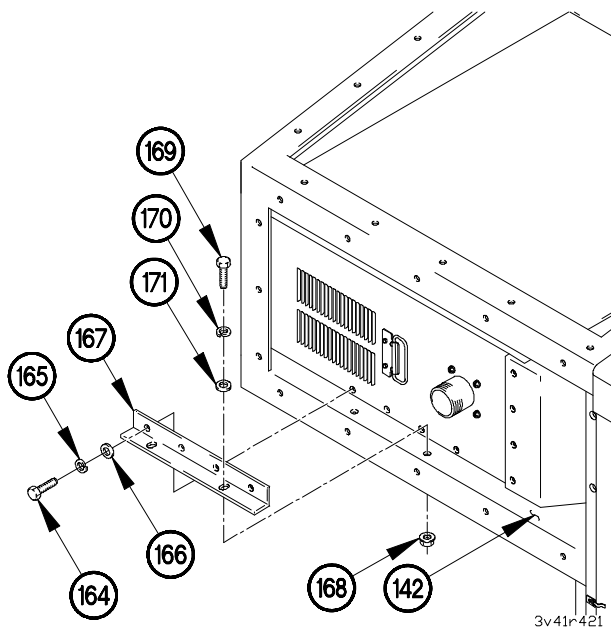
NOTE

Steps (88) through (94) require the aid of an assistant.

- (88) Remove four screws (161), lockwashers (162), and washers (163) from heater duct (160). Discard lockwashers.

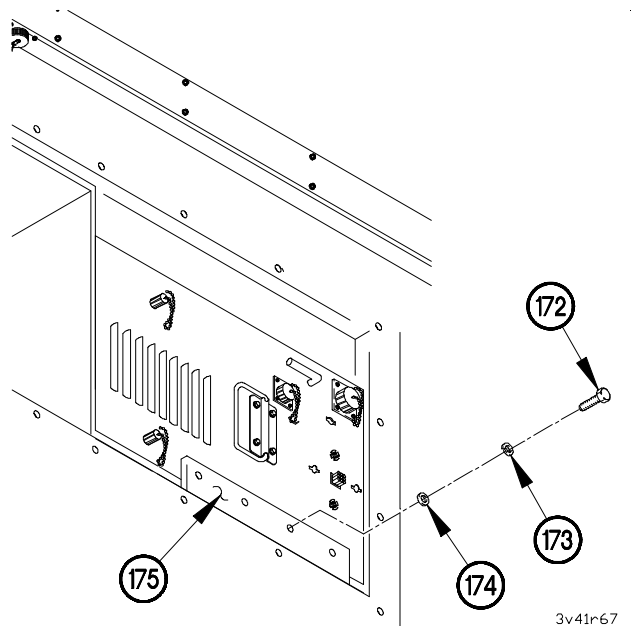


- (89) Remove four screws (164), lockwashers (165), and washers (166) from bracket (167).



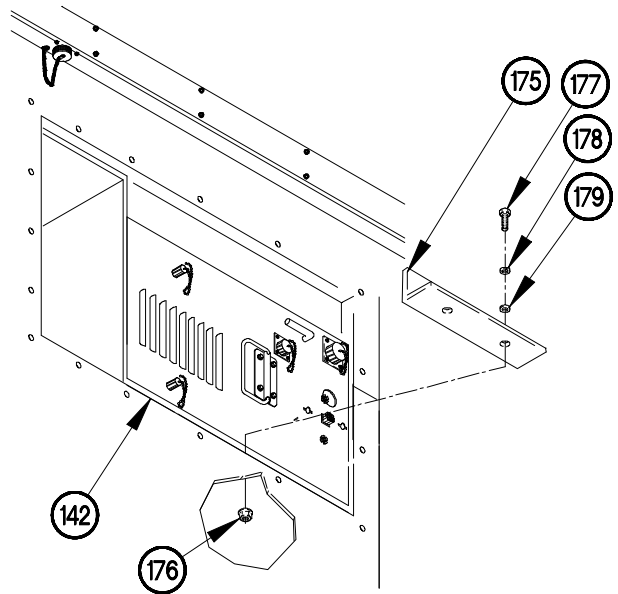
- (90) Remove two self-locking nuts (168), screws (169), lockwashers (170), washers (171), and bracket (167) from pod panel (142).

- (91) Remove four screws (172), lockwashers (173), and washers (174) from bracket (175).



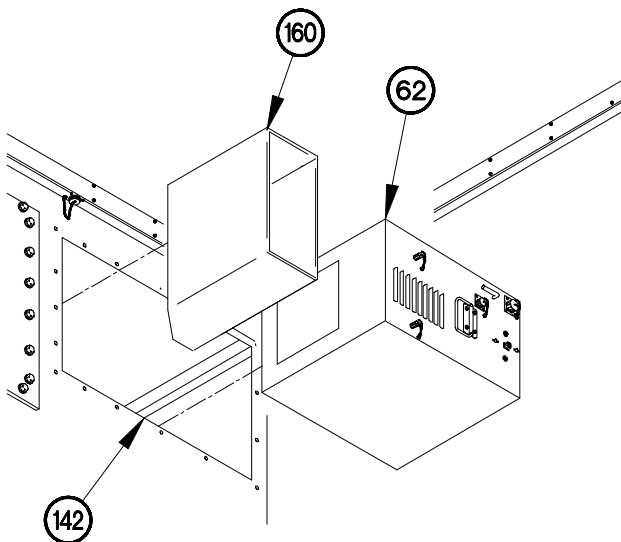
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (92) Remove two self-locking nuts (176), screws (177), lockwashers (178), washers (179), and bracket (175) from pod panel (142).



3v41r68

- (93) Remove heater duct (160) from pod panel (142).



3v41r69

- (95) Install two twist locks (59) on heater (62).
 (96) Position heater control unit (23) on heater (62).
 (97) Latch two screws (58) on heater control unit (23).
 (98) Connect connector P4 (57) to connector J4 (38).

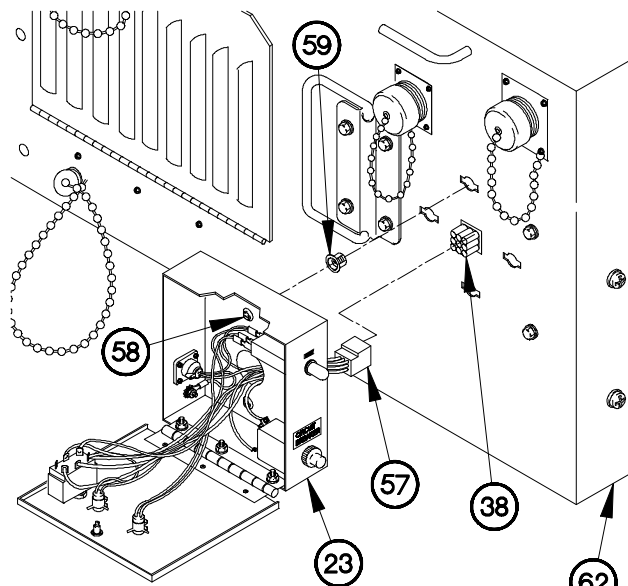
WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

CAUTION

Use caution when installing heater. Heater fuel pump power cable installed. Failure to comply may cause damage to equipment.

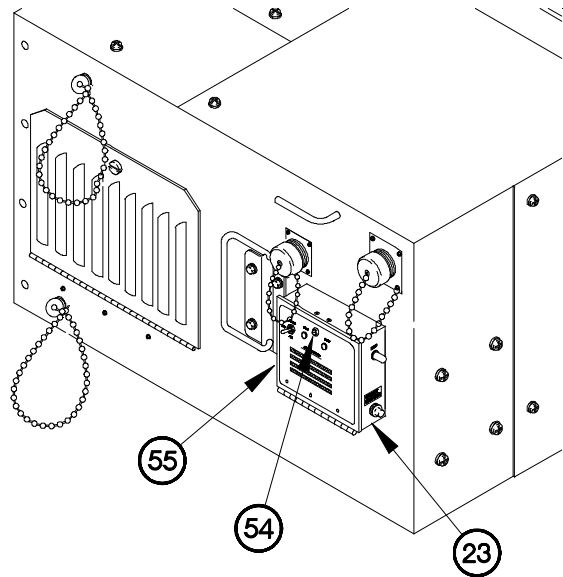
- (94) Remove heater (62) from pod panel (142).



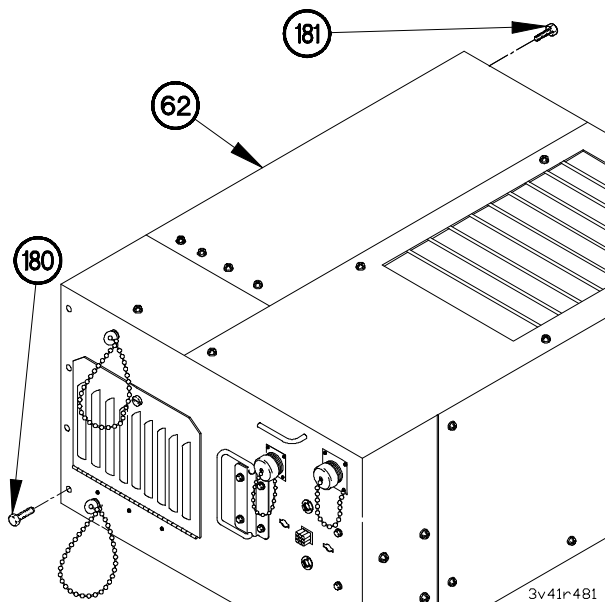
3v41r461

(99) Close door (55) on heater control unit (23).

(100) Latch screw (54) on door (55).



3v41r471



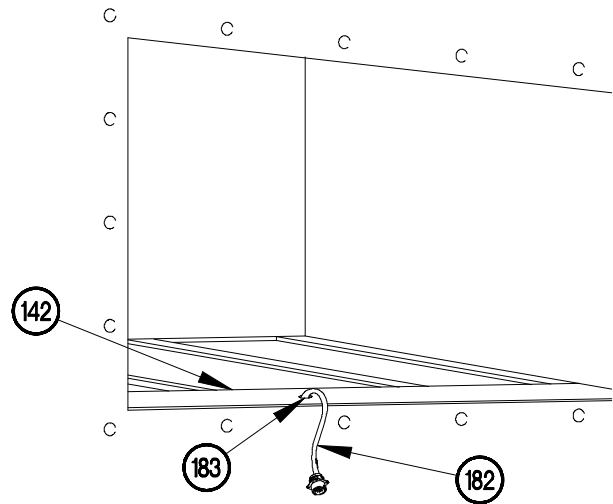
3v41r481

(101) Install eight screws (180) in heater (62).

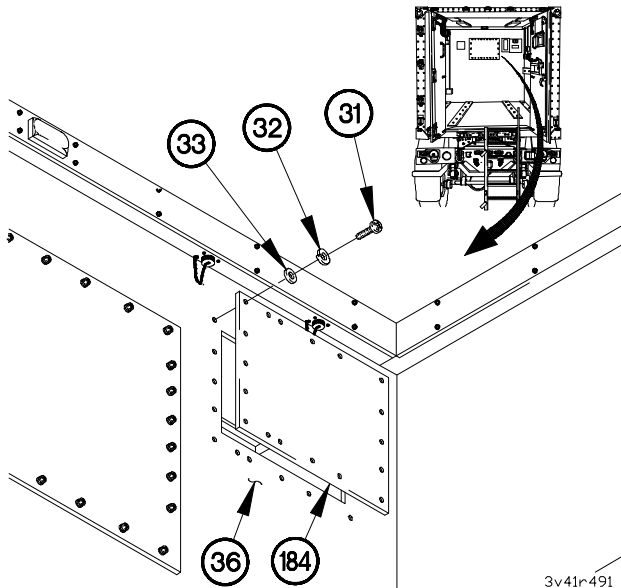
(102) Install eight screws (181) in heater (62).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

(103) Remove heater fuel pump power cable (182) through hole (183) in pod panel (142).



3v41r70

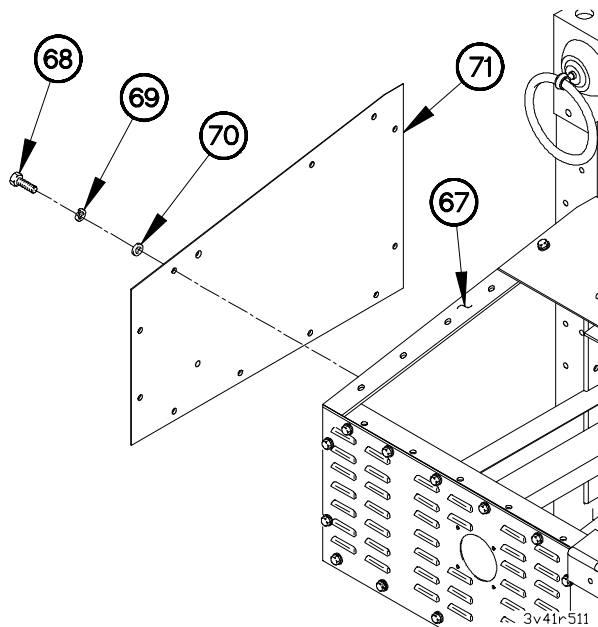
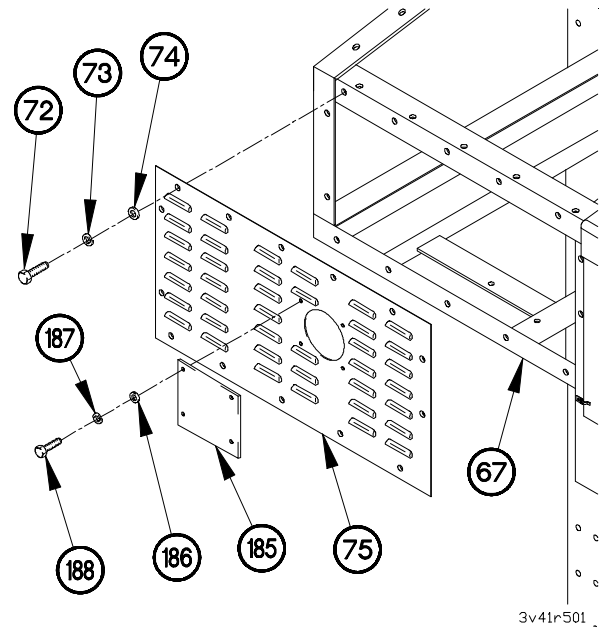


(104) Install cover (184) on inside front van body wall (36) with 18 washers (33), lockwashers (32), and screws (31).

3v41r491

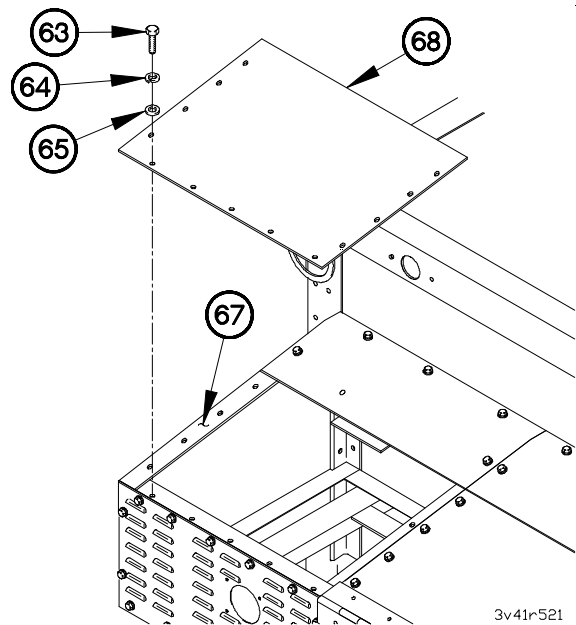
(105) Install cover plate (185) on curbside front panel (75) with four washers (186), lockwasher (187), and screws (188).

(106) Install curbside front panel (75) on pod frame (67) with 14 washers (74), lockwasher (73), and screws (72).



(107) Install curbside panel (71) on pod frame (67) with 13 washers (70), lockwashers (69), and screws (68).

(108) Install curbside top front panel (68) on pod frame (67) with 13 washers (65), lockwashers (64), and screws (63).



20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

c. Follow-on Maintenance.

- (1) Raise spare tire (TM 9-2320-365-10).
- (2) Lower cab (TM 9-2320-365-10).
- (3) Connect AC power (TM 9-2320-365-10).
- (4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-42. M1079 HEATER POWER CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

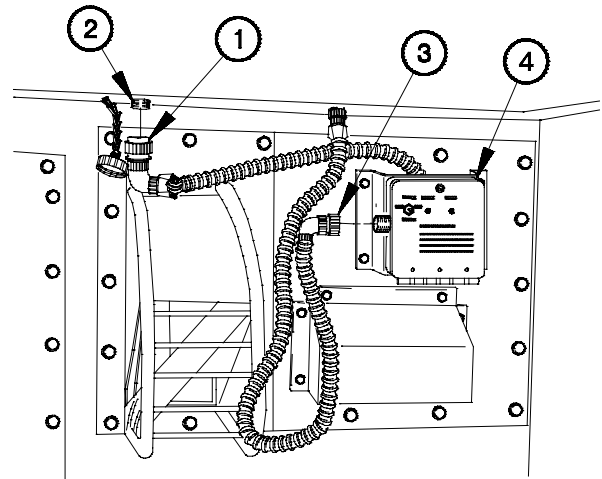
- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
- Lockwasher (18) (Item 84, Appendix G)

a. Removal.

NOTE

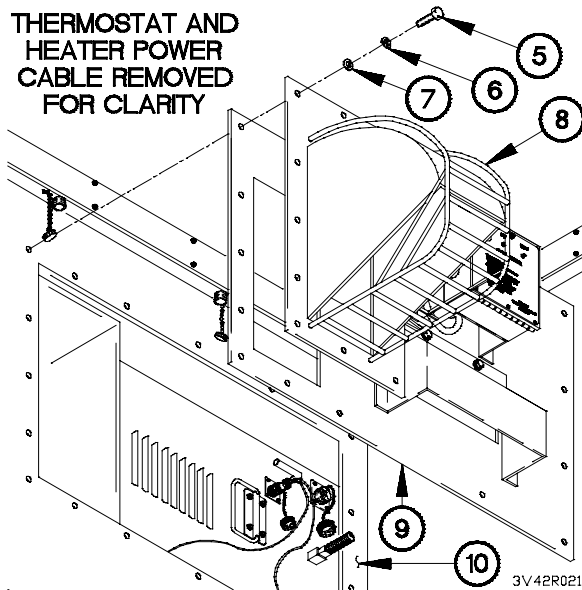
Tag connectors and connection points prior to removal.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).



3V42R011

THERMOSTAT AND HEATER POWER CABLE REMOVED FOR CLARITY

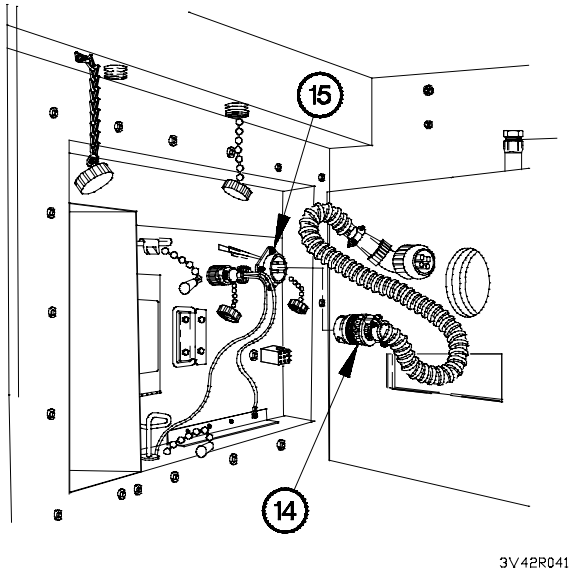
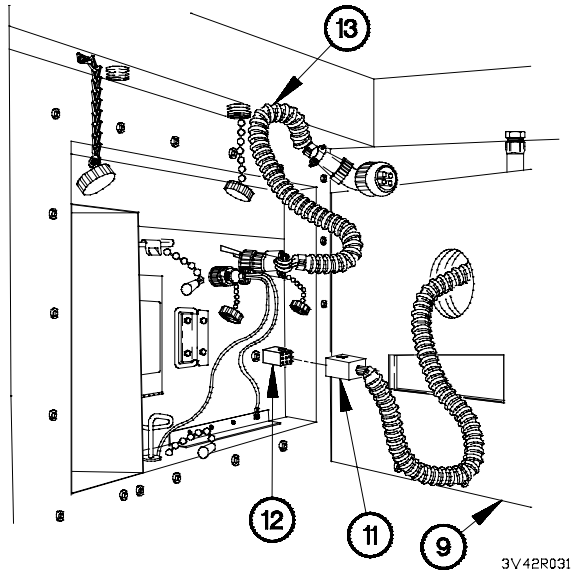


3V42R021

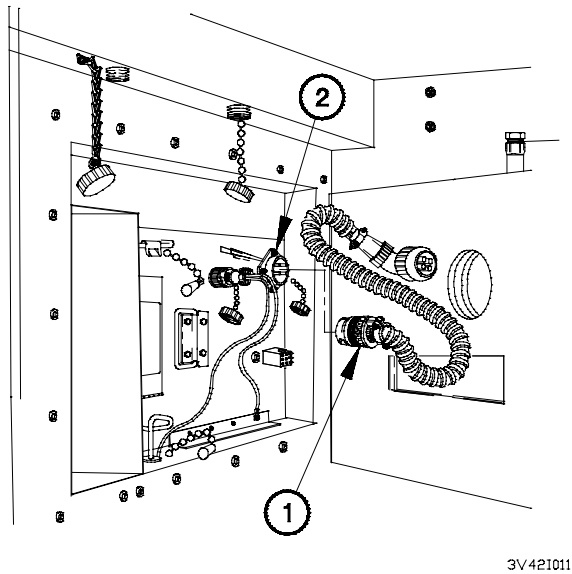
- (3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8), and heater cover (9) from van body wall (10). Discard lockwashers.

20-42. M1079 HEATER POWER CABLE REPLACEMENT (CONT)

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).



- (6) Disconnect connector J244A (14) from heater power connector (15).

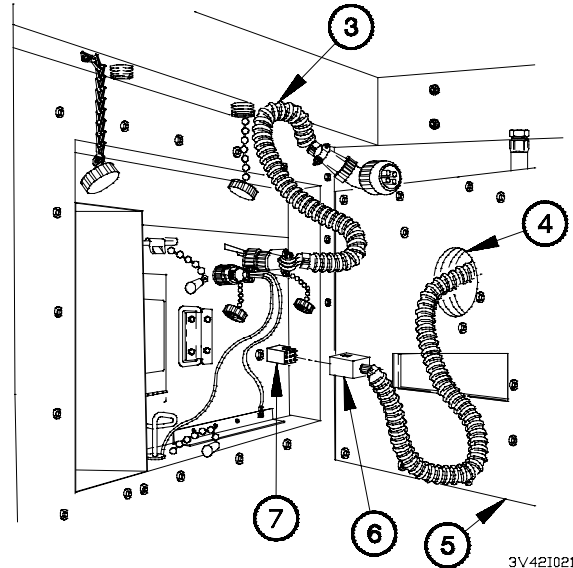


b. Installation.

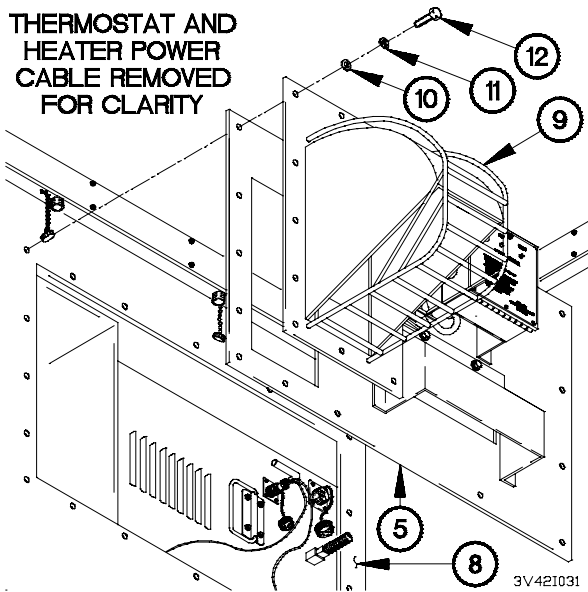
- (1) Connect connector J244A (1) to heater power connector (2).

(2) Route heater power cable (3) through hole (4) in heater cover (5).

(3) Connect connector P4A (6) to connector J4 (7).



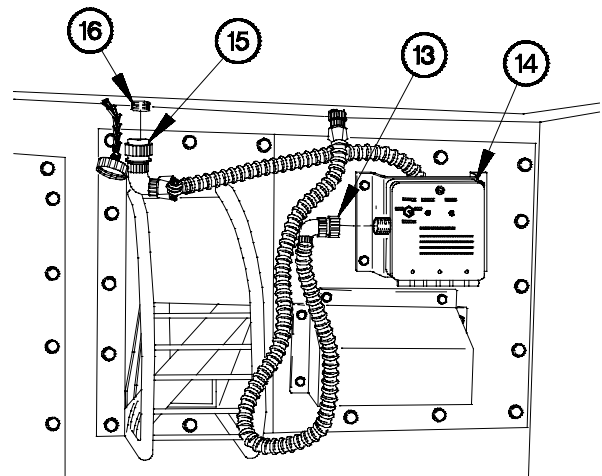
**THERMOSTAT AND
HEATER POWER
CABLE REMOVED
FOR CLARITY**



(4) Install heater cover (5) on van body wall (8) with heater deflector (9), 18 washers (10), lockwashers (11), and screws (12).

(5) Connect connector P245A (13) to heater control unit (14).

(6) Connect connector P244 (15) to heater connector (16).



3V421041

20-42. M1079 HEATER POWER CABLE REPLACEMENT (CONT)

c. Follow-on Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-43. M1079 HEATER CONTROL CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).
 AC power disconnected (TM 9-2320-365-10).
 LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
 Lockwasher (18) (Item 92, Appendix G)

Personnel Required

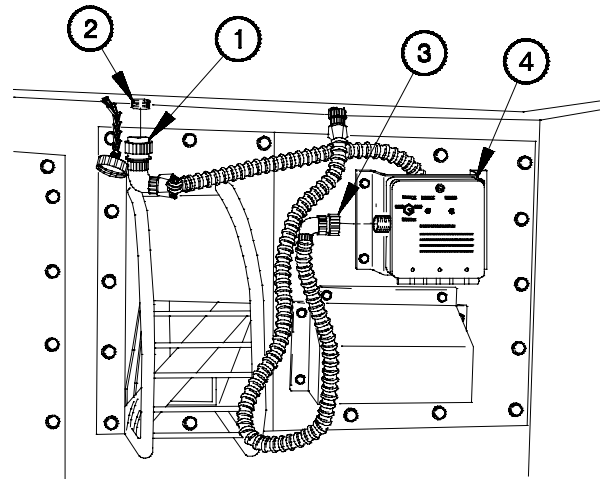
(2)

a. Removal.

NOTE

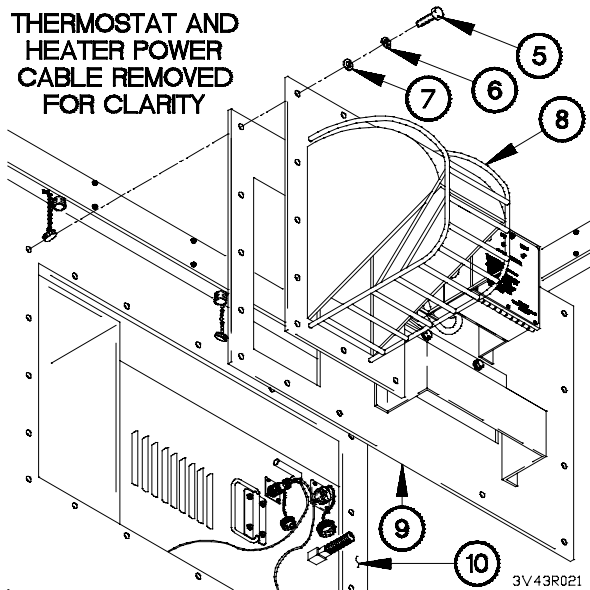
Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).



3V43R011

THERMOSTAT AND HEATER POWER CABLE REMOVED FOR CLARITY

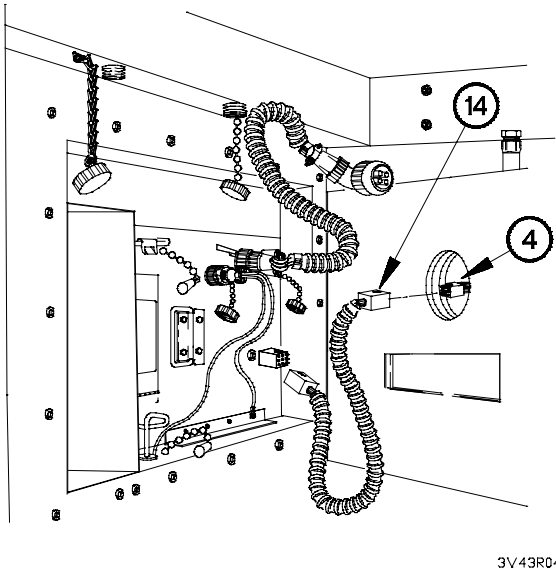
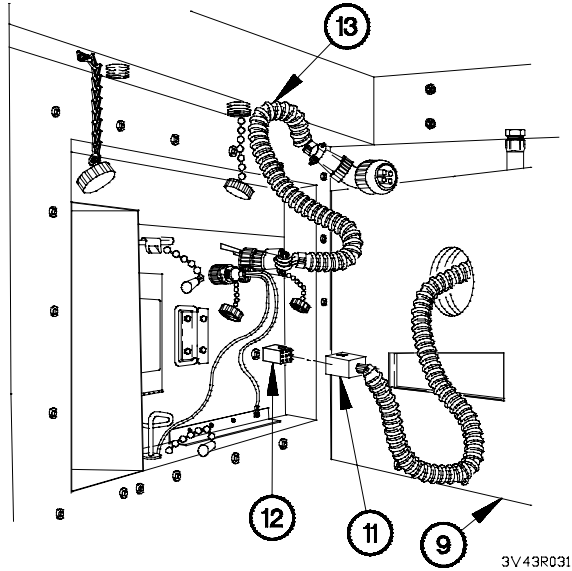


3V43R021

- (3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8), and heater cover (9) from van body wall (10). Discard lockwashers.

20-43. M1079 HEATER CONTROL CABLE REPLACEMENT (CONT)

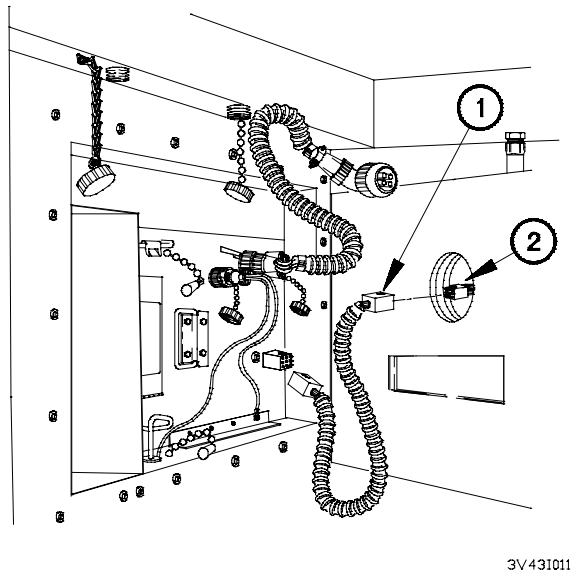
- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).



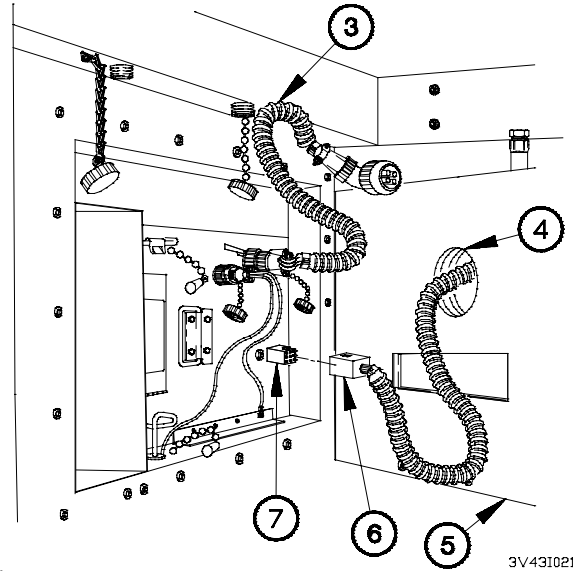
- (6) Disconnect connector J4A (14) from connector P4 (4).

b. Installation.

- (1) Connect connector J4A (1) to connector P4 (2).

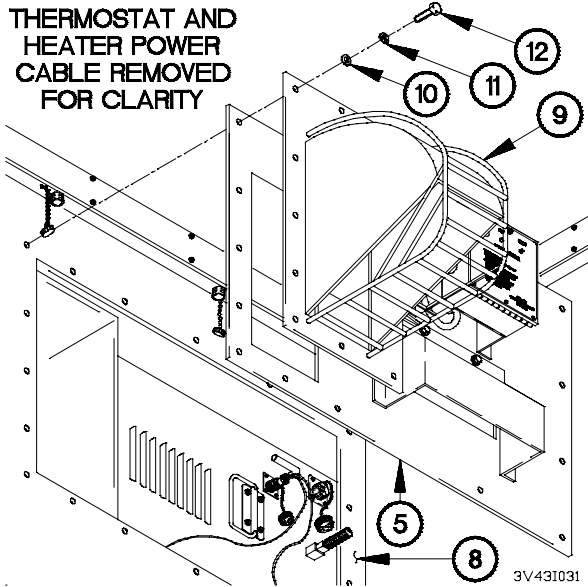


- (2) Route heater power cable (3) through hole (4) in heater cover (5).
- (3) Connect connector P4A (6) to connector J4 (7).



3V431021

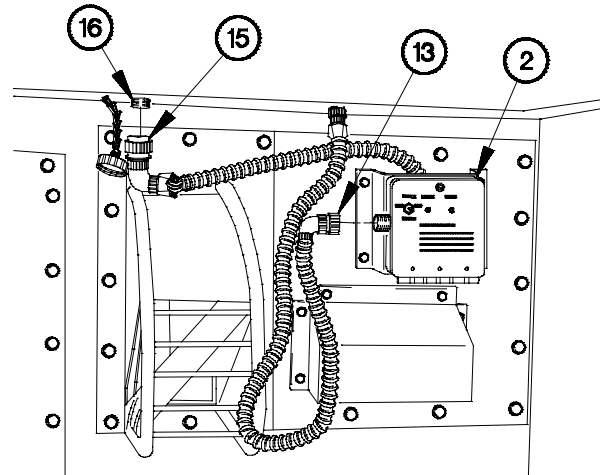
THERMOSTAT AND
HEATER POWER
CABLE REMOVED
FOR CLARITY



3V431031

- (4) Install heater cover (5) on van body wall (8) with heater deflector (9), 18 washers (10), lockwasher (11), and screws (12).

- (5) Connect connector P245A (13) to heater control unit (2).
- (6) Connect connector P244 (15) to heater connector (16).



3V431041

20-43. M1079 HEATER CONTROL CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH van doors (TM 9-2320-365-10).

End of Task.

20-44. M1079 HEATER THERMOSTAT REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).
 AC power disconnected (TM 9-2320-365-10).
 LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

References

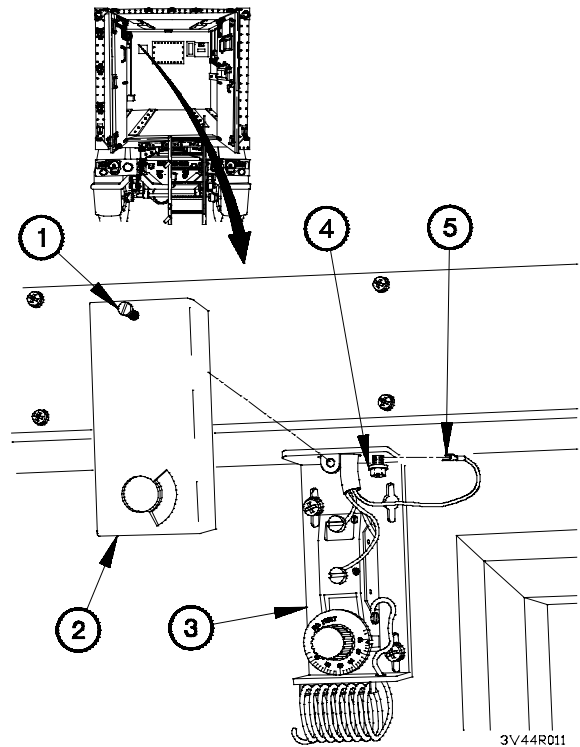
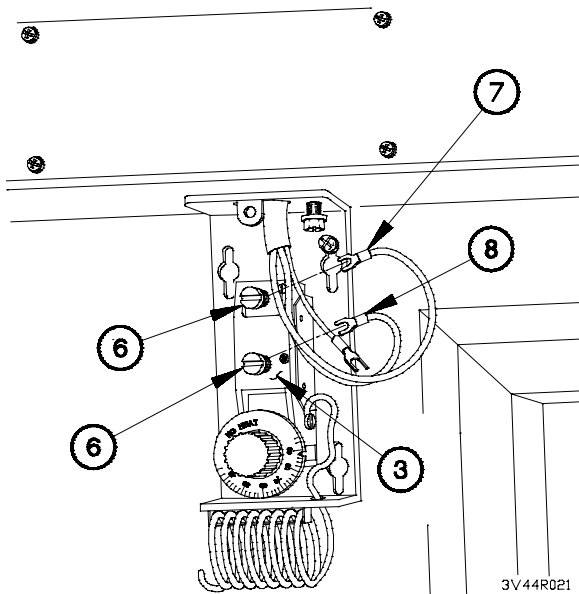
TM 5-4520-253-23P

a. Removal.

NOTE

Tag wires and connection points prior to removal.

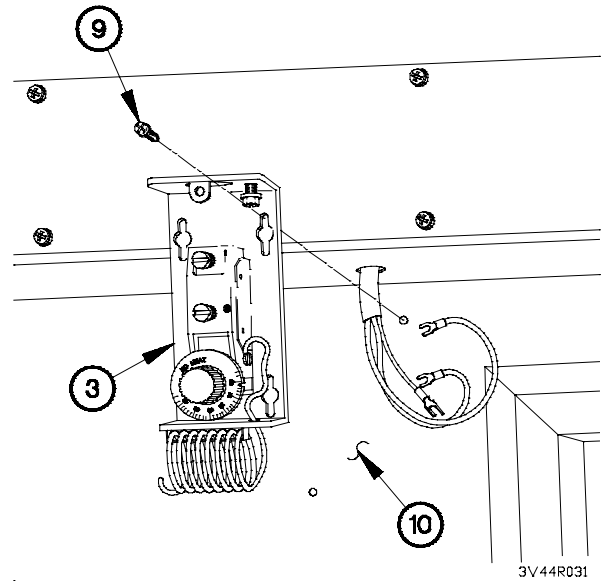
- (1) Remove screw (1) and cover (2) from thermostat (3).
- (2) Loosen screw (4) on thermostat (3).
- (3) Remove wire 3086C (5) from thermostat (3).



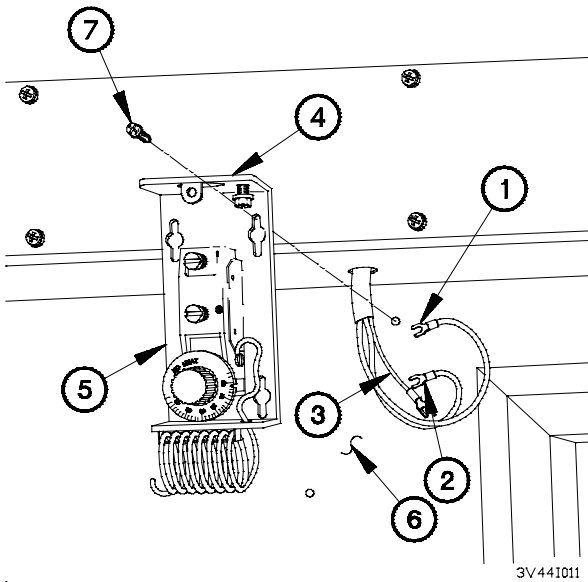
- (4) Loosen two screws (6) on thermostat (3).
- (5) Remove wire 1499R (7) and wire 401 (8) from thermostat (3).

20-44. M1079 HEATER THERMOSTAT REPLACEMENT (CONT)

(6) Remove two screws (9) and thermostat (3) from van body wall (10).

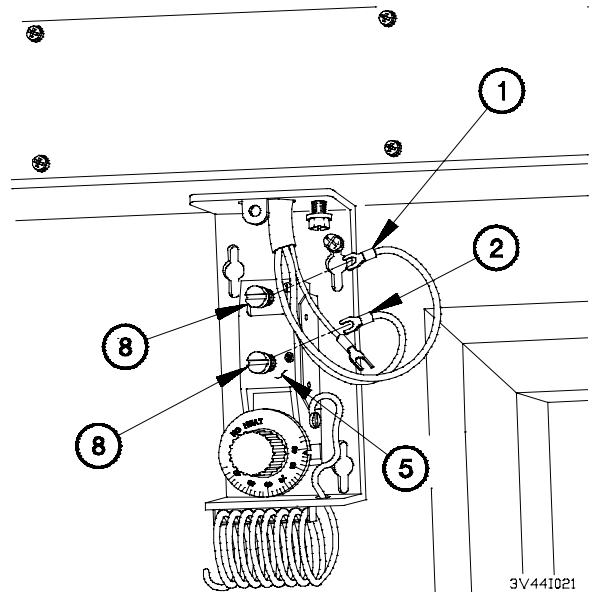


b. Installation.

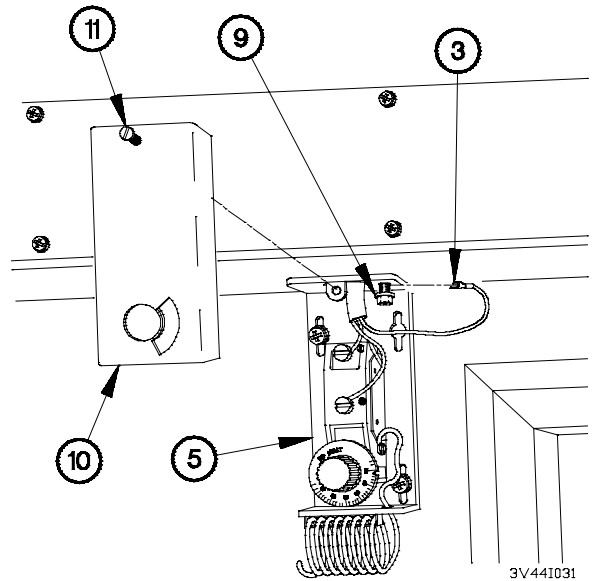


- (1) Route wire 1499R (1), wire 401 (2), and wire 3086C (3) through hole (4) on thermostat (5).
- (2) Install thermostat (5) on van body wall (6) with two screws (7).

- (3) Loosen two screws (8) on thermostat (5).
- (4) Position wire 401 (2) and wire 1499R (1) on thermostat (5).
- (4) Tighten two screws (8) on thermostat (5).



- (6) Loosen screw (9) on thermostat (5).
- (7) Position wire 3086C (3) on thermostat (5).
- (8) Tighten screw (9) on thermostat (5).
- (9) Install cover (10) on thermostat (5) with screw (11).



c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check thermostat for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

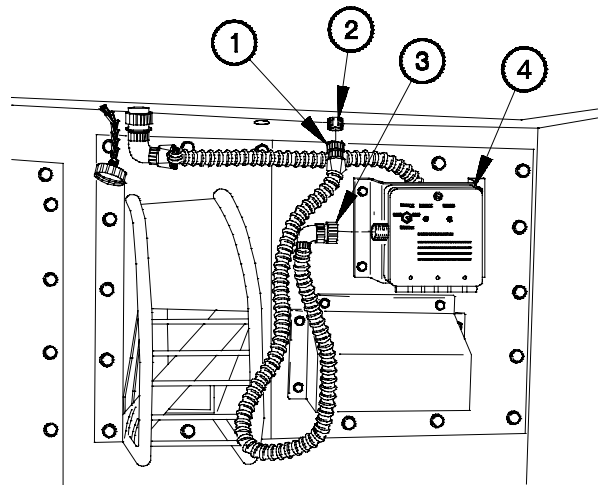
20-45. M1079 HEATER THERMOSTAT CABLE REPLACEMENT	
This task covers:	
<ul style="list-style-type: none"> a. Removal b. Installation 	<ul style="list-style-type: none"> c. Follow-On Maintenance
INITIAL SETUP	
<p>Equipment Conditions Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).</p> <p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)</p>	<p>Materials/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)</p>

a. Removal.

NOTE

Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector J245 (1) from thermostat connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).



3V45X011

b. Installation

- (1) Connect connector P245A (3) to heater control unit (4).
- (2) Connect connector J245 (1) to thermostat connector (2).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check thermostat for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).
- Spare tire lowered (TM 9-2320-365-10).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

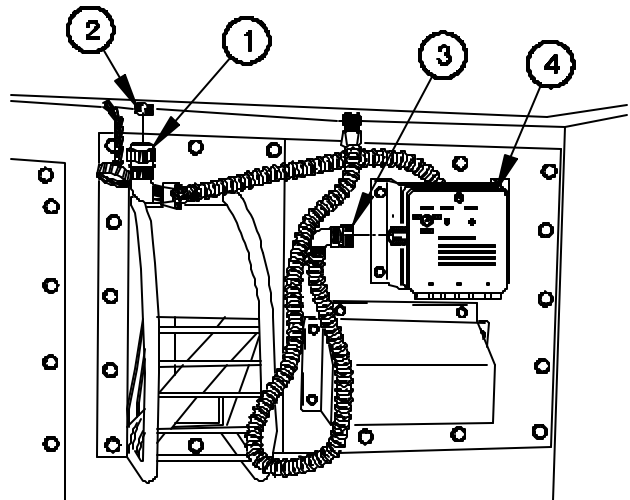
- Sealant, Pipe, Teflon (Item 58, Appendix D)
- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
- Lockwasher (18) (Item 84, Appendix G)
- Lockwasher (3) (Item 83, Appendix G)
- Ties, Cable, Plastic (Item 76, Appendix D)

a. Removal.

NOTE

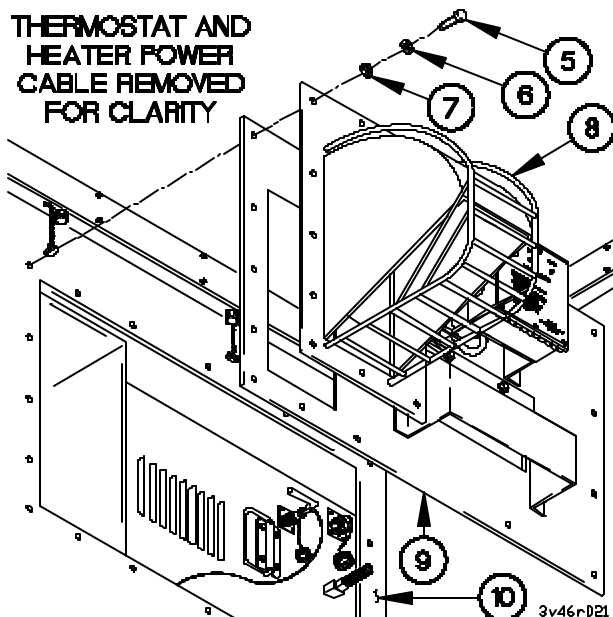
Tag connector and connection points prior to disconnecting.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).



3V46R011

THERMOSTAT AND HEATER POWER CABLE REMOVED FOR CLARITY

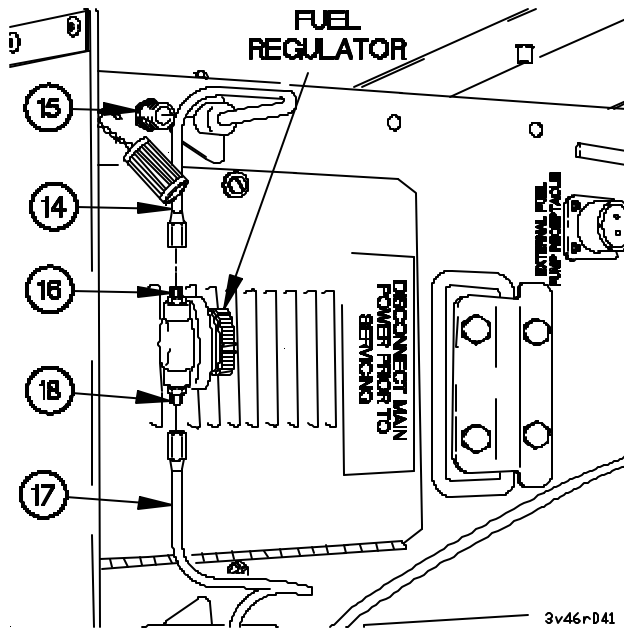
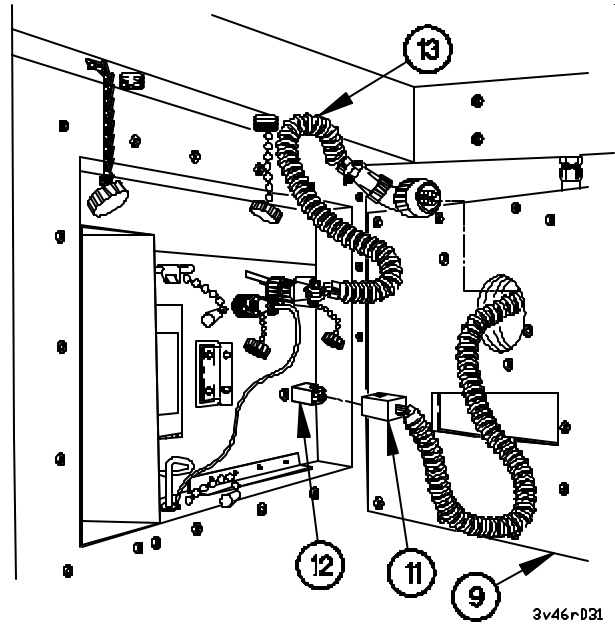


3v46r021

- (3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8), and heater cover (9) from van body wall (10). Discard lockwashers.

20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).



WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

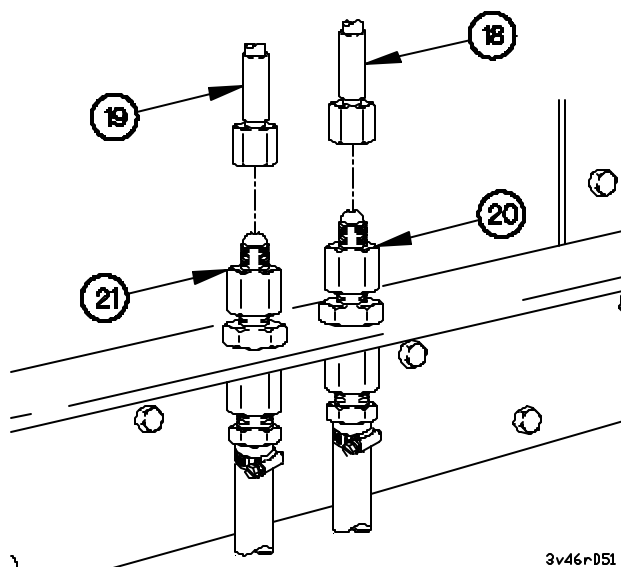
- (6) Remove fuel tube (14) from fuel inlet port (15).
- (7) Remove fuel tube (14) from fitting (16).

NOTE

Note position of fuel regulator prior to removal.

- (8) Remove fuel tube (17) from fitting (18).

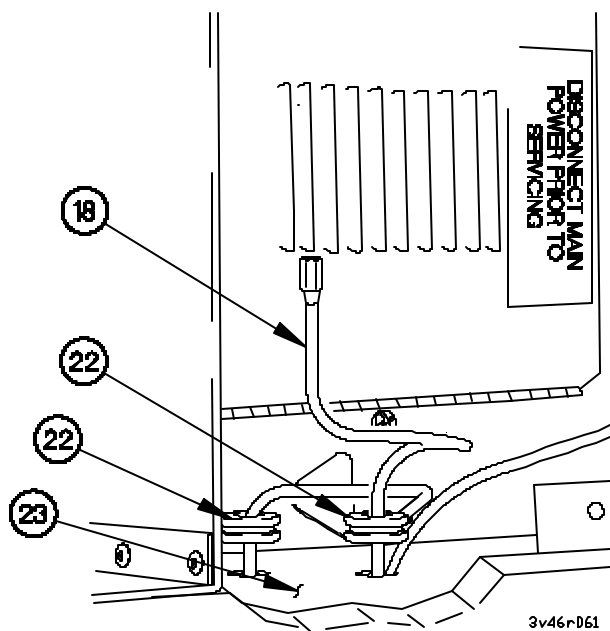
(9) Remove fuel tubes (18 and 19) from adapters (20 and 21).



3v46r051

(10) Remove two grommets (22) from pod panel (23).

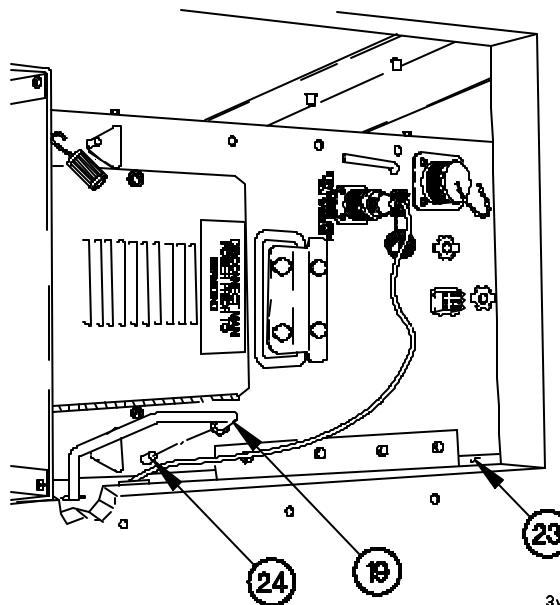
(11) Remove fuel tube (18) from pod panel (23).



3v46r061

(12) Remove fuel tube (19) from fuel overflow port (24).

(13) Remove fuel tube (19) from pod panel (23).



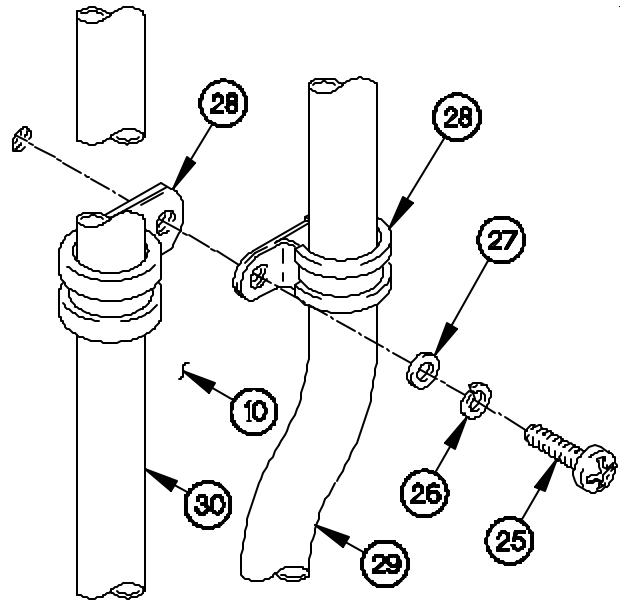
3v46r071

20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

NOTE

Remove plastic cable ties as required.

- (14) Remove three screws (25), lockwashers (26), washers (27), and six clamps (28) from van body wall (10). Discard lockwashers.
- (15) Remove six clamps (28) from hoses (29 and 30).



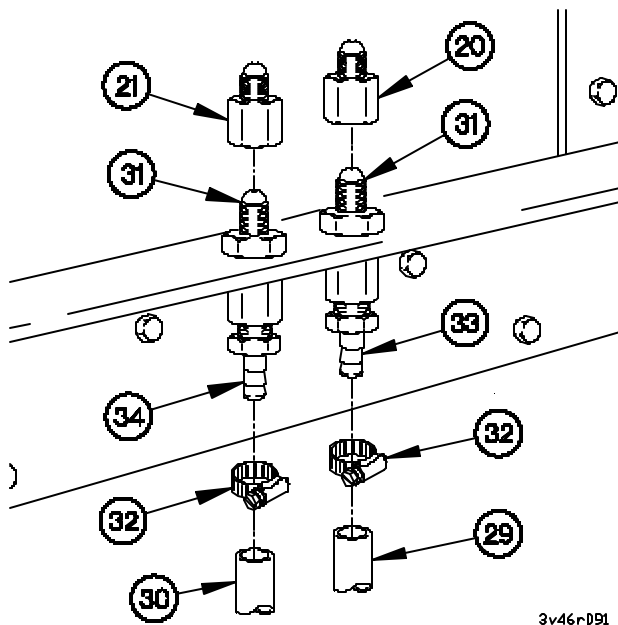
3v46rDB1

- (16) Remove adapters (20 and 21) from two fittings (31).

NOTE

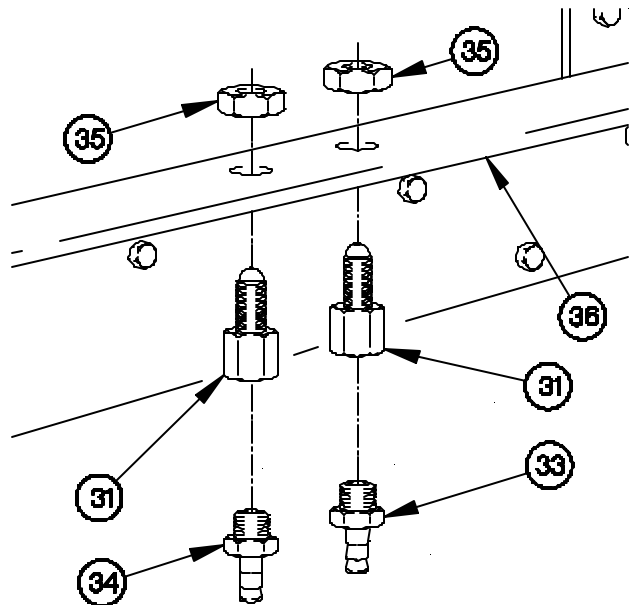
Tag hoses and connection point prior to disconnecting.

- (17) Loosen two clamps (32) on hoses (29 and 30).
- (18) Remove hoses (29 and 30) and two clamps (32) from fittings (33 and 34).



3v46rDB1

- (19) Remove fittings (33 and 34) from two fittings (31).
- (20) Remove two nuts (35) and fittings (31) from pod frame (36).

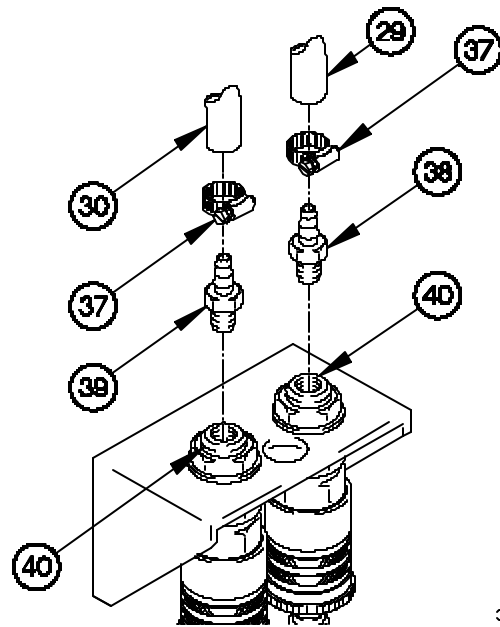


3v46r101

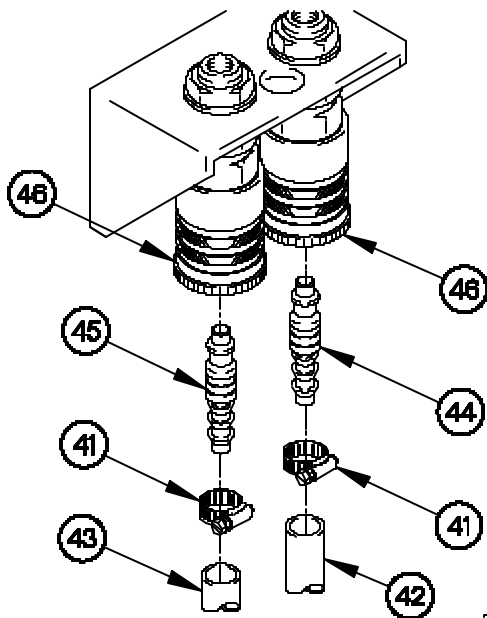
NOTE

Remove plastic cable ties as required.

- (21) Loosen clamps (37) on hoses (29 and 30).
- (22) Remove hoses (29 and 30) and two clamps (37) from fittings (38 and 39).
- (23) Remove fittings (38 and 39) from two bushings (40).



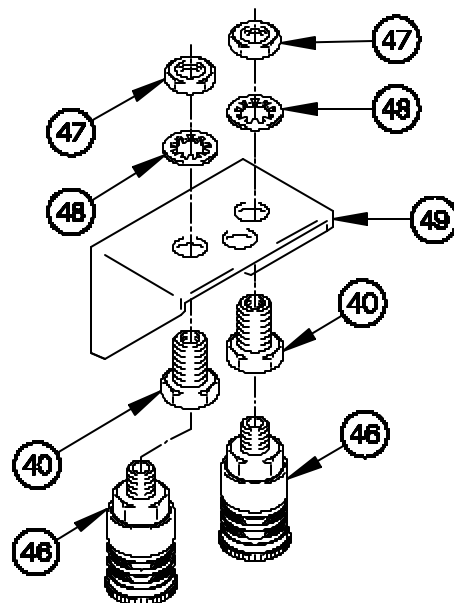
3v46r111



3v46r121

- (24) Loosen two clamps (41) on hoses (42 and 43).
- (25) Remove hoses (42 and 43) and two clamps (41) from fittings (44 and 45).
- (26) Disconnect fitting (44 and 45) from two quick connect fittings (46).

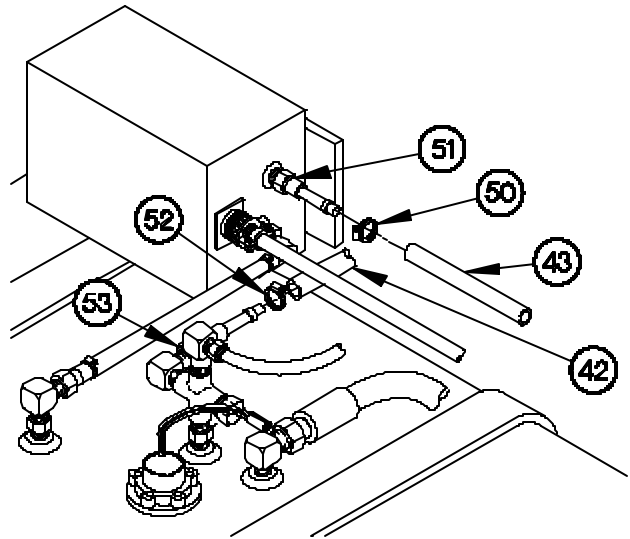
- (27) Remove two quick disconnect fittings (46) from bushings (40).
- (28) Remove two nuts (47), washers (48), and bushings (40) from bracket (49).



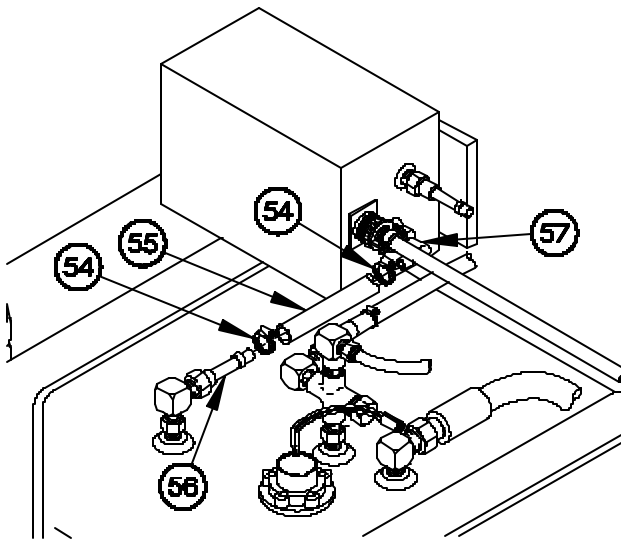
3v46r131

20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

- (29) Loosen clamp (50) on hose (43).
- (30) Remove hose (43) and clamp (50) from fitting (51).
- (31) Loosen clamp (52) on hose (42).
- (32) Remove hose (42) and clamp (52) from 90-degree fitting (53).



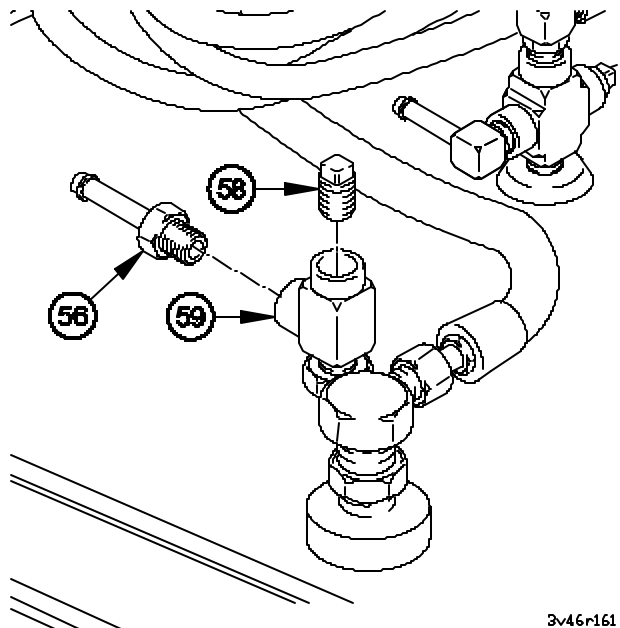
3v46r141



3v46r151

- (33) Loosen two clamps (54) on hose (55).
- (34) Remove hose (55) and two clamps (54) from fittings (56 and 57).

- (35) Remove fitting (56) and plug (58) from run tee fitting (59).

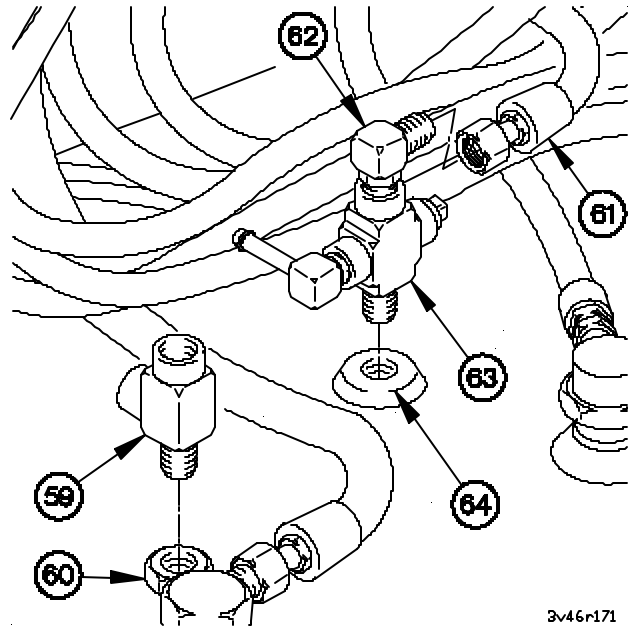


3v46r161

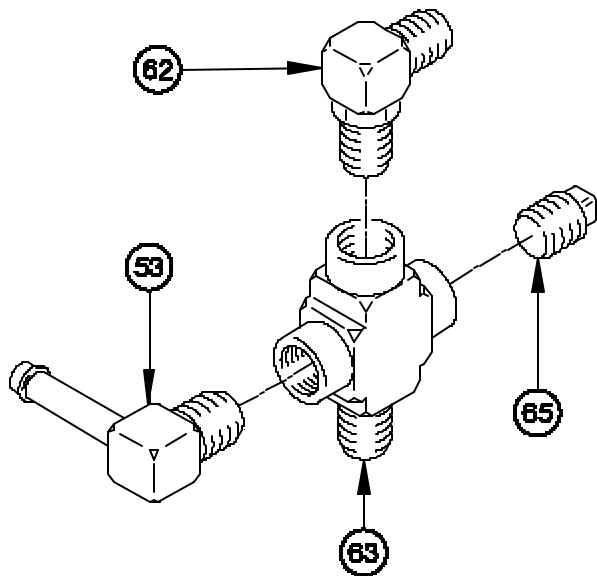
NOTE

Note position of fitting prior to removal.

- (36) Remove run tee fitting (59) from auxiliary supply port (60).
- (37) Disconnect fuel hose (61) from 90-degree fuel return fitting (62).
- (38) Remove four-way fitting (63) from fuel tank (64).



3v46r171



3v46r1B1

- (39) Remove plug (65), 90-degree fitting (53), and 90-degree fuel return fitting (62) from four way fitting (63).

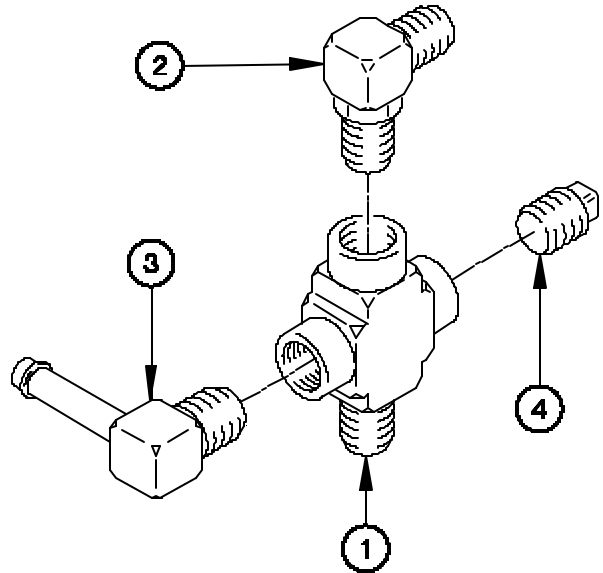
20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

b. Installation.

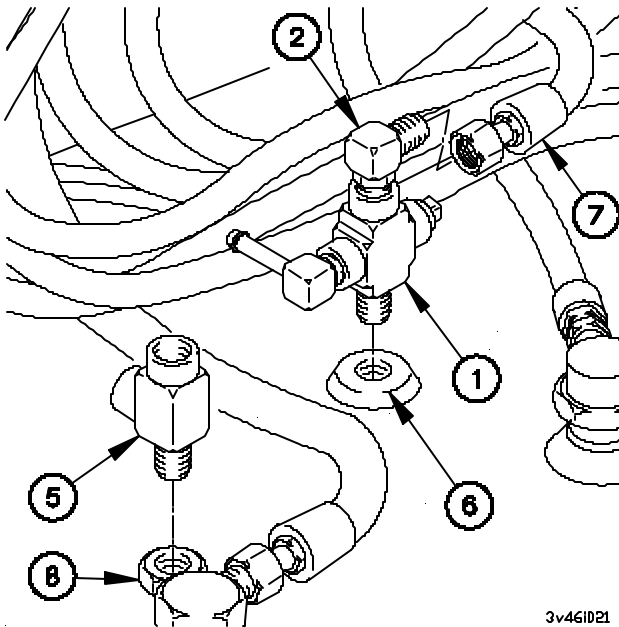
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to four-way fitting (1), 90-degree fuel return (2), 90-degree fitting (3), and plug (4).
- (2) Install 90-degree fuel return fitting (2), 90-degree fitting (3), and plug (4) on four-way fitting (1).



3v46011



3v461021

- (3) Apply sealing compound to run tee fitting (5).
- (4) Install four-way fitting (1) on fuel tank (6).

NOTE

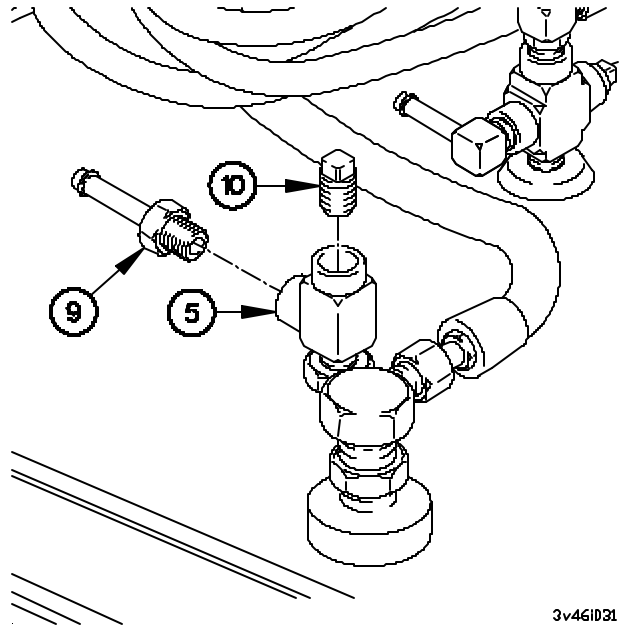
Install plastic cable ties as required.

- (5) Connect fuel hose (7) to 90-degree return fitting (2).
- (6) Install run tee fitting (5) in auxiliary supply port (8).

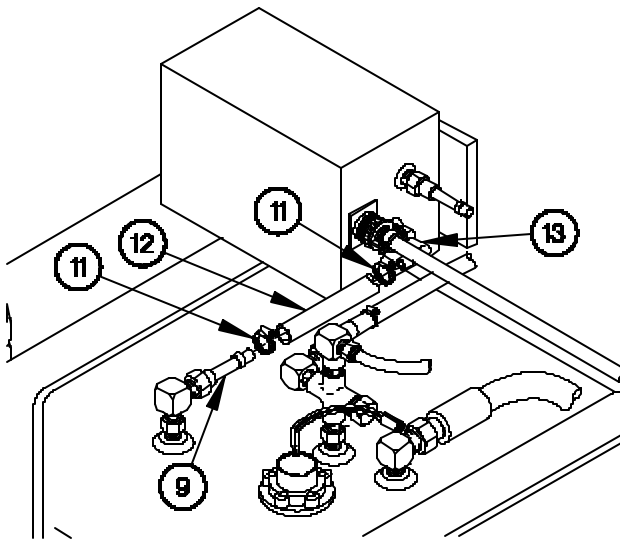
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (7) Apply sealing compound to threads of fitting (9) and plug (10).
- (8) Install fitting (9) and plug (10) on run tee fitting (5).



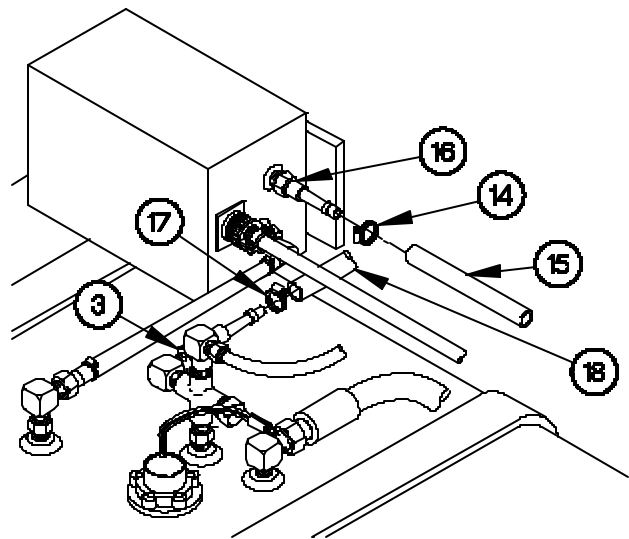
3v461031



3v461041

- (9) Position two clamps (11) on hose (12).
- (10) Install hose (12) on 90 degree fitting (13) and fitting (9) with two clamps (11).

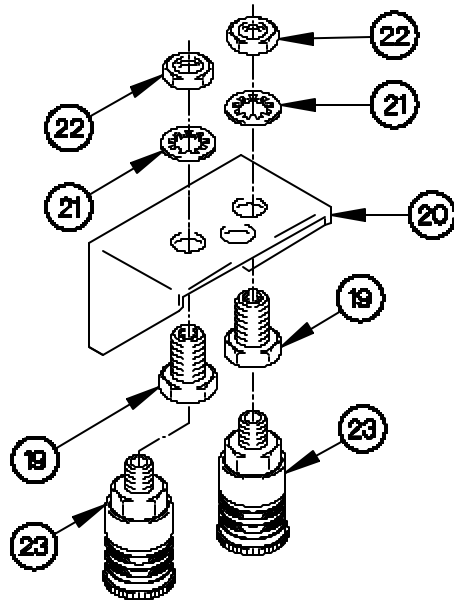
- (11) Position clamp (14) on hose (15).
- (12) Install hose (15) on fitting (16) with clamp (14).
- (13) Position clamp (17) on hose (18).
- (14) Install hose (18) on 90-degree fitting (3) with clamp (17).



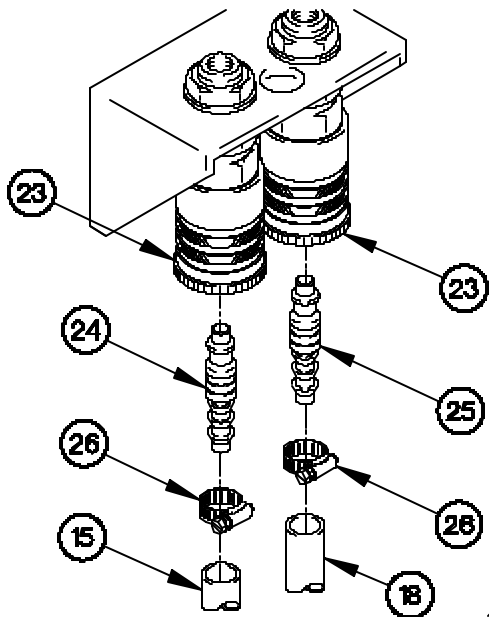
3v461051

20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

- (15) Install two bushings (19) on bracket (20) with two washers (21) and nuts (22).
- (16) Install two quick disconnect fittings (23) on bushings (19).



3v461061



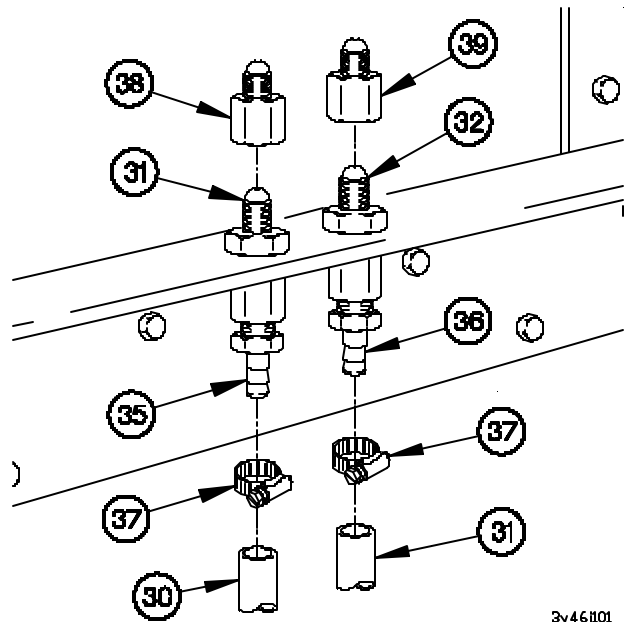
3v461071

- (17) Connect fittings (24 and 25) to two quick connect fittings (23).
- (18) Position two clamps (26) on hoses (15 and 18).
- (19) Install hoses (15 and 18) on fittings (24 and 25) with two clamps (26).

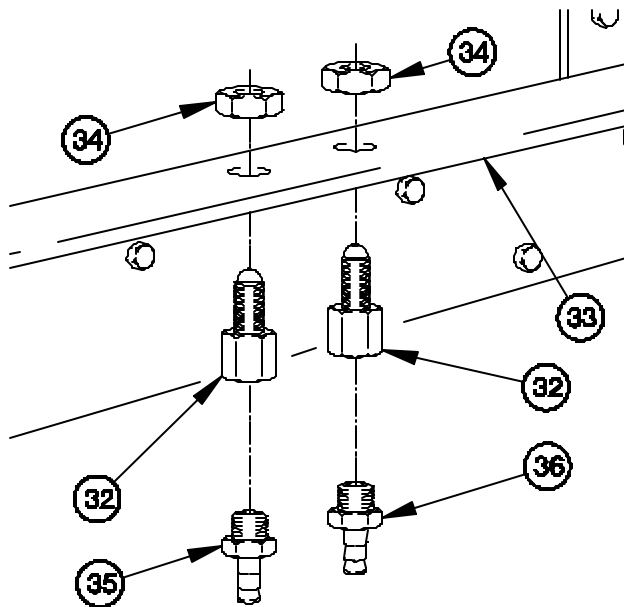
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (20) Apply sealing compound to threads of fittings (27 and 28).
- (21) Install fittings (27 and 28) on two bushings (19).
- (22) Position two clamps (29) on hoses (30 and 31).
- (23) Install hoses (30 and 31) on fittings (27 and 28) with two clamps (29).



3v46101



3v461091

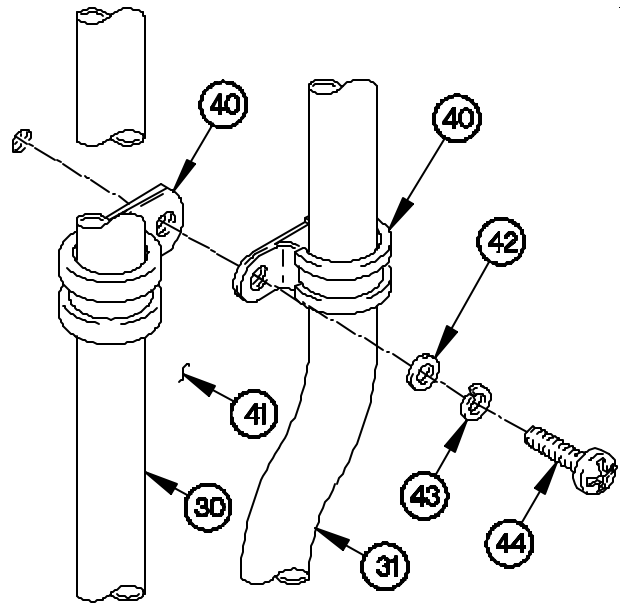
- (24) Install two fittings (32) on pod frame (33) with two nuts (34).
- (25) Apply sealing compounds to threads of fittings (35 and 36).
- (26) Install fittings (35 and 36) on two fittings (32).
- (27) Position two clamps (37) on hoses (30 and 31).
- (28) Install hoses (30 and 31) on fittings (35 and 36) with two clamps (37).
- (29) Install adapters (38 and 39) on two fittings (32).

20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

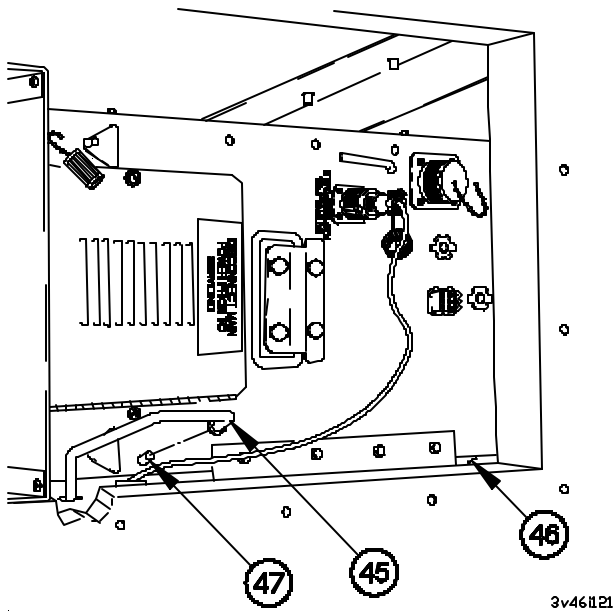
NOTE

Install plastic cable ties as required.

- (30) Position six clamps (40) on hoses (30 and 31).
- (31) Install six clamps (40) on van body wall (41) with three washers (42), lockwashers (43), and screws (44).



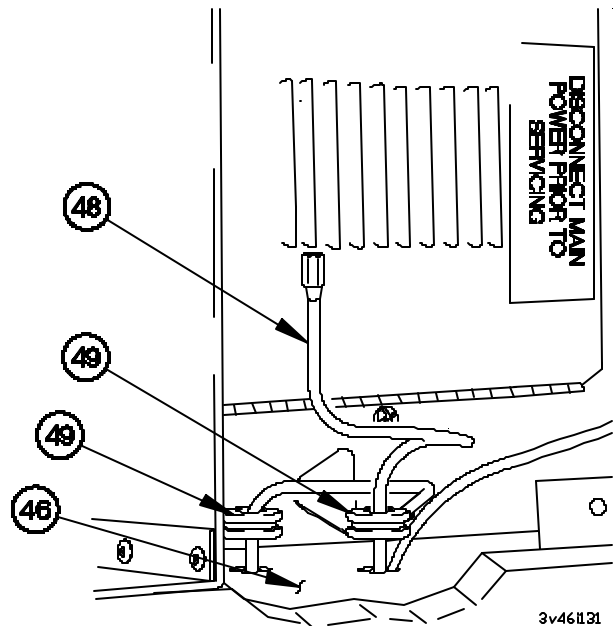
3v46111



3v461121

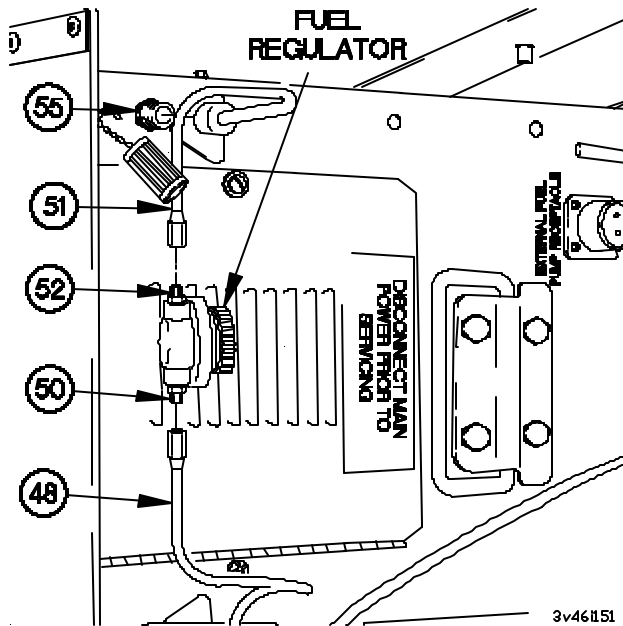
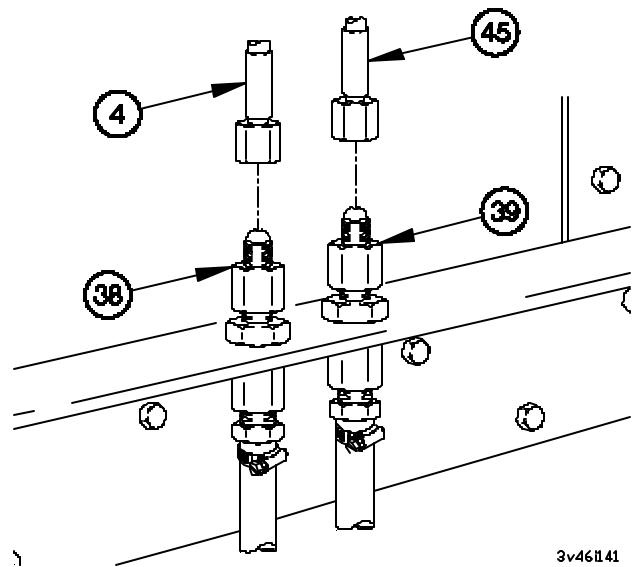
- (32) Position fuel tube (45) on pod panel (46).
- (33) Install fuel tube (45) on fuel overflow port (47).

- (34) Position fuel tube (48) in hole on pod panel (46).
- (35) Install two grommets (49) in holes on pod panel (46).



3v461131

(36) Install fuel tubes (45 and 48) on adapters (38 and 39).



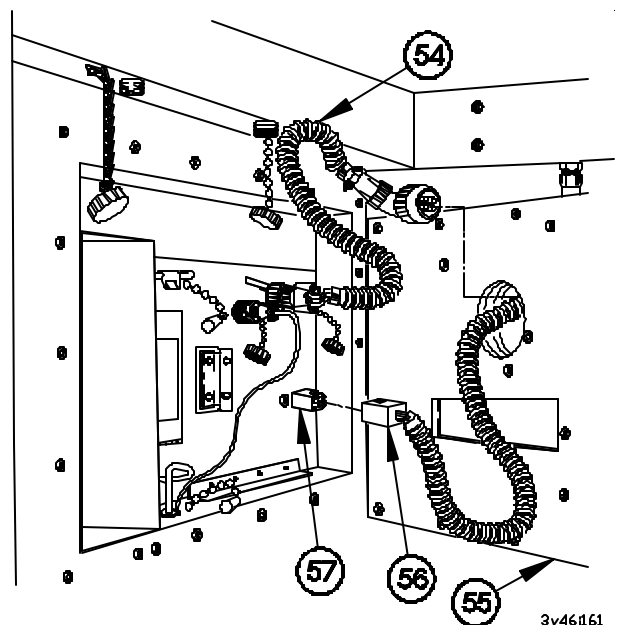
(37) Install fuel tube (48) on fitting (50).

(38) Install fuel tube (51) on fitting (52).

(39) Install fuel tube (51) on fuel inlet port (53).

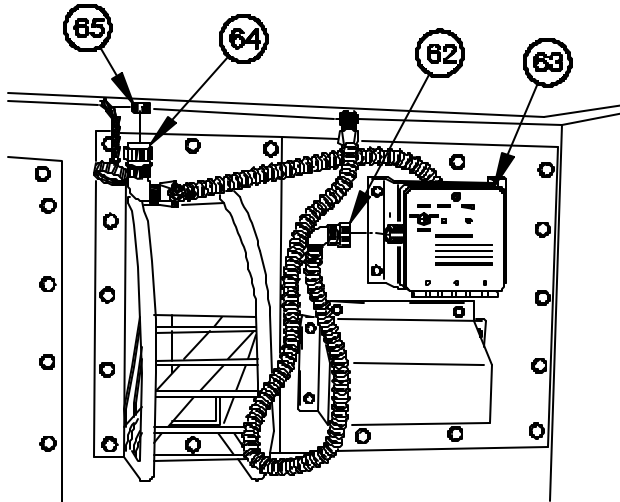
(40) Route heater power cable (54) through hole in heater cover (55).

(41) Connect connector P4A (56) to connector J4 (57).

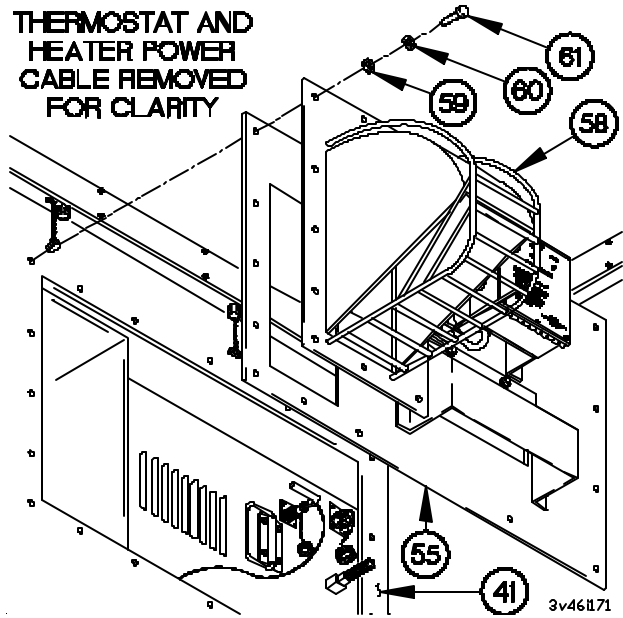


20-46. M1079 HEATER FUEL TUBES/HOSES REPLACEMENT (CONT)

(42) Install heater cover (55) and heater deflector (58) on van body wall (41) with 18 washers (59), lockwashers (60), and screws (61).



3v461B1



3v46171

- (43) Connect connector P245A (62) to heater control unit (63).
- (44) Connect connector P244 (64) to heater connector (65).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365- 10).
- (3) Close LH and RH doors (TM 9-2320-365-10).
- (4) Raise spare tire (TM 9-2320-365-10).

End of Task.

20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

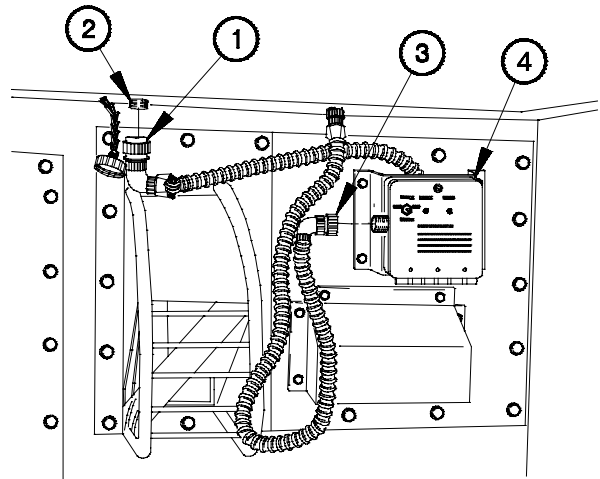
- Sealant, Pipe, Teflon (Item 58, Appendix D)
- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
- Lockwasher (18) (Item 84, Appendix G)

a. Removal.

NOTE

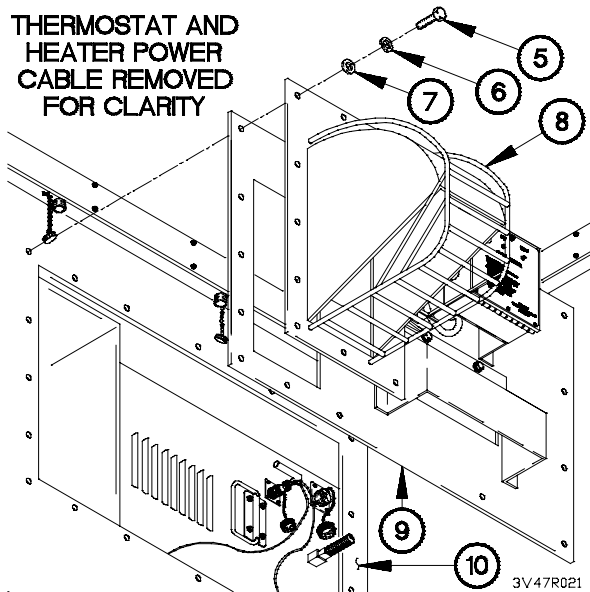
Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).



3V47R011

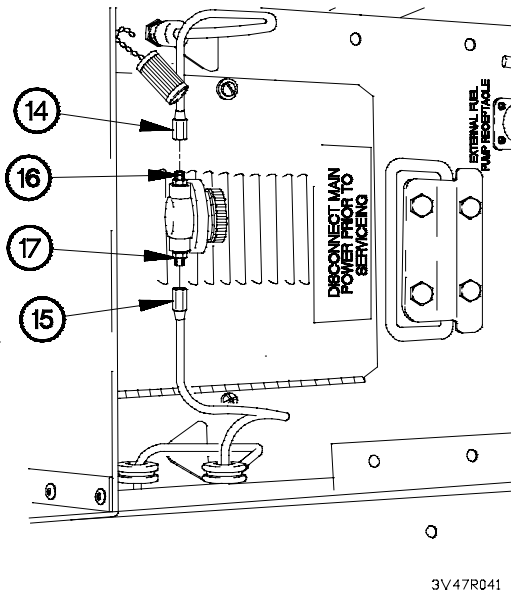
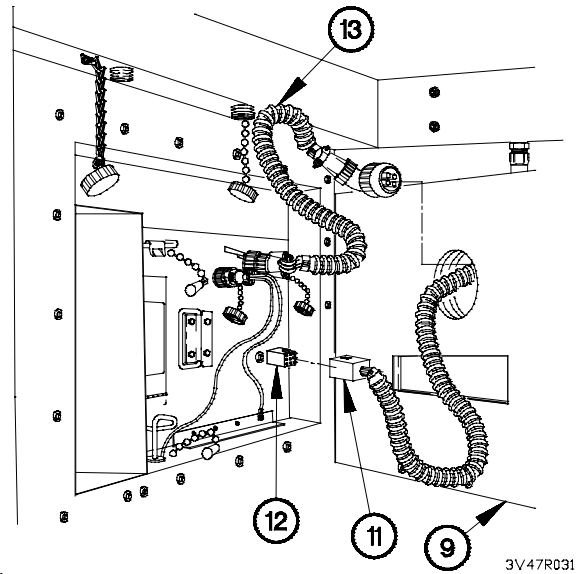
THERMOSTAT AND HEATER POWER CABLE REMOVED FOR CLARITY



- (3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8) and heater cover (9) from van body wall (10). Discard lockwashers.

20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT (CONT)

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).



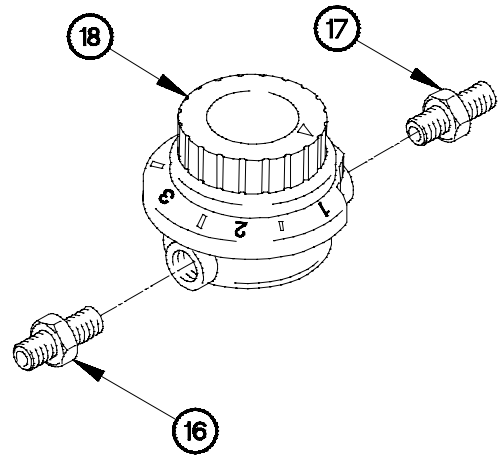
WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

NOTE

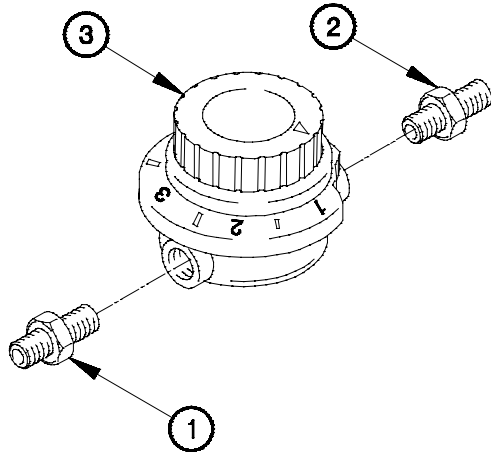
- Tag tubes and connection points prior to disconnecting.
 - Note position of fittings and fuel regulator prior to removal.
- (6) Disconnect fuel tubes (14 and 15) from fittings (16 and 17).

(7) Remove fittings (16 and 17) from fuel regulator (18).



3V47R051

b. Installation.



3V47I011

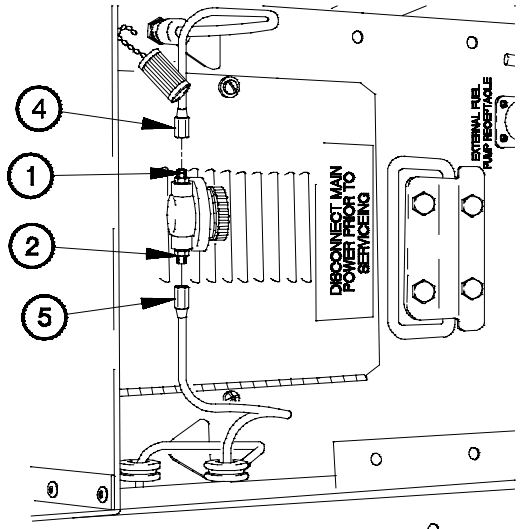
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to threads of fittings (1 and 2).
- (2) Install fittings (1 and 2) on fuel regulator (3).

20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT (CONT)

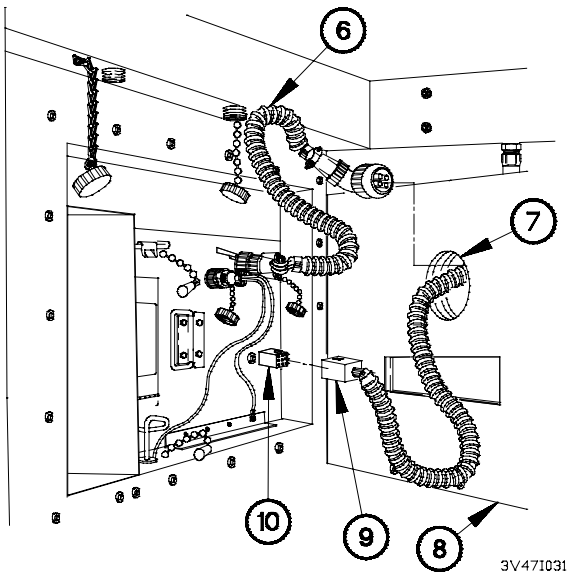
(3) Connect fuel tubes (4 and 5) to fittings (1 and 2).



3V471021

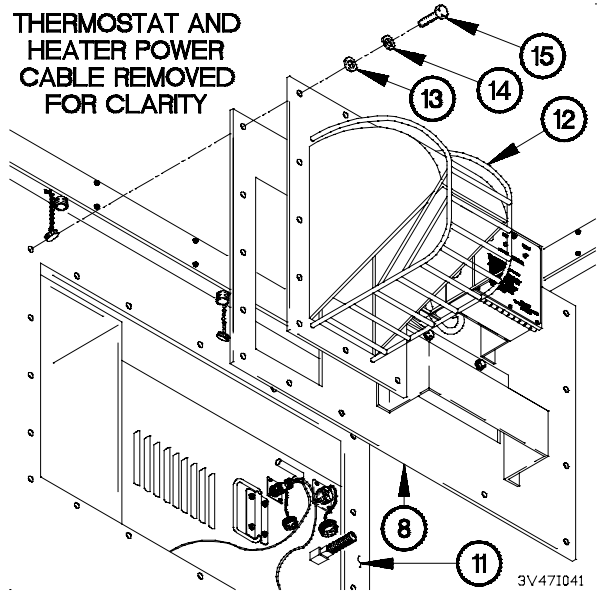
(4) Route heater power cable (6) through hole (7) in heater cover (8).

(5) Connect connector P4A (9) to connector J4 (10).



3V471031

(6) Install heater cover (8) on van body wall (11) with heater deflector (12), washers (13), lockwashers (14), and screws (15).



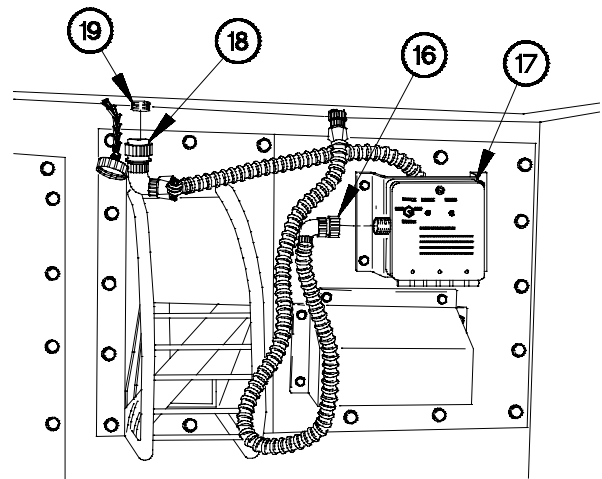
3V471041

- (7) Connect connector P245A (16) to heater control unit (17).
- (8) Connect connector P244 (18) to heater connector (19).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.



3V471051

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT

This task covers:

- a. Removal
- b. Disassembly
- c. Cleaning/Inspection
- d. Assembly
- e. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

Sealant, Pipe, Teflon (Item 58, Appendix D)
 Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

Materials/Parts (Cont)

Lockwasher (2) (Item 83, Appendix G)
 Lockwasher (4) (Item 105, Appendix G)
 Lockwasher (2) (Item 106, Appendix G)
 Seal (Item 247.1, Appendix G)
 Seal (2) (Item 247.2, Appendix G)
 Seal (Item 247.3, Appendix G)

Personnel Required

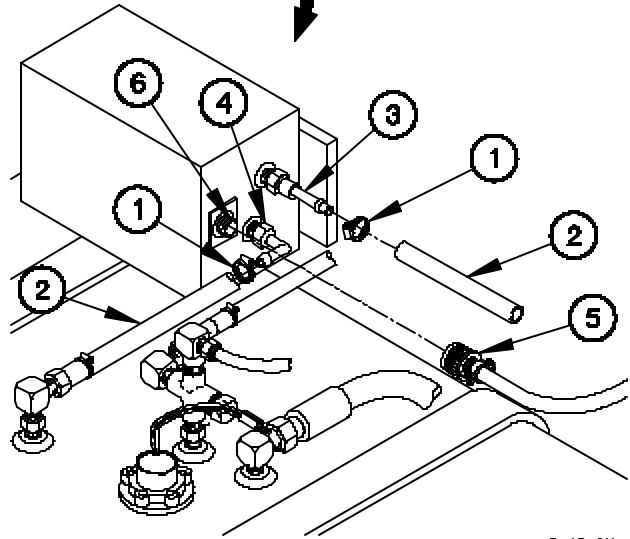
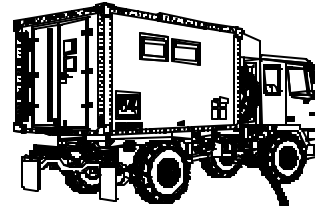
(2)

a. Removal.

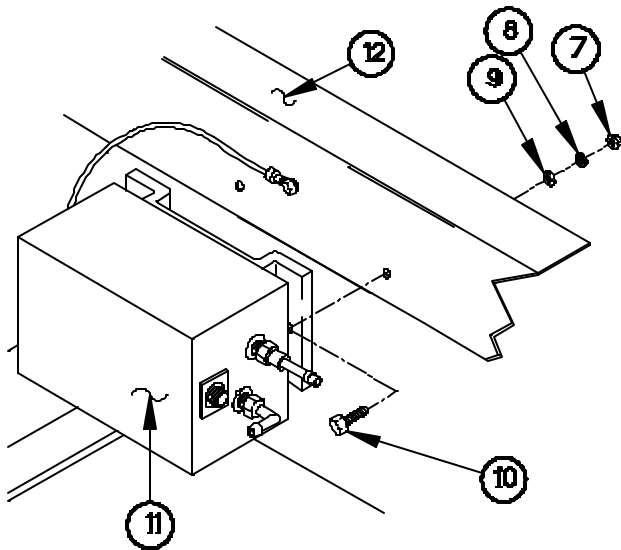
NOTE

Tag hoses and connection points prior to removal.

- (1) Loosen two clamps (1) on hoses (2).
- (2) Remove two hoses (2) and clamps (1) from fitting (3) and 90 degree fitting (4).
- (3) Disconnect connector P310 (5) from EMI shielded fuel pump connector (6).



3v48r-011



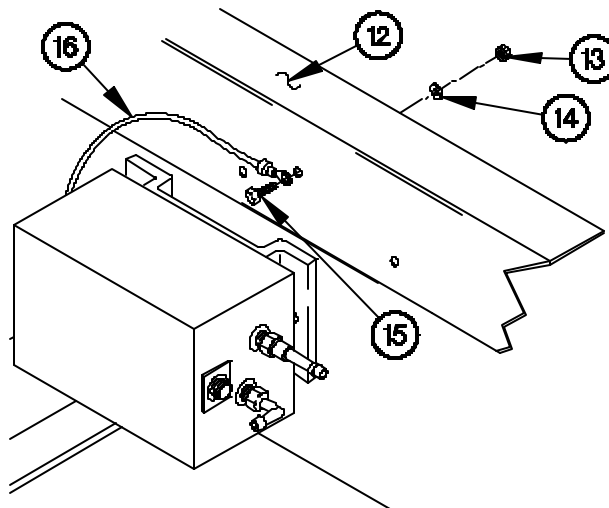
3v48r-021

NOTE

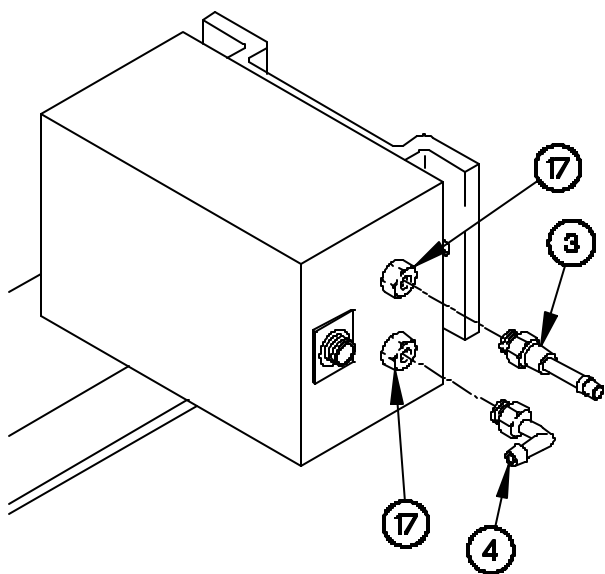
Steps (4) through (6) requires the aid of an assistant.

- (4) Remove two nuts (7), lockwashers (8), washers (9), screws (10), and EMI shielded fuel pump assembly (11) from subframe (12). Discard lockwashers.

- (5) Remove self-locking nut (13), washer (14), screw (15), and EMI shielded fuel pump ground wire (16) from sub-frame (12). Discard self-locking nut.



3v48r031



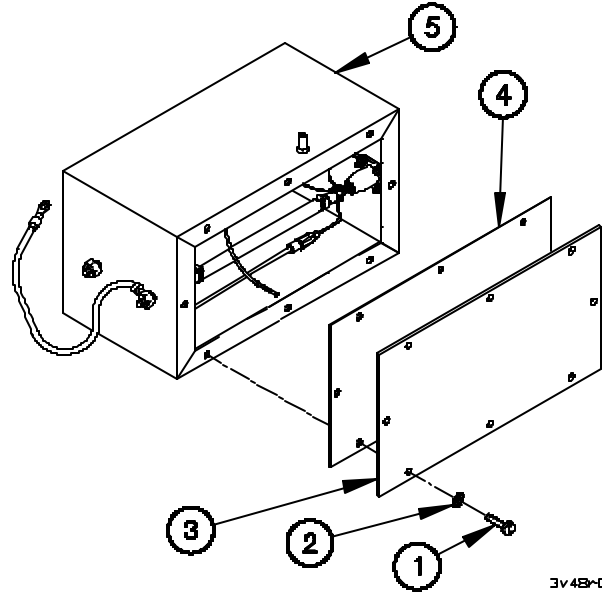
3v48r04

- (6) Remove fitting (3) and 90-degree fitting (4) from two couplings (17).

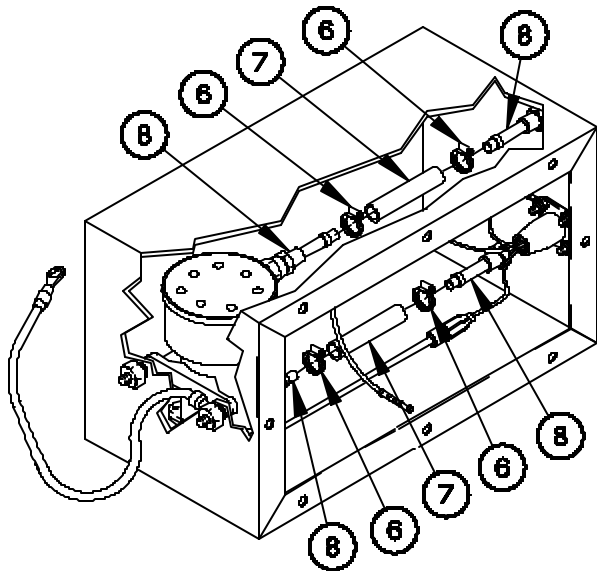
20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

b. Disassembly.

- (1) Remove eight screws (1), washers (2), seal (3), and cover (4) from fuel pump box (5). Discard seal.



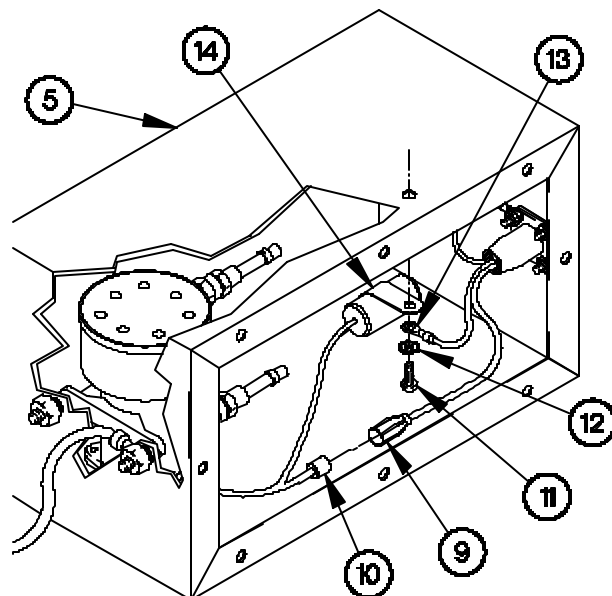
3v48r-05



3v48r-06

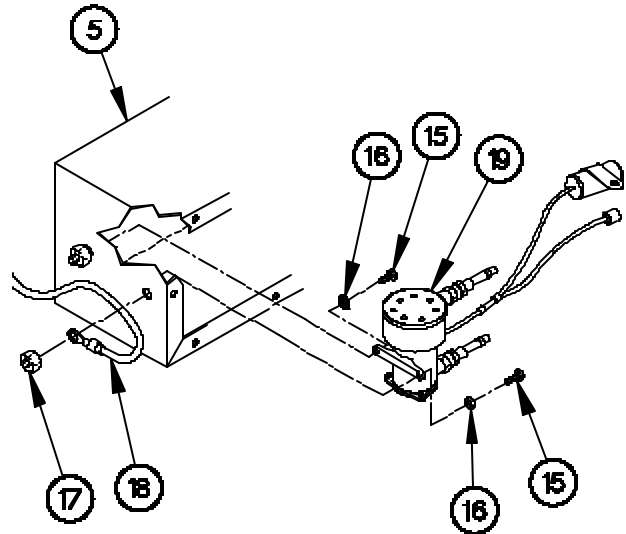
- (2) Loosen four clamps (6) on two hoses (7).
- (3) Remove two hoses (7) from four fittings (8).

- (4) Disconnect connector P46 (9) from fuel pump connector (10).
- (5) Remove screw (11), washer (12), terminal lug TL526 (13), and capacitor (14) from pump box (5).

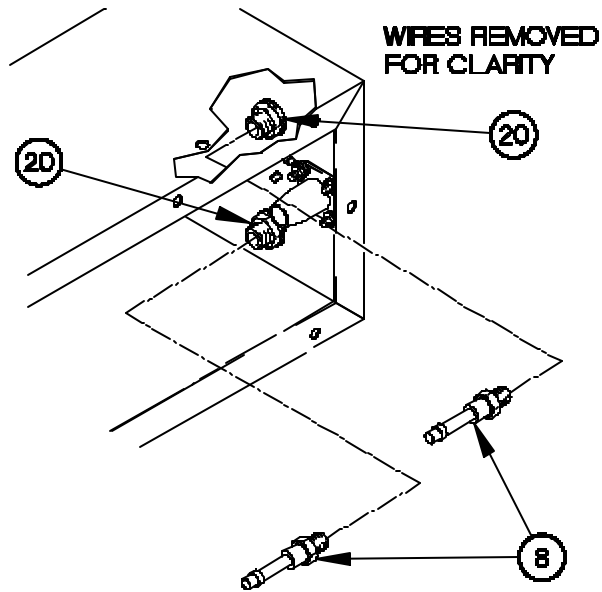


3v48r-07

- (6) Remove two screws (15), washers (16), nuts (17), ground wire (18), and fuel pump (19) from pump box (5).

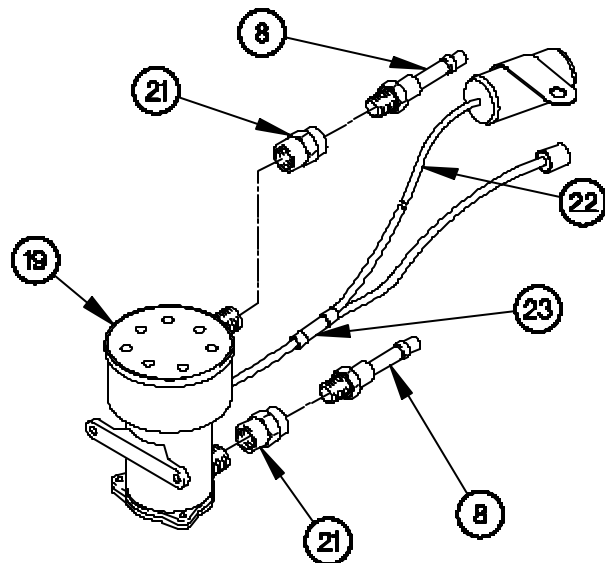


3v48r08



3v48r09

- (7) Remove two fittings (8) from couplings (20).

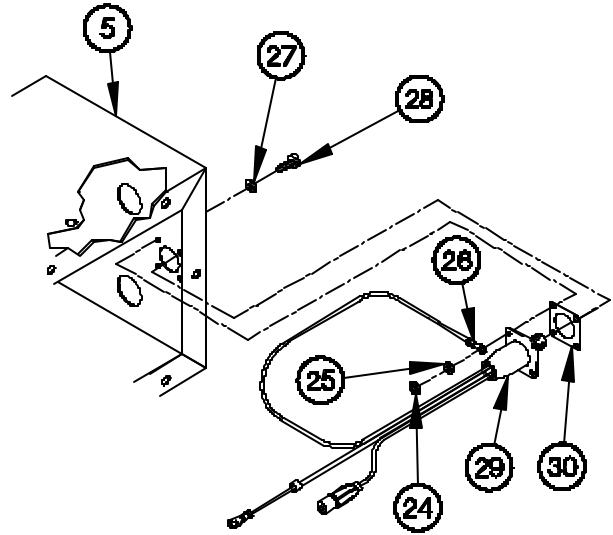


3v48r10

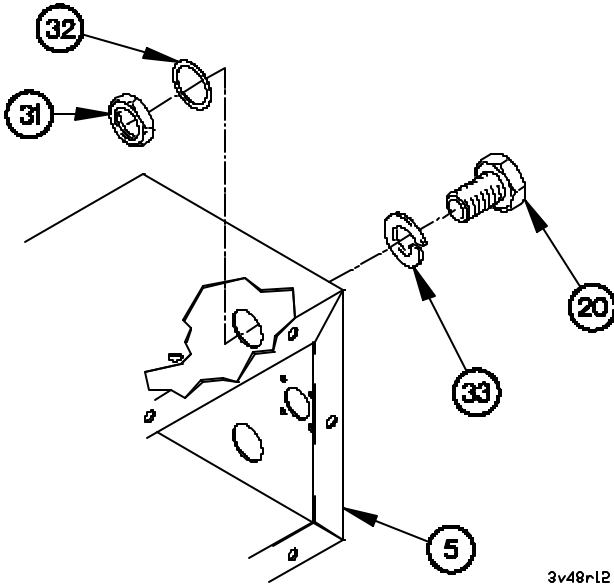
- (8) Remove two fittings (8) from couplers (21).
 (9) Remove two couplers (21) from heater fuel pump (19).
 (10) Cut condenser wire (22) leading to splice (23) on heater fuel pump (19).

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

- (11) Remove four nuts (24), lockwashers (25), terminal lug TL526 (26), four washers (27), screws (28), cable assembly (29), and seal (30) from pump box (5). Discard lockwashers and seal.



3v48r11



3v48r12

- (12) Remove two nuts (31), seals (32), coupling (20), and lockwasher (33) from pump box (5). Discard seals and lockwasher.

c. Cleaning/Inspection.

WARNING

- Dry cleaning solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I dry cleaning solvent is 100 degree F (38 degree C) and for Type II is 130 degree F (50 degree C). Failure to comply may result in serious injury or death to personnel.'
- If personnel become dizzy while suing dry cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

NOTE

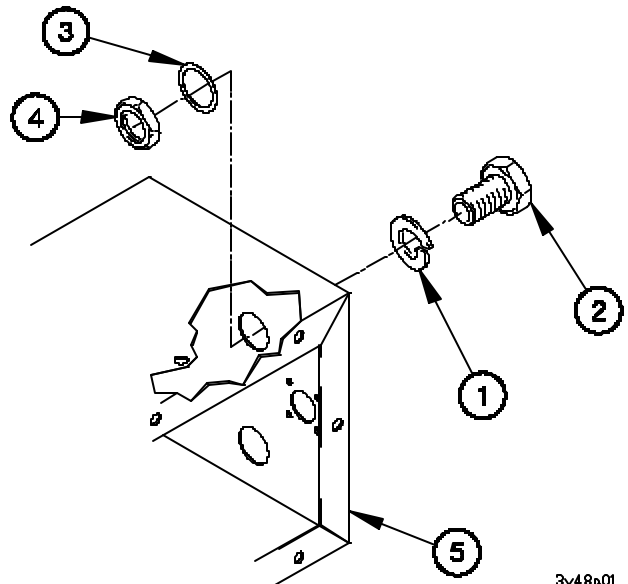
Clean all metal parts with dry cleaning solvent and dry using compressed air prior to inspection and assembly.

d. Assembly.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

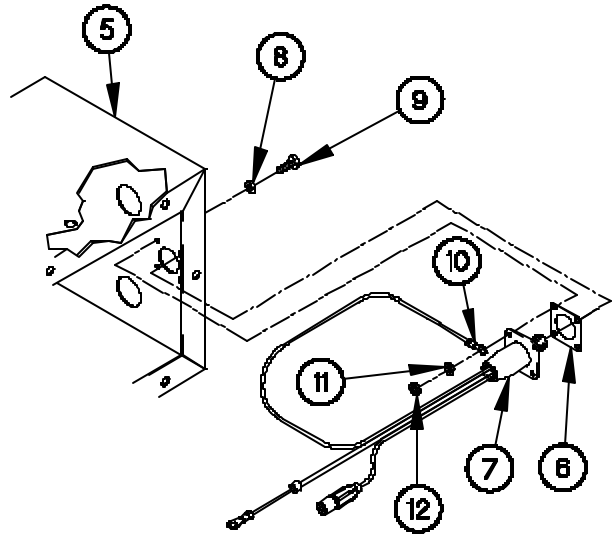
- (1) Apply sealing compound around the edge of all exterior exposed surfaces.
- (2) Install two lockwashers (1), coupling (2), seals (3), and nuts (4) on pump box (5).



3v48a01

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

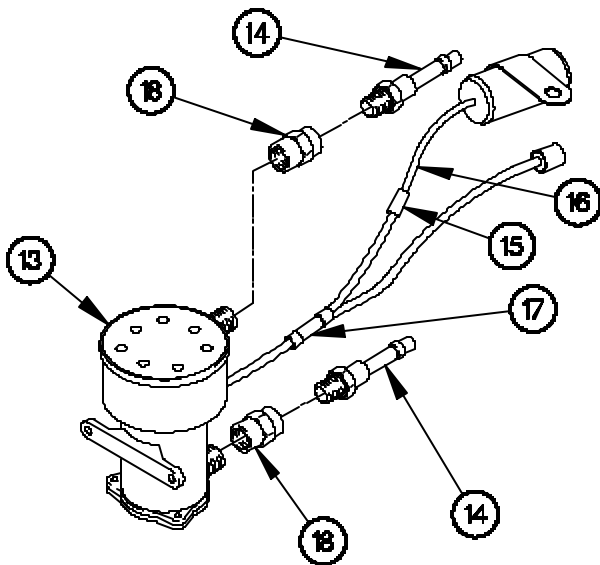
- (3) Install seal (6), cable assembly (7), four washers (8), screws (9), terminal lug TL526 (10), lockwashers (11), and nuts (12) on pump box (5).



3v48a02

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



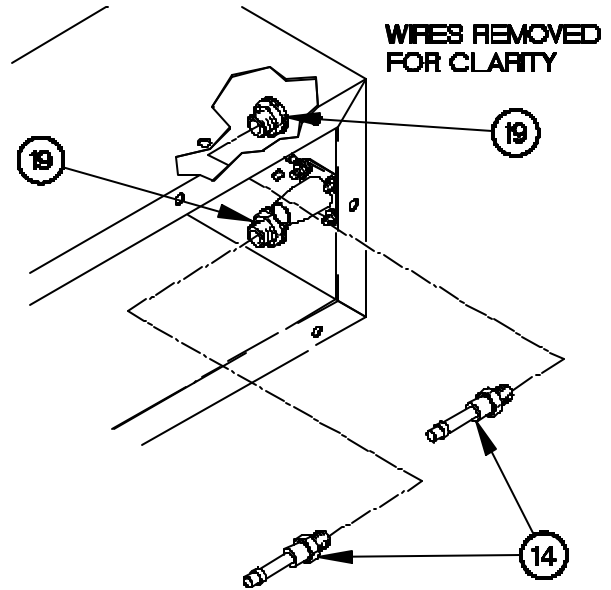
3v48a03

- (4) Apply sealing compound to threads of heater fuel pump (13) and two fittings (14).
 (5) Install conductor splice (15) on condenser wire (16) and fuel pump wire splice (17).
 (6) Install two couplers (18) on heater fuel pump (13).
 (7) Install two fittings (14) in couplers (18).

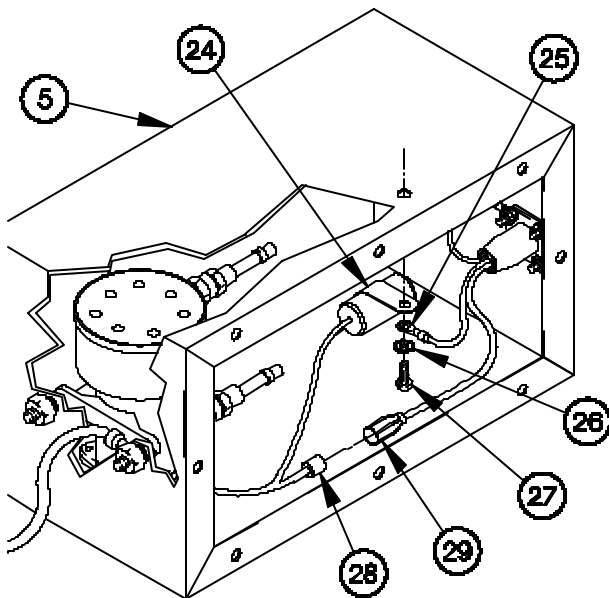
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (8) Apply sealing compound to threads of two fittings (14).
- (9) Install two fittings (14) in couplings (19).



3v48a04

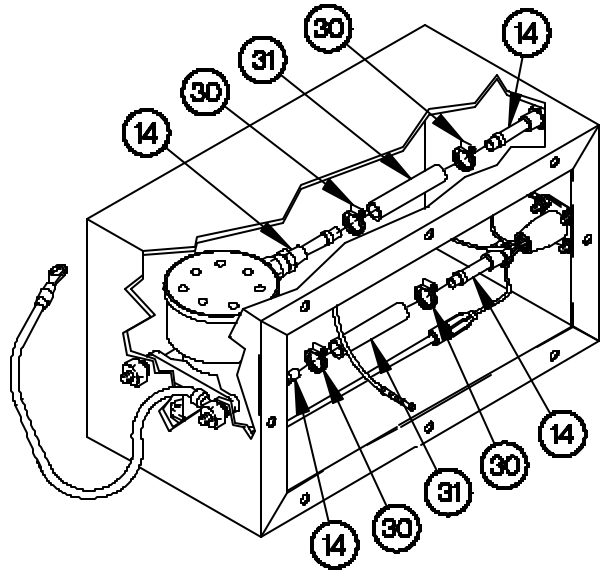


3v48a06

- (10) Install capacitor (24) on pump box (5) with terminal lug TL526 (25), washer (26), and screw (27).
- (11) Connect fuel pump connector (28) to connector P46 (29).

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

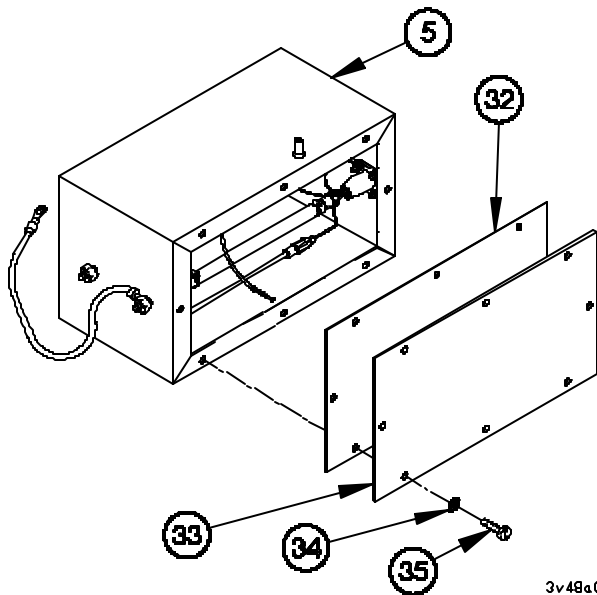
- (12) Position four clamps (30) on two hoses (31).
- (13) Install two hoses (31) on four fittings (14) with clamps (30).



3v48a07

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



3v48a08

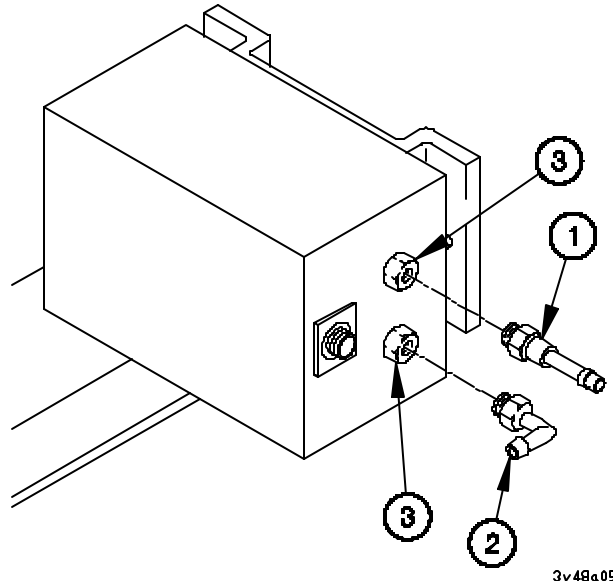
- (14) Apply sealing compound around outer mating area of pump box cover (33).
- (15) Install seal (32) and pump box cover (33) on pump box (5) with eight washers (34) and screws (35).

d. Installation.

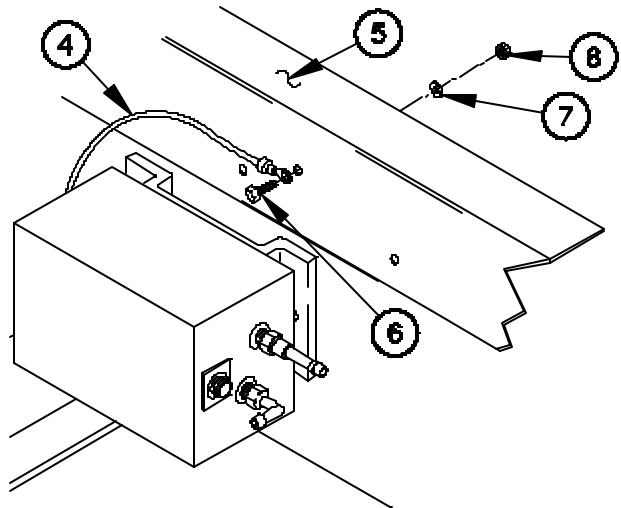
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to threads of fitting (1) and 90-degree (2).
- (2) Install fitting (1) and 90-degree fitting (2) in two couplings (3).



3v48a09



3v48a10

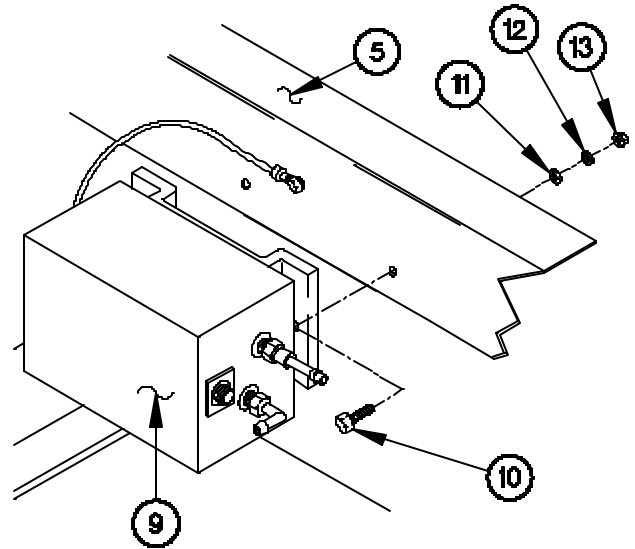
NOTE

Step (3) requires the aid of an assistant.

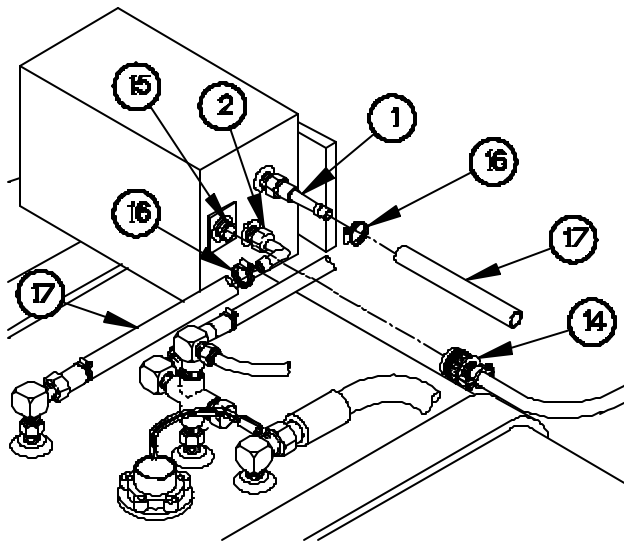
- (3) Install EMI shielded fuel pump ground wire (4) on subframe (5) with screw (6), washer (7), and locknut (8).

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

- (4) Install EMI shielded fuel pump assembly (9) on subframe (5) with two screws (10), washers (11), lockwashers (12), and nuts (13).



3v4B011



3v4B012

- (5) Connect connector P310 (14) to heater fuel pump connector (15).
- (6) Position two clamps (16) on hoses (17).
- (7) Install two hoses (17) on fitting (1) and 90-degree fitting (2) with two clamps (16).

End of Task.

20-49. M1079 HEATER FUEL PUMP POWER CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).
- Heater removed (para 20-51)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

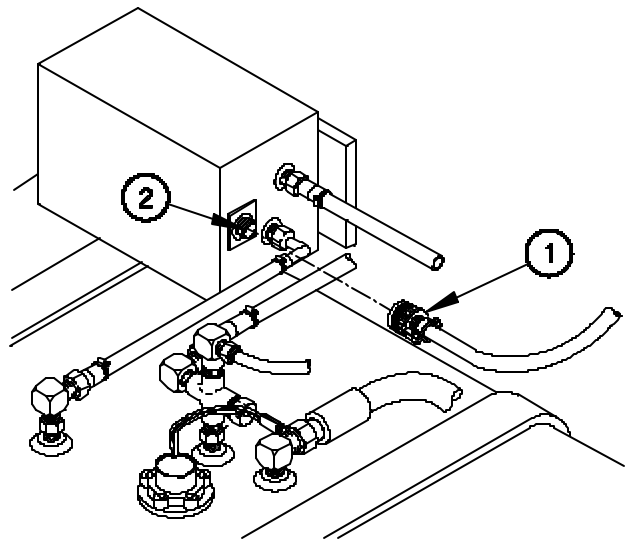
- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

a. Removal.

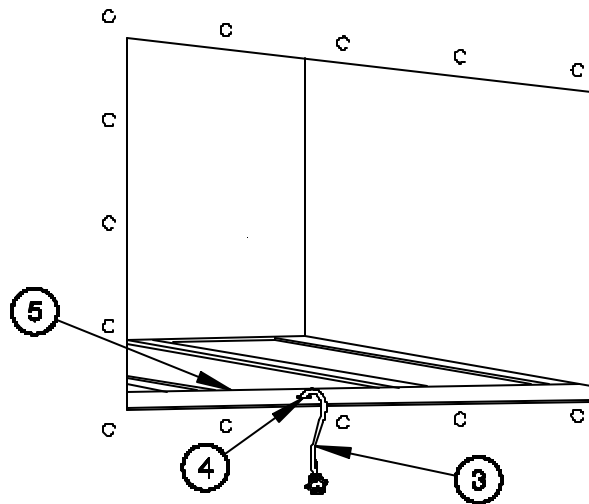
NOTE

Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector P310 (1) from EMI shielded fuel pump connector (2).



3v49r011

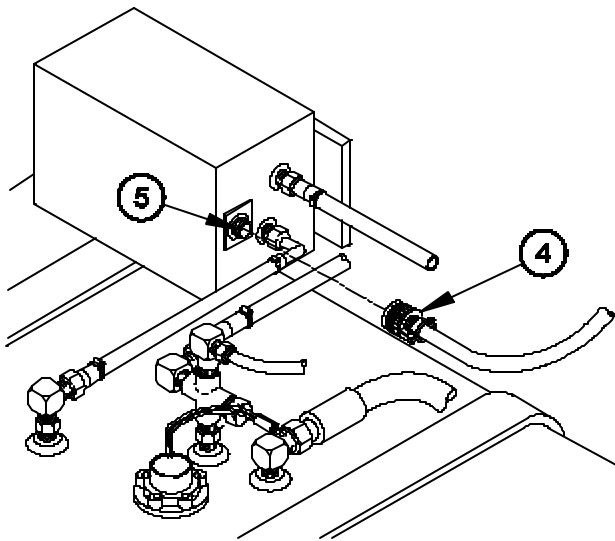


3v49r021

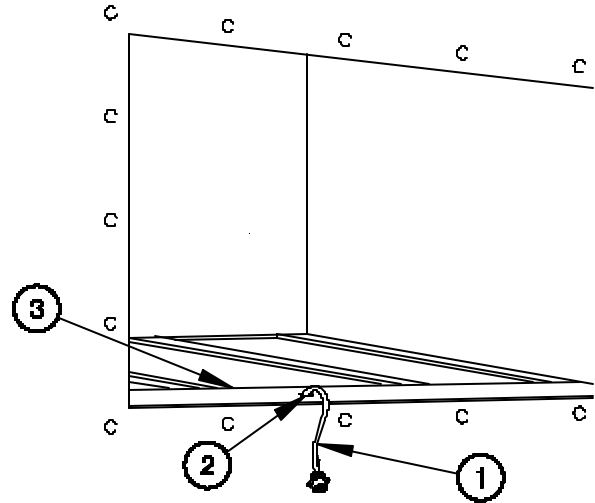
- (2) Remove heater fuel pump power cable (3) through hole (4) in bottom pod panel (5).

b. Installation.

- (1) Position heater fuel pump power cable (1) through hole (2) in bottom pod panel (3).



3v491021



3v491011

- (2) Connect connector P310 (4) to EMI shielded fuel pump connector (5).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

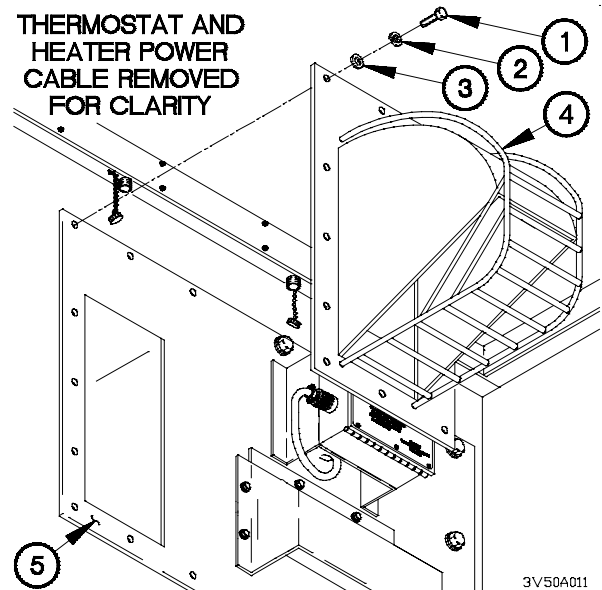
<p>20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT</p>	
<p>This task covers:</p> <p>a. Heater Deflector Removal b. Heater Deflector Installation c. Heater Duct Removal</p> <p>d. Heater Duct Installation e. Follow-On Maintenance</p>	
<p>INITIAL SETUP</p> <p>Equipment Conditions Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). LH and RH doors opened (115-degrees) (TM 9-2320-365-10). M1079 heater fuel pump power cable removed (for heater duct) (para 20-49).</p> <p>Materials/Parts Sealant, Pipe, Teflon (Item 58, Appendix D) Lockwasher (9) (for heater deflector) (Item 84, Appendix G) Lockwasher (40) (Item 82, Appendix G) Lockwasher (19) (Item 83, Appendix G) Nut, Self-Locking (4) (Item 126, Appendix G)</p> <p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)</p> <p>Personnel Required (2)</p>	

a. Heater Deflector Removal.

Remove nine screws (1), lockwashers (2), washers (3), and heater deflector (4) from heater cover (5). Discard lockwashers.

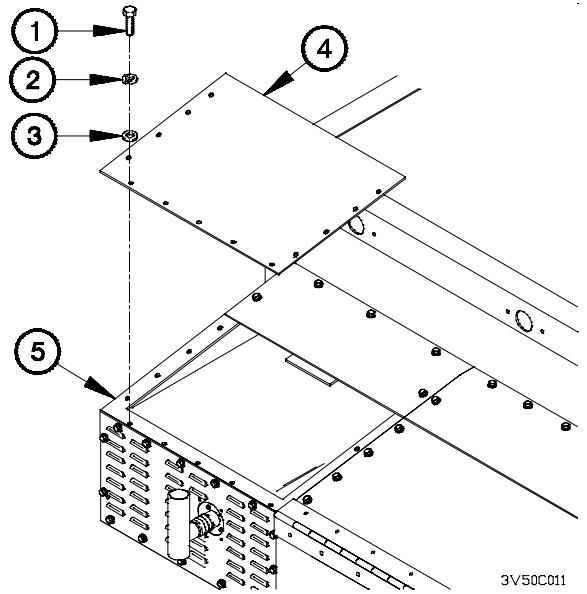
b. Heater Deflector Installation.

Install heater deflector (4) on heater cover (5) with nine washers (3), lockwashers (2), and screws(1).



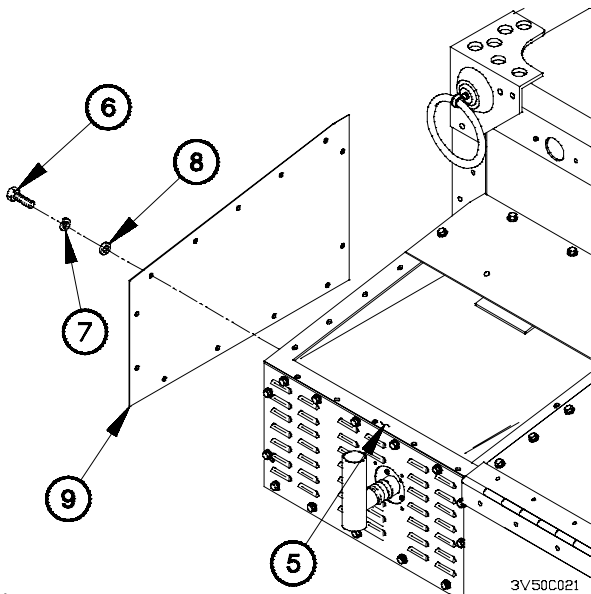
c. Heater Duct Removal.

- (1) Remove 13 screws (1), lockwashers (2), washers (3), and curbside top front panel (4) from pod frame (5). Discard lockwashers.



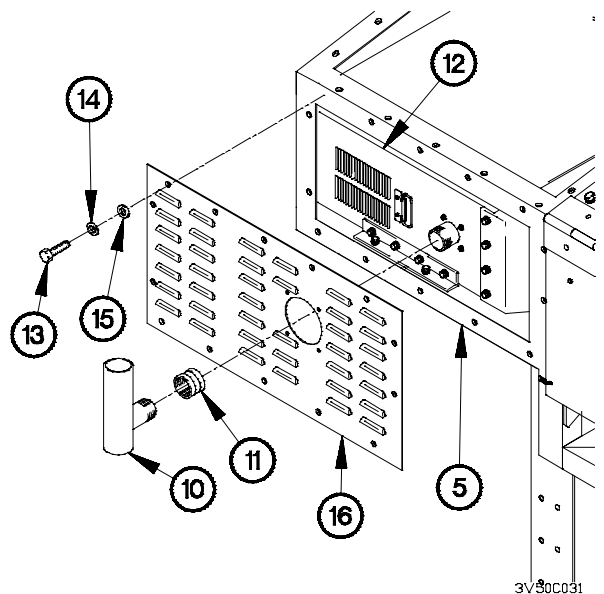
3V50C011

- (2) Remove 13 screws (6), lockwashers (7), washers (8), and curbside panel (9) from pod frame (5). Discard lockwashers.



3V50C021

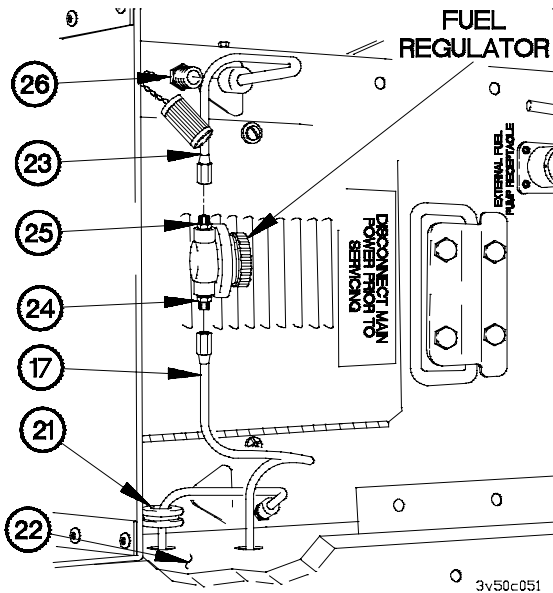
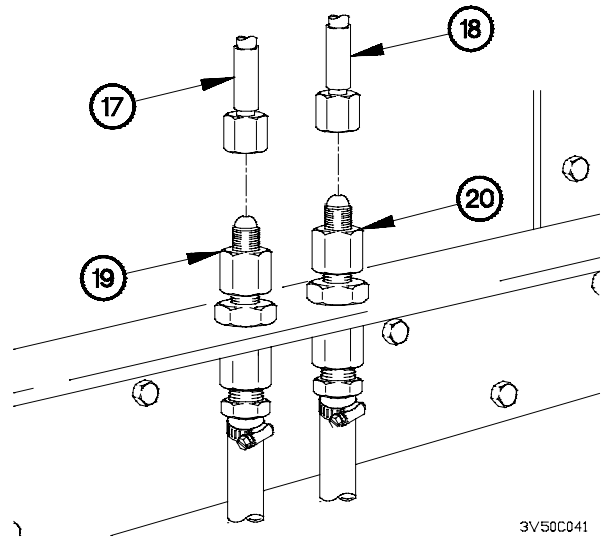
- (3) Remove exhaust pipe (10) from coupling (11).
- (4) Remove coupling (11) from heater (12).
- (5) Remove 14 screws (13), lockwashers (14), washers (15), and curbside front panel (16) from pod frame (5). Discard lockwashers.



3V50C031

20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

(6) Remove fuel tubes (17 and 18) from adapters (19 and 20).



(7) Remove grommet (21) from pod panel (22).

NOTE

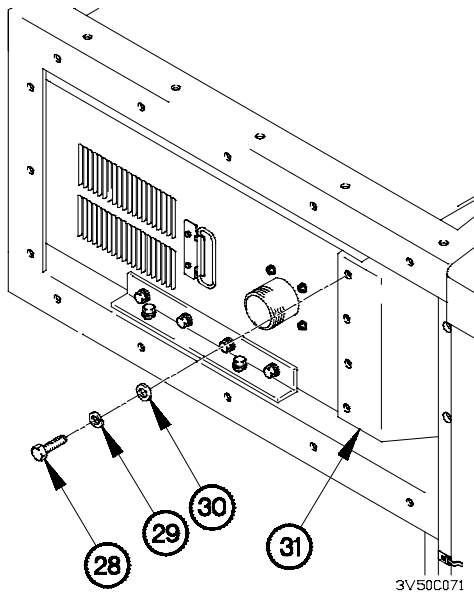
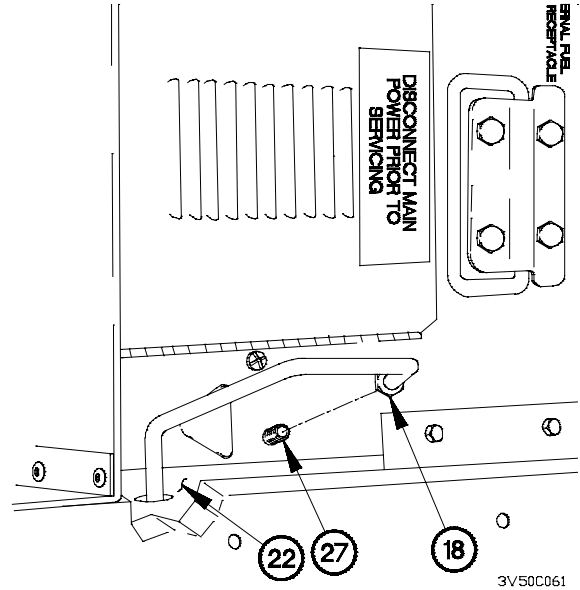
Note position of fuel regulator prior to removal.

(8) Remove fuel tubes (17 and 23) from fittings (24 and 25).

(9) Remove fuel tube (23) from fuel inlet port (26).

(10) Remove fuel tube (17) from pod panel (22).

- (11) Remove fuel tube (18) from overflow port (27).
- (12) Remove fuel tube (18) from pod panel (22).

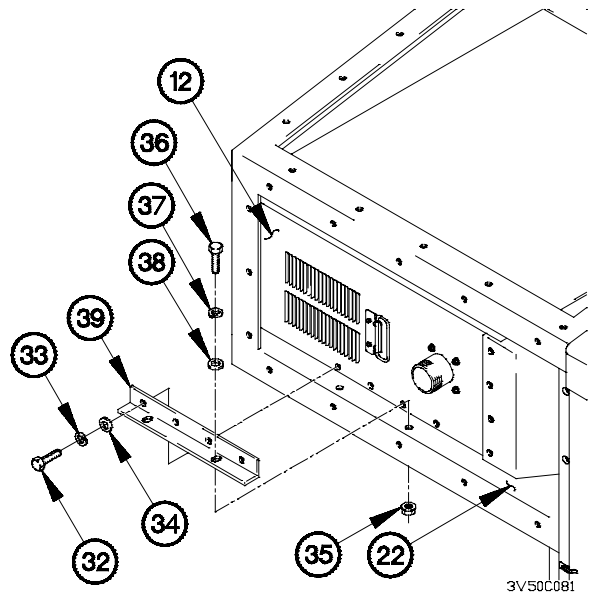


- (13) Remove four screws (28), lockwashers (29), and washers (30) from heater duct (31). Discard lockwashers.

NOTE

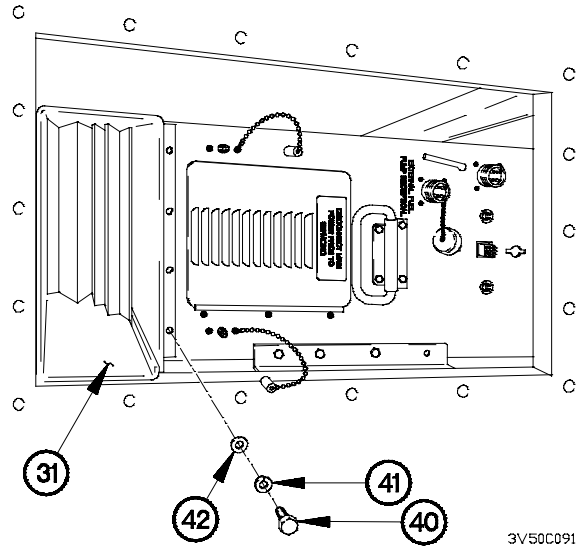
Steps (14) and (15) require the aid of an assistant.

- (14) Remove four screws (32), lockwashers (33), and washers (34) from heater (12). Discard lockwashers.
- (15) Remove two self-locking nuts (35), screws (36), lockwashers (37), washers (38), and bracket (39) from pod panel (22). Discard lockwashers and self-locking nuts.



20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

(16) Remove four screws (40), lockwashers (41), and washers (42) from heater duct (31). Discard lockwashers.

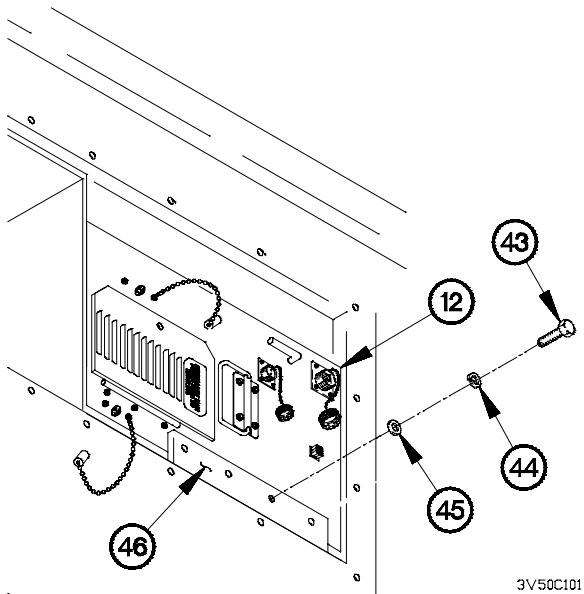


3V50C091

NOTE

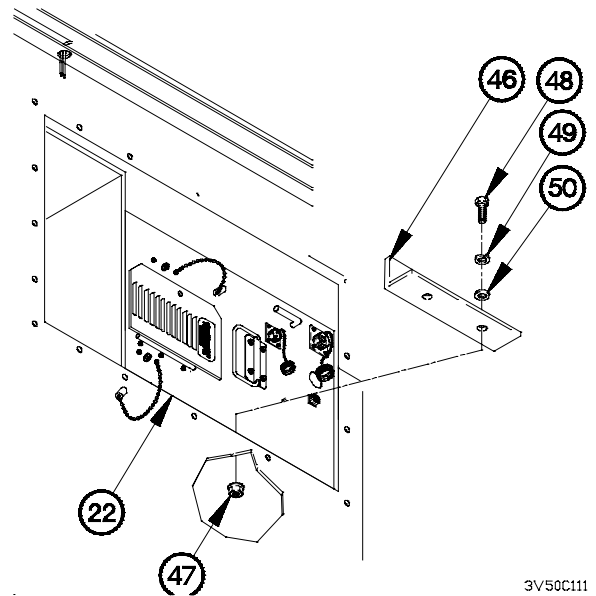
Steps (17) and (18) require the aid of an assistant.

(17) Remove three screws (43), lockwashers (44), washers (45), and bracket (46) from heater (12). Discard lockwashers.



3V50C101

(18) Remove two self-locking nuts (47), screws (48), lockwashers (49), washers (50), and bracket (46) from pod panel (22). Discard lockwashers and self-locking nuts.



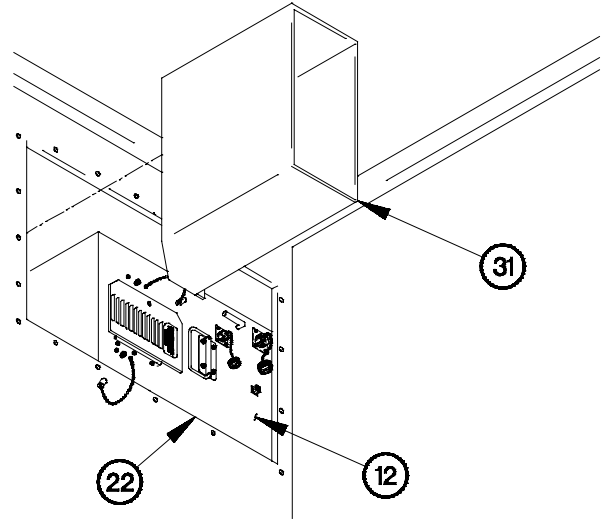
3V50C111

NOTE

Step (19) requires the aid of an assistant.

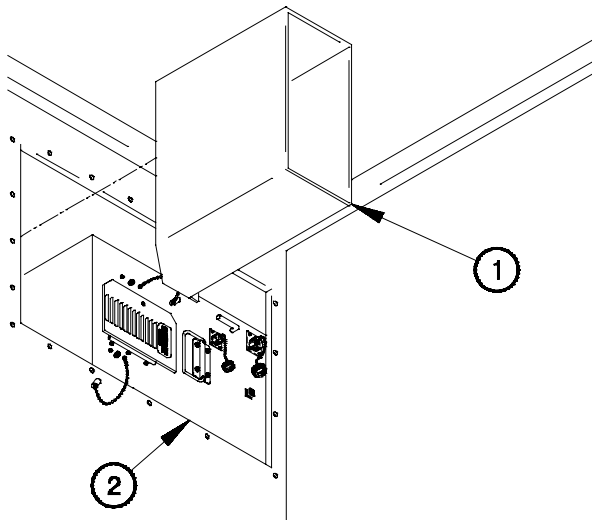
(19) Position heater (12) to access heater duct (31).

(20) Remove heater duct (31) from pod panel (22).



3V50C121

d. Heater Duct Installation.



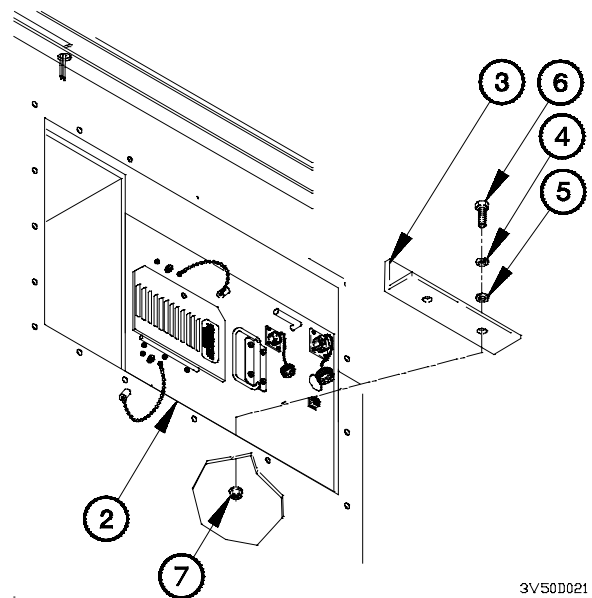
3V50D011

(1) Position heater duct (1) on pod panel (2).

NOTE

Steps (2) and (3) require the aid of an assistant.

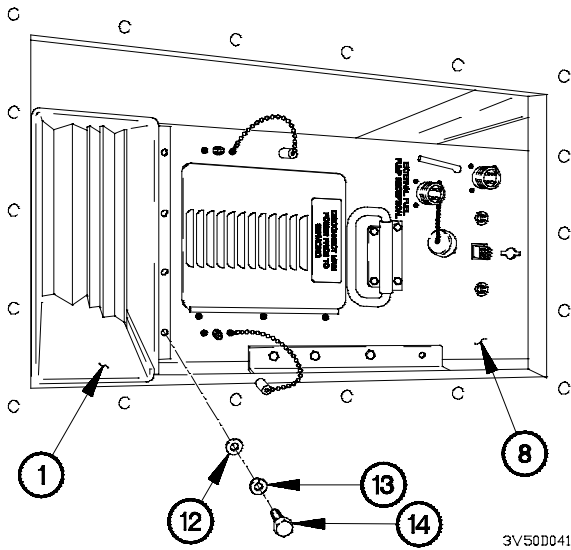
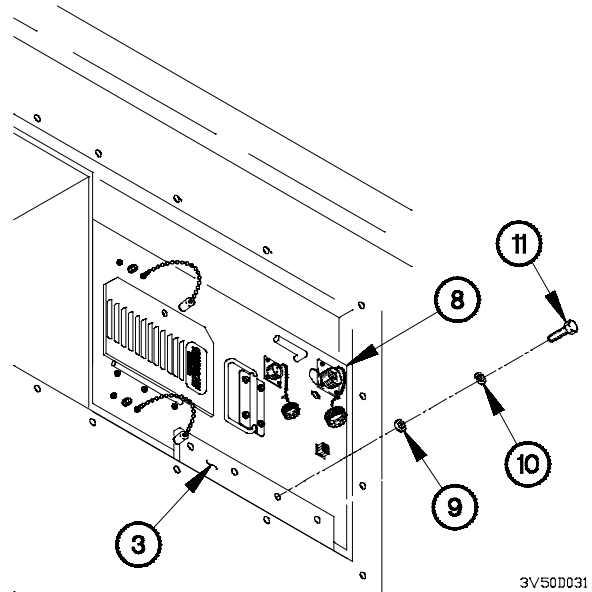
(2) Position bracket (3) on pod panel (2) with two washers (4), lockwashers (5), screws (6), and self-locking nuts (7).



3V50D021

20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

- (3) Install bracket (3) on heater (8) with three washers (9), lockwashers (10), and screws (11).

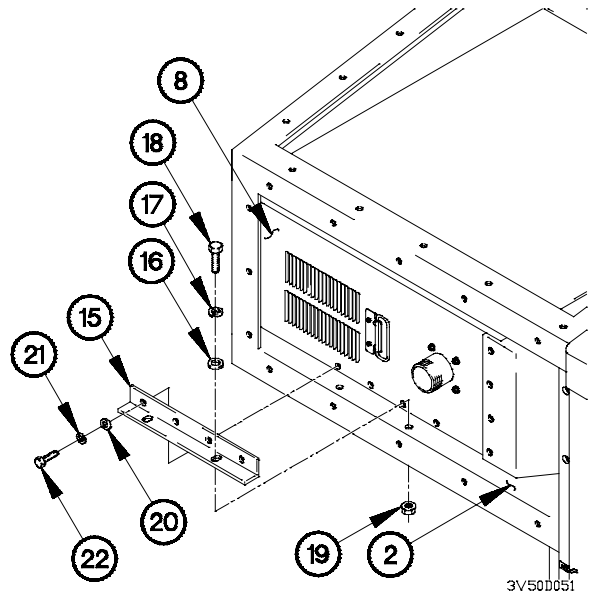


- (4) Install heater duct (1) on heater (8) with four washers (12), lockwashers (13), and screws (14).

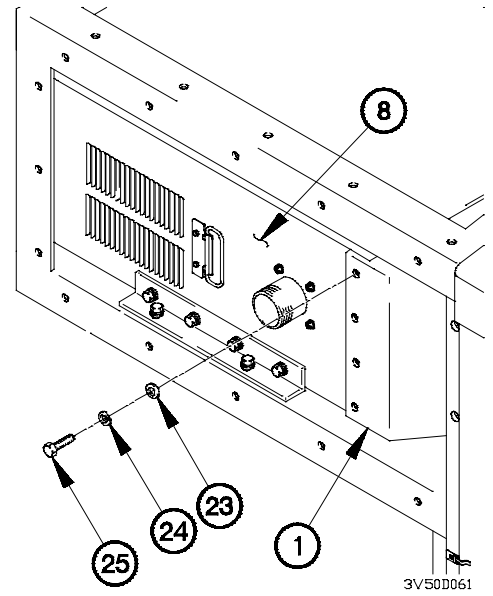
NOTE

Steps (5) and (6) require the aid of an assistant.

- (5) Position bracket (15) on pod panel (2) with two washers (16), lockwashers (17), screws (18), and self-locking nuts (19).
- (6) Install bracket (15) on heater (8) with four washers (20), lockwashers (21), and screws (22).

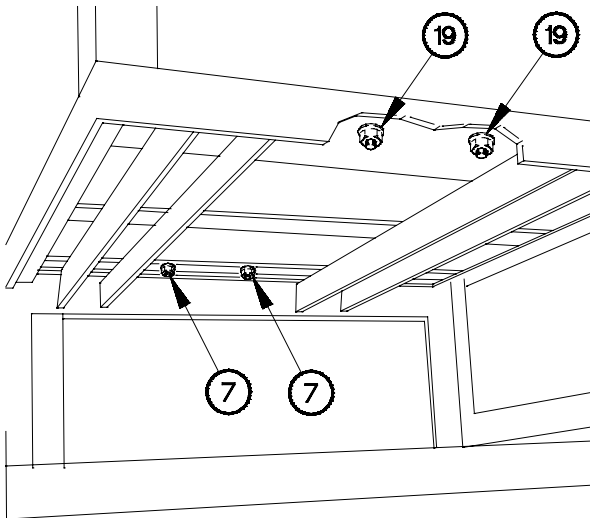


(7) Install heater duct (1) on heater (8) with four washers (23), lockwashers (24), and screws (25).



3V50D061

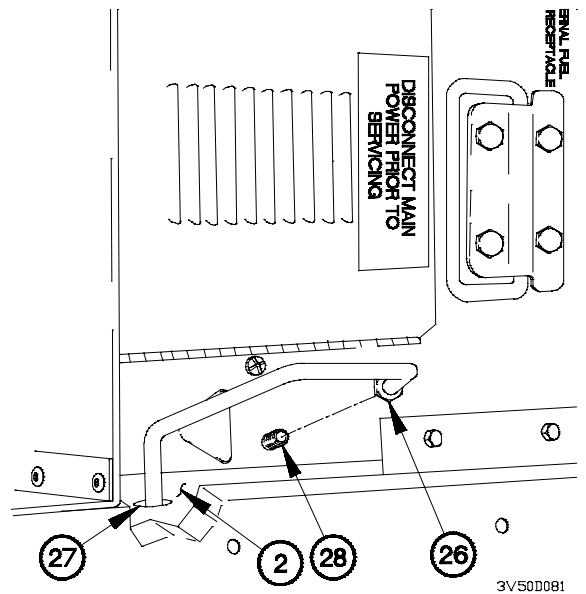
(8) Tighten two self-locking nuts (7 and 19).



3V50D071

(9) Route fuel tube (26) through hole (27) in pod panel (2).

(10) Install fuel tube (26) on fuel overflow port (28).



3V50D081

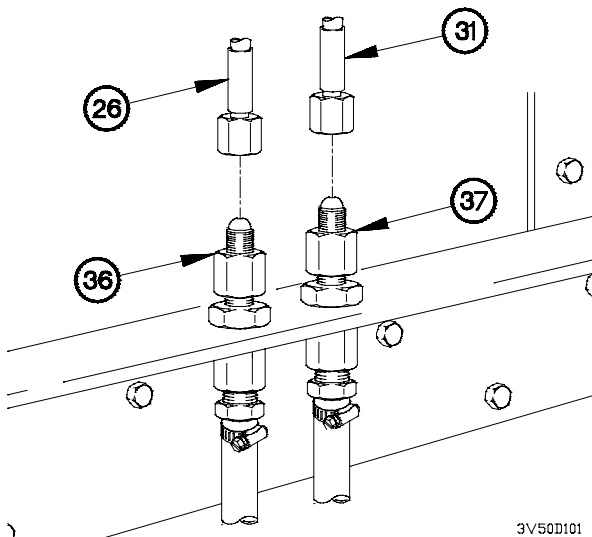
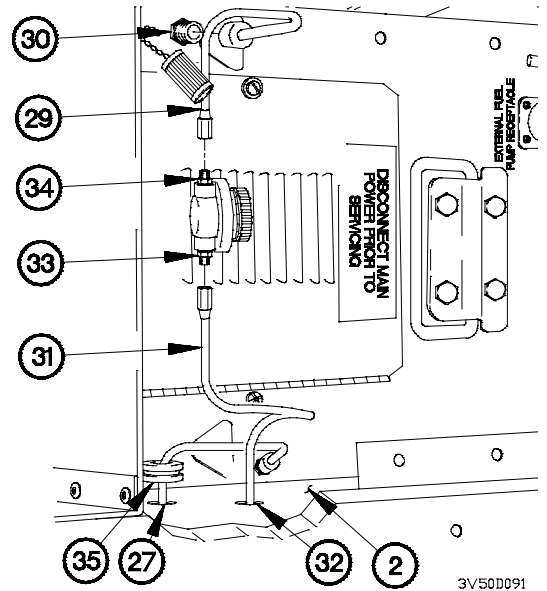
20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

- (11) Install fuel tube (29) on fuel inlet port (30).
- (12) Route fuel tube (31) through hole (32) on pod panel(2).

WARNING

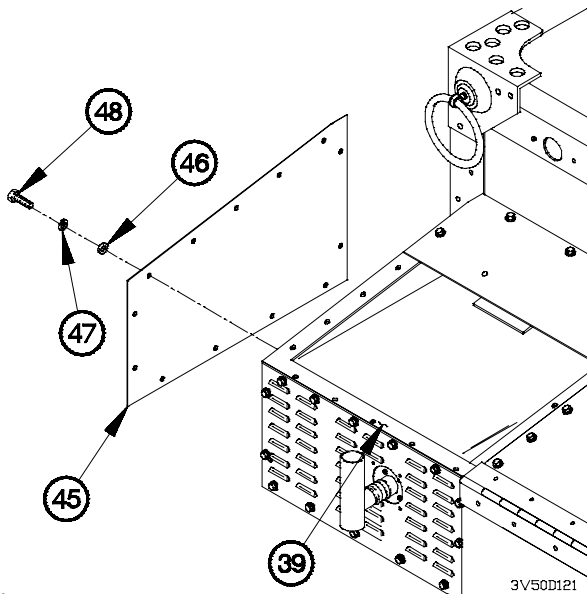
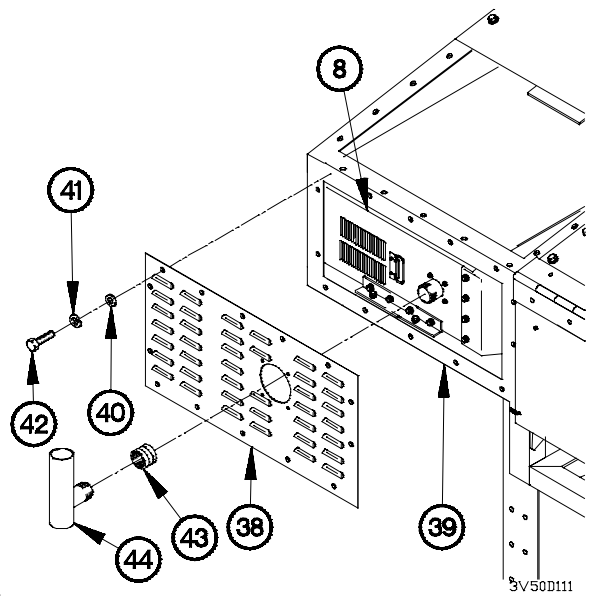
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (13) Apply sealing compound to threads of fittings (33 and 34).
- (14) Install fuel tubes (31 and 29) on fittings (33 and 34).
- (15) Install grommet (35) in hole (27) on pod panel (2).



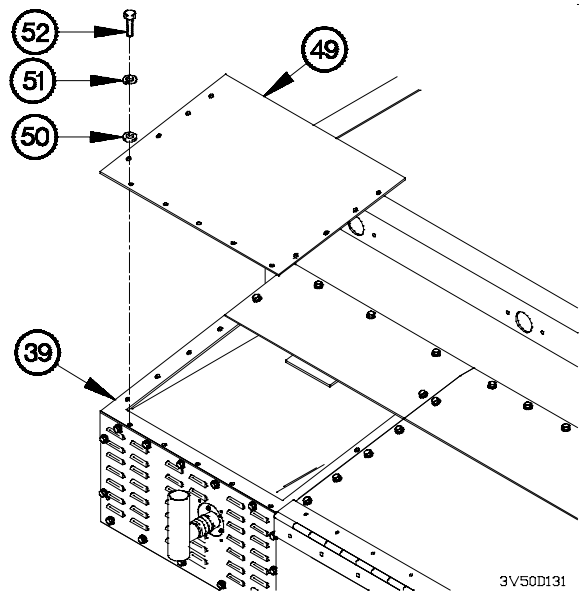
- (16) Install fuel tubes (26 and 31) on adapters (36 and 37).

- (17) Install curbside front panel (38) on pod frame (39) with 14 washers (40), lockwashers (41), and screws (42).
- (18) Install coupling (43) on heater (8).
- (19) Install exhaust pipe (44) on coupling (43).



- (20) Install curbside panel (45) on pod frame (39) with 13 washers (46), lockwashers (47), and screws (48).

- (21) Install curbside top front panel (49) on pod frame (39) with 13 washers (50), lockwashers (51), and screws (52).



20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

e. Follow-On Maintenance.

- (1) Lower cab (TM 9-2320-365-10).
- (2) Install M1079 heater fuel pump power cable (para 20-49).
- (3) Connect AC power (TM 9-2320-365-10).
- (4) Check heater for proper operation (TM 9-2320-365-10).
- (5) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-51. M1079 HEATER REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

M1079 heater duct removed (para 20-50).

Personnel Required

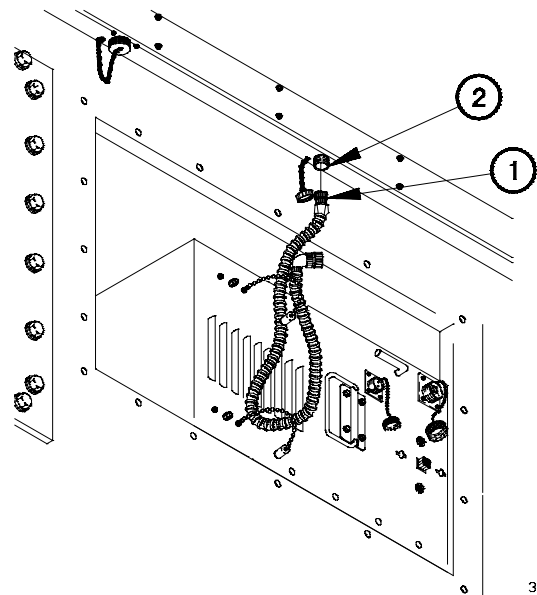
(2)

Tools and Special Tools

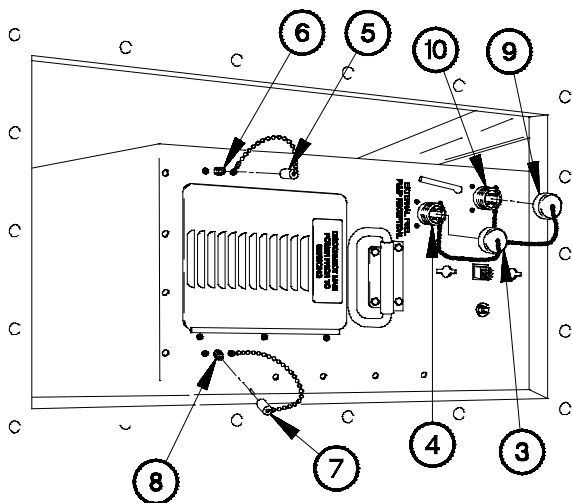
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Disconnect connector J245 (1) from thermostat connector (2).



3v51r-011



3v51r-021

- (2) Install dust cap (3) on heater fuel pump power connector (4).
- (3) Install dust cap (5) on fuel inlet port (6).
- (4) Install dust cap (7) on fuel overflow port (8).
- (5) Install dust cap (9) on heater power connector (10).

20-51. M1079 HEATER REPLACEMENT (CONT)

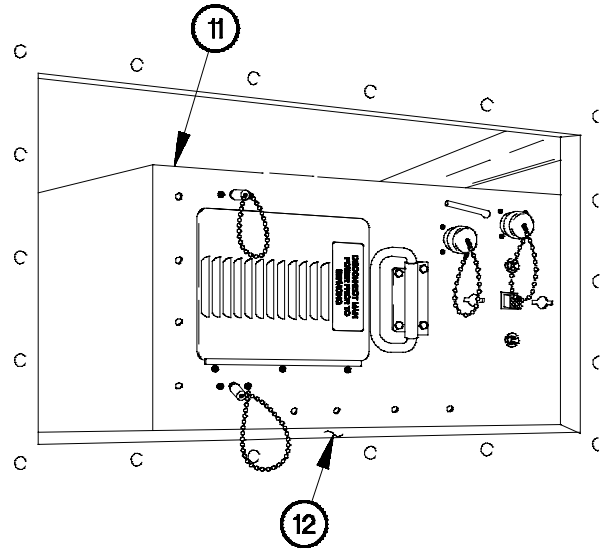
WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

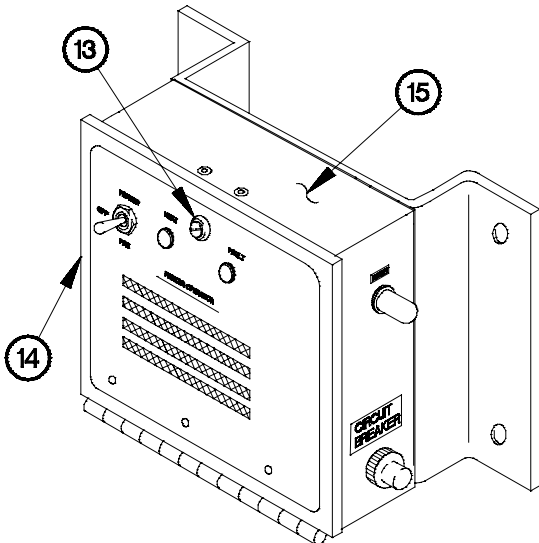
NOTE

Step (6) requires the aid of an assistant.

(6) Remove heater (11) from pod panel (12).



3v51r031



3v51r041

(7) Unlatch screw (13) on door (14).

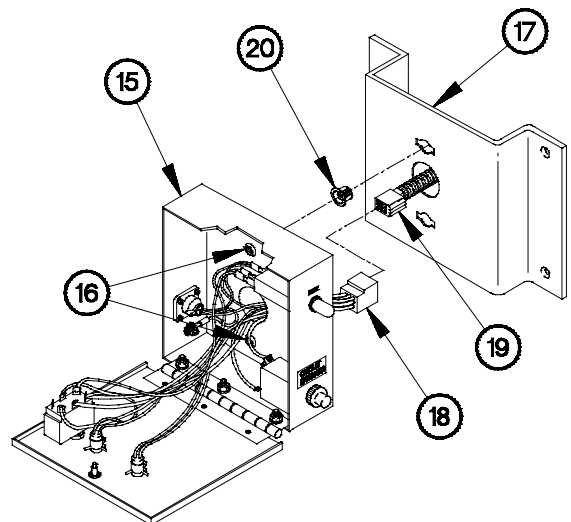
(8) Open door (14) on heater control unit (15).

(9) Unlatch two screws (16) on heater control unit (15).

(10) Remove heater control unit (15) from bracket (17).

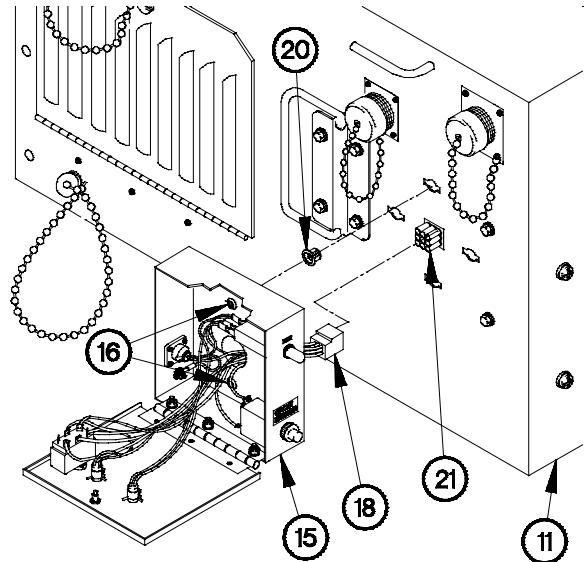
(11) Disconnect connector P4 (18) from connector J4A (19).

(12) Remove two twist locks (20) from bracket (17).

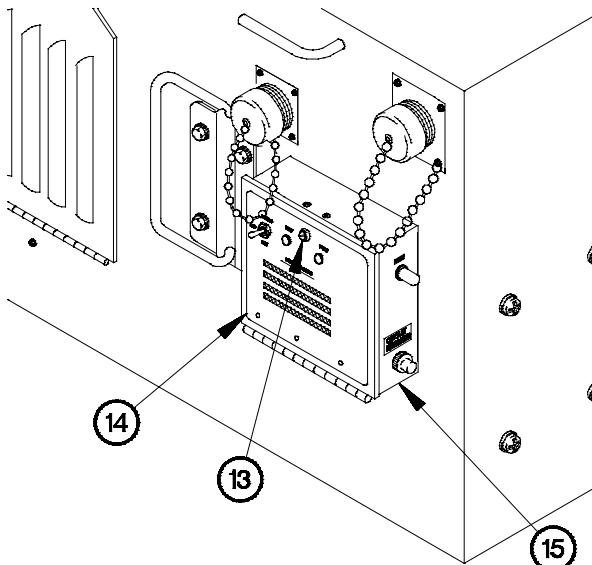


3v51r051

- (13) Install two twist locks (20) on heater (11).
- (14) Connect connector P4 (18) to connector J4 (21).
- (15) Position heater control unit (15) on heater (11).
- (16) Latch two screws (16) on heater control unit (15).



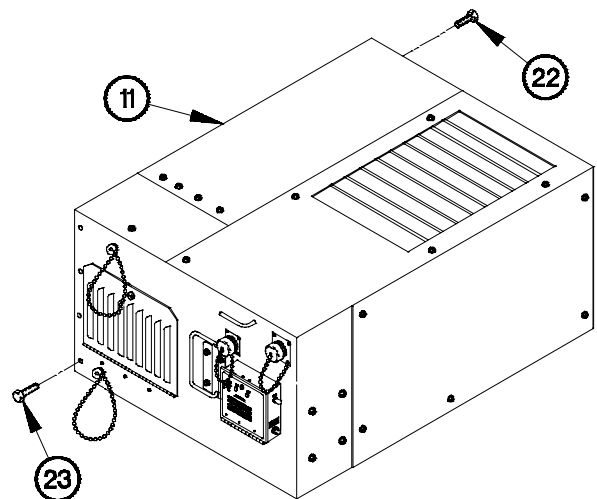
3v51r061



3v51r071

- (17) Close door (14) on heater control unit (15).
- (18) Latch screw (13) on door (14).

- (19) Install eight screws (22) in heater (11).
- (20) Install eight screws (23) in heater (11).

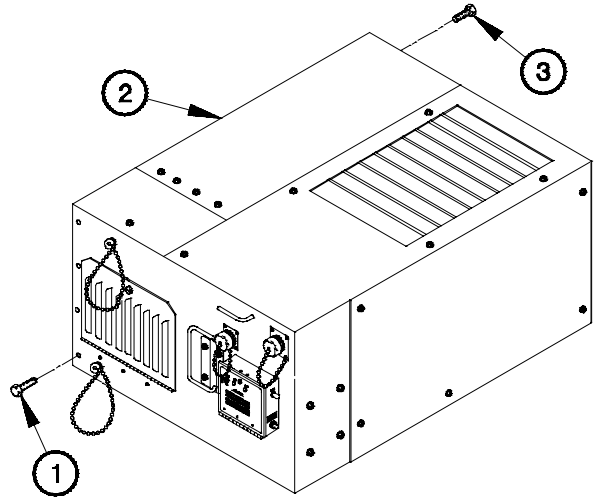


3v51r081

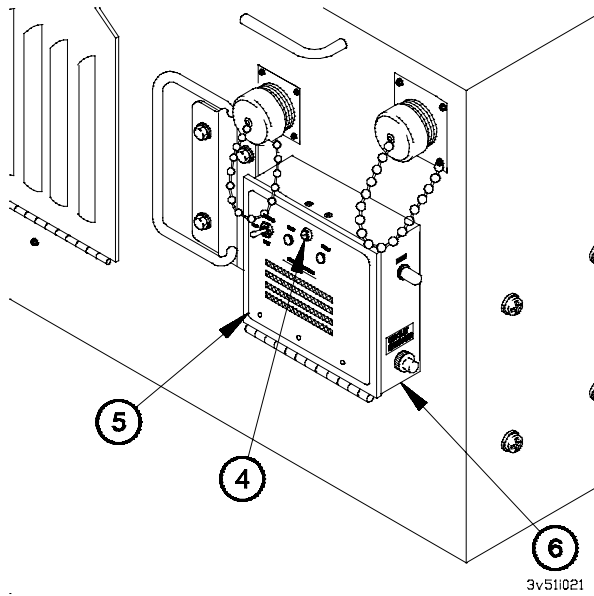
20-51. M1079 HEATER REPLACEMENT (CONT)

b. Installation.

- (1) Remove eight screws (1) from heater (2).
- (2) Remove eight screws (3) from heater (2).
- (3) Retain eight screws (1 and 3) for future use.



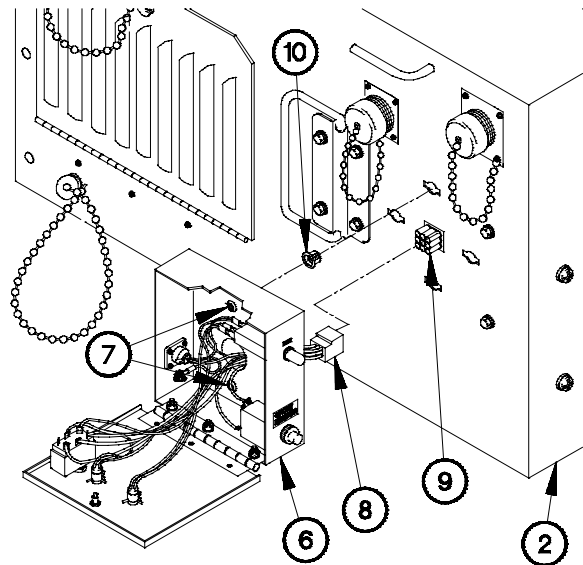
3v511011



3v511021

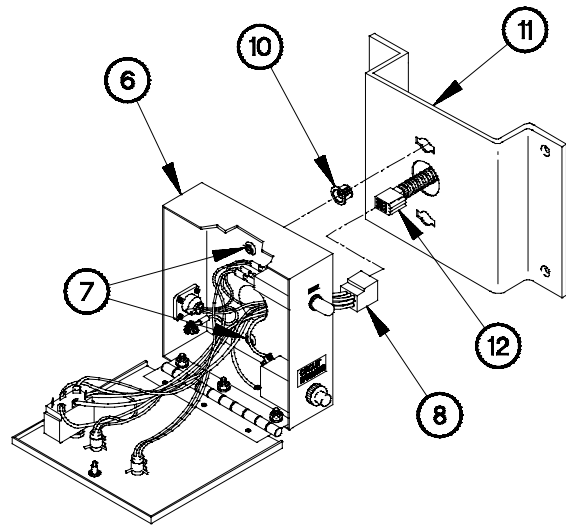
- (4) Unlatch screw (4) on door (5).
- (5) Open door (5) on heater control unit (6).

- (6) Unlatch two screws (7) on heater control unit (6).
- (7) Remove heater control unit (6) from heater (2).
- (8) Disconnect connector P4 (8) from connector J4 (9).
- (9) Remove two twist locks (10) from heater (2).

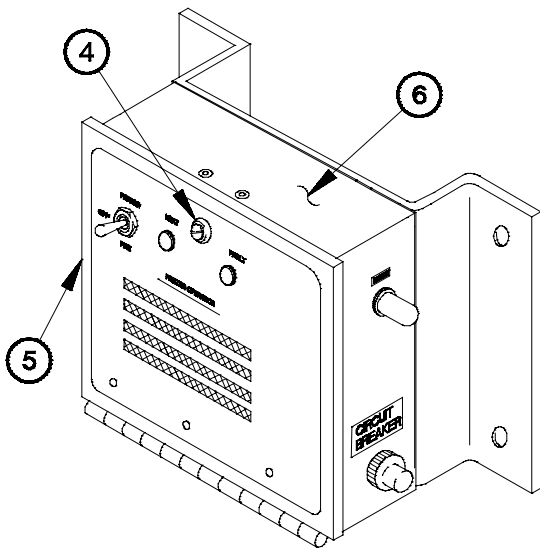


3v511031

- (10) Install two twist locks (10) on bracket (11).
- (11) Connect connector P4 (8) to connector J4A (12).
- (12) Position heater control unit (6) on bracket (11).
- (13) Latch two screws (7) on heater control unit (6).



3v511041



3v511051

- (14) Close door (5) on heater control unit (6).
- (15) Latch screw (4) on door (5).

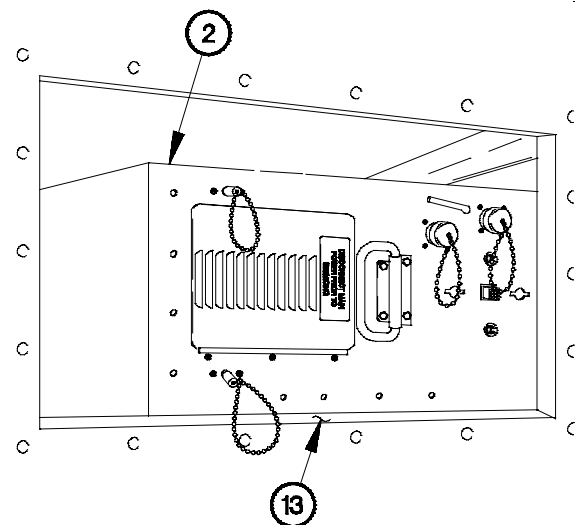
WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

NOTE

Step (16) requires the aid of an assistant.

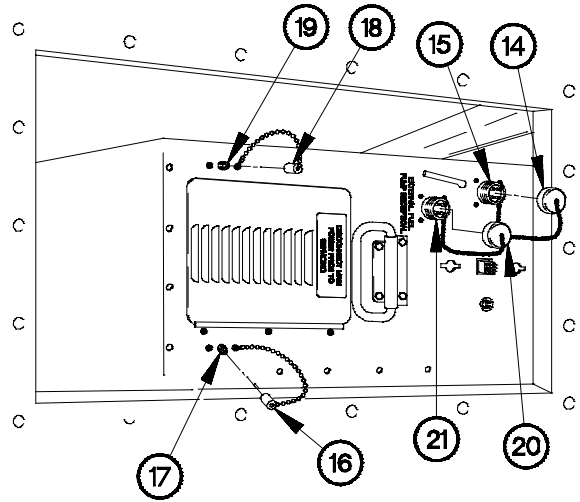
- (16) Install heater (2) on pod panel (13).



3v511061

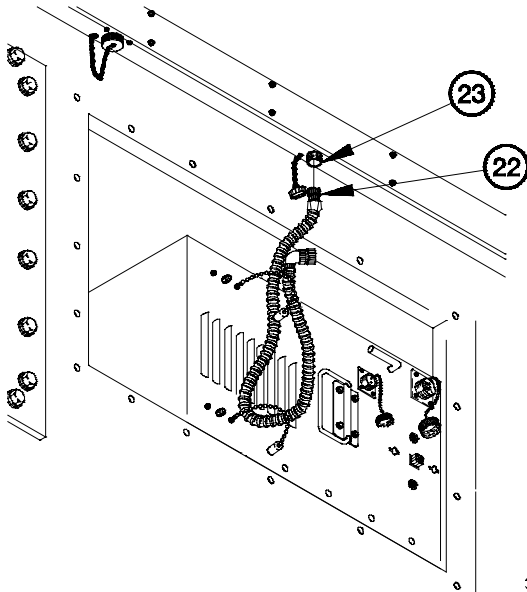
20-51. M1079 HEATER REPLACEMENT (CONT)

- (17) Remove dust cap (14) from heater power connector (15).
- (18) Remove dust cap (16) from fuel overflow port (17).
- (19) Remove dust cap (18) from fuel inlet port (19).
- (20) Remove dust cap (20) from heater fuel pump power connector (21).



3v511071

- (21) Connect connector J245 (22) to thermostat connector (23).



3v511081

c. Follow-On Maintenance.

Install M1079 heater duct (para 20-50).

End of Task.

20-52. DELETED

20-54. 200 AMP ALTERNATOR KIT INSTALLATION

This task covers:

- a. Installation
- b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- 100 amp alternator removed (para 7-2).
- 100 amp reverse polarity relay removed (para 7-27).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 35, Appendix C)
- Caps, Vise Jaw (Item 4, Appendix C)
- Vise, Machinist (Item 46, Appendix C)

Materials/Parts

- Ties, Cable, Plastic (Item 76, Appendix D)
- Nut, Self-Locking (3) (Item 149, Appendix G)
- Nut, Self-Locking (Item 137, Appendix G)
- Nut, Self-Locking (M1081 only) (2) (Item 140, Appendix G)
- Washer, Spring (M1081 only) (2) (Item 280, Appendix G)
- Lockwasher (2) (Item 92, Appendix G)

Personnel Required

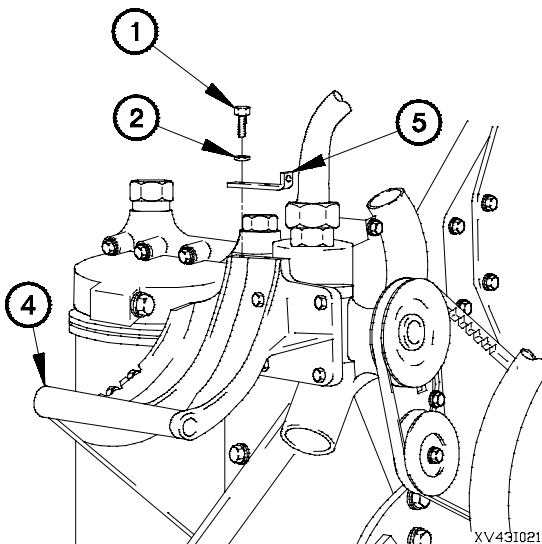
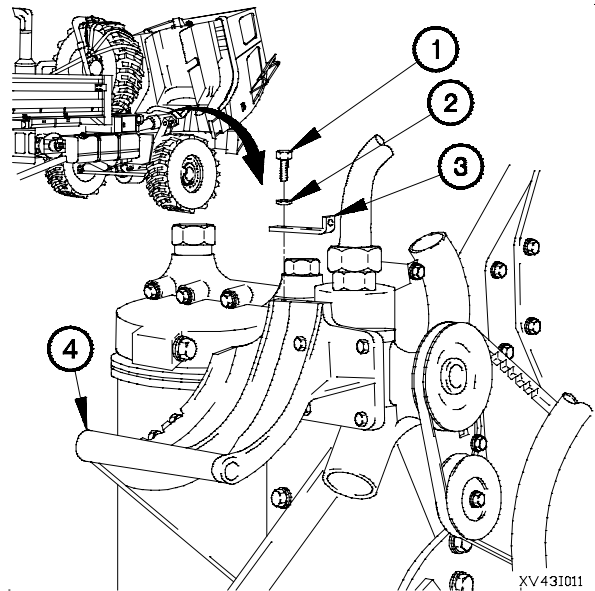
(2)

a. Installation.

NOTE

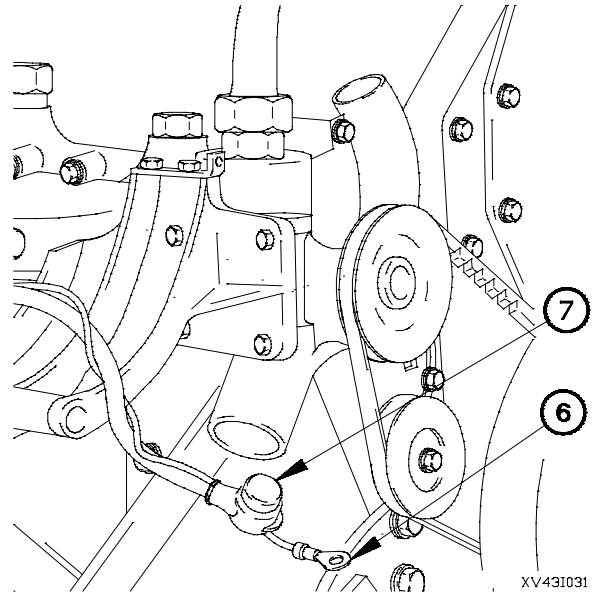
Retain belt adjusting arm for future installation.

- (1) Remove two screws (1), lockwashers (2), and belt adjusting arm (3) from alternator bracket (4). Discard lockwashers.



- (2) Position belt adjusting arm (5) on alternator bracket (4) with two lockwashers (2) and screws (1).
- (3) Tighten two screws (1) to 25-32 lb-ft (35-43 N-m).

(4) Remove terminal lug TL6 (6) from dust boot (7).

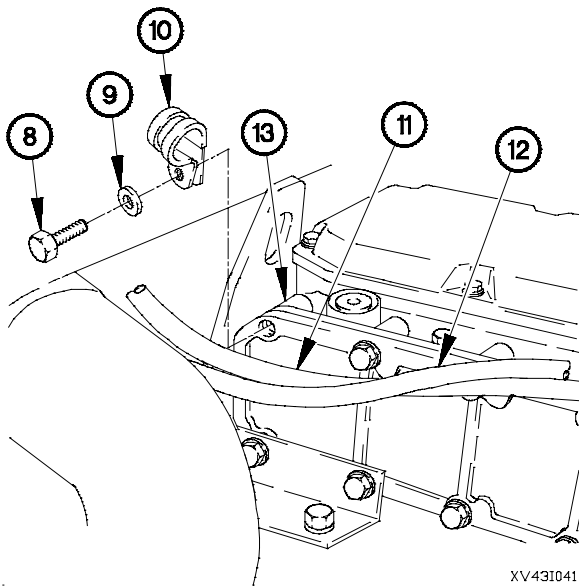


XV431031

NOTE

Retain 24vdc and 12vdc cable assemblies for future installation.

- (5) Remove three screws (8), washers (9), clamps (10), 24vdc cable (11), and 12vdc cable (12) from air inlet manifold (13).
- (6) Remove three clamps (10) from 24 vdc cable (11) and 12 vdc cable (12).



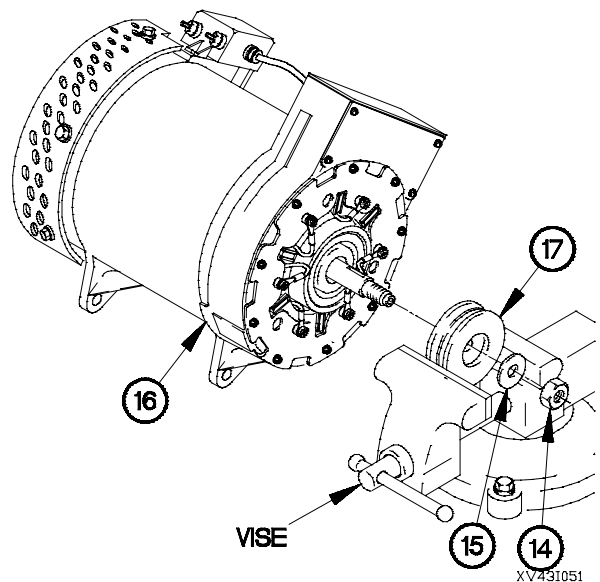
XV431041

(7) Remove self-locking nut (14) and washer (15) from alternator (16).

CAUTION

Ensure pulley does not contact wires, terminal lugs, or terminal screws on front of alternator. Failure to comply may result in damage to equipment.

- (8) Position pulley (17) on alternator (16) with washer (15) and self-locking nut (14).
- (9) Position pulley (17) in vise.
- (10) Tighten self-locking nut (14) to 106-130 lb-ft (144-176 N-m).
- (11) Remove pulley (17) from vise.



XV431051

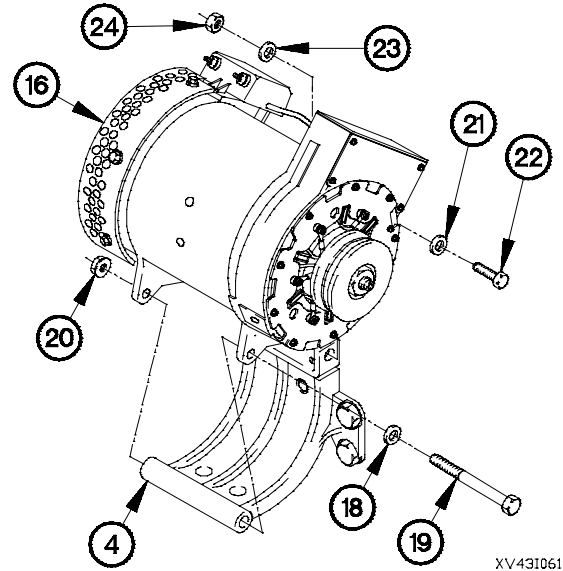
20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

WARNING

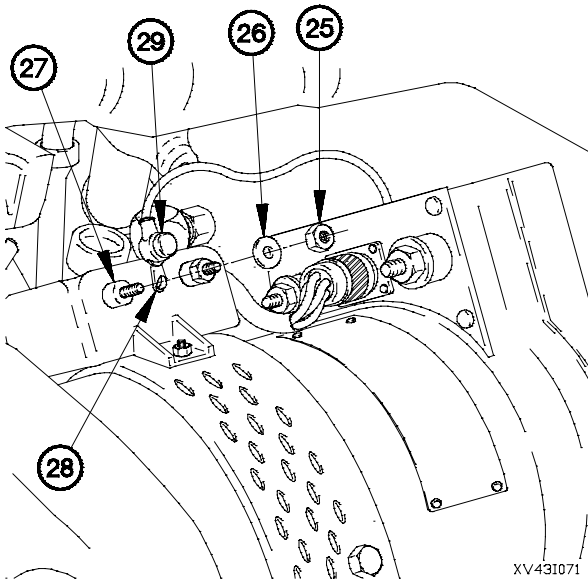
200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to install 200 amp alternator. Failure to comply may result in injury to personnel.

NOTE

Step (12) requires the aid of an assistant.

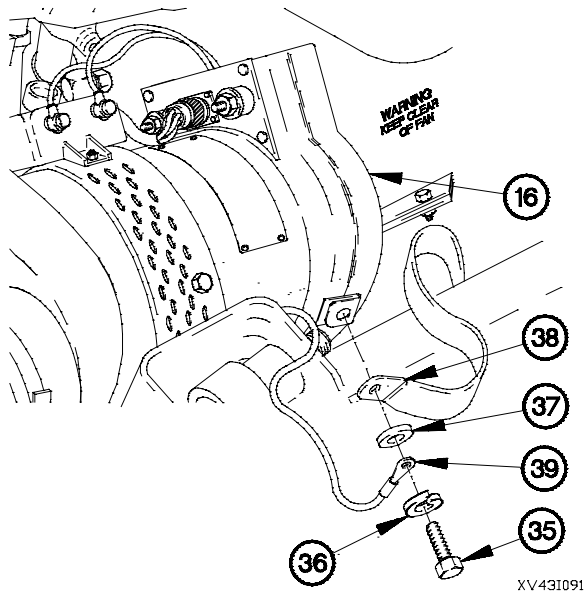
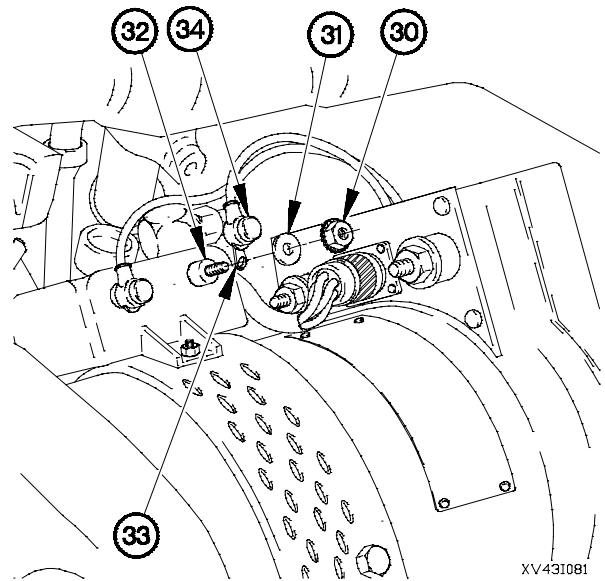


- (12) Position alternator (16) on alternator bracket (4) with washer (18), screw (19), and self-locking nut (20).
- (13) Position washer (21), screw (22), washer (23), and self-locking nut (24) on alternator (16).
- (14) Tighten self-locking nut (20) to 45-55 lb-ft (61-75 N·m).
- (14.1) Tighten self-locking nut (24) to 25-32 lb-ft (35-43 N·m).



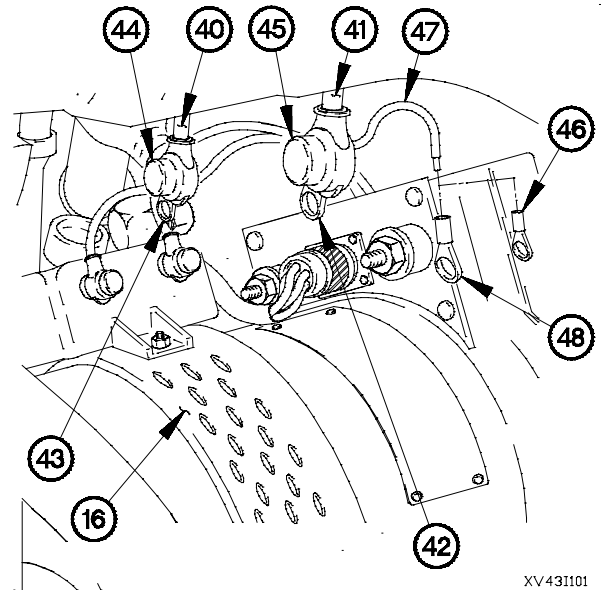
- (15) Remove self-locking nut (25) and washer (26) from voltage regulator terminal (27).
- (16) Position terminal lug TL110 (28) on voltage regulator terminal (27) with washer (26) and self-locking nut (25).
- (17) Tighten self-locking nut (25) to 24 lb-in. (3 N·m).
- (18) Position dust boot (29) on terminal lug TL110 (28).

- (19) Remove self-locking nut (30), and washer (31) from voltage regulator terminal (32).
- (20) Position terminal lug TL35 (33) on voltage regulator terminal (32) with washer (31), and self-locking nut (30).
- (21) Tighten self-locking nut (30) to 24 lb-in. (3 N-m).
- (22) Position dust boot (34) on terminal lug TL35 (33).



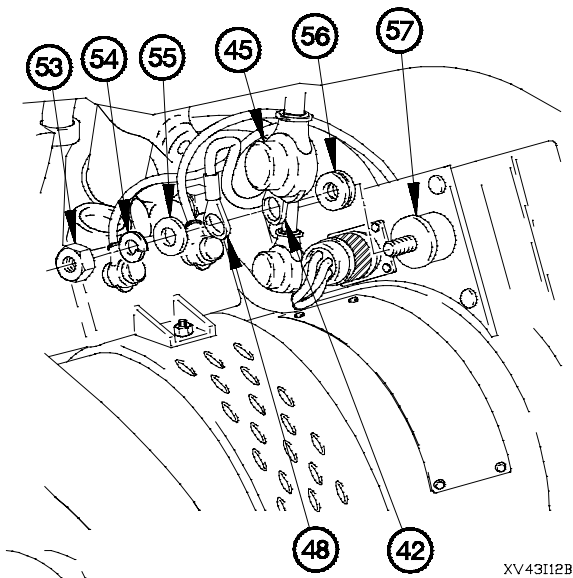
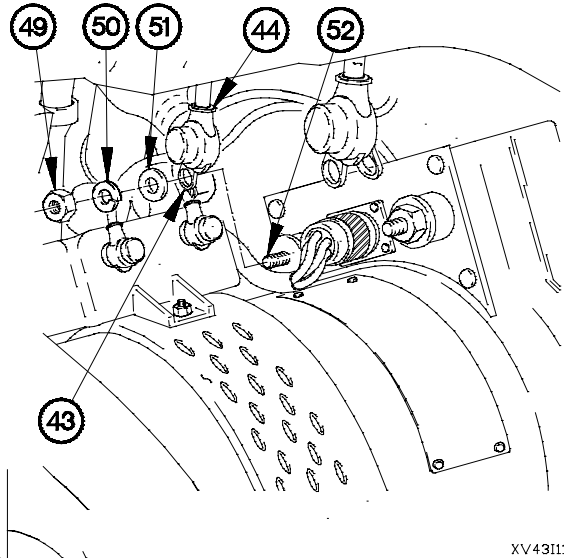
- (23) Remove screw (35), lockwasher (36), and washer (37) from alternator (16).
- (24) Position ground strap (38), washer (37), and terminal lug TL5 (39) on alternator (16) with lockwasher (36) and screw (35).
- (25) Tighten screw (35) to 60-84 lb-in. (7-9 N-m).

- (26) Position 12vdc cable (40) and 24vdc cable (41) in engine compartment with terminal lugs TL2 (42) and TL60 (43) located next to alternator (16).
- (27) Install dust boot (44) on 12vdc cable (40).
- (28) Install dust boot (45) on 24vdc cable (41).
- (29) Remove terminal lug TL6 (46) from wire (47). Discard terminal lug.
- (30) Position wire (47) in dust boot (45) with terminal lug TL2 (42).
- (31) Install terminal lug TL6 (48) on wire (47).



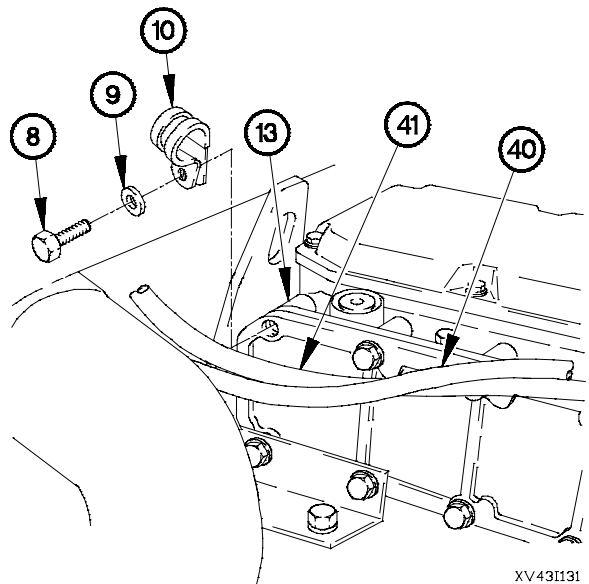
20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

- (32) Remove nut (49), lockwasher (50), and washer (51) from alternator terminal (52).
- (33) Position terminal lug TL60 (43) on alternator terminal (52) with washer (51), lockwasher (50), and nut (49).
- (34) Tighten nut (49) to 156-180 lb-in. (17-21 N·m).
- (35) Position dust boot (44) on terminal lug TL60 (43).



- (36) Remove nut (53), lockwasher (54), insulation washer (55), and fuse link (56) from alternator terminal (57).
- (37) Position fuse link (56), terminal lug TL2 (42) and TL6 (48), insulation washer (55), lockwasher (54), and nut (53) on alternator terminal (57).
- (38) Tighten nut (53) to 156-180 lb-in. (17-21 N·m).
- (39) Position dust boot (45) on terminal lugs TL2 (42) and TL6 (48).

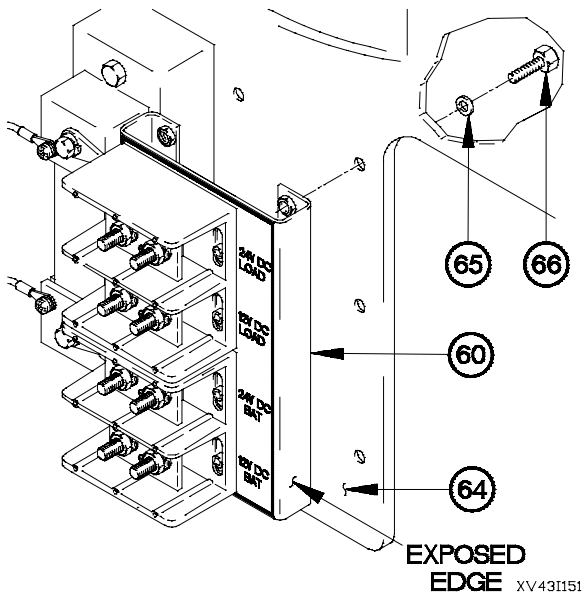
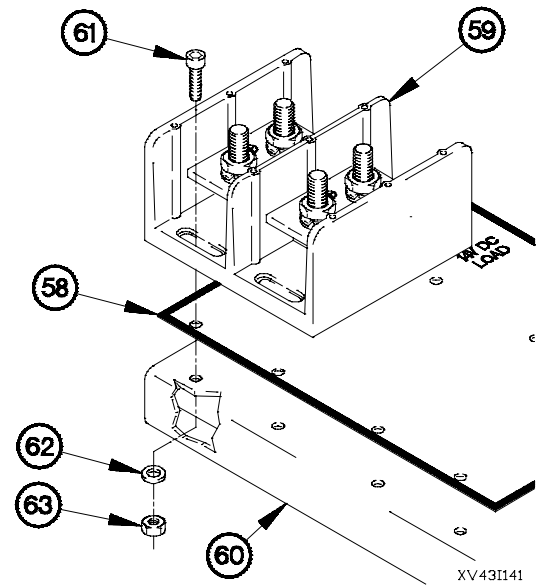
- (40) Position three clamps (10) on 12vdc cable (40) and 24vdc cable (41).
- (41) Position three clamps (10) on air inlet manifold (13) three with washers (9) and screws (8).
- (42) Tighten three screws (8) to 22-27 lb-ft (31-37 N·m).



CAUTION

Position both terminal blocks loosely on mounting bracket and align correctly before tightening nuts. Failure to comply may result in damage to equipment.

- (43) Position identification plate (58) and two terminal blocks (59) on bracket (60) with eight screws (61), washers (62), and self-locking nuts (63).
- (44) Tighten eight self-locking nuts (63) to 48 lb-in. (5 N·m).

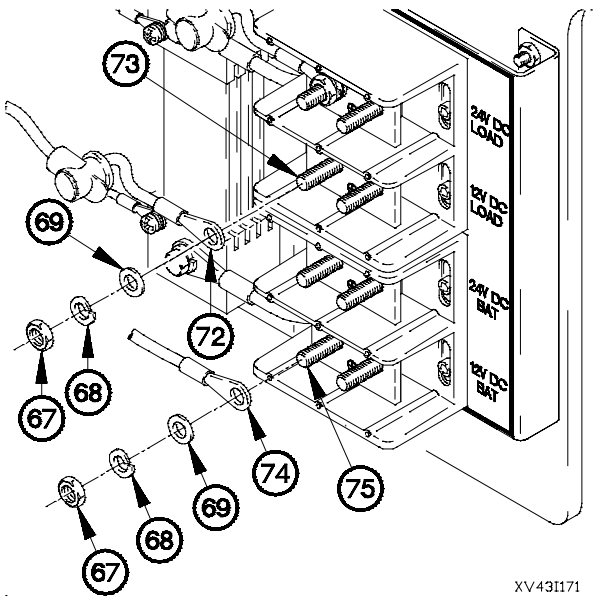
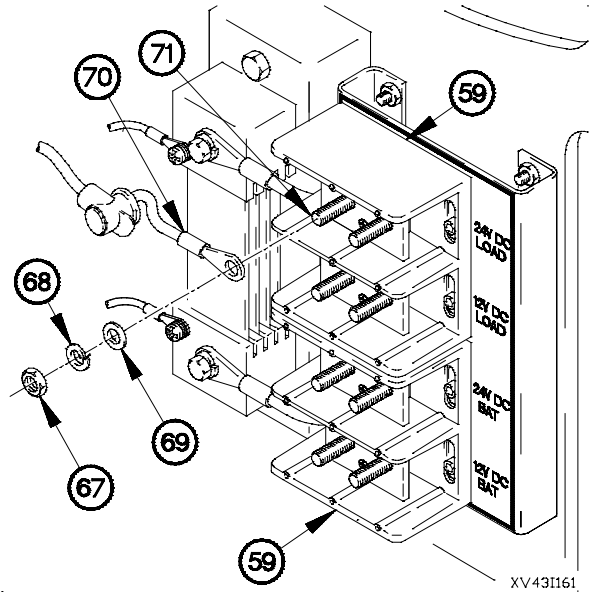


NOTE

- Terminal blocks are not centered on bracket. Position bracket on spare tire retainer with exposed edge of identification plate toward cab.
 - Step (45) requires the aid of an assistant.
- (45) Position bracket (60) on spare tire retainer (64) with four washers (65) and screws (66).
 - (46) Tighten four screws (66) to 48 lb-in. (5 N·m).

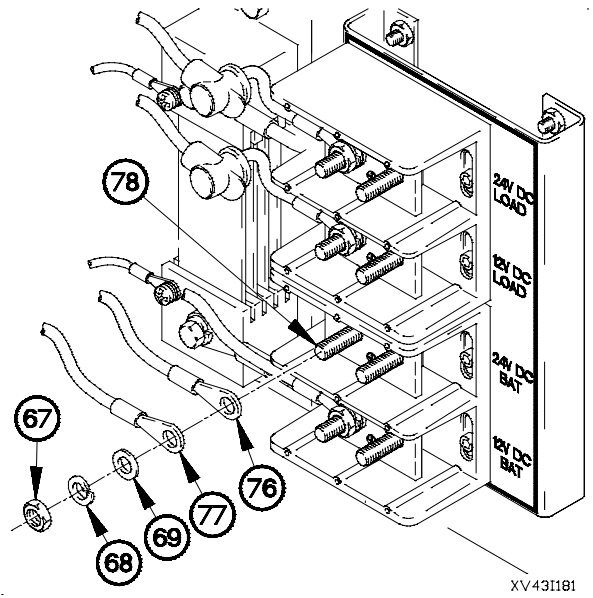
20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

- (47) Remove eight nuts (67), lockwashers (68), and washers (69) from two terminal blocks (59).
- (48) Position terminal lug TL44 (70) on terminal block terminal (71) with washer (69), lockwasher (68), and nut (67).

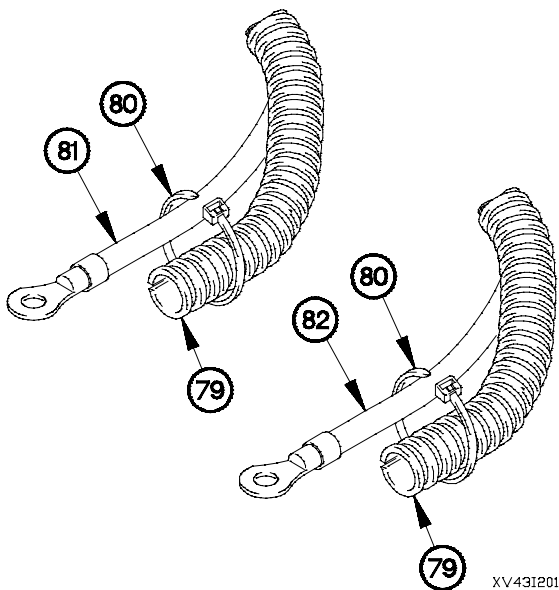
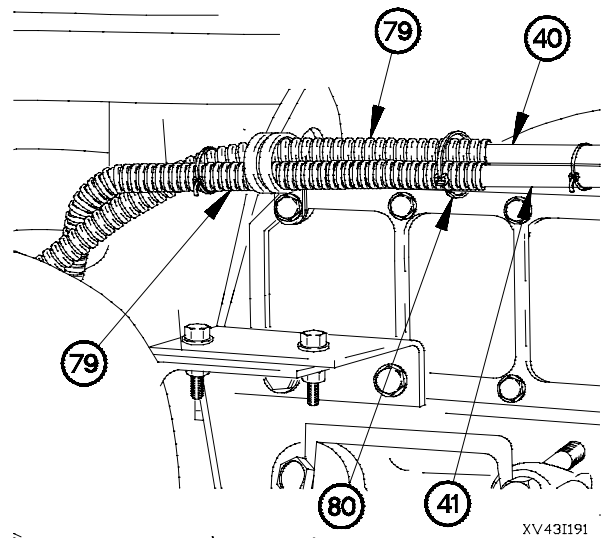


- (49) Position terminal lug TL80 (72) on terminal block terminal (73) with washer (69), lockwasher (68), and nut (67).
- (50) Position terminal lug TL47 (74) on terminal block terminal (75) with washer (69), lockwasher (68), and nut (67).

- (51) Position terminal lugs TL36 (76) and TL37 (77) on terminal block terminal (78) with washer (69), lockwasher (68), and nut (67).



- (52) Install 17.7 in. (45.0 cm) of convoluted tubing (79) on 12vdc cable (40).
- (53) Install 19.6 in. (50.0 cm) of convoluted tubing (79) on 24vdc cable (41).
- (54) Install three plastic cable ties (80) on convoluted tubing (79).



NOTE

24 vdc load cable terminates with terminal lugs TL167 and TL169. 24 vdc battery cable terminates with terminal lugs TL166 and TL168.

- (55) Install 21.6 in. (55.5 cm) of convoluted tubing (79) on 24vdc load cable (81).
- (56) Install 21.5 in. (55.0 cm) of convoluted tubing (79) on 24vdc battery cable (82).
- (57) Install plastic cable ties (80) on convoluted tubing (79).

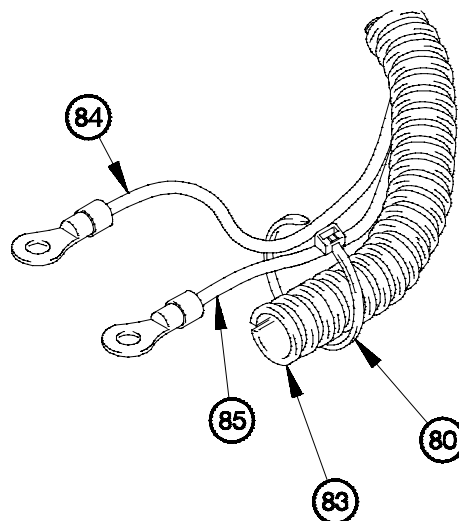
20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

NOTE

- 12 vdc load cable terminates with terminal lugs TL172 and TL174. 12 vdc battery cable terminates with terminal lugs TL171 and TL173.
- Position terminal lugs TL171 and TL172 at the same end.

(58) Install 21.6 in. (55.0 cm) of convoluted tubing (83) on 12vdc load cable (84) and 12vdc battery cable (85).

(59) Install plastic cable ties (80) on convoluted tubing (83).



XV431211

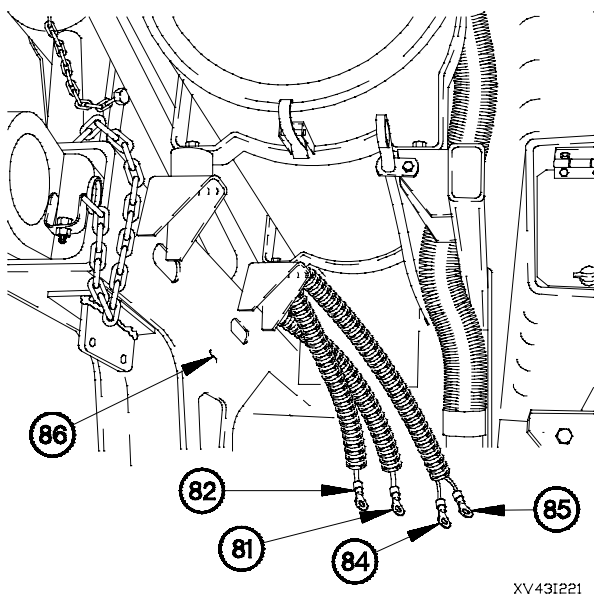
NOTE

Position 24vdc load cable, 24vdc battery cable, 12vdc load cable, and 12vdc battery cable with terminal lugs TL167, TL172, TL166, and TL171 at terminal block.

(60) Position 24vdc load cable (81) on rear side of front lifting beam (86).

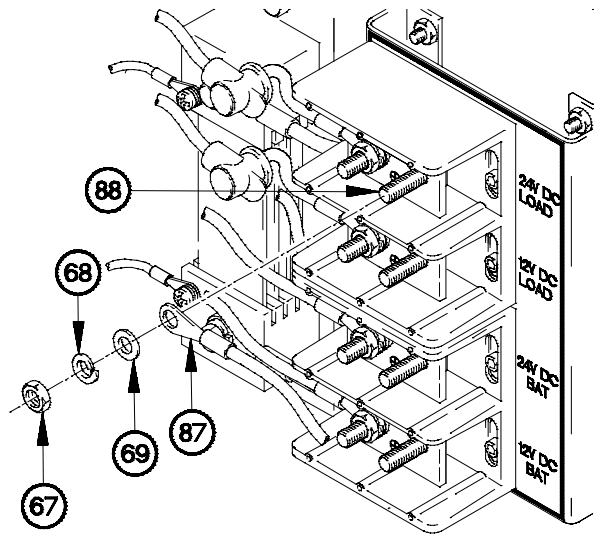
(61) Position 24vdc battery cable (82) on rear side of front lifting beam (86).

(62) Position 12vdc load cable (84) and 12vdc battery cable (85) on rear side of front lifting beam (86).

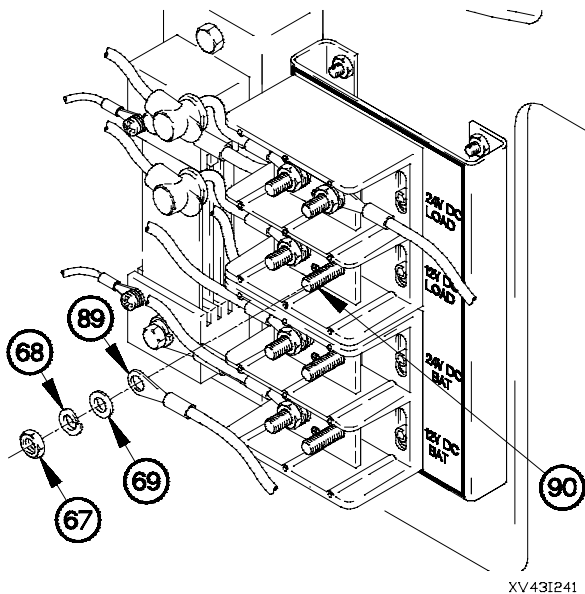


XV431221

(63) Position terminal lug TL167 (87) on terminal block terminal (88) with washer (69), lockwasher (68), and nut (67).



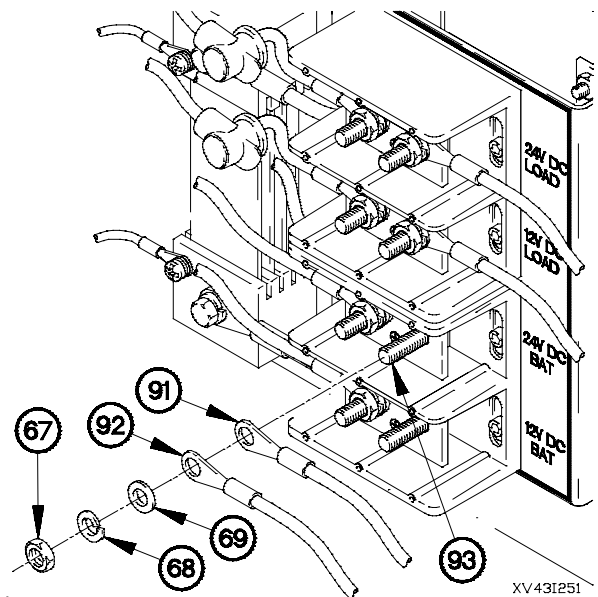
XV 431231



XV 431241

(64) Position terminal lug TL172 (89) on terminal block terminal (90) with washer (69), lockwasher (68), and nut (67).

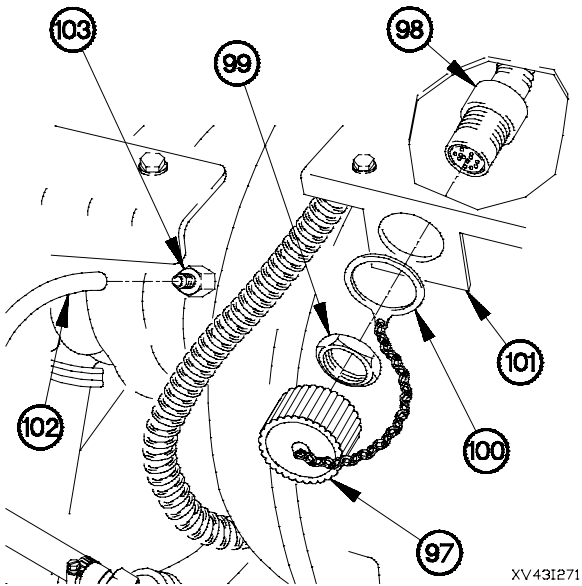
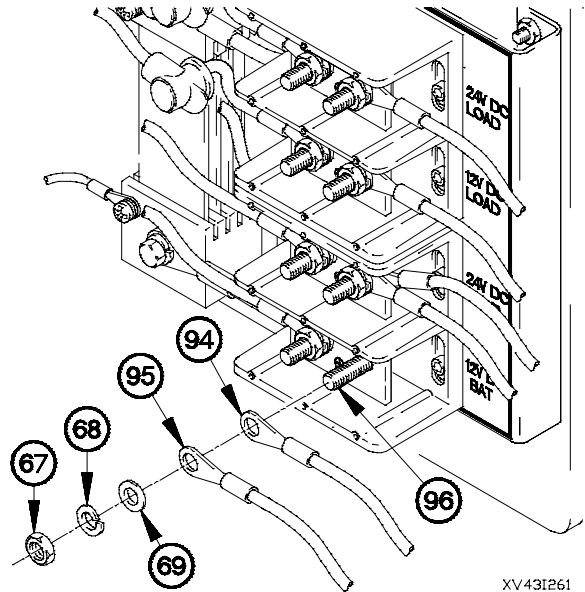
(65) Position terminal lugs TL1 (91) and TL166 (92) on terminal block terminal (93) with washer (69), lockwasher (68), and nut (67).



XV 431251

20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

(66) Position terminal lugs TL61 (94) and TL171 (95) on terminal block terminal (96) with washer (69), lockwasher (68), and nut (67).

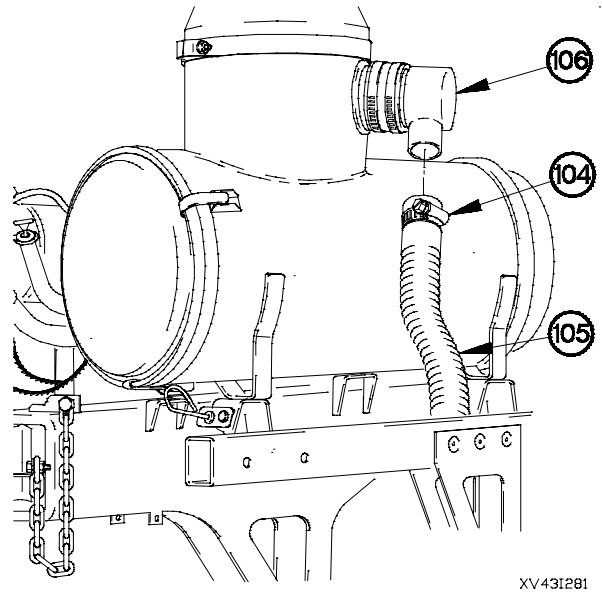


- (67) Remove dust cap (97) from connector J106 (98).
- (68) Remove nut (99), dust cap lanyard (100), and connector J106 (98) from chemical detection unit mounting bracket (101).
- (69) Disconnect air filter restriction gauge hose (102) from air flow sensor (103).

NOTE

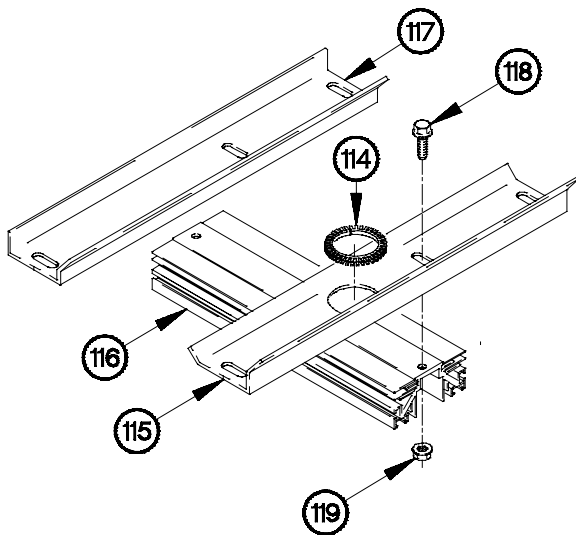
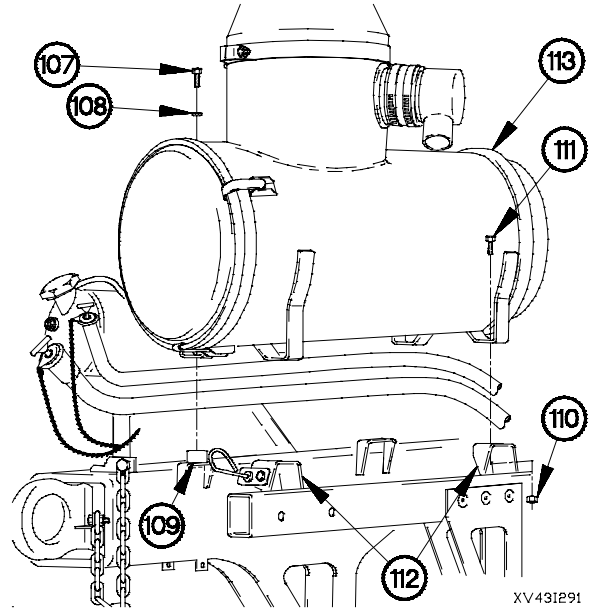
Perform steps (70) through (104) on all models except M1081.

- (70) Loosen clamp (104) on particle extraction hose (105).
- (71) Remove particle extraction hose (105) from adapter (106).



PARTICLE EXTRACTION HOSE
REMOVED FOR CLARITY

- (72) Remove screw (107) and washer (108) from resilient mount (109).
- (73) Remove three self-locking nuts (110) and screws (111) from mounting brackets (112). Discard self-locking nuts.
- (74) Remove intake air cleaner housing (113) from mounting brackets (112) and resilient mount (109).



- (75) Cut grommet (114) to 8 1/4 in. (210 mm).
- (76) Install grommet (114) in bracket (115).

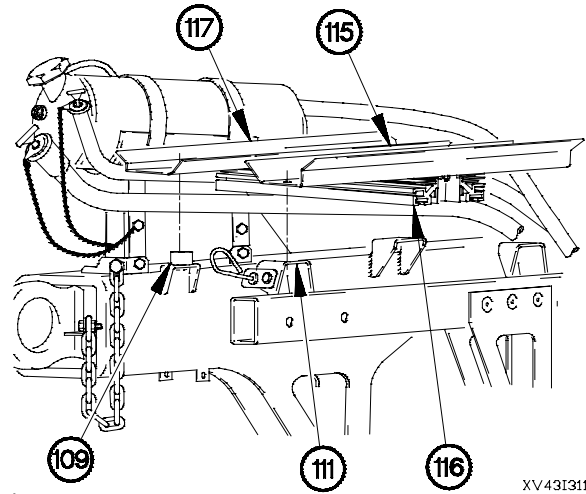
NOTE

Position reverse polarity relay 24V terminals toward front of vehicle.

- (77) Position reverse polarity relay (116) on brackets (115 and 117) with two screws (118) and self-locking nuts (119).

20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

(78) Position reverse polarity relay (116) and brackets (115 and 117) on mounting brackets (112) and resilient mount (109) with bracket (115) toward rear of vehicle.



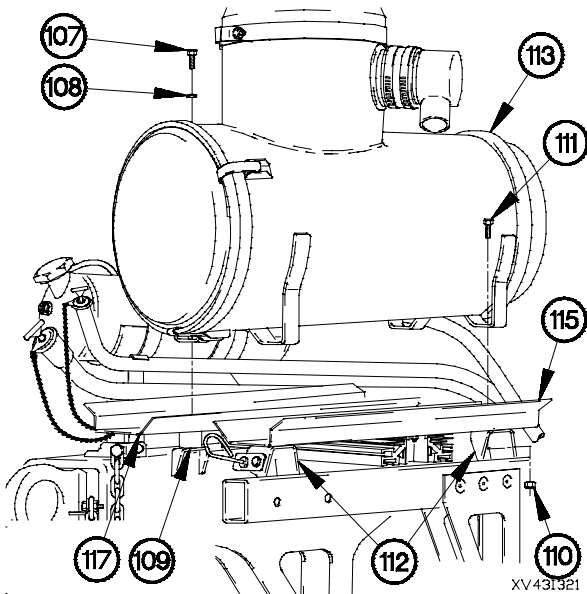
(79) Position intake air cleaner housing (113) on brackets (115 and 117).

(80) Position washer (108) and screw (107) in resilient mount (109).

(81) Position three screws (111) and self-locking nuts (110) in mounting brackets (112).

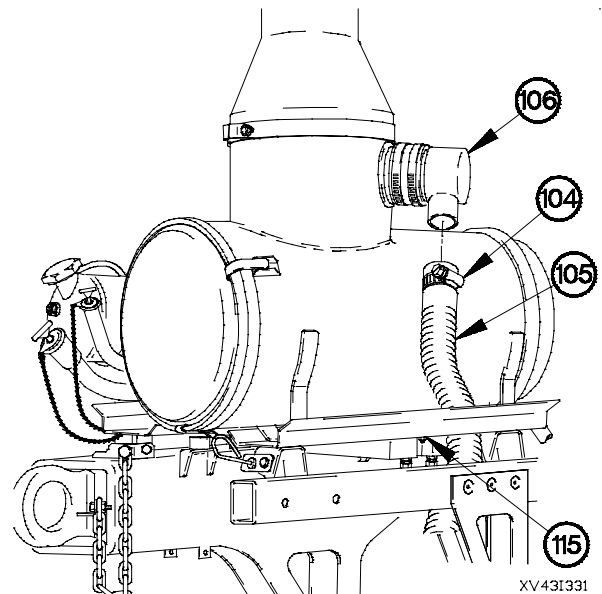
(82) Tighten screw (107) to 26-31 lb-ft (35-42 N-m).

(83) Tighten three self-locking nuts (110) to 35-51 lb-ft (47-69 N-m).

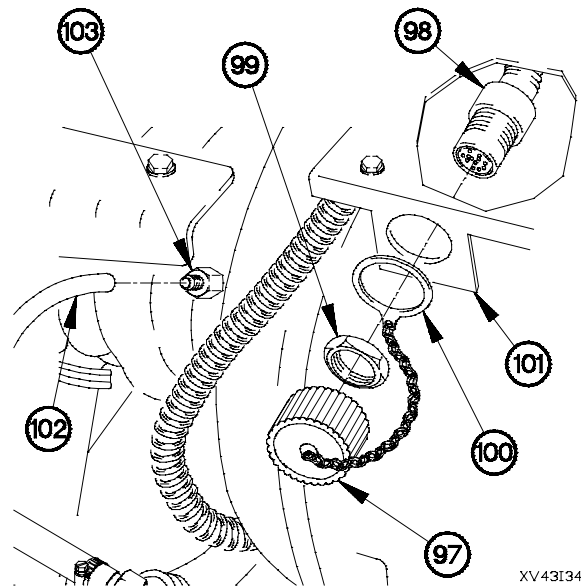


(84) Position particle extraction hose (105) through bracket (115).

(85) Install particle extraction hose (105) on adapter (106) with clamp (104).



- (86) Connect air filter restriction gauge hose (102) to air flow sensor (103).
- (87) Install connector J106 (98) and dust cap lanyard (100) on chemical detection unit mounting bracket (101) with nut (99).
- (88) Install dust cap (97) on connector J106 (98).

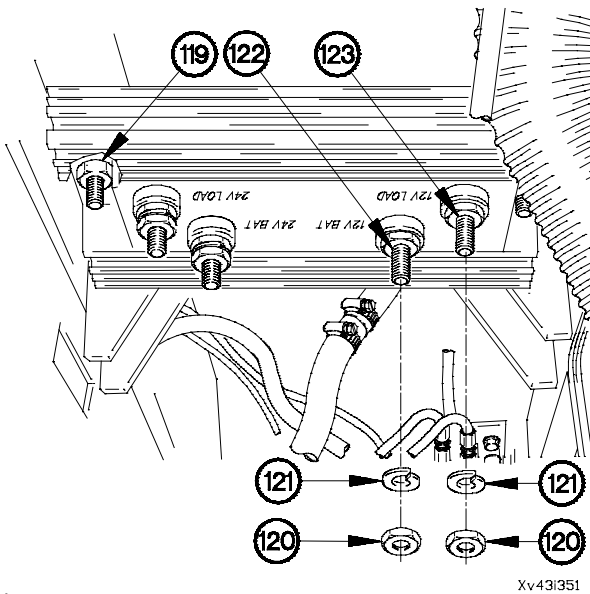


XV431341

NOTE

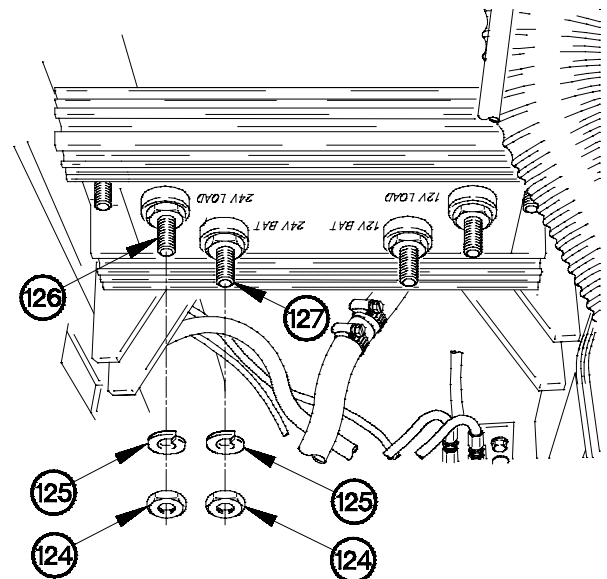
Step (89) requires the aid of an assistant.

- (89) Tighten two self-locking nuts (119) to 25-31 lb-ft (35-43 N-m).
- (90) Remove two nuts (120) and lockwashers (121) from reverse polarity relay 12V BAT terminal (122) and 12V LOAD terminal (123).



Xv431351

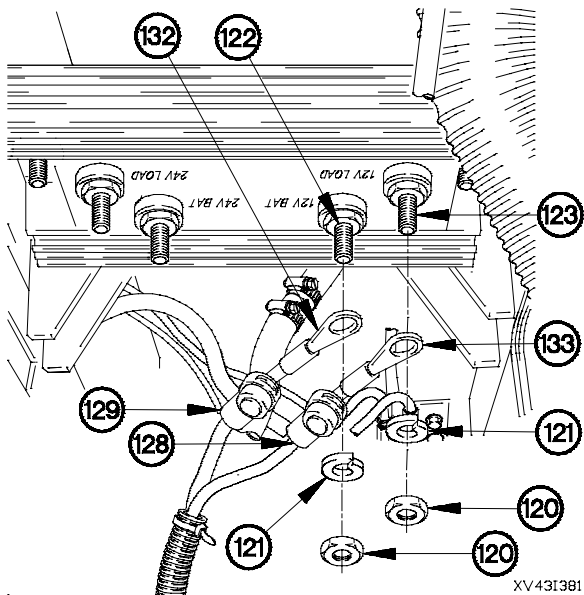
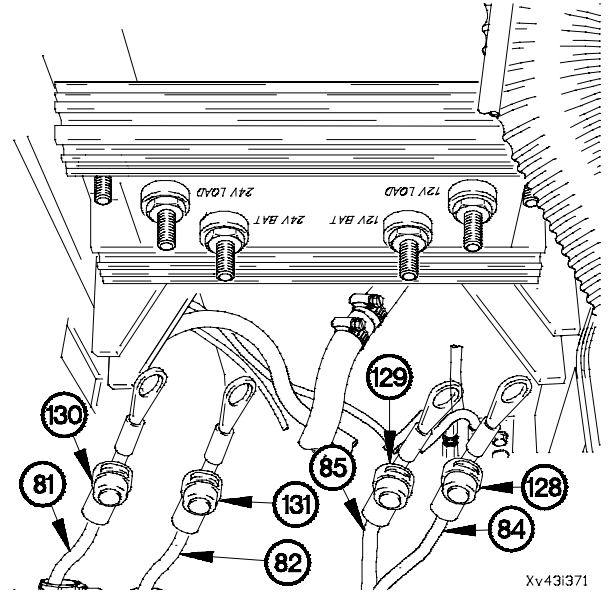
- (91) Remove two nuts (124) and lockwashers (125) from reverse polarity relay 24V LOAD terminal (126) and 24V BAT terminal (127).



Xv431361

20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

- (92) Install dust boot (128) on 12vdc load cable (84).
- (93) Install dust boot (129) on 12vdc battery cable (85).
- (94) Install dust boot (130) on 24vdc load cable (81).
- (95) Install dust boots (131) on 24vdc battery cable (82).

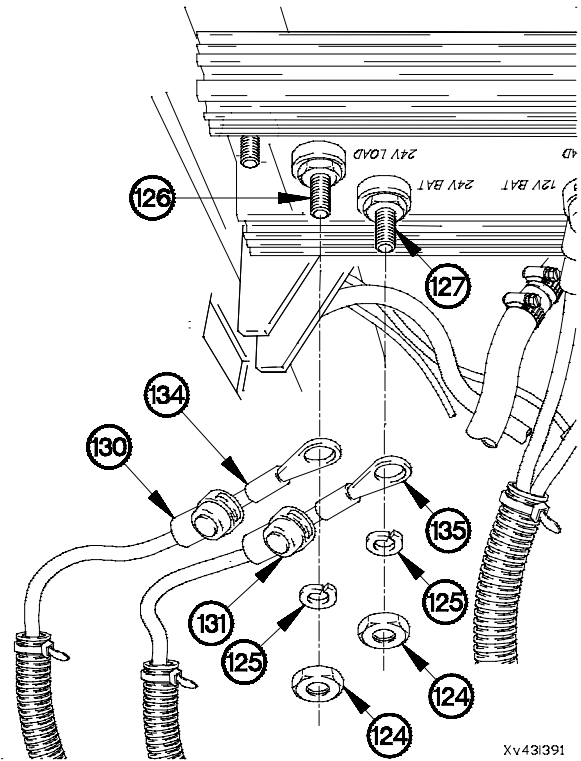


NOTE

Steps (96) through (101) require the aid of an assistant.

- (96) Position terminal lug TL173 (132) on reverse polarity relay 12V BAT terminal (122) with lockwasher (121) and nut (120).
- (97) Position terminal lug TL174 (133) on reverse polarity relay 12V LOAD terminal (123) with lockwasher (121) and nut (120).
- (98) Tighten two nuts (120) to 108-132 lb-in. (13-15 N-m).
- (99) Position dust boots (128 and 129) on terminal lugs TL173 (132) and TL174 (133).

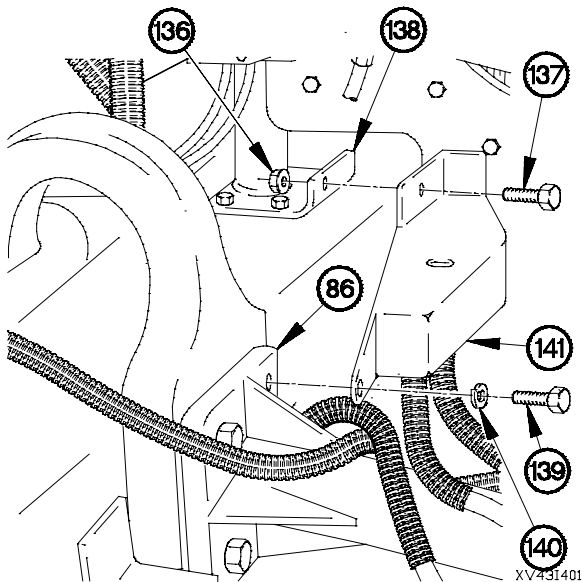
- (100) Position terminal lug TL169 (134) on reverse polarity relay 24V LOAD terminal (126) with lockwasher (125) and nut (124).
- (101) Position terminal lug TL168 (135) on reverse polarity relay 24V BAT terminal (127) with lockwasher (125) and nut (124).
- (102) Tighten two nuts (124) to 27-33 lb-ft (37-47 N·m).
- (103) Install dust boots (130 and 131) on terminal lugs TL169 (134) and TL168 (135).



NOTE

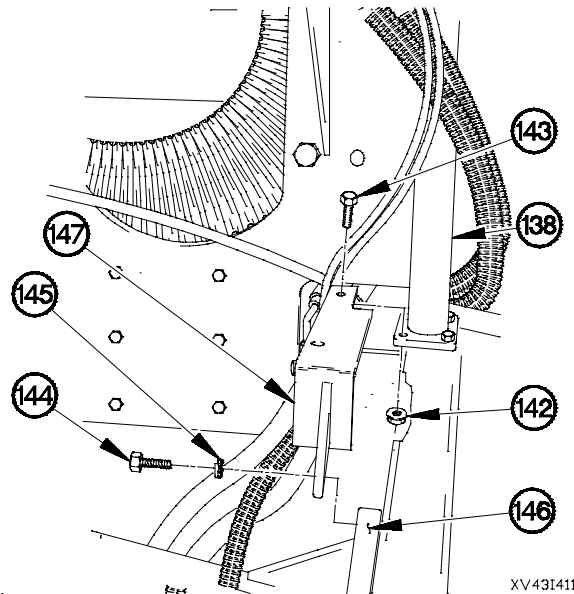
Perform steps (104) through (131) on M1081 only.

- (104) Remove self-locking nut (136) and screw (137) from spare tire retainer (138). Discard self-locking nut.
- (105) Remove screw (139) and spring washer (140) from front lifting beam (86). Discard spring washer.
- (106) Position bracket (141) on spare tire retainer (138) with screw (137) and self-locking nut (136).
- (107) Position bracket (141) on front lifting beam (86) with spring washer (140) and screw (139).
- (108) Tighten self-locking nut (136) to 43-51 lb-ft (58-69 N·m).
- (109) Tighten screw (139) to 43-51 lb-ft (58-69 N·m).



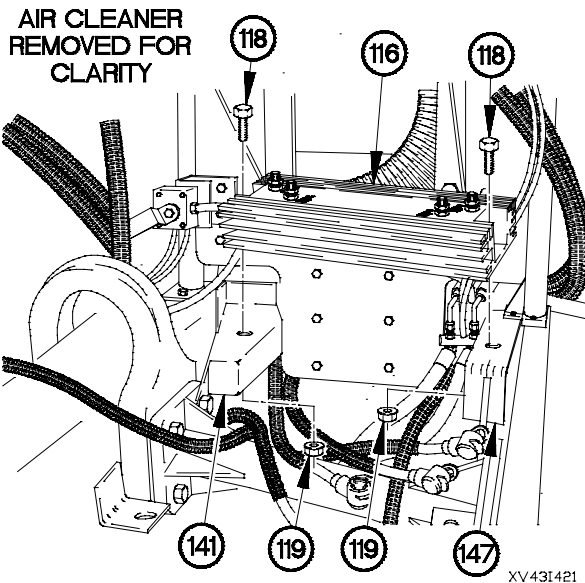
20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

- (110) Remove self-locking nut (142) and screw (143) from spare tire retainer (138). Discard self-locking nut.
- (111) Remove screw (144) and spring washer (145) from rear support brace (146). Discard spring washer.
- (112) Position bracket (147) on spare tire retainer (138) with screw (143) and self-locking nut (142).
- (113) Position bracket (147) on rear support brace (146) with spring washer (145) and screw (144).
- (114) Tighten self-locking nut (142) to 43-51 lb-ft (58-69 N·m).
- (115) Tighten screw (144) to 43-51 lb-ft (58-69 N·m).



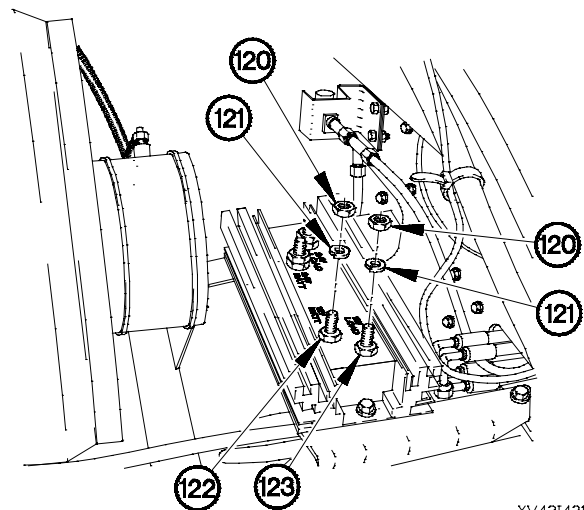
NOTE

Position reverse polarity relay 24V terminals toward front of vehicle.

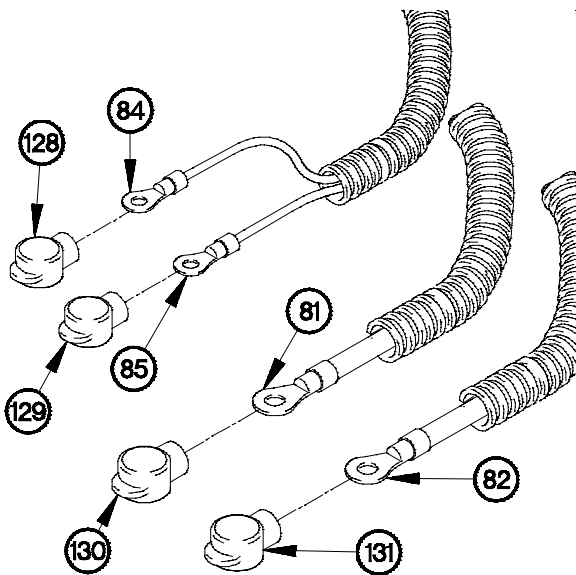
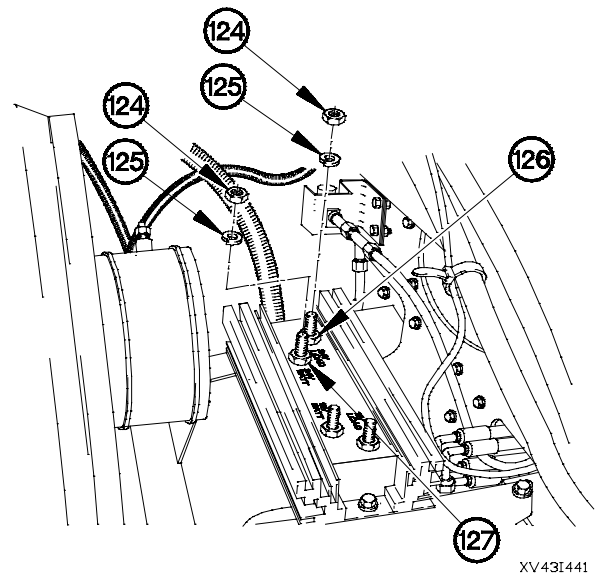


- (116) Position reverse polarity relay (116) on brackets (141 and 147) with two screws (118) and self-locking nuts (119).
- (117) Tighten two self-locking nuts (119) to 25-31 lb-ft (35-43 N·m).

- (118) Remove two nuts (120) and lockwashers (121) from reverse polarity relay 12V BAT terminal (122) and 12V LOAD terminal (123).



(119) Remove two nuts (124) and lockwashers (125) from reverse polarity relay 24V LOAD terminal (126) and 24V BAT terminal (127).



(120) Install dust boot (128) on 12vdc load cable (84).

(121) Install dust boot (129) on 12vdc battery cable (85).

(122) Install dust boot (130) on 24vdc load cable (81).

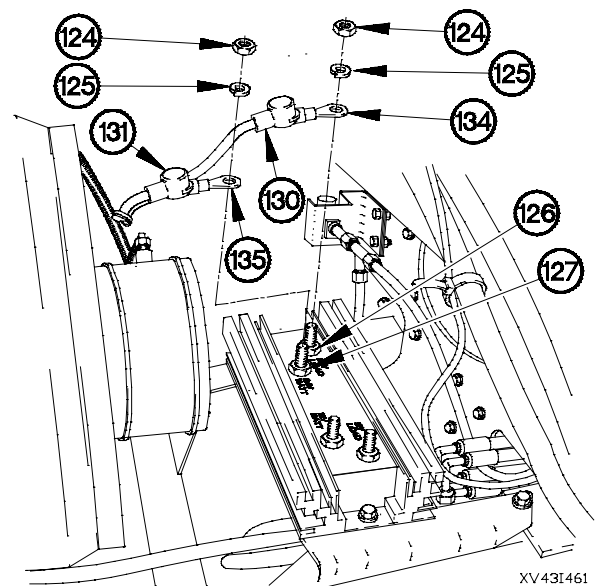
(123) Install dust boot (131) on 24vdc battery cable (82).

(124) Position terminal lug TL169 (134) on reverse polarity relay 24V LOAD terminal (126) with lockwasher (125) and nut (124).

(125) Position terminal lug TL168 (135) on reverse polarity relay 24V BAT terminal (127) with lockwasher (125) and nut (124).

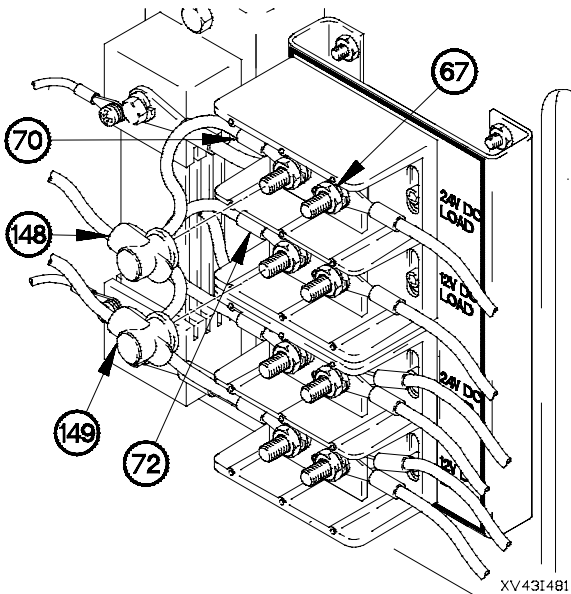
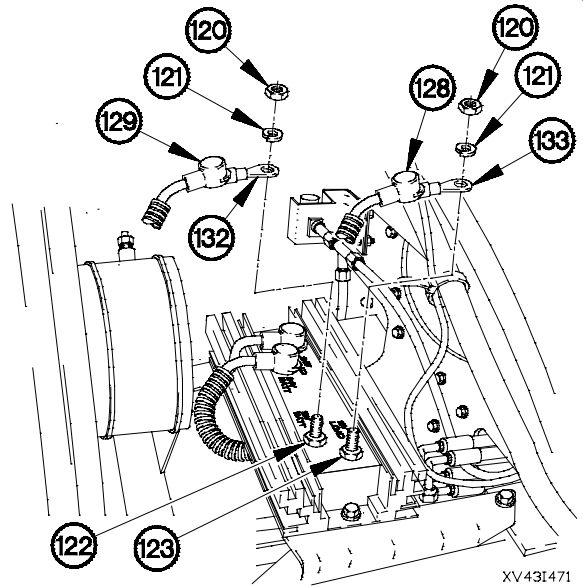
(126) Tighten two nuts (124) to 30 lb-ft (41 N-m).

(127) Position dust boots (130 and 131) on terminal lugs TL169 (134) and TL168 (135).



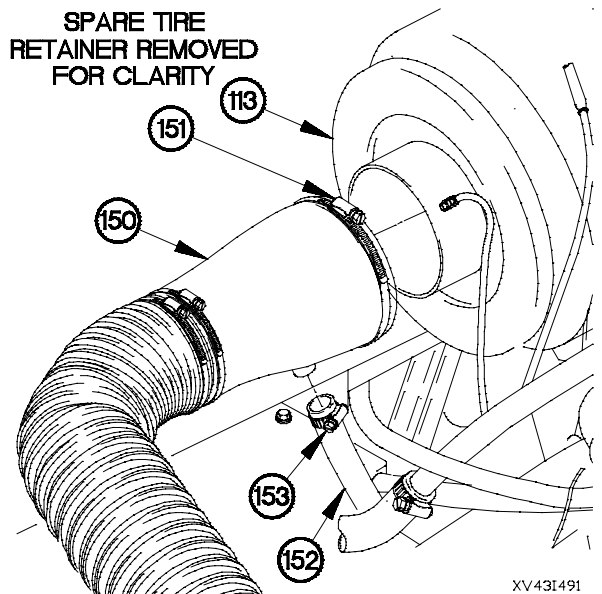
20-54. 200 AMP ALTERNATOR KIT INSTALLATION (CONT)

- (128) Position terminal lug TL173 (132) on reverse polarity relay 12V BAT terminal (122) with lockwasher (121) and nut (120).
- (129) Position terminal lug TL174 (133) on reverse polarity relay 12V LOAD terminal (123) with lockwasher (121) and nut (120).
- (130) Tighten two nuts (120) to 108-132 lb-in. (13-15 N-m).
- (131) Position dust boots (128 and 129) on terminal lugs TL173 (132) and TL174 (133).



- (132) Tighten eight nuts (67) to 15-19 lb-ft (21-25 N-m).
- (133) Position dust boots (148 and 149) on terminal lugs TL44 (70) and TL80 (72).

- (134) Position intake air cleaner boot (150) on intake air cleaner housing (113) with clamp (151).
- (135) Position air compressor intake hose (152) on intake air cleaner boot (150) with clamp (153).
- (136) Tighten clamps (151 and 153) to 36-48 lb-in. (4-5 N-m).



b. Follow-On Maintenance.

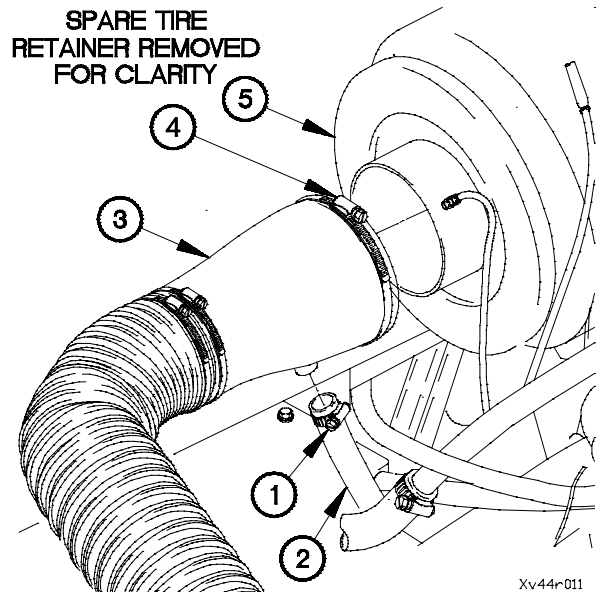
- (1) Install alternator belts (para 7-3).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Connect batteries (para 7-48).
- (4) Start engine (TM 9-2320-365-10).
- (5) Check alternator operation (TM 9-2320-365-10).
- (6) Shut down engine (TM 9-2320-365-10).

End of Task.

20-55. 200 AMP ALTERNATOR KIT REMOVAL	
This task covers:	
a. Removal	b. Follow-On Maintenance
INITIAL SETUP	
<p>Equipment Conditions Batteries disconnected (para 7-48). Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10).</p> <p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Vise, Machinist (Item 46, Appendix C) Caps, Vise Jaw (Item 4, Appendix C)</p> <p>Materials/Parts Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (2) (Item 66, Appendix G) Lockwasher (2) (Item 65, Appendix G) Nut, Self-Locking (2) (Item 139, Appendix G) Nut, Self-Locking (M1081) (2) (Item 140, Appendix G)</p>	<p>Materials/Parts Washer, Spring (M1081) (2) (Item 280, Appendix G) Nut, Self-Locking (all models except M1081) (3) (Item 140, Appendix G) Lockwasher (8) (Item 92, Appendix G) Nut, Self-Locking (8) (Item 146, Appendix G) Lockwasher (2) (Item 101, Appendix G) Terminal, Lug (Item 265, Appendix G) Terminal, Lug (Item 264, Appendix G) Lockwasher (Item 98, Appendix G) Nut, Self-Locking (Item 130, Appendix G) Nut, Self-Locking (Item 131, Appendix G) Nut, Self-Locking (Item 129, Appendix G) Lockwasher (2) (Item 92, Appendix G)</p> <p>Personnel Required (2)</p>

a. Removal.

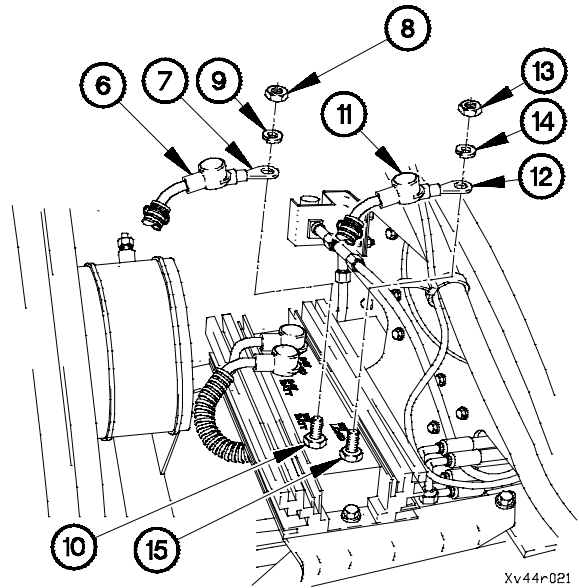
- (1) Loosen clamp (1) on air compressor intake hose (2).
- (2) Remove air compressor intake hose (2) from intake air cleaner boot (3).
- (3) Loosen clamp (4) on intake air cleaner boot (3).
- (4) Remove intake air cleaner boot (3) from intake air cleaner housing (5).



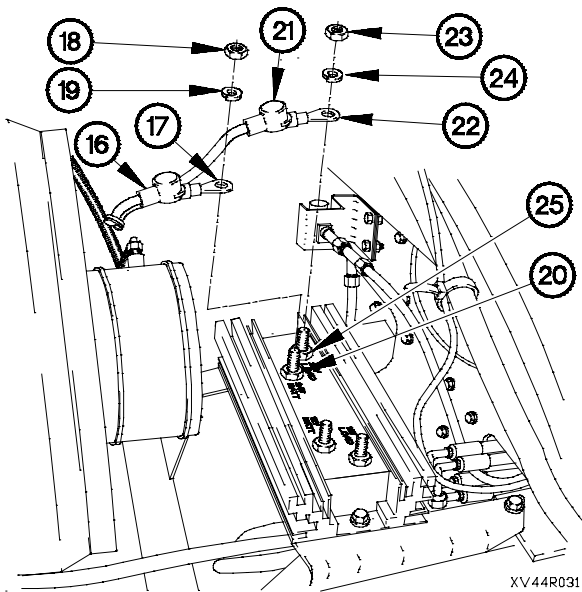
NOTE

- Perform steps (5) through (27) on M1081.
- Remove plastic cable ties as required.

- (5) Lift dust boot (6) on terminal lug TL173 (7).
- (6) Remove nut (8), lockwasher (9), and terminal lug TL173 (7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.
- (7) Lift dust boot (11) on terminal lug TL174 (12).
- (8) Remove nut (13), lockwasher (14), and terminal lug TL174 (12) from reverse polarity relay 12V LOAD terminal (15). Discard lockwasher.
- (9) Position lockwashers (9 and 14) and nuts (8 and 13) on reverse polarity relay 12V BAT terminal (10) and 12V LOAD terminal (15).



Xv44r021

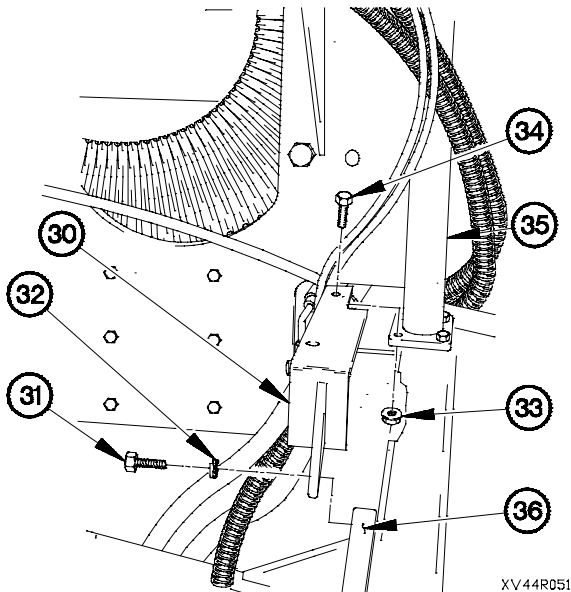
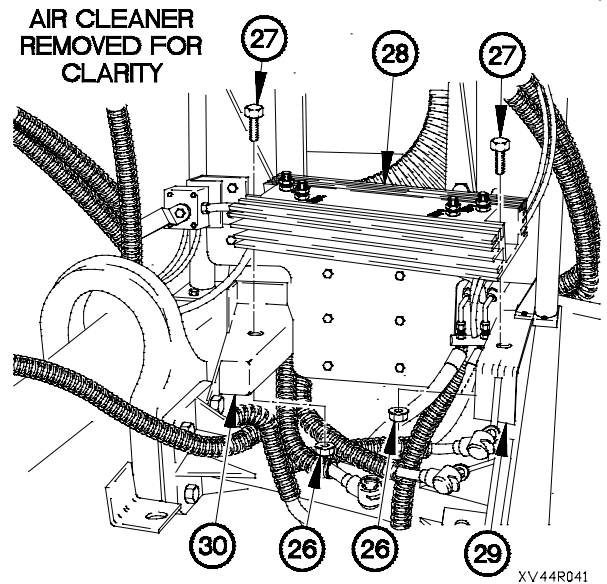


XV44R031

- (10) Lift dust boot (16) on terminal lug TL168 (17).
- (11) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.
- (12) Lift dust boot (21) on terminal lug TL169 (22).
- (13) Remove nut (23), lockwasher (24), and terminal lug TL169 (22) from reverse polarity relay 24V LOAD terminal (25). Discard lockwasher.
- (14) Position lockwashers (19 and 24) and nuts (18 and 23) on reverse polarity relay 24V BAT terminal (20) and 24V LOAD terminal (25).

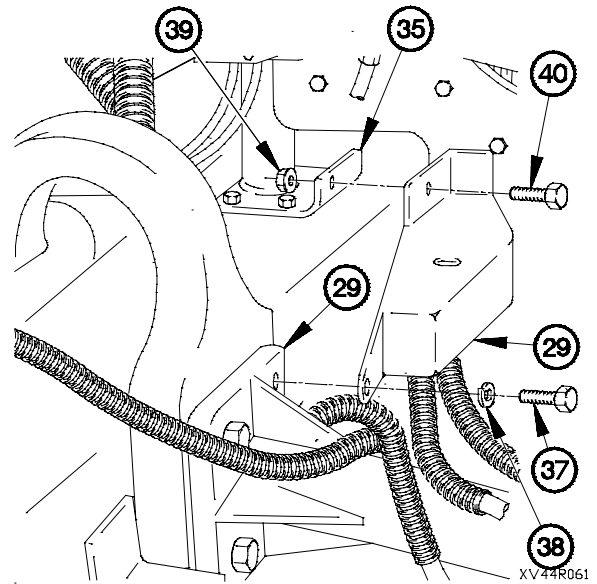
20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

- (15) Remove two self-locking nuts (26), screws (27), and reverse polarity relay (28) from brackets (29 and 30). Discard self-locking nuts.



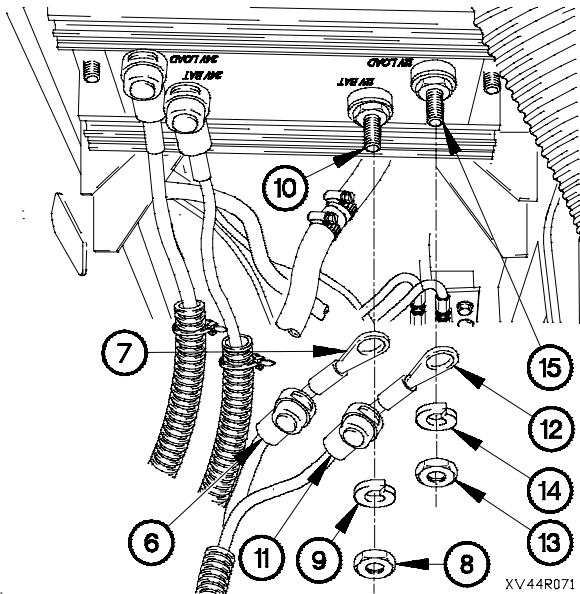
- (16) Remove screw (31) and lockwasher (32) from bracket (30). Discard lockwasher.
- (17) Remove self-locking nut (33), screw (34), and bracket (30) from spare tire retainer (35). Discard self-locking nut.
- (18) Position screw (34) and self-locking nut (33) in spare tire retainer (35).
- (19) Tighten self-locking nut (33) to 43-51 lb-ft (58-69 N-m).
- (20) Position lockwasher (32) and screw (31) in rear support brace (36).
- (21) Tighten screw (31) to 43-51 lb-ft (58-69 N-m).

- (22) Remove screw (37) and lockwasher (38) from bracket (29). Discard lockwasher.
- (23) Remove self-locking nut (39), screw (40), and bracket (29) from spare tire retainer (35). Discard self-locking nut.
- (24) Position screw (40) and self-locking nut (39) in spare tire retainer (35).
- (25) Tighten self-locking nut (39) to 43-51 lb-ft (58-69 N·m).
- (26) Position lockwasher (38) and screw (37) in front lifting beam (41).
- (27) Tighten screw (37) to 43-51 lb-ft (58-69 N·m).



NOTE

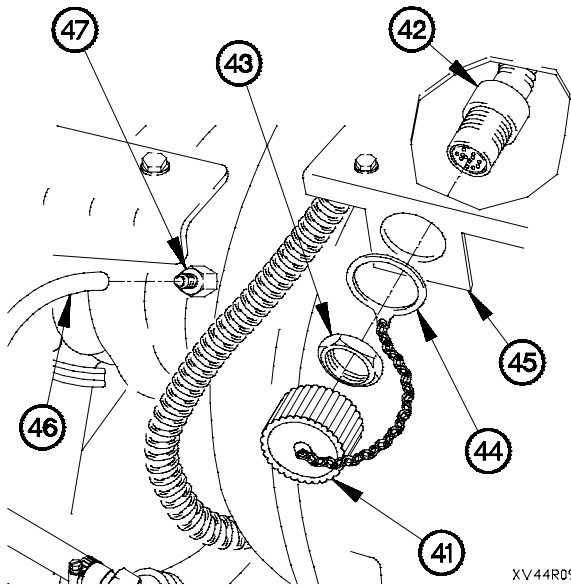
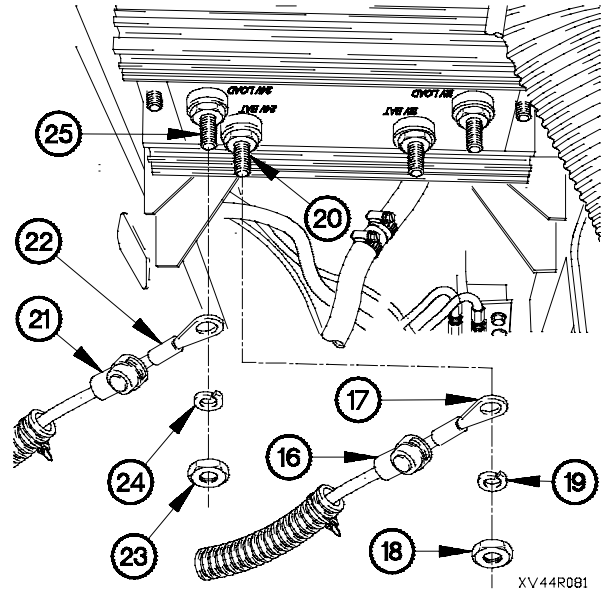
- Perform steps (28) through (56) on all models except M1081.
- Remove plastic cable ties as required.



- (28) Lift dust boot (6) on terminal lug TL173 (7).
- (29) Remove nut (8), lockwasher (9), and terminal lug TL173 (7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.
- (30) Lift dust boot (11) on terminal lug TL174 (12).
- (31) Remove nut (13), lockwasher (14), and terminal lug TL174 (12) from reverse polarity relay 12V LOAD terminal (15). Discard lockwasher.
- (32) Position lockwashers (9 and 14) and nuts (8 and 13) on reverse polarity relay 12V BAT terminal (10) and 12V LOAD terminal (15).

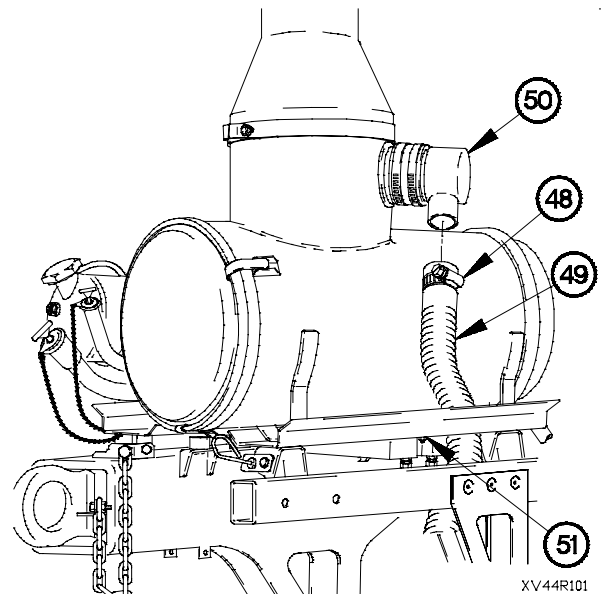
20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

- (33) Lift dust boot (16) on terminal lug TL168 (17).
- (34) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.
- (35) Lift dust boot (21) on terminal lug TL169 (22).
- (36) Remove nut (23), lockwasher (24), and terminal lug TL169 (22) from reverse polarity relay 24V LOAD terminal (25). Discard lockwasher.
- (37) Position lockwashers (19 and 24) and nuts (18 and 23) on reverse polarity relay 24V BAT terminal (20) and 24V LOAD terminal (25).

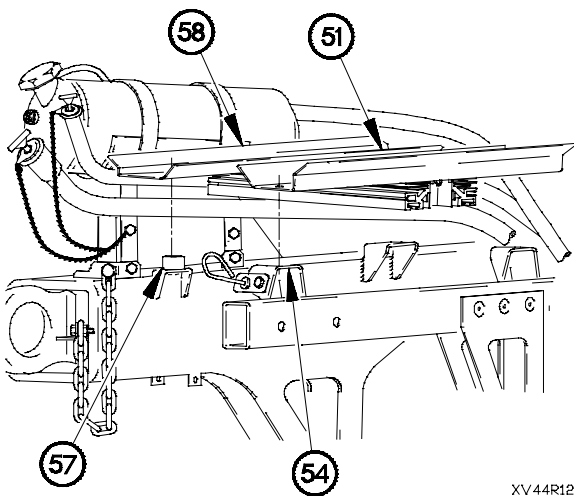


- (38) Remove dust cap (41) from connector J106 (42).
- (39) Remove nut (43), dust cap lanyard (44), and connector J106 (42) from chemical detection unit mounting bracket (45).
- (40) Disconnect air filter restriction gauge hose (46) from air flow sensor (47).

- (41) Loosen clamp (48) on particle extraction hose (49).
- (42) Disconnect particle extraction hose (49) from adapter (50).
- (43) Remove particle extraction hose (49) from bracket (51).

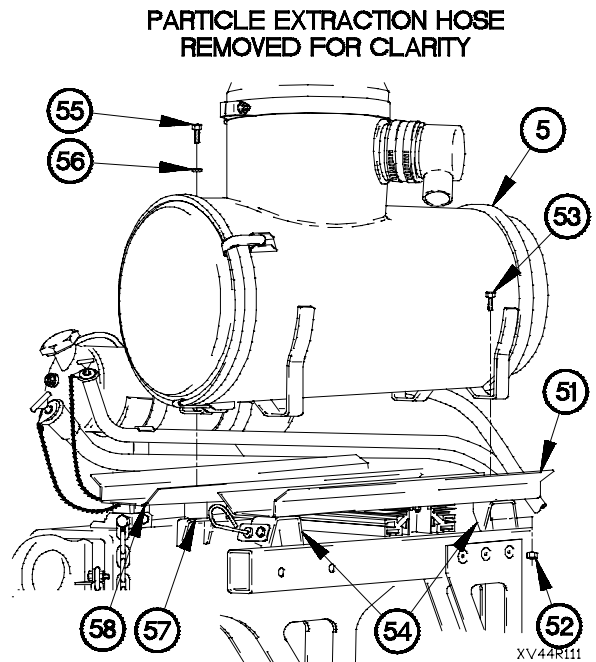


- (44) Remove three self-locking nuts (52) and screws (53) from mounting brackets (54). Discard self-locking nuts.
- (45) Remove screw (55) and washer (56) from resilient mount (57).
- (46) Remove intake air cleaner housing (5) from brackets (51 and 58).

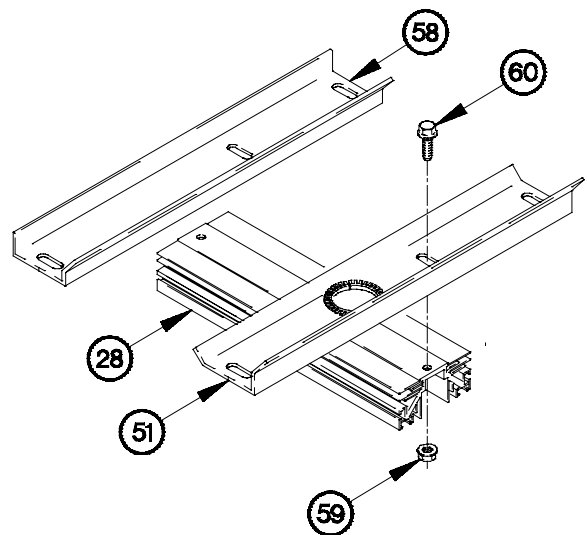


XV44R121

- (48) Remove two self-locking nuts (59), screws (60), and reverse polarity relay (28) from brackets (51 and 58). Discard self-locking nuts.



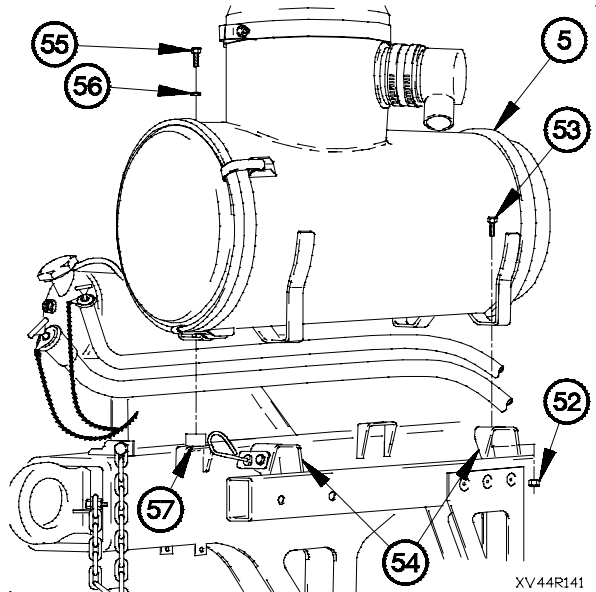
- (47) Remove brackets (51 and 58) from three mounting brackets (54) and resilient mount (57).



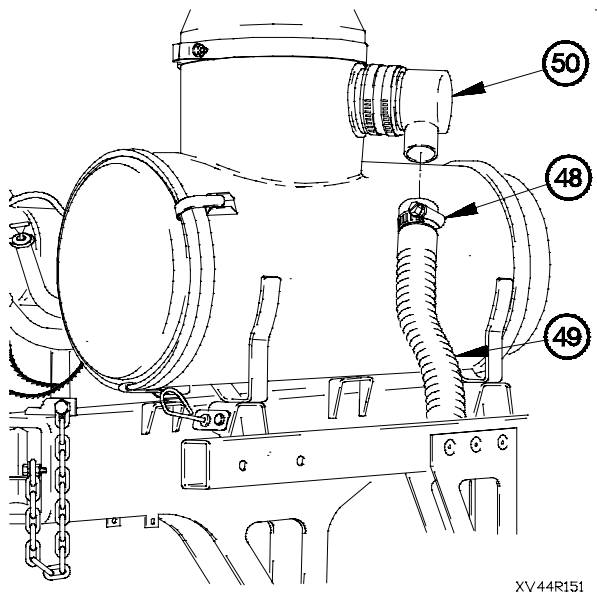
XV44R131

20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

- (49) Position intake air cleaner housing (5) on three mounting brackets (54) with three screws (53) and self-locking nuts (52).
- (50) Position washer (56) and screw (55) in resilient mount (57).
- (51) Tighten screw (55) to 26-31 lb-ft (35-42 N-m).
- (52) Tighten three self-locking nuts (52) to 35-51 lb-ft (47-69 N-m).



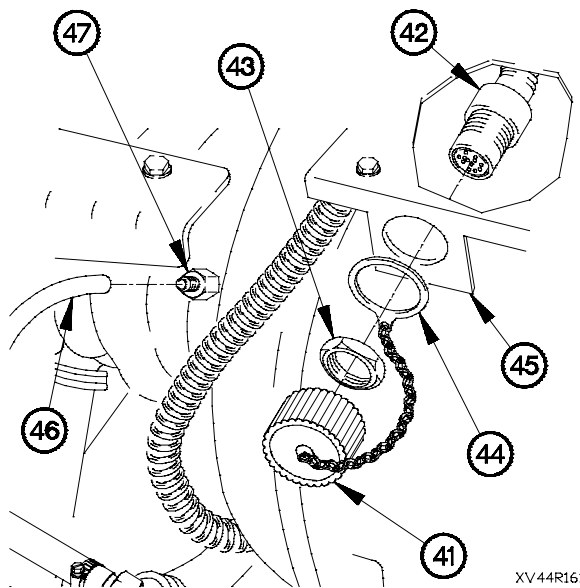
XV44R141



XV44R151

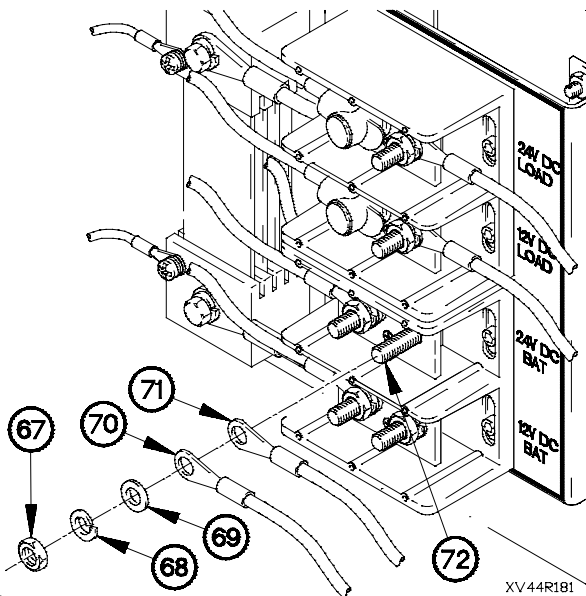
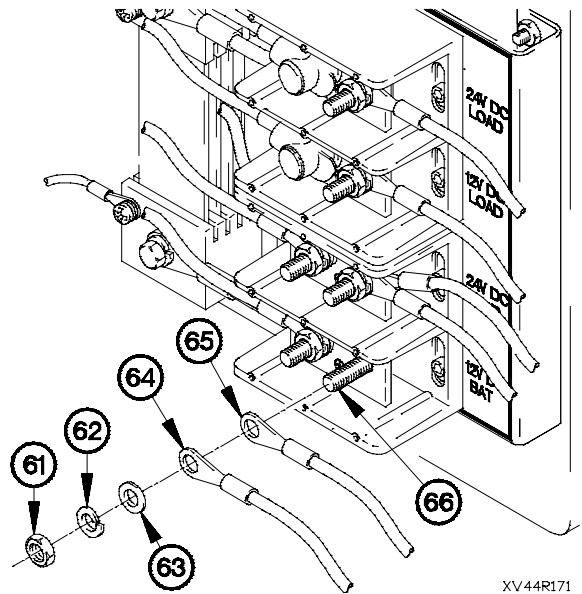
- (53) Install particle extraction hose (49) on adapter (50) with clamp (48).

- (54) Connect air filter restriction gauge hose (46) to air flow sensor (47).
- (55) Install connector J106 (42) and dust cap lanyard (44) on chemical detection unit mounting bracket (45) with nut (43).
- (56) Install dust cap (41) on connector J106 (42).



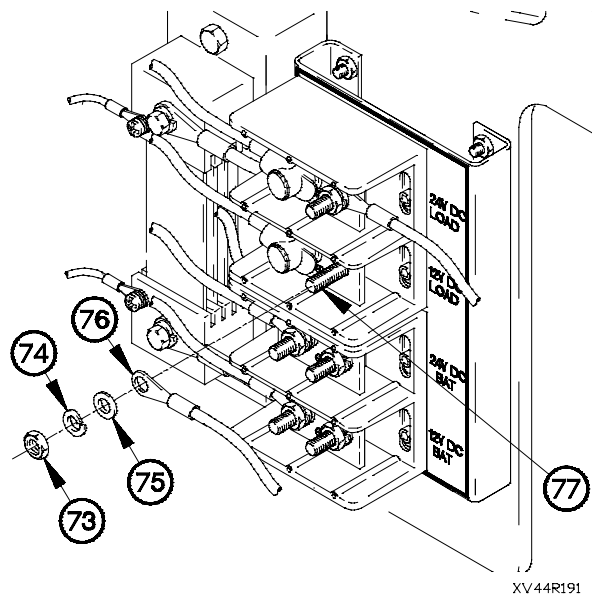
XV44R161

- (57) Remove nut (61), lockwasher (62), washer (63), and terminal lugs TL171 (64) and TL61 (65) from terminal block terminal (66). Discard lockwasher.
- (58) Position washer (63), lockwasher (62), and nut (61) on terminal block terminal (66).



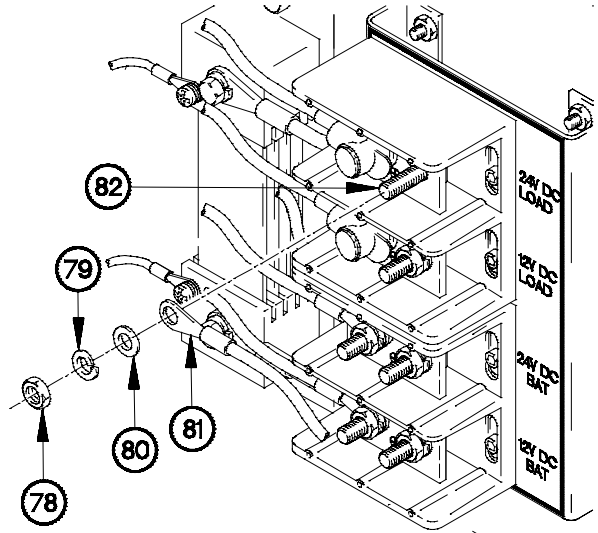
- (59) Remove nut (67), lockwasher (68), washer (69), and terminal lugs TL1 (70) and TL166 (71) from terminal block terminal (72). Discard lockwasher.
- (60) Position washer (69), lockwasher (68), and nut (67) on terminal block terminal (72).

- (61) Remove nut (73), lockwasher (74), washer (75), and terminal lug TL172 (76) from terminal block terminal (77). Discard lockwasher.
- (62) Position washer (75), lockwasher (74), and nut (73) on terminal block terminal (77).

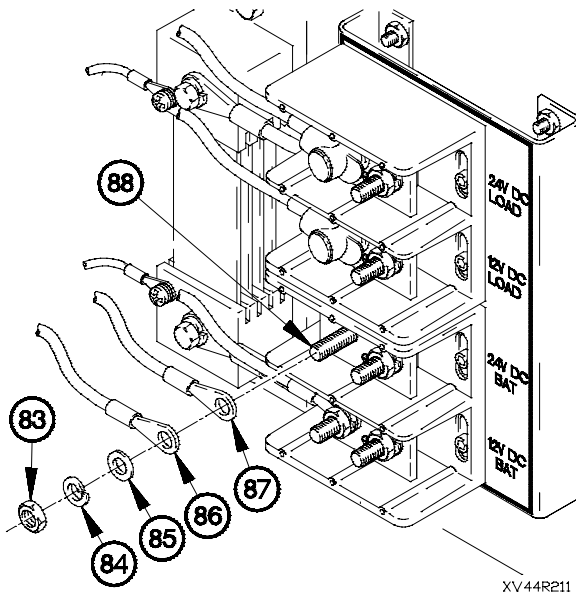


20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

- (63) Remove nut (78), lockwasher (79), washer (80), and terminal lug TL167 (81) from terminal block terminal (82). Discard lockwasher.
- (64) Position washer (80), lockwasher (79), and nut (78) on terminal block terminal (82).



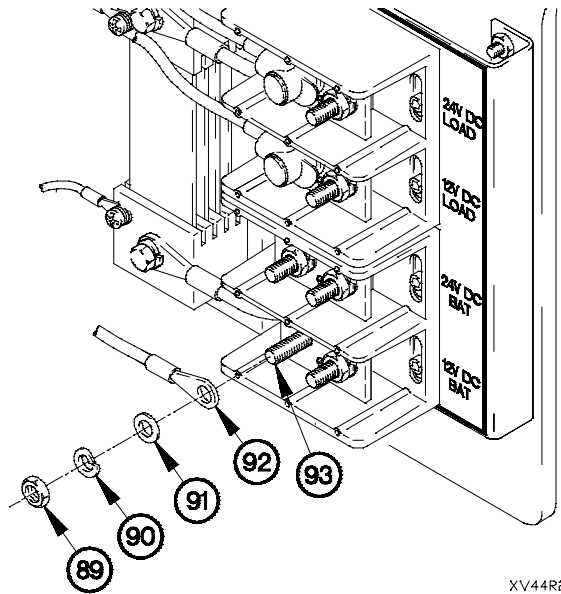
XV44R201



XV44R211

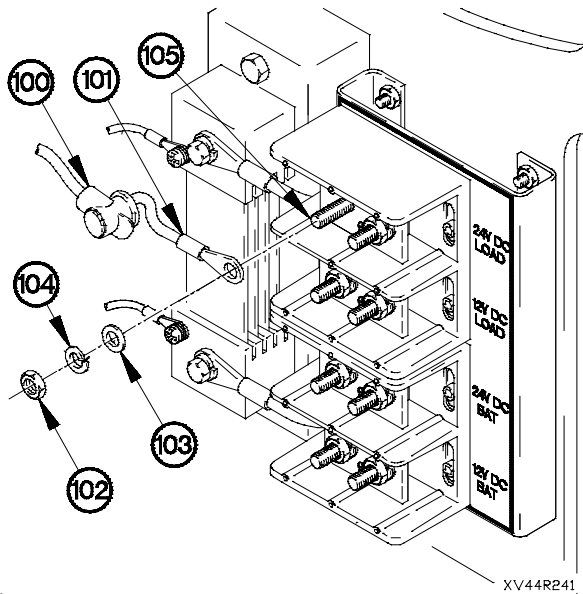
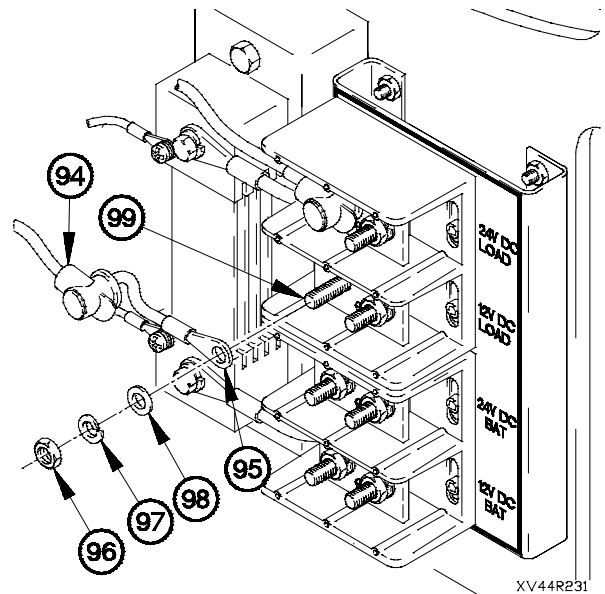
- (65) Remove nut (83), lockwasher (84), washer (85), and terminal lugs TL37 (86) and TL36 (87) from terminal block terminal (88). Discard lockwasher.
- (66) Position washer (85), lockwasher (84), and nut (83) on terminal block terminal (88).

- (67) Remove nut (89), lockwasher (90), washer (91), and terminal lug TL47 (92) from terminal block terminal (93). Discard lockwasher.
- (68) Position washer (91), lockwasher (90), and nut (89) on terminal block terminal (93).



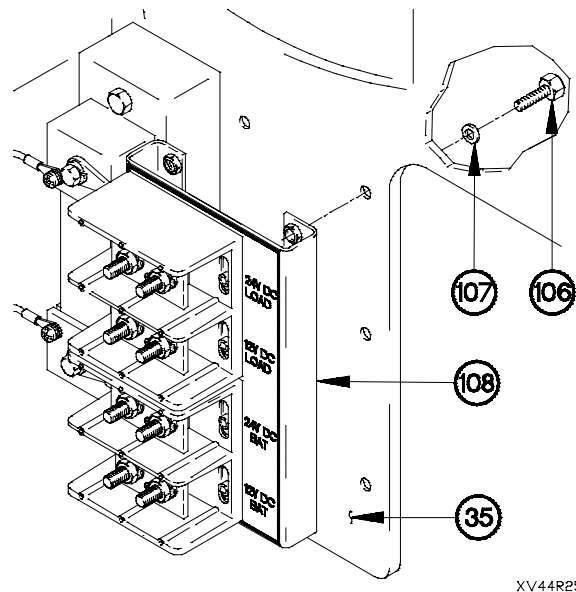
XV44R221

- (69) Lift dust boot (94) on terminal lug TL80 (95).
- (70) Remove nut (96), lockwasher (97), washer (98), and terminal lug TL80 (95) from terminal block terminal (99).
- (71) Position washer (98), lockwasher (97), and nut (96) on terminal block terminal (99).



- (72) Lift dust boot (100) on terminal lug TL44 (101).
- (73) Remove nut (102), lockwasher (103), washer (104), and terminal lug TL44 (101) from terminal block terminal (105). Discard lockwasher.
- (74) Position washer (104), lockwasher (103), and nut (102) on terminal block terminal (105).

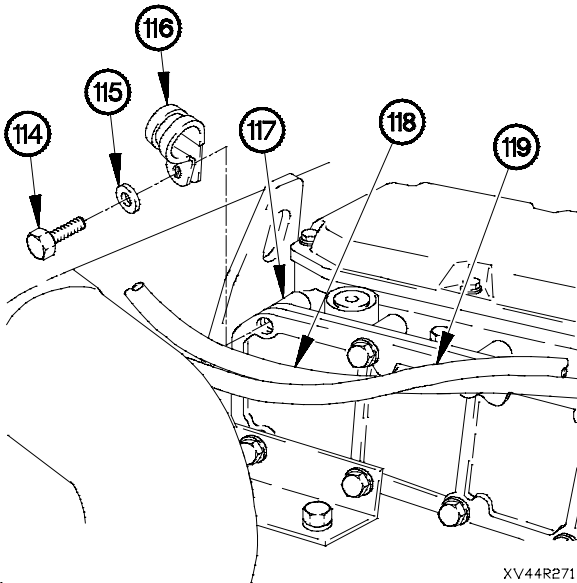
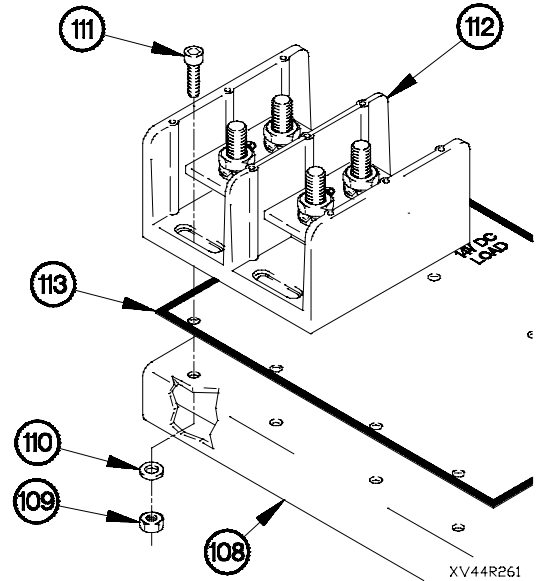
- (75) Remove four screws (106), washers (107), and bracket (108) from spare tire retainer (35).



XV44R251

20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

(76) Remove eight self-locking nuts (109), washers (110), screws (111), two terminal blocks (112) and identification plate (113) from bracket (108). Discard self-locking nuts.



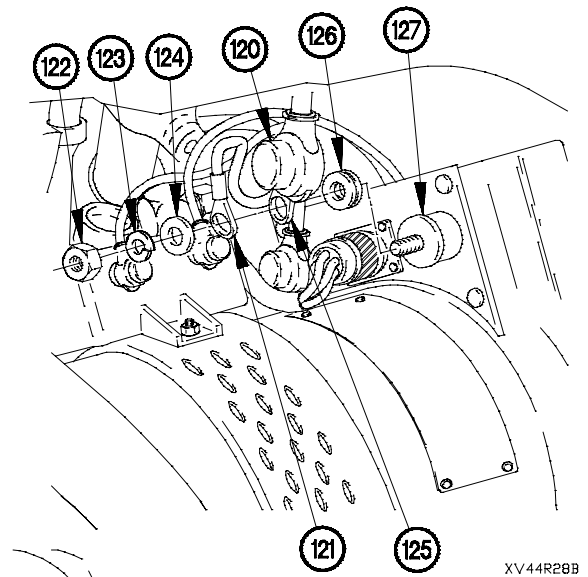
(77) Remove three screws (114), washers (115), and clamps (116) from air inlet manifold (117).

(78) Remove three clamps (116) from 12vdc cable (118) and 24vdc cable (119).

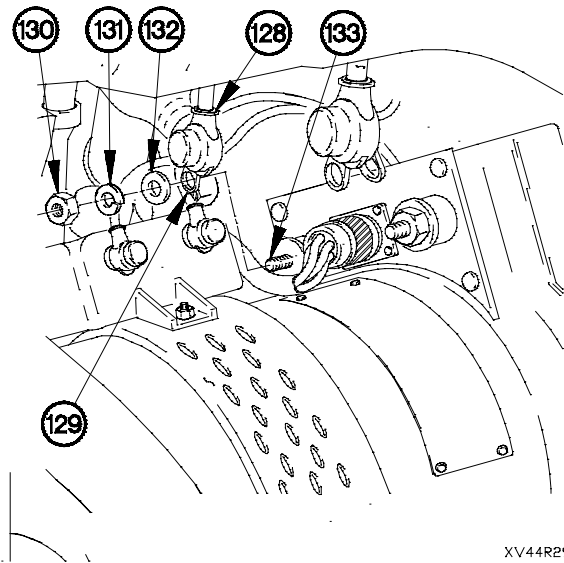
(79) Lift dust boot (120) on terminal lug TL6 (121).

(80) Remove nut (122), lockwasher (123), washer (124), and terminal lugs TL6 (121), TL2 (125) and fuse link (126) from alternator terminal (127). Discard lockwasher.

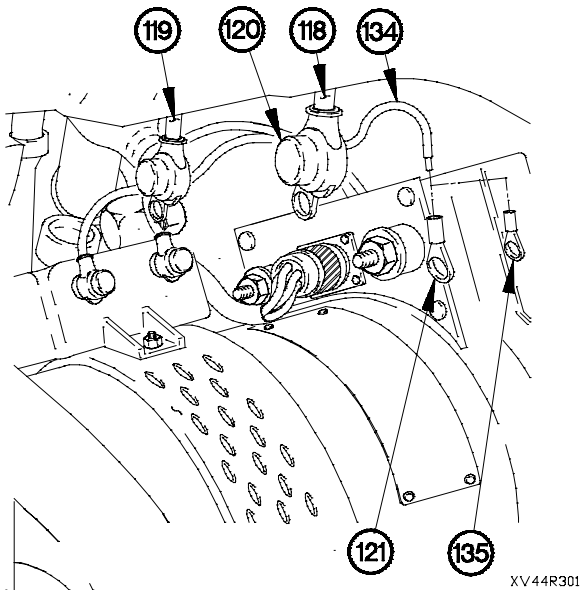
(81) Position fuse link (126), washer (124), lockwasher (123), and nut (122) on alternator terminal (127).



- (82) Lift dust boot (128) on terminal lug TL60 (129).
- (83) Remove nut (130), lockwasher (131), washer (132), and terminal lug TL60 (129) from alternator terminal (133). Discard lockwasher.
- (84) Position washer (132), lockwasher (131), and nut (130) on alternator terminal (133).



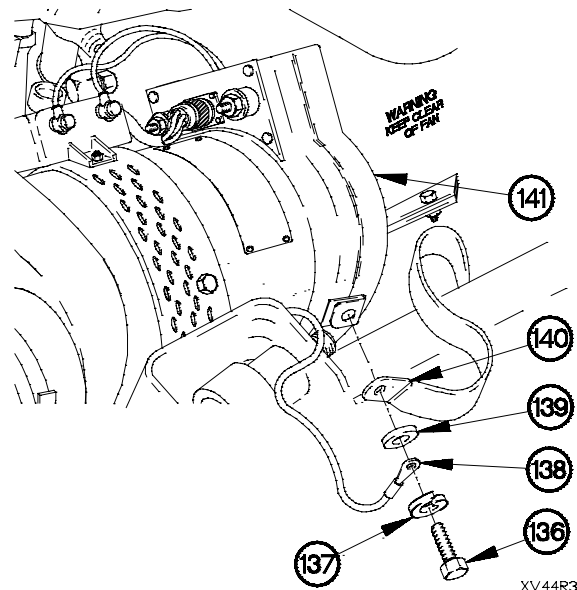
XV44R291



XV44R301

- (85) Remove terminal lug TL6 (121) from wire (134). Discard terminal lug.
- (86) Remove wire (134) from dust boot (120).
- (87) Install terminal lug TL6 (135) on wire (134).
- (88) Remove 12vdc cable (118) and 24vdc cable (119) from vehicle.

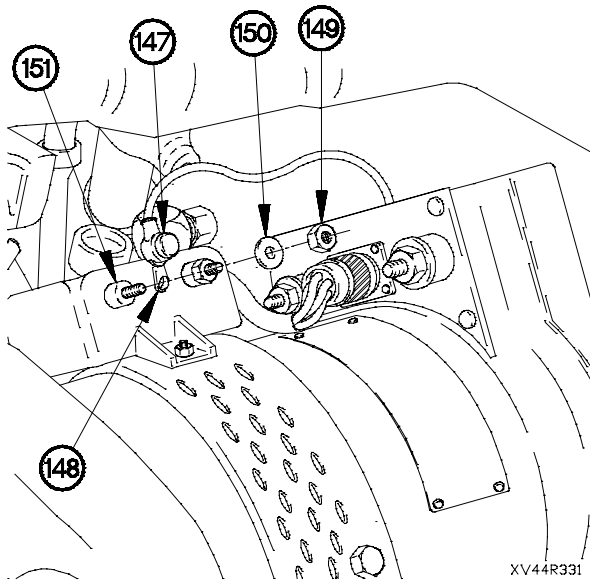
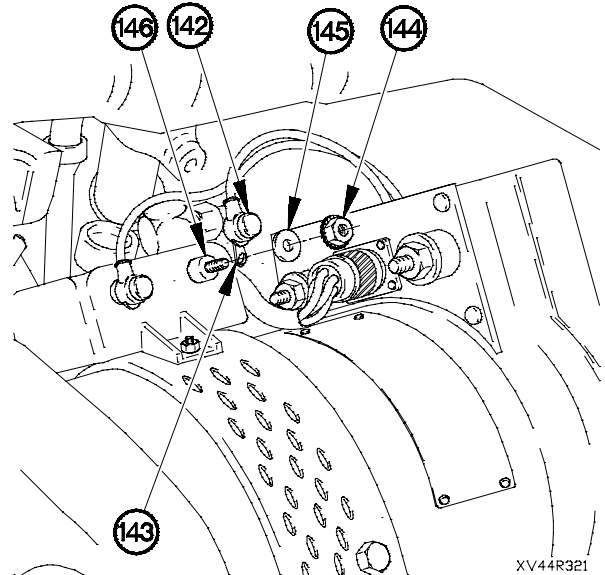
- (89) Remove screw (136), lockwasher (137), terminal lug TL5 (138), washer (139), and ground strap (140) from alternator (141). Discard lockwasher.
- (90) Position washer (139), lockwasher (137), and screw (136) in alternator (141).



XV44R311

20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

- (91) Lift dust boot (142) on terminal lug TL35 (143).
- (92) Remove self-locking nut (144), washer (145), and terminal lug TL35 (143) from voltage regulator terminal (146). Discard self-locking nut.
- (93) Position washer (145) and self-locking nut (144) on voltage regulator terminal (146).



- (94) Lift dust boot (147) on terminal lug TL110 (148).
- (95) Remove self-locking nut (149), washer (150), and terminal lug TL110 (148) from voltage regulator terminal (151). Discard self-locking nut.
- (96) Position washer (150) and self-locking nut (149) on voltage regulator terminal (151).

- (97) Remove nut (152), washer (153), screw (154), and washer (155) from alternator (141).

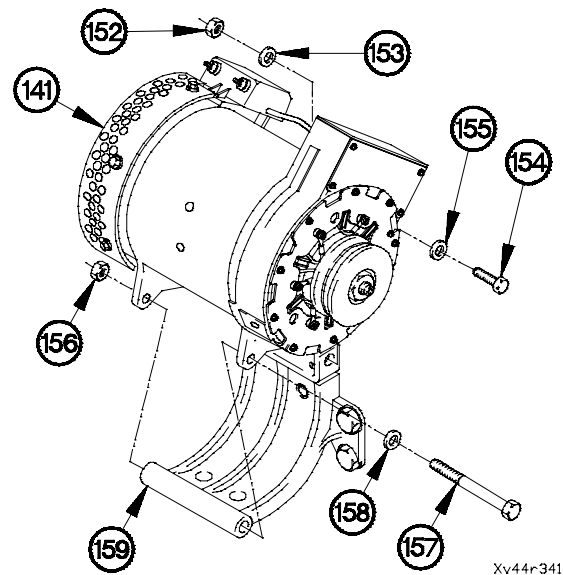
WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to remove 200 amp alternator. Failure to comply may result in injury to personnel.

NOTE

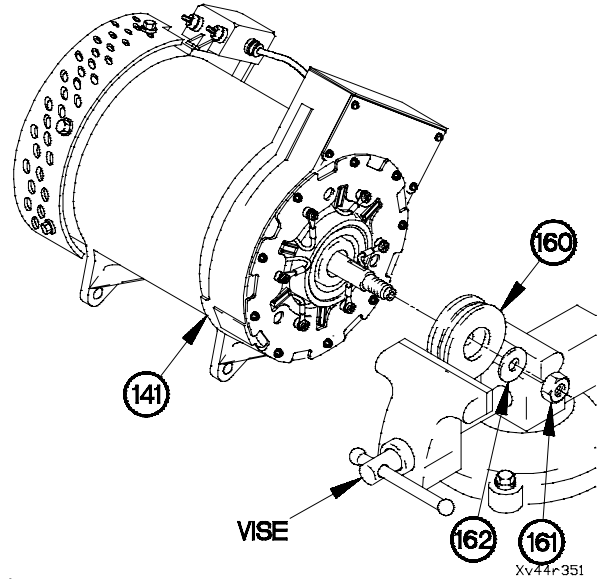
Step (98) requires the aid of an assistant.

- (98) Remove nut (156), screw (157), washer (158), and alternator (141) from alternator bracket (159).

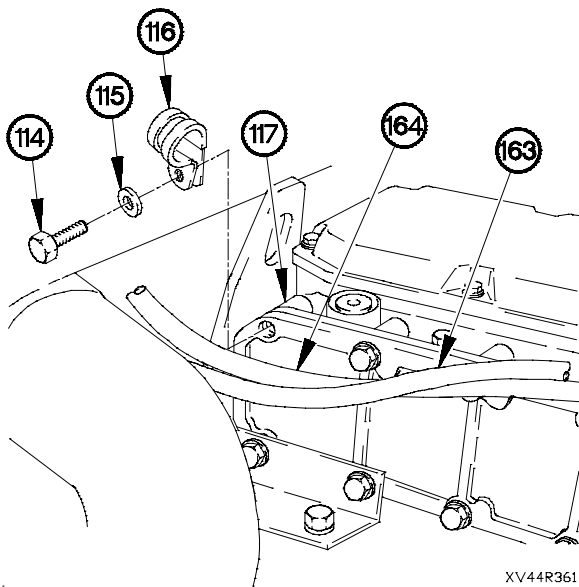


CAUTION

Alternator pulley must be positioned in a vise equipped with vise jaw caps when loosening self-locking nut. Failure to comply may result in damage to equipment.



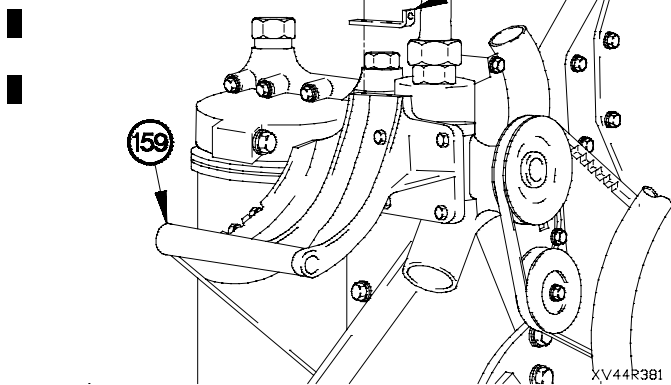
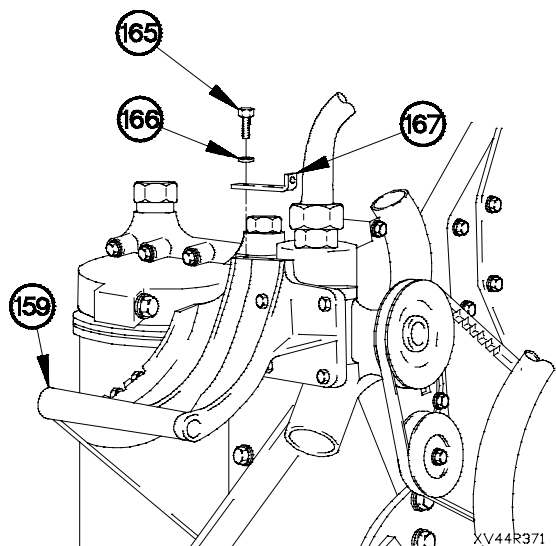
- (99) Position pulley (160) in vise.
- (100) Loosen self-locking nut (161).
- (101) Remove pulley (160) from vise.
- (102) Remove self-locking nut (161), washer (162), and pulley (160) from alternator (141). Discard self-locking nut.
- (103) Position washer (162) and self-locking nut (161) on alternator (141).



- (104) Position three clamps (116) on 12vdc cable (163) and 24vdc cable (164).
- (105) Position three clamps (116) on air inlet manifold (117) with three washers (115) and screws (114).
- (106) Tighten three screws (114) to 22-27 lb-ft (31-37 N·m).
- (107) Position 12vdc cable (163) and 24 vdc cable (164) on vehicle.

20-55. 200 AMP ALTERNATOR KIT REMOVAL (CONT)

- (108) Remove two screws (165), lockwashers (166), and belt adjusting arm (167) from alternator bracket (159). Discard lockwasher.



- (109) Position belt adjusting arm (168) on alternator bracket (159) with two lockwashers (166) and screws (165).
- (110) Tighten two screws (165) to 25-32 lb-ft (35-43 N-m).

b. Follow-On Maintenance.

- (1) Install 100 amp reverse polarity relay (para 7-27).
- (2) Install 100 amp alternator (para 7-2).
- (3) Raise spare tire (TM 9-2320-365-10).
- (4) Lower cab (TM 9-2320-365-10).
- (5) Connect batteries (para 7-48).
- (6) Start engine (TM 9-2320-365-10).
- (7) Check alternator operation (TM 9-2320-365-10).
- (8) Shut down engine (TM 9-2320-365-10).

End of Task.

20-56. 200 AMP ALTERNATOR REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Batteries disconnected (para 7-48).
- Alternator belts removed (para 7-3).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Sling, Cargo (Item 31, Appendix C)
- Vise, Machinist (Item 46, Appendix C)
- Caps, Vise Jaw (Item 4, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts

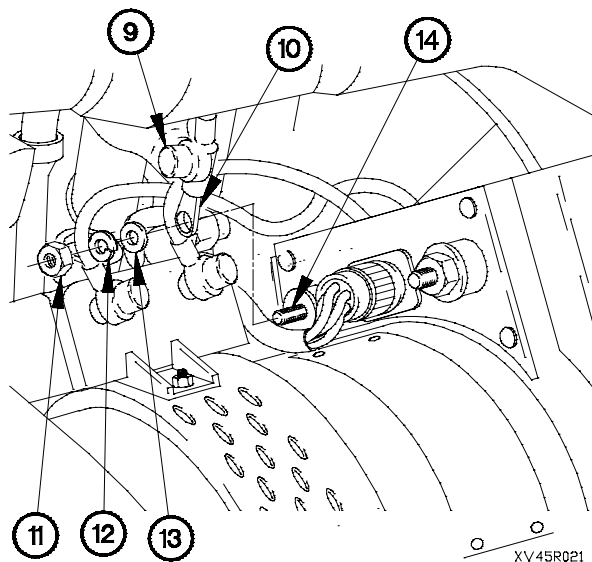
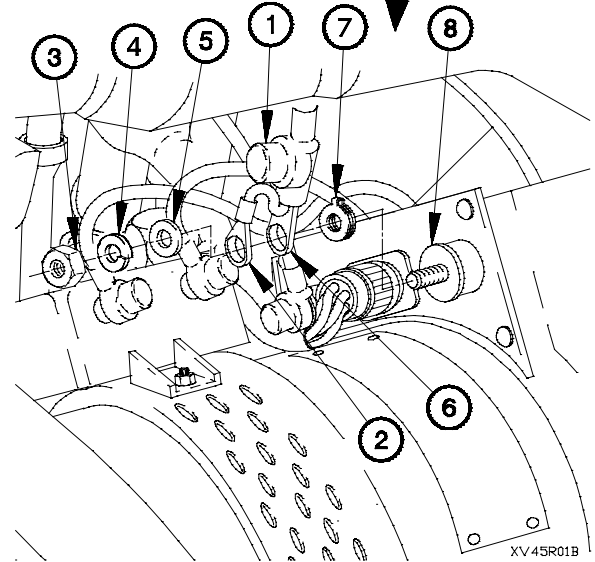
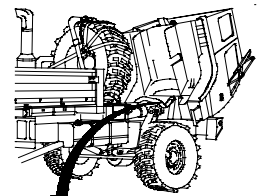
- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
- Nut, Self-Locking (Item 137, Appendix G)

Personnel Required

- (2)

a. Removal.

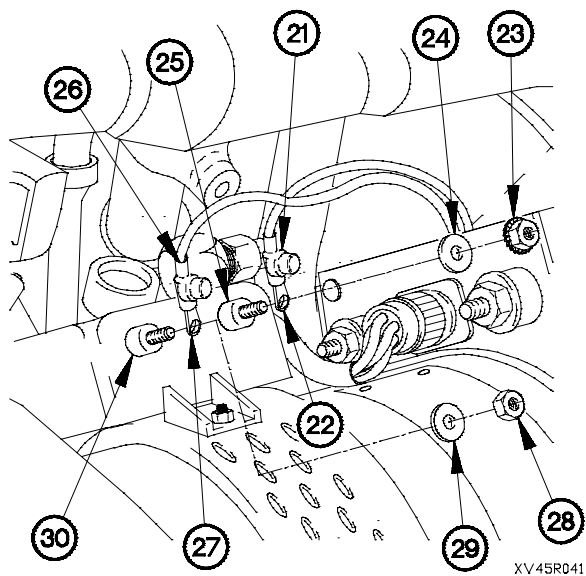
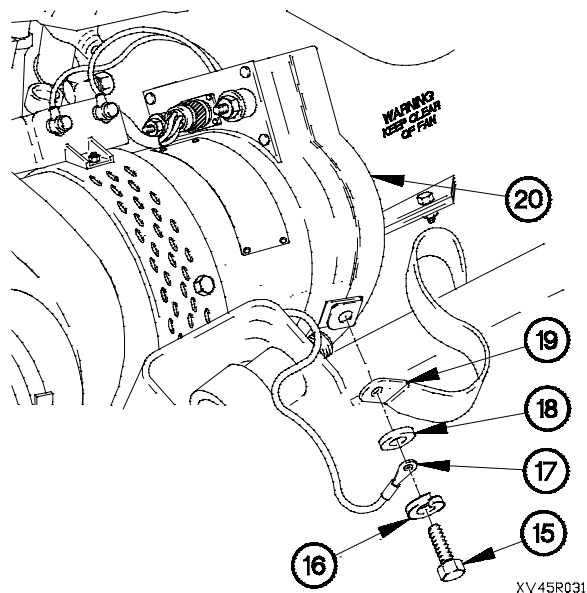
- (1) Lift dust boot (1) on terminal lug TL6 (2).
- (2) Remove nut (3), lockwasher (4), washer (5), terminal lugs TL6 (2) and TL2 (6), and fuse link (7) from alternator terminal (8).
- (3) Position fuse link (7), washer (5), lockwasher (4), and nut (3) on alternator terminal (8).



- (4) Lift dust boot (9) on terminal lug TL60 (10).
- (5) Remove nut (11), lockwasher (12), washer (13), and terminal lug TL60 (10) from alternator terminal (14).
- (6) Position washer (13), lockwasher (12) and nut (11) on alternator terminal (14).

20-56. 200 AMP ALTERNATOR REPLACEMENT (CONT)

- (7) Remove screw (15), lockwasher (16), terminal lug TL5 (17), washer (18), and ground strap (19) from alternator (20).
- (8) Position washer (18), lockwasher (16), and screw (15) on alternator (20).



- (9) Lift dust boot (21) on terminal lug TL35 (22).
- (10) Remove self-locking nut (23), washer (24), and terminal lug TL35 (22) from voltage regulator terminal (25).
- (11) Position washer (24) and self-locking nut (23) on voltage regulator terminal (25).
- (12) Lift dust boot (26) on terminal lug TL110 (27).
- (13) Remove self-locking nut (28), washer (29), and terminal lug TL110 (27) from voltage regulator terminal (30).
- (14) Position washer (29) and self-locking nut (28) on voltage regulator terminal (30).

- (15) Remove nut (31), washer (32), screw (33), and washer (34) from alternator (20).
- (16) Remove self-locking nut (35), screw (36), and washer (37) from alternator (20)

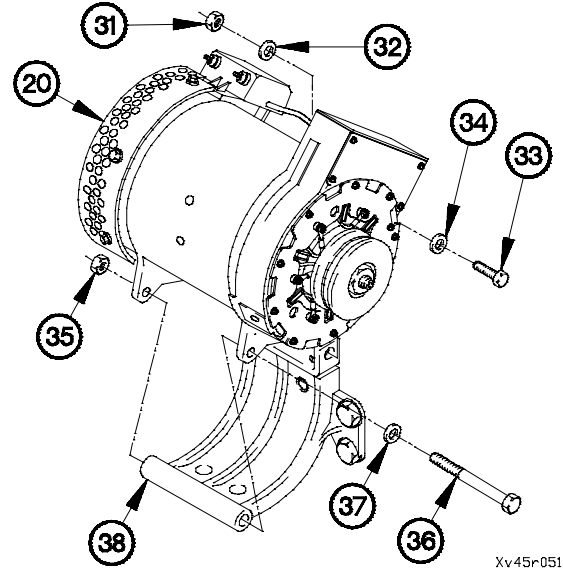
WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

NOTE

Step (17) requires the aid of an assistant.

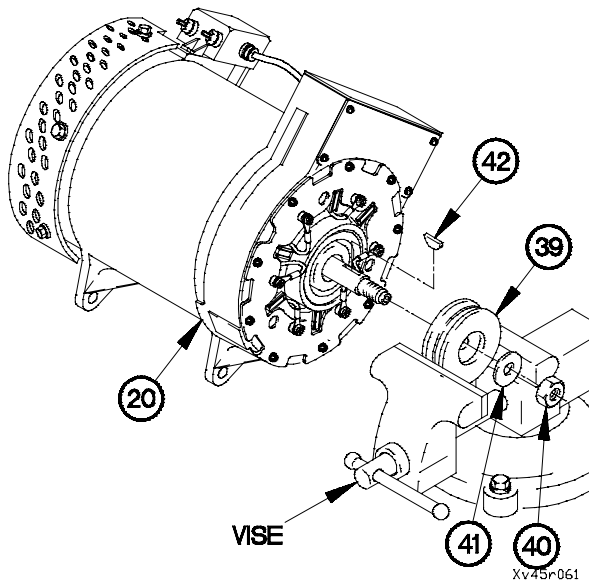
- (17) Remove alternator (20) from alternator support bracket (38).



Xv45r051

CAUTION

Alternator pulley must be positioned in a vise equipped with vise jaw caps when loosening self-locking nut. Failure to comply may result in damage to equipment.



Xv45r061

- (18) Position pulley (39) in vise.
- (19) Loosen self-locking nut (40).
- (20) Remove pulley (39) from vise.
- (21) Remove self-locking nut (40), washer (41), pulley (39), and key (42) from alternator (20).
- (22) Position washer (41) and self-locking nut (40) on alternator (20).

20-56. 200 AMP ALTERNATOR REPLACEMENT (CONT)

b. Installation.

- (1) Remove self-locking nut (1) and washer (2) from alternator (3).

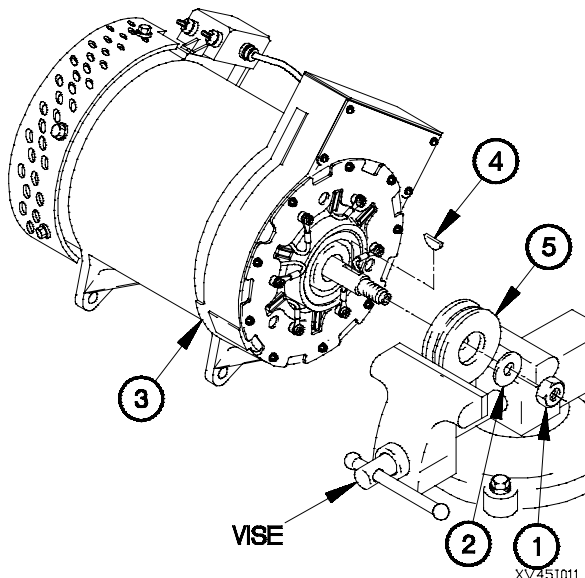
CAUTION

Ensure pulley does not contact wires, terminal lugs, or terminal screws on front of alternator. Failure to comply will result in damage to equipment.

- (2) Position key (4) and pulley (5) on alternator (3) with washer (2) and self-locking nut (1).

CAUTION

Alternator pulley must be positioned in a vise equipped with vise jaw caps when tightening self-locking nut. Failure to comply may result in damage to equipment.



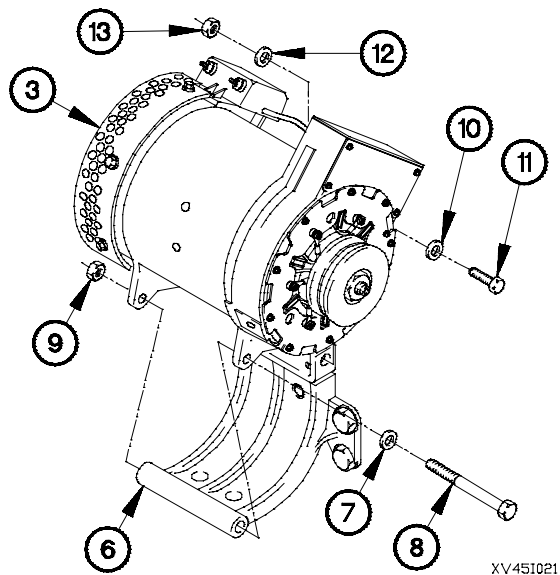
- (3) Position pulley (5) in vise.
- (4) Tighten self-locking nut (1) to 106-130 lb-ft (144-176 N·m).
- (5) Remove pulley (5) from vise.

WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

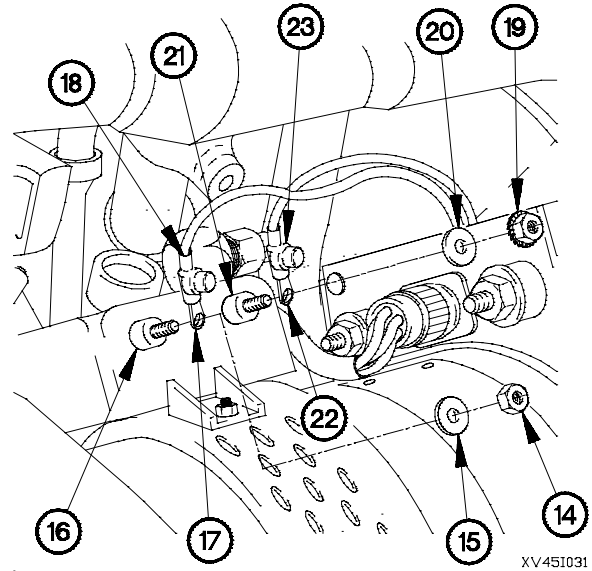
NOTE

Step (6) requires the aid of an assistant.

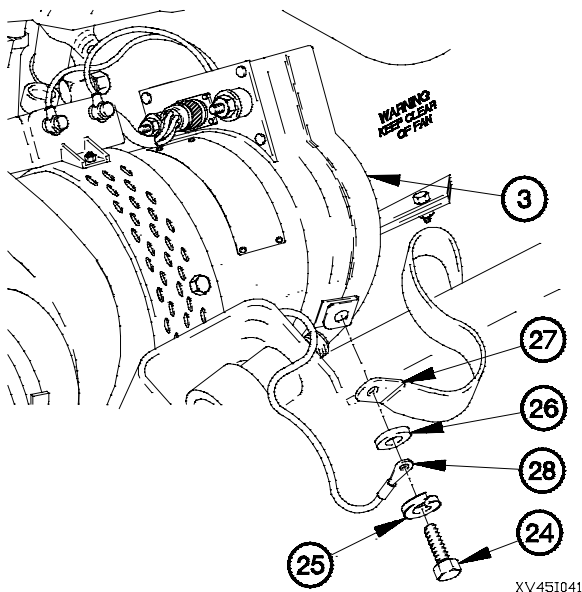


- (6) Position alternator (3) on alternator support bracket (6) with washer (7), screw (8), and self-locking nut (9).
- (7) Position washer (10), screw (11), washer (12), and nut (13) in alternator (3).
- (8) Tighten nut (13) to 25-32 lb-ft (35-43 N·m).
- (9) Tighten self-locking nut (9) to 45-55 lb-ft (61-75 N·m).

- (10) Remove self-locking nut (14) and washer (15) from voltage regulator terminal (16).
- (11) Position terminal lug TL110 (17) on voltage regulator terminal (16) with washer (15) and self-locking nut (14).
- (12) Tighten self-locking nut (14) to 24 lb-in. (3 N-m).
- (13) Position dust boot (18) on terminal lug TL110 (17).
- (14) Remove self-locking nut (19) and washer (20) from voltage regulator terminal (21).
- (15) Position terminal lug TL35 (22) on voltage regulator terminal (21) with washer (20) and self-locking nut (19).
- (16) Tighten self-locking nut (19) to 24 lb-in. (3 N-m).
- (17) Position dust boot (23) on terminal lug TL35 (22).



XV451031

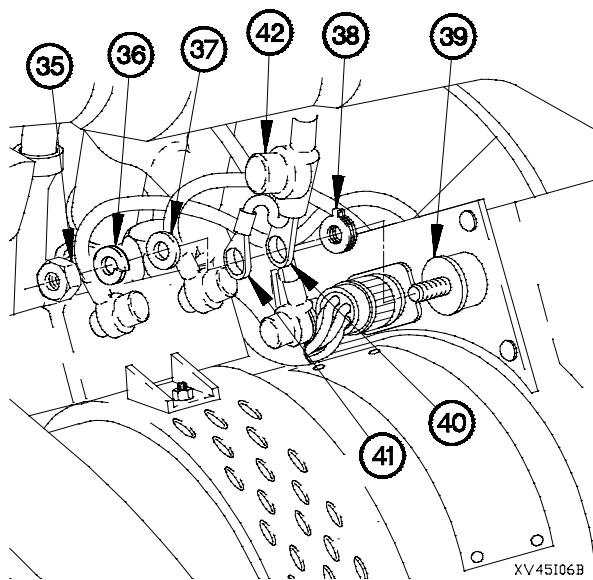
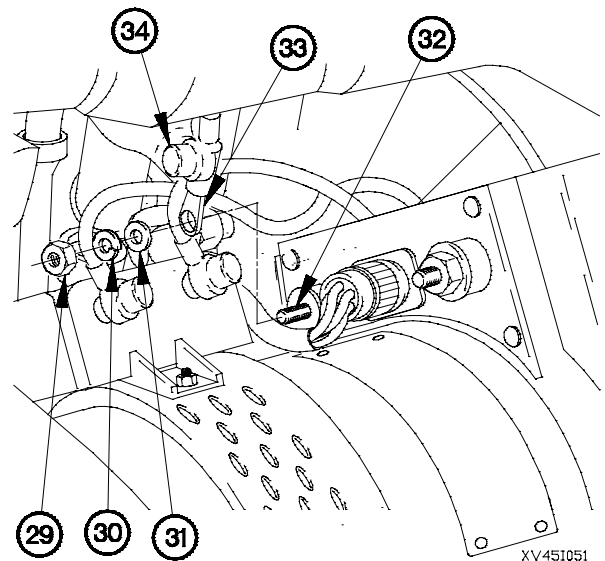


XV451041

- (18) Remove screw (24), lockwasher (25), and washer (26) from alternator (3).
- (19) Position ground strap (27), washer (26), and terminal lug TL5 (28) on alternator (3) with washer (26), lockwasher (25), and screw (24).
- (20) Tighten screw (24) to 60-84 lb-in. (7-9 N-m).

20-56. 200 AMP ALTERNATOR REPLACEMENT (CONT)

- (21) Remove nut (29), lockwasher (30), and washer (31) from alternator terminal (32).
- (22) Position terminal lug TL60 (33) on alternator terminal (32) with washer (31), lockwasher (30), and nut (29).
- (23) Tighten nut (29) to 156-180 lb-in. (17-21 N-m).
- (24) Position dust boot (34) on terminal lug TL60 (33).



- (25) Remove nut (35), lockwasher (36), washer (37), and fuse link (38) from alternator terminal (39).
- (26) Position fuse link (38), terminal lugs TL2 (40) and TL6 (41) on alternator terminal (39) with washer (37), lockwasher (36), and nut (35).
- (27) Tighten nut (35) to 156-180 lb-in. (17-21 N-m).
- (28) Position dust boot (42) on terminal lug TL6 (41).

c. Follow-On Maintenance

- (1) Install alternator belts (para 7-3).
- (2) Connect batteries (para 7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check alternator operation (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-57. 200 AMP VOLTAGE REGULATOR REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 35, Appendix C)

Materials/Parts

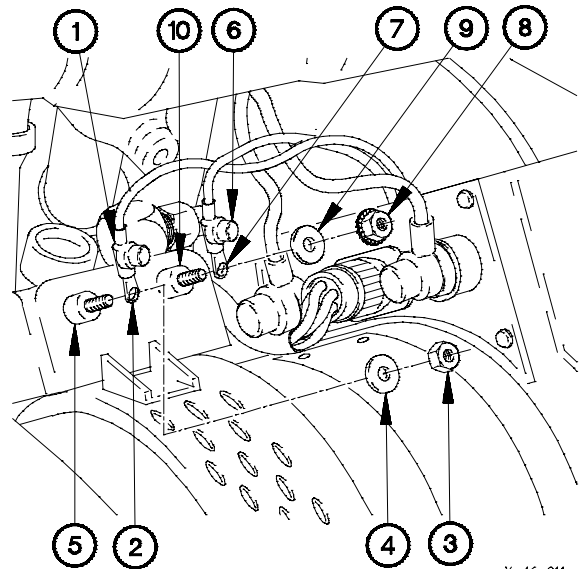
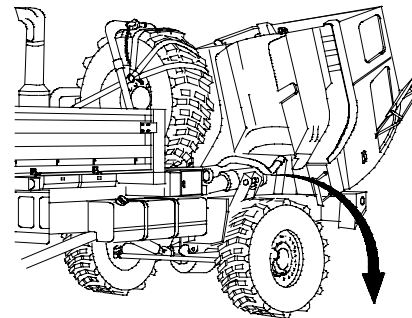
- Lockwasher (2) (Item 100, Appendix G)
- Nut, Self-Locking (Item 130, Appendix G)
- Nut, Self-Locking (Item 131, Appendix G)
- Sealing Compound (Item 64, Appendix D)

a. Removal.

NOTE

Tag terminal lugs and connection points prior to removal.

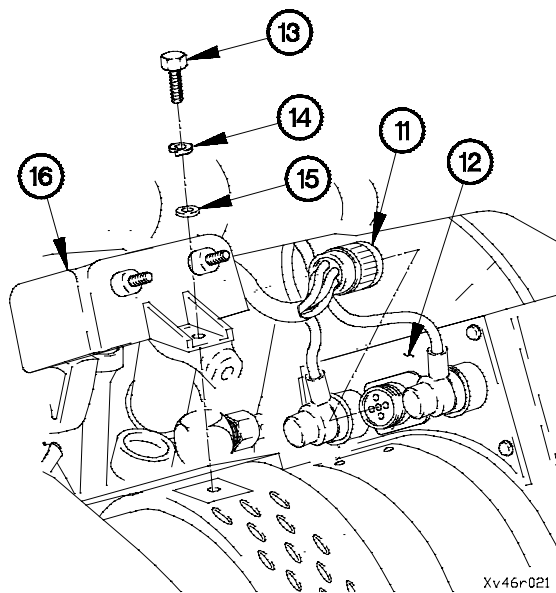
- (1) Lift dust boot (1) on terminal lug TL110 (2).
- (2) Remove self-locking nut (3), washer (4), and terminal lug TL110 (2) from voltage regulator terminal (5). Discard self-locking nut.
- (3) Lift dust boot (6) on terminal lug TL35 (7).
- (4) Remove self-locking nut (8), washer (9), and terminal lug TL35 (7) from voltage regulator terminal (10). Discard self-locking nut.



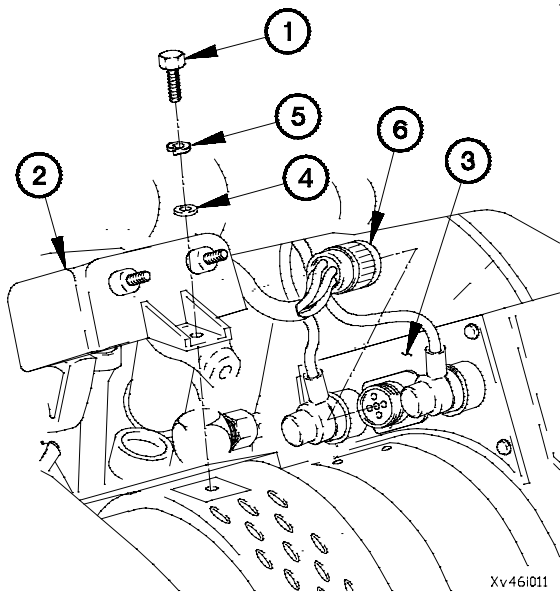
Xv46r011

20-57. 200 AMP VOLTAGE REGULATOR REPLACEMENT (CONT)

- (5) Disconnect voltage regulator connector (11) from alternator (12).
- (6) Remove two screws (13), lockwashers (14), washers (15) and voltage regulator (16) from alternator (12). Discard lockwashers.



b. Installation

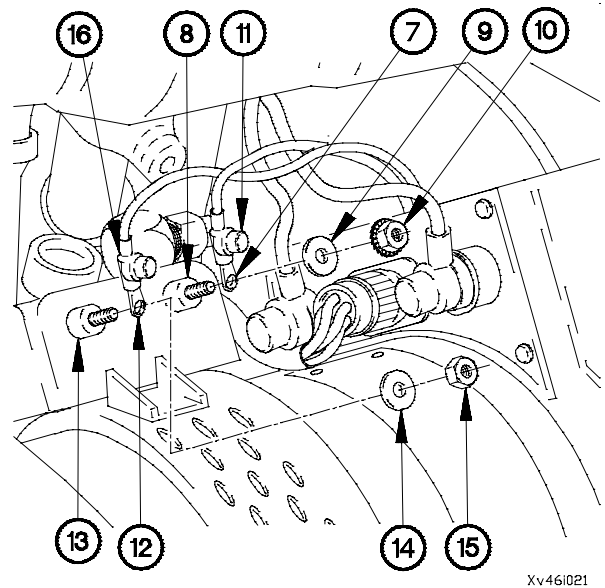


WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to threads of two screws (1).
- (2) Position voltage regulator (2) on alternator (3) with two washers (4), lockwashers (5), and screws (1).
- (3) Tighten two screws (1) to 75 lb-in. (8 N·m).
- (4) Connect voltage regulator connector (6) to alternator (3).

- (5) Position terminal lug TL35 (7) on voltage regulator terminal (8) with washer (9) and self-locking nut (10).
- (6) Tighten self-locking nut (10) to 25 lb-in. (3 N·m).
- (7) Position dust boot (11) on terminal lug TL35 (7).
- (8) Position terminal lug TL110 (12) on voltage regulator terminal (13) with washer (14) and self-locking nut (15).
- (9) Tighten self-locking nut (15) to 25 lb-in. (3 N·m).
- (10) Position dust boot (16) on terminal lug TL110 (12).



Xv46i021

c. Follow-On Maintenance

- (1) Lower cab (TM 9-2320-365-10).
- (2) Connect batteries (para 7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT

This task covers:

a. Removal (All Models Except M1081)	d. Installation (M1081)
b. Installation (All Models Except M1081)	e. Follow-On Maintenance
c. Removal (M1081)	

INITIAL SETUP

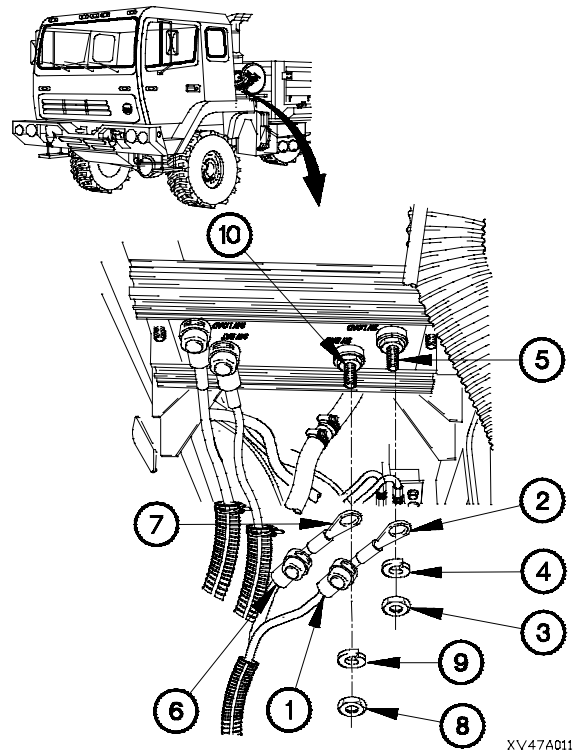
<p>Equipment Conditions Spare tire lowered (TM 9-2320-365-10). Batteries disconnected (para 7-48).</p> <p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 35, Appendix C)</p>	<p>Material/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (2) (Item 65, Appendix G) Lockwasher (2) (Item 66, Appendix G) Nut, Self-Locking (2) (Item 135, Appendix G)</p>
--	--

a. Removal (All Models Except M1081).

NOTE

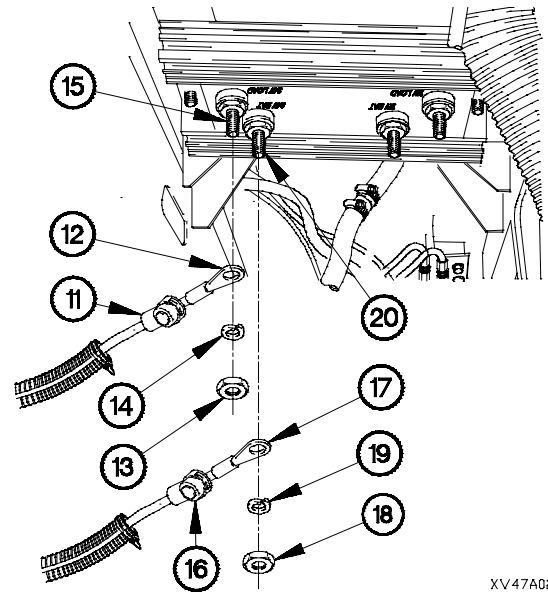
- Tag cables and connection points prior to disconnecting.
- Remove plastic cable ties as required.

- (1) Lift dust boot (1) on terminal lug TL174 (2).
- (2) Remove nut (3), lockwasher (4), and terminal lug TL174 (2) from reverse polarity relay 12V LOAD terminal (5). Discard lockwasher.
- (3) Lift dust boot (6) on terminal lug TL173 (7).
- (4) Remove nut (8), lockwasher (9), and terminal lug TL173 (7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.



XV47A011

- (5) Lift dust boot (11) on terminal lug TL169 (12).
- (6) Remove nut (13), lockwasher (14), and terminal lug TL169 (12) from reverse polarity relay 24V LOAD terminal (15). Discard lockwasher.
- (7) Lift dust boot (16) on terminal lug TL168 (17).
- (8) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.

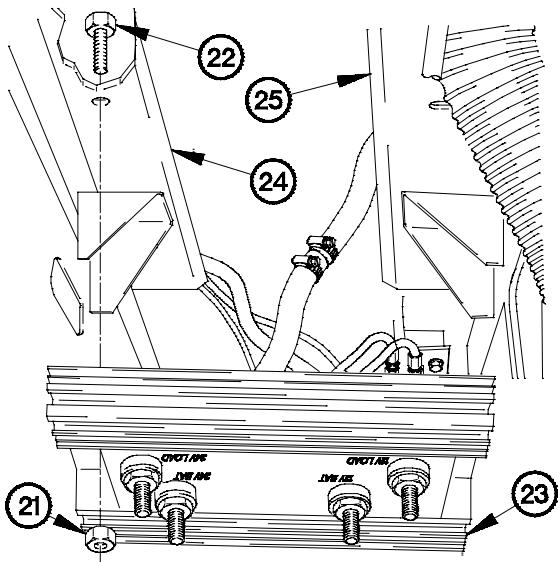


XV47A021

NOTE

Note orientation of reverse polarity relay prior to removal.

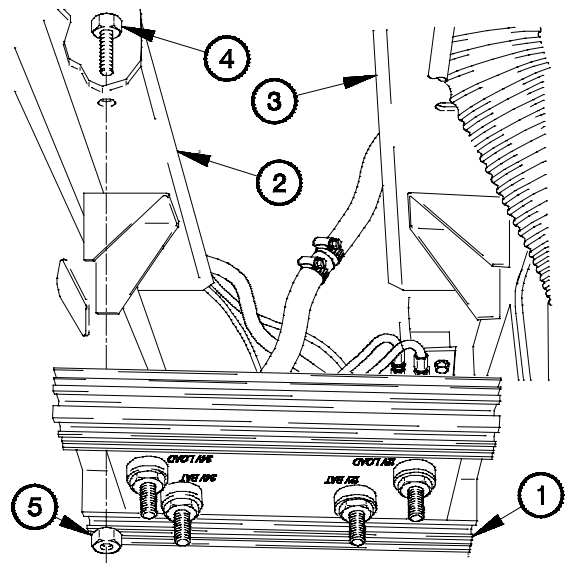
- (9) Remove two self-locking nuts (21), screws (22), and reverse polarity relay (23) from brackets (24 and 25). Discard self-locking nuts.



XV47A031

b. Installation (All Models Except M1081).

- (1) Position reverse polarity relay (1) on brackets (2 and 3) with two screws (4) and self-locking nuts (5).
- (2) Tighten two self-locking nuts (5) to 22-27 lb-ft (31-37 N-m).



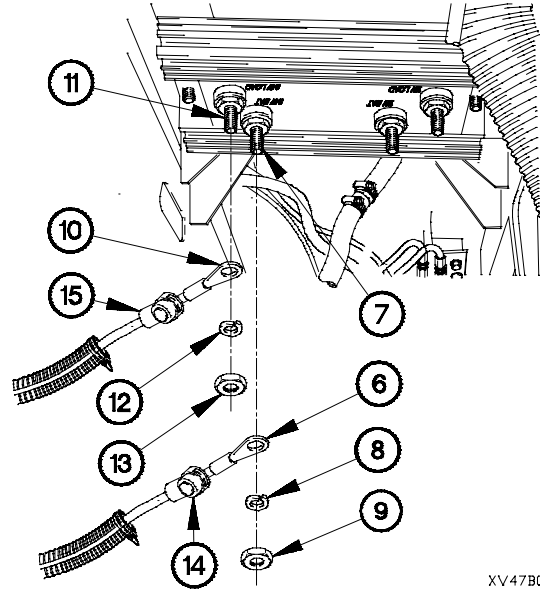
XV47B011

20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT (CONT)

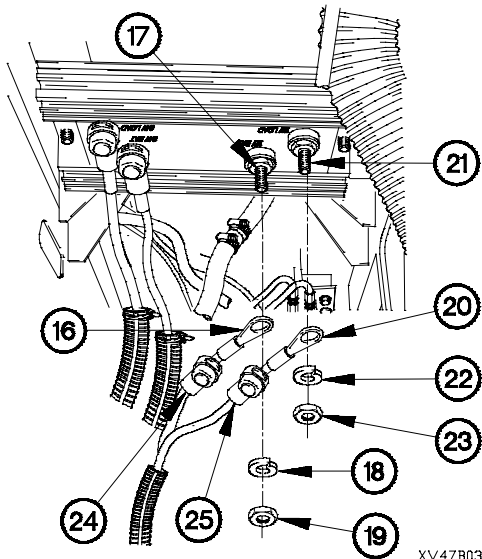
NOTE

Install plastic cable ties as required.

- (3) Position terminal lug TL168 (6) on reverse polarity relay 24V BAT terminal (7) with lockwasher (8) and nut (9).
- (4) Position terminal lug TL169 (10) on reverse polarity relay 24V LOAD terminal (11) with lockwasher (12) and nut (13).
- (5) Tighten nuts (9 and 13) to 27-33 lb-ft (37-45 N-m).
- (6) Position dust boots (14 and 15) on terminal lugs TL168 (6) and TL169 (10).



XV47B021

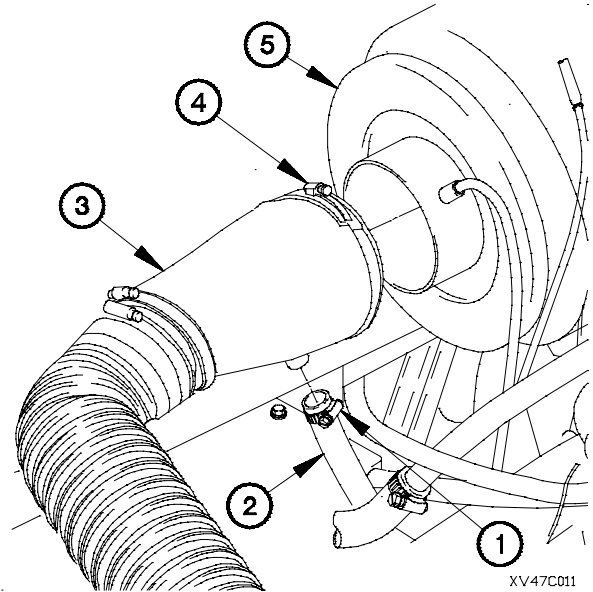


XV47B031

- (7) Position terminal lug TL173 (16) on reverse polarity relay 12V BAT terminal (17) with lockwasher (18) and nut (19).
- (8) Position terminal lug TL174 (20) on reverse polarity relay 12V LOAD terminal (21) with lockwasher (22) and nut (23).
- (9) Tighten nuts (19 and 23) to 108-132 lb-in. (12-15 N-m).
- (10) Position dust boots (24 and 25) on terminal lugs TL173 (16) and TL174 (20).

c. Removal (M1081).

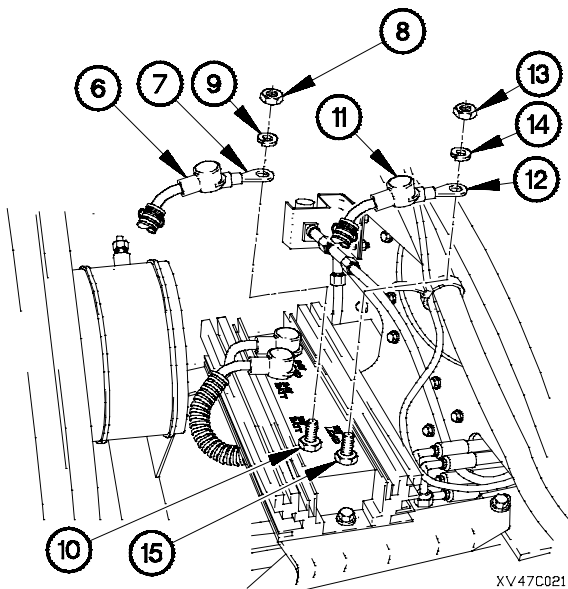
- (1) Loosen clamp (1) on air compressor intake hose (2).
- (2) Remove air compressor intake hose (2) from intake air cleaner boot (3).
- (3) Loosen clamp (4) on intake air cleaner boot (3).
- (4) Remove intake air cleaner boot (4) from intake air cleaner housing (5).



NOTE

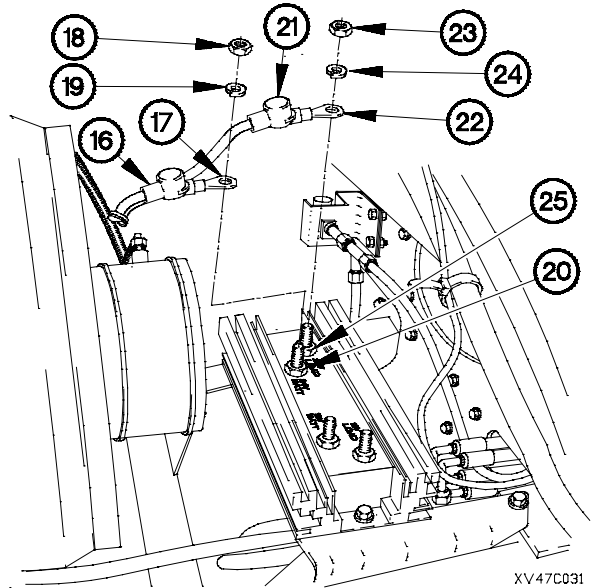
- Tag cables and connection points prior to disconnecting.
- Remove plastic cable ties as required.

- (5) Lift dust boot (6) on terminal lug TL173 (7).
- (6) Remove nut (8), lockwasher (9), and terminal lug TL173 (7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.
- (7) Lift dust boot (11) on terminal lug TL174 (12).
- (8) Remove nut (13), lockwasher (14), and terminal lug TL174 (12) from reverse polarity relay 12V LOAD terminal (15). Discard lockwasher.



20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT (CONT)

- (9) Lift dust boot (16) on terminal lug TL168 (17).
- (10) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.
- (11) Lift dust boot (21) on terminal lug TL169 (22).
- (12) Remove nut (23), lockwasher (24), and terminal lug TL169 (22) from reverse polarity relay 24V LOAD terminal (25). Discard lockwasher.

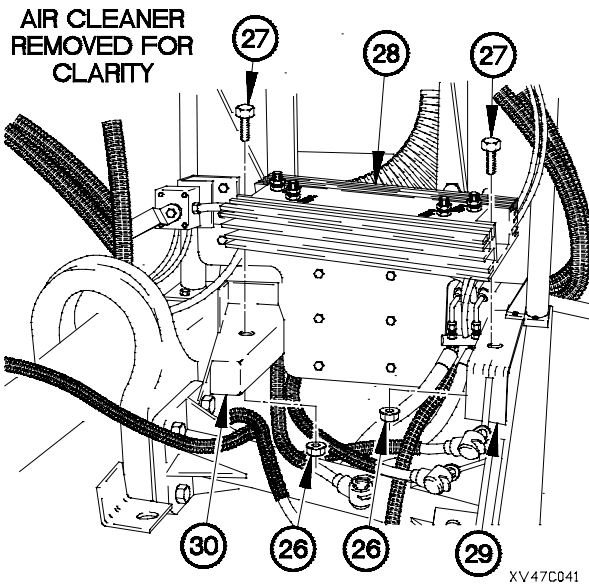


XV47C031

NOTE

Note orientation of reverse polarity relay prior to removal.

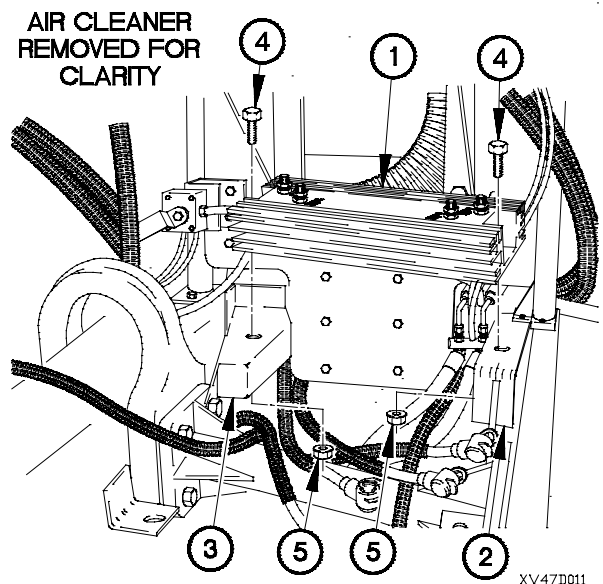
- (13) Remove two self-locking nuts (26), screws (27), and reverse polarity relay (28) from brackets (29 and 30). Discard self-locking nuts.



XV47C041

d. Installation (M1081).

- (1) Position reverse polarity relay (1) on brackets (2 and 3) with two screws (4) and self-locking nuts (5).
- (2) Tighten two self-locking nuts (5) to 22-27 lb-ft (31-37 N-m).

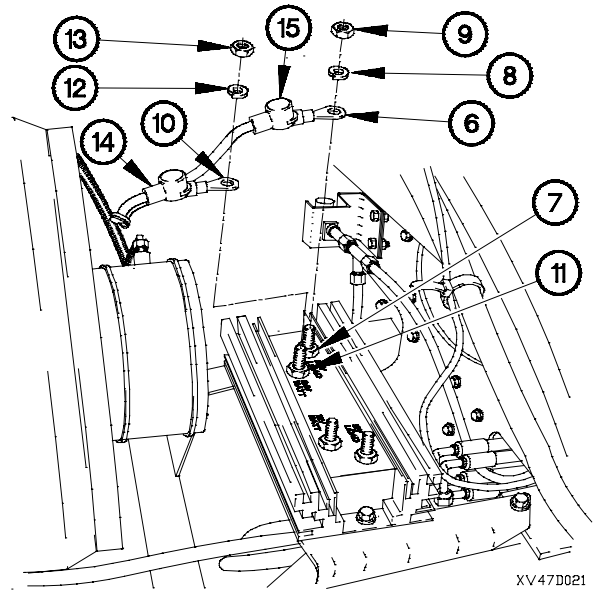


XV47D011

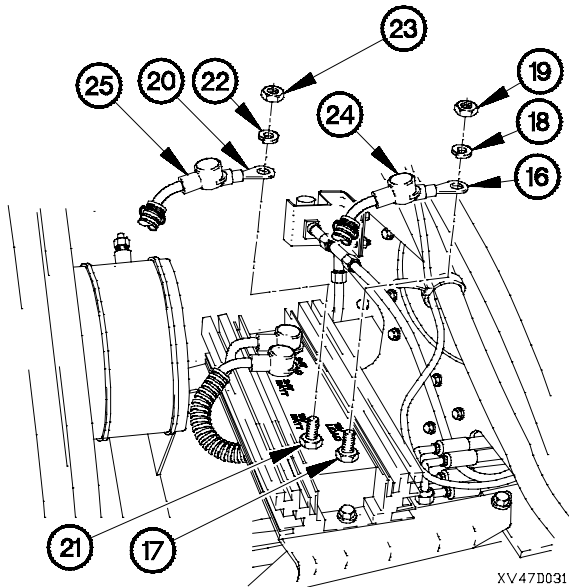
NOTE

Install plastic cable ties as required.

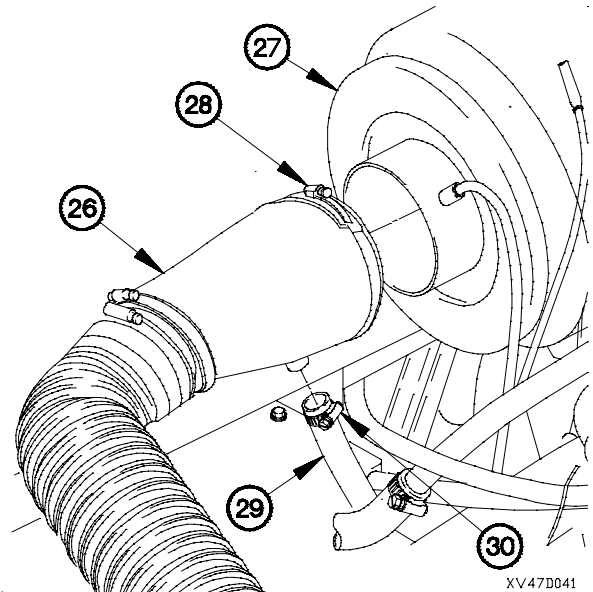
- (3) Position terminal lug TL169 (6) on reverse polarity relay 24V LOAD terminal (7) with lockwasher (8) and nut (9).
- (4) Position terminal lug TL168 (10) on reverse polarity relay 24V BAT terminal (11) with lockwasher (12) and nut (13).
- (5) Tighten nuts (9 and 13) to 27-33 lb-ft (37-45 N-m).
- (6) Position dust boots (14 and 15) on terminal lugs TL169 (6) and TL168 (10).



- (7) Position terminal lug TL174 (16) on reverse polarity relay 12V LOAD terminal (17) with lockwasher (18) and nut (19).
- (8) Position terminal lug TL173 (20) on reverse polarity relay 12V BAT terminal (21) with lockwasher (22) and nut (23).
- (9) Tighten nuts (19 and 23) to 108-132 lb-in. (12-15 N-m).
- (10) Position dust boots (24 and 25) on terminal lugs TL174 (16) and TL173 (20).



- (11) Position intake air cleaner boot (26) on intake air cleaner housing (27) with clamp (28).
- (12) Position air compressor intake hose (29) on intake air cleaner boot (26) with clamp (30).
- (13) Tighten clamps (28 and 30) to 36-48 lb-in. (4-5 N-m).



20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT (CONT)

e. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Materials/Parts

- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 96, Appendix G)
- Lockwasher (Item 89, Appendix G)

Tools and Special Tools

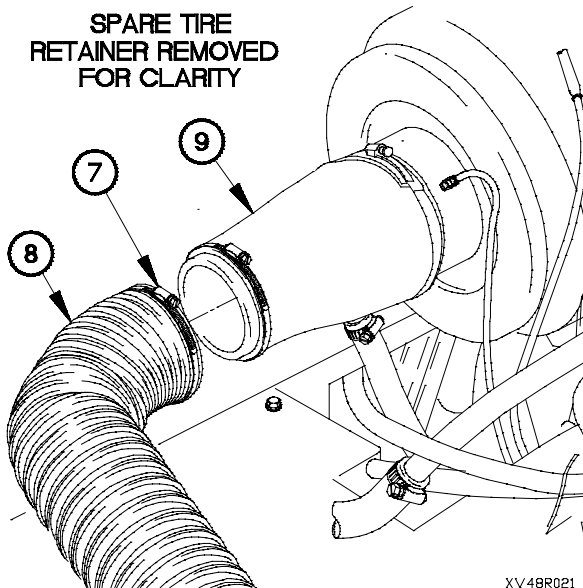
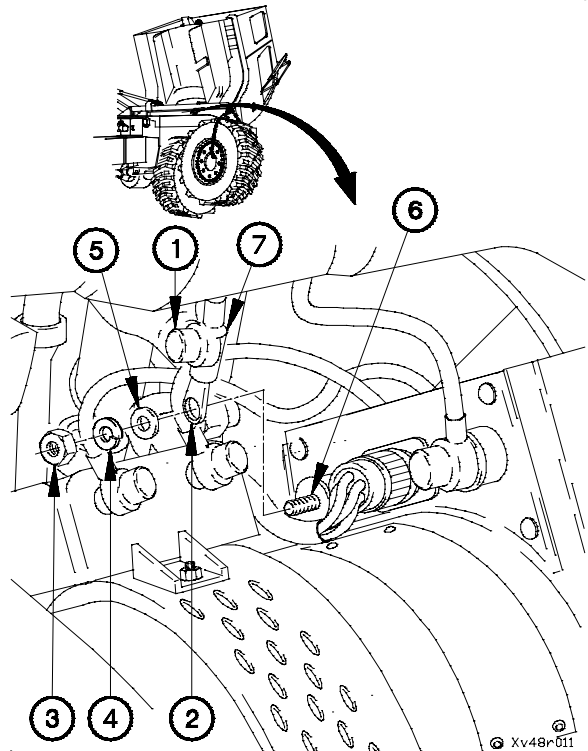
- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

NOTE

Remove plastic cable ties as required.

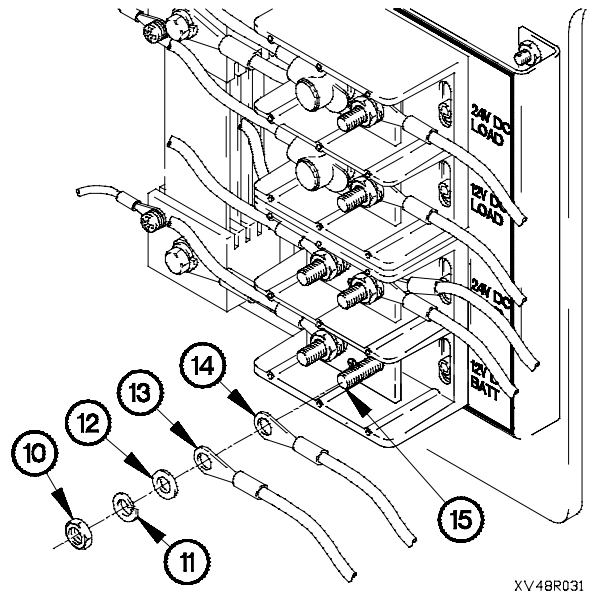
- (1) Lift dust boot (1) on terminal lug TL60 (2).
- (2) Remove nut (3), lockwasher (4), washer (5), and terminal lug TL60 (2) from alternator terminal (6). Discard lockwasher.
- (3) Remove dust boot (1) from terminal lug TL60 (2).



- (4) Loosen clamp (7) on turbocharger intake hose (8).
- (5) Remove turbocharger intake hose (8) from intake air cleaner boot (9).

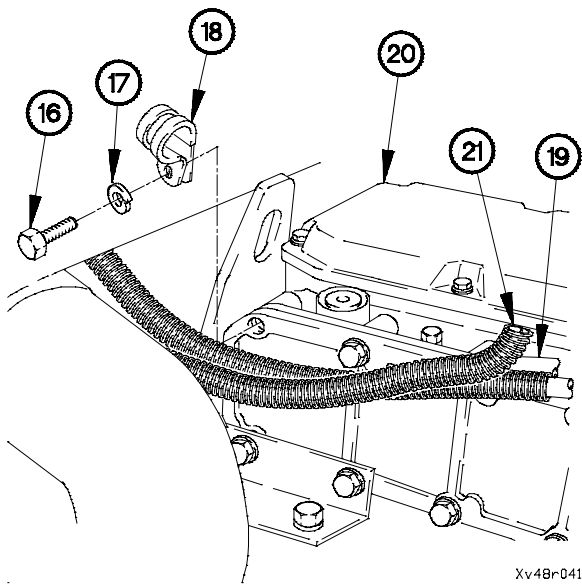
20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT (CONT)

- (6) Remove nut (10), lockwasher (11), washer (12), and terminal lugs TL61 (13) and TL171 (14) from terminal block terminal (15). Discard lockwasher.



Xv48R031

- (7) Remove three screws (16), washers (17), clamps (18), and 200 amp alternator to terminal block 12 vdc cable (19) from engine (20).
- (8) Remove convoluted tubing (21) from 200 amp alternator to terminal block 12 vdc cable (19).



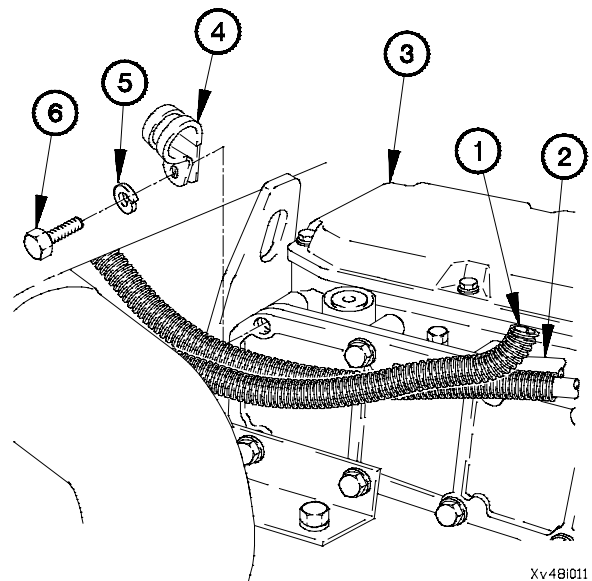
Xv48r-041

b. Installation.

NOTE

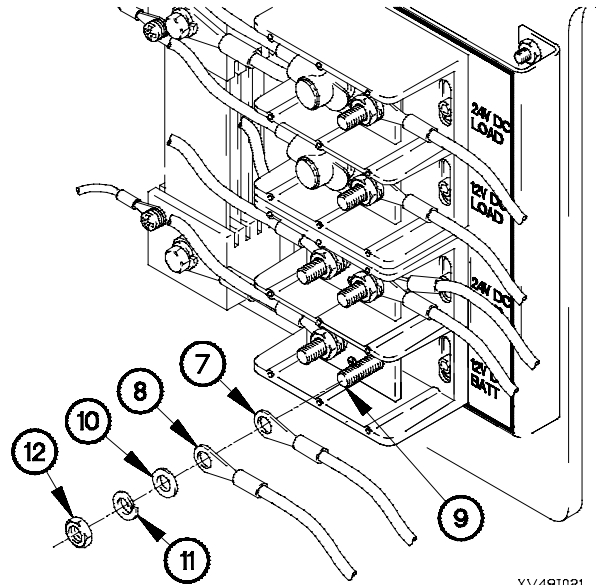
Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp alternator to terminal block 12 vdc cable (2).
- (2) Position 200 amp alternator to terminal block 12 vdc cable (2) on engine (3) with three clamps (4), washers (5), and screws (6).
- (3) Tighten three screws (6) to 22-27 lb-ft (31-37 N·m).

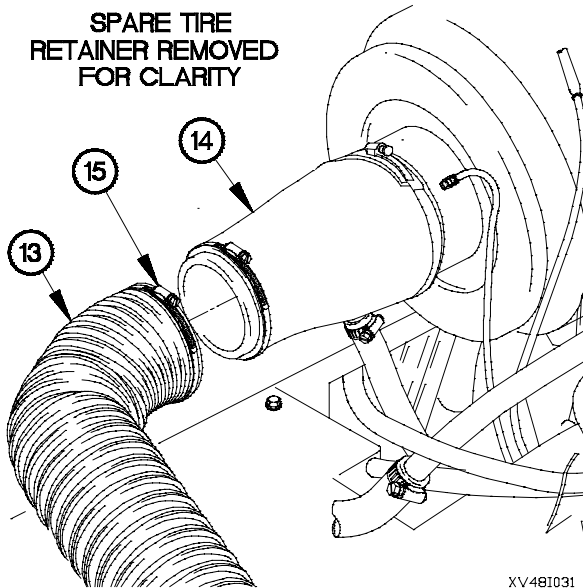


Xv48I011

- (4) Position terminal lugs TL171 (7) and TL61 (8) on terminal block terminal (9) with washer (10), lockwasher (11), and nut (12).
- (5) Tighten nut (12) to 15-19 lb-ft (21-25 N·m).



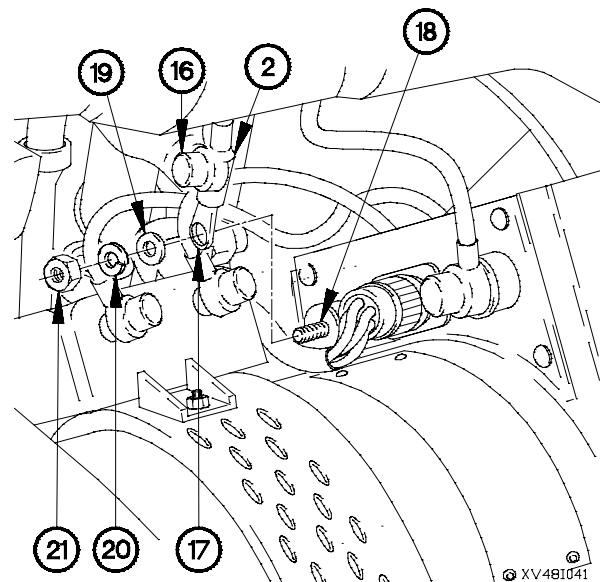
XV481021



XV481031

- (6) Position turbocharger intake hose (13) on intake air cleaner boot (14) with clamp (15).
- (7) Tighten clamp (15) to 36-48 lb-in. (4-5 N·m).

- (8) Install dust boot (16) on terminal lug TL60 (17).
- (9) Position terminal lug TL60 (17) on alternator terminal (18) with washer (19), lockwasher (20), and nut (21).
- (10) Tighten nut (21) to 144-192 lb-in. (17-21 N·m).
- (11) Position dust boot (16) on terminal lug TL60 (17).



XV481041

**20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT
(CONT)**

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Lower cab (TM 9-2320-365-10).
- (4) Start engine (TM 9-2320-365-10).
- (5) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (6) Shut down engine (TM 9-2320-365-10).

End of Task.

20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Materials/Parts

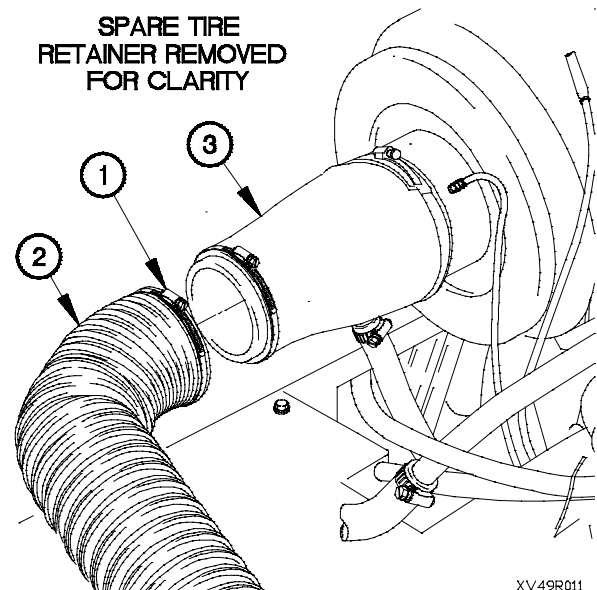
- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 65, Appendix G)
- Lockwasher (Item 89, Appendix G)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).

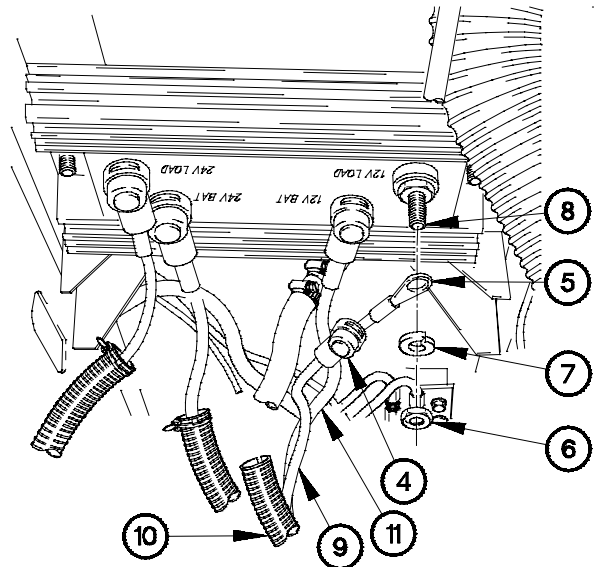


20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD CABLE REPLACEMENT (CONT)

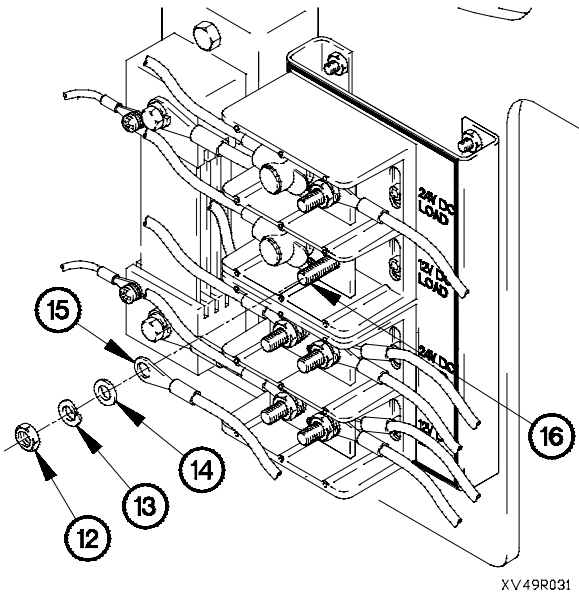
NOTE

Remove plastic cable ties as required.

- (3) Lift dust boot (4) on terminal lug TL174 (5).
- (4) Remove nut (6), lockwasher (7), and terminal lug TL174 (5) from reverse polarity relay (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 12 vdc load cable (9).
- (6) Remove convoluted tubing (10) from 200 amp terminal block to reverse polarity relay 12 vdc load cable (9) and 200 amp terminal block to reverse polarity relay 12 vdc battery cable (11).



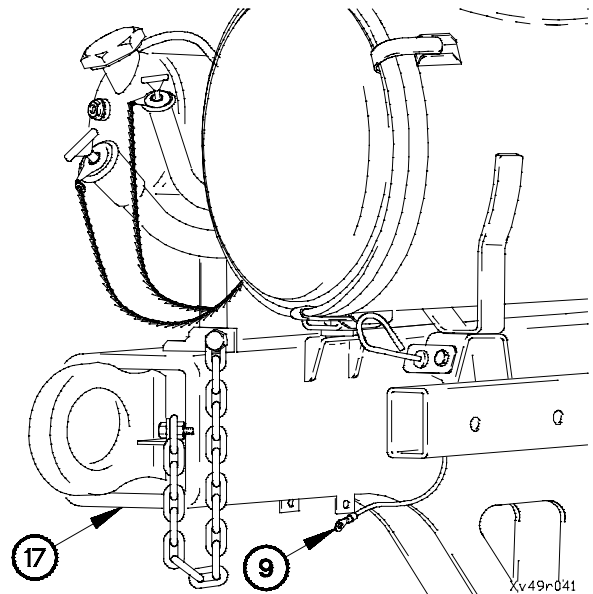
XV 49R021



XV 49R031

- (7) Remove nut (12), lockwasher (13), washer (14), and terminal lug TL172 (15) from terminal block terminal (16). Discard lockwasher.

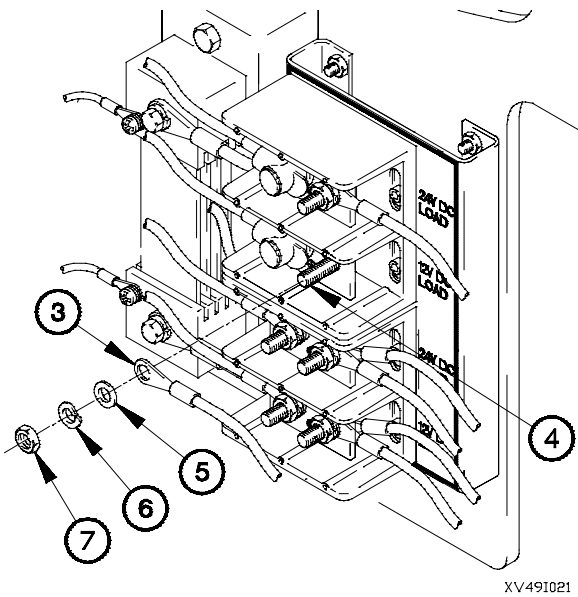
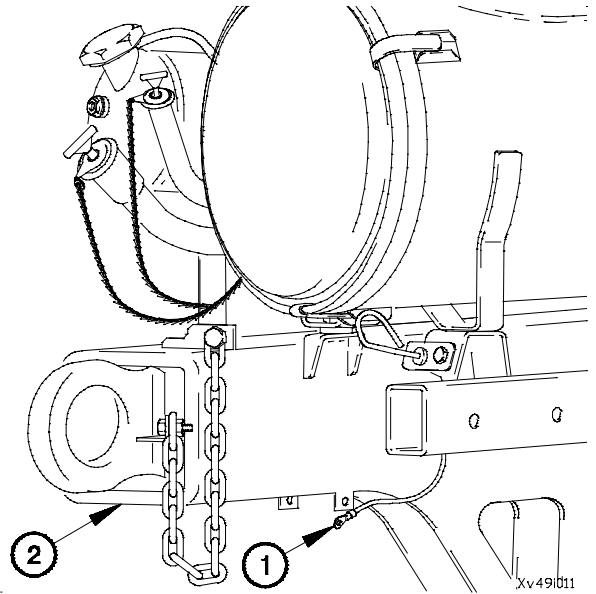
- (8) Remove 200 amp terminal block to reverse polarity relay 12 vdc load cable (9) from rear side of front lifting beam (17).



XV 49R041

b. Installation.

- (1) Position 200 amp terminal block to reverse polarity relay 12 vdc load cable (1) on rear side of front lifting beam (2).

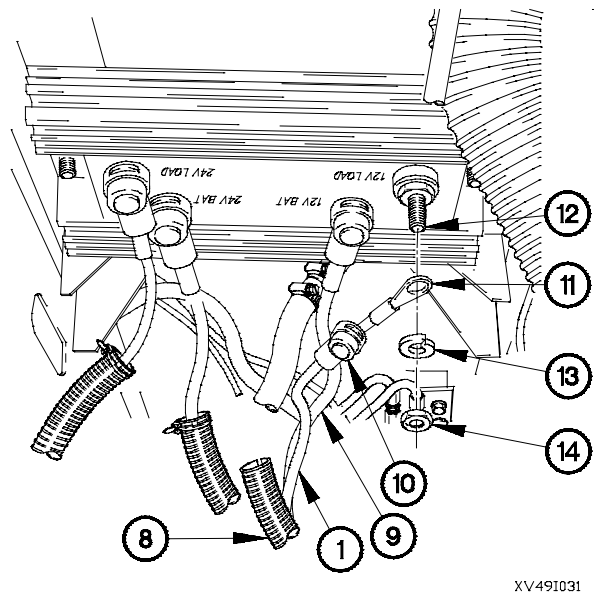


- (2) Position terminal lug TL172 (3) on terminal block terminal (4) with washer (5), lockwasher (6), and nut (7).
- (3) Tighten nut (7) to 15-19 lb-ft (21-25 N·m).

NOTE

Install plastic cable ties as required.

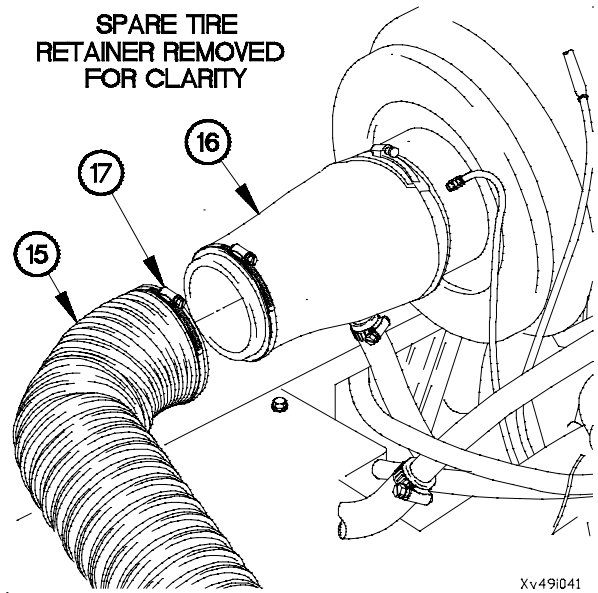
- (4) Install convoluted tubing (8) on 200 amp terminal block to reverse polarity relay 12 vdc load cable (1) and 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9).
- (5) Install dust boot (10) on 200 amp terminal block to reverse polarity relay 12 vdc load cable (1).
- (6) Position terminal lug TL174 (11) on reverse polarity relay (12) with lockwasher (13), and nut (14).
- (7) Tighten nut (14) to 108-132 lb-in. (12-15 N·m).
- (8) Position dust boot (10) on terminal lug TL174 (11).



Xv491031

**20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD
CABLE REPLACEMENT (CONT)**

- (9) Position turbocharger intake hose (15) on intake air cleaner boot (16) with clamp (17).
- (10) Tighten clamp (17) to 36-48 lb-in. (4-5 N·m).



c. Follow-On Maintenance

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Lower cab (TM 9-2320-365-10).
- (4) Start engine (TM 9-2320-365-10).
- (5) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (6) Shut down engine (TM 9-2320-365-10).

End of Task.

20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Materials/Parts

- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 96, Appendix G)
- Lockwasher (Item 89, Appendix G)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

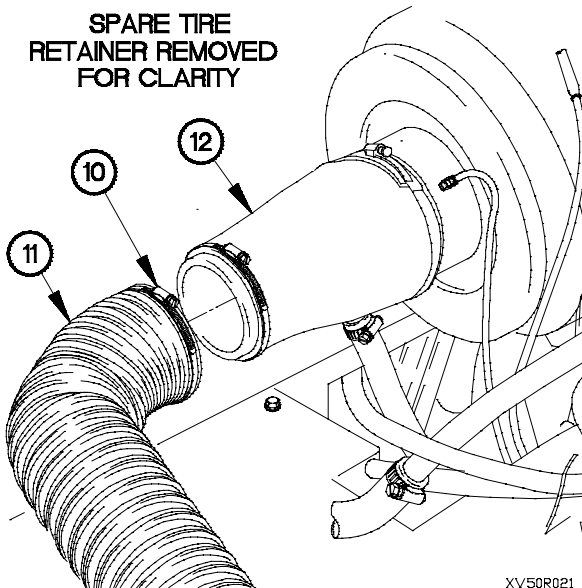
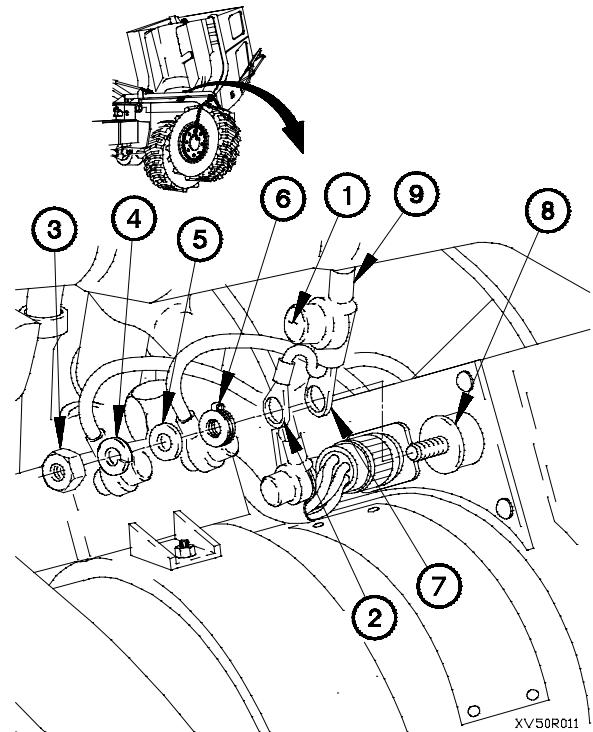
a. Removal.

- (1) Lift dust boot (1) on terminal lug TL2 (2).

NOTE

Remove plastic cable ties as required.

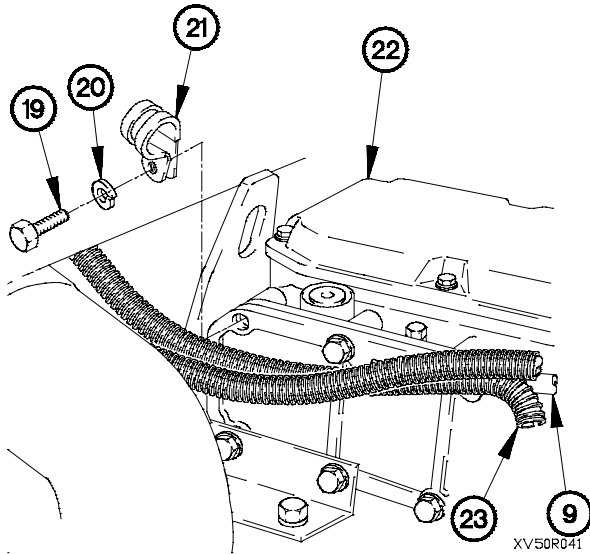
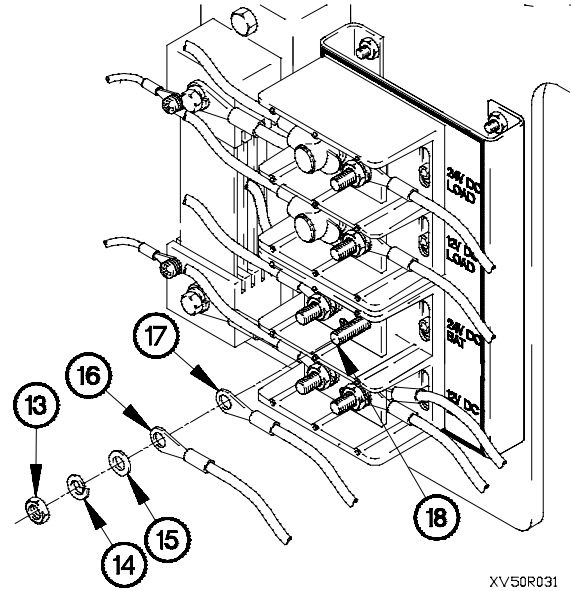
- (2) Remove nut (3), lockwasher (4), washer (5), fuse (6), and terminal lugs TL2 (2) and TL8 (7) from alternator terminal (8). Discard lockwasher.
- (3) Remove alternator to terminal block 24 vdc cable (9) from dust boot (1).



- (4) Loosen clamp (10) on turbocharger intake hose (11).
- (5) Remove turbocharger intake hose (11) from intake air cleaner boot (12).

20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT (CONT)

- (6) Remove nut (13), lockwasher (14), washer (15), and terminal lugs TL1 (16) and TL166 (17) from terminal block terminal (18). Discard lockwasher.



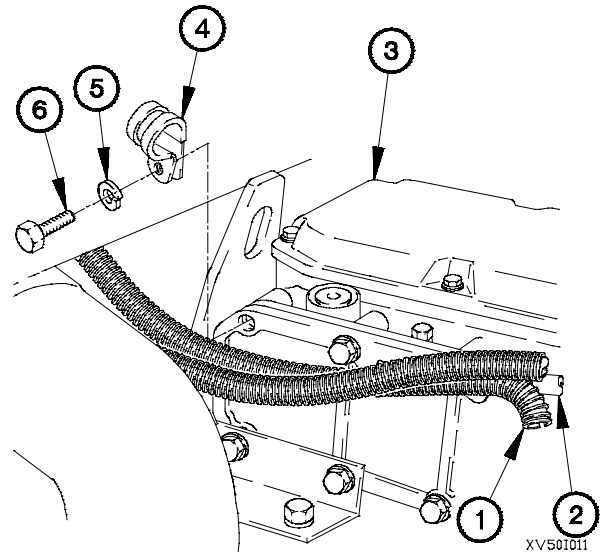
- (7) Remove three screws (19), washers (20), clamps (21), and 200 amp alternator to terminal block 24 vdc cable (9) from engine (22).
- (8) Remove convoluted tubing (23) from 200 amp alternator to terminal block 24 vdc cable (9).

b. Installation.

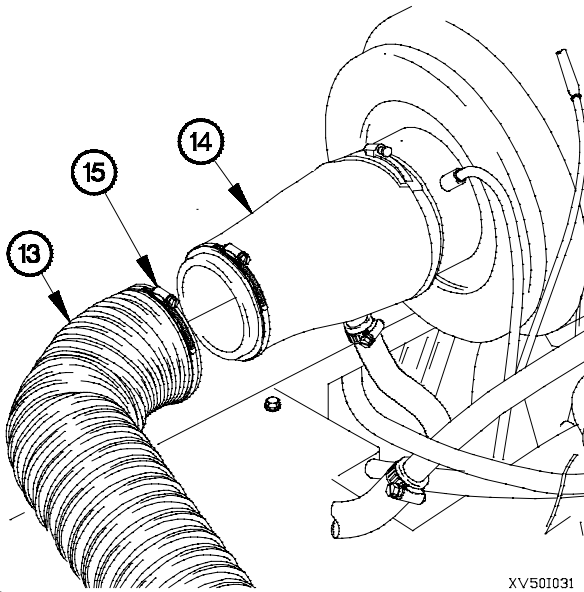
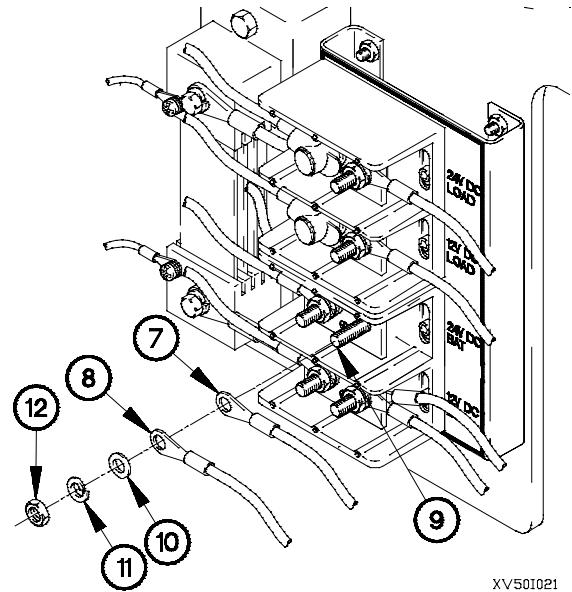
NOTE

Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp alternator to terminal block 24 vdc cable (2).
- (2) Position 200 amp alternator to terminal block 24 vdc cable (2) on engine (3) with three clamps (4), washers (5), and screws (6).
- (3) Tighten three screws (6) to 22-27 lb-ft (31-37 N·m).

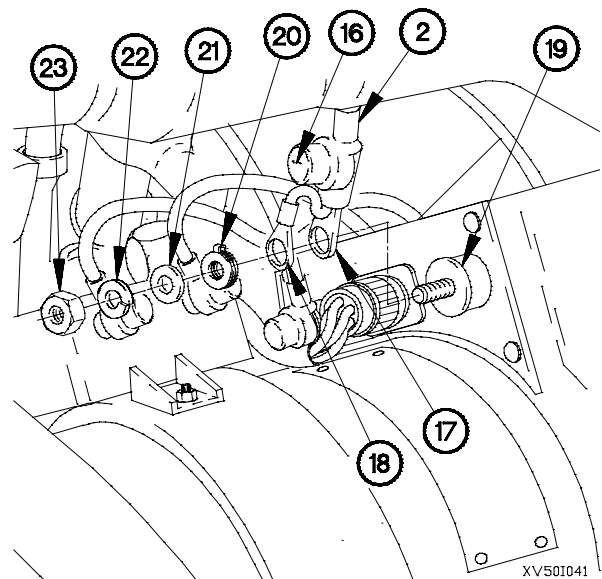


- (4) Position terminal lugs TL166 (7) and TL1 (8) on terminal block terminal (9) with washer (10), lockwasher (11), and nut (12).
- (5) Tighten nut (12) to 15-19 lb-ft (21-25 N·m).



- (6) Position turbocharger intake hose (13) on intake air cleaner boot (14) with clamp (15).
- (7) Tighten clamp (15) to 36-48 lb-in. (4-5 N·m).

- (8) Install 200 amp alternator to terminal block 24 vdc cable (2) in dust boot (16).
- (9) Position terminal lugs TL8 (17) and TL2 (18) on alternator terminal (19) with fuse (20), washer (21), lockwasher (22), and nut (23).
- (10) Tighten nut (23) to 144-192 lb-in. (17-21 N·m).
- (11) Install dust boot (16) on terminal lug TL2 (18).



**20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT
(CONT)**

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Materials/Parts

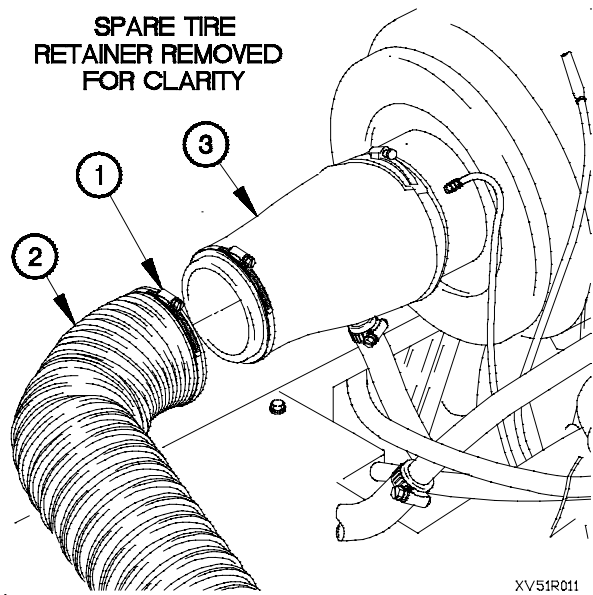
- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 89, Appendix G)
- Lockwasher (Item 66, Appendix G)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).

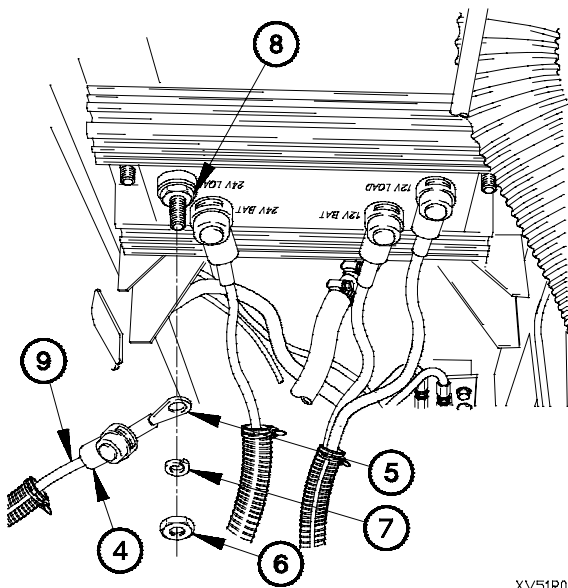


- (3) Lift dust boot (4) on terminal lug TL168 (5).

NOTE

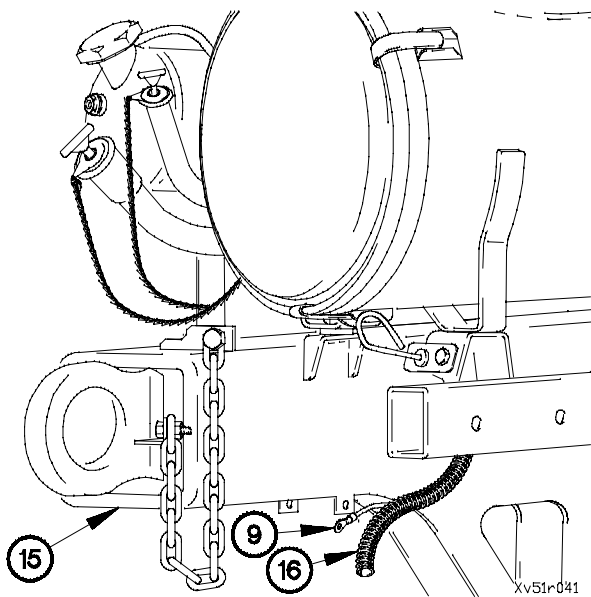
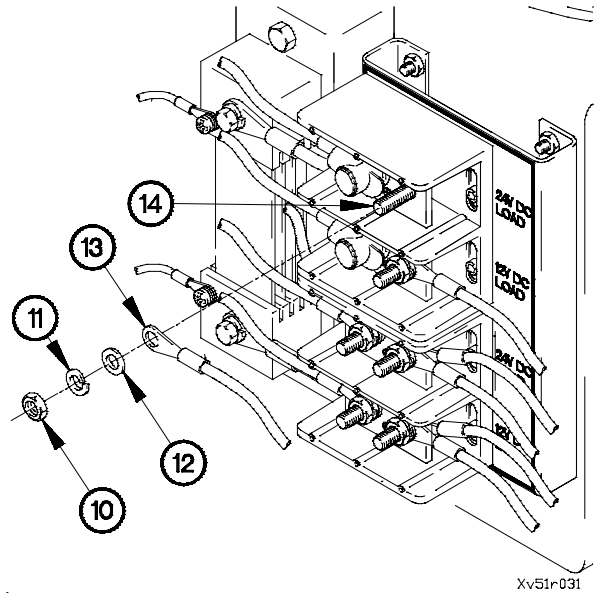
Remove plastic cable ties as required.

- (4) Remove nut (6), lockwasher (7), and terminal lug TL168 (5) from reverse polarity relay 24 VDC LOAD terminal (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 24 vdc load cable (9).



20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD CABLE REPLACEMENT (CONT)

- (6) Remove nut (10), lockwasher (11), washer (12), and terminal lug TL167 (13) from terminal block terminal (14). Discard lockwasher.



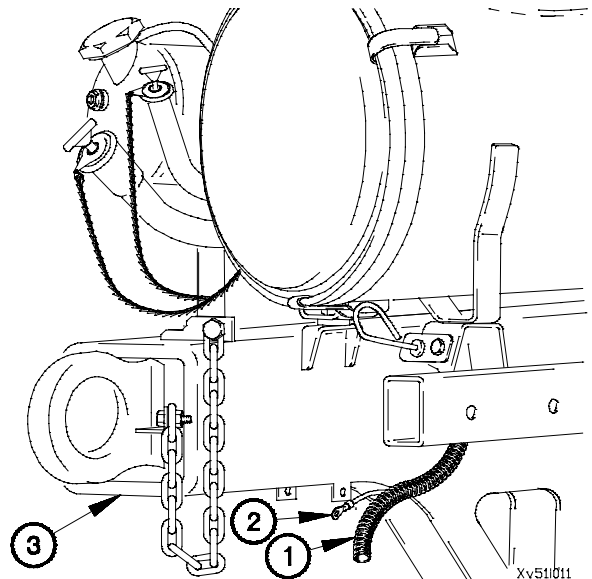
- (7) Remove 200 amp terminal block to reverse polarity relay 24 vdc load cable (9) from rear side of front lifting beam (15).
- (8) Remove convoluted tubing (16) from 200 amp terminal block to reverse polarity relay 24 vdc load cable (9).

b. Installation.

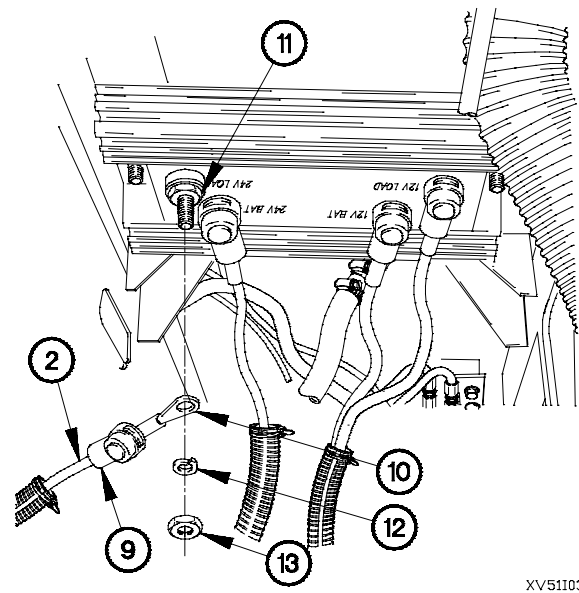
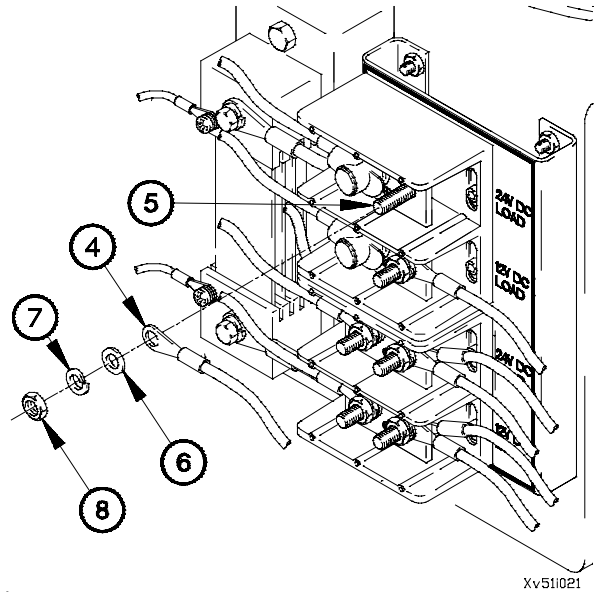
NOTE

Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp terminal block to reverse polarity relay 24 vdc load cable (2).
- (2) Route 200 amp terminal block to reverse polarity relay 24 vdc load cable (2) on rear side of front lifting beam (3).

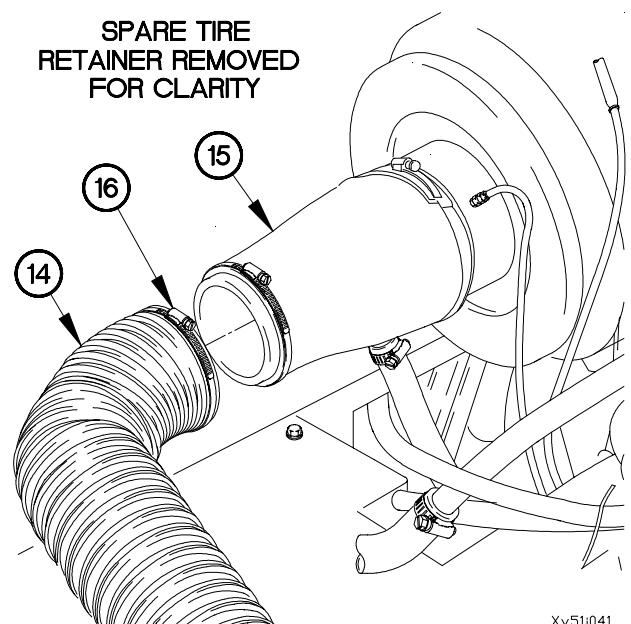


- (3) Position terminal lug TL167 (4) on terminal block terminal (5) with washer (6) lockwasher (7) and nut (8).
- (4) Tighten nut (8) to 15-19 lb-ft (21-25 N-m).



- (5) Install dust boot (9) on 200 amp terminal block to reverse polarity relay 24 vdc load cable (2).
- (6) Position terminal lug TL168 (10) on reverse polarity relay 24 VDC LOAD terminal (11) with lockwasher (12) and nut (13).
- (7) Tighten nut (13) to 27-33 lb-ft (37-45 N-m).
- (8) Position dust boot (9) on terminal lug TL168 (10).

- (9) Position turbocharger intake hose (14) on intake air cleaner boot (15) with clamp (16).
- (10) Tighten clamp (16) to 36-48 lb-in. (4-5 N-m).



**20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD
CABLE REPLACEMENT (CONT)**

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-63. BATTERY TO 200 AMP TERMINAL BLOCK 12 VDC CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Materials/Parts

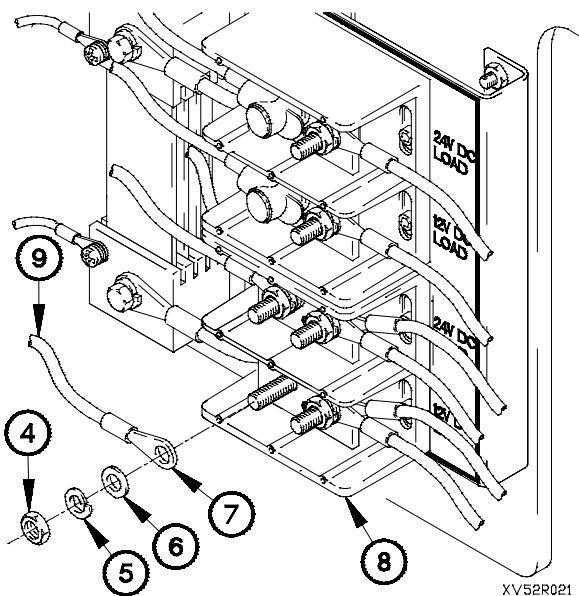
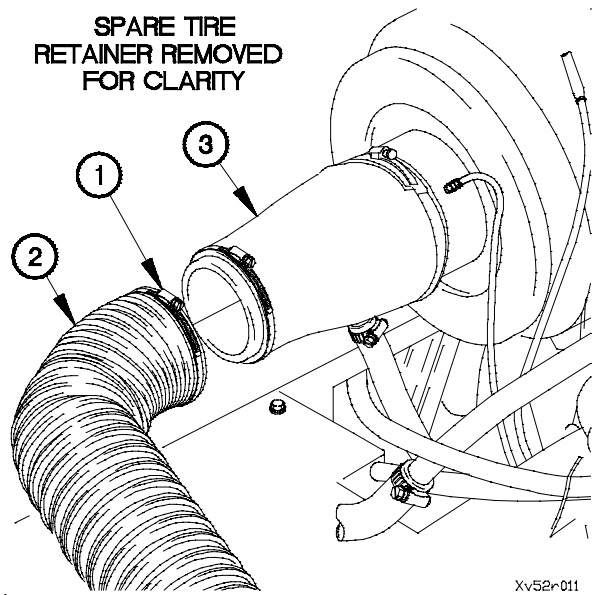
- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 89, Appendix G)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).



- (3) Remove nut (4), lockwasher (5), washer (6), and terminal lug TL47 (7) from terminal block (8). Discard lockwasher.

NOTE

- Note routing of battery to 200 amp terminal block 12 vdc cable prior to removal.
 - Remove plastic cable ties as required.
- (4) Remove battery to 200 amp terminal block 12 vdc cable (9) from vehicle.

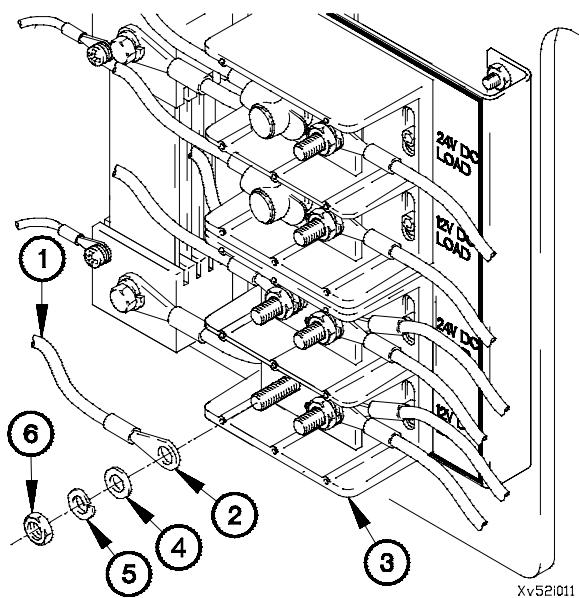
20-63. BATTERY TO 200 AMP TERMINAL BLOCK 12 VDC CABLE ASSEMBLY REPLACEMENT (CONT)

b. Installation.

NOTE

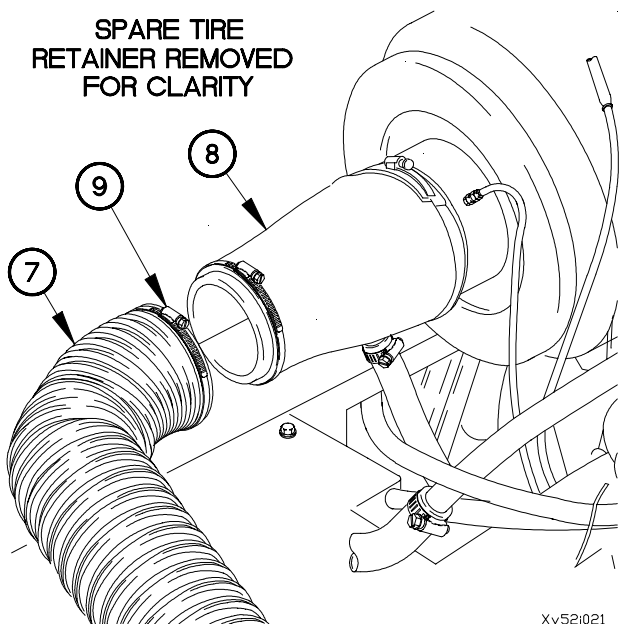
Install plastic cable ties as required.

- (1) Position battery to 200 amp terminal block 12 vdc cable (1) on vehicle.
- (2) Position terminal lug TL47 (2) on terminal block (3) with washer (4), lockwasher (5), and nut (6).
- (3) Tighten nut (6) to 15-19 lb-ft (21-25 N·m).



Xv52i011

**SPARE TIRE
RETAINER REMOVED
FOR CLARITY**



Xv52i021

- (4) Position turbocharger intake hose (7) on intake air cleaner boot (8) with clamp (9).
- (5) Tighten clamp (9) to 36-48 lb-in. (4-5 N·m).

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-64. BATTERY TO 200 AMP TERMINAL BLOCK 24 VDC CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts

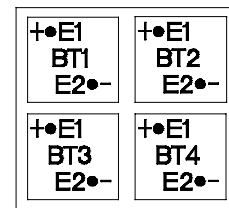
- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 89, Appendix G)

a. Removal.

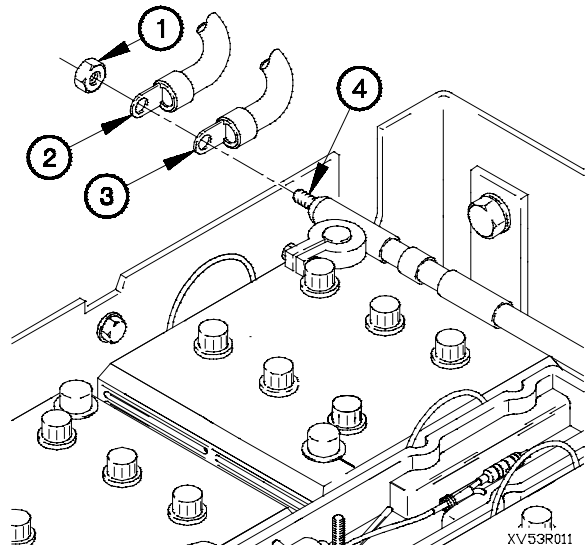
WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Batteries can explode from a spark. Battery acid is harmful to skin and eyes. Always wear eye protection when working with batteries. Failure to comply may result in injury to personnel.

- (1) Remove nut (1) and terminal lugs TL10 (2) and TL39 (3) from battery cable BT1 E1 (4).

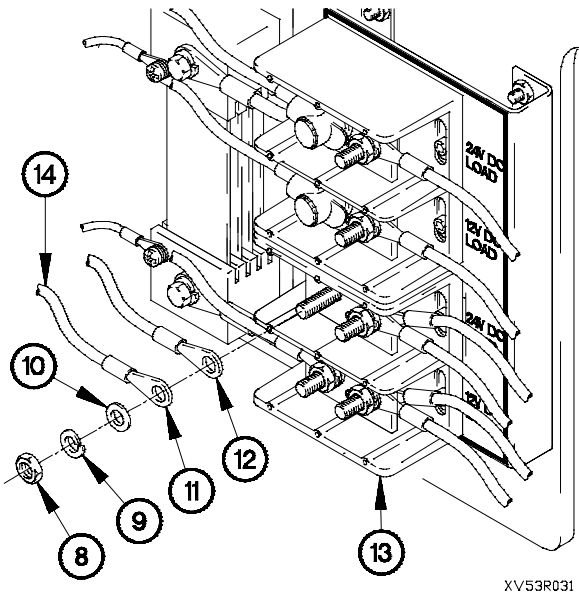
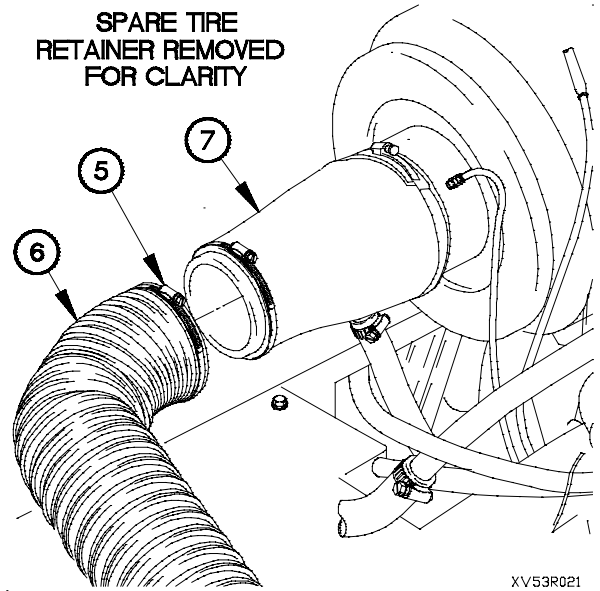


BATTERY INSTALLATION DIAGRAM



20-64. BATTERY TO 200 AMP TERMINAL BLOCK 24 VDC CABLE ASSEMBLY REPLACEMENT (CONT)

- (2) Loosen clamp (5) on turbocharger intake hose (6).
- (3) Remove turbocharger intake hose (6) from intake air cleaner boot (7).



- (4) Remove nut (8), lockwasher (9), washer (10), and two terminal lugs TL37 (11) and TL36 (12) from terminal block (13). Discard lockwasher.

NOTE

Remove plastic cable ties as required.

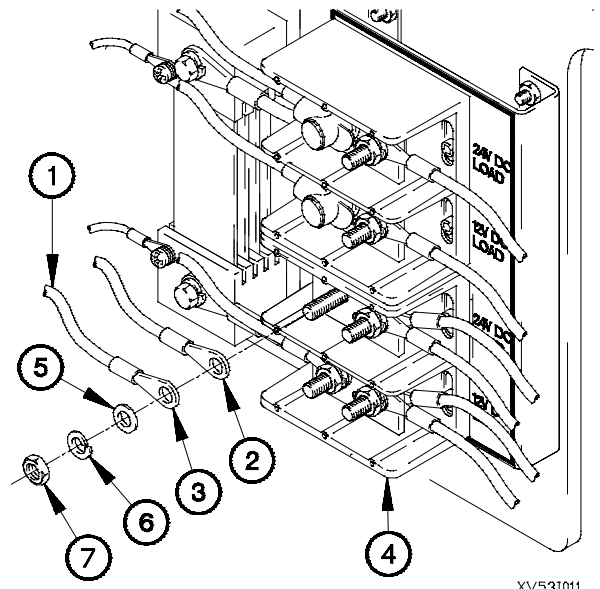
- (5) Remove battery to 200 amp terminal block 24 vdc cable (14) from vehicle.

b. Installation.

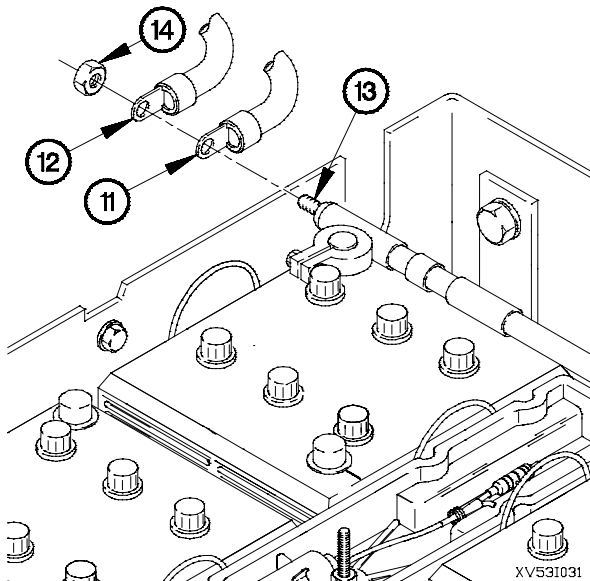
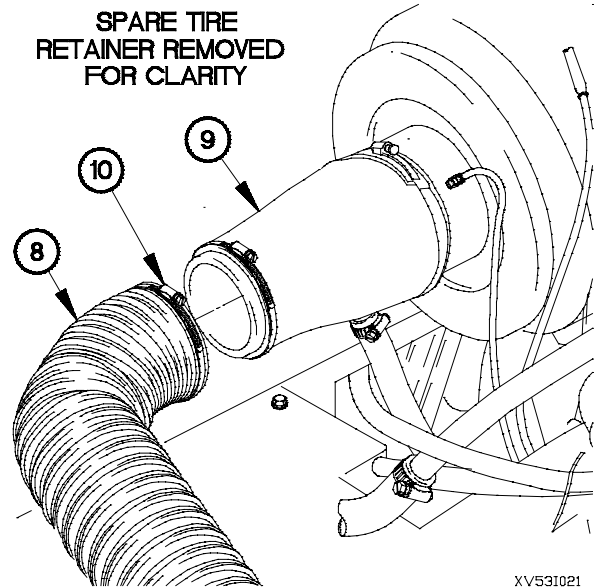
NOTE

Install plastic cable ties as required.

- (1) Position battery to 200 amp terminal block 24 vdc cable assembly (1) on vehicle.
- (2) Position terminal lugs TL36 (2) and TL37 (3) on terminal block (4) with washer (5), lockwasher (6), and nut (7).
- (3) Tighten nut (7) to 15-19 lb-ft (21-25 N·m).



- (4) Position turbocharger intake hose (8) on intake air cleaner boot (9) with clamp (10).
- (5) Tighten clamp (10) to 36-48 lb-in. (4-5 N·m).



- (6) Install terminal lugs TL39 (11) and TL10 (12) on battery cable BT1 E1 (13) with nut (14).

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for 24 vdc (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Batteries disconnected (para 7-48).
- PDP cover removed (para 16-2).
- Spare tire lowered (TM 9-2320-365-10).
- Lower radiator fan shroud removed (para 6-4).

Materials/Parts

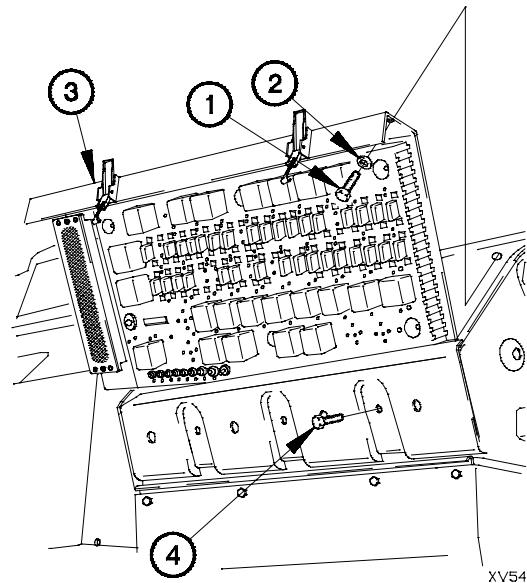
- Ties, Cable, Plastic (Item 76, Appendix D)
- Nut, Self-Locking (2) (Item 137, Appendix G)
- Lockwasher (Item 92, Appendix G)
- Lockwasher (Item 74, Appendix G)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

- (1) Remove three screws (1) and washers (2) from PDP (3).
- (2) Remove three screws (4) from PDP (3).
- (3) Lift PDP (3) outward to gain access.



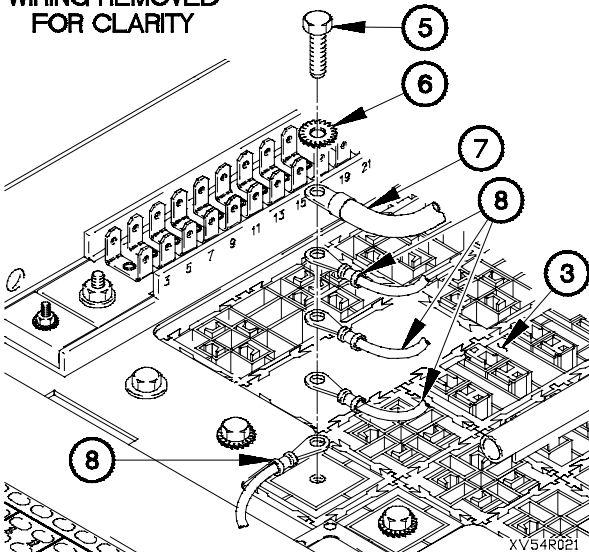
XV54R011

NOTE

Remove plastic cable ties as required.

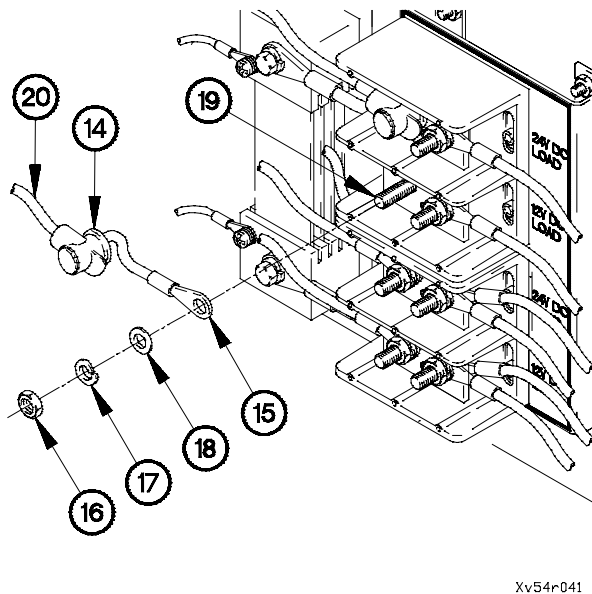
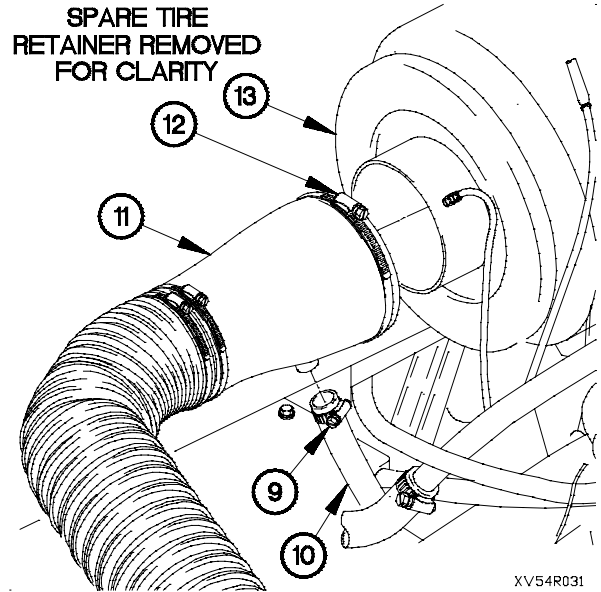
- (4) Remove screw (5), lockwasher (6), terminal lug TL41 (7), and four terminal lugs (8) from PDP (3). Discard lockwasher.
- (5) Position four terminal lugs (8) on PDP (3) with screw (5).

WIRING REMOVED FOR CLARITY



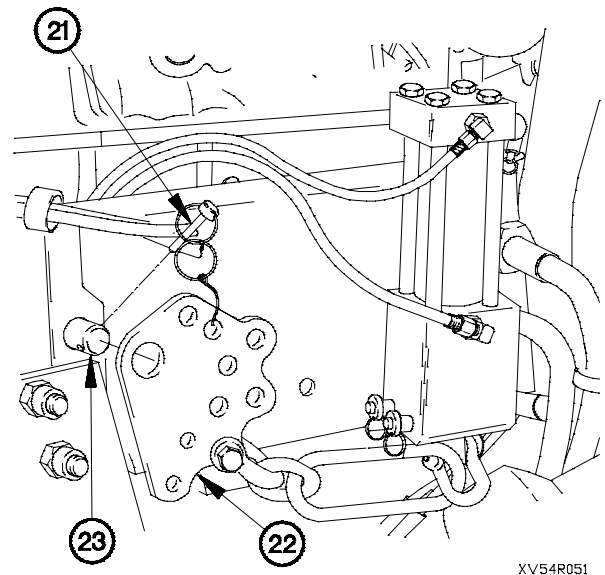
XV54R021

- (6) Loosen clamp (9) on air compressor intake hose (10).
- (7) Remove air compressor intake hose (10) from intake air cleaner boot (11).
- (8) Loosen clamp (12) on intake air cleaner boot (11).
- (9) Remove intake air cleaner boot (11) from intake air cleaner housing (13).



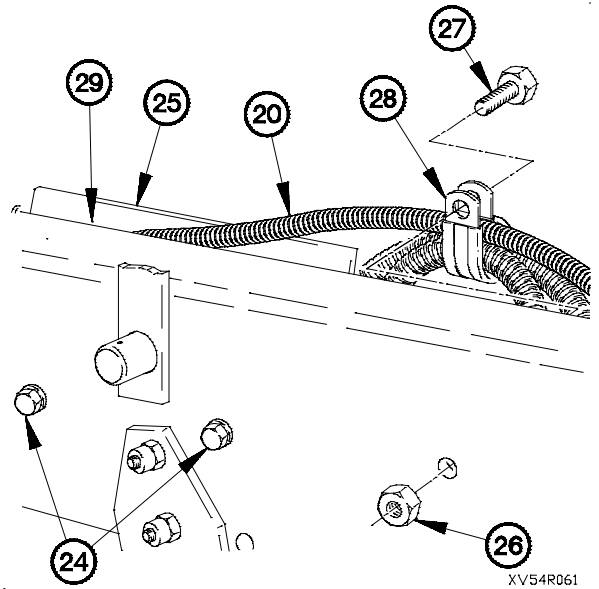
- (10) Lift dust boot (14) on terminal lug TL80 (15).
- (11) Remove nut (16), lockwasher (17), washer (18) and terminal lug TL80 (15) from terminal block terminal (19). Discard lockwasher.
- (12) Remove dust boot (14) from 200 amp terminal block to PDP 12 vdc cable (20).

- (13) Remove spring pin (21) and suspension compression plate (22) from suspension compression plate stud (23).

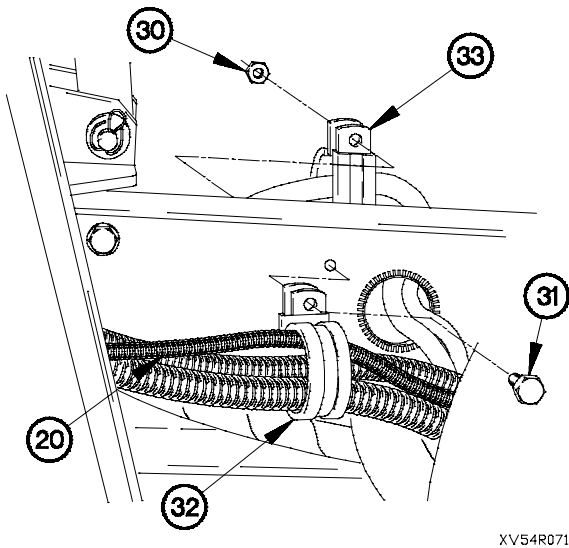


20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT (CONT)

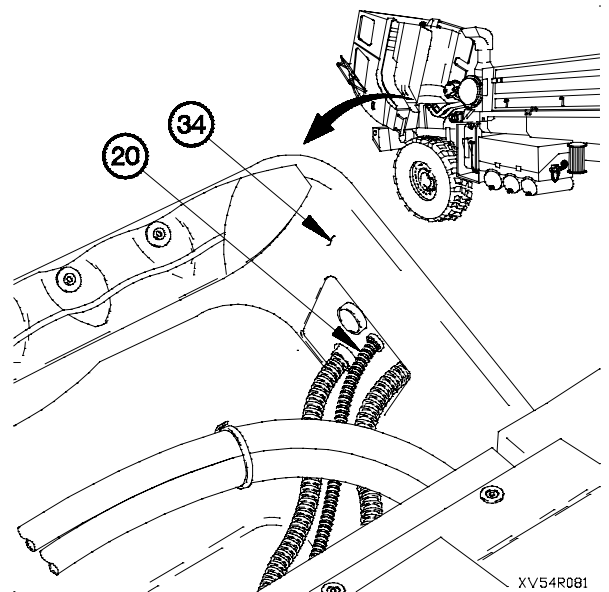
- (14) Loosen two screws (24) in heat shield assembly (25).
- (15) Remove 200 amp terminal block to PDP 12 vdc cable (20) from heat shield assembly (25).
- (16) Remove self-locking nut (26), screw (27), clamp (28), and 200 amp terminal block to PDP 12 vdc cable (20) from frame rail (29). Discard self-locking nut.
- (17) Remove 200 amp terminal block to PDP 12 vdc cable (20) from clamp (28).



- (18) Remove self-locking nut (30) and screw (31) from clamps (32 and 33). Discard self-locking nut.
- (19) Remove 200 amp terminal block to PDP 12 vdc cable (20) from clamp (32).



- (20) Remove 200 amp terminal block to PDP 12 vdc cable (20) from cab (34).

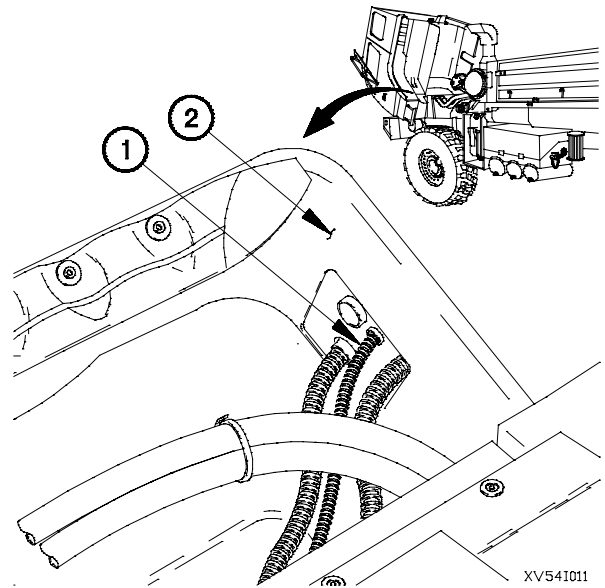


b. Installation.

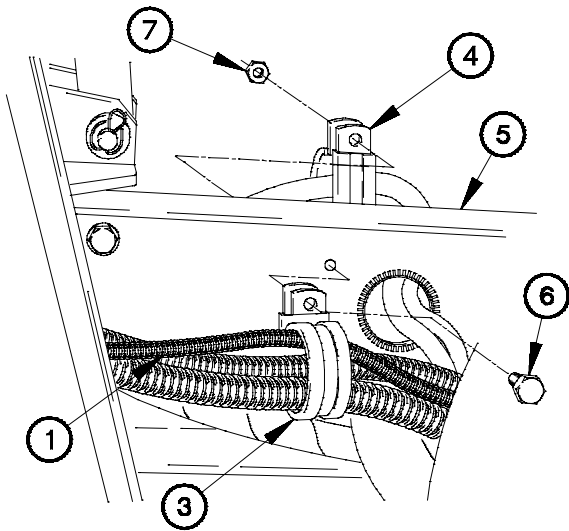
NOTE

Install plastic cable ties as required.

- (1) Route 200 amp terminal block to PDP 12 vdc cable (1) through bottom of cab (2).



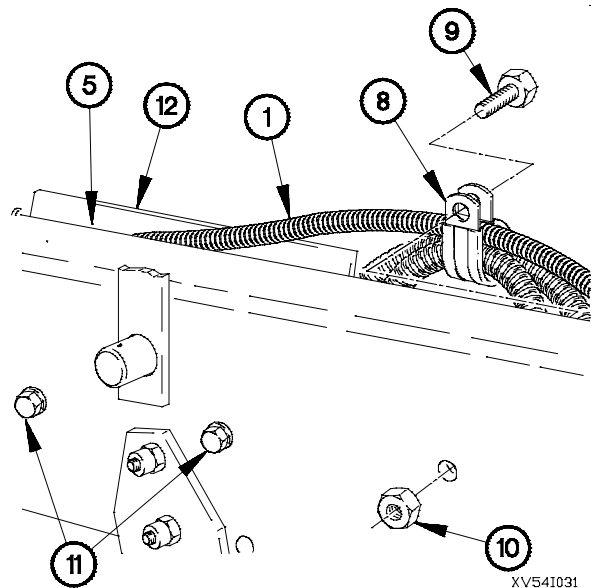
XV541011



XV541021

- (2) Position 200 amp terminal block to PDP 12 vdc cable (1) in clamp (3).
- (3) Install clamps (3 and 4) on frame rail (5) with screw (6) and self-locking nut (7).

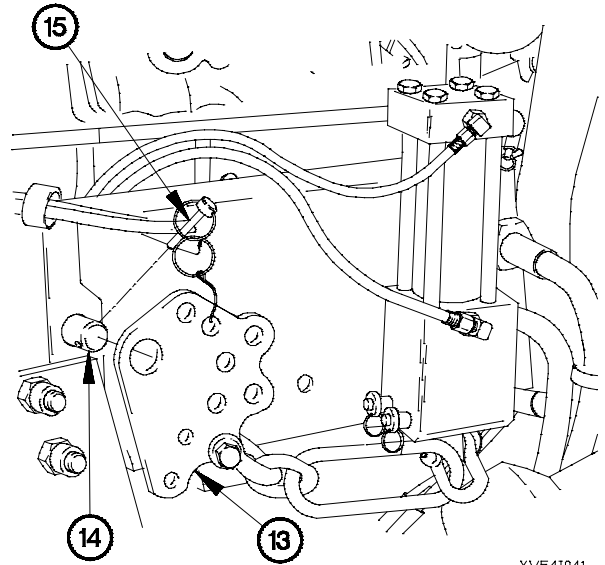
- (4) Position 200 amp terminal block to PDP 12 vdc cable (1) in clamp (8).
- (5) Position clamp (8) on frame rail (5) with screw (9), and self-locking nut (10).
- (6) Tighten self-locking nut (10) to 84-108 lb-in. (10-12 N·m).
- (7) Tighten two screws (11) in heat shield assembly (12).



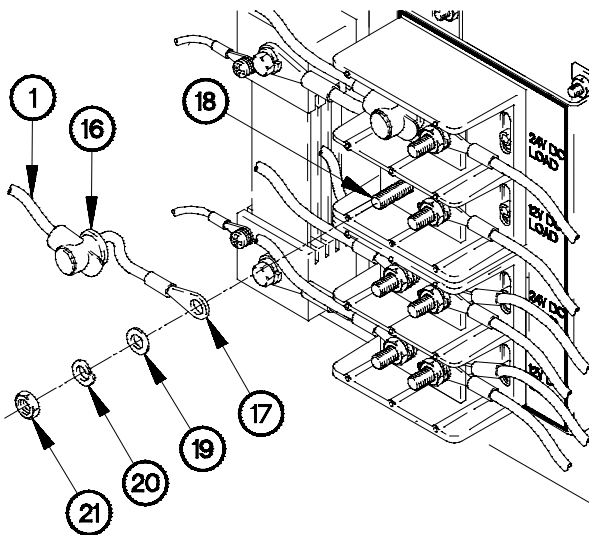
XV541031

20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT (CONT)

- (8) Install suspension compression plate (13) on suspension compression plate stud (14) with spring pin (15).



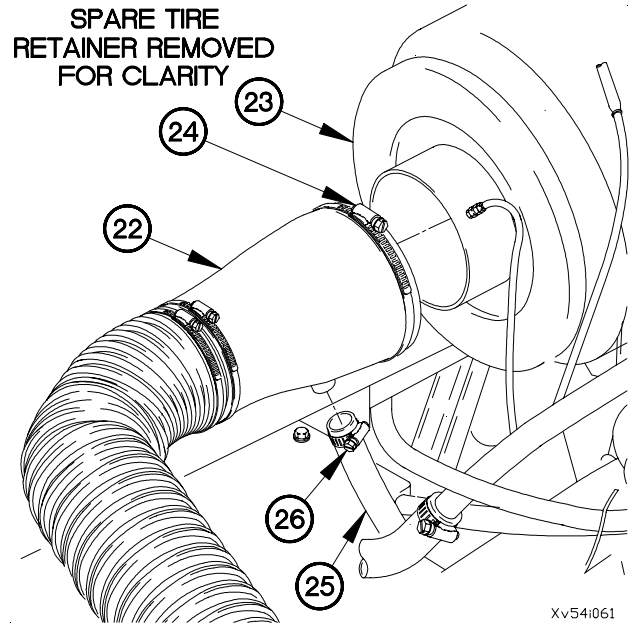
XV541041



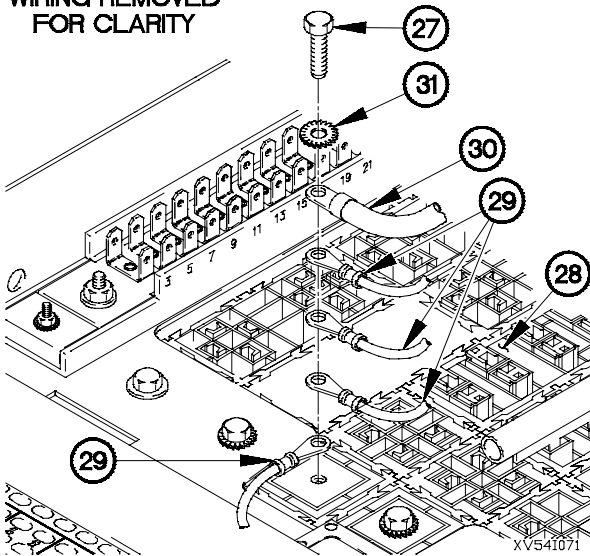
Xv541051

- (9) Install dust boot (16) on 200 amp terminal block to PDP 12 vdc cable (1).
- (10) Position terminal lug TL80 (17) on terminal block terminal (18) with washer (19), lockwasher (20), and nut (21).
- (11) Tighten nut (21) to 15-19 lb-ft (21-25 N·m).
- (12) Position dust boot (16) on terminal lug TL80 (17).

- (13) Position intake air cleaner boot (22) on intake air cleaner housing (23) with clamp (24).
- (14) Position air compressor intake hose (25) on intake air cleaner boot (22) with clamp (26).
- (15) Tighten clamps (24 and 26) to 36-48 lb-in. (4-5 N·m).
- (16) Lower cab (TM 9-2320-365-10).

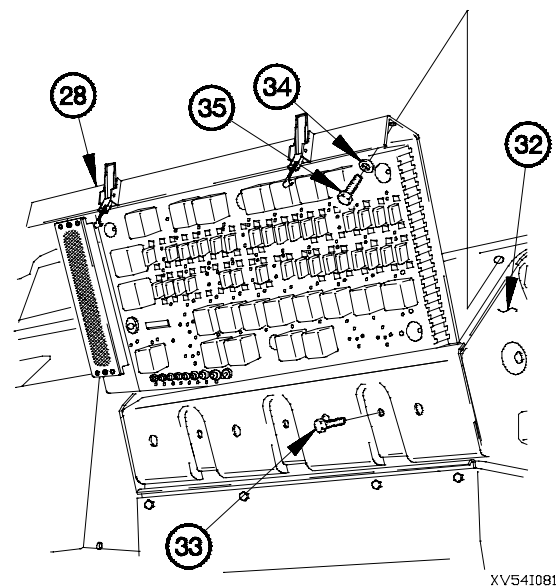


WIRING REMOVED
FOR CLARITY



- (17) Remove screw (27) from PDP (28).
- (18) Position four terminal lugs (29) and terminal lug TL41 (30) on PDP (28) with lockwasher (31) and screw (27).
- (19) Tighten screw (27) to 35-45 lb-in. (4-5 N·m).

- (20) Install PDP (28) on dashboard (32) with three screws (33).
- (21) Install three washers (34) and screws (35) in PDP (28).



**20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC
CABLE REPLACEMENT (CONT)**

c. Follow-On Maintenance.

- (1) Install PDP cover (para 16-2).
- (2) Install lower radiator fan shroud (para 6-4).
- (3) Connect batteries (para 7-48).
- (4) Raise spare tire (TM 9-2320-365-10).
- (5) Start engine (TM 9-2320-365-10).
- (6) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (7) Shut down engine (TM 9-2320-365-10).

End of Task.

20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC BATTERY CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Tools and Special Tools

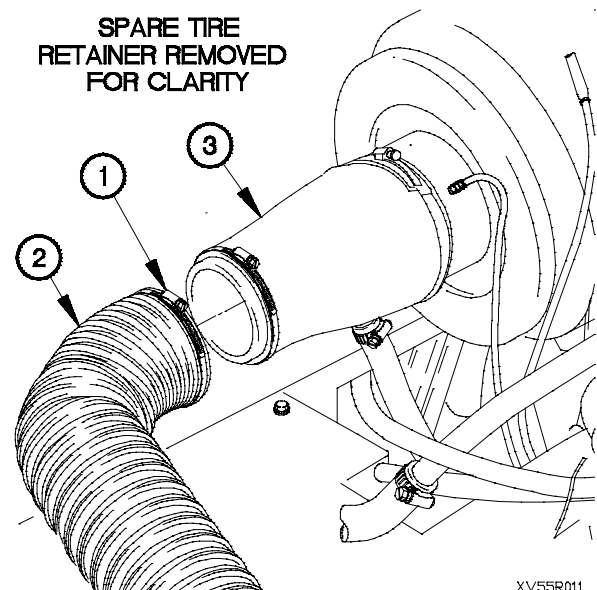
- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts

- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 92, Appendix G)
- Lockwasher (Item 65, Appendix G)

a. Removal

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).



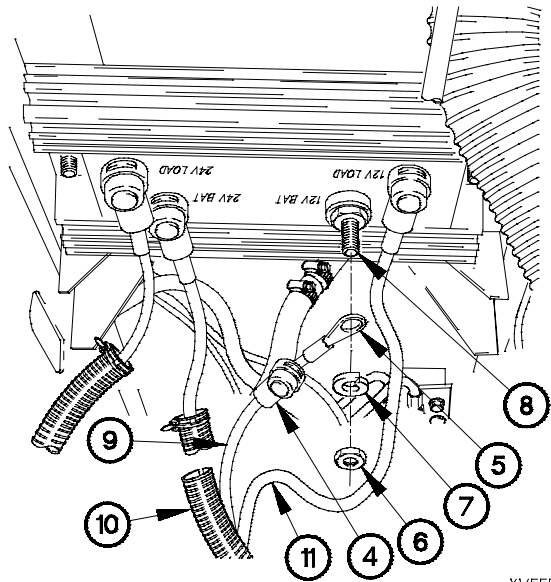
20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC BATTERY CABLE REPLACEMENT (CONT)

(3) Lift dust boot (4) on terminal lug TL173 (5).

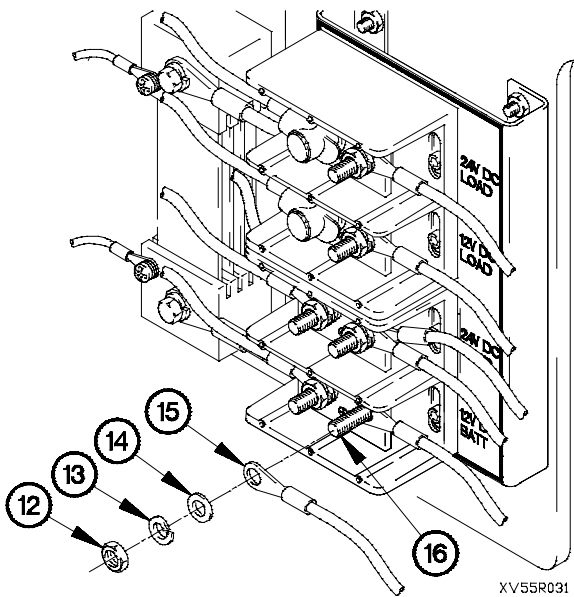
NOTE

Remove plastic cable ties as required.

- (4) Remove nut (6), lockwasher (7), and terminal lug TL173 (5) from reverse polarity relay 12 VDC BAT terminal (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9).
- (6) Remove convoluted tubing (10) from 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9) and 200 amp terminal block to reverse polarity relay 12 vdc load cable (11).



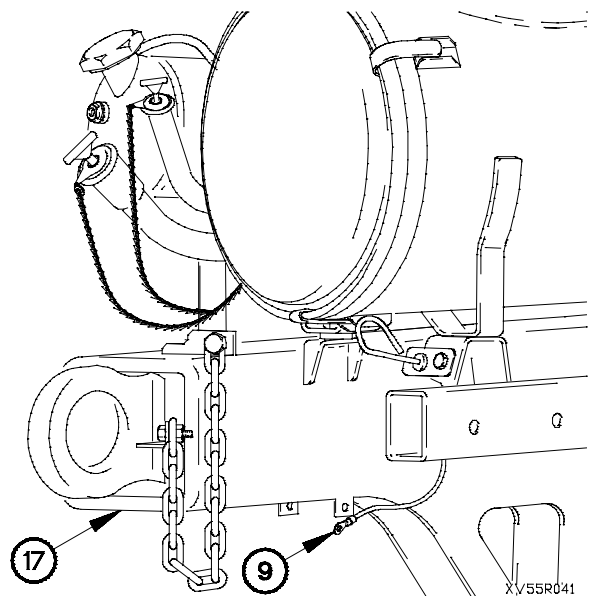
XV55R021



XV55R031

- (7) Remove nut (12), lockwasher (13), washer (14), and terminal lug TL171 (15) from terminal block terminal (16). Discard lockwasher.

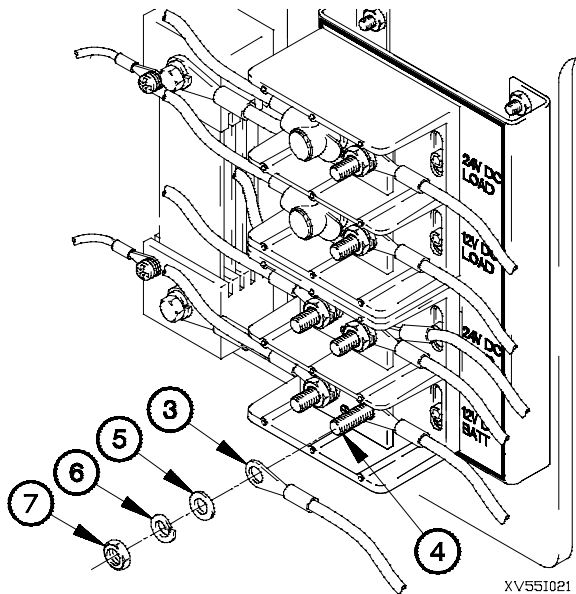
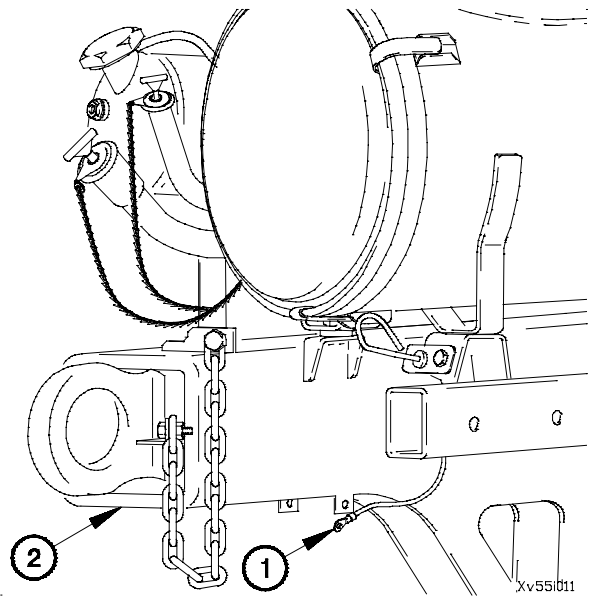
- (8) Remove 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9) from rear side of front lifting beam (17).



XV55R041

b. Installation.

- (1) Route 200 amp terminal block to reverse polarity relay 12 vdc battery cable (1) to rear side of front lifting beam (2).

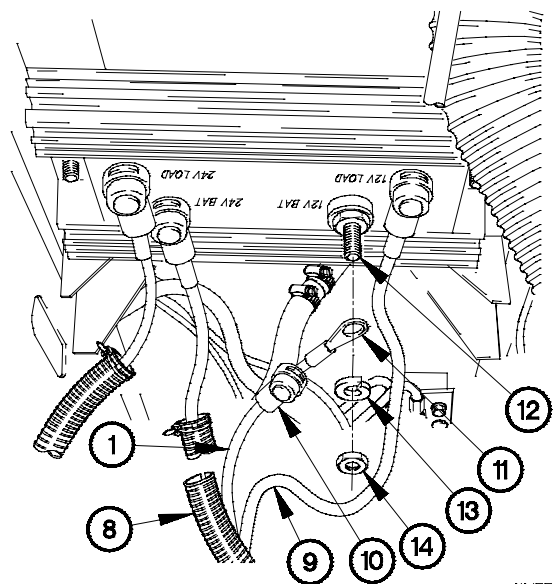


- (2) Position terminal lug TL171 (3) on terminal block terminal (4) with washer (5), lockwasher (6), and nut (7).
- (3) Tighten nut (7) to 15-19 lb-ft (21-25 N-m).

NOTE

Install plastic cable ties as required.

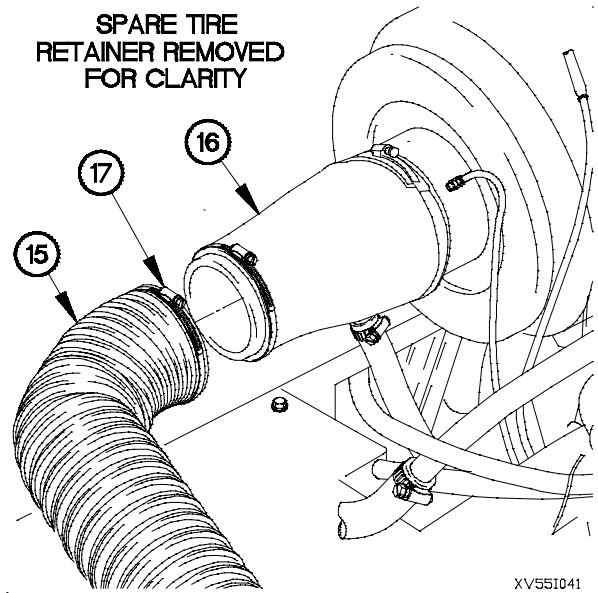
- (4) Install convoluted tubing (8) on 200 amp terminal block to reverse polarity relay 12 vdc battery cable (1) and 200 amp terminal block to reverse polarity relay 12 vdc load cable (9).
- (5) Install dust boot (10) on 200 amp terminal block to reverse polarity relay 12 vdc battery cable (1).
- (6) Position terminal lug TL173 (11) on reverse polarity relay 12 VDC BAT terminal (12) with lockwasher (13), and nut (14).
- (7) Tighten nut (14) to 120 lb-in. (14 N-m).
- (8) Position dust boot (10) on terminal lug TL173 (11).



XV551031

**20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC
BATTERY CABLE REPLACEMENT (CONT)**

- (9) Position turbocharger intake hose (15) on intake air cleaner boot (16) with clamp (17).
- (10) Tighten clamp (17) to 36-48 lb-in. (4-5 N·m).



c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Materials/Parts

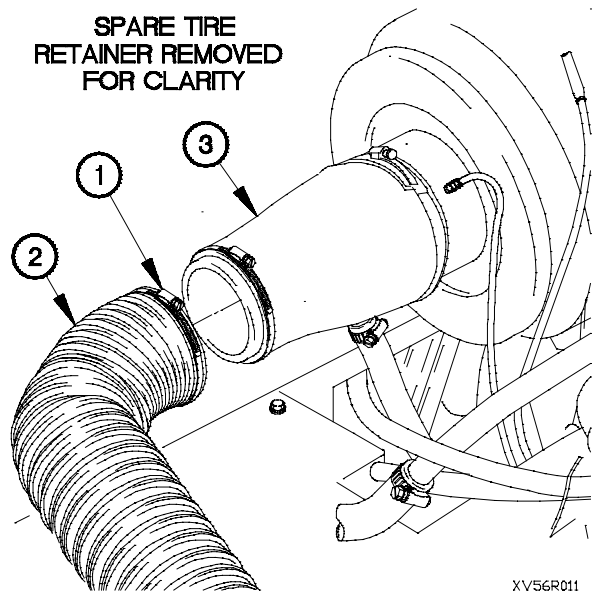
- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (Item 92, Appendix G)
- Lockwasher (Item 66, Appendix G)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).

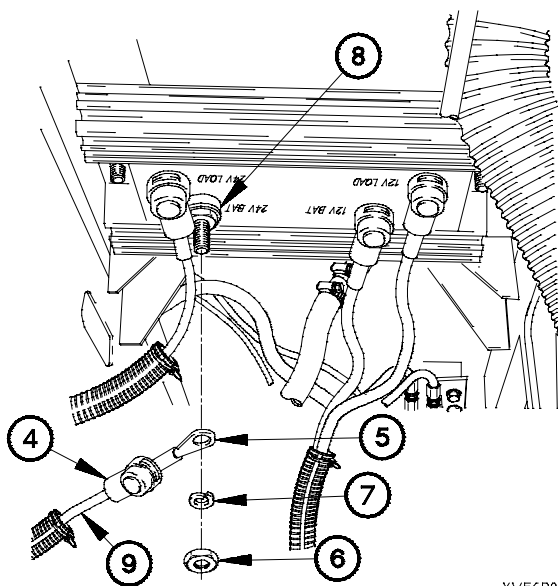


- (3) Lift dust boot (4) on terminal lug TL169 (5).

NOTE

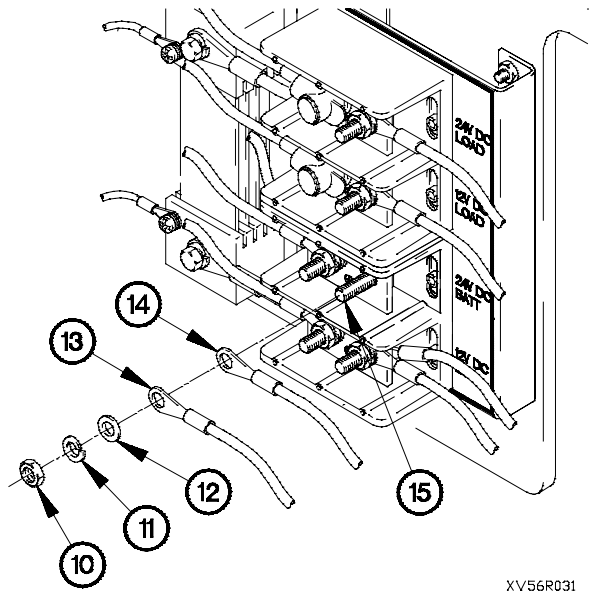
Remove plastic cable ties as required.

- (4) Remove nut (6), lockwasher (7), and terminal lug TL169 (5) from reverse polarity relay 24 VDC BAT terminal (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 24 vdc battery cable (9).

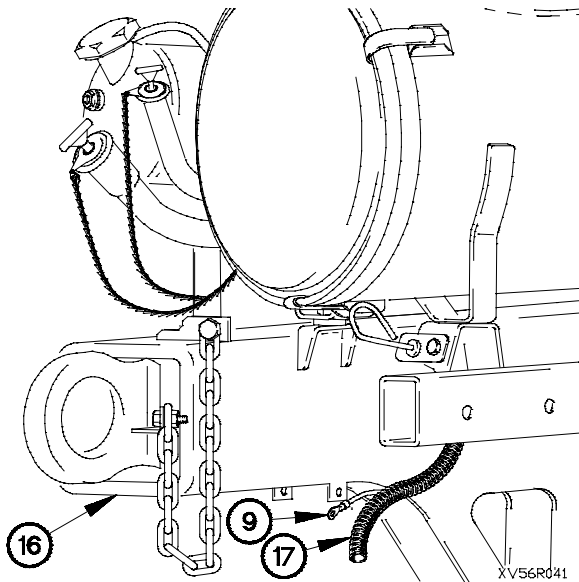


20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY CABLE REPLACEMENT (CONT)

- (6) Remove nut (10), lockwasher (11), washer (12), and terminal lugs TL1 (13) and TL166 (14) from terminal block terminal (15). Discard lockwasher.



- (7) Remove 200 amp terminal block to reverse polarity relay 24 vdc battery cable (9) from rear side of front lifting beam (16).
- (8) Remove convoluted tubing (17) from 200 amp terminal block to reverse polarity relay 24 vdc battery cable (9).

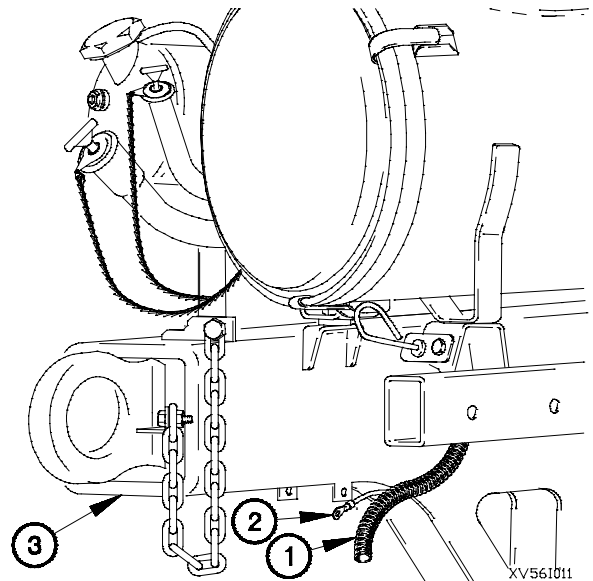


b. Installation.

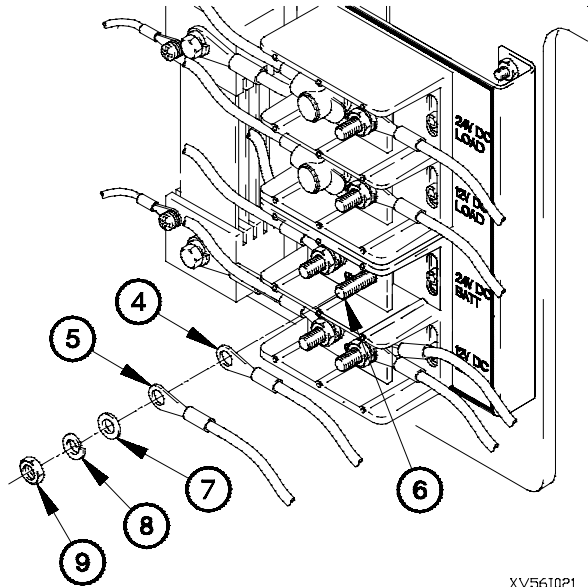
NOTE

Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp terminal block to reverse polarity relay 24 vdc battery cable (2).
- (2) Position 200 amp terminal block to reverse polarity relay 24 vdc battery cable (2) on rear side of front lifting beam (3).

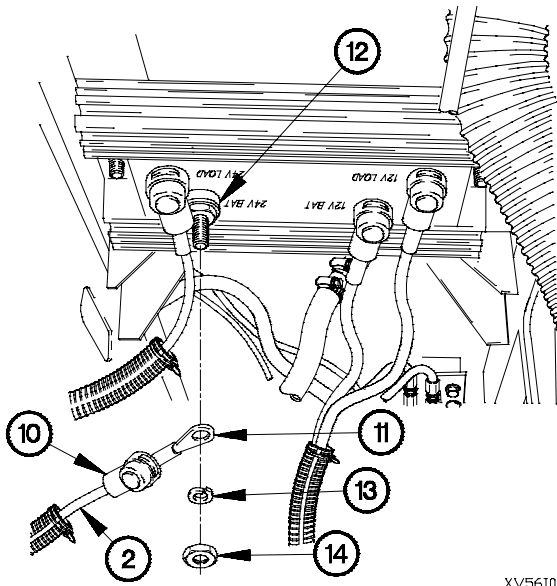


- (3) Position terminal lugs TL166 (4) and TL1 (5) on terminal block terminal (6) with washer (7), lockwasher (8), and nut (9).
- (4) Tighten nut (9) to 15-19 lb-ft (21-25 N-m).



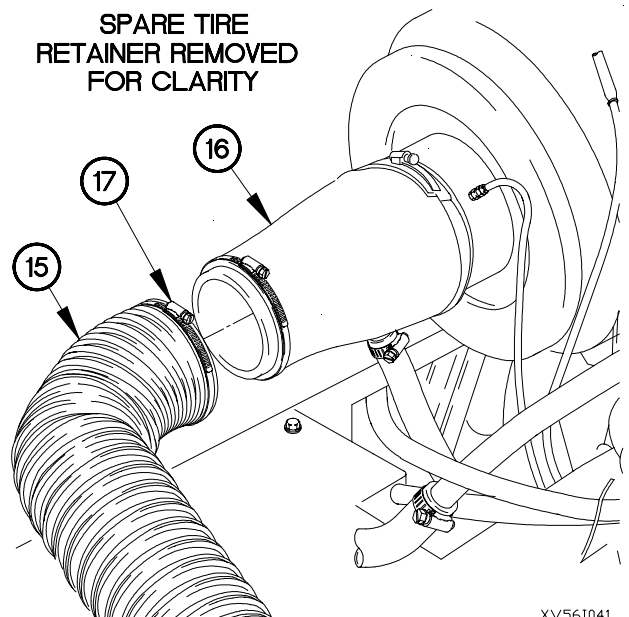
XV561021

- (5) Install dust boot (10) on 200 amp terminal block to reverse polarity relay 24 vdc battery cable (2).
- (6) Position terminal lug TL169 (11) on reverse polarity relay 24 VDC BAT terminal (12) with lockwasher (13) and nut (14).
- (7) Tighten nut (14) to 30 lb-ft (41 N-m).
- (8) Position dust boot (10) on terminal lug TL169 (11).



XV561031

- (9) Position turbocharger intake hose (15) on intake air cleaner boot (16) with clamp (17).
- (10) Tighten clamp (17) to 36-48 lb-in. (4-5 N-m).



XV561041

**20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY
CABLE REPLACEMENT (CONT)**

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Batteries disconnected (para 7-48).
- PDP cover removed (para 16-2).
- Spare tire lowered (TM 9-2320-365-10).
- Bottom radiator fan shroud removed (para 6-4).
- Cab lowered (TM 9-2320-365-10).

Tools and Special Tools

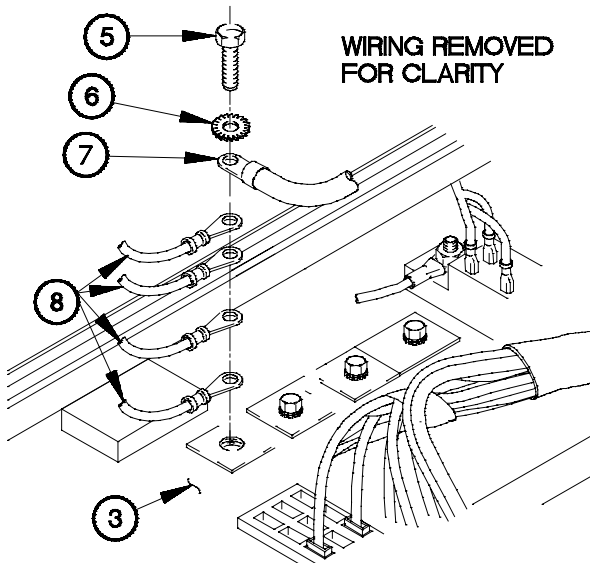
- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts

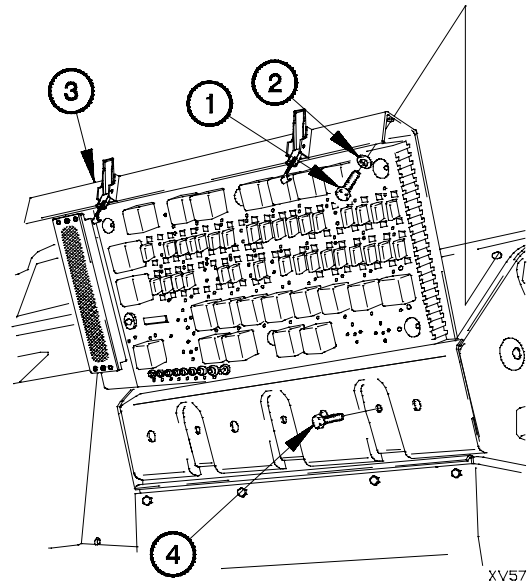
- Ties, Cable, Plastic (Item 76, Appendix D)
- Nut, Self-Locking (2) (Item 133, Appendix G)
- Lockwasher (Item 89, Appendix G)
- Lockwasher (Item 70, Appendix G)

a. Removal.

- (1) Remove three screws (1) and washers (2) from PDP (3).
- (2) Remove three screws (4) from PDP (3).
- (3) Lift PDP (3) outward to gain access.



XV57R021



XV57R011

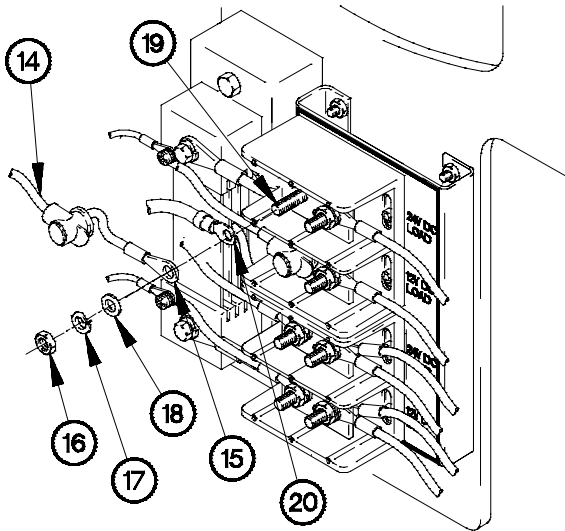
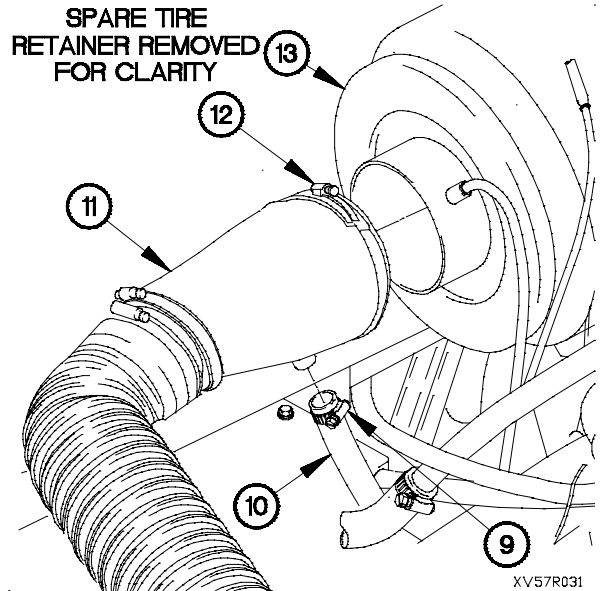
NOTE

Remove plastic cable ties as required.

- (4) Remove screw (5), lockwasher (6), terminal lug TL42 (7), and four terminal lugs (8) from PDP (3). Discard lockwasher.
- (5) Position four terminal lugs (8) on PDP (3) with screw (5).

20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT (CONT)

- (6) Loosen clamp (9) on air compressor intake hose (10).
- (7) Remove air compressor intake hose (10) from intake air cleaner boot (11).
- (8) Loosen clamp (12) on intake air cleaner boot (11).
- (9) Remove intake air cleaner boot (11) from intake air cleaner housing (13).



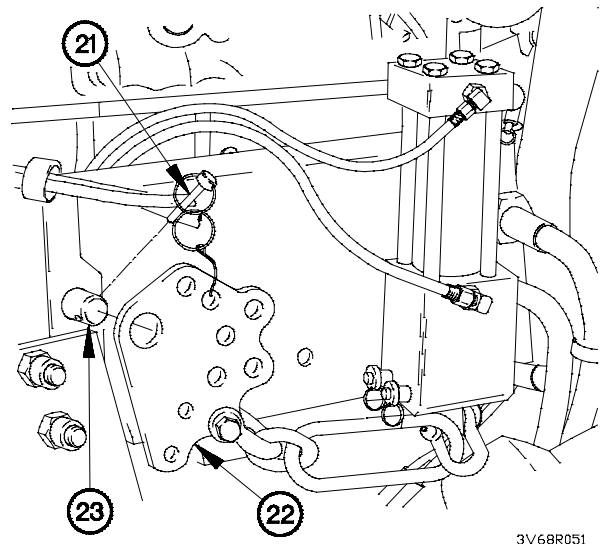
- (10) Lift dust boot (14) on terminal lug TL44 (15).
- (11) Remove nut (16), lockwasher (17), washer (18), and terminal lug TL44 (15) from terminal block terminal (19). Discard lockwasher.

NOTE

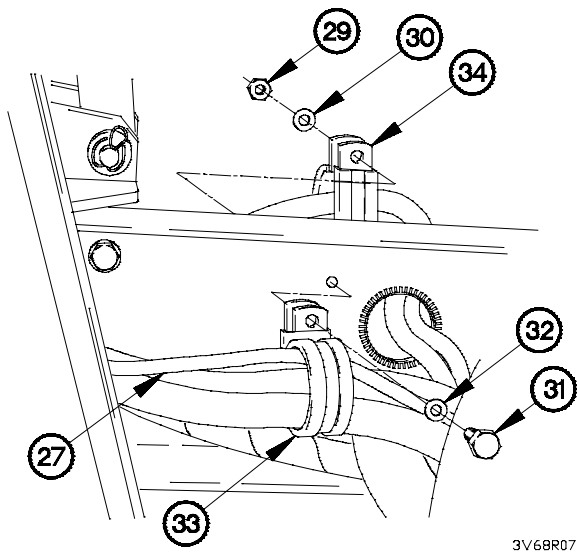
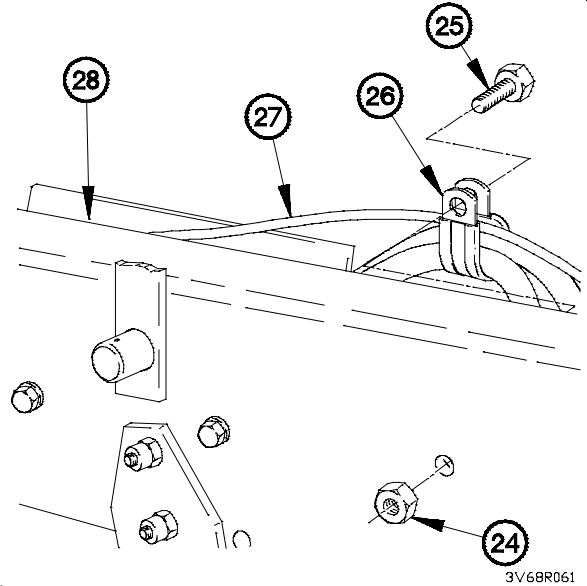
Perform step (12) on M1079.

- (12) Remove terminal lug TL100 (20) from terminal block terminal (19).

- (13) Raise cab (TM 9-2320-365-10).
- (14) Remove spring pin (21) and suspension compression plate (22) from suspension compression plate stud (23).

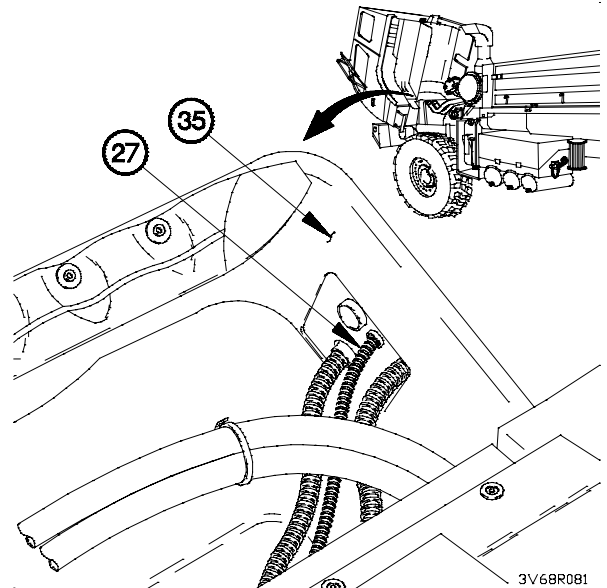


- (15) Remove self-locking nut (24), screw (25), clamp (26), and 200 amp terminal block to PDP 24 vdc cable (27) from frame rail (28).
- (16) Remove 200 amp terminal block to PDP 24 vdc cable (27) from clamp (26).



- (17) Remove self-locking nut (29), washer (30), screw (31), and washer (32) from clamps (33 and 34). Discard self-locking nut.
- (18) Remove 200 amp terminal block to PDP 24 vdc cable (27) from clamp (33).

- (19) Remove 200 amp terminal block to PDP 24 vdc cable (27) from cab (35).



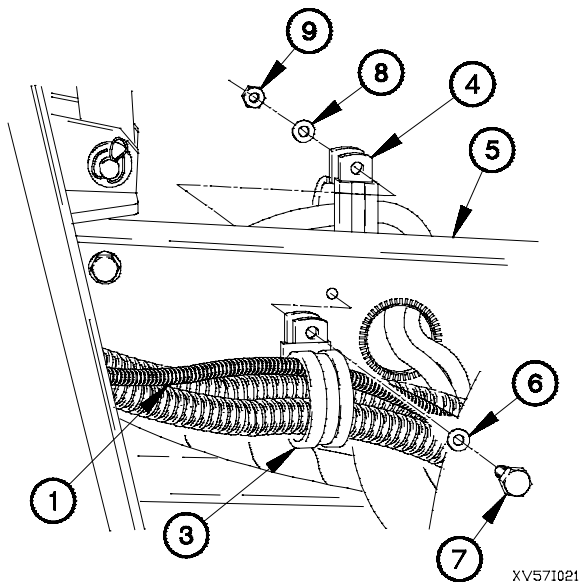
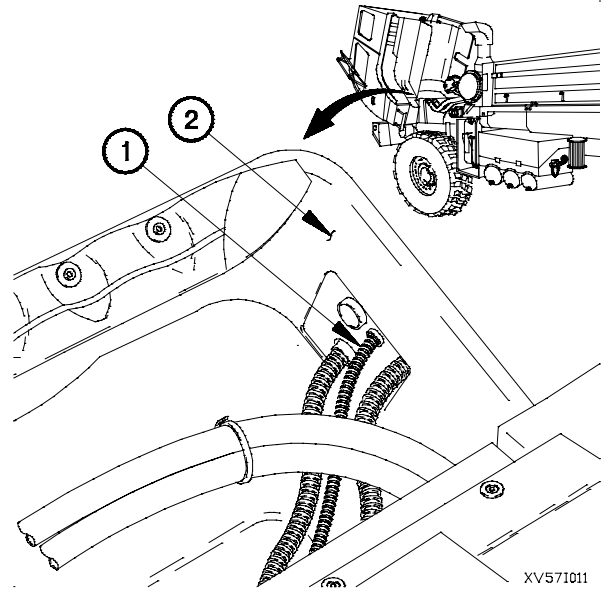
20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT (CONT)

b. Installation.

NOTE

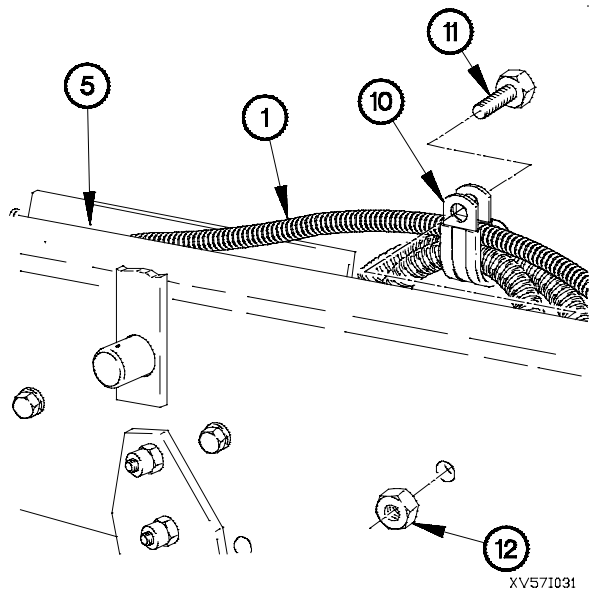
Install plastic cable ties as required.

- (1) Route 200 amp terminal block to PDP 24 vdc cable (1) through bottom of cab (2).

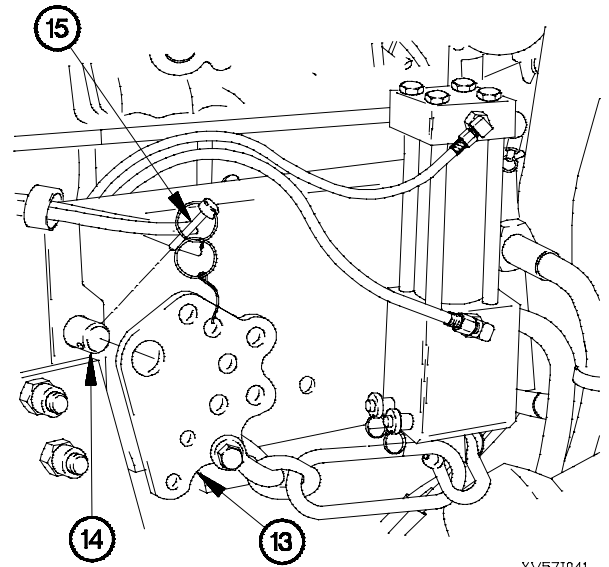


- (2) Position 200 amp terminal block to PDP 24 vdc cable (1) in clamp (3).
- (3) Position clamps (3 and 4) on frame rail (5) with washer (6), screw (7), washer (8), and self-locking nut (9).
- (4) Tighten self-locking nut (9) to 97-120 lb-in. (11-14 N·m).

- (5) Position 200 amp terminal block to PDP 24 vdc cable (1) in clamp (10).
- (6) Position clamp (10) on frame rail (5) with screw (11) and self-locking nut (12).
- (7) Tighten self-locking nut (12) to 97-120 lb-in. (11-14 N·m).



- (8) Install suspension compression plate (13) on suspension compression plate stud (14) with spring pin (15).

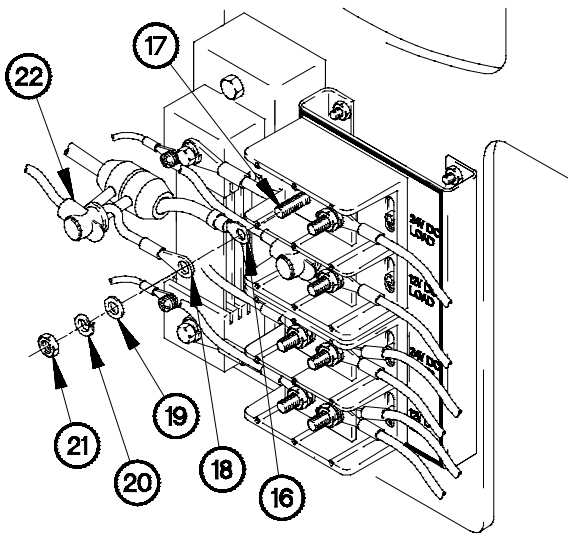


XV571041

NOTE

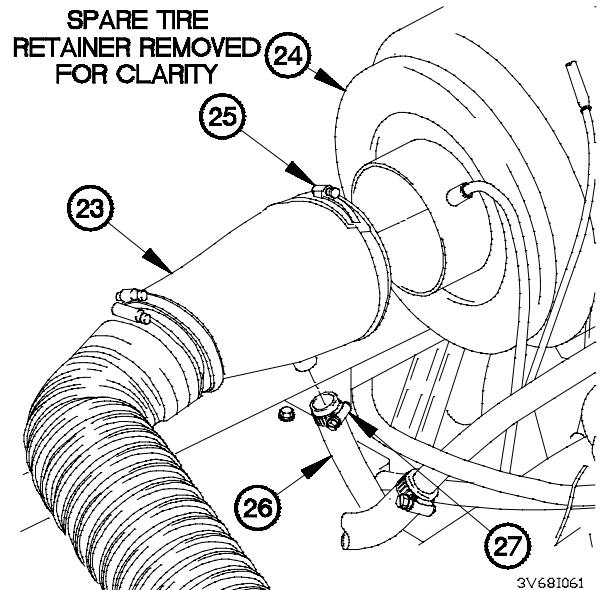
Perform step (9) on M1089.

- (9) Position terminal lug TL100 (16) on terminal block terminal (17).
- (10) Position terminal lug TL44 (18) on terminal block terminal (17) with washer (19), lockwasher (20) and nut (21).
- (11) Tighten nut (21) to 15-19 lb-ft (21-25 N·m).
- (12) Position dust boot (22) on terminal lug TL44 (18).



3V681051

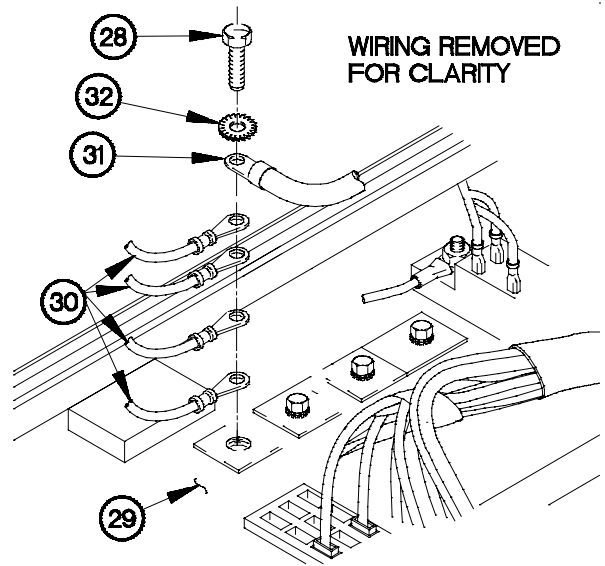
- (13) Position intake air cleaner boot (23) on intake air cleaner housing (24) with clamp (25).
- (14) Position air compressor intake hose (26) on intake air cleaner boot (23) with clamp (27).
- (15) Tighten clamps (25 and 27) to 36-48 lb-in. (4-5 N·m).
- (16) Lower cab (TM 9-2320-365-10).



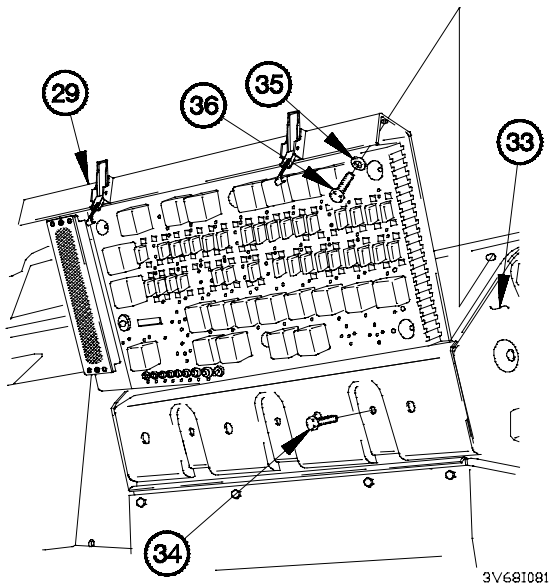
3V681061

20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT (CONT)

- (17) Remove screw (28) from PDP (29).
- (18) Position four terminal lugs (30) and terminal lug TL42 (31) on PDP (29) with lockwasher (32) and screw (28).
- (19) Tighten screw (28) to 35-45 lb-in. (4-5 N-m).



3V681071



3V681081

- (20) Install PDP (29) on dashboard (33) with three screws (34).
- (21) Install three washers (35) and screws (36) in PDP (29).

c. Follow-On Maintenance.

- (1) Raise cab (TM 9-2320-365-10).
- (2) Install bottom radiator fan shroud (para 6-4).
- (3) Raise spare tire (TM 9-2320-365-10).
- (4) Install PDP cover (para 16-2).
- (5) Connect batteries (para 7-48).
- (6) Start engine (TM 9-2320-365-10).
- (7) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (8) Shut down engine (TM 9-2320-365-10).

End of Task.

20-69. 200 AMP TERMINAL BLOCK REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Spare tire lowered (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Socket Set, Socket Wrench (Item 34, Appendix C)

Materials/Parts

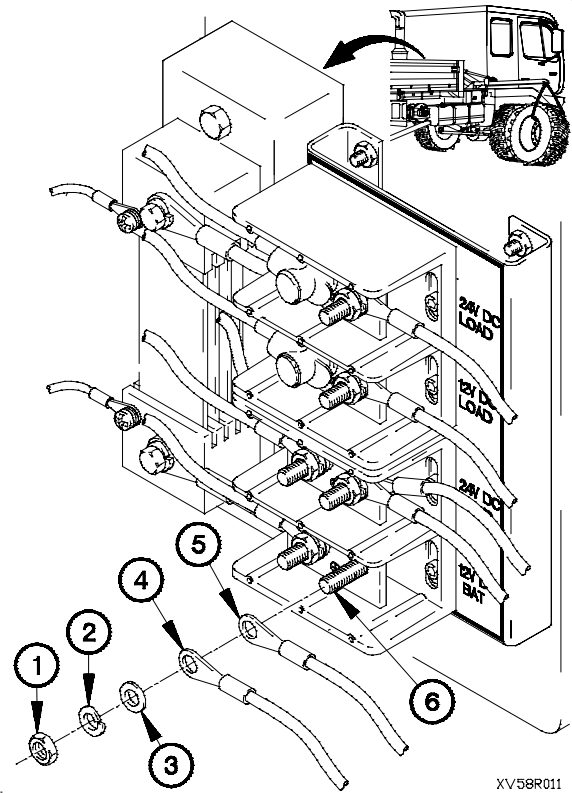
- Ties, Cable, Plastic (Item 76, Appendix D)
- Lockwasher (8) (Item 89, Appendix G)
- Nut, Self-Locking (8) (Item 143, Appendix G)

a. Removal.

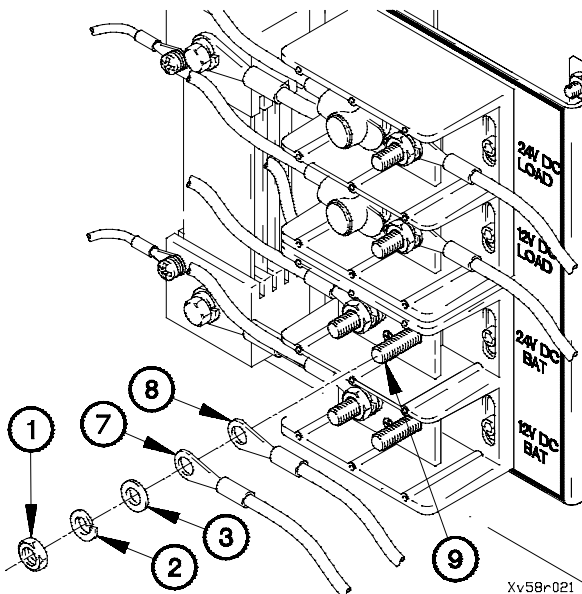
NOTE

- Tag wires and connection points prior to disconnecting.
- Remove plastic cable ties as required.

- (1) Remove nut (1), lockwasher (2), washer (3), and terminal lugs TL171 (4) and TL61 (5) from terminal block terminal (6). Discard lockwasher.



XV58R011

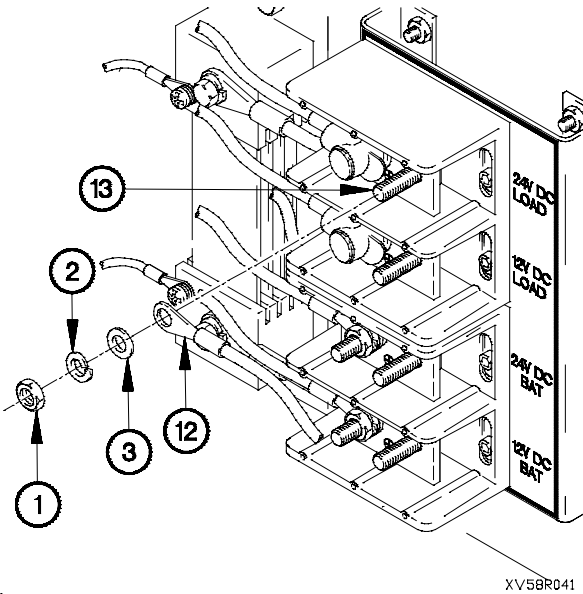
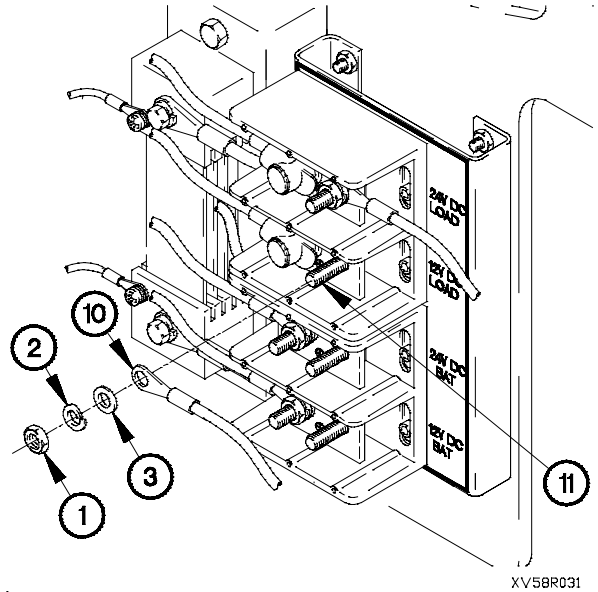


Xv58r-021

- (2) Remove nut (1), lockwasher (2), washer (3), and terminal lugs TL166 (7) and TL1 (8) from terminal block terminal (9). Discard lockwasher.

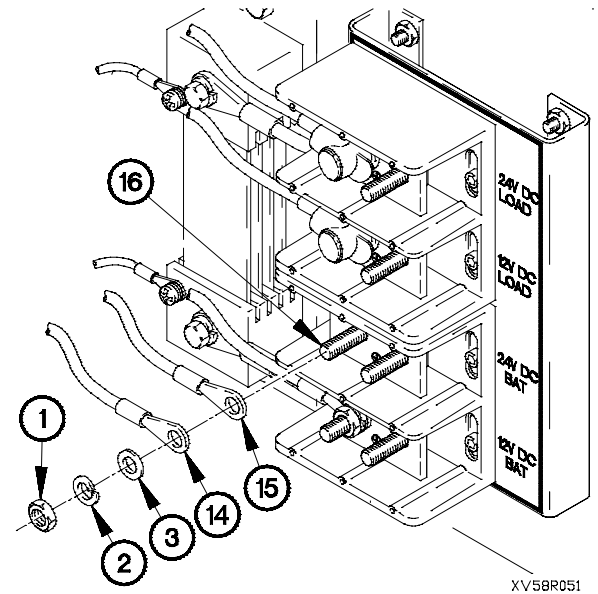
20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

- (3) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL172 (10) from terminal block terminal (11). Discard lockwasher.

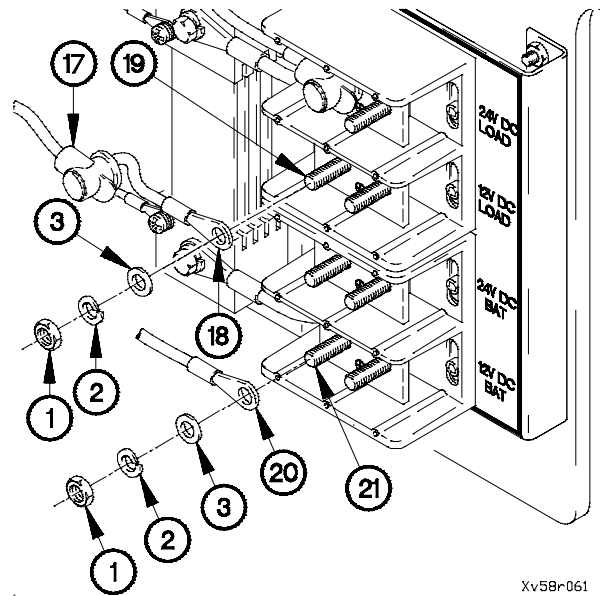


- (4) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL167 (12) from terminal block terminal (13). Discard lockwasher.

- (5) Remove nut (1), lockwasher (2), washer (3), and terminal lugs TL37 (14) and TL36 (15) from terminal block terminal (16). Discard lockwasher.



- (6) Lift dust boot (17) on terminal lug TL80 (18).
- (7) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL80 (18) from terminal block terminal (19). Discard lockwasher.
- (8) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL47 (20) from terminal block terminal (21). Discard lockwasher.



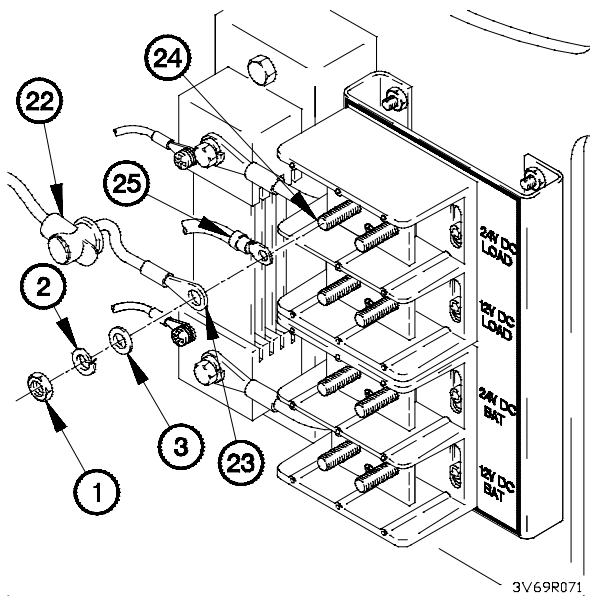
Xv58r-061

- (9) Lift dust boot (22) on terminal lug TL44 (23).
- (10) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL44 (23) from terminal block terminal (24). Discard lockwasher.

NOTE

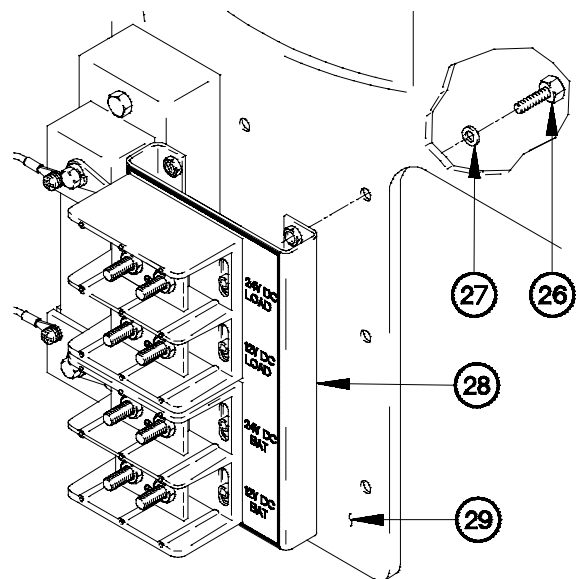
Perform step (11) on M1079.

- (11) Remove terminal lug TL100 (25) from terminal block terminal (24).



3V69R071

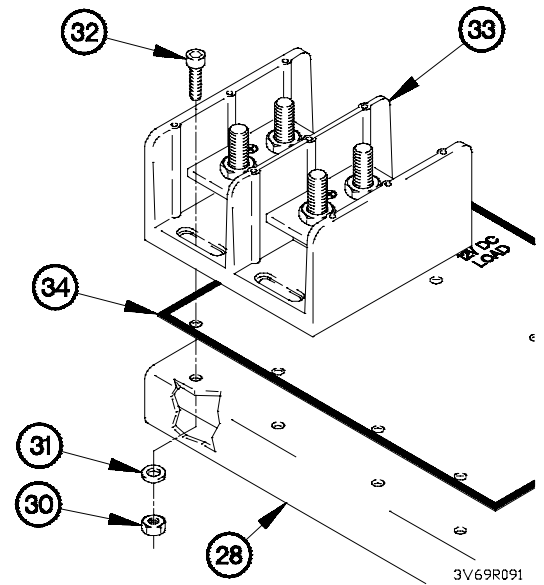
- (12) Remove four screws (26), washers (27), and bracket (28) from spare tire retainer (29).



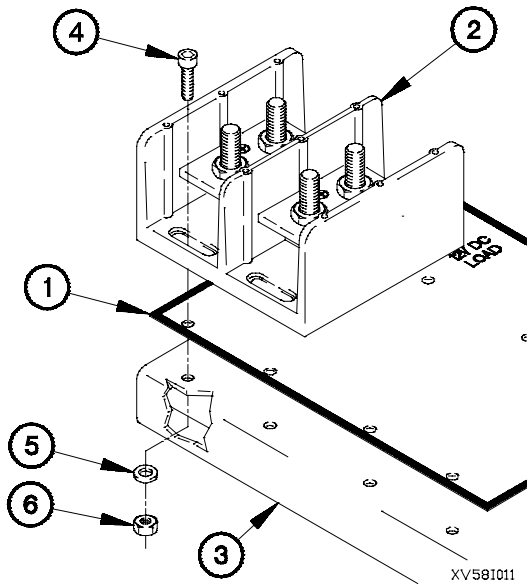
3V69R081

20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

(13) Remove eight self-locking nuts (30), washers (31), screws (32), two terminal blocks (33), and identification plate (34) from bracket (28). Discard self-locking nuts.



b. Installation.

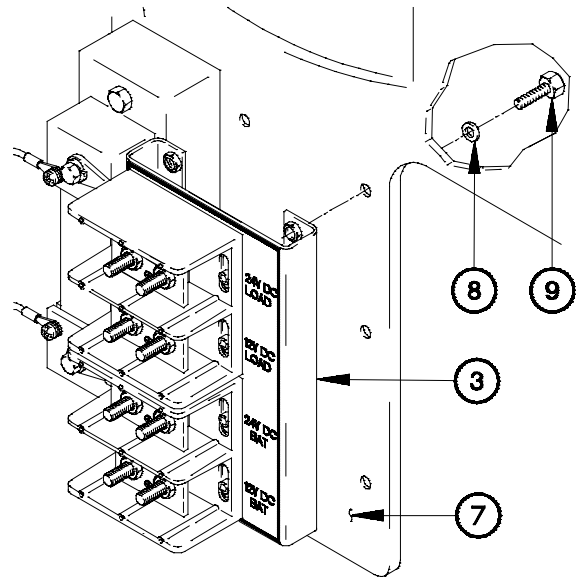


CAUTION

Both terminal blocks must be positioned loosely to align correctly on mounting bracket before tightening hardware. Failure to comply may result in damage to equipment.

- (1) Position identification plate (1) and two terminal blocks (2) on bracket (3) with eight screws (4), washers (5), and self-locking nuts (6).
- (2) Tighten eight self-locking nuts (6) to 48 lb-in. (5 N·m).

- (3) Install bracket (3) on spare tire retainer (7) with four washers (8) and screws (9).

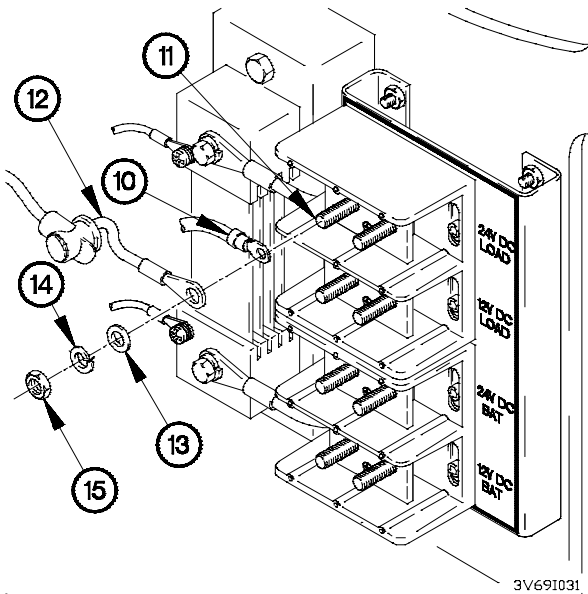


XV581021

NOTE

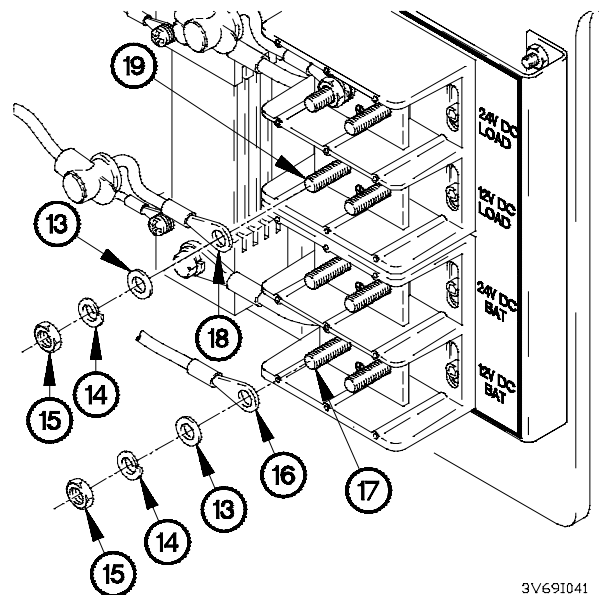
Perform step (4) on M1079.

- (4) Position terminal lug TL100 (10) on terminal block terminal (11).
- (5) Position terminal lug TL44 (12) on terminal block terminal (11) with washer (13), lockwasher (14), and nut (15).



3V691031

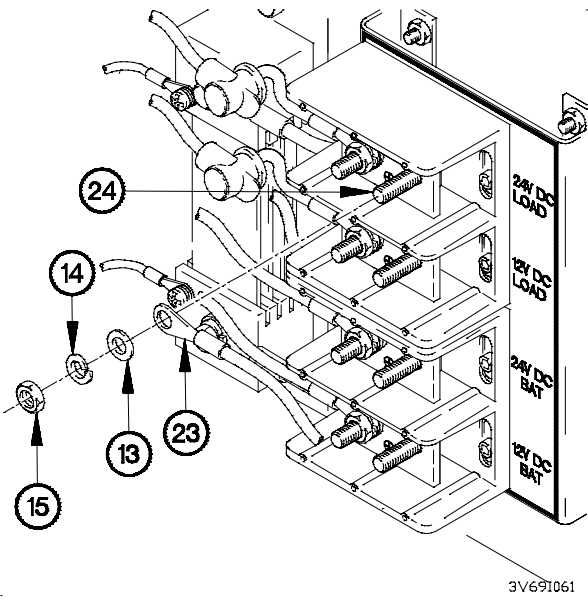
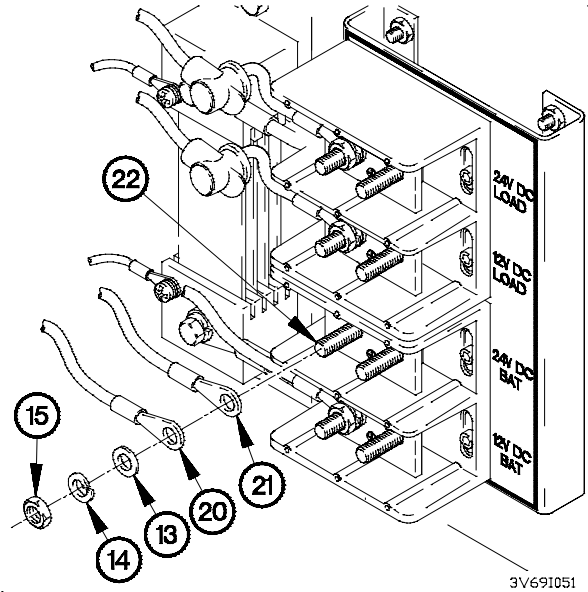
- (6) Position terminal lug TL47 (16) on terminal block terminal (17) with washer (13), lockwasher (14), and nut (15).
- (7) Position terminal lug TL80 (18) on terminal block terminal (19) with washer (13), lockwasher (14), and nut (15).



3V691041

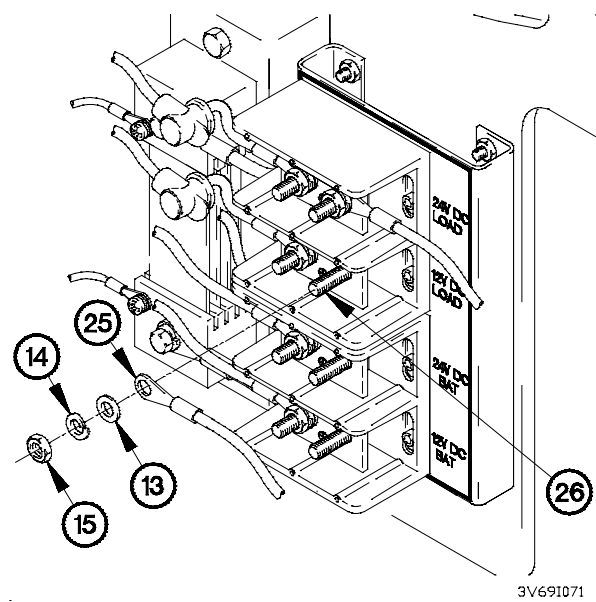
20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

(8) Position terminal lugs TL37 (20) and TL36 (21) on terminal block terminal (22) with washer (13), lockwasher (14), and nut (15).

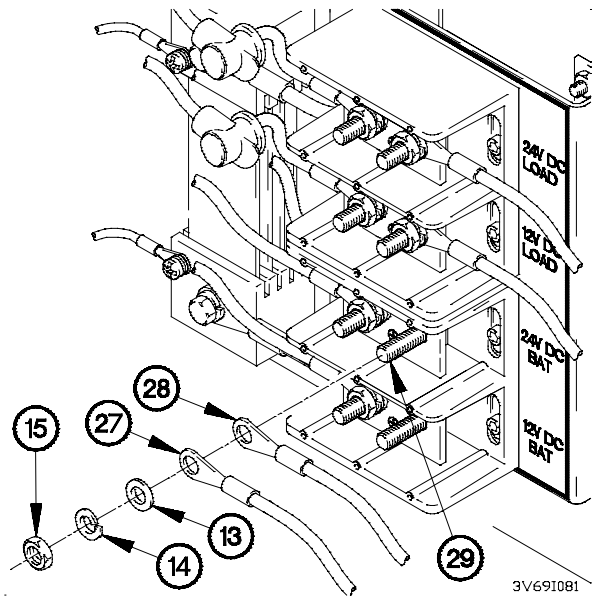


(9) Position terminal lug TL167 (23) on terminal block terminal (24) with washer (13), lockwasher (14), and nut (15).

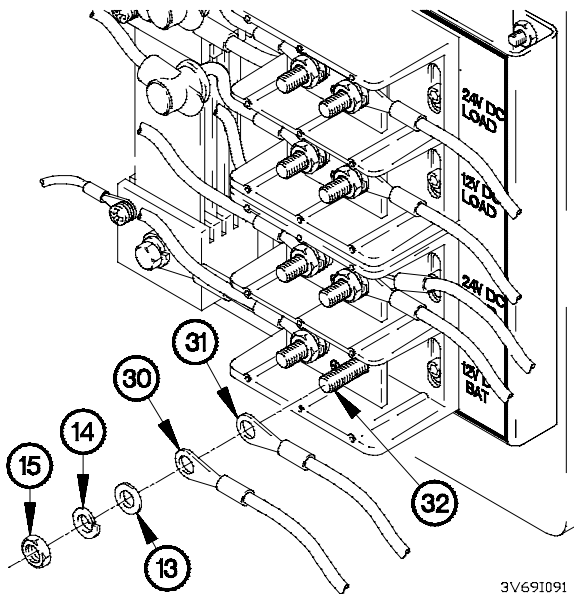
(10) Position terminal lug TL172 (25) on terminal block terminal (26) with washer (13), lockwasher (14), and nut (15).



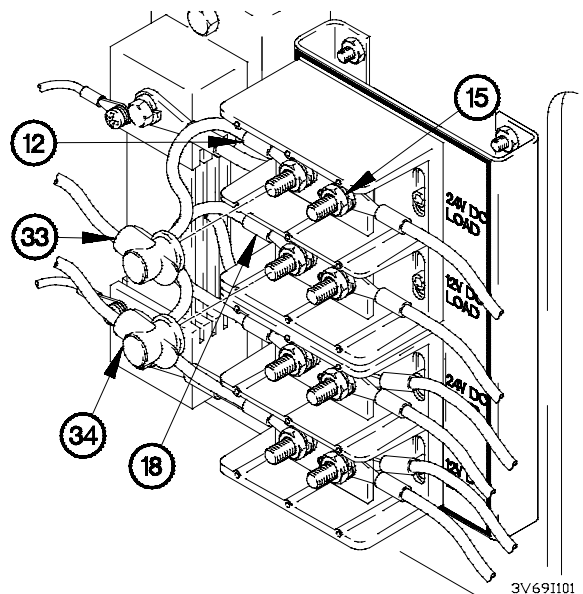
- (11) Position terminal lugs TL166 (27) and TL1 (28) on terminal block terminal (29) with washer (13), lockwasher (14), and nut (15).



- (12) Position terminal lugs TL171 (30) and TL61 (31) on terminal block terminal (32) with washer (13), lockwasher (14) and nut (15).



- (13) Tighten eight nuts (15) to 15-19 lb-ft (21-25 N-m).
 (14) Position dust boot (33) on terminal lug TL44 (12).
 (15) Position dust boot (34) on terminal lug TL80 (18).



20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Raise spare tire (TM 9-2320-365-10).
- (2) Connect batteries (7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check alternator operation (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY

This task covers:

- a. Assembly
- b. Disassembly

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Materials/Parts

Lockwasher (2) (Item 104, Appendix G)

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)
Sling, Cargo (Item 31, Appendix C)

Personnel Required

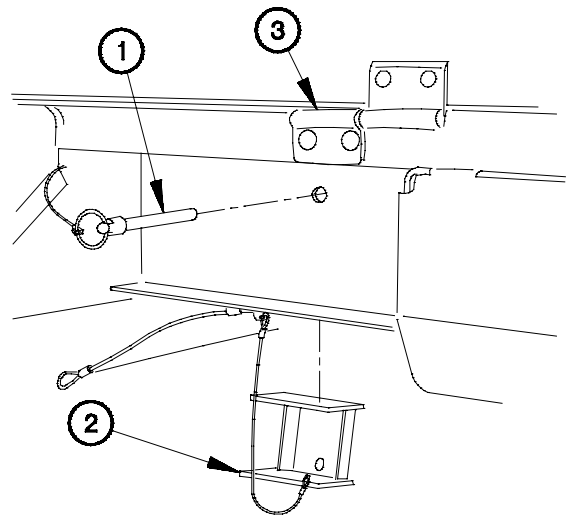
(2)

a. Assembly.

NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

- (1) Remove quick release pin (1) and plug (2) from cargo bed pocket (3).



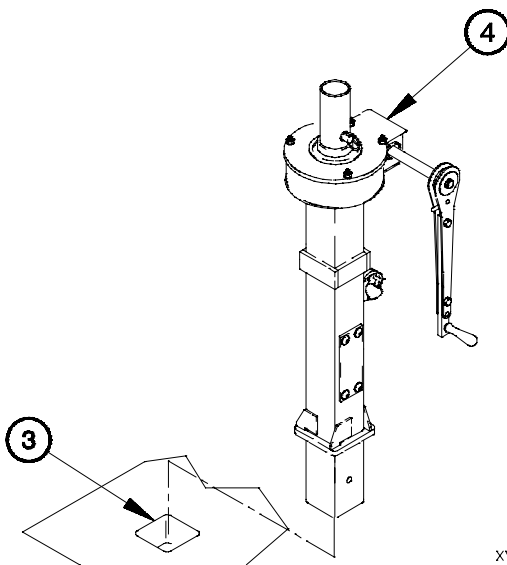
XV60A011

WARNING

Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

- Step (2) requires the aid of an assistant.
- Position mast in cargo bed so handle does not extend over front or rear edge of cargo bed.

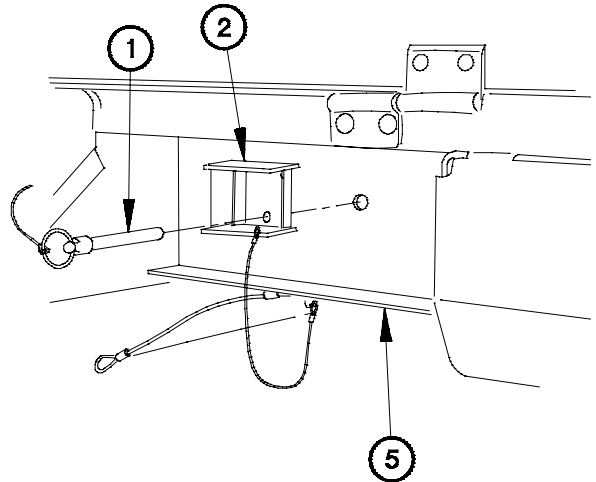


XV60A021

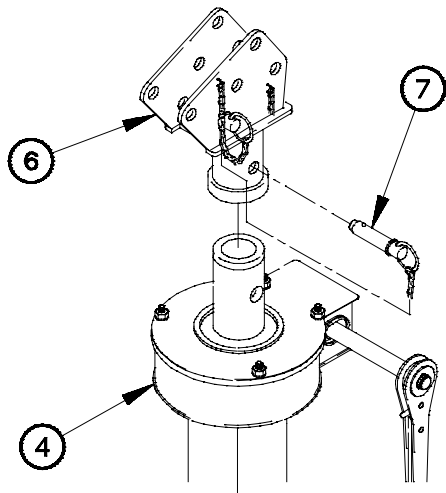
- (2) Install mast (4) in cargo bed pocket (3).

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY (CONT)

(3) Install plug (2) on cargo bed frame (5) with quick release pin (1).



XV60A031



XV60A041

(4) Position turret (6) on mast (4).

(5) Install quick release pin (7) in turret (6).

WARNING

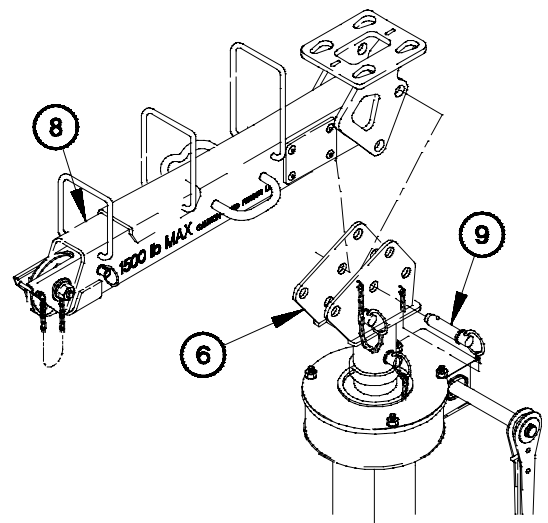
Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Step (6) requires the aid of an assistant.

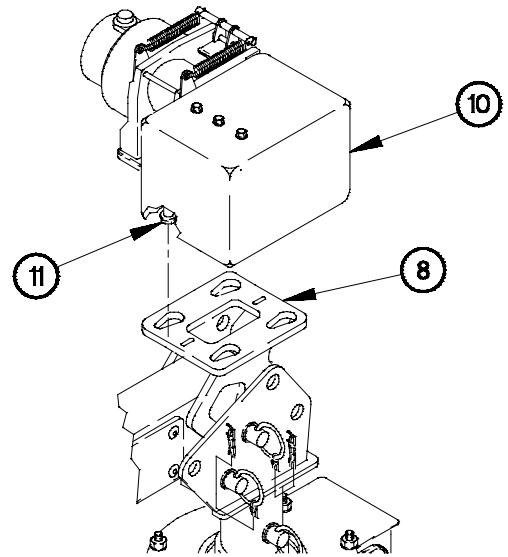
(6) Position boom (8) in turret (6).

(7) Install two quick release pins (9) in turret (6).

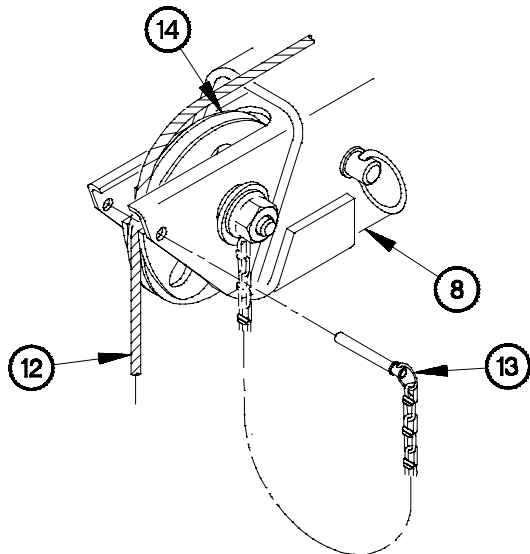


XV60A051

- (8) Position winch (10) on boom (8).
- (9) Slide winch (10) to front of boom (8).
- (10) Tighten four screws (11) on winch (10).



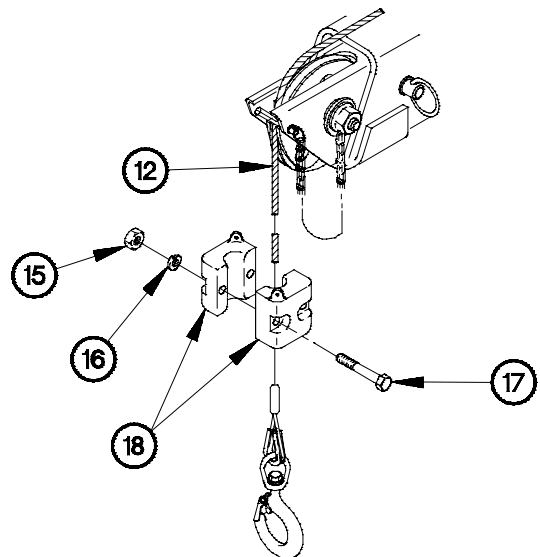
XV60A061



XV60A071

- (11) Connect power and remote control cables (TM 9-2320-365-10).
- (12) Extend winch cable (12) approximately 6 feet (1.8 m).
- (13) Remove quick release pin (13) from boom (8).
- (14) Position winch cable (12) on boom sheave (14).
- (15) Install quick release pin (13) in boom (8).

- (16) Remove two nuts (15), lockwashers (16), and screws (17) from weight blocks (18). Discard lockwashers.
- (17) Install two weight blocks (18) on winch cable (12) with two screws (17), lockwashers (16), and nuts (15).
- (18) Position boom in stowed position (TM 9-2320-365-10).



XV60A081

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY (CONT)

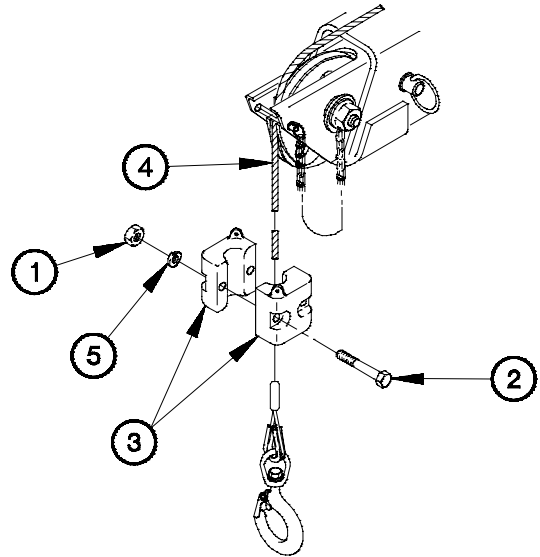
b. Disassembly.

- (1) Position boom in the 0-degree position (TM 9-2320-365-10).
- (2) Remove two nuts (1), screws (2), lockwashers (5), and weight blocks (3) from winch cable (4). Discard lockwashers.

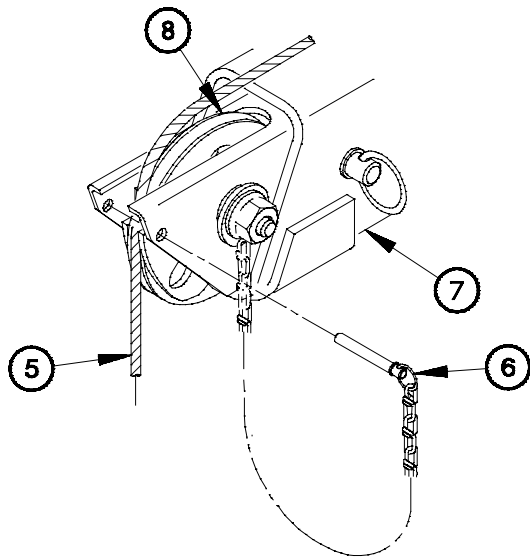
NOTE

Perform step (3) for storage of weight block.

- (3) Install two screws (2) in weight blocks (3) with lockwashers (5) and nuts (1).



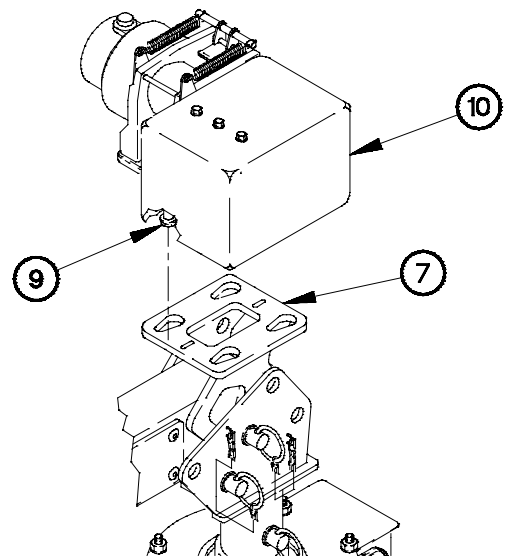
XV60B011



XV60B021

- (4) Remove quick release pin (6) from boom (7).
- (5) Remove winch cable (5) from boom sheave (8).
- (6) Install quick release pin (6) in boom (7).
- (7) Retract winch cable approximately 6 feet (1.8 m).
- (8) Disconnect remote control and power cables (TM 9-2320-365-10).

- (9) Loosen four screws (9) on winch (10).
- (10) Slide winch (10) to rear of boom (7).
- (11) Remove winch (10) from boom (7).



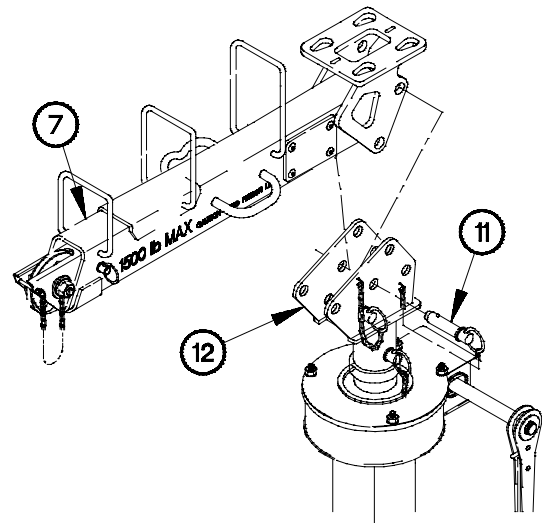
XV60B031

WARNING

Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

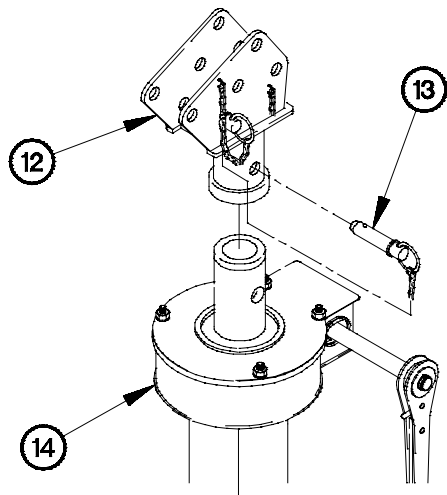
Steps (12) and (13) require the aid of an assistant.



XV60B041

(12) Remove two quick release pins (11) from turret (12).

(13) Remove boom (7) from turret (12).



XV60B051

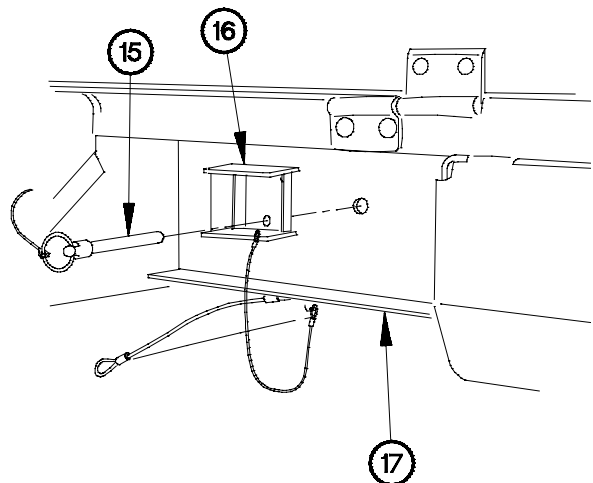
(14) Remove quick release pin (13) from turret (12).

(15) Remove turret (12) from mast (14).

NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

(16) Remove quick release pin (15) and plug (16) from cargo bed frame (17).



XV60B061

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY (CONT)

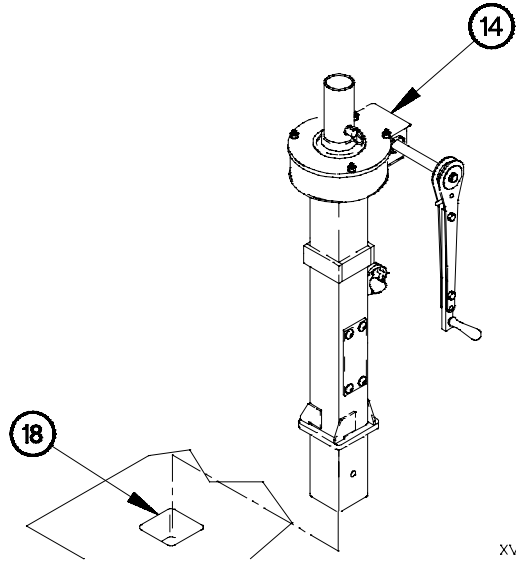
WARNING

Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

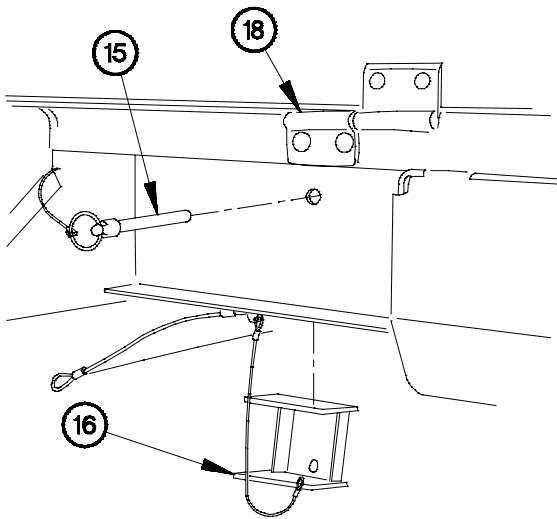
NOTE

Step (17) requires the aid of an assistant.

(17) Remove mast (14) from cargo bed pocket (18).



XV60B071



XV60B081

(18) Install plug (16) in cargo bed pocket (18) with quick release pin (15).

End of Task.

20-71. LIGHT MATERIAL HANDLING CRANE (LMHC) REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- LMHC power cable removed (TM 9-2320-365-10).
- LMHC remote control cable removed (TM 9-2320-365-10).

Tools and Special Tools

- Sling, Cargo (2) (Item 31, Appendix C)

Personnel Required

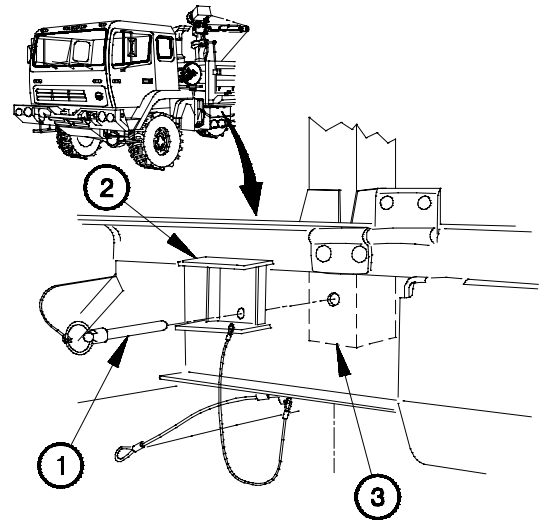
- (2)

a. Removal.

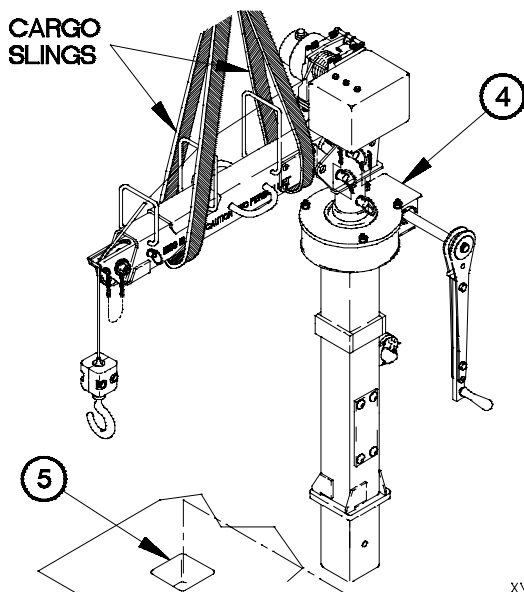
NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

- (1) Remove quick release pin (1) and plug (2) from cargo bed frame (3).



XV61R011



XV61R021

WARNING

Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

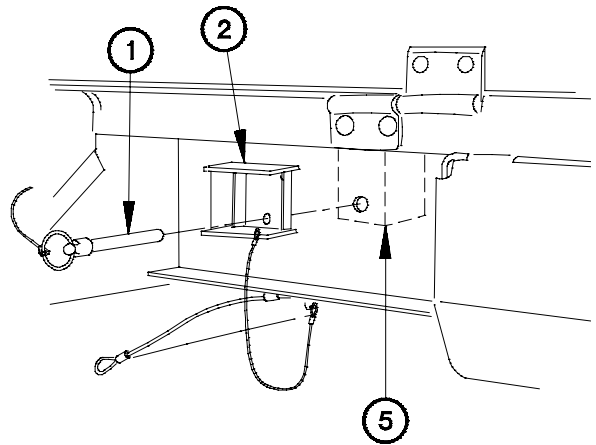
NOTE

Step (2) requires the aid of an assistant.

- (2) Remove LMHC (4) from cargo bed pocket (5).

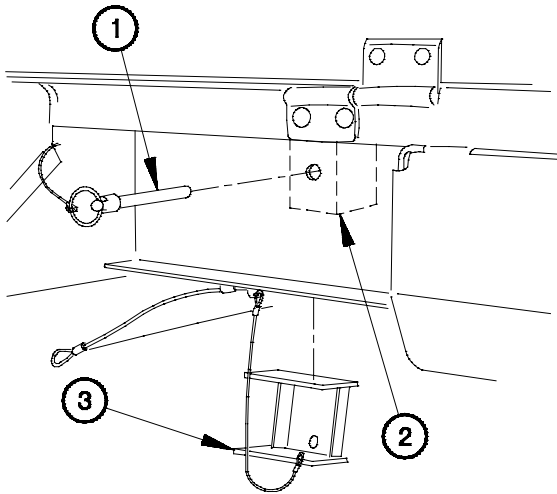
20-71. LIGHT MATERIAL HANDLING CRANE (LMHC) REPLACEMENT (CONT)

- (3) Install plug (2) in cargo bed pocket (5).
- (4) Install quick release pin (1) in cargo bed pocket (5).



XV61R031

b. Installation.



XV61I011

WARNING

Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kg). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

NOTE

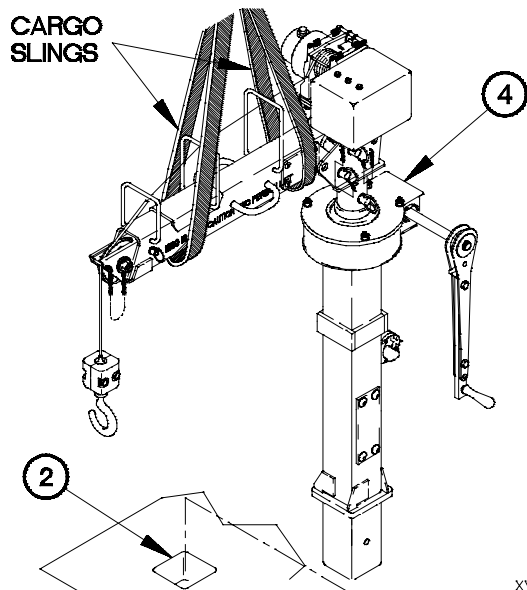
Step (3) requires the aid of an assistant.

- (3) Position LMHC (4) in cargo bed pocket (2).

NOTE

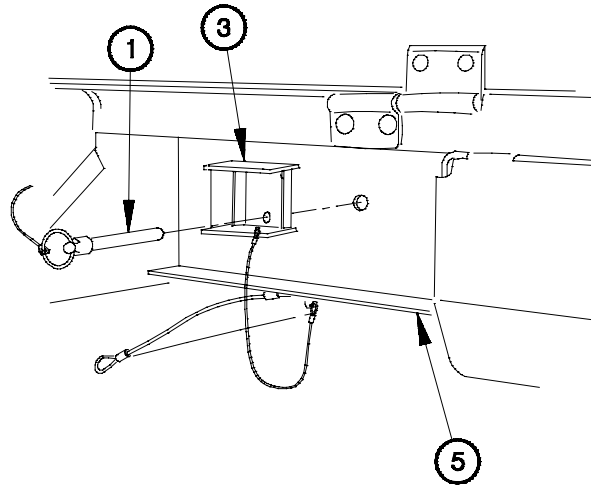
LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

- (1) Remove quick release pin (1) from cargo bed pocket (2).
- (2) Remove plug (3) from cargo bed pocket (2).



XV61I021

- (4) Install plug (3) on cargo bed frame (5) with quick release pin (1).



c. Follow-On Maintenance.

Operate LMHC and check for proper operation (TM 9-2320-365-10).

XV611031

End of Task.

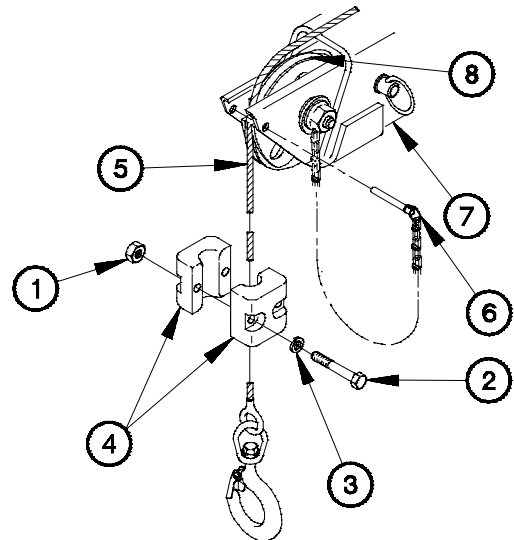
20-72. LIGHT MATERIAL HANDLING CRANE (LMHC) WEIGHT BLOCK AND WIRE ROPE REPLACEMENT/REPAIR	
This task covers:	
<ul style="list-style-type: none"> a. Removal b. Installation 	<ul style="list-style-type: none"> c. Follow-On Maintenance
INITIAL SETUP	
<p>Equipment Conditions</p> <ul style="list-style-type: none"> Engine shut down (TM 9-2320-365-10). LMHC circuit breaker positioned to ON (TM 9-2320-365-10). LMHC power cable installed (TM 9-2320-365-10). LMHC remote control cable installed (TM 9-2320-365-10). LMHC wire rope assembly fully extended (TM 9-2320-365-10). 	<p>Tools and Special Tools</p> <ul style="list-style-type: none"> Tool Kit, Genl Mech (Item 44, Appendix C) Gloves, Welders (Item 14, Appendix C) <p>Materials/Parts</p> <ul style="list-style-type: none"> Lockwasher (2) (Item 104, Appendix G) <p>Personnel Required</p> <ul style="list-style-type: none"> (2)

a. Removal.

NOTE

Perform step (1) if replacing weight block.

- (1) Remove two nuts (1), screws (2), lockwashers (3), and weight blocks (4) from wire rope (5). Discard lockwashers.
- (2) Remove quick release pin (6) from boom (7).
- (3) Remove wire rope (5) from sheave (8).



XV62R011

WARNING

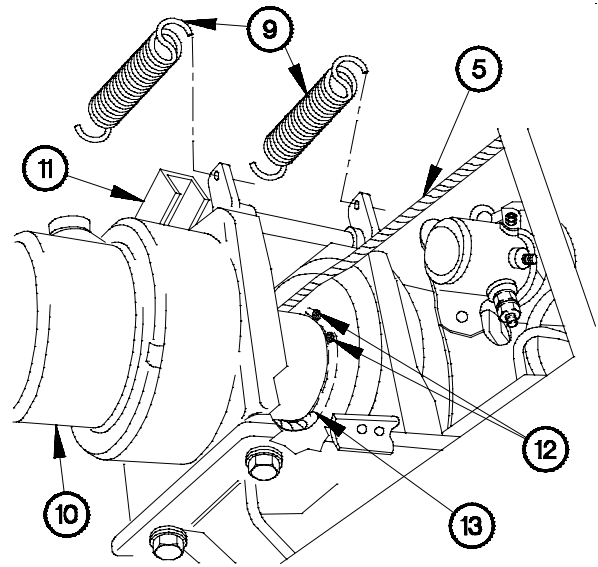
Use care when removing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

- (4) Remove two springs (9) from winch assembly (10).
- (5) Position tensioner (11) for access.
- (6) Loosen two set screws (12) on drum (13).

WARNING

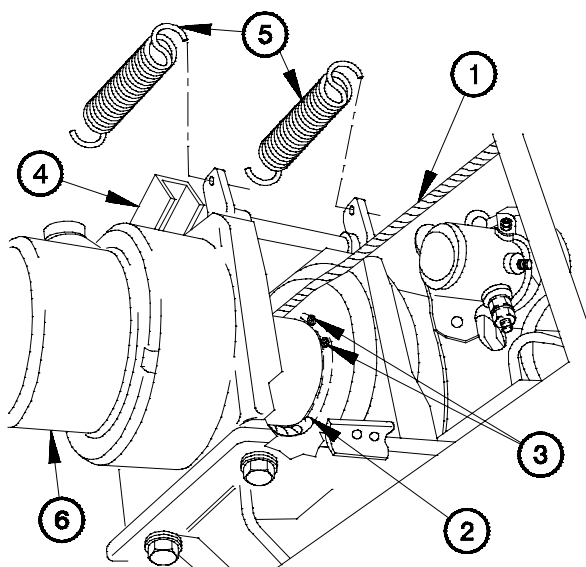
- Wire rope can become frayed or contain broken wires. Wear heavy leather-palmed work gloves when handling wire rope. Failure to comply may result in injury to personnel.
- Never let moving wire rope slide through hands, even when wearing gloves. A broken wire could pierce through glove and cut hands. Failure to comply may result in injury to personnel.

- (7) Remove wire rope (5) from drum (13).



XV62R021

b. Installation.



XV62I011

- (1) Position wire rope (1) in drum (2).
- (2) Tighten two set screws (3) on drum (2).
- (3) Position tensioner (4) on drum (2).

WARNING

Use care when installing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

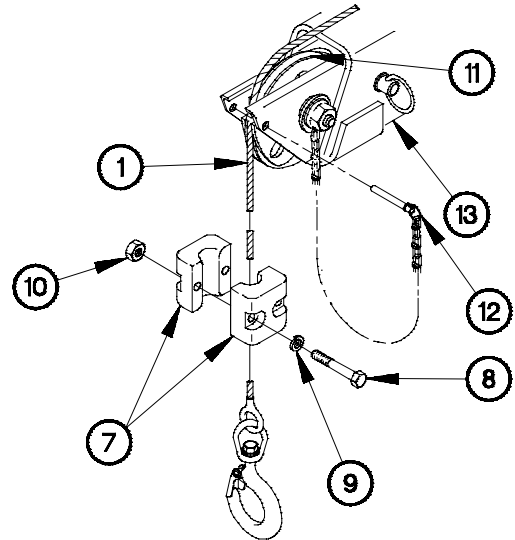
- (4) Install two springs (5) on winch assembly (6).

20-72. LIGHT MATERIAL HANDLING CRANE (LMHC) WEIGHT BLOCK AND WIRE ROPE REPLACEMENT/REPAIR.

NOTE

Perform step (5) if weight block was replaced.

- (5) Install two weight blocks (7) on wire rope (1) with two screws (8), lockwashers (9), and nuts (10).
- (6) Position wire rope (1) in sheave (11).
- (7) Install quick release pin (12) in boom (13).



XV621021

c. Follow-On Maintenance.

- (1) Retract LMHC wire rope assembly (TM 9-2320-365-10).
- (2) Extend and retract LMHC wire rope assembly to check for proper function (TM 9-2320-365-10).
- (3) Remove LMHC remote control cable (TM 9-2320-365-10).
- (4) Remove LMHC power cable (TM 9-2320-365-10).
- (5) Notify DS maintenance to perform LMHC load test.

End of Task.

20-73. LIGHT MATERIAL HANDLING CRANE (LMHC) WINCH REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Base Plate Disassembly
- c. Winch Disassembly
- d. Cleaning/Inspection
- e. Winch Assembly
- f. Base Plate Assembly
- g. Installation
- h. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

LMHC weight block and wire rope removed (para 20-72).
 LMHC power cable removed (TM 9-2320-365-10).
 LMHC remote control cable removed (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)
 Goggles, Industrial (Item 15, Appendix C)
 Gloves, Rubber (Item 13, Appendix C)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
 Gasket (3) (Item 30, Appendix G)
 Grease, Molybdenum Disulfide (Item 25, Appendix D)
 Rag, Wiping (Item 51, Appendix D)
 Solvent, Dry Cleaning (Item 71, Appendix D)

Personnel Required

(2)

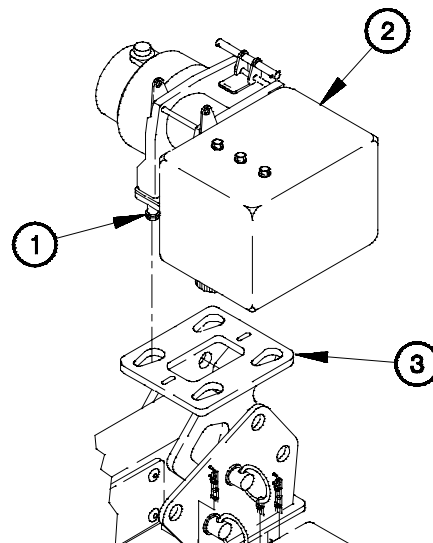
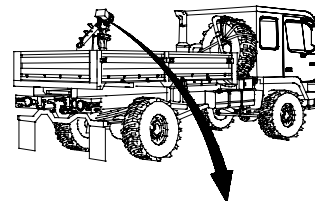
a. Removal.

- (1) Loosen four screws (1) on winch (2).

NOTE

Step (2) and (3) require the aid of an assistant.

- (2) Slide winch (2) to rear of boom (3).
- (3) Remove winch (2) from boom (3).

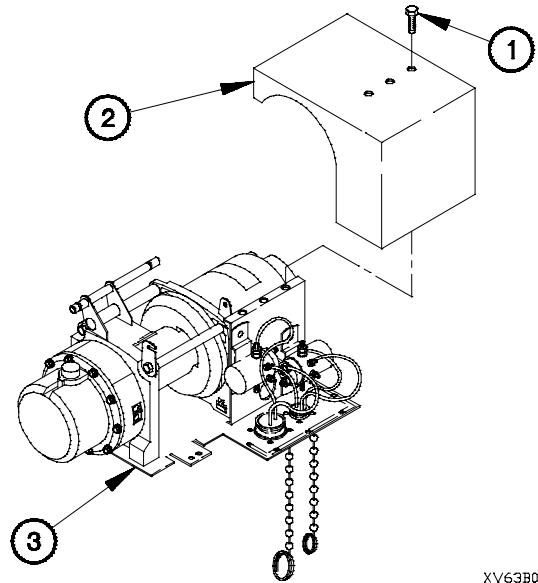


3V73A011

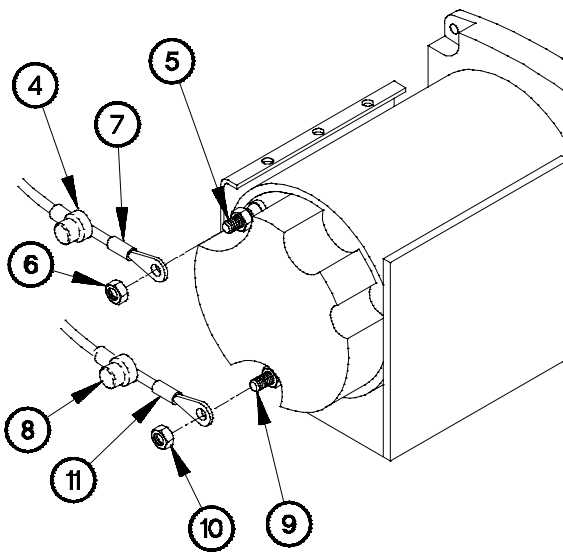
20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

b. Base Plate Disassembly.

(1) Remove 18 screws (1) and cover (2) from base plate (3).



XV63B011

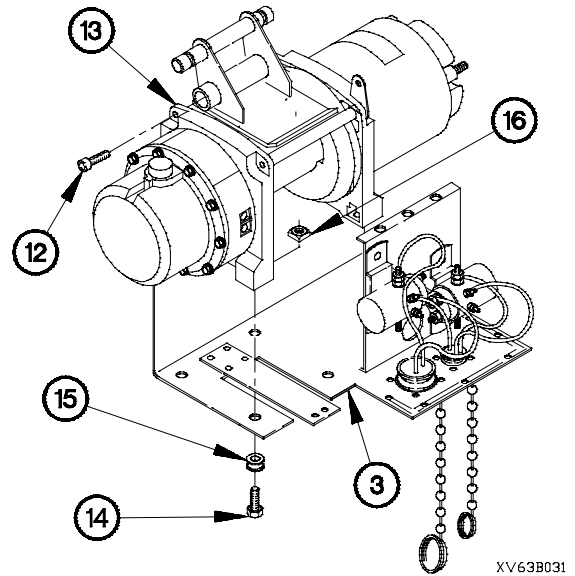


XV63B021

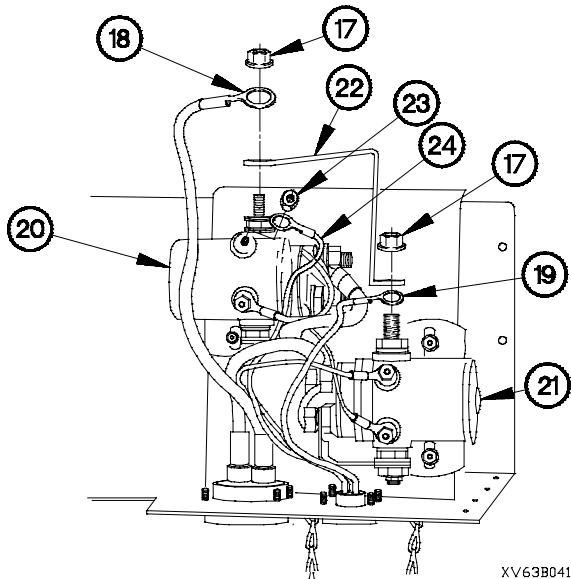
NOTE

- Tag wires and connection points prior to disconnecting.
 - Note position of wires prior to removal.
- (2) Remove rubber boot (4) from negative terminal (5).
 - (3) Remove nut (6) and terminal lug (7) from negative terminal (5).
 - (4) Remove rubber boot (8) from positive terminal (9).
 - (5) Remove nut (10) and terminal lug (11) from positive terminal (9).

- (6) Remove two screws (12) from winch assembly (13).
- (7) Remove four screws (14), mounting feet (15), nuts (16), and winch assembly (13) from base plate (3).



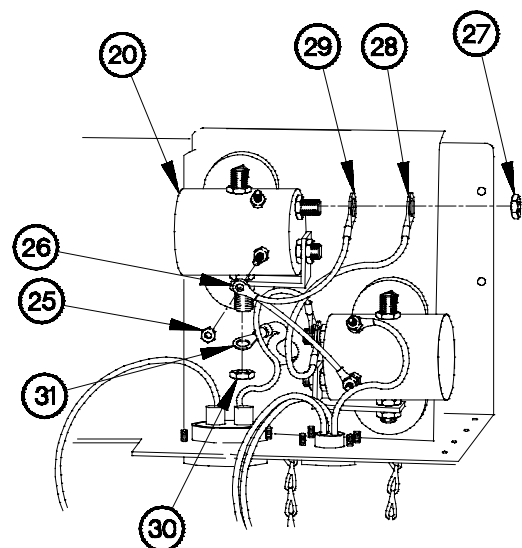
XV63B031



XV63B041

- (8) Remove two nuts (17) and terminal lugs (18 and 19) from solenoids (20 and 21).
- (9) Remove strap (22) from solenoids (20 and 21).
- (10) Remove nut (23) and terminal lug (24) from solenoid (20).

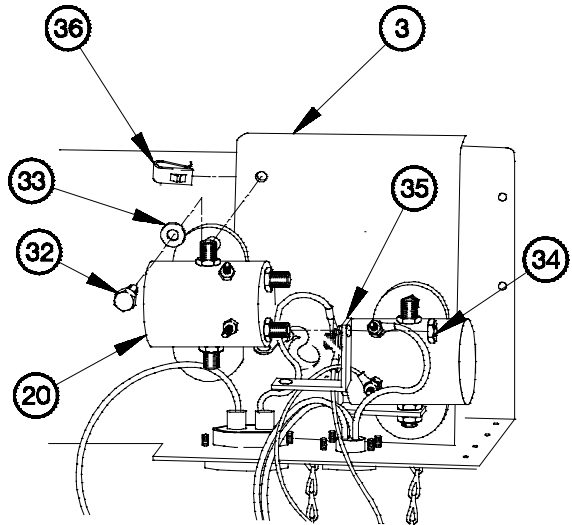
- (11) Remove nut (25) and terminal lug (26) from solenoid (20).
- (12) Remove nut (27) and two terminal lugs (28 and 29) from solenoid (20).
- (13) Remove nut (30) and terminal lug (31) from solenoid (20).



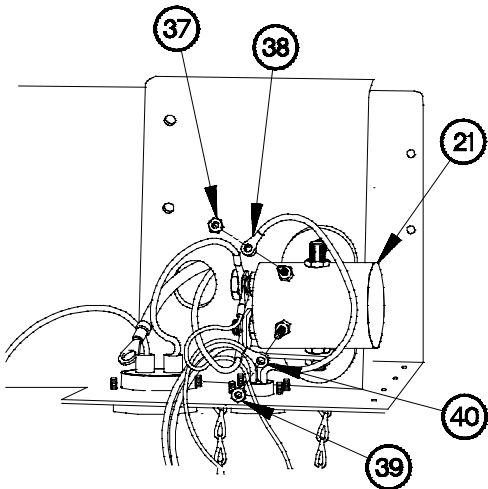
XV63B051

20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

- (14) Remove two screws (32), washers (33), and solenoid (20) from base plate (3).
- (15) Remove nut (34) and strap (35) from solenoid (20).
- (16) Remove two clip nuts (36) from base plate (3).



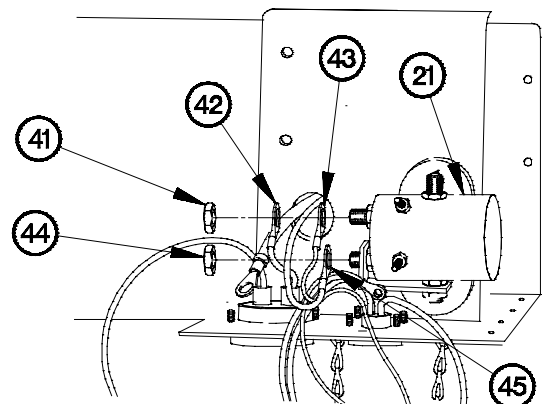
XV63B061



XV63B071

- (17) Remove nut (37) and terminal lug (38) from solenoid (21).
- (18) Remove nut (39) and terminal lug (40) from solenoid (21).

- (19) Remove nut (41) and two terminal lugs (42 and 43) from solenoid (21).
- (20) Remove nut (44) and terminal lug (45) from solenoid (21).

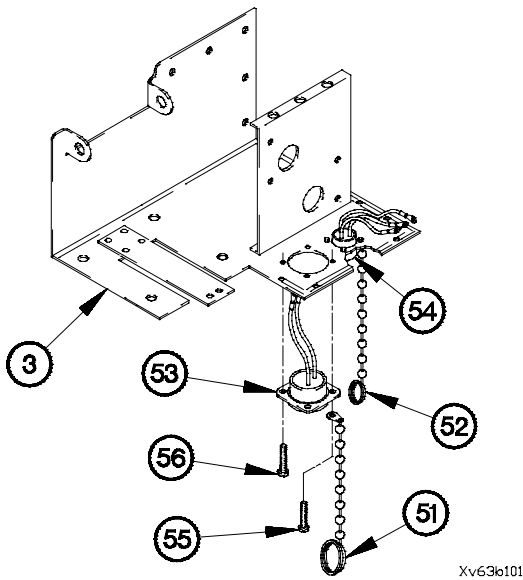
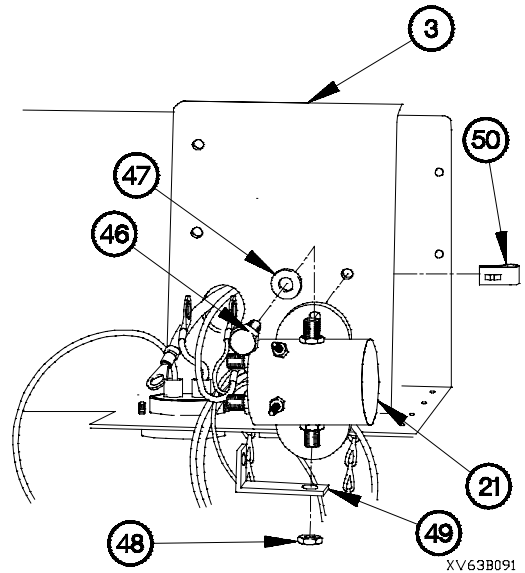


XV63B081

(21) Remove two screws (46), washers (47), and solenoid (21) from base plate (3).

(22) Remove nut (48) and strap (49) from solenoid (21).

(23) Remove two clip nuts (50) from base plate (3).



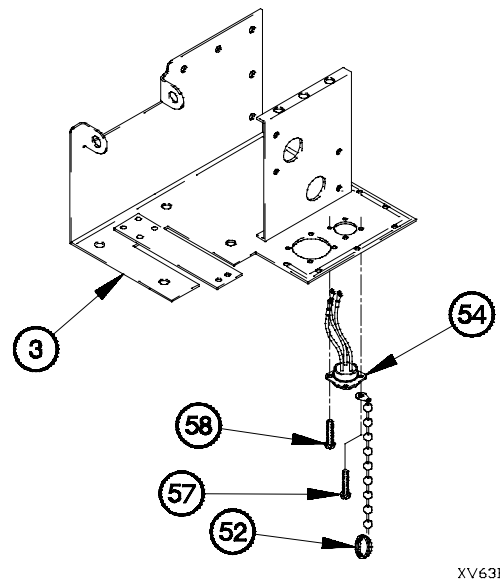
(24) Remove dust caps (51 and 52) from power connector (53) and remote control connector (54).

(25) Remove screw (55) and dust cap (51) from power connector (53).

(26) Remove three screws (56) and power connector (53) from base plate (3).

(27) Remove screw (57) and dust cap (52) from remote control connector (54).

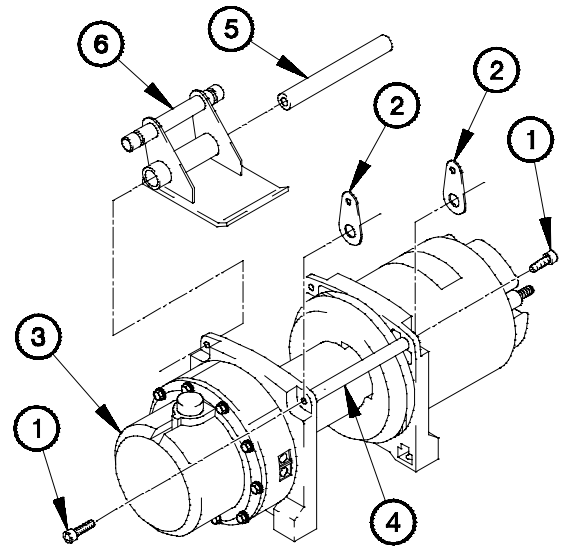
(28) Remove three screws (58) and remote control connector (54) from base plate (3).



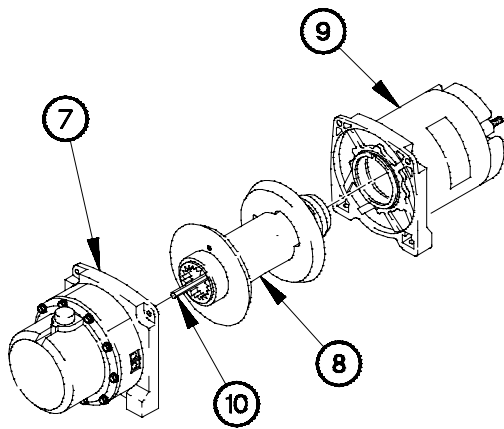
20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

c. Winch Disassembly.

- (1) Remove two screws (1) and brackets (2) from winch assembly (3).
- (2) Remove tie rods (4 and 5) from winch assembly (3).
- (3) Remove tensioner (6) from tie rod (5).



XV63C011



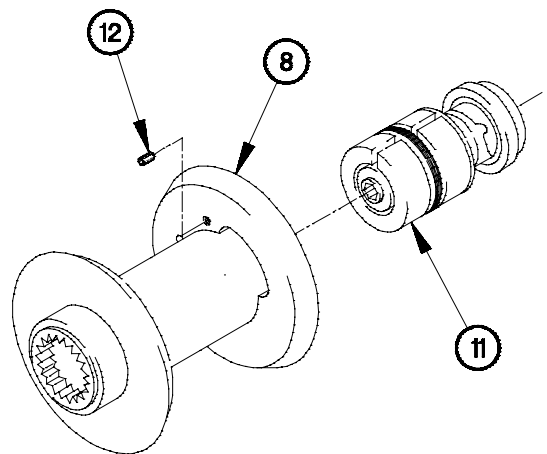
XV63C021

- (4) Remove housing assembly (7) from drum assembly (8).
- (5) Remove drum assembly (8) from 24 vdc motor assembly (9).
- (6) Remove hex shaft (10) from drum assembly (8).

NOTE

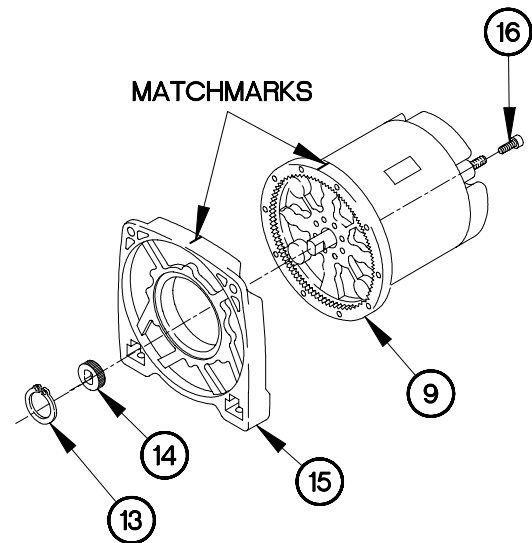
Note position of break in drum assembly prior to removal.

- (7) Remove brake (11) from drum assembly (8).
- (8) Remove two screws (12) from drum assembly (8).

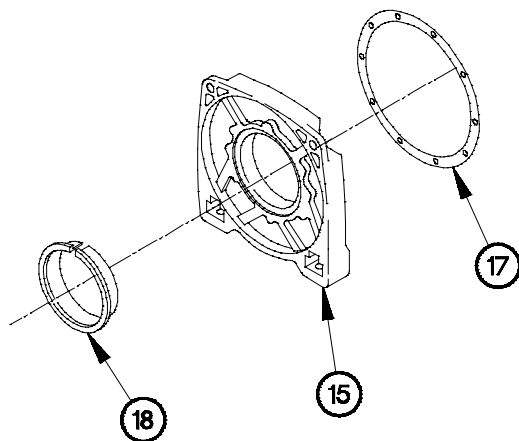


XV63C031

- (9) Remove circlip (13) and gear (14) from 24 vdc motor assembly (9).
- (10) Match mark drum support (15) and 24 vdc motor assembly (9).
- (11) Remove 10 screws (16) and drum support (15) from 24 vdc motor assembly (9).



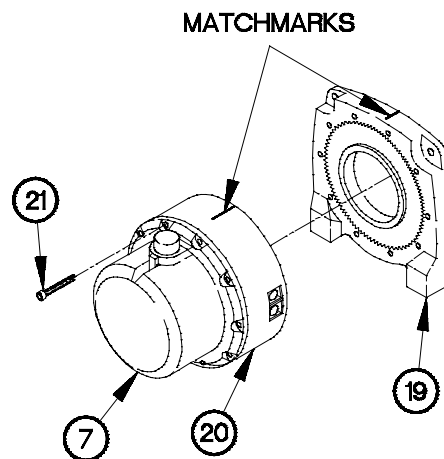
Xv63c041



XV63C051

- (12) Remove gasket (17) from drum support (15). Discard gasket.
- (13) Remove sleeve bushing (18) from drum support (15).

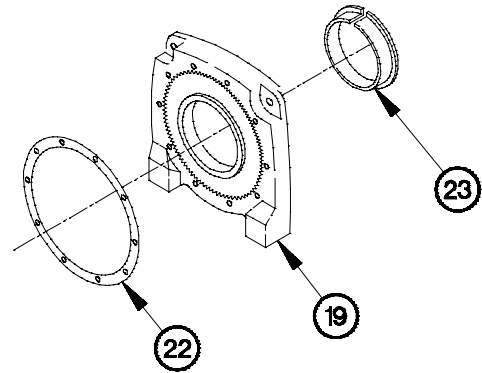
- (14) Match mark drum support (19) spur gear (20) and housing assembly (7).
- (15) Remove 10 screws (21) and drum support (19) from spur gear (20).



XV63C061

20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

- (16) Remove gasket (22) from drum support (19). Discard gasket.
- (17) Remove sleeve bushing (23) from drum support (19).

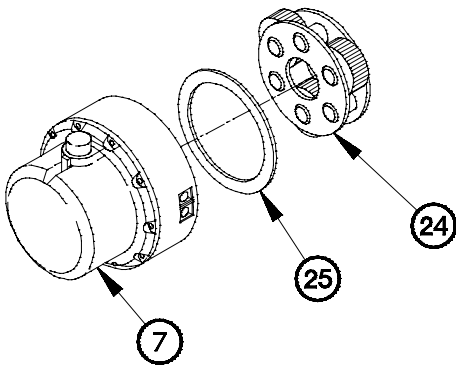


XV63C071

NOTE

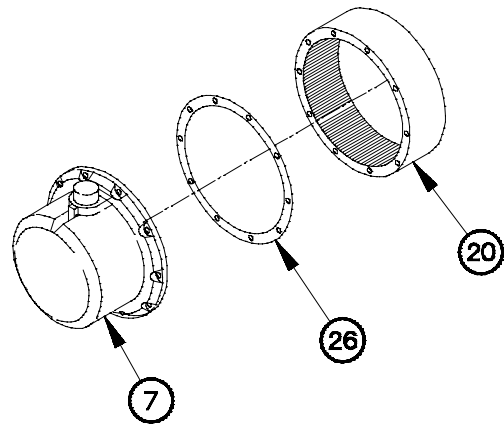
Note position of stage 3 carrier in housing assembly prior to removal.

- (18) Remove stage 3 carrier (24) from housing assembly (7).
- (19) Remove washer (25) from stage 3 carrier (24).



XV63C081

- (20) Remove spur gear (20) from housing assembly (7).
- (21) Remove gasket (26) from spur gear (20). Discard gasket.

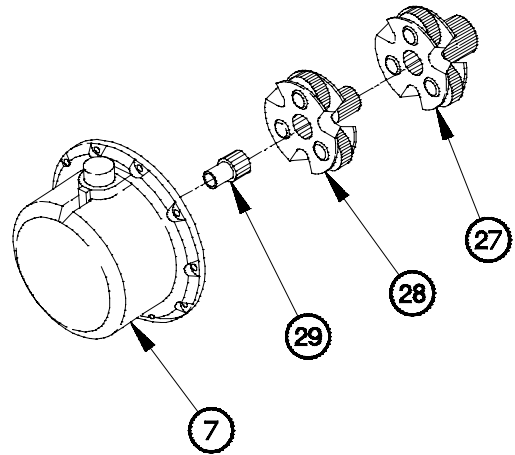


XV63C091

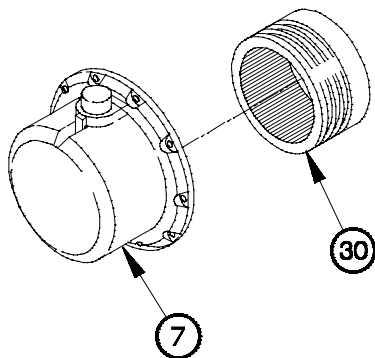
NOTE

Note position of stage 2 carrier, WI carrier, and spur gear in housing assembly prior to removal.

- (22) Remove stage 2 carrier (27) from housing assembly (7).
- (23) Remove WI carrier (28) from housing assembly (7).
- (24) Remove spur gear (29) from housing assembly (7).



XV63C101



XV63C111

NOTE

Note position of internal gear in housing assembly prior to removal.

- (25) Remove internal gear (30) from housing assembly (7).

20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

d. Cleaning/Inspection.

WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

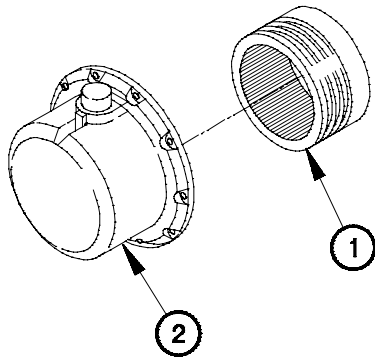
(1) Clean all metal parts thoroughly with dry cleaning solvent.

NOTE

Replace any part that fails visual inspection.

(2) Inspect all parts for visible cracks or damage.

e. Winch Assembly.



(1) Position internal gear (1) in housing assembly (2).

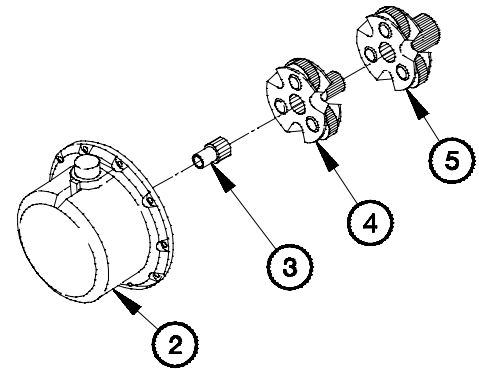
XV63E011

- (2) Apply grease to spur gear (3).
- (3) Install spur gear (3) in housing assembly (2).
- (4) Apply grease to WI carrier (4).

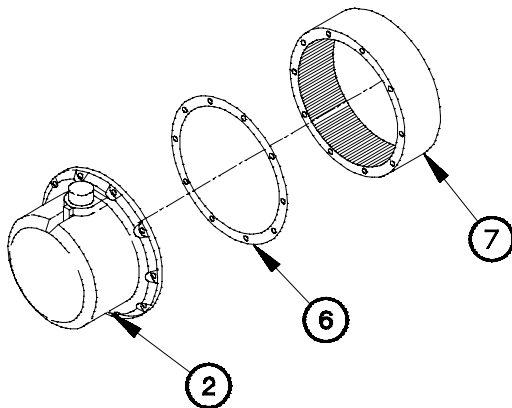
NOTE

Hex shaft may be used to align WI carrier with spur gear.

- (5) Install WI carrier (4) in housing assembly (2).
- (6) Apply grease to stage 2 carrier (5).
- (7) Install stage 2 carrier (5) in housing assembly (2).



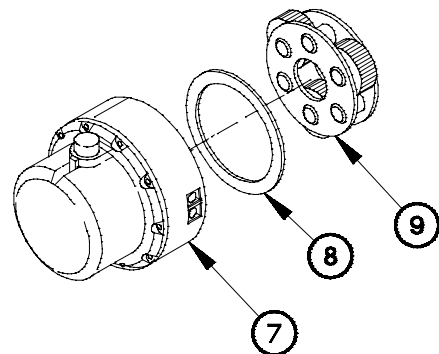
XV63E021



XV63E031

- (8) Position gasket (6) and spur gear (7) on housing assembly (2).

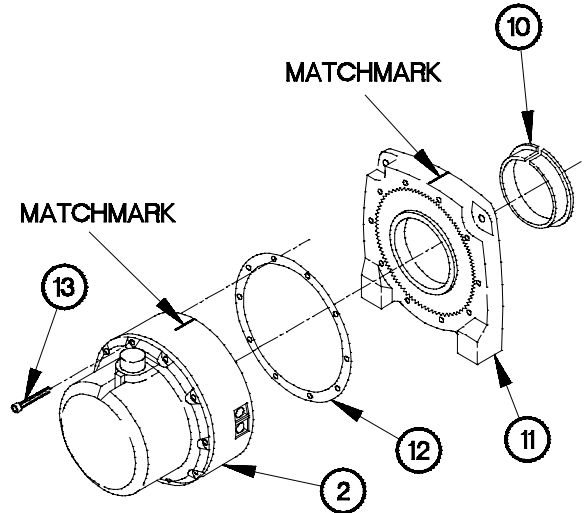
- (9) Apply grease to washer (8) and stage 3 carrier (9).
- (10) Position washer (8) and stage 3 carrier (9) in spur gear (7).



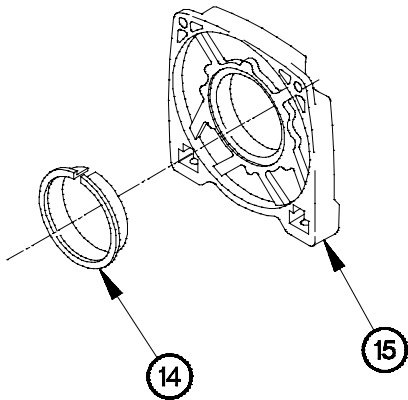
XV63E041

20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

- (11) Install sleeve bushing (10) in drum support (11).
- (12) Install gasket (12) and drum support (11) on housing assembly (2) with matchmarks aligned.
- (13) Install 10 screws (13) in housing assembly (2).



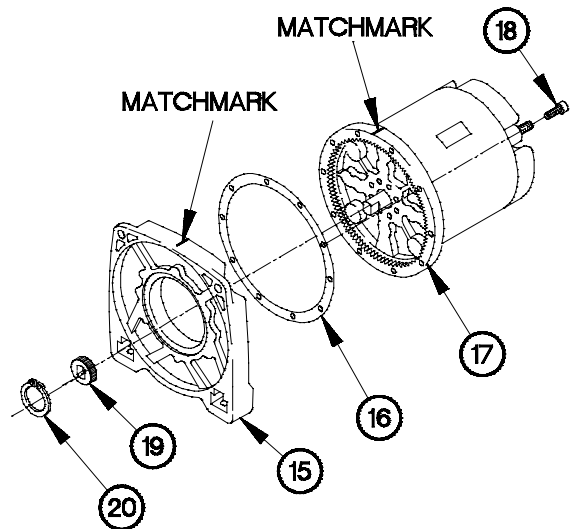
XV 63E051



XV 63E061

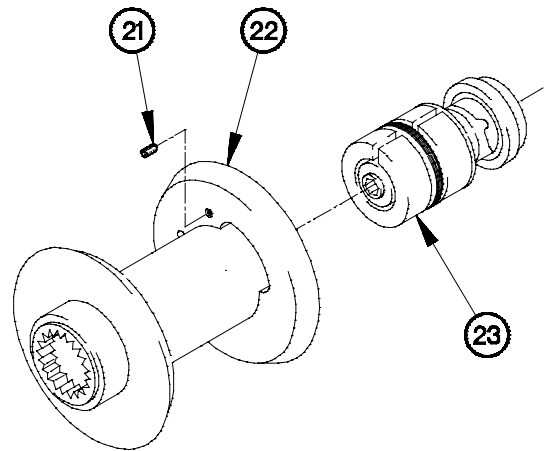
- (14) Install sleeve bushing (14) in drum support (15).

- (15) Install gasket (16) and drum support (15) on 24 vdc motor assembly (17) with matchmarks aligned.
- (16) Install 10 screws (18) in 24 vdc motor assembly (17).
- (17) Apply grease to gear (19).
- (18) Install gear (19) on 24 vdc motor assembly (17) with circlip (20).

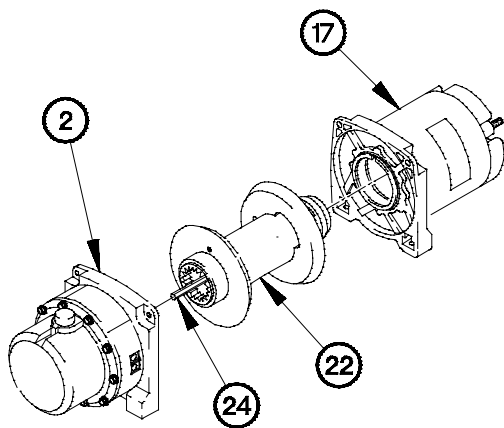


XV 63E071

- (19) Position two screws (21) in drum assembly (22).
- (20) Apply grease to brake (23).
- (21) Install brake (23) in drum assembly (22).



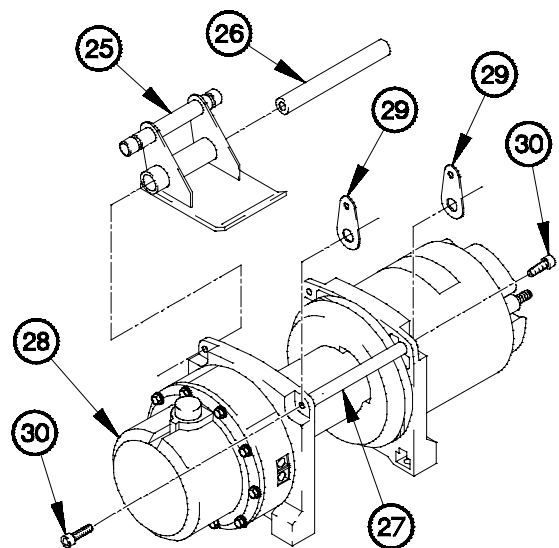
XV63E081



XV63E091

- (22) Apply grease to hex shaft (24).
- (23) Install hex shaft (24) in drum assembly (22).
- (24) Position drum assembly (22) on 24 vdc motor assembly (17).
- (25) Position housing assembly (2) on drum assembly (22).

- (26) Position tensioner (25) on tie rod (26).
- (27) Position tie rods (26 and 27) in winch assembly (28).
- (28) Install two brackets (29) on winch assembly (28) with two screws (30).

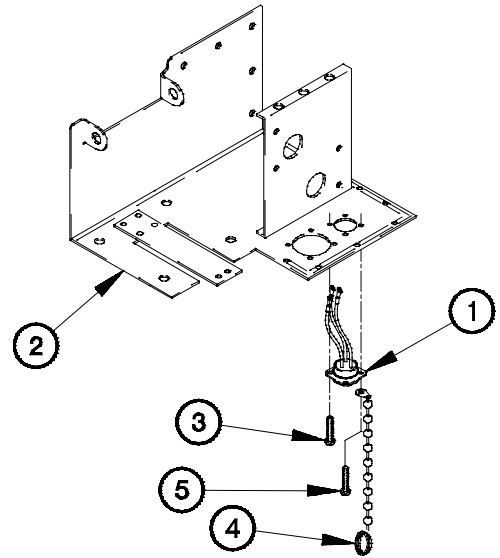


XV63E101

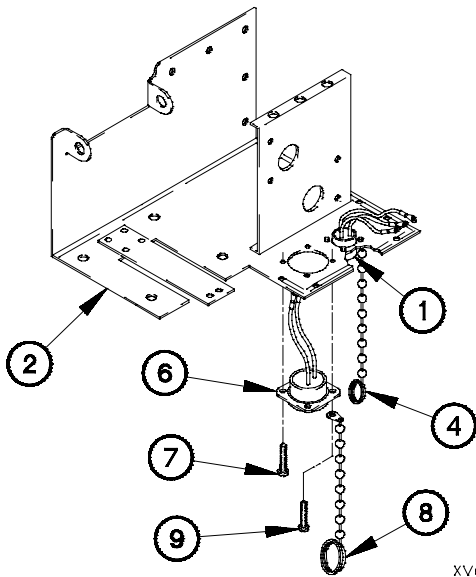
20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

f. Base Plate Assembly.

- (1) Install remote control connector (1) on base plate (2) with three screws (3).
- (2) Install dust cap (4) on remote control connector (1) with screw (5).



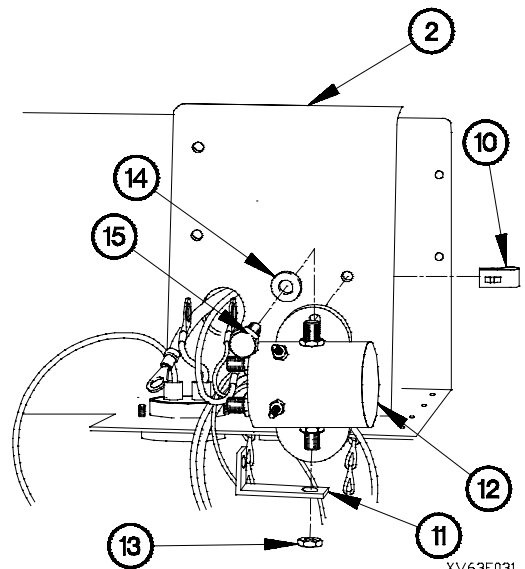
XV63F011



XV63F021

- (3) Install power connector (6) on base plate (2) with three screws (7).
- (4) Install dust cap (8) on power connector (6) with screw (9).
- (5) Install dust caps (4 and 8) on remote control connector (1) and remote control connector (6).

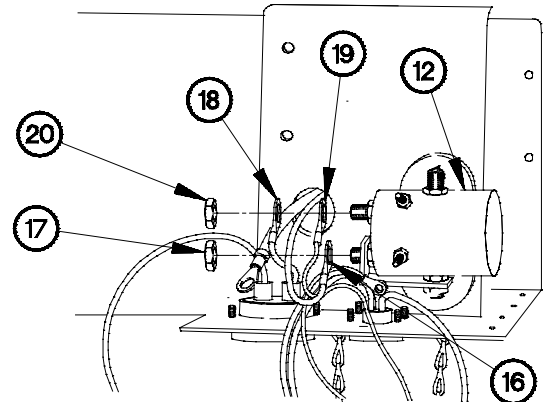
- (6) Install two clip nuts (10) on base plate (2).
- (7) Install strap (11) on solenoid (12) with nut (13).
- (8) Install solenoid (12) on base plate (2) with two washers (14) and screws (15).



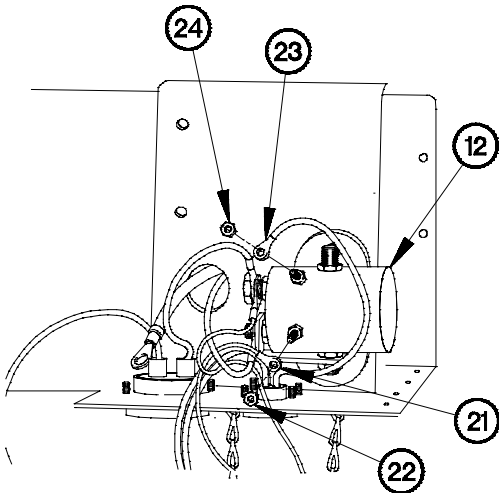
XV63F031

(9) Install terminal lug (16) on solenoid (12) with nut (17).

(10) Install terminal lugs (18 and 19) on solenoid (12) with nut (20).



XV63F041



XV63F051

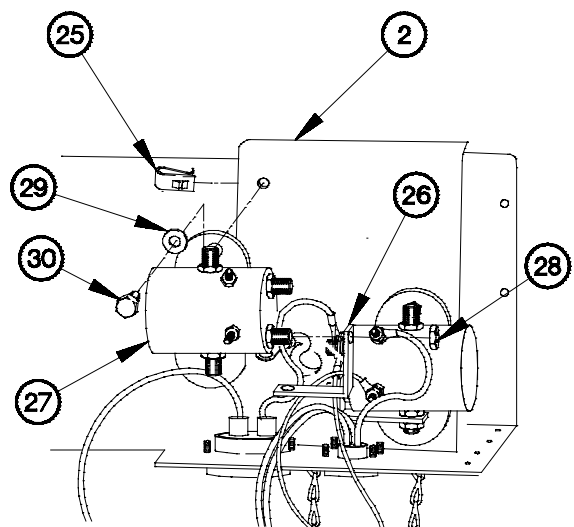
(11) Install terminal lug (21) on solenoid (12) with nut (22).

(12) Install terminal lug (23) on solenoid (12) with nut (24).

(13) Install two clip nuts (25) on base plate (2).

(14) Install strap (26) on solenoid (27) with nut (28).

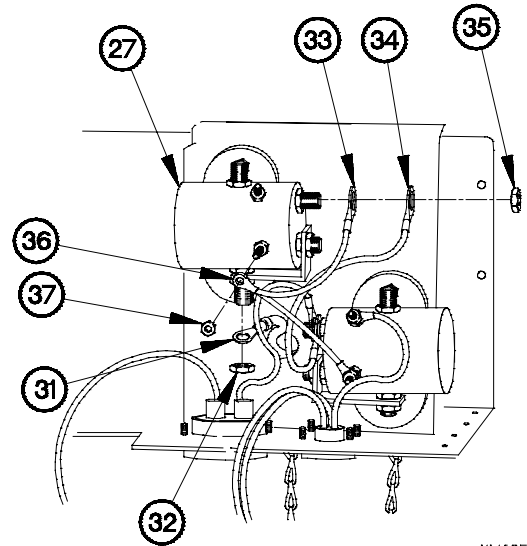
(15) Install solenoid (27) on base plate (2) with two washers (29) and screws (30).



XV63F061

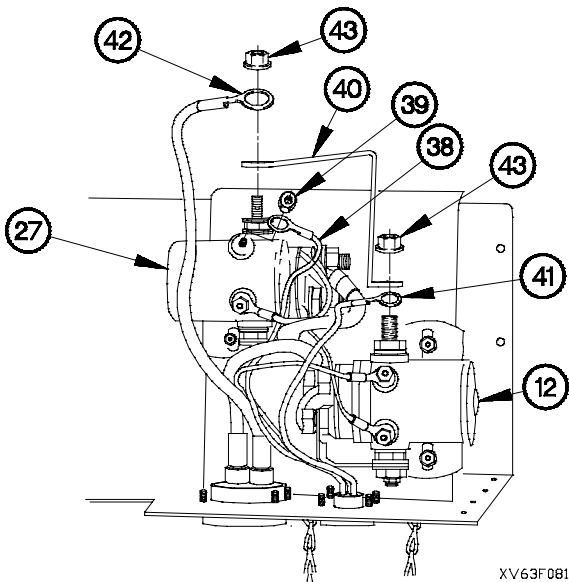
20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

- (16) Install terminal lug (31) on solenoid (27) with nut (32).
- (17) Install terminal lugs (33 and 34) on solenoid (27) with nut (35).
- (18) Install terminal lug (36) on solenoid (27) with nut (37).



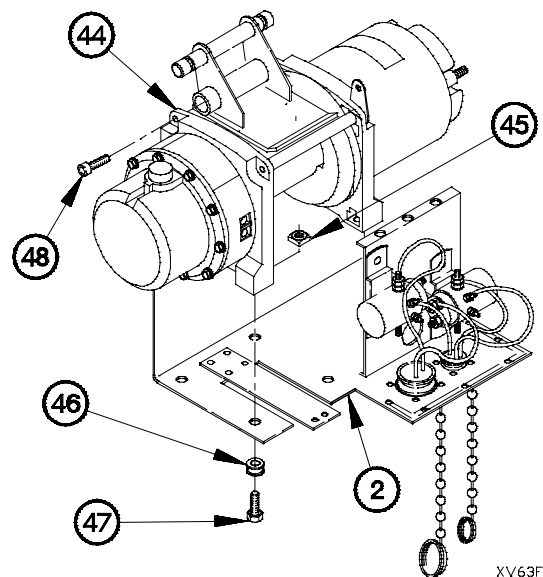
XV 63F071

- (19) Install terminal lug (38) on solenoid (27) with nut (39).
- (20) Install strap (40) on solenoids (12 and 27).
- (21) Install terminal lugs (41 and 42) on solenoids (12 and 27) with nuts (43).



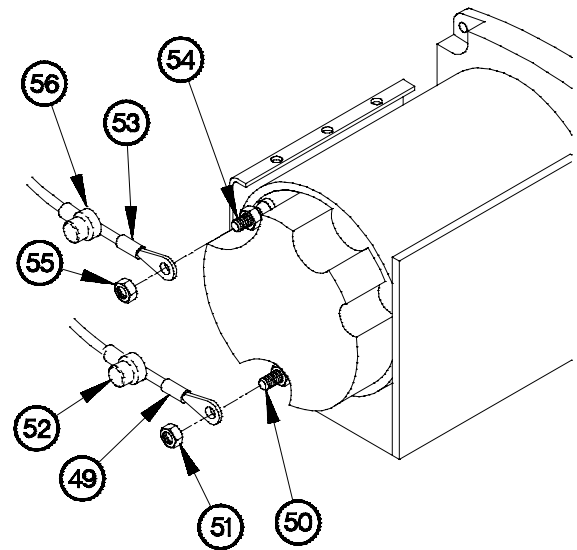
XV 63F081

- (22) Install winch assembly (44) on base plate (2) with four nuts (45), mounting feet (46), and screws (47).
- (23) Install two screws (48) in winch assembly (44).

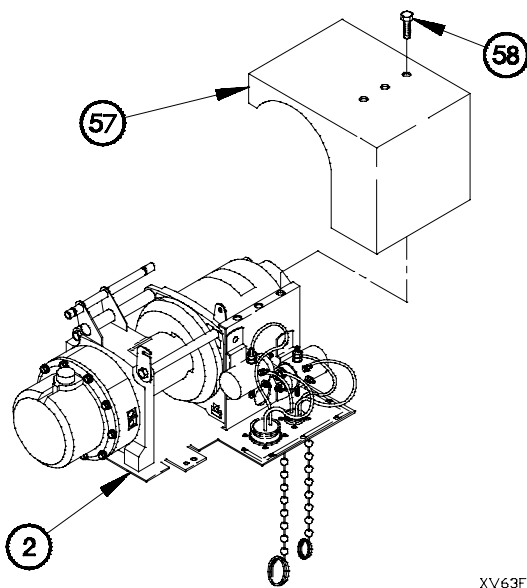


XV 63F091

- (24) Install terminal lug (49) on positive terminal (50) with nut (51).
- (25) Install rubber boot (52) on positive terminal (50).
- (26) Install terminal lug (53) on negative terminal (54) with nut (55).
- (27) Install rubber boot (56) on negative terminal (54).



XV63F101



XV63F111

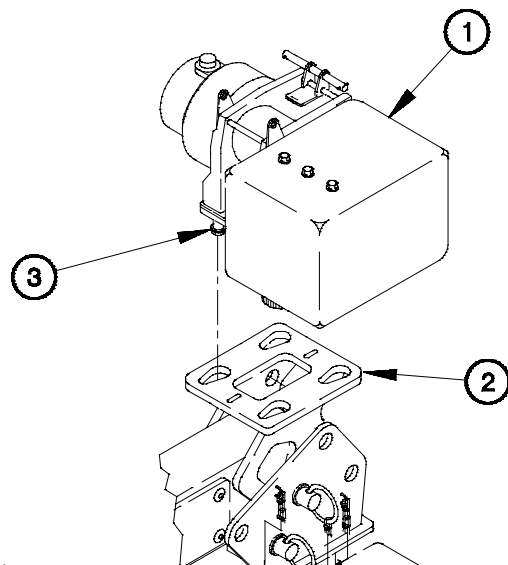
- (28) Install cover (57) on base plate (2) with 18 screws (58).

g. Installation.

NOTE

Steps (1) and (2) require the aid of an assistant.

- (1) Position winch (1) on boom (2).
- (2) Slide winch (1) toward front of boom (2).
- (3) Tighten four screws (3).



XV63G011

**20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR
(CONT)**

h. Follow-On Maintenance.

- (1) Install LMHC remote control cable (TM 9-2320-365-10).
- (2) Install LMHC power cable (TM 9-2320-365-10).
- (3) Install LMHC weight block and wire rope (para 20-72).

End of Task.

20-74. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- LMHC winch removed (para 20-73).

Materials/Parts

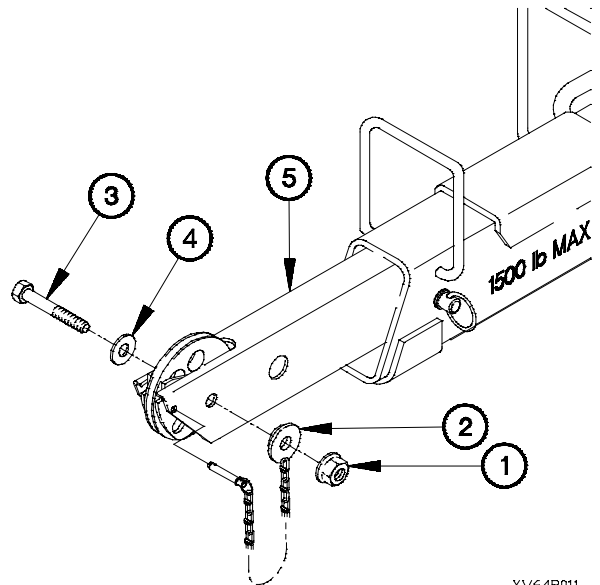
- Nut, Self-Locking (Item 151, Appendix G)
- Bushing, Sleeve (Item 5, Appendix G)

Tools and Special Tools

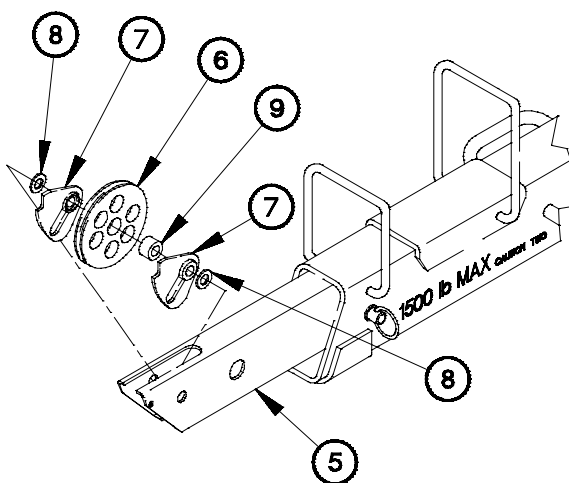
- Tool Kit, Genl Mech (Item 44, Appendix C)
- Gloves, Welders (Item 14, Appendix C)

a. Removal.

- (1) Remove self-locking nut (1), chain assembly (2), screw (3), and washer (4) from fly section (5). Discard self-locking nut.



XV64R011



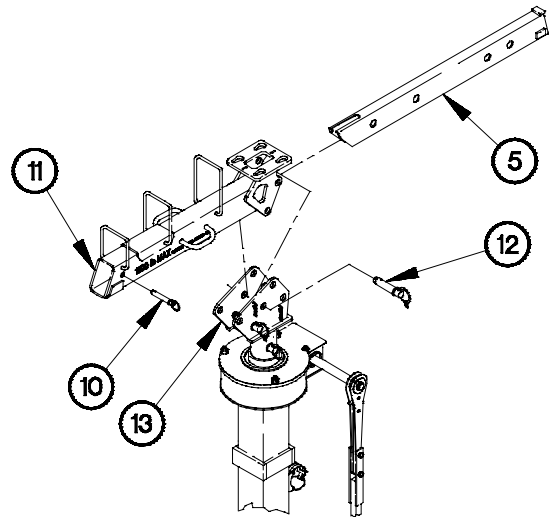
XV64R021

- (2) Remove sheave (6), two detent plates (7), and washers (8) from fly section (5).

- (3) Remove bushing (9) from sheave (6). Discard bushing.

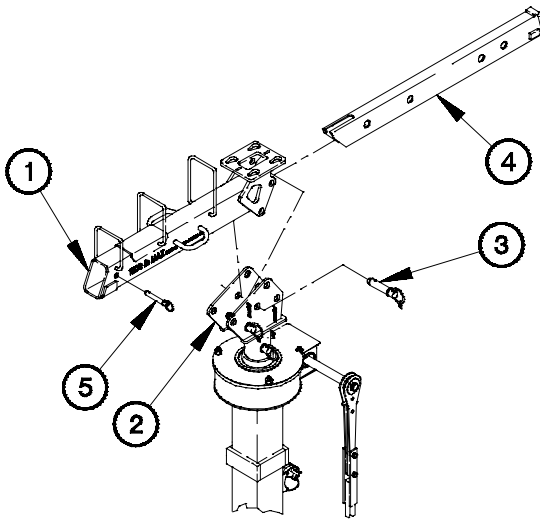
20-74. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM REPLACEMENT (CONT)

- (4) Remove quick release pin (10) from base weld (11) and fly section (5).
- (5) Remove fly section (5) from base weld (11).
- (6) Remove quick release pin (12) and base weld (11) from turret (13).



XV64R031

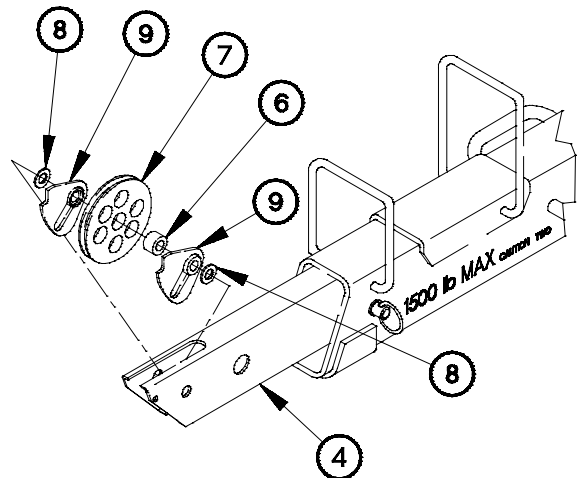
b. Installation.



XV64I011

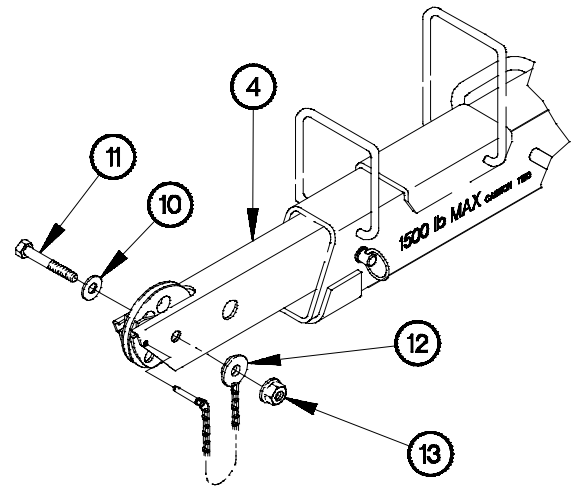
- (1) Install base weld (1) in turret (2) with quick release pin (3).
- (2) Position fly section (4) in base weld (1).
- (3) Install quick release pin (5) through base weld (1) and fly section (4).

- (4) Install bushing (6) in sheave (7).
- (5) Position two washers (8), detent plates (9), and sheave (7) in fly section (4).



XV64I021

- (6) Install washer (10), screw (11), chain assembly (12), and self-locking nut (13) in fly section (4).



c. Follow-On Maintenance.

Install LMHC winch (para 20-73).

End of Task.

XV641031

20-75. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM SHEAVE REPLACEMENT	
This task covers:	
a. Removal b. Installation	c. Follow-On Maintenance
INITIAL SETUP	
Equipment Conditions LMHC power cable removed (TM 9-2320-365-10).	Materials/Parts Nut, Self-Locking (Item 151, Appendix G) Bushing, Sleeve (Item 5, Appendix G)
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Gloves, Welders (Item 14, Appendix C)	

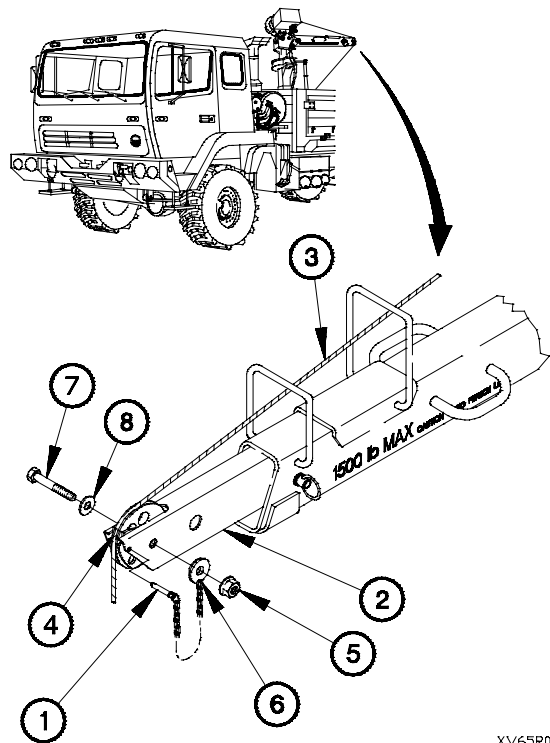
a. Removal.

- (1) Remove quick release pin (1) from fly section (2).

WARNING

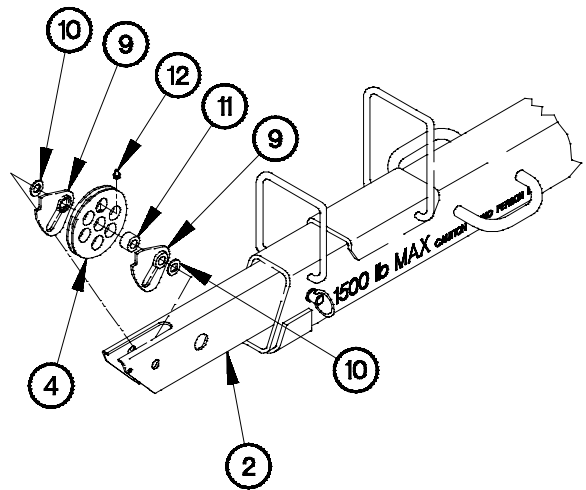
Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

- (2) Remove wire rope (3) from sheave (4).
- (3) Remove self-locking nut (5), chain assembly (6), screw (7), and washer (8) from fly section (2). Discard self-locking nut.



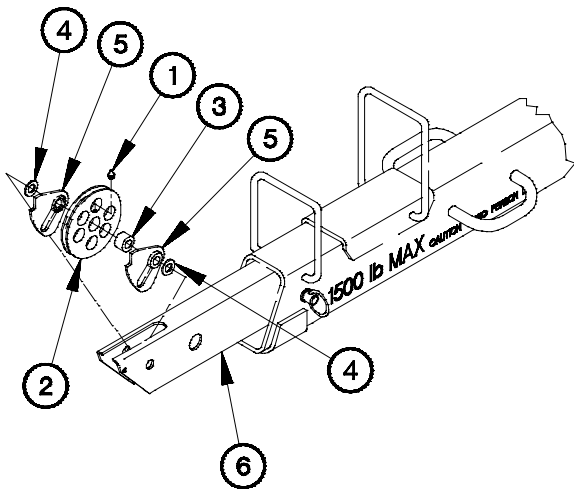
XV65R011

- (4) Remove sheave (4), two detent plates (9), and washers (10) from fly section (2).
- (5) Remove bushing (11) from sheave (4). Discard bushing.
- (6) Remove fitting (12) from sheave (4).



XV65R021

b. Installation.



XV65I011

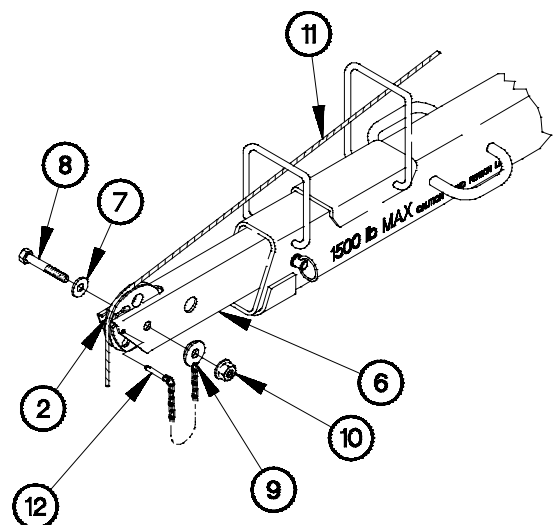
- (1) Install fitting (1) in sheave (2).
- (2) Install bushing (3) in sheave (2).
- (3) Position sheave (2), two washers (4), and detent plates (5) in fly section (6).

- (4) Install washer (7), screw (8), chain assembly (9), and self-locking nut (10) in fly section (6).

WARNING

Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

- (5) Install wire rope (11) in sheave (2).
- (6) Install quick release pin (12) in fly section (6).



XV65I021

**20-75. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM SHEAVE REPLACEMENT
(CONT)**

c. Follow-On Maintenance.

- (1) Install LMHC power cable (TM 9-2320-365-10).
- (2) Extend and retract LMHC wire rope assembly to check for proper function (TM 9-2320-365-10).

End of Task.

20-76. LIGHT MATERIAL HANDLING CRANE (LMHC) TURRET REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- LMHC power cable removed (TM 9-2320-365-10).
- LMHC remote control cable removed (TM 9-2320-365-10).

Personnel Required

(2)

a. Removal.

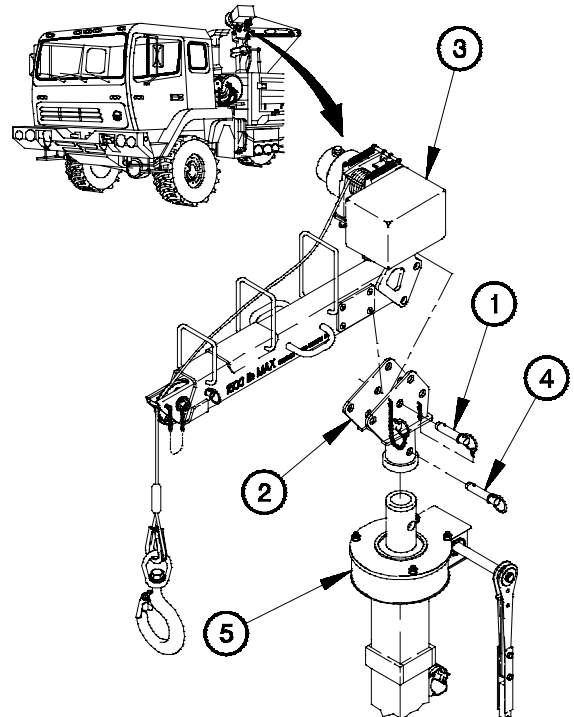
WARNING

Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use an assistant when removing boom assembly. Failure to comply may result in injury to personnel.

NOTE

Steps (1) and (2) require the aid of an assistant.

- (1) Remove quick release pin (1) from turret (2).
- (2) Remove boom assembly (3) from turret (2).
- (3) Remove quick release pin (4) from turret (2).
- (4) Remove turret (2) from mast (5).



XV66R011

20-76. LIGHT MATERIAL HANDLING CRANE (LMHC) TURRET REPLACEMENT (CONT)

b. Installation.

- (1) Position turret (1) on mast (2).
- (2) Install quick release pin (3) in turret (1).

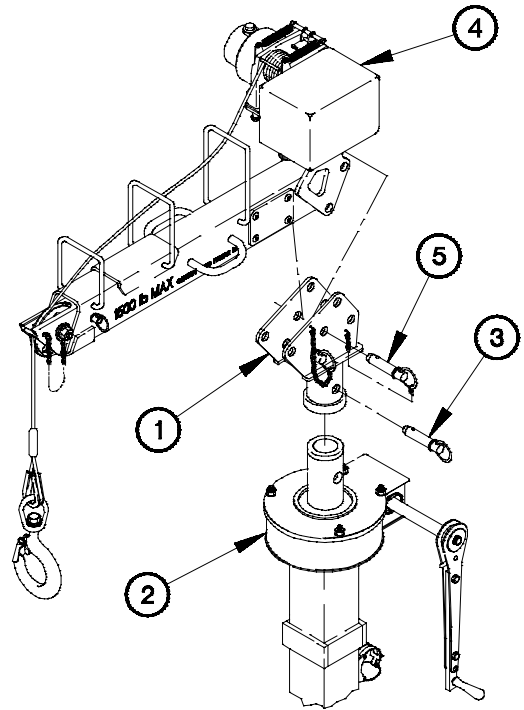
WARNING

Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use the aid of an assistant when installing boom assembly. Failure to comply may result in injury to personnel.

NOTE

Steps (3) and (4) require the aid of an assistant.

- (3) Install boom assembly (4) on turret (1).
- (4) Install quick release pin (5) in boom assembly (4).



XV661011

c. Follow-On Maintenance.

- (1) Install LMHC remote control unit cable (TM 9-2320-365-10).
- (2) Install LMHC power cable (TM 9-2320-365-10).
- (3) Operate LMHC and check for proper operation (TM 9-2320-365-10).

End of Task.

20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR	
This task covers:	
a. Disassembly b. Assembly	c. Follow-On Maintenance
INITIAL SETUP	
<p>Equipment Conditions LMHC control box power cable removed (TM 9-2320-365-10). LMHC control box removed (TM 9-2320-365-10).</p> <p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Tool Kit, Auto Fuel and Electrical Systems Repair (Item 43, Appendix C)</p>	<p>Materials/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Lockwasher (2) (Item 85, Appendix G) Lockwasher (2) (Item 96, Appendix G) Lockwasher (4) (Item 95, Appendix G) Gasket (Item 26, Appendix G) Terminal, Lug (2) (Item 267, Appendix G)</p>

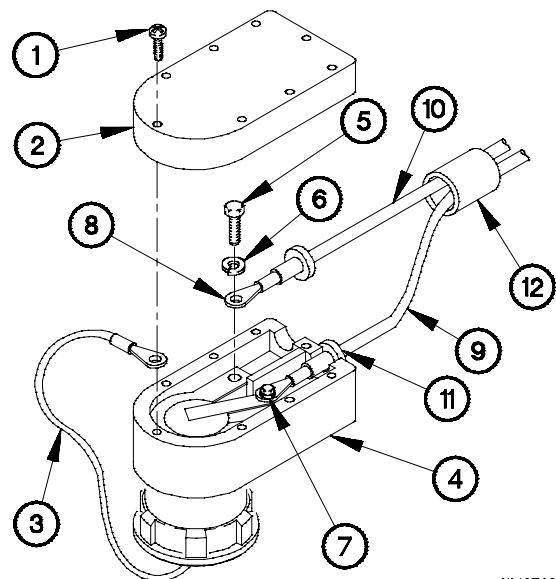
a. Disassembly.

- (1) Remove eight screws (1), cover (2), and retainer (3) from NATO plug (4).

NOTE

Tag wires and connection points prior to disconnecting.

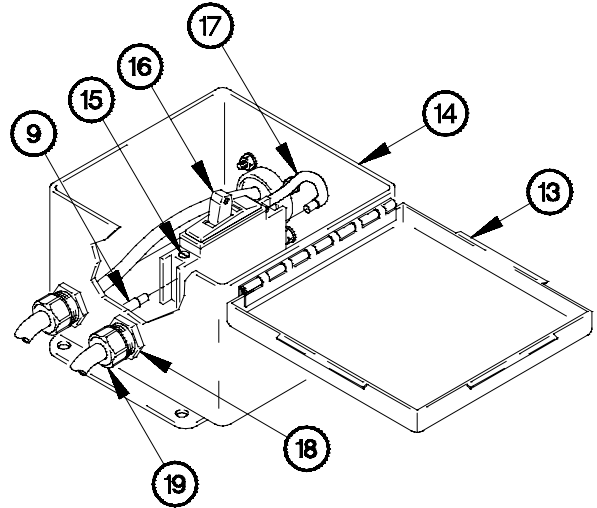
- (2) Remove two screws (5), lockwashers (6), and terminal lugs (7 and 8) from NATO plug (4). Discard lockwashers.
- (3) Remove terminal lugs (7 and 8) from wires (9 and 10). Discard terminal lugs.
- (4) Remove two grommets (11) from wires (9 and 10).
- (5) Remove sleeve (12) from wires (9 and 10).



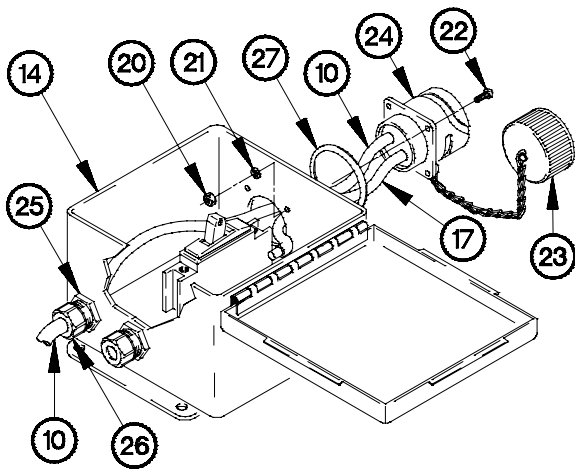
XV67A011

**20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR
(CONT)**

- (6) Open cover (13) on control box (14).
- (7) Loosen two screws (15) on circuit breaker (16).
- (8) Disconnect wires (17 and 9) from circuit breaker (16).
- (9) Loosen nut (18) on box connector (19).
- (10) Remove wire (9) from control box (14).



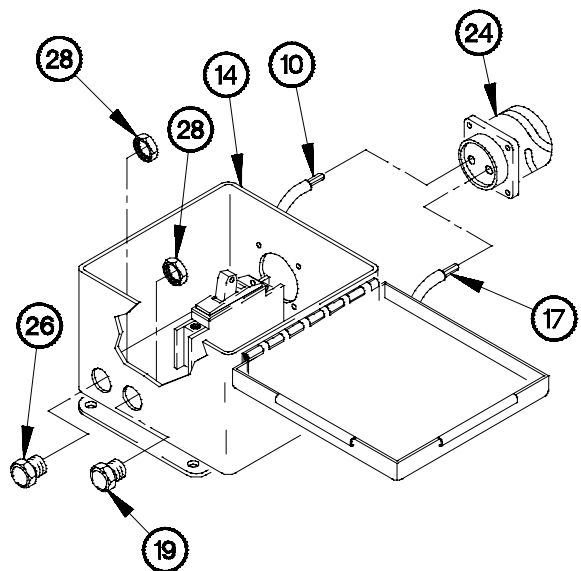
XV 67A021



XV 67A031

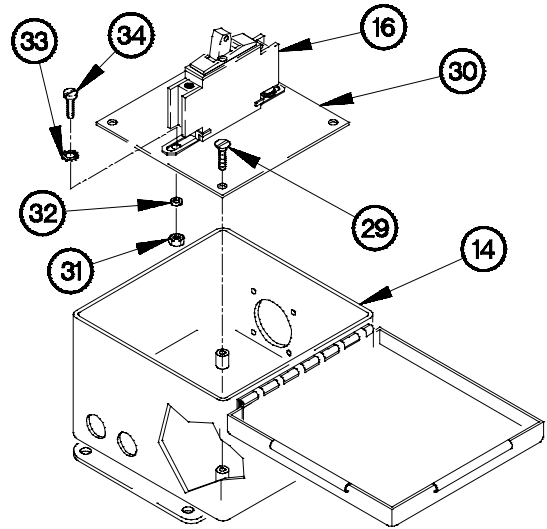
- (11) Remove four nuts (20), lockwashers (21), screws (22), and cap (23) from receptacle (24). Discard lockwashers.
- (12) Loosen nut (25) on box connector (26).
- (13) Remove receptacle (24), wires (17 and 10), and gasket (27) from control box (14). Discard gasket.

- (14) Remove wires (17 and 10) from receptacle (24).
- (15) Remove two nuts (28) and box connectors (19 and 26) from control box (14).



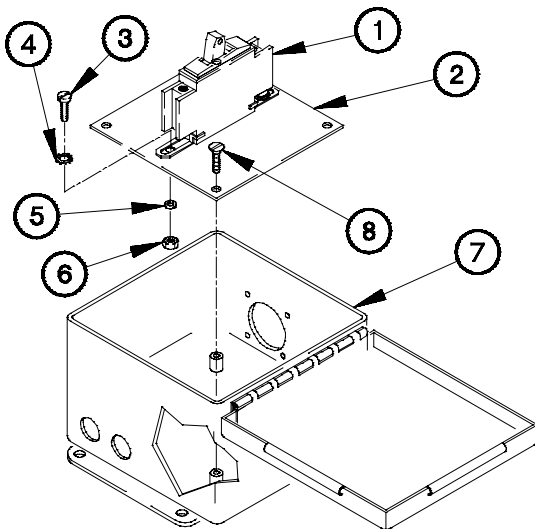
XV 67A041

- (16) Remove four screws (29) and plate (30) from control box (14).
- (17) Remove two nuts (31), lockwashers (32), washers (33), screws (34), and circuit breaker (16) from plate (30). Discard lockwashers.



XV67A051

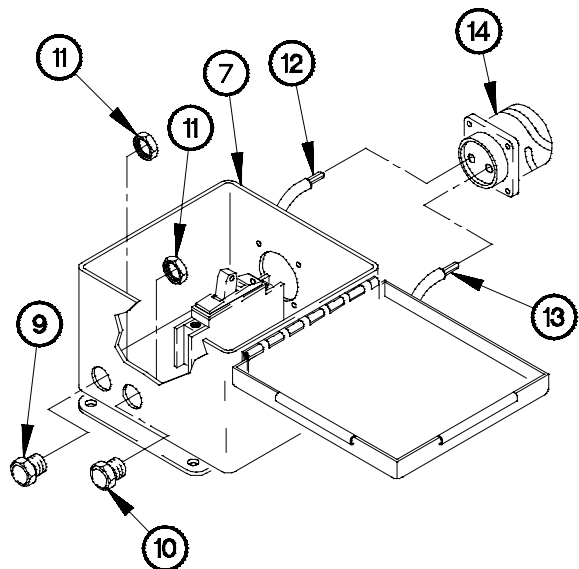
b. Assembly.



XV67B011

- (1) Install circuit breaker (1) on plate (2) with two screws (3), washers (4), lockwashers (5), and nuts (6).
- (2) Install plate (2) in control box (7) with four screws (8).

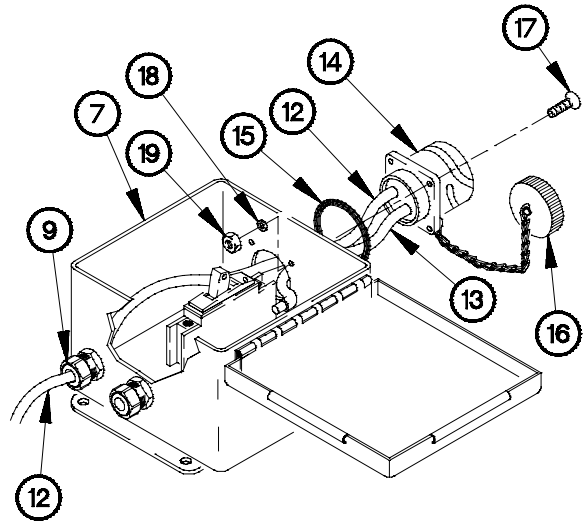
- (3) Install box connectors (9 and 10) in control box (7) with nuts (11).
- (4) Install wires (12 and 13) in receptacle (14).



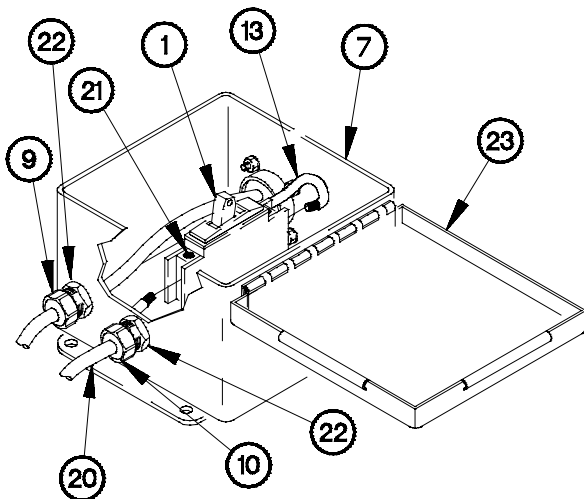
XV67B021

**20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR
(CONT)**

- (5) Install wires (12 and 13), gasket (15), and receptacle (14) in control box (7).
- (6) Position wire (12) through box connector (9).
- (7) Install cap (16), four screws (17), lockwashers (18), and nuts (19) in receptacle (14).



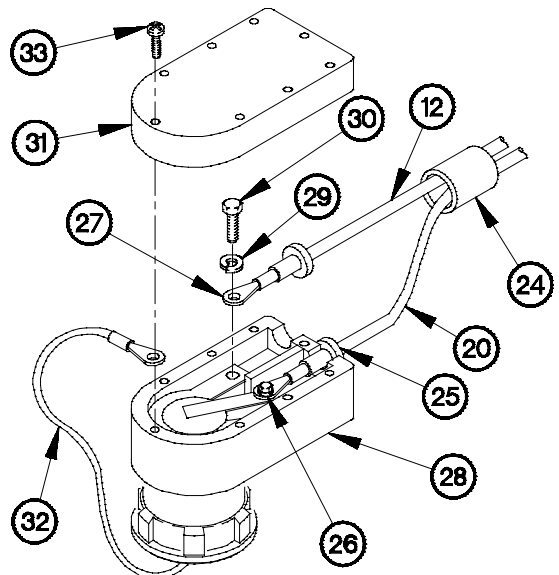
XV67B031



XV67B041

- (8) Position wire (20) through box connector (10).
- (9) Install wires (13 and 20) in circuit breaker (1) with two screws (21).
- (10) Tighten two nuts (22) on box connectors (9 and 10).
- (11) Close cover (23) on control box (7).

- (12) Install sleeve (24) on wires (12 and 20).
- (13) Install two grommets (25) on wires (12 and 20).
- (14) Install terminal lugs (26 and 27) on wires (12 and 20).
- (15) Install wires (12 and 20) on NATO plug (28) with two lockwashers (29) and screws (30).
- (16) Install cover (31) and retainer (32) on NATO plug (28) with eight screws (33).



XV67B051

c. Follow-On Maintenance.

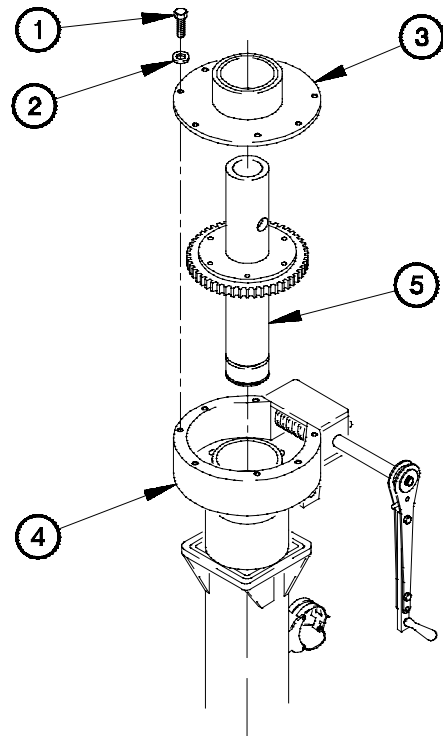
Operate LMHC and check for proper operation (TM 9-2320-365-10).

End of Task.

20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR	
This task covers:	
a. Disassembly b. Cleaning	c. Assembly d. Follow-on Maintenance
INITIAL SETUP	
Equipment Condition LMHC disassembled (para 20-70). Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C) Gloves, Rubber (Item 13, Appendix C)	Materials/Parts Solvent, Dry Cleaning (Item 71, Appendix D) Rag, Wiping (Item 51, Appendix D) Lockwasher (3) (Item 90, Appendix G) Lockwasher (2) (Item 91, Appendix G)

a. Disassembly.

- (1) Remove seven screws (1) and washers (2) from top plate (3).
- (2) Remove top plate (3) from housing (4).
- (3) Remove rotator (5) from housing (4).

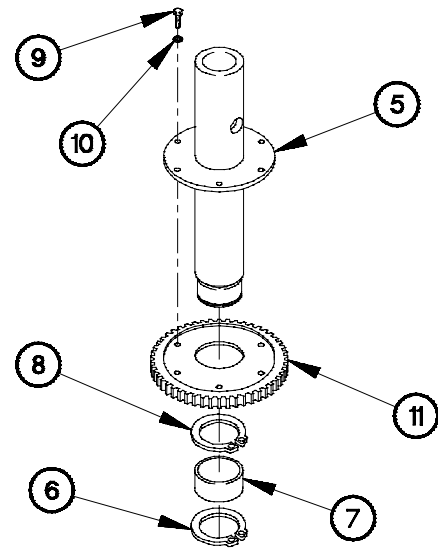


XV68R011

WARNING

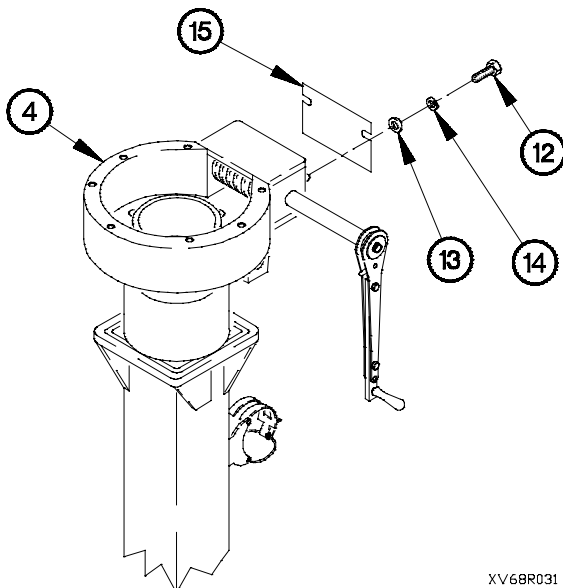
Use care when removing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

- (4) Remove retaining ring (6) from rotator (5).
- (5) Remove bearing (7) from rotator (5).
- (6) Remove retaining ring (8) from rotator (5).
- (7) Remove six screws (9), washers (10), and gear (11) from rotator (5).



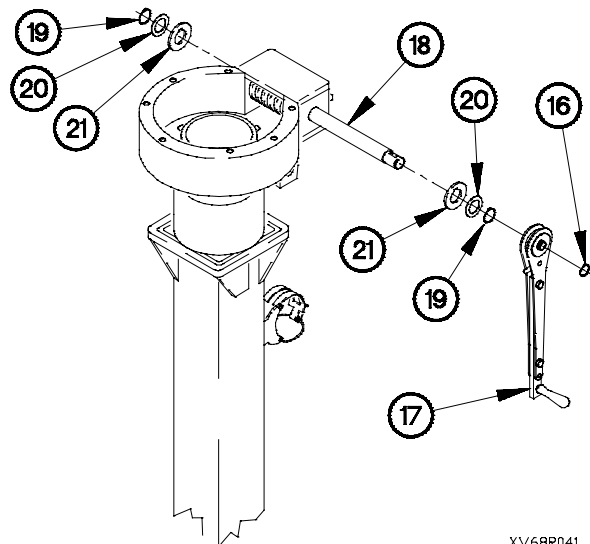
XV68R021

- (8) Remove two screws (12), washers (13), lockwashers (14), and plate (15) from housing (4). Discard lockwashers.



XV68R031

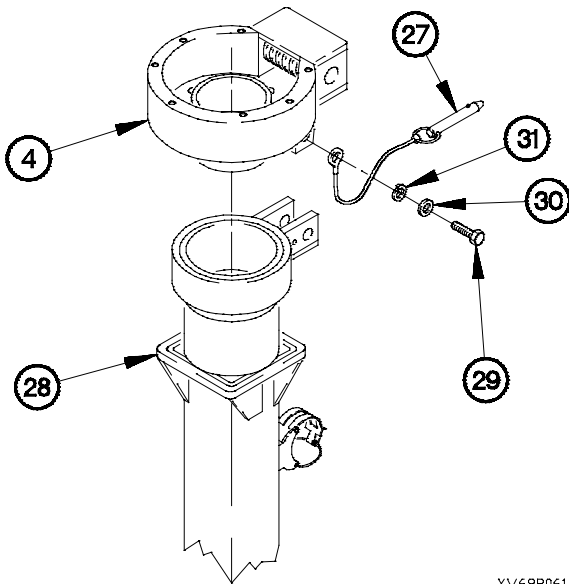
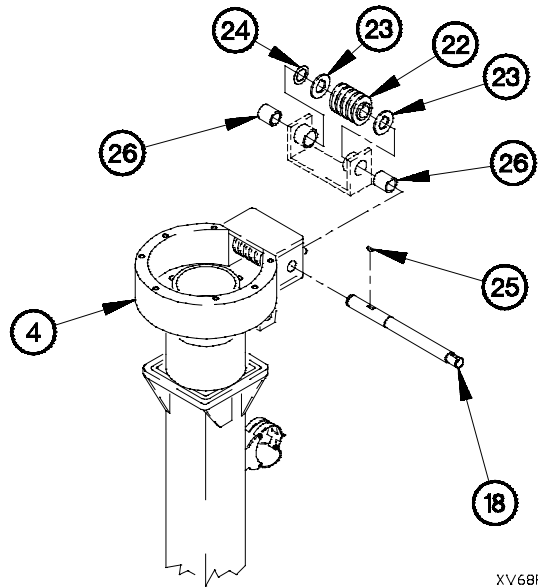
- (9) Remove retaining ring (16) and handle (17) from shaft (18).
- (10) Remove two retaining rings (19), washers (20), and washers (21) from shaft (18).



XV68R041

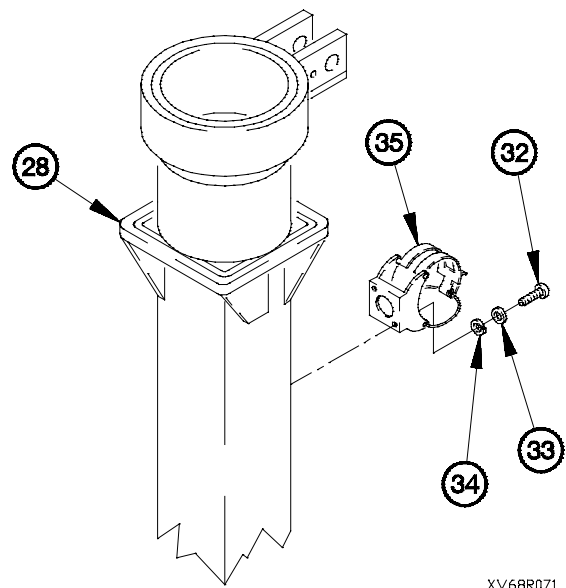
20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR (CONT)

- (11) Remove shaft (18), worm gear (22), two washers (23), and washer (24) from housing (4).
- (12) Remove woodruff key (25) from shaft (18).
- (13) Remove two bearings (26) from housing (4).



- (14) Remove quick release pin (27) from housing (4).
- (15) Remove housing (4) from mast (28).
- (16) Remove screw (29), washer (30), lockwasher (31), and quick release pin (27) from housing (4). Discard lockwasher.

- (17) Remove two screws (32), washers (33), lockwashers (34), and clamp (35) from mast (28). Discard lockwashers.



b. Cleaning.

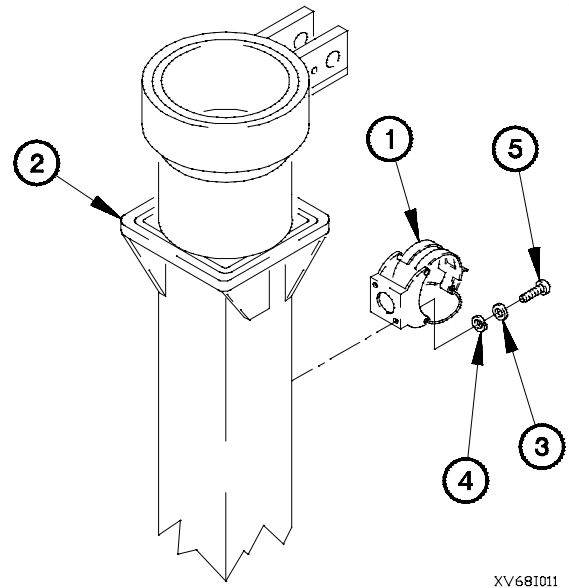
WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint of Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

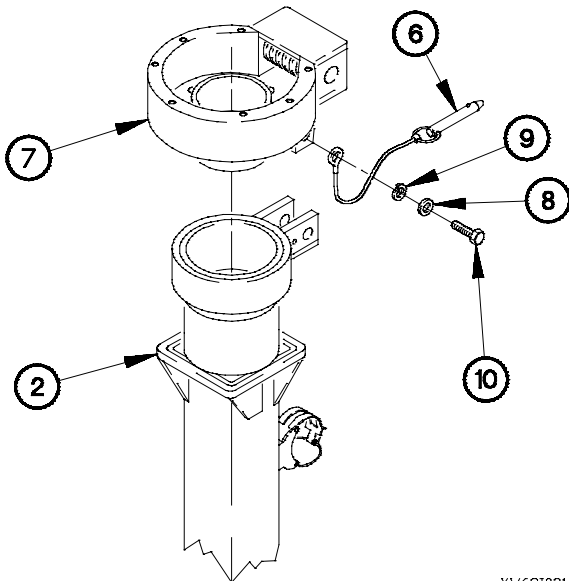
Clean all metal parts with dry cleaning solvent.

c. Assembly.

- (1) Install clamp (1) on mast (2) with two lockwashers (3), washers (4), and screws (5).



XV681011

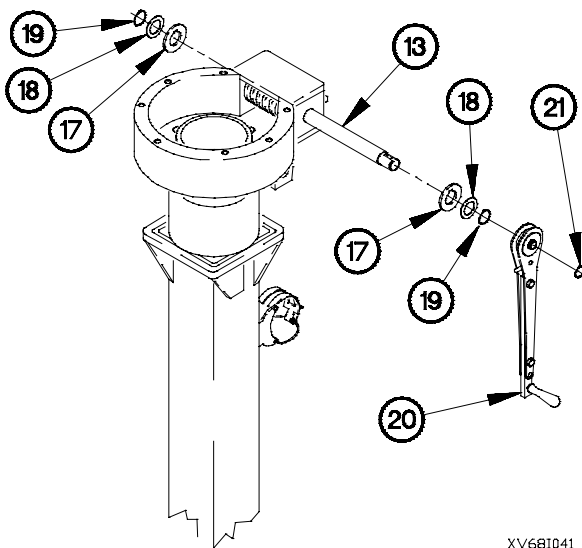
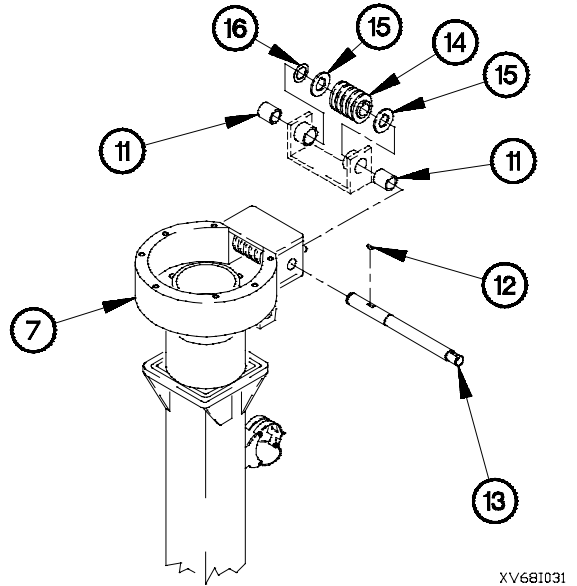


XV681021

- (2) Install quick release pin (6) on housing (7) with lockwasher (8), washer (9), and screw (10).
- (3) Position housing (7) on mast (2).
- (4) Install quick release pin (6) in housing (7).

20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR (CONT)

- (5) Install two bearings (11) in housing (7).
- (6) Install woodruff key (12) on shaft (13).
- (7) Install worm gear (14), two washers (15), washer (16), and shaft (13) in housing (7).

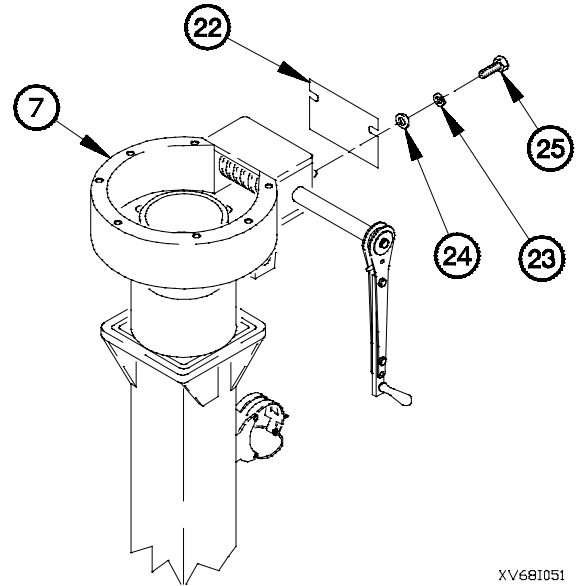


WARNING

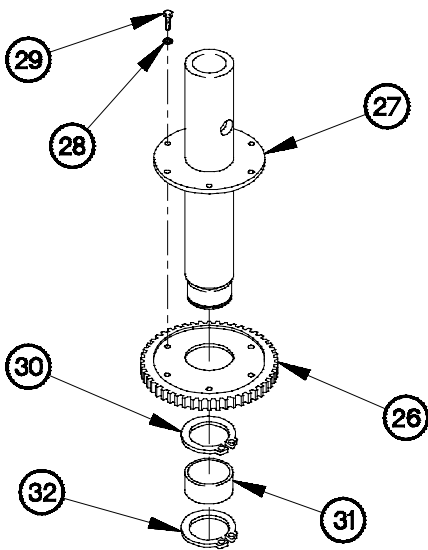
Use care when installing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

- (8) Install two washers (17), washers (18), and retaining rings (19) on shaft (13).
- (9) Install handle (20) on shaft (13) with retaining ring (21).

- (10) Install plate (22) on housing (7) with two lockwashers (23), washers (24), and screws (25).



XV681051



XV681061

- (11) Install gear (26) on rotator (27) with six washers (28) and screws (29).

WARNING

Use care when installing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

- (12) Install retaining ring (30) on rotator (27).
 (13) Install bearing (31) on rotator (27).
 (14) Install retaining ring (32) on rotator (27).

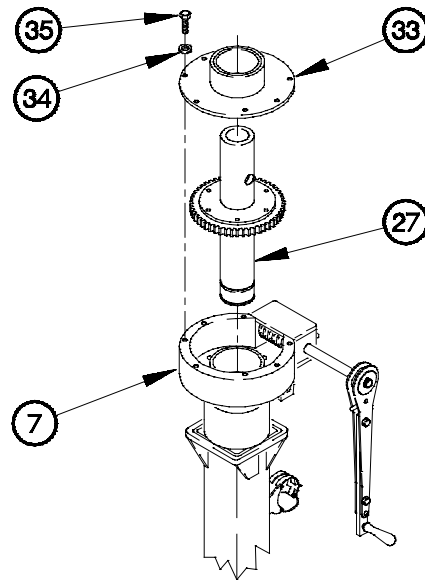
20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR (CONT)

- (15) Install rotator (27) in housing (7).
- (16) Install top plate (33) on housing (7) with seven washers (34) and screws (35).

d. Follow-On Maintenance.

Assemble LMHC (para 20-70).

End of Task.



XV681071

20-79. TROOP TRANSPORT ALARM CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).
Cab raised (TM 9-2320-365-10).

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D)

Tools and Special Tools

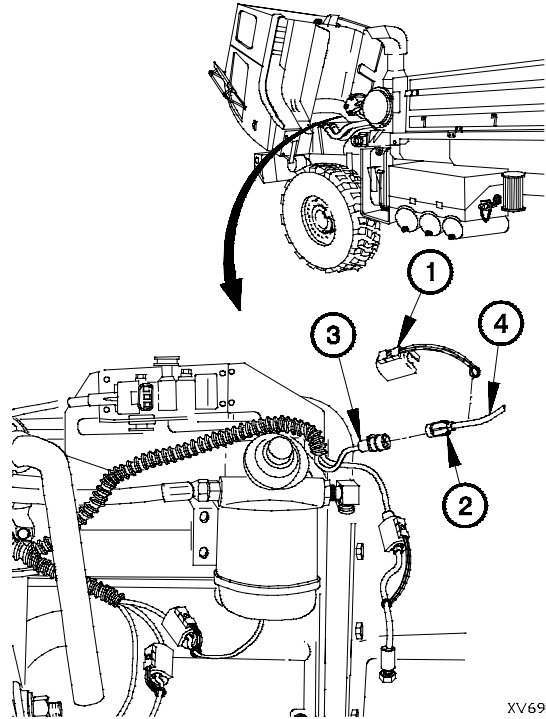
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

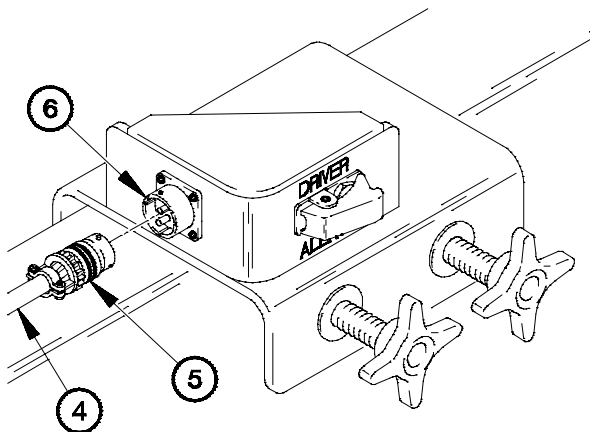
NOTE

Remove plastic cable ties as required.

- (1) Disconnect connector clamp (1) from connector J39 (2).
- (2) Disconnect connector J39 (2) from connector P39 (3).
- (3) Remove connector clamp (1) from troop transport alarm cable (4).



XV69R01B



XV69R02B

- (4) Disconnect connector P921 (5) from connector J921 (6).

NOTE

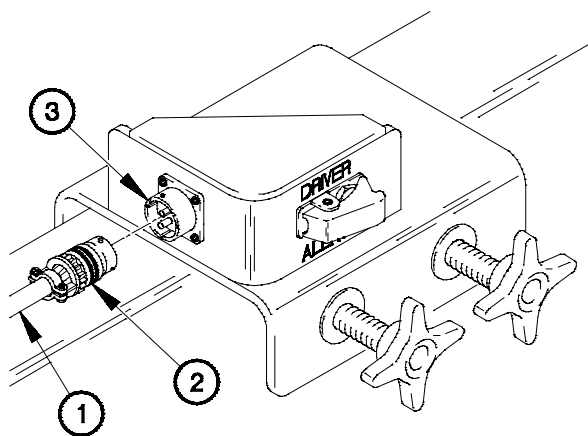
Note routing of cable assembly prior to removal.

- (5) Remove troop transport alarm cable (4) from vehicle.

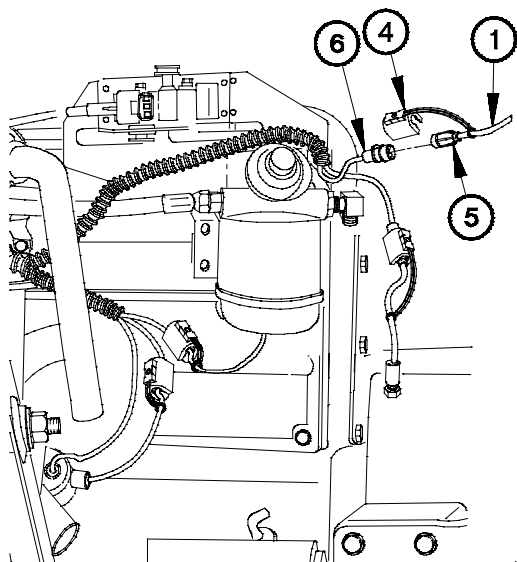
20-79. TROOP TRANSPORT ALARM CABLE ASSEMBLY REPLACEMENT (CONT)

b. Installation.

- (1) Position troop transport alarm cable (1) on vehicle.
- (2) Connect connector P921 (2) to connector J921 (3).



XV69101B



XV69102B

NOTE

Install plastic cable ties as required.

- (3) Install connector clamp (4) on troop transport alarm cable (1).
- (4) Connect connector J39 (5) to connector P39 (6).
- (5) Connect connector clamp (4) to connector J39 (5).

c. Follow-On Maintenance.

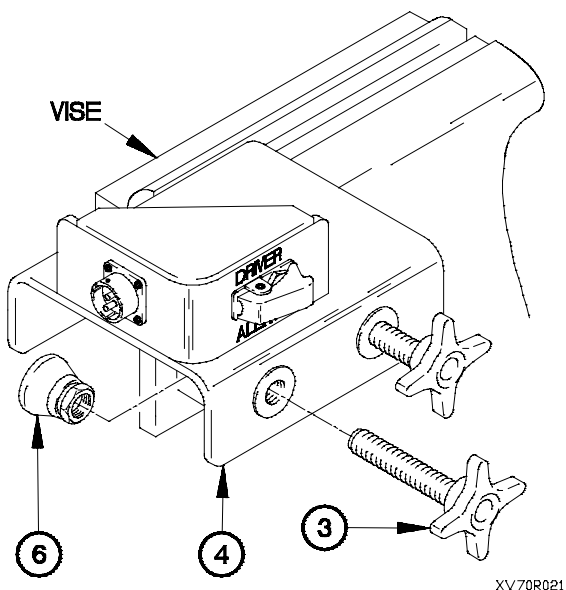
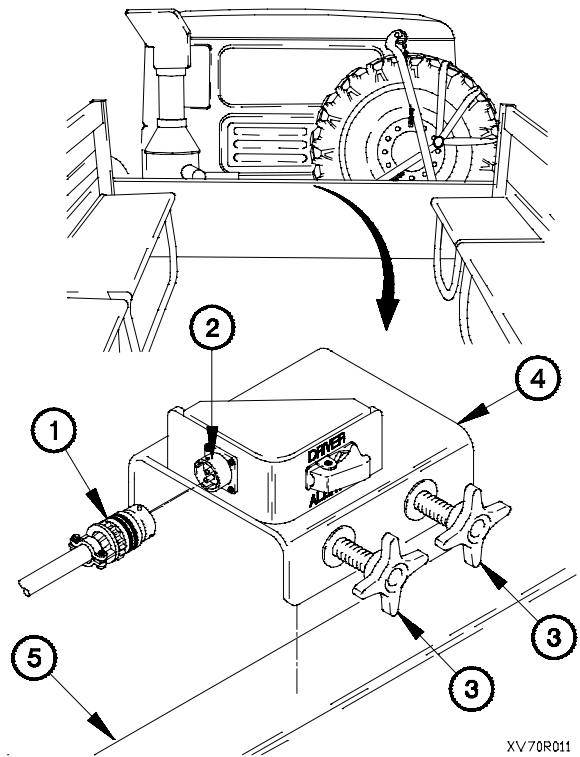
- (1) Lower cab (TM 9-2320-365-10).
- (2) Operate troop transport alarm and check for proper operation (TM 9-2320-365-10).

End of Task.

20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT	
This task covers:	
a. Removal b. Installation	c. Follow-On Maintenance
INITIAL SETUP	
Equipment Conditions Engine shut down (TM 9-2320-365-10). Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Vise, Machinist (Item 46, Appendix C)	Materials/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Adhesive (Item 8, Appendix D) Sealing Compound (Item 64, Appendix D) Nut, Self-Locking (4) (Item 120, Appendix G)

a. Removal.

- (1) Disconnect connector P921 (1) from connector J921 (2).
- (2) Loosen two knobs (3) on bracket (4).
- (3) Remove bracket (4) from cargo bed (5).



- (4) Position bracket (4) in vise.
- (5) Remove two mounts (6) from knobs (3).
- (6) Remove two knobs (3) from bracket (4).

XV 70R011

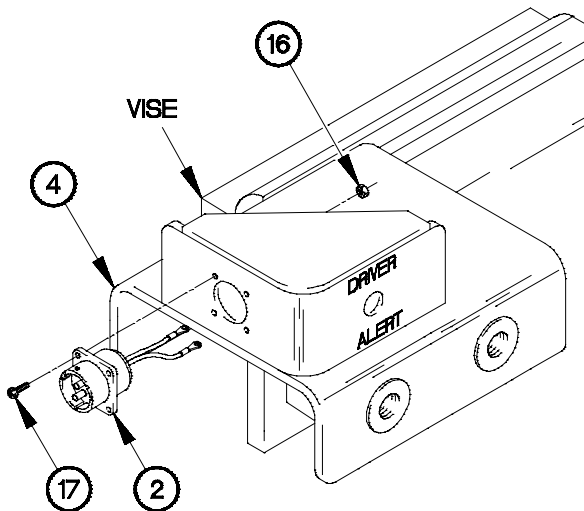
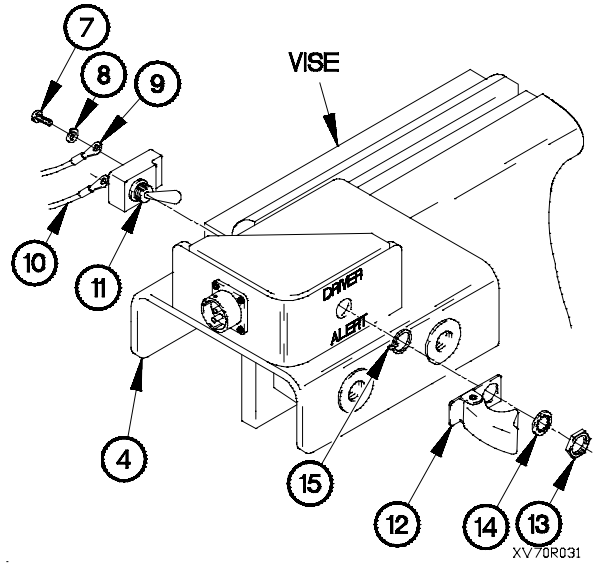
XV 70R021

20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT (CONT)

NOTE

Tag wires and connection points prior to disconnecting.

- (7) Remove two screws (7), lockwashers (8), and terminal lugs TL164 (9) and TL165 (10) from switch (11).
- (8) Lift switch cover (12) on switch (11).
- (9) Remove nut (13), lockwasher (14), switch cover (12), locking ring (15), and switch (11) from bracket (4).



- (10) Remove four self-locking nuts (16), screws (17), and connector J921 (2) from bracket (4). Discard self-locking nuts.

- (11) Remove bracket (4) from vise.

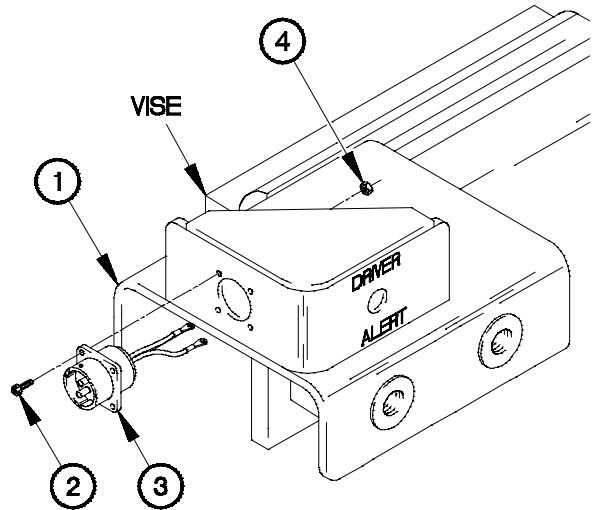
XV 70R041

b. Installation.

- (1) Position bracket (1) in vise.

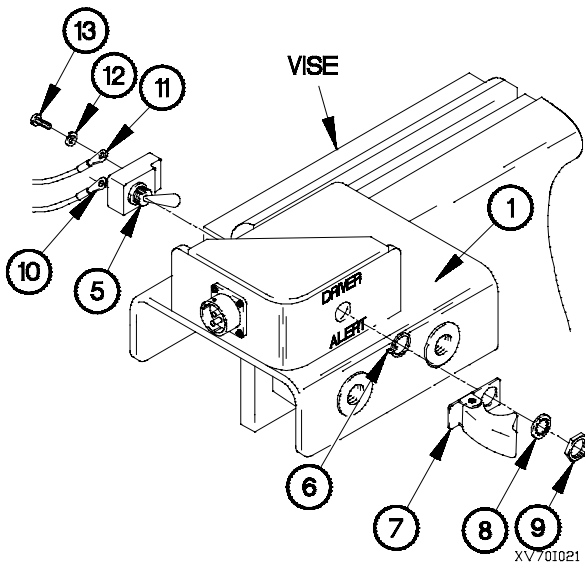
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



Xv701011

- (2) Apply sealing compound to threads of four screws (2).
 (3) Install connector J921 (3) on bracket (1) with four screws (2) and self-locking nuts (4).



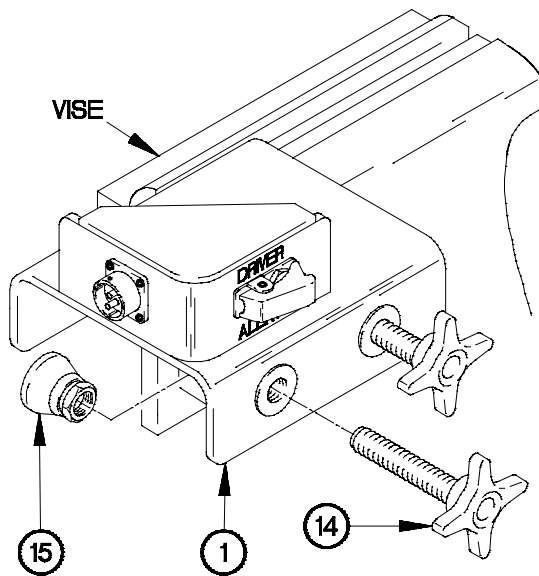
XV701021

- (4) Install switch (5) on bracket (1) with locking ring (6), switch cover (7), lockwasher (8) and nut (9).
 (5) Close switch cover (7) on switch (5).
 (6) Install terminal lugs TL164 (10) and TL165 (11) on switch (5) with two lockwashers (12) and screws (13).
 (7) Apply adhesive to two screws (13), lockwashers (12), and terminal lugs TL164 (10) and TL165 (11).

20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT (CONT)

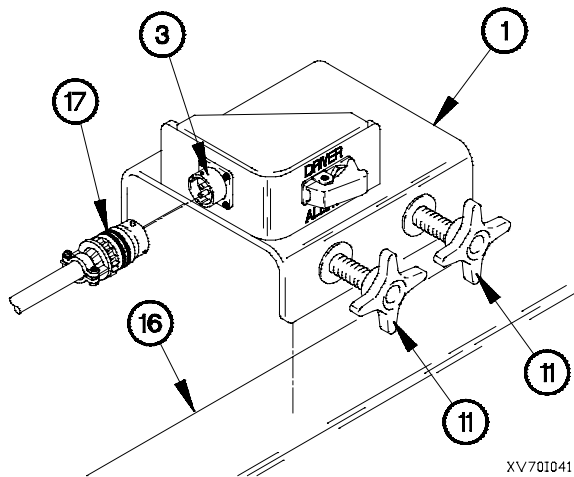
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



xv70i031

- (8) Apply sealing compound to threads of two knobs (14).
- (9) Install two knobs (14) on bracket (1).
- (10) Install two mounts (15) on knobs (14).
- (11) Remove bracket (1) from vise.



XV70I041

- (12) Install bracket (1) on cargo bed (16) with two knobs (11).
- (13) Connect connector P921 (17) to connector J921 (3).

c. Follow-On Maintenance.

Operate troop transport alarm and check for proper operation (TM 9-2320-365-10).

End of Task.

20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL

This task covers:

- a. Installation
- b. Removal
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).
- Cab raised (TM 9-2320-365-10).
- Spare tire lowered (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Materials/Parts

- Lockwasher (30) (Item 84, Appendix G)
- Lockwasher (8) (Item 82, Appendix G)
- Seal, Nonmetallic (2) (Item 254, Appendix G)

Personnel Required

(4)

Tools and Special Tools

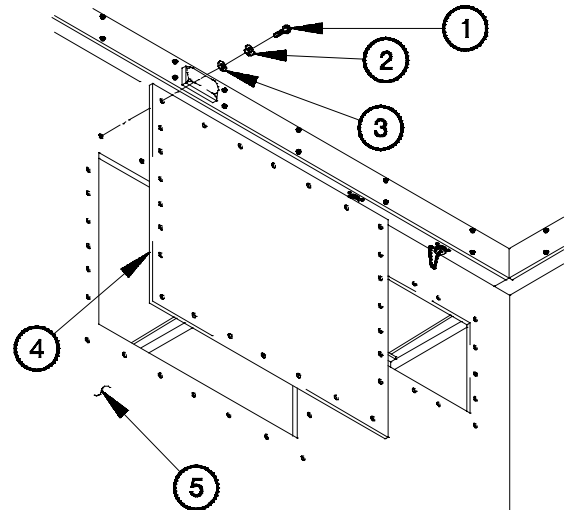
- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Sling, Endless (Item 32, Appendix C)

a. Installation.

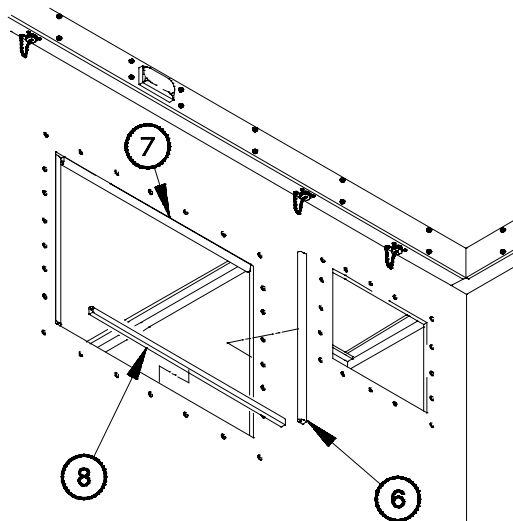
NOTE

Retain cover and hardware for future use.

- (1) Remove 30 screws (1), lockwashers (2), washers (3), and cover (4) from van wall (5). Discard lockwashers.



3V811011

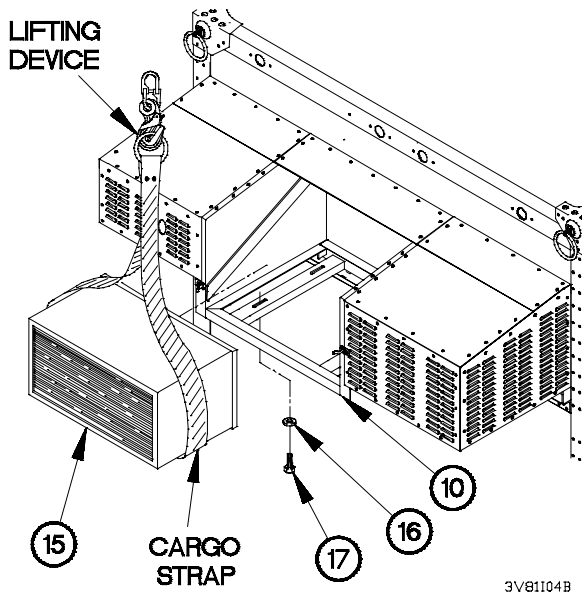
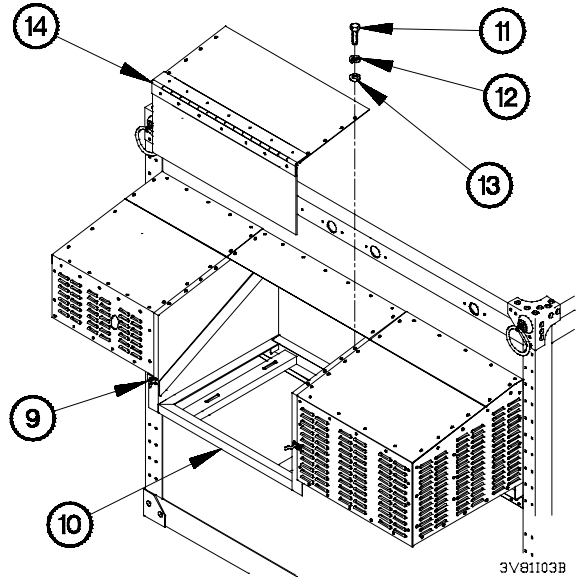


3V811021

- (2) Install seal (6) on left and right side of opening (7).
- (3) Install seal (8) on top and bottom of opening (7).

20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL (CONT)

- (4) Release two latches (9) on pod (10).
- (5) Remove eight screws (11), lockwashers (12), washers (13), and center top front cover (14) from pod (10). Discard lockwashers.



WARNING

Air conditioner weighs approximately 300 lbs (136 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

CAUTION

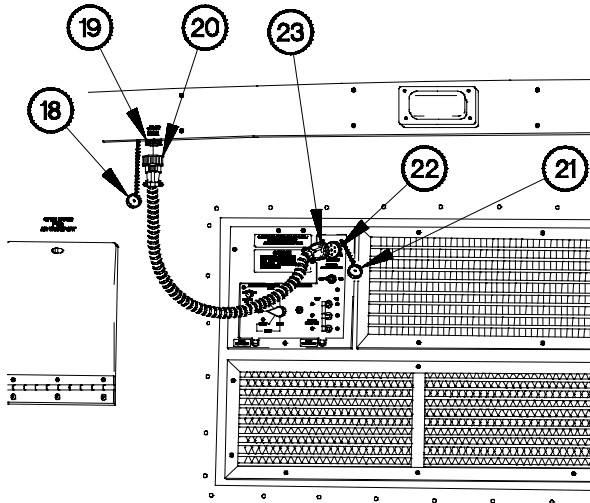
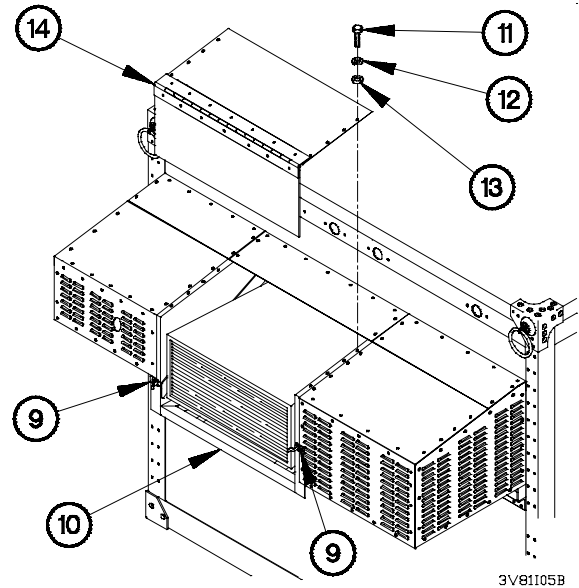
Use care when positioning air conditioner in van pod. Failure to comply may result in damage to air conditioner, pod panel, or seals.

NOTE

Step (6) requires the aid of three assistants.

- (6) Position air conditioner (15) in pod (10) with four washers (16) and screws (17).
- (7) Tighten four screws (17) to 27-29 lb-ft (N·m).

- (8) Install center top front cover (14) on pod (10) with eight washers (13), lockwashers (12), and screws (11).
- (9) Latch two latches (9) on pod (10).



- (10) Remove dust cap (18) from connector J242 (19).
- (11) Connect connector P242 (20) to connector J242 (19).
- (12) Remove dust cap (21) from power input connector (22).
- (13) Connect connector J242A (23) to power input connector (22).

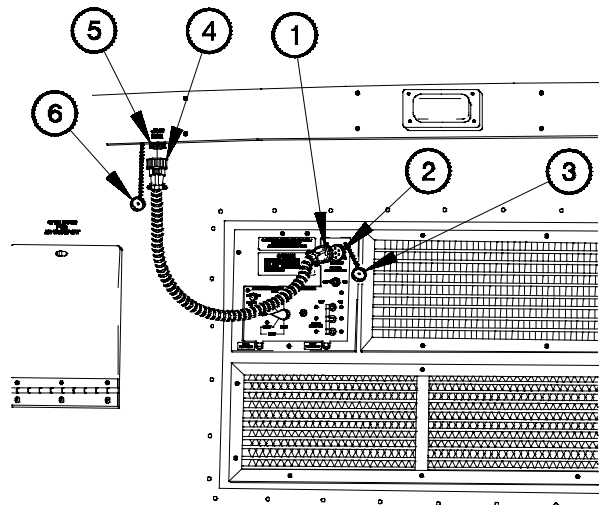
b. Removal.

- (1) Disconnect connector J242A (1) from power input connector (2).
- (2) Install dust cap (3) on power input connector (2).

NOTE

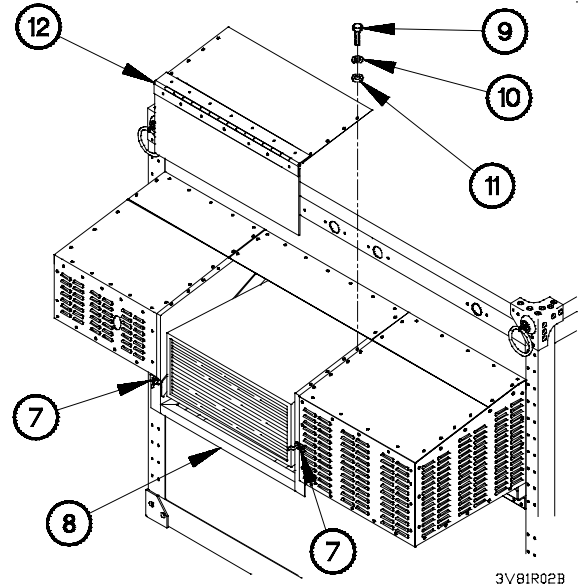
Retain air conditioner power cable for future use.

- (3) Disconnect connector P242 (4) from connector J242 (5).
- (4) Install dust cap (6) on connector J242 (5).



20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL (CONT)

- (5) Release two latches (7) on pod (8).
- (6) Remove eight screws (9), lockwashers (10), washers (11), and center top front cover (12) from pod (8). Discard lockwashers.



- (7) Remove four screws (13) and washers (14) from pod (8).

WARNING

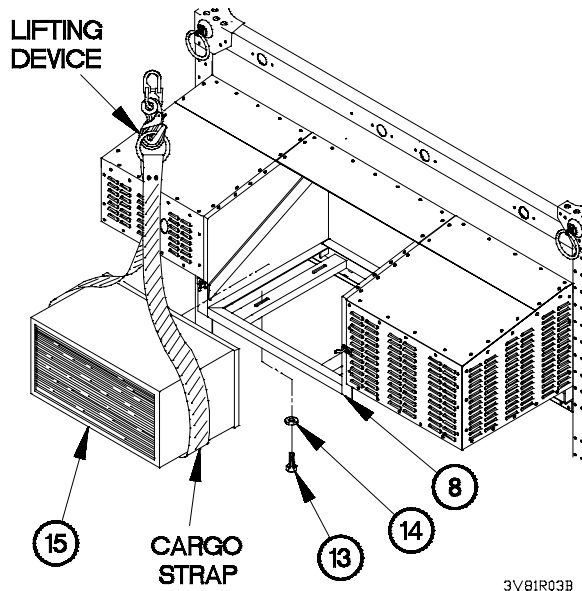
Air conditioner weighs approximately 300 lbs (136 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

CAUTION

Use care when removing air conditioner from van pod. Failure to comply may result in damage to equipment.

NOTE

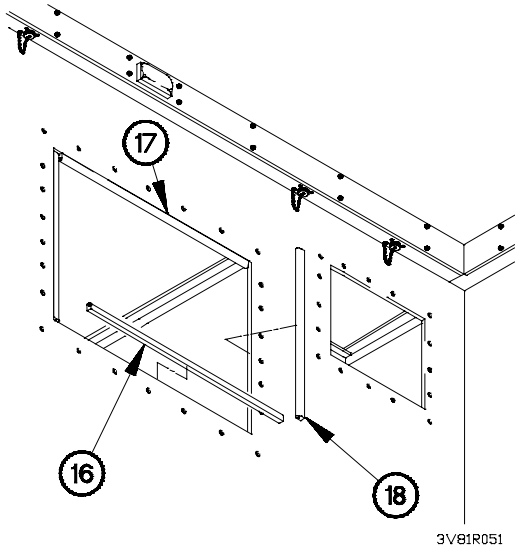
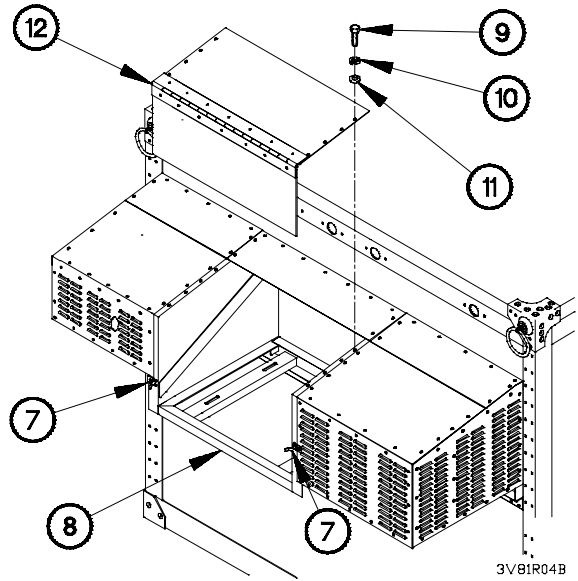
- Step (8) requires the aid of three assistants.
- Retain air conditioner and hardware for future use.



- (8) Remove air conditioner (15) from pod (8).

(9) Install center top front cover (12) on pod (8) with eight washers (11), lockwashers (10), and screws (9).

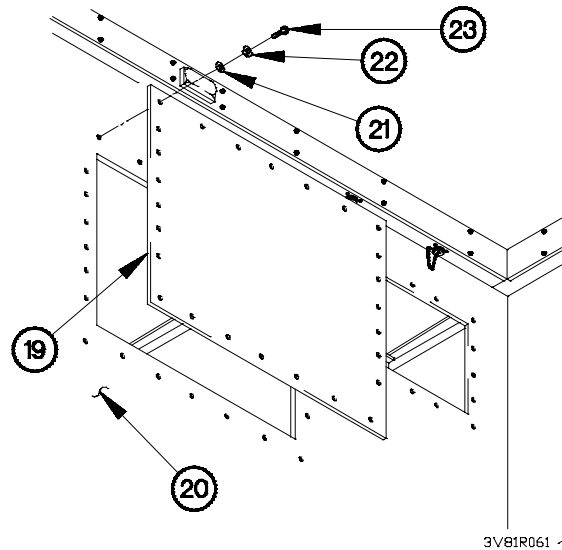
(10) Latch two latches (7) on pod (8).



(11) Remove seals (16) from top and bottom of opening (17). Discard seals.

(12) Remove seals (18) from left and right side of opening (17). Discard seals.

(13) Install cover (19) on van wall (20) with 30 washers (21), lockwashers (22), and screws (23).



20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL (CONT)

c. Follow-On Maintenance.

- (1) Raise spare tire (TM 9-2320-365-10).
- (2) Lower cab (TM 9-2320-365-10).
- (3) Connect batteries (para 7-48).
- (4) Connect AC power (TM 9-2320-365-10).
- (5) Operate air conditioner and check for proper operation (TM 9-2320-365-10).
- (6) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-82. M1079 A/C POWER CABLE REPLACEMENT**This task covers:**

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP**Equipment Conditions**

- Engine shut down (TM 9-2320-365-10).
- AC power disconnected (TM 9-2320-365-10).
- LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

a. Removal.

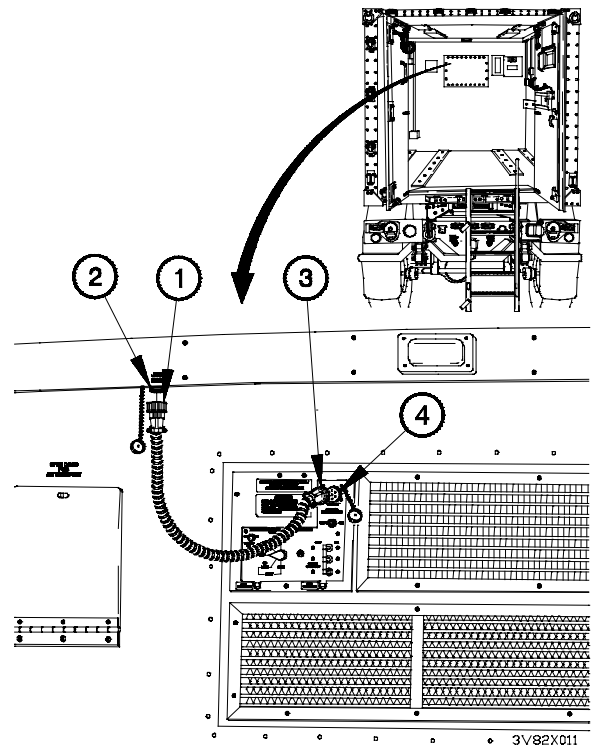
- (1) Disconnect connector P242 (1) from connector J242 (2).
- (2) Disconnect connector J242A (3) from A/C power connector (4).

b. Installation

- (1) Connect connector J242A (3) to A/C power connector (4).
- (2) Connect connector P242 (1) to connector J242 (2).

c. Follow-On Maintenance.

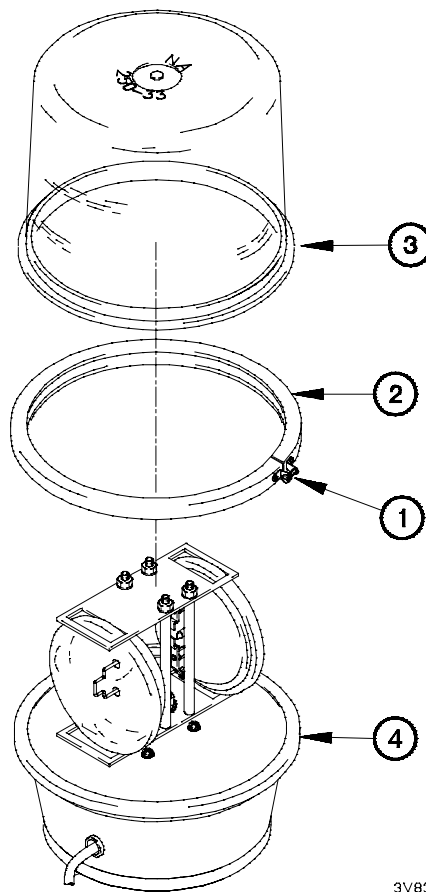
- (1) Connect AC power (TM 9-2320-365-10).
- (2) Close LH and RH doors (TM 9-2320-365-10).

**End of Task.**

20-83. AMBER WARNING LIGHT ASSEMBLY REPAIR	
This task covers: a. Disassembly b. Assembly c. Follow-On Maintenance	
INITIAL SETUP	
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)	Materials/Parts Lockwasher (4) (Item 68, Appendix G)

a. Disassembly.

- (1) Loosen screw (1) on clamp (2).
- (2) Remove lens (3) from lamp housing (4).
- (3) Remove clamp (2) from lamp housing (4).



3V83A011

NOTE

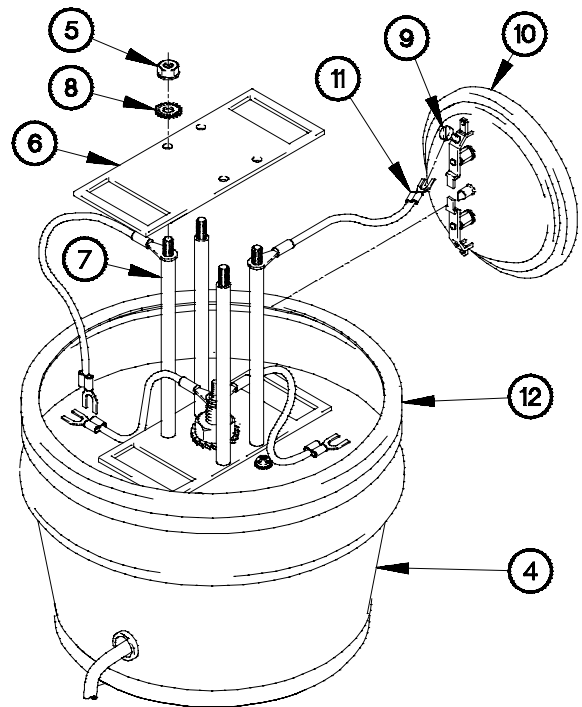
Perform step (4) on amber warning lights equipped with nuts containing a captive lockwasher.

- (4) Remove four self-locking nuts (5) and lamp mounting plate (6) from mounting studs (7). Discard self-locking nuts.

NOTE

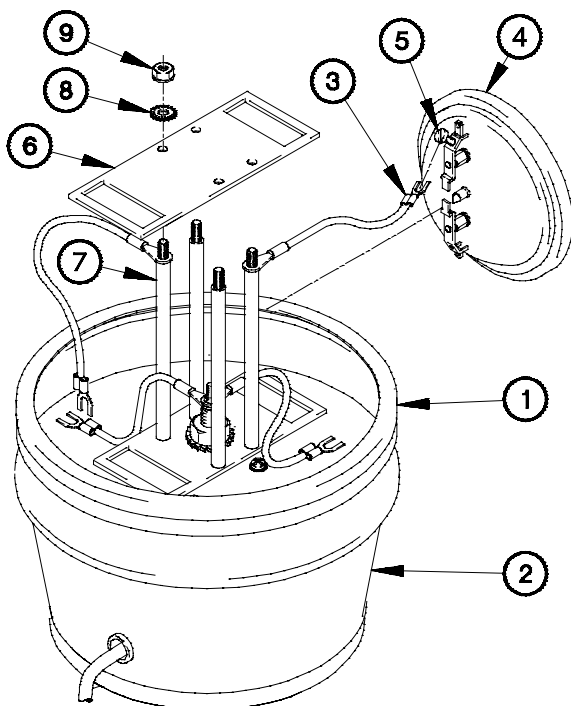
Perform step (5) on amber warning lights equipped with nuts and lockwashers.

- (5) Remove four nuts (5), lockwashers (8), and lamp mounting plate (6) from mounting studs (7). Discard lockwashers.
- (6) Loosen four screws (9) on two lamps (10).
- (7) Remove four terminal lugs (11) from two lamps (10).
- (8) Remove seal (12) from lamp housing (4).



3V83A021

b. Assembly.



3V83B011

- (1) Install seal (1) on lamp housing (2).
- (2) Install four terminal lugs (3) on two lamps (4) with four screws (5).
- (3) Install lamp mounting plate (6) on four mounting studs (7) with lockwashers (8) and nuts (9).

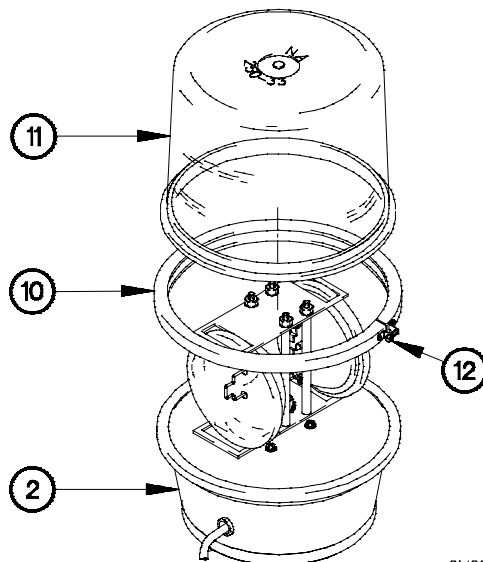
20-83. AMBER WARNING LIGHT ASSEMBLY REPAIR (CONT)

- (4) Position clamp (10) on lamp housing (2).
- (5) Install lens (11) on lamp housing (2).
- (6) Tighten screw (12) in clamp (10).

c. Follow-On Maintenance.

Operate amber warning light and check for proper operation (TM 9-2320-365-10).

End of Task.



3V83B021

**20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT
INSTALLATION/REMOVAL**

This task covers:

- a. Installation
- b. Removal
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).
Cargo bed side panels and stakes removed (TM 9-2320-365-10).

Tools and Special Tools

Drill Set, Twist (Item 8, Appendix C)
Drill, Portable, Electric (Item 7, Appendix C)
Tap, thread, cutting (Item 40.3, Appendix C)
Tap and Die Set, (Item 40.2, Appendix C)

Tools and Special Tools (Cont)

Tool Kit, Genl Mech (Item 44, Appendix C)
Sling, Cargo (2) (Item 31, Appendix C)

Materials/Parts

Lockwasher (8) (Item 66.2, Appendix G)
Nut, Self-Locking (4) (Item 143, Appendix G)

Personnel Required

(2)

NOTE

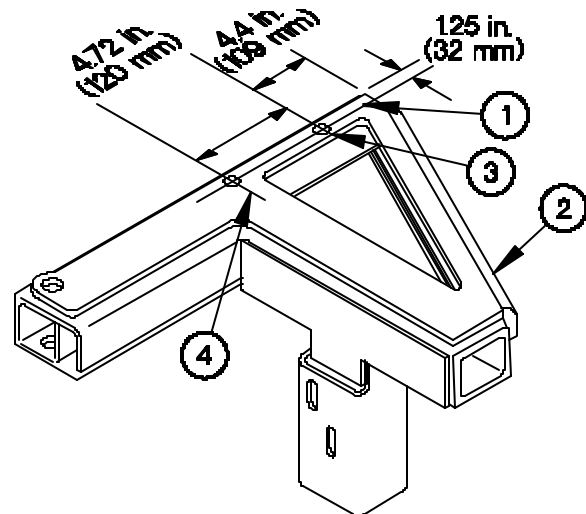
This paragraph applies to shelter models A, B, or C with an overall height of 83 1/2 to 89 in. (214 to 226 cm). If shelter height is below 83 1/2 in. (214 cm), shorten cable for proper removal of slack in turnbuckle assembly.

a. Installation.

NOTE

- Perform steps (1) through (6) on tiedowns not originally modified.
- All tiedowns are modified the same way. RH front tiedown shown.
- Measurements will be taken from upper LH corner on LH tiedown bracket.

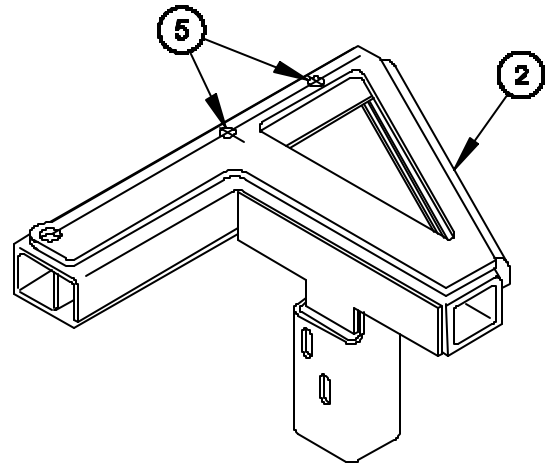
- (1) Measure and mark a line (1) 1.25 in. (32 mm) down from upper RH corner of tiedown bracket (2).
- (2) Measure and mark a line (3) 4.4 in. (109 mm) from RH side of line (1).
- (3) Measure and mark a line (4) 4.72 in. (120 mm) from RH side of line (3).



3V84A011

**20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT
INSTALLATION/REMOVAL (CONT)**

- (4) Drill two 27/64 in. holes (5) in tiedown bracket (2).
- (5) Tap two holes (5).
- (6) Perform steps (1) through (5) on remaining tiedowns.

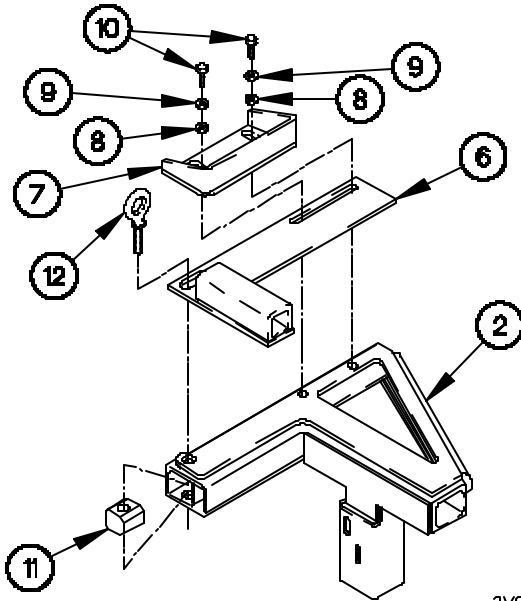


3V84A021

NOTE

All tiedowns are assembled the same way. RH front tiedown bracket shown.

- (7) Position slider (6) and stop (7) on tiedown bracket (2) with two lockwashers (8), washers (9), and screws (10).
- (8) Install threaded block (11) in tiedown bracket (2) with eyebolt (12).
- (9) Perform steps (7) and (8) on remaining tiedown brackets.

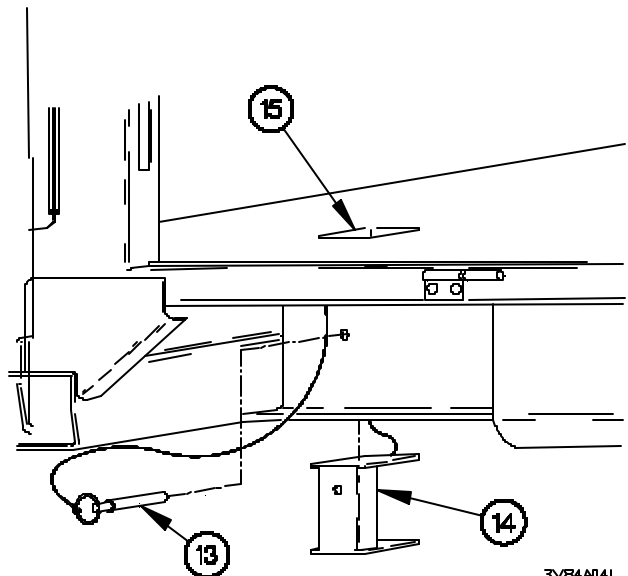


3V84A031

WARNING

Ensure cargo bed is free of equipment and debris, and is not warped or damaged. Failure to comply may result in serious injury or death to personnel or damage to equipment.

- (10) Remove four quick release pins (13) and plugs (14) from crane pockets (15).
- (11) Lower ladder (TM 9-2320-365-10).

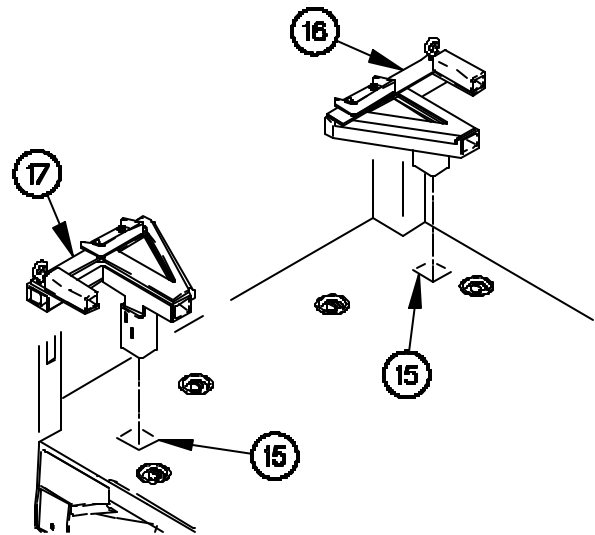


3V84A041

NOTE

Tiedowns are positioned with eyebolts toward four corners of cargo bed.

- (12) Install two tiedowns (16 and 17) in four crane pockets (15).

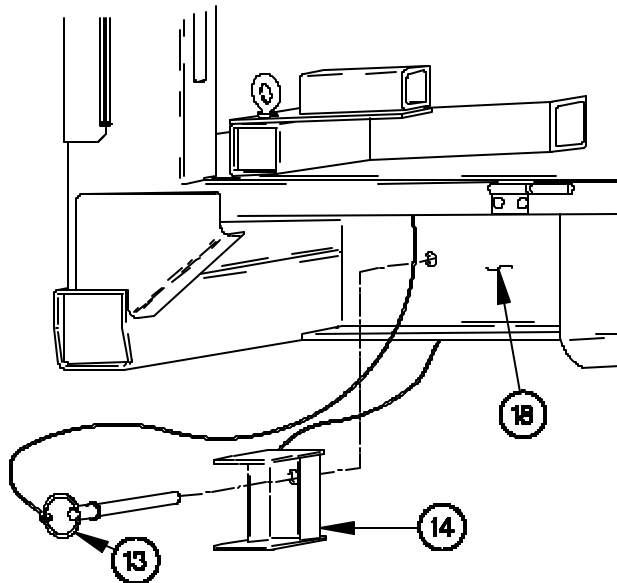


3V94A051

CAUTION

Ensure quick release pins are installed through both sides of crane pockets. Failure to comply may result in change to equipment.

- (13) Install four plugs (14) in cargo bed frame (18) with four quick release pins (13).



3V94A061

CAUTION

Ensure at least two whole threads are showing past nuts after installation. Failure to comply may result in damage to equipment.

NOTE

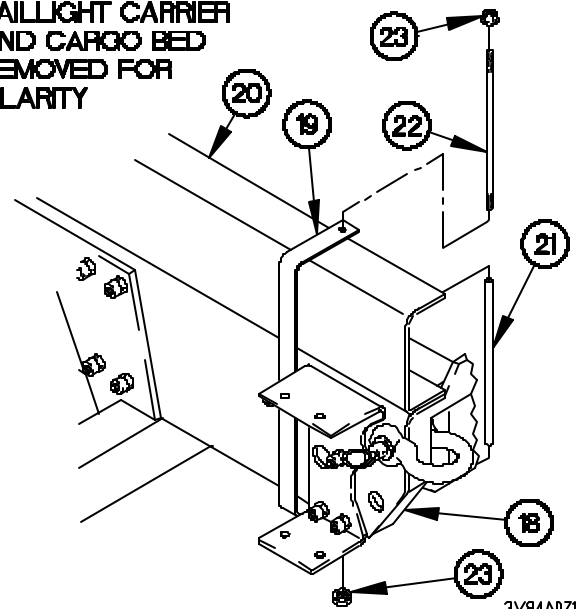
- Left and right clamps are installed the same way. Left clamp shown.

Perform steps (14) and (15) on M1078.

- (14) Install clamp (19) on frame rail (18) and subframe rail (20) with spacer (21), tie-rod (22), and two self-locking nuts (23).

- (15) Perform step (14) on right clamp.

TAILLIGHT CARRIER AND CARGO BED REMOVED FOR CLARITY



3V94A071

**20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT
INSTALLATION/REMOVAL (CONT)**

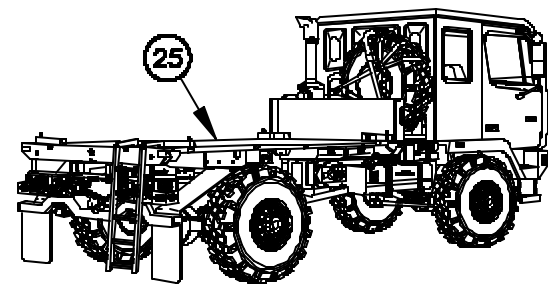
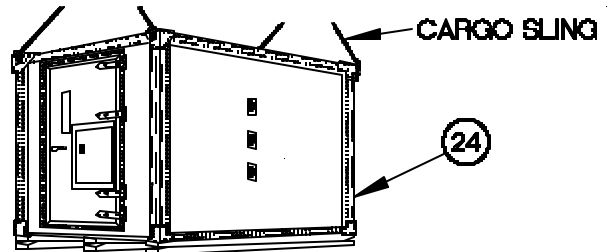
WARNING

S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

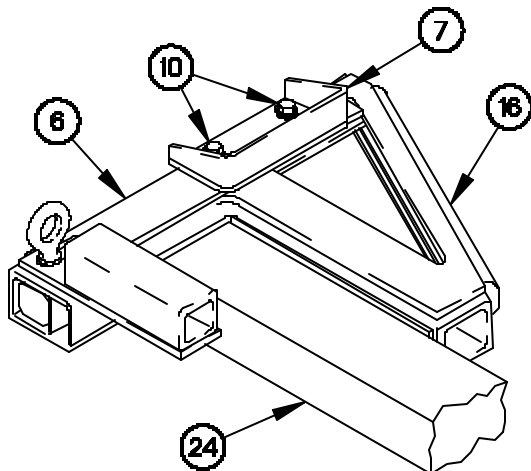
NOTE

Steps (16) through (19) require the aid of an assistant.

(16) Position S-280 shelter (24) on cargo bed (25).



3VB4AD01



3VB4AD01

NOTE

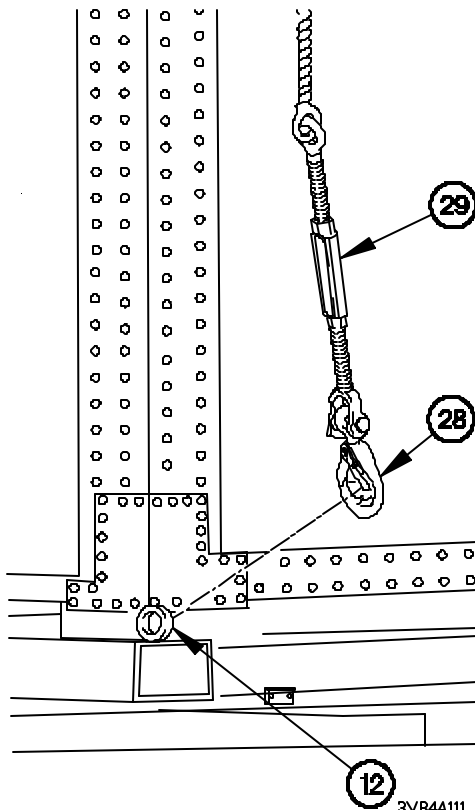
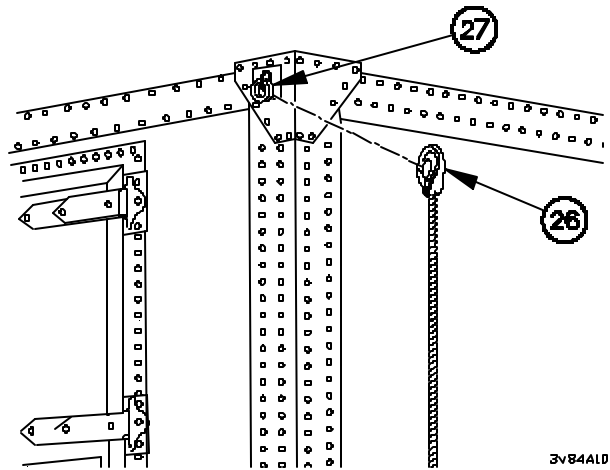
All tiedowns are adjusted the same way. RH front tiedown shown.

- (17) Adjust tiedown (16) until slider (6) and stop (7) are flush with side and end of S-280 shelter (24).
- (18) Tighten two screws (10)
- (19) Perform steps (17) and (18) on remaining tiedowns.

NOTE

- Four tiedown cables are installed the same way. One tiedown cable shown.
- Large end of S-280 shelter tiedown ring points toward cargo bed.

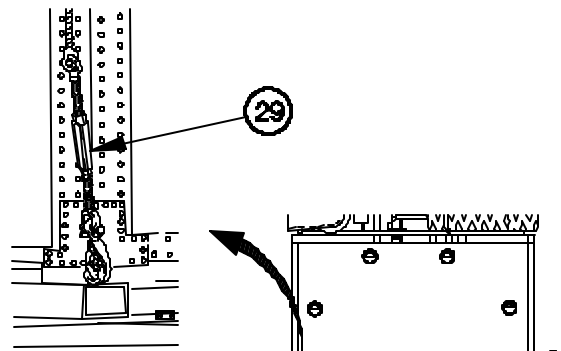
(20) Install hook (26) on upper S-280 shelter tiedown ring (27).



(21) Install hook (28) on eyebolt (12).

(22) Perform steps (20) and (21) on remaining tiedown cables.

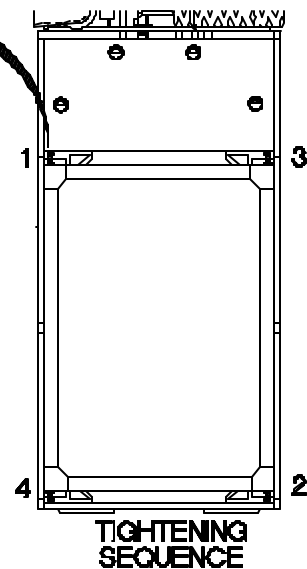
(23) Remove slack from four turnbuckles (29).



(24) Tighten four turnbuckles (29) 1/2 turn in sequence shown.

(25) Perform step (24) four more times.

(26) Raise ladder (TM 9-2320-365-10).



**20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT
INSTALLATION/REMOVAL (CONT)**

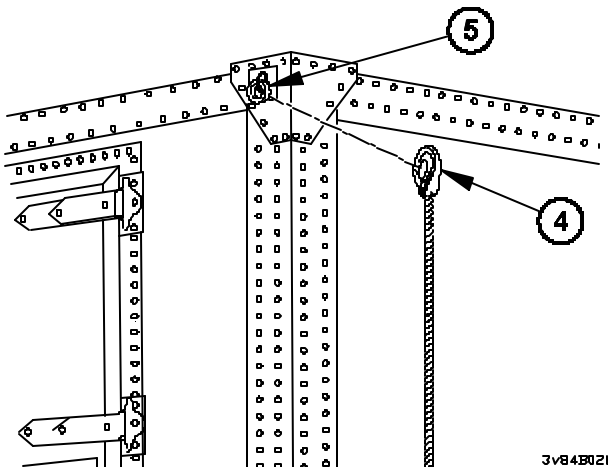
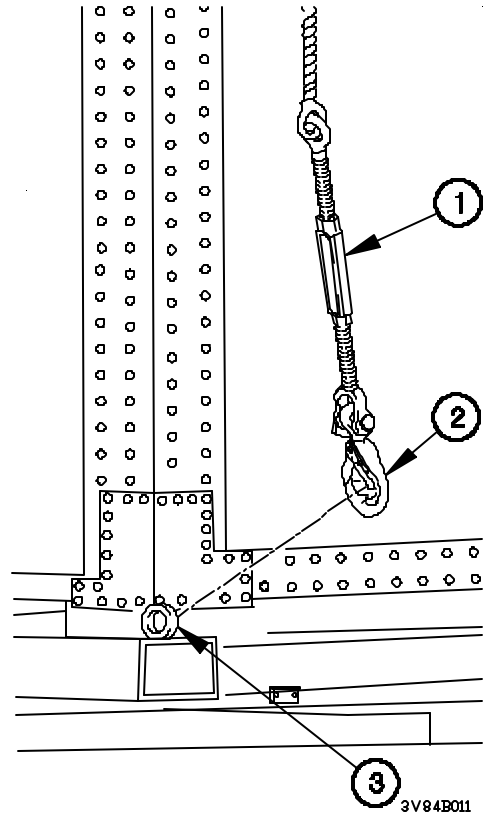
b. Removal.

- (1) Lower ladder (TM 9-2320-365-10).
- (2) Loosen four turnbuckles (1).

NOTE

Four tiedown cables are removed the same way. One tiedown cable shown

- (3) Remove hook (2) from eyebolt (3).

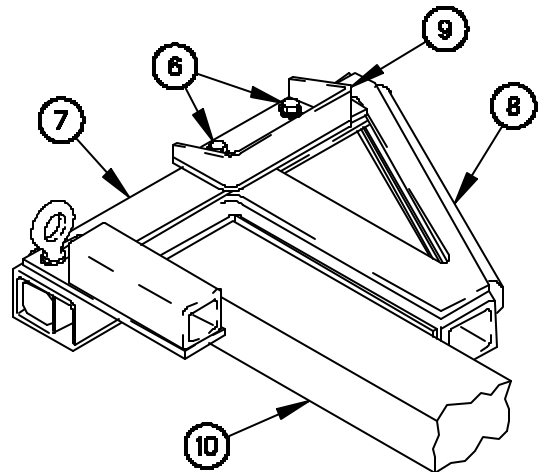


- (4) Remove hook (4) from upper S-280 shelter tiedown ring (5).
- (5) Perform steps (3) and (4) on remaining tiedown cables.

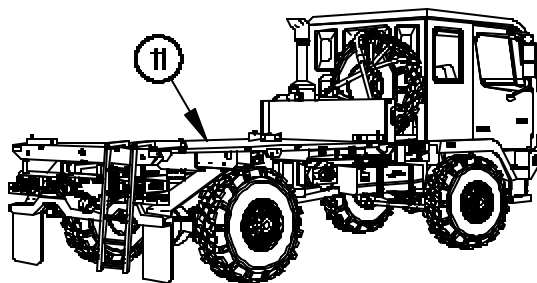
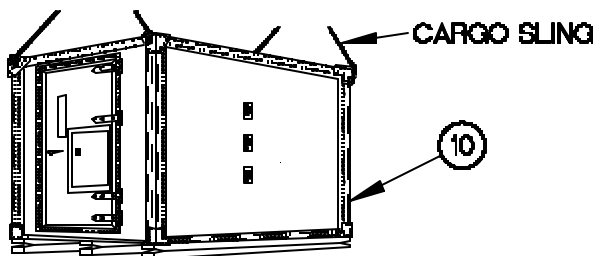
NOTE

All tiedowns are loosened the same way. RH front tiedown shown.

- (6) Loosen six screws (6).
- (7) Adjust tiedown (7) until slider (8) and stop (9) are removed from side and end of S-280 shelter (10).
- (8) Perform steps (6) and (7) on remaining tiedowns.



3V84B031



3V84B041

WARNING

S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

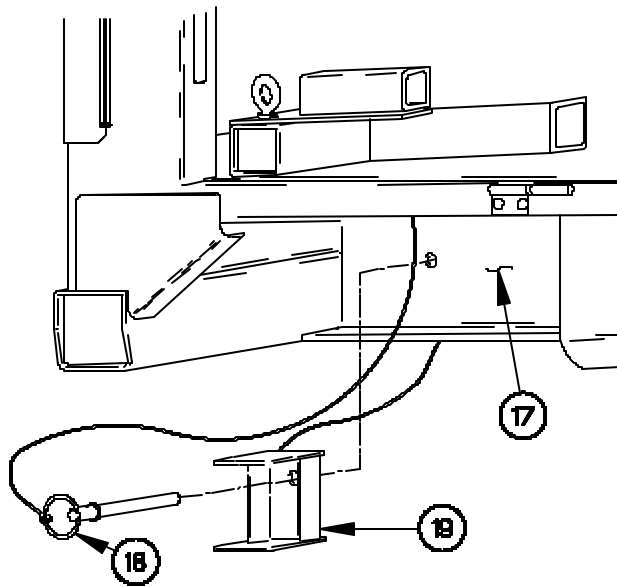
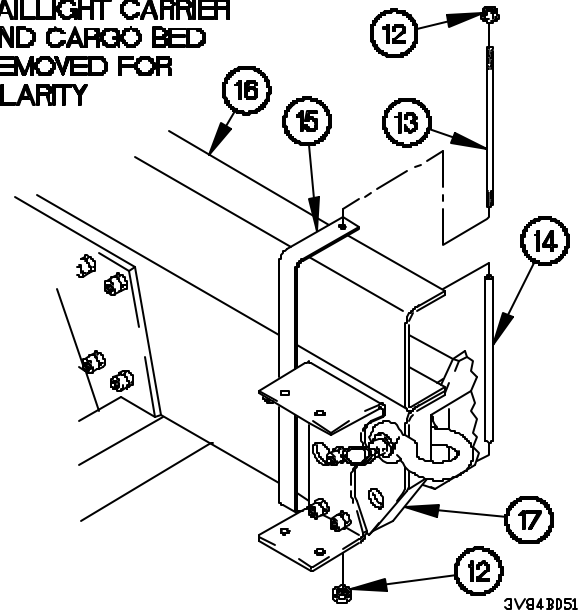
Step (9) requires the aid of an assistant.

- (9) Remove S-280 shelter (10) from cargo bed (11).

NOTE

- Left and right clamps are removed the same way. Left clamp shown.
 - Perform steps (10) and (11) on M1078.
- (10) Remove two self-locking nuts (12), tie-rod (13), spacer (14), and clamp (15) from subframe rail (16) and frame rail (17).
- (11) Perform step (10) on right clamp.

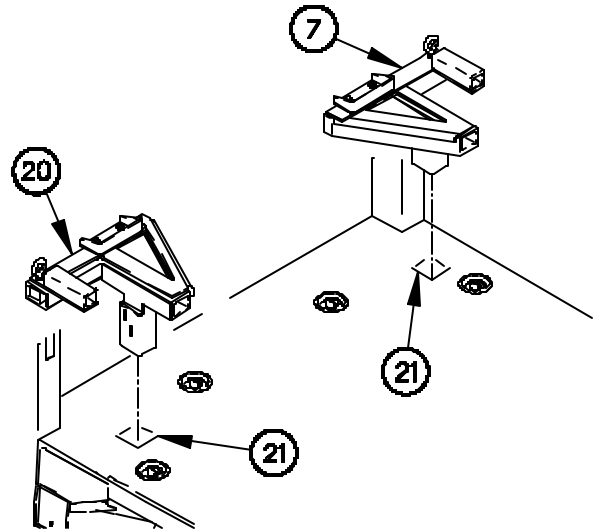
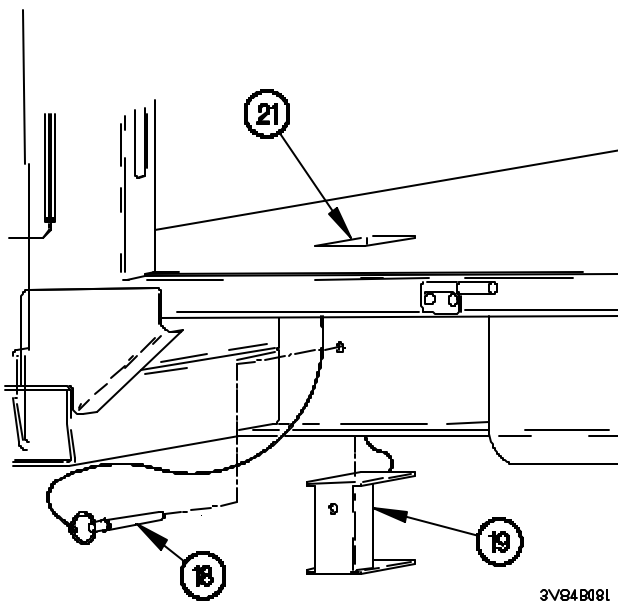
TAILLIGHT CARRIER
AND CARGO BED
REMOVED FOR
CLARITY



- (12) Remove four quick release pins (18) and plugs (19) from cargo bed frame (17).

**20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT
INSTALLATION/REMOVAL (CONT)**

- (13) Remove two tiedowns (7 and 20) from four crane pockets (21).



CAUTION

Ensure quick release pins are removed through both sides of crane pockets. Failure to comply may result in change to

- (14) Install four plugs (19) in crane pockets (21) with quick release pins (18).
 (15) Raise ladder (Tm 9-2320-365-10).

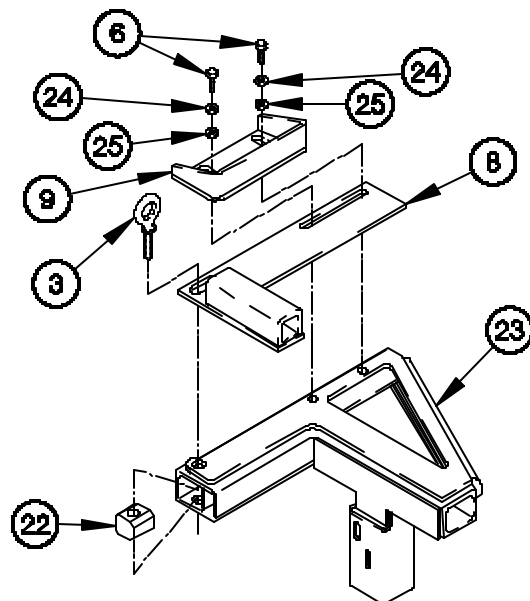
NOTE

All tiedowns are disassembled the same way. RH front tiedown shown.

- (16) Remove eyebolt (3) and threaded block (22) from tiedowns.
 (17) Remove two screws (6), washers (24), lockwashers (25), stop (9), and slider (8) from tiedown bracket (23). Discard lockwashers.
 (18) Perform steps (16) and (17) on remaining tiedowns.

c. Follow-On Maintenance.

Install cargo bed side panels and stakes (TM 9-2320-365-10).



End of Task.

20-85. DIGITIZATION KIT REMOVAL

This task covers:

- a. Removal
- b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10-1)
- Batteries discounted (Para 7-48)
- Kick panel removed (Para 16-3)
- Power distribution panel removed (Para 7-10 WTEC II, Para 7-11 WTEC III)
- RH seat removed (Para 16-14)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

- Lockwasher (2) (Item 103.1 Appendix G)
- Washer, Spring (6) (Item 283 Appendix G)
- Nut Self-Locking (6) (Item 132.1 Appendix G)

Personnel Required

- (2)

NOTE

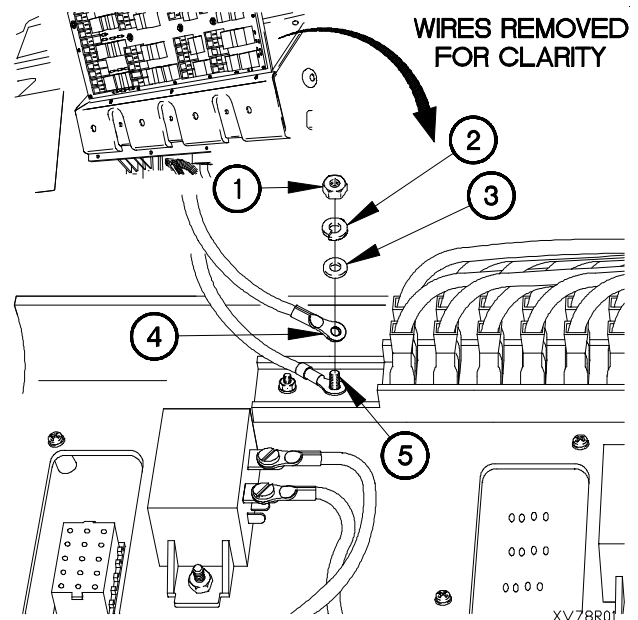
Retain digitization kit parts for future use.

a. Removal.

NOTE

Other terminal lugs are present at this location.

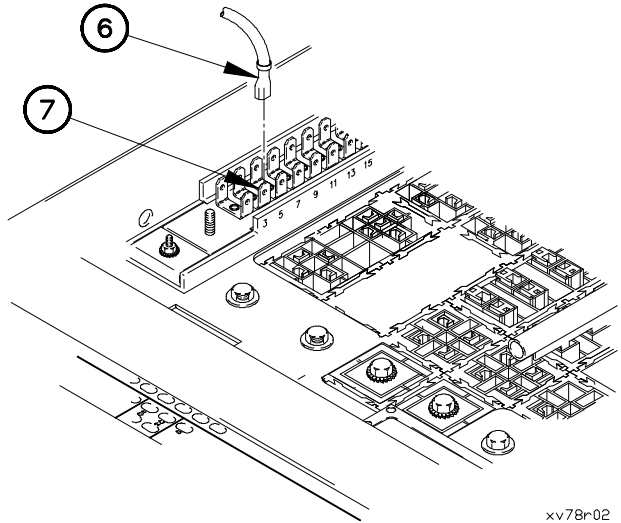
- (1) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL21 (4) from ground stud (5). Discard lockwasher.
- (2) Install washer (3) and lockwasher (2) on ground stud (5) with nut (1).



20-85. DIGITIZATION KIT REMOVAL (CONT)

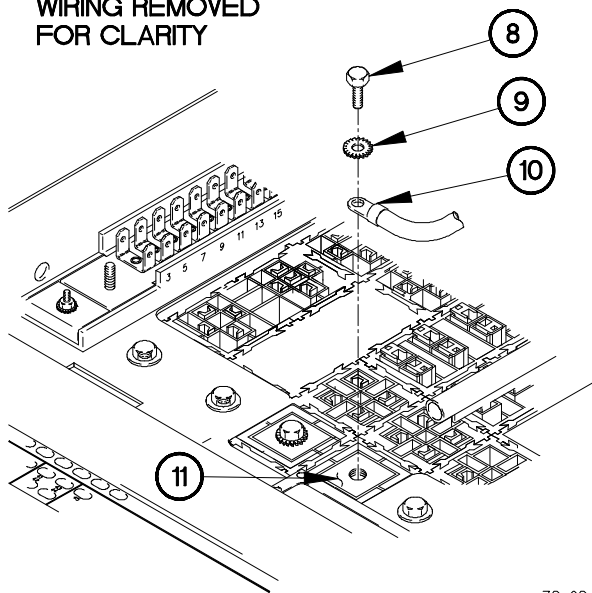
- (3) Disconnect terminal lug TL14 (6) from terminal block TB2 connector 5 (7).

WIRING REMOVED FOR CLARITY



xv78r02

WIRING REMOVED FOR CLARITY



xv78r03

NOTE

Other terminal lugs are present at this location.

- (4) Remove screw (8), lockwasher (9), and terminal lug TL20 (10) from 24 VDC connector X1 (11). Discard lockwasher.
- (5) Install lockwasher (9) on 24 VDC connector X1 (11) with screw (8).

- (6) Remove two nuts (12), lockwashers (13), washers (14), cover (15), and two washers (14) from terminal block TB1 (16). Discard lockwasher.

NOTE

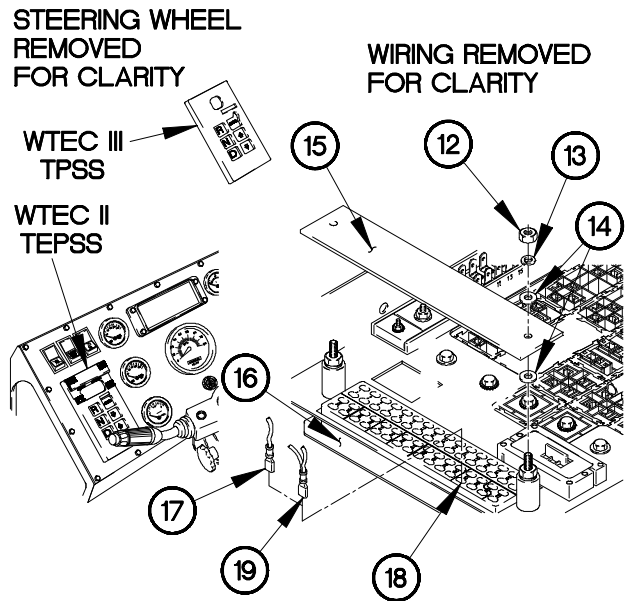
Perform step (7) on vehicles equipped with WTEC II transmission controllers.

- (7) Remove terminal lug TL22 (17) from terminal block TB1 connector 58 (18).

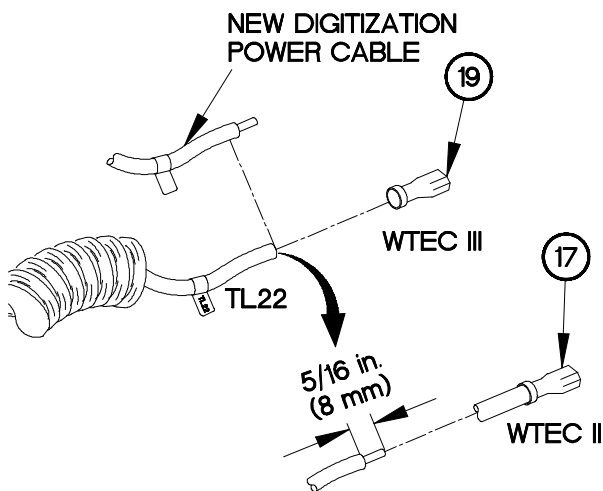
NOTE

Perform step (8) on vehicles equipped with WTEC III transmission controllers.

- (8) Remove terminal lug TL22 (19) from terminal block TB1 connector 58 (18).



xv78r04



xv78r05

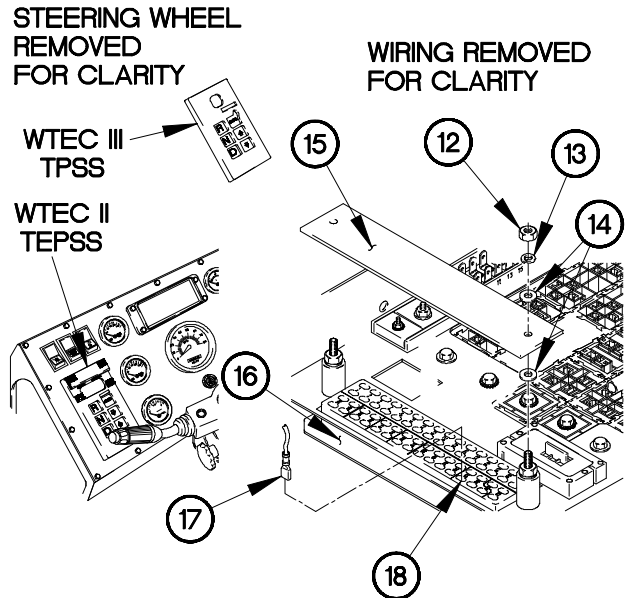
NOTE

Perform steps (9) through (11) on vehicle serial numbers 00001 through 11347 equipped with WTEC III controls.

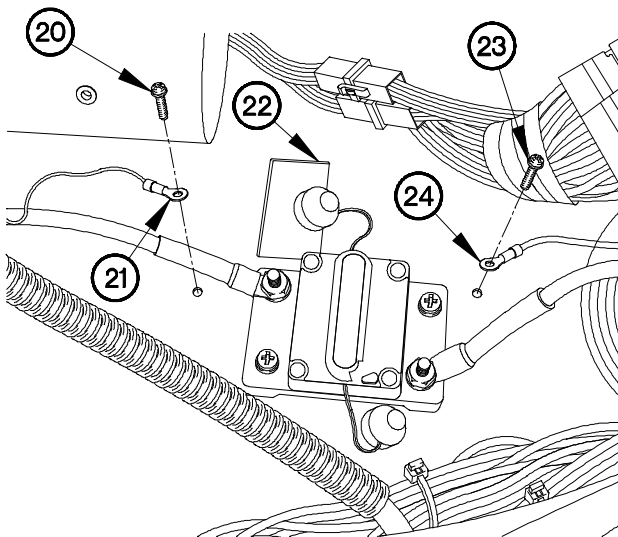
- (9) Remove terminal lug (19) from existing wire J117 and digitization power cable. Discard terminal lug.
- (10) Strip insulation 5/16 (8 mm) on existing wire J119.
- (11) Install terminal lug (17) on existing wire J119.

20-85. DIGITIZATION KIT REMOVAL (CONT)

- (12) Install terminal lug TL22 (17) on terminal block TB1 connector 58 (18).
- (13) Install two washers (14) and cover (15) on terminal block TB1 (16) with two washers (14), lockwashers (13), and nuts (12).



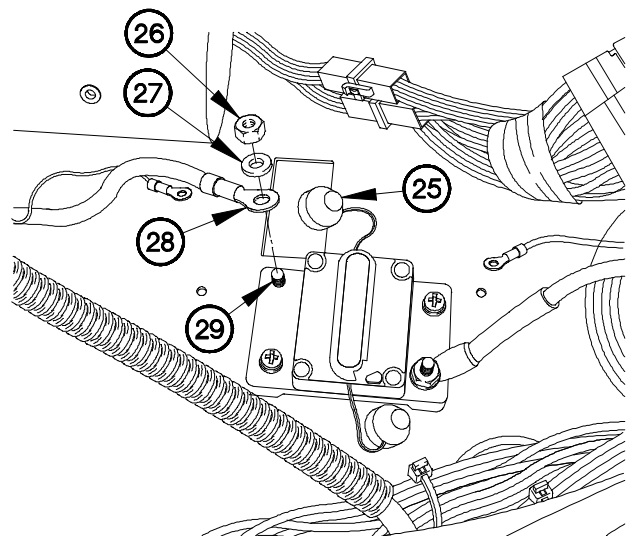
xv78r06



xv78r07

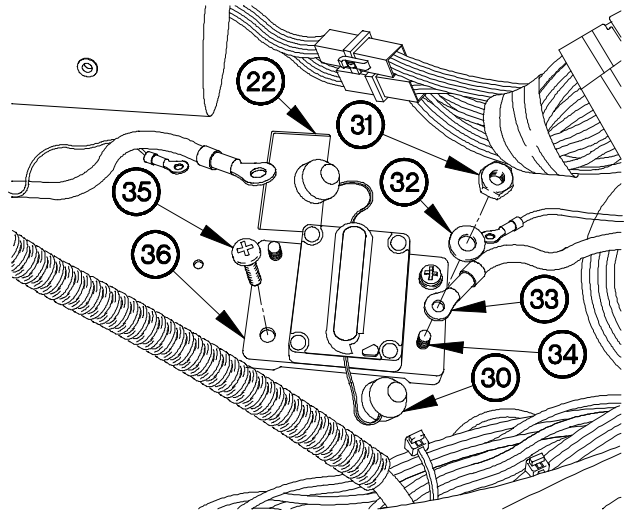
- (14) Remove screw (20) and terminal lug TL25 (21) from dashboard (22).
- (15) Remove screw (23) and terminal lug TL19 (24) from dashboard (22).

- (16) Remove dust boot (25), nut (26), washer (27), and terminal lug TL23 (28) from stud (29).

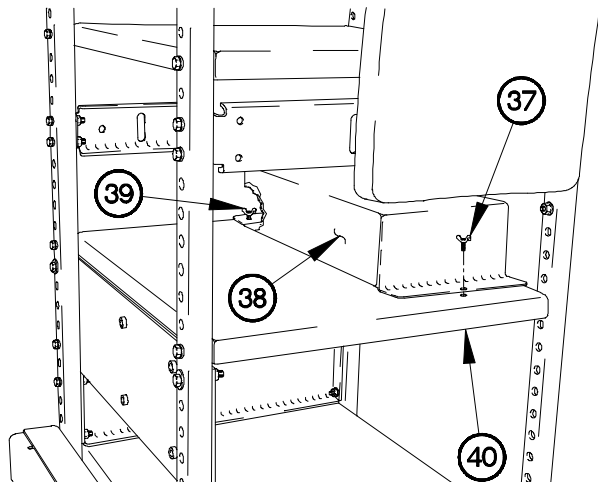


xv78r08

- (17) Remove dust boot (30), nut (31), washer (32), and terminal lug TL24 (33) from stud (34).
- (18) Remove two screws (35) and circuit breaker CB11 (36) from dashboard (22).



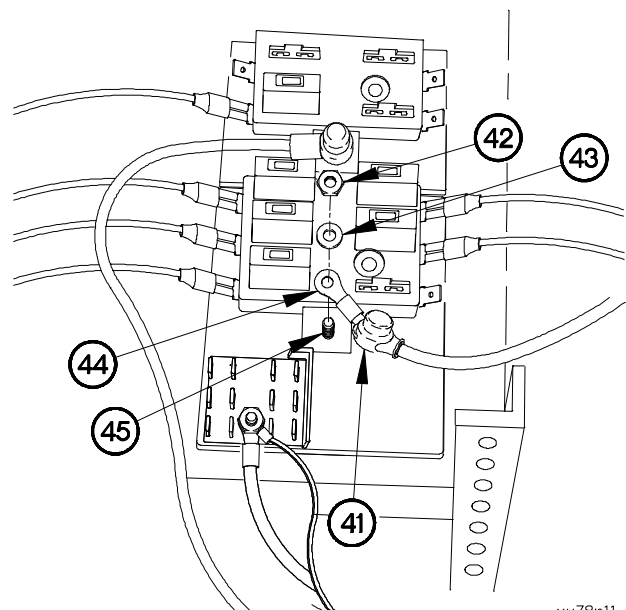
xv78r09



xv78r24

- (19) Remove wing screw (37) from electrical distribution block cover (38).
- (20) Loosen wing screw (39) on electrical distribution block cover (38).
- (21) Remove electrical distribution block cover (38) from power distribution shelf (40).
- (22) Position wing screw (37) in power distribution shelf (40).

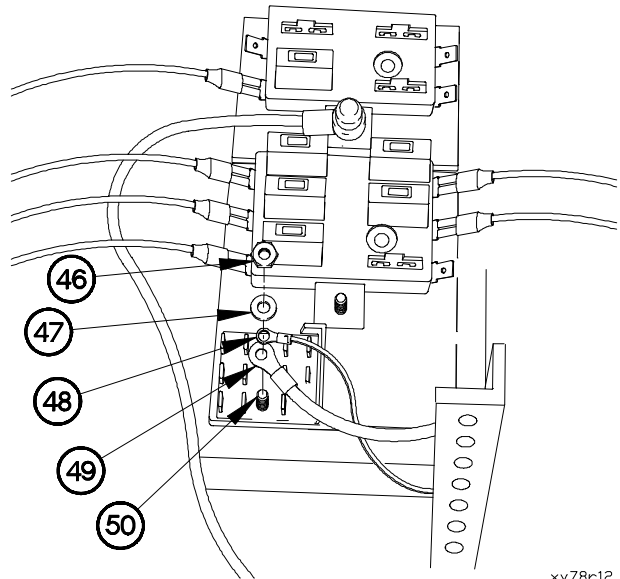
- (23) Remove dust boot (41), nut (42), washer (43), and terminal lug TL16 (44) from stud (45).
- (24) Position washer (43) on stud (45) with nut (42).



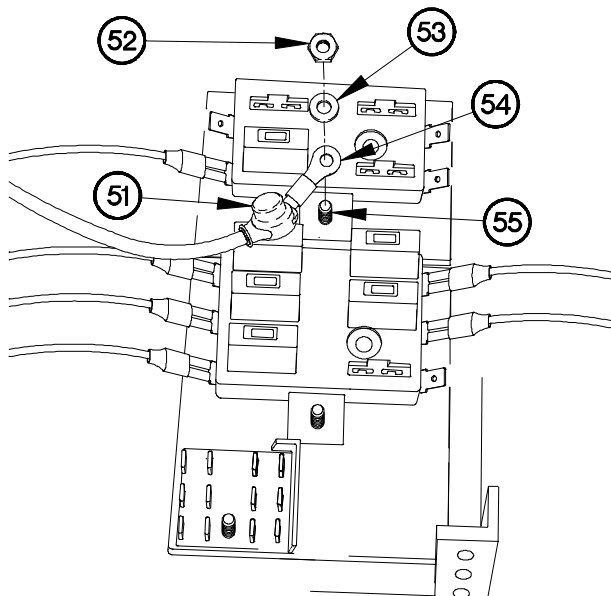
xv78r11

20-85. DIGITIZATION KIT REMOVAL (CONT)

- (25) Remove nut (46), washer (47), terminal lug TL17 (48), and terminal lug TL18 (49) from stud (50).
- (26) Position washer (47) on stud (50) with nut (46).



xv78r12



xv78r13

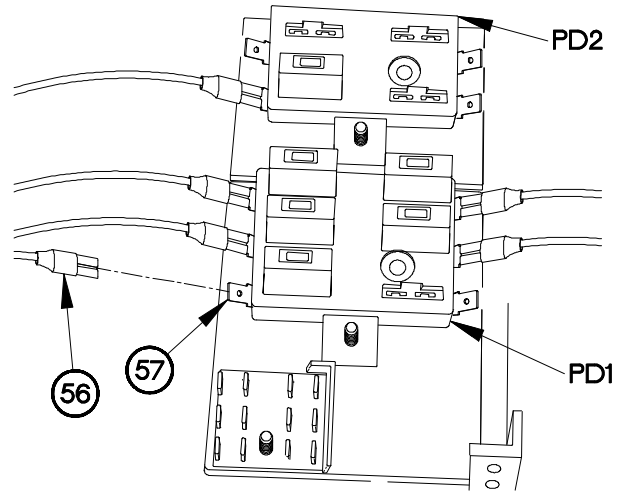
- (27) Remove dust boot (51), nut (52), washer (53), and terminal lug TL15 (54) from stud (55).
- (28) Position washer (53) on stud (55) with nut (52).

NOTE

- Terminal lugs are disconnected the same way. One terminal lug shown.
- Refer to **Table 1 Terminal Lug Locations and Connectors** for details.

(29) Disconnect terminal lug TL1 (56) from distribution panel PD1 CB10 connector (57).

(30) Perform step (29) on remaining terminal lugs.



xv78r14

Table 1 – Terminal Lug Locations and Connectors

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINCGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

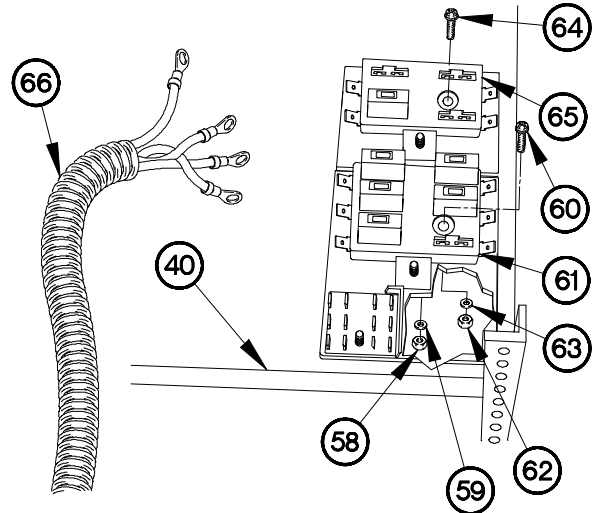
20-85. DIGITIZATION KIT REMOVAL (CONT)

- (31) Remove circuit breakers from distribution panels PD1 and PD2 (Para 20-87).
- (32) Remove four nuts (58), lockwashers (59), screws (60), and distribution panel PD1 (61) from power distribution shelf (40). Discard lockwashers.
- (33) Remove two nuts (62), lockwashers (63), screws (64), and distribution panel PD2 (65) from power distribution shelf (40). Discard lockwashers.

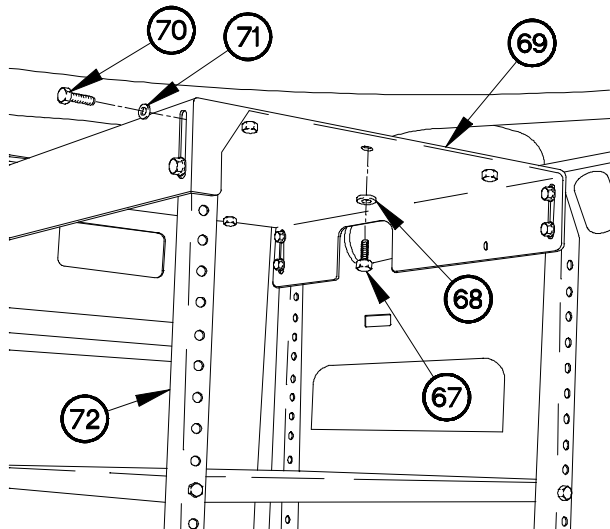
NOTE

Note routing of digitization power cable before removing from vehicle.

- (34) Remove digitization power cable (66) from vehicle.
- (35) Position four screws (60) in distribution panel PD1 (61).
- (36) Position two screws (64) in distribution panel PD2 (65) with nuts (62).



xv78r15



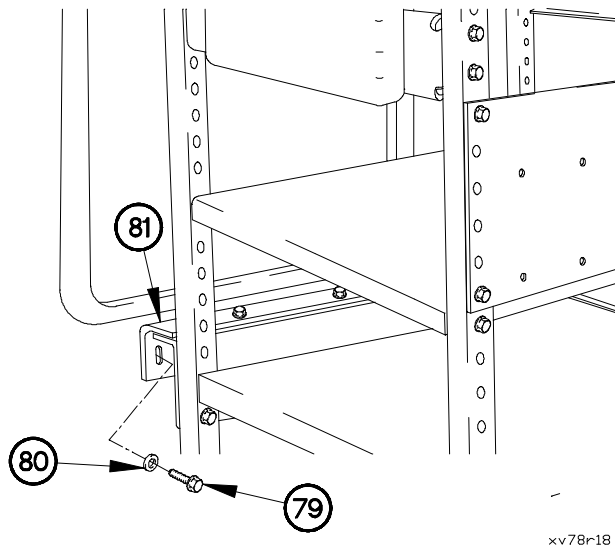
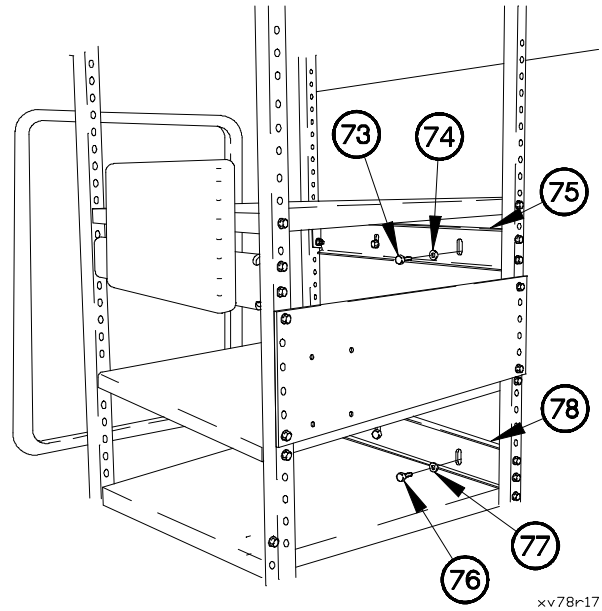
xv78r16

- (37) Remove six screws (67) and washers (68) from top support (69).
- (38) Remove eight screws (70), washers (71), and top support (69) from rack assembly (72).

CAUTION

Spacers may be used with vehicles equipped with rear panels. Use caution when removing screws so washers do not fall behind panel or disassembly may be required to recover washers.

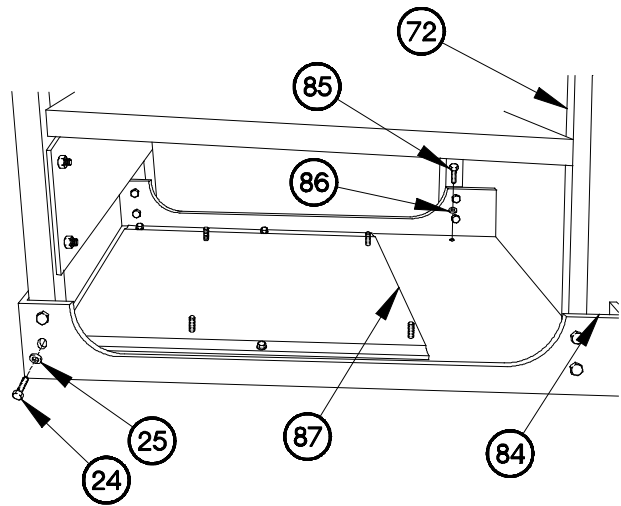
- (39) Remove two screws (73) and washers (74) from rear upper support (75).
- (40) Remove two screws (76) and washers (77) from rear mid support (78).



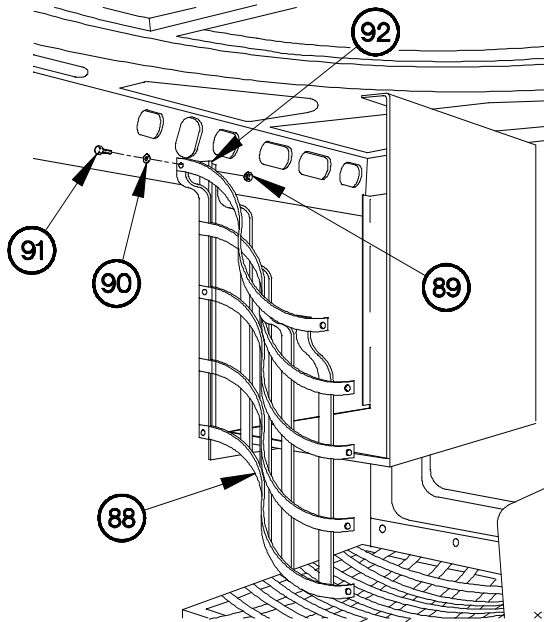
- (41) Remove three screws (79) and washers (80) from side mid support (81).

20-85. DIGITIZATION KIT REMOVAL (CONT)

- (42) Remove eight screws (82) and washers (83) from bottom support (84).
- (43) Remove six screws (85), washers (86), and MTS mounting bracket (87) from bottom support (84).
- (44) Remove rack assembly (72) and bottom support (84) from cab.

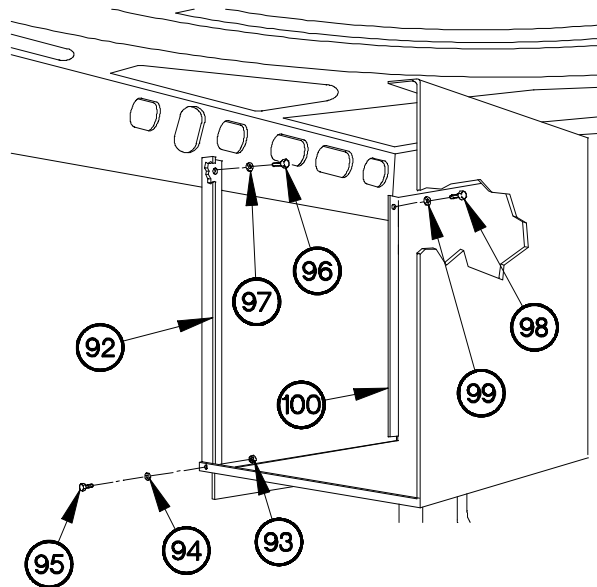


xv78r19



xv78r20

- (45) Unsnap webbing (88).
- (46) Remove three nuts (89), webbing (88), washers (90), and screws (91) from angle (92).



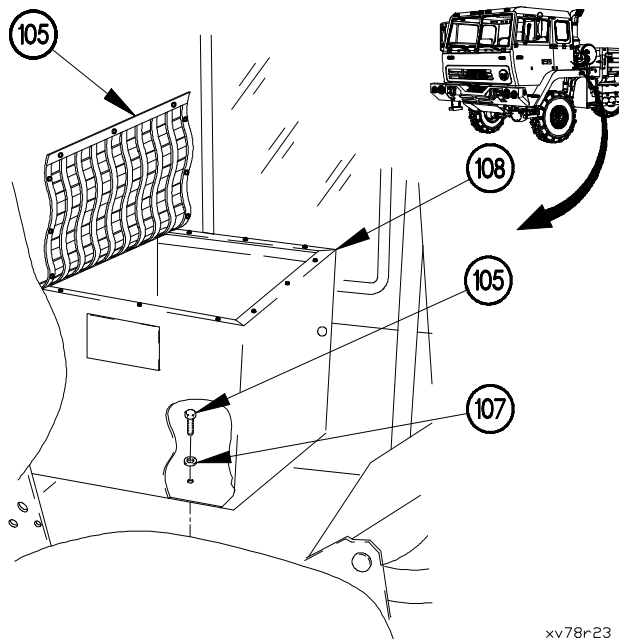
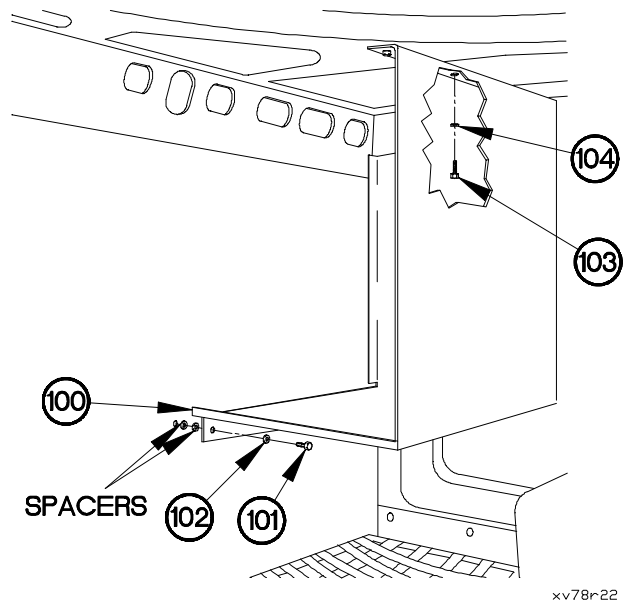
xv78r21

- (47) Remove nut (93), washer (94), and screw (95) from angle (92).
- (48) Remove screw (96), washer (97), and angle (92) from vehicle.
- (49) Remove two screws (98) and washers (99) from Co-Driver's Storage Box (100).

CAUTION

Spacers may be used with vehicles equipped with rear panels. Use caution when removing screws so washers do not fall behind panel or disassembly may be required to recover washers.

- (50) Remove three screws (101) and washers (102) from Co-Driver's Storage Box (100).
- (51) Remove three screws (103), washers (104), and Co-Driver's Storage Box (100) from vehicle.



- (52) Unsnap webbing (105).
- (53) Remove six screws (106) and washers (107) from Driver's Storage Box (108).
- (54) Remove Driver's Storage Box (108) from cab.

b. Follow-on Maintenance

- (1) Install RH Seat (Para 16-14).
- (2) Install power distribution panel (Para 7-10 WTEC II, Para 7-11 WTEC III).
- (3) Install kick panel (Para 16-3).
- (4) Connect batteries (Para 7-48).
- (5) Install driver and co-driver storage boxes (Para 16-17).

End of Task

20-86. DIGITIZATION KIT INSTALLATION

This task covers:

- a. Installation
- b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10)
- Batteries disconnected (para 7-48)
- Power distribution panel removed (para 7-10)
- WTEC II, para 7-11 WTEC III)
- Kick panel removed (para 16-3)
- RH seat removed (para 16-14)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque (0-200 Lb-in) (Item 58, Appendix C)
- Wrench Set, Socket (Item 49, Appendix C)

Materials/Parts

- Plastic Cable Ties (Item 76, Appendix D)
- Sealant (Item 68.2 Appendix D)

Personnel Required

(2)

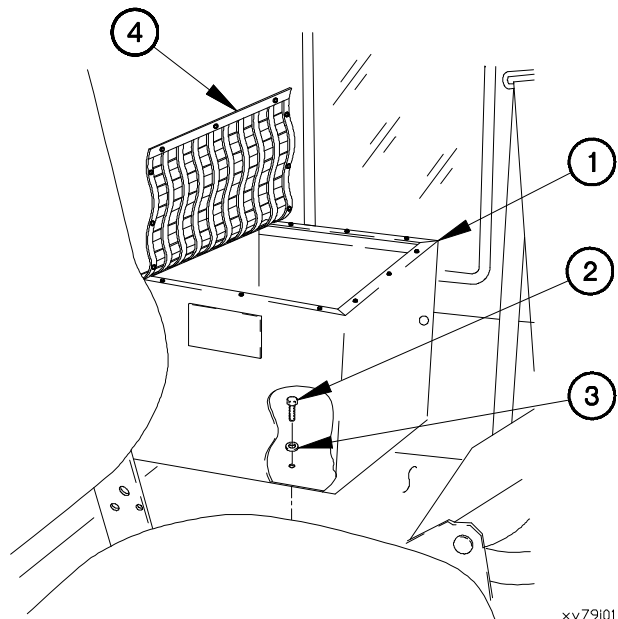
a. Installation.

- (1) Position drivers storage box (1) in cab.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (2) Apply sealant to threads of six screws (2).
- (3) Position six washers (3) and screws (2) in drivers storage box (1).
- (4) Tighten six screws (2) to 70-85 lb-in. (8-10 N•m).
- (5) Snap webbing (4).



xv79101

WARNING

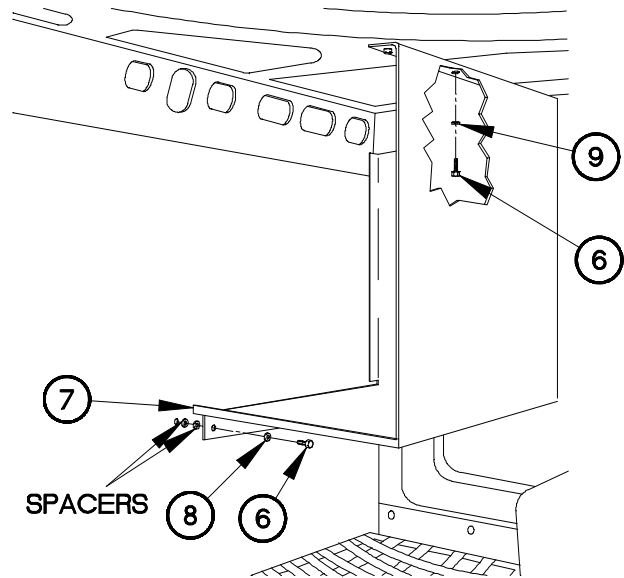
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (6) Apply sealant to threads of six screws (6).

CAUTION

Add spacers behind supports on vehicles equipped with rear panels. Failure to comply may result in damage to equipment.

- (7) Position co-drivers storage box (7) in cab with three washers (8) and screws (6).
- (8) Position three washers (9) and screws (6) in co-drivers storage box (7).
- (9) Tighten six screws (6) to 70-85 lb-in. (8-10 N•m).

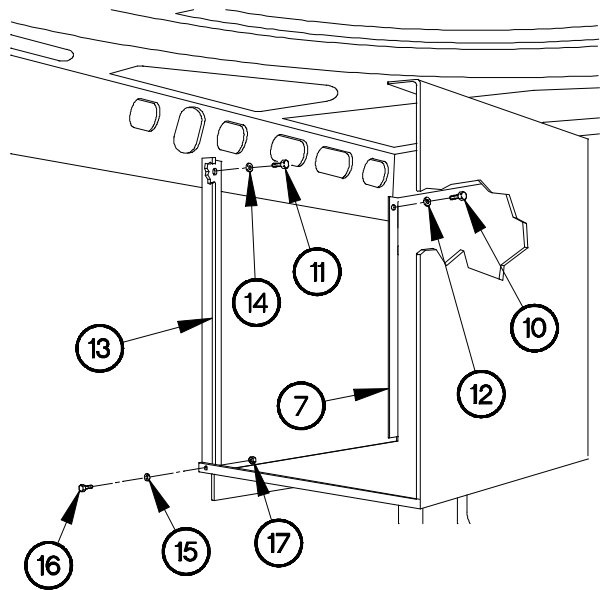


20-86. DIGITIZATION KIT INSTALLATION (CONT)

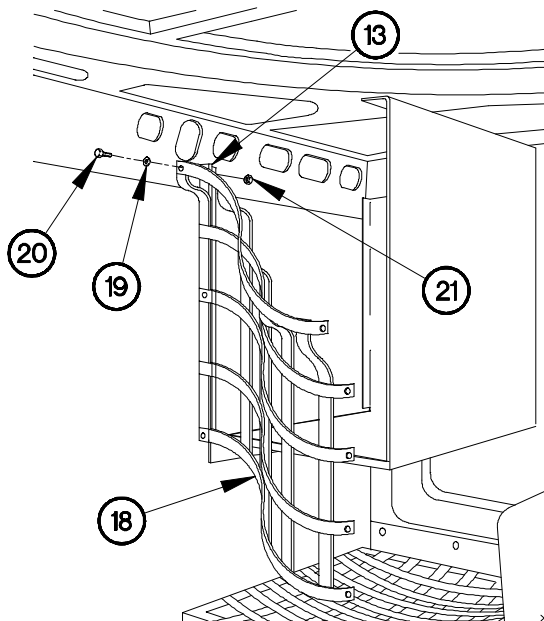
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (10) Apply sealant to threads of screws (10 and 11).
- (11) Position washer (12) and screw (10) in co-drivers storage box (7).
- (12) Position angle (13) on cab with washer (14) and screw (11).
- (13) Position washer (15) and screw (16) in co-drivers storage box (7) with self-locking nut (17).
- (14) Tighten screws (10 and 11) to 70-85 lb-in. (8-10 N•m).
- (15) Tighten self-locking nut (17) to 100-120 lb-in. (12-13 N•m).



xv79i03



xv79i04

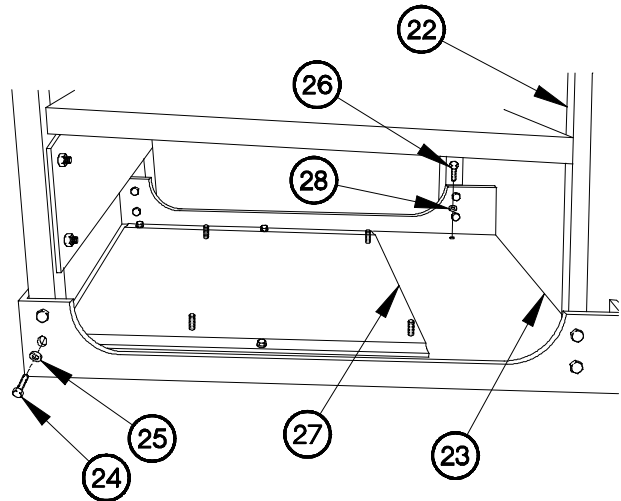
- (16) Position webbing (18) on angle (13) with three washers (19), screws (20), and self-locking nuts (21).
- (17) Tighten three self-locking nuts (21) to 110-120 lb-in (12-13 N•m).
- (18) Snap webbing (18).

- (19) Position rack assembly (22) and bottom support (23) in cab.

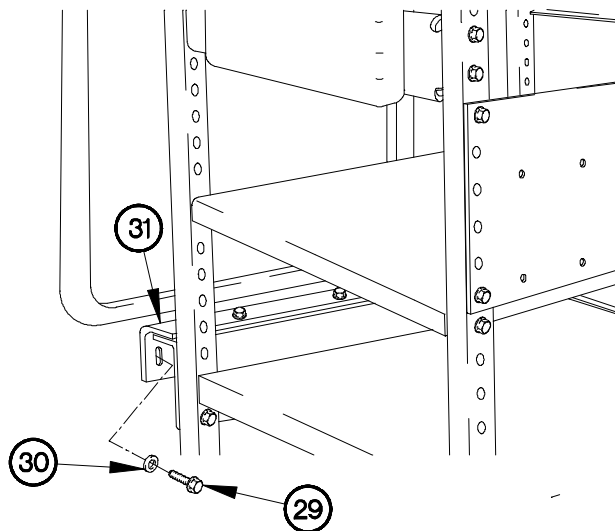
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (20) Apply sealant to threads of eight screws (24).
- (21) Position eight washers (25) and screws (24) in bottom support (23).
- (22) Tighten eight screws (24) to 110-120 lb-in. (12-13 N•m).
- (23) Apply sealant to threads of six screws (26).
- (24) Position MTS mounting bracket (27) on bottom support (23) with six washers (28) and screws (26).
- (25) Tighten six screws (26) to 70-85 lb-in (8-10 N•m).



xv79i05



xv79i06

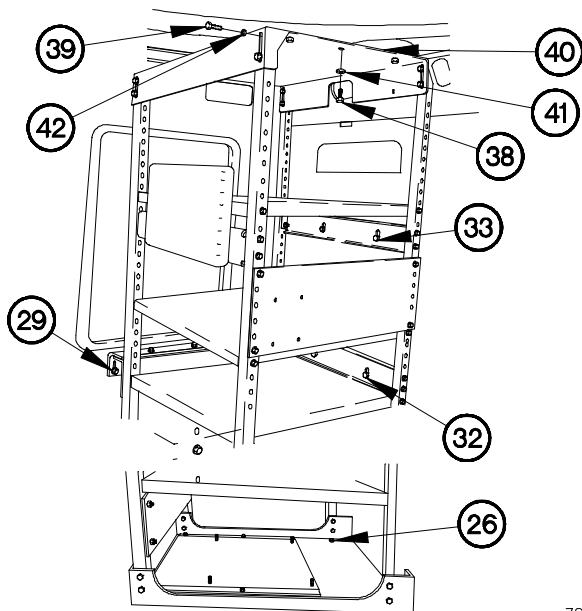
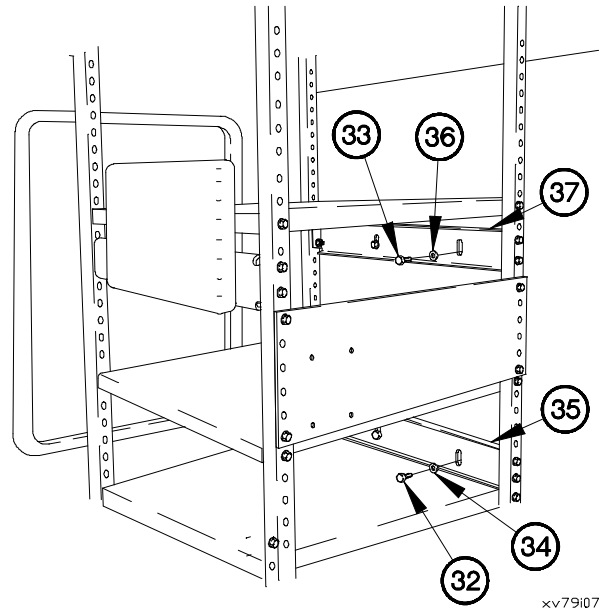
- (26) Apply sealant to threads of three screws (29).
- (27) Position three washers (30) and screws (29) in outer side support (31).

20-86 DIGITIZATION KIT INSTALLATION (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (28) Apply sealant to threads of two screws (32 and 33).
- (29) Position two washers (34) and screws (32) on lower rear support (35).
- (30) Position two washers (36) and screws (33) on upper rear support (37).

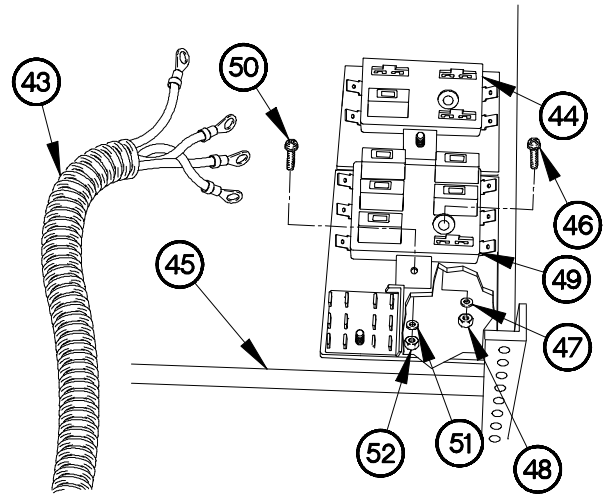


- (31) Apply sealant to threads of six screws (38) and eight screws (39).
- (32) Position top support (40) in cab with six washers (41) and screws (38).
- (33) Position eight washers (42) and screws (39) in top support (40).
- (34) Tighten eight screws (39) to 110-120 lb-in. (12-13 N•m).
- (35) Tighten six screws (26), three screws (29), two screws (32), two screws (33), and six screws (38) to 70-85 lb-in. (8-10 N•m).

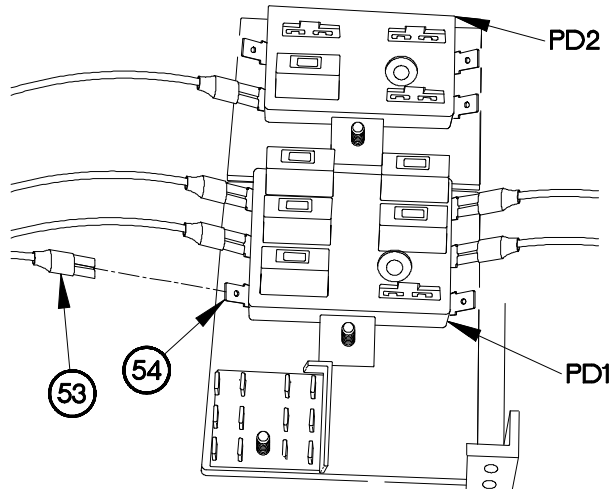
NOTE

Install plastic cable ties as required.

- (36) Position digitization power cable (43) in vehicle.
- (37) Install distribution panel PD2 (44) on power distribution shelf (45) with two screws (46), lockwashers (47), and nuts (48).
- (38) Install distribution panel PD1 (49) on power distribution shelf (45) with four screws (50), lockwashers (51), and nuts (52).
- (39) Install circuit breakers in distribution panels PD2 and PD1 (para 20-87).



xxv79109



xxv79110

- (40) Connect terminal lug TL1 (53) to distribution panel PD1 CB10 (54).

NOTE

- Terminal lugs are connected the same way. One terminal lug shown.
- Refer to Table 1 Terminal Lug Locations and Connectors for details.

- (41) Perform step (40) on remaining terminal lugs.

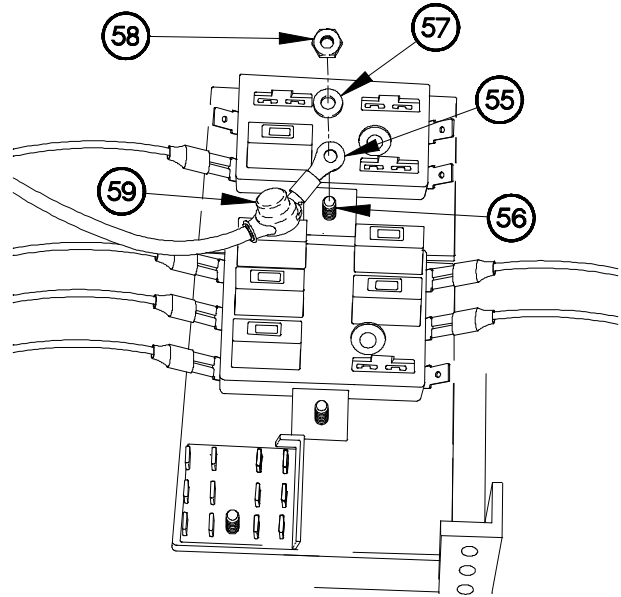
Table 1 – Terminal Lug Locations and Connectors

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINCGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

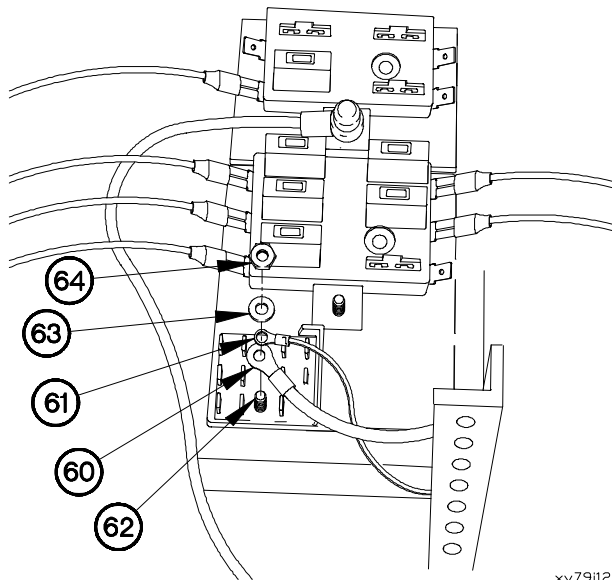
20-86 DIGITIZATION KIT INSTALLATION (CONT)

(42) Install terminal lug TL15 (55) on stud (56) with washer (57) and nut (58).

(43) Install dust boot (59) on stud (56).



xv79i11

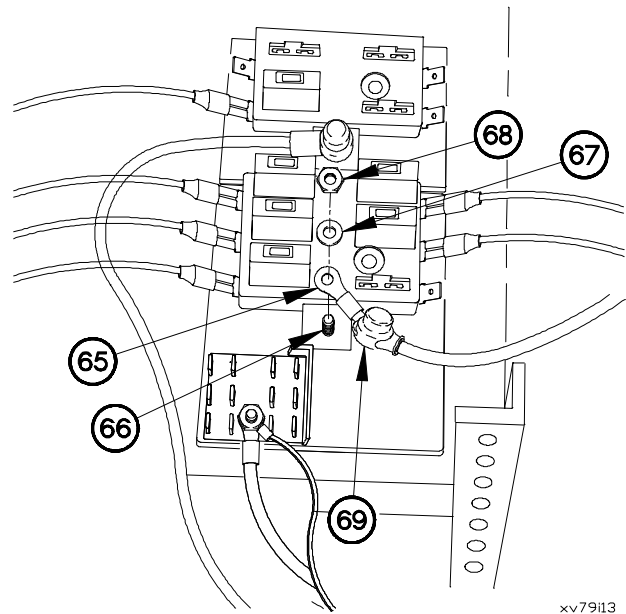


xv79i12

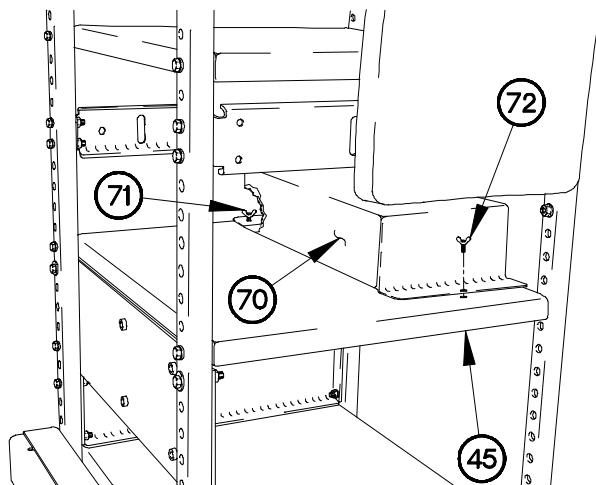
(44) Install terminal lug TL18 (60) and terminal lug TL17 (61) on stud (62) with washer (63) and nut (64).

(45) Install terminal lug TL16 (65) on stud (66) with washer (67) and nut (68).

(46) Install dust boot (69) on stud (66).



xv79i13



xv79i14

(47) Position electrical distribution block cover (70) on power distribution shelf (45).

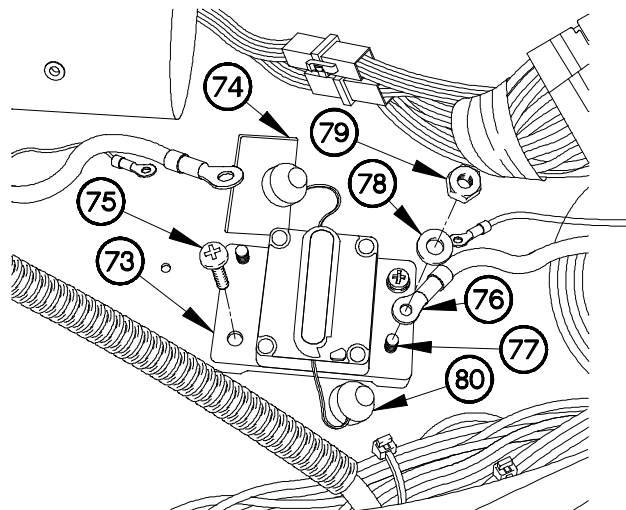
(48) Tighten wing screw (71) on electrical distribution block cover (70).

(49) Install wing screw (72) in electrical distribution block cover (70).

(50) Install circuit breaker CB11 (73) on dashboard (74) with two screws (75).

(51) Install terminal lug TL24 (76) on stud (77) with washer (78) and nut (79).

(52) Install dust boot (80) on stud (77).

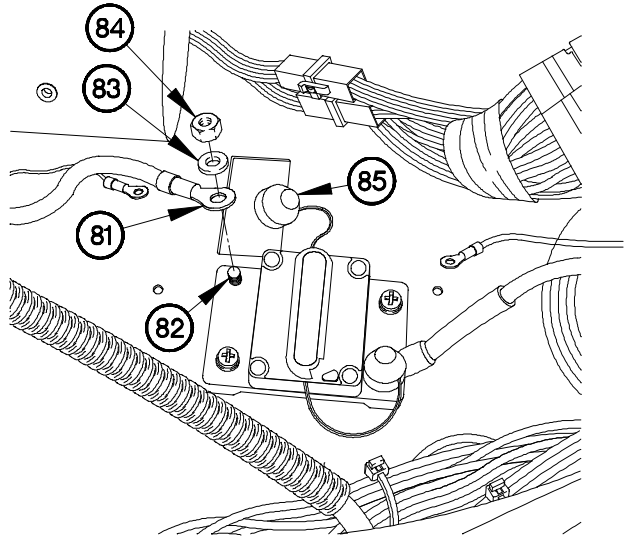


xv79i15

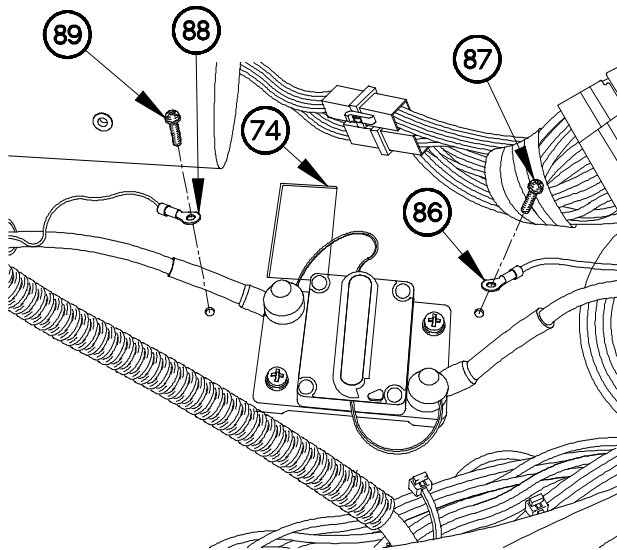
20-86. DIGITIZATION KIT INSTALLATION (CONT)

(53) Install terminal lug TL23 (81) on stud (82) with washer (83) and nut (84).

(54) Install dust boot (85) on stud (82).



xv79ii6



xv79ii7

(55) Install terminal lug TL25 (86) on dashboard (74) with screw (87).

(56) Install terminal lug TL19 (88) on dashboard (74) with screw (89).

NOTE

- Perform steps (57) through (60) if a new digitization power cable is being installed.
- Perform steps (57) and (58) if replacing the digitization power cable on vehicle serial numbers 00001 through 11347 equipped with WTEC II controller.

(57) Remove terminal lug TL22 ring terminal (90) from NEW digitization power cable and strip insulation 5/16 in (8 mm).

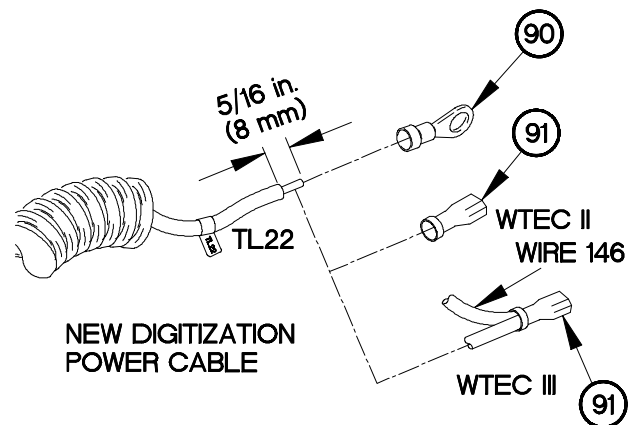
(58) Install terminal lug TL22 spade terminal (91) on NEW digitization power cable.

NOTE

Perform steps (59) and (60) if replacing the digitization power cable on vehicle serial numbers 00001 through 11347 equipped with WTEC III controller.

(59) Remove terminal lug TL22, ring terminal (90) from NEW digitization power cable and strip insulation 5/16 in (8 mm).

(60) Install terminal lug TL22, spade terminal (91) on NEW digitization power cable and wire 146.



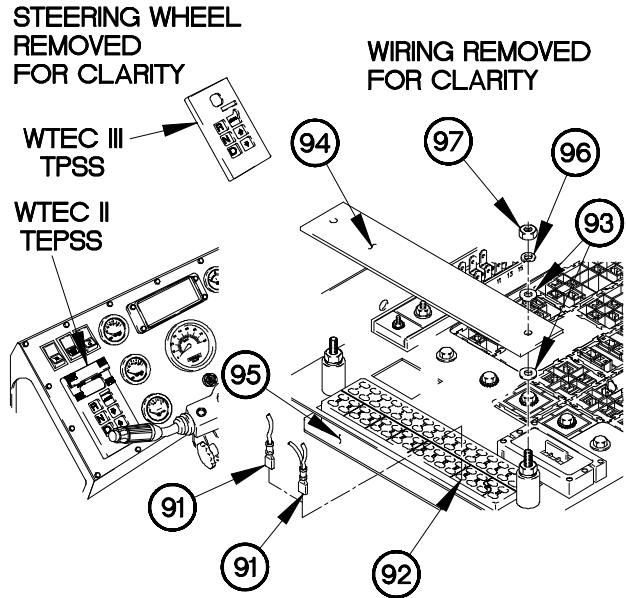
xv79118

20-86. DIGITIZATION KIT INSTALLATION (CONT)

NOTE

- Perform steps (61) through (68) on vehicle serial numbers 00001 through 11437.
- Perform step (61) on vehicles equipped with WTEC II transmission controllers.

(61) Install terminal lug TL22 (91) on terminal block TB1 connector 58 (92).



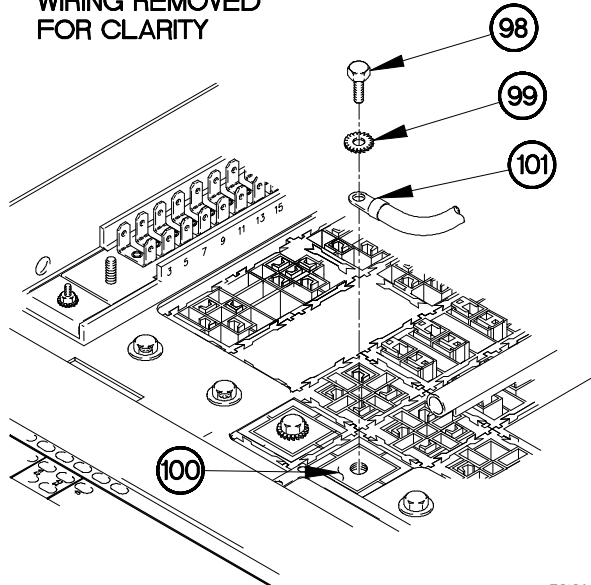
NOTE

Perform step (62) on vehicles equipped with WTEC III transmission controllers.

(62) Install terminal lug TL22 (91) on terminal block TB1 connector 58 (92).

(63) Install two washers (93) and cover (94) on terminal block TB1 (95) with two washers (93), lockwashers (96), and nuts (97).

WIRING REMOVED FOR CLARITY



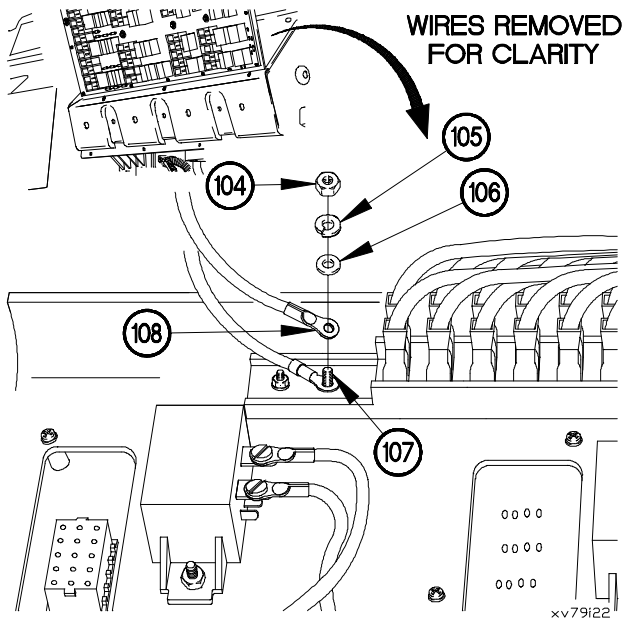
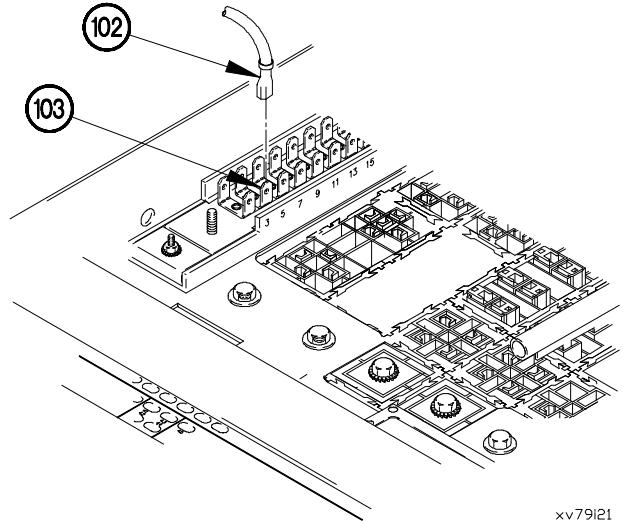
NOTE

Other terminal lugs are present at this location.

- (64) Remove screw (98) and lockwasher (99) from 24 VDC connector X1 (100).
- (65) Install terminal lug TL20 (101) on 24 VDC connector X1 (100) with lockwasher (99) and screw (98).

- (66) Connect terminal lug TL14 (102) to terminal block TB2 connector 43 (103).

WIRING REMOVED FOR CLARITY



NOTE

Other terminal lugs are present at this location.

- (67) Remove nut (104), lockwasher (105), and washer (106) from ground stud (107).
 (68) Install terminal lug TL21 (108) on ground stud (107) with washer (106), lockwasher (105), and nut (104).

b. Follow-on Maintenance

- (1) Install power distribution panel (para 7-11 WTEC II, Para 7-13 WTEC III).
- (2) Install kick panel (para 16-3).
- (3) Connect batteries (para 7-57).
- (4) Install RH seat (para 7-57)
- (5) Operate equipment, check for proper operation.

End of Task

20-87 DIGITIZATION KIT CIRCUIT BREAKER REPLACEMENT/INSTALLATION

This task covers:

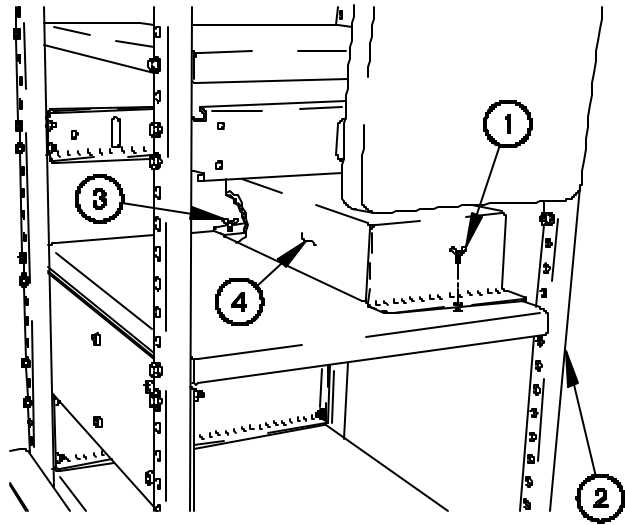
- a. Removal
- b. installation
- c. Follow-On Maintenance

INITIAL SETUP

<p>Equipment Conditions Engine shut down (TM 9-2320-365-10) Batteries discounted (para 7-48)</p>	<p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)</p> <p>Personnel Required (2)</p>
---	--

a. Removal.

- (1) Removal wing screw (1) from power distribution shelf (2).
- (2) Loosen wing screw (3) on electrical distribution block cover (4).
- (3) Remove electrical distribution block cover (4) from power distribution shelf (2).



xv80A02

NOTE

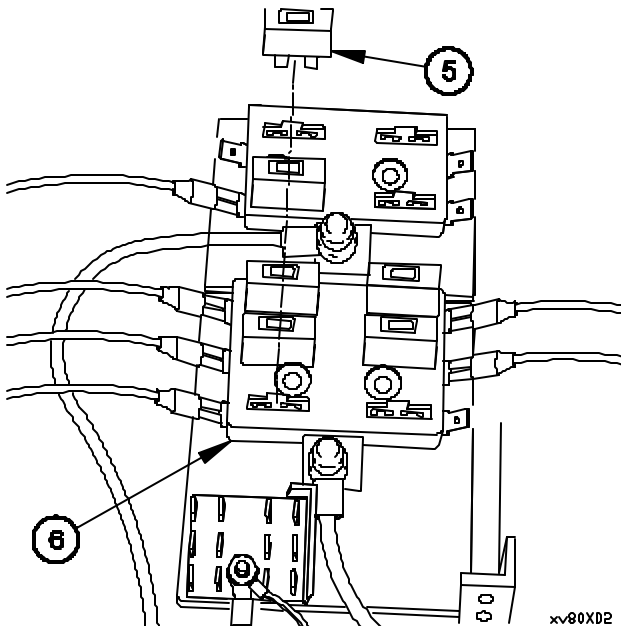
All circuit breakers in digitization power distribution panels PD1 and PD2 are replaced the same way. One circuit breaker shown.

- (4) Locate circuit breaker to be replaced.

NOTE

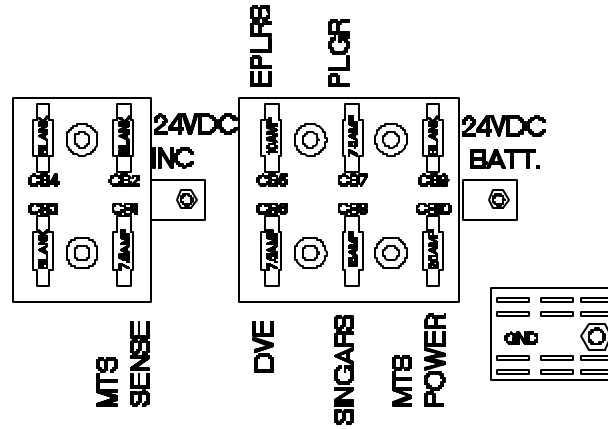
Refer to **Figure 3-1. Power Distribution Circuit Breaker Locations** and **Table 3-1 Power Distribution Circuit Breakers** for details.

- (5) Remove circuit breaker (5) from power distribution panel PD1 (6).



xv80XD2

Figure 3-1. Power Distribution Circuit Breaker Locations



xv80A03

Table 3-1. Power Distribution Panel Circuit Breakers.

CB	Amp	Function	Reset	P/N
CB1	7.5 AMP	MTS SENSE	Manual	223-7.5-400
CB2		Blank		
CB3		Blank		
CB4		Blank		
CB5	10 AMP	DPLARS	Manual	223-10-400
CB6	7.5 AMP	DVE	Manual	223-7.5-400
CB7	7.5 AMP	PLGR	Manual	223-7.5-400
CB8	15 AMP	SINGARS/FBCB2	Manual	223-15-400
CB9		Blank		
CB10	20 AMP	MTS POWER	Manual	2223-20-400

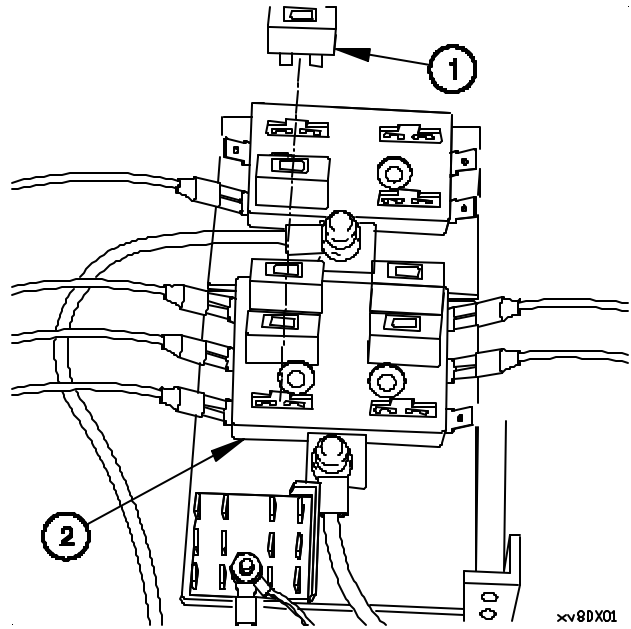
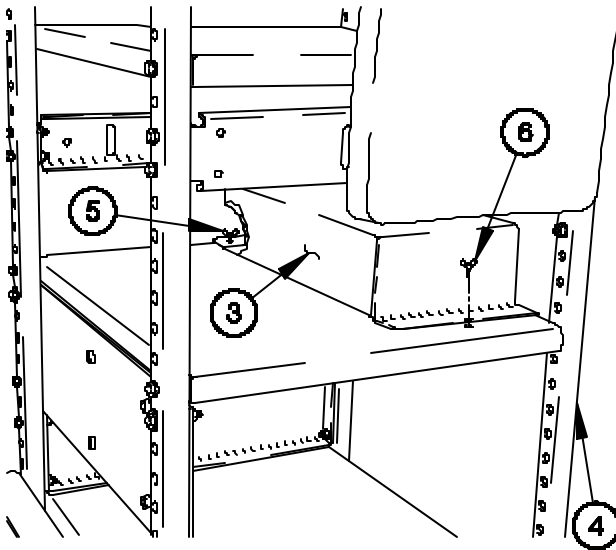
20-87. DIGITIZATION KIT CIRCUIT BREAKER REPLACEMENT/INSTALLATION (CONT)

b. Installation

NOTE

Refer to **Figure 3-1. Power distribution Circuit Breaker Locations** and **Table 3-1 Power Distribution Circuit Breakers** for details.

- (1) Install circuit breaker (1) on power distribution panel PD1 (2).



- (2) Position electrical distribution block cover (3) on power distribution shelf (4).
- (3) Tighten wing screw (5) on electrical distribution block cover (3).
- (4) Install wing screw (6) in power distribution shelf (4).

c. Follow-on Maintenance.

Connect batteries (para 7-48)

End of Task

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION

This task covers:

- a. Removal
- b. installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10-1)
- Batteries discounted (TM 9-2320-365-20-3)
- Kick panel removed (TM 9-2320-365-20-4)
- Power Distribution Panel removed for access (TM 9-2320-365-20-3)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Tool Kit Electrical Contact Repair (Item 44.1 Appendix C)

Materials/Parts

- Lockwasher (2) (Item 103.1 Appendix G)
- Ties, Cable, Plastic (Item 76, Appendix D)
- Washer, Spring (6) (Item 283, Appendix G)
- Dispenser Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
- Terminal Lug (Item 269.01, Appendix G)
- Nut, Self-Locking (Item 132.1, Appendix G)

Personnel Required

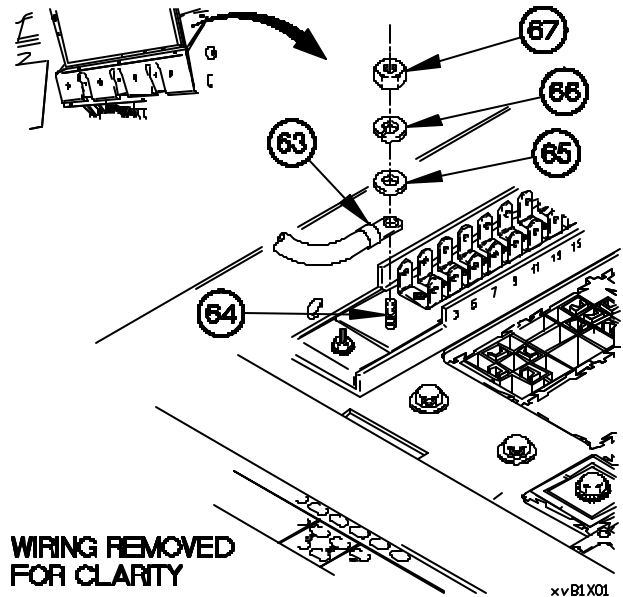
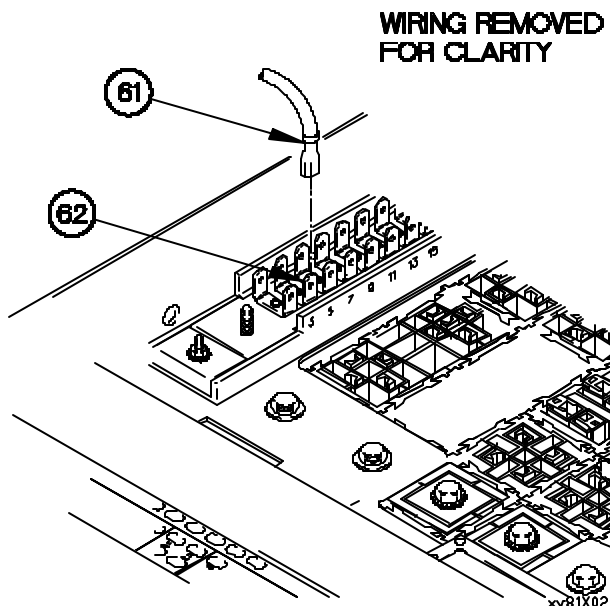
(2)

a. Removal.

NOTE

- Perform steps (1) through (4) on vehicle serial numbers 00001 through 11437.
- Tag connectors and connection points prior to disconnecting.

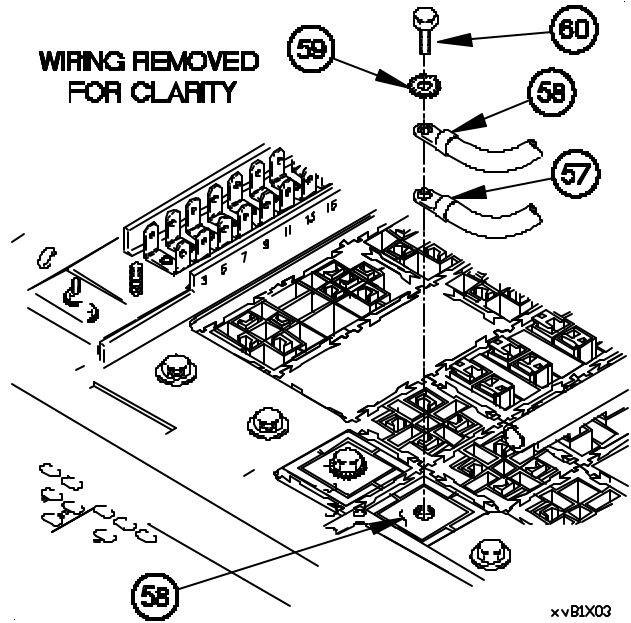
- (1) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL21 (4) from ground stud (5). Discard lockwasher.



- (2) Disconnect terminal lug TL14 (6) from terminal block TB2 connector 5 (7).

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (3) Remove screw (8), lockwasher (9), and terminal lug TL20 (10) from 24 VDC connector X1 (11). Discard lockwasher.



- (4) Remove two nuts (12), lockwashers (13), washers (14), cover (15), and two washers (14) from terminal block TB1 (16). Discard lockwasher.

NOTE

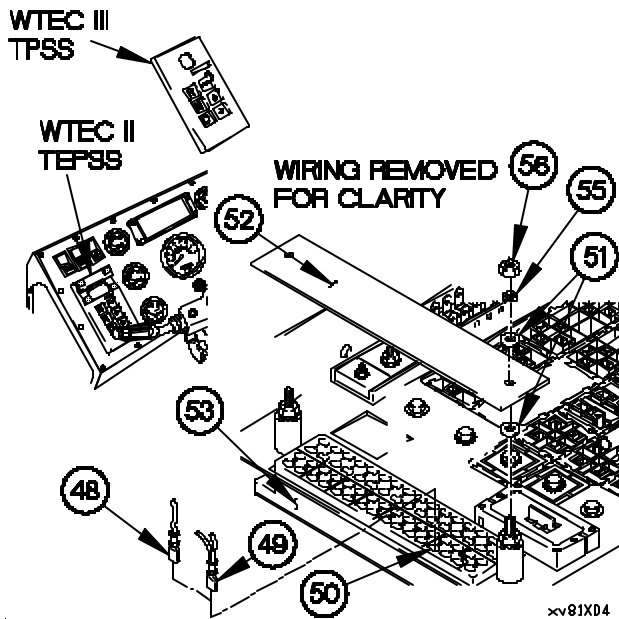
Perform step (5) on vehicles equipped with WTEC II transmission controllers.

- (5) Remove terminal lug TL 22 (17) from terminal block TB1 connector 58 (18).

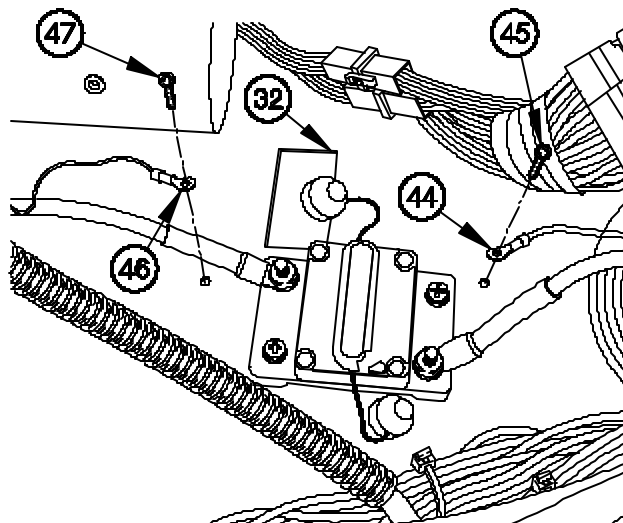
NOTE

Perform step (6) on vehicles equipped with WTEC III transmission controllers.

- (6) Remove terminal lug TL22 (19) from terminal block TB1 connector 58 (18).

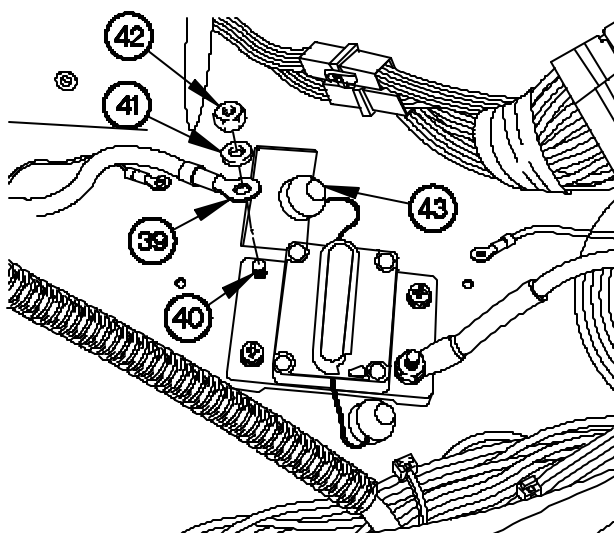


- (11) Remove screw (20) and terminal lug TL25 (21) from dashboard (22).
- (12) Remove screw (23) and terminal lug TL19 (24) from dashboard (22).



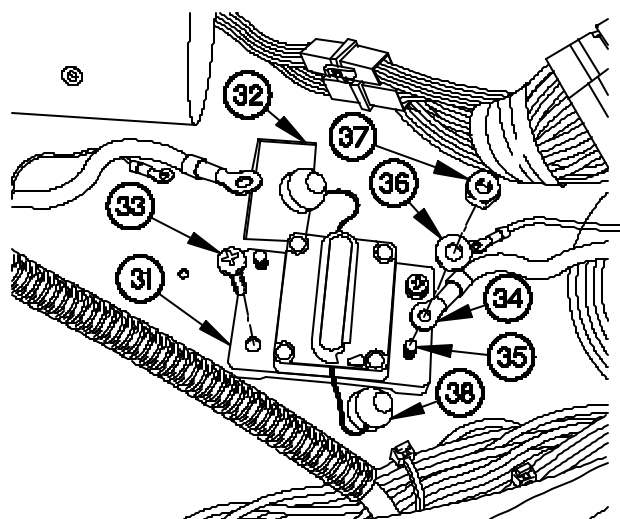
xvBLX09

- (13) Remove dust boot (25), nut (26), washer (27), and terminal lug TL23 (28) from stud (29).



xvBLX10

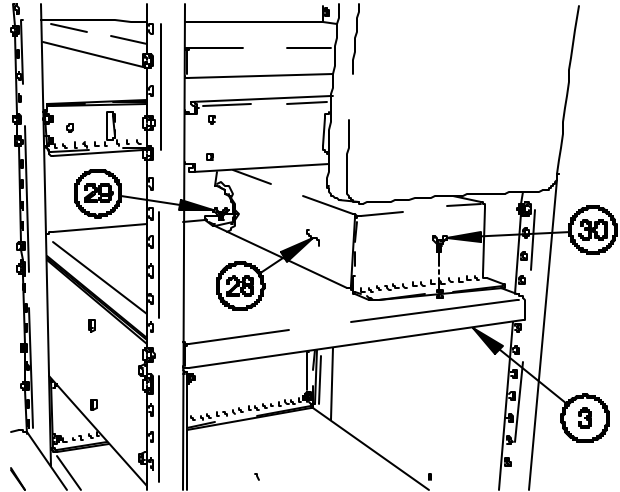
- (14) Remove dust boot (30), nut (31), washer (32), and terminal lug TL24 (33) from stud (34).
- (15) Remove two screws (35) and circuit breaker CB11 (36) from dashboard (22).



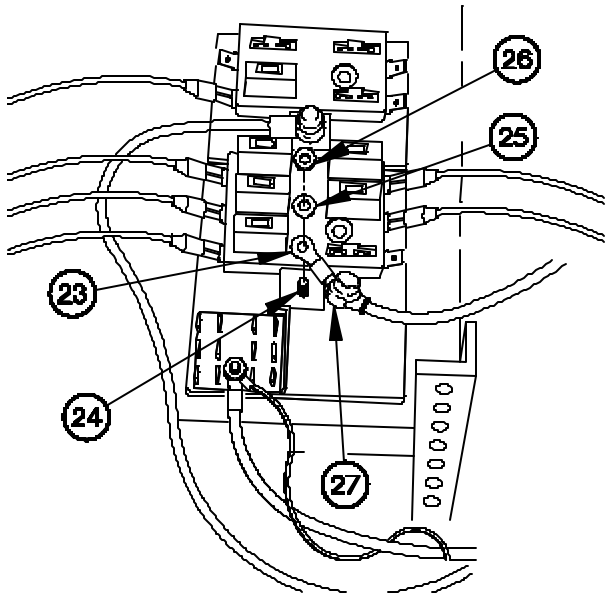
TKRBAx

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (16) Remove wing screw (37) from electrical distribution block cover (38).
- (17) Loosen wing screw (39) on electrical distribution block cover (38).
- (18) Remove electrical distribution block cover (38) from power distribution shelf (40).



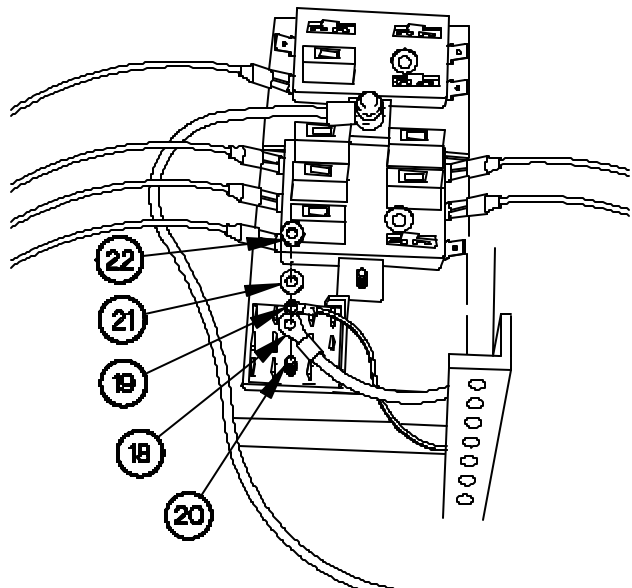
xv81X12



xv81X13

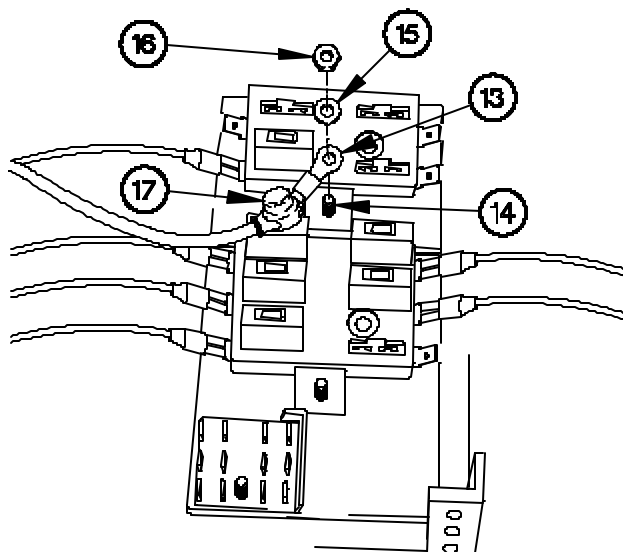
- (19) Remove dust boot (41), nut (42), washer (43), and terminal lug TL16 (44) from stud (45).

- (20) Remove nut (46), washer (47), terminal lug TL17 (48), and terminal lug TL18 (49) from stud (50).



xv81X14

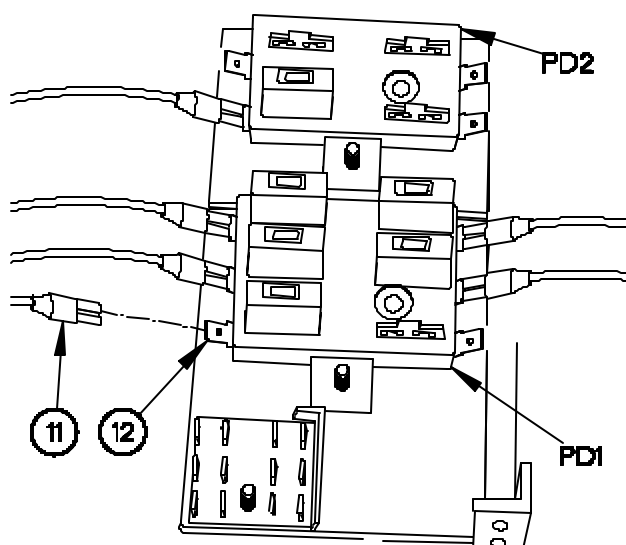
(21) Remove dust boot (51), nut (52), washer (53), and terminal lug TL15 (54) from stud (55).



NOTE

×v81X15

- Terminal lugs are disconnected the same way. One terminal lug shown.
- Refer to Table 1 Terminal Lug Locations and Connectors for details.



×v81X16

- (22) Disconnect terminal lug TL1 (56) from distribution panel PD1 CB10 connector (57).
- (23) Perform step 13 on remaining terminal lugs.

Table 1 – Terminal Lug Locations and Connectors

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

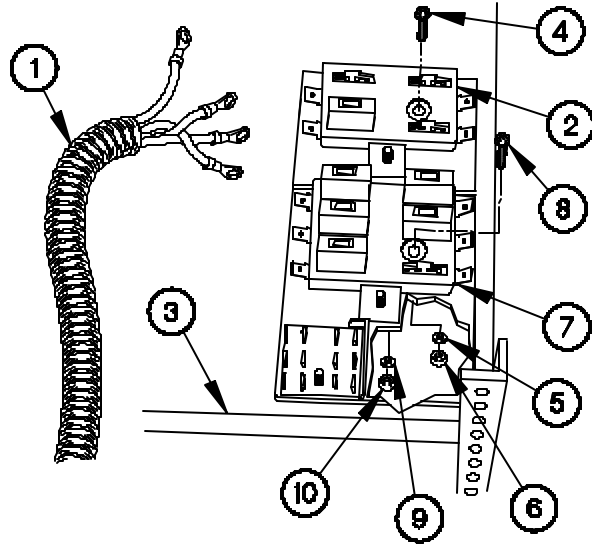
20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (24) Remove circuit breakers from distribution panels PD1 and PD2 (WP 03).
- (25) Remove four nuts (58), lockwashers (59), screws (60), and distribution panel PD1 (61) from power distribution shelf (40). Discard lockwashers.
- (26) Remove two nuts (62), lockwashers (63), screws (64), and distribution panel PD2 (65) from power distribution shelf (40). Discard lockwashers.

NOTE

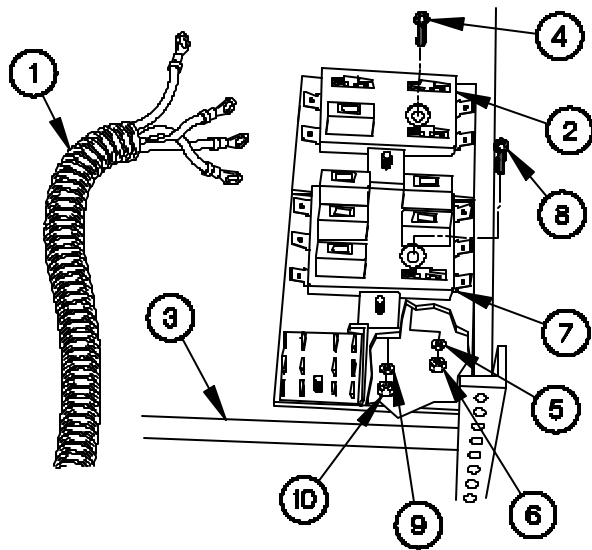
Note routing of digitization power cable prior to removal.

- (27) Remove digitization power cable (66) from vehicle.



×v8LXL7

b. Installation



×v8LXL7

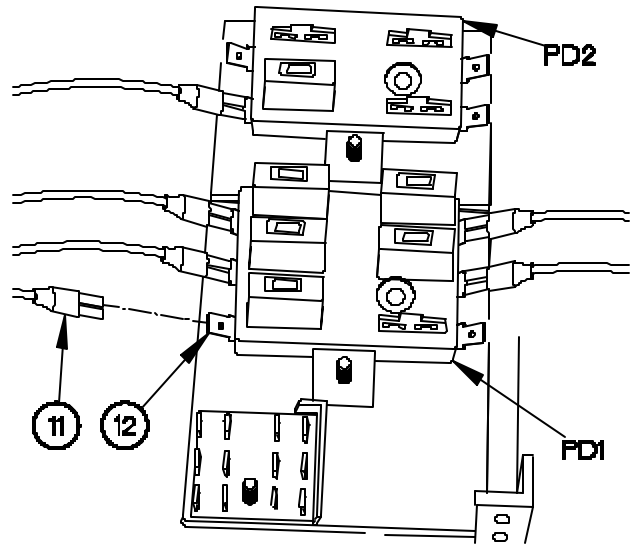
- (1) Position digitization power cable (66) in vehicle.
- (2) Install distribution panel PD2 (65) on power distribution shelf (40) with two screws (64), lockwashers (63), and nuts (62).
- (3) Install distribution panel PD1 (61) on power distribution shelf (40) with four screws (60), lockwashers (59), and nuts (58).
- (4) Install circuit breakers in distribution panels PD2 and PD1 (WP 03).

NOTE

- Terminal lugs are connected the same way. One terminal lug shown.
- Refer to Table 1 Terminal Lug Locations and Connectors for details.

(5) Connect terminal lug TL1 (56) to distribution panel PD1 CB10 (57).

(6) Perform step 5 on remaining terminal lugs.



xv81X16

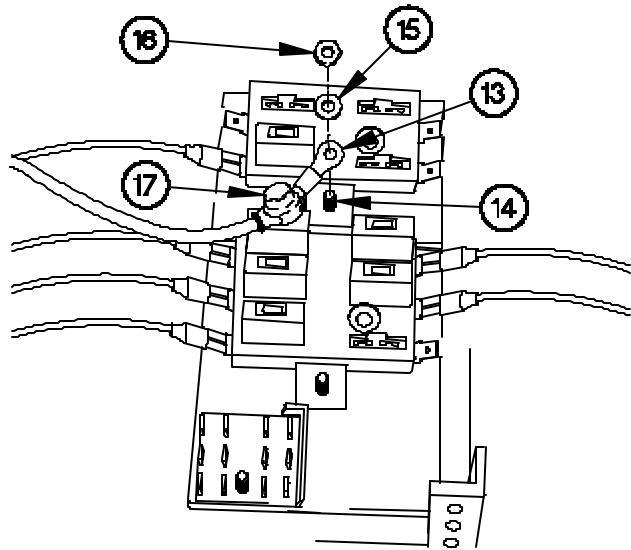
Table 1 – Terminal Lug Locations and Connectors

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINCGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

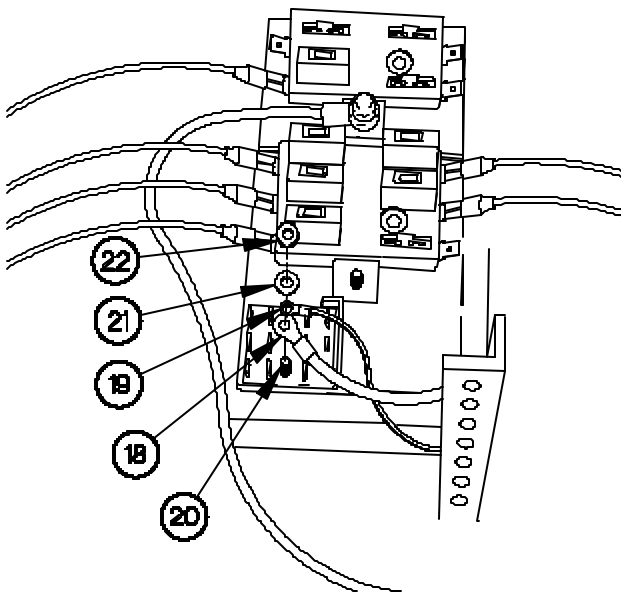
20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

(7) Install terminal lug TL15 (54) on stud (55) with washer (53) and nut (52).

(8) Install dust boot (51) on stud (55).



xv81X15

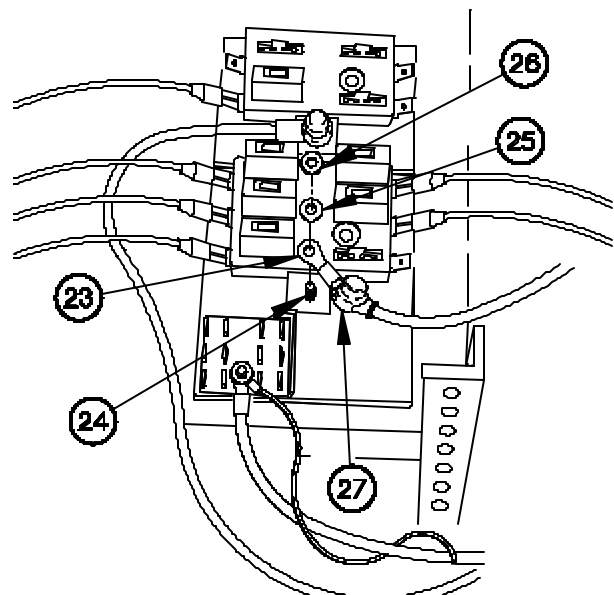


xv81X14

(10) Install terminal lug TL16 (44) on stud (45) with washer (43) and nut (42).

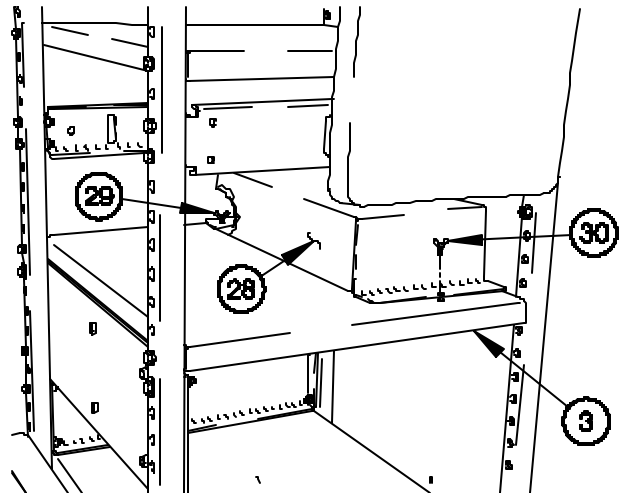
(11) Install Dust boot (41) on stud (45).

(9) Install terminal lug TL18 (49) and terminal lug TL17 (48) on stud (50) with washer (47) and nut (46).



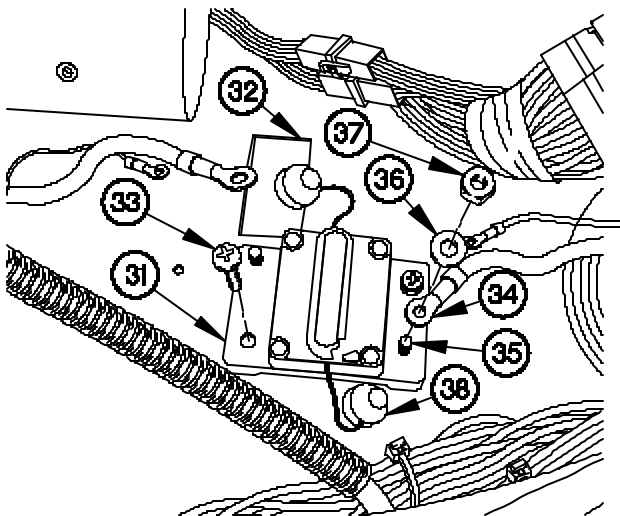
xv81X13

- (12) Position electrical distribution block cover (38) on power distribution shelf (40).
- (13) Tighten wing screw (39) on electrical distribution block cover (38).
- (14) Install wing screw (37) in electrical distribution block cover (38).



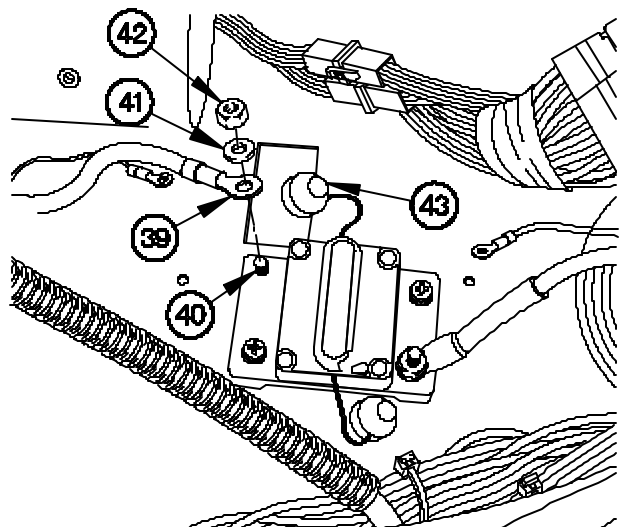
xv81X12

- (15) Install circuit breaker CB11 (36) on dashboard (22) with two screws (35).
- (16) Install terminal lug TL24 (33) on stud (34) with washer (32) and nut (31).
- (17) Install dust boot (30) on stud (34).



xv81X11

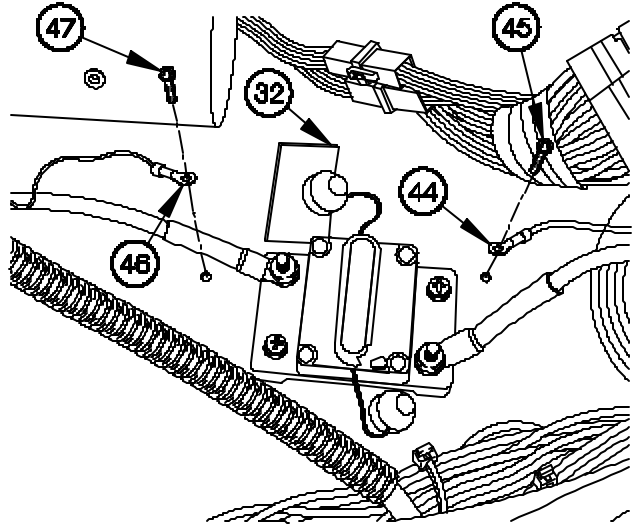
- (18) Install terminal lug TL23 (28) on stud (29) with washer (27) and nut (26).
- (19) Install dust boot (25) on stud (29).



xv81X10

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (20) Install terminal lug TL25 (24) on dashboard (22) with screw (23).
- (21) Install terminal lug TL19 (21) on dashboard (22) with screw (20).



xv81X09

NOTE

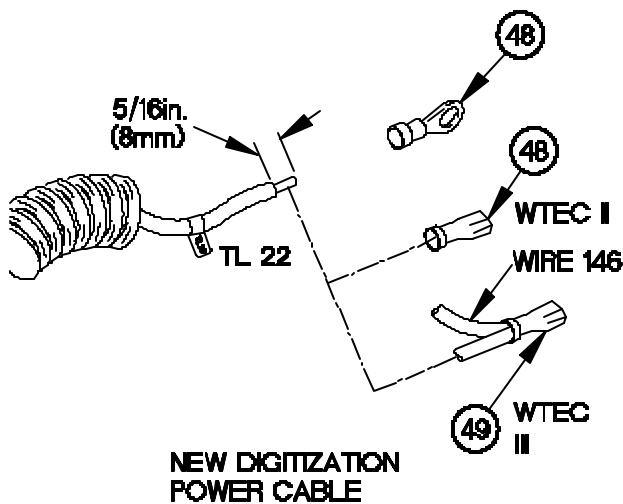
Perform steps (22) and (23) if replacing the digitization power cable on vehicle serial numbers 0001 through 11347 equipped with WTEC II controller.

- (22) Remove terminal lug TL22 ring terminal (17) from NEW digitization power cable and strip insulation 5/16 in (8 mm).
- (23) Install terminal lug TL22 spade terminal (17) on NEW digitization power cable.

NOTE

Perform steps (24) and (25) if replacing the digitization power cable on vehicle serial numbers 00001 through 11347 equipped with WTEC III controller.

- (24) Remove terminal lug TL22, ring terminal (19) from NEW digitization power cable and strip insulation 5/16 in (8 mm).
- (25) Install terminal lug TL22, spade terminal (19) on NEW digitization power cable and existing wire J117.



xv81X18

NOTE

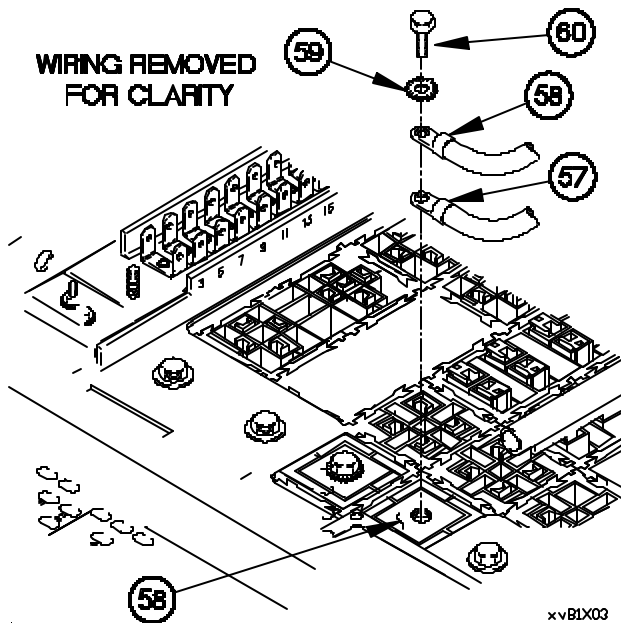
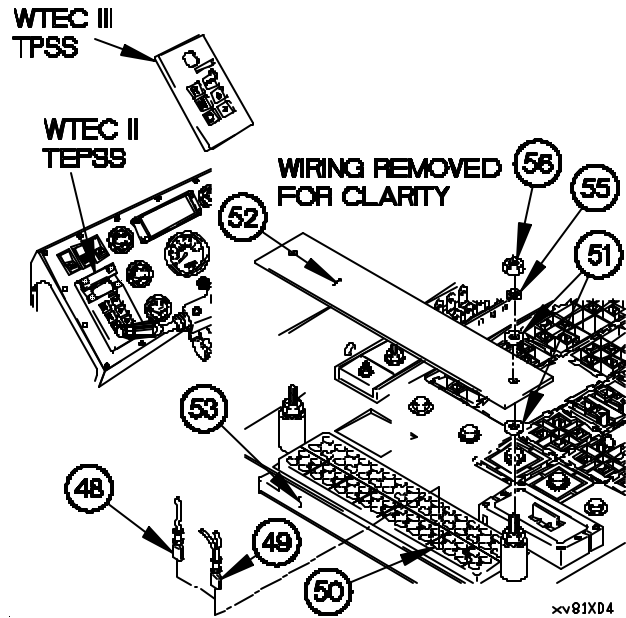
Perform step (26) on vehicles equipped with WTEC II transmission controllers.

- (26) Install terminal lug TL22 (17) on terminal block TB1 connector 58 (18).

NOTE

Perform step (27) on vehicles equipped with WTEC III transmission controllers.

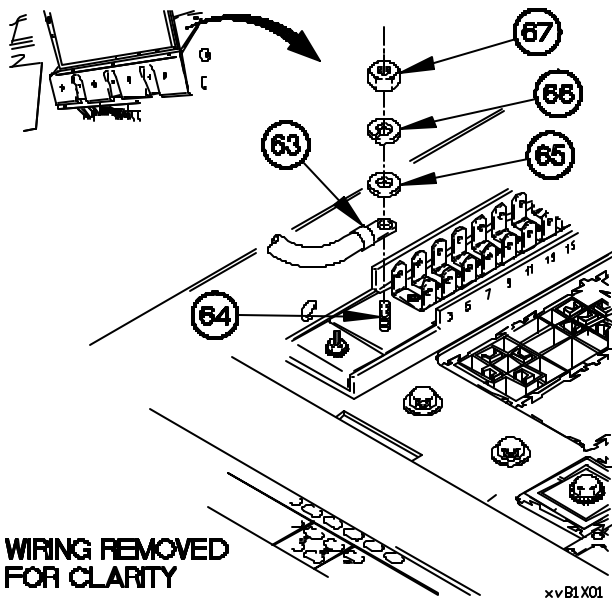
- (27) Install terminal lug TL22 (19) on terminal block TB1 connector 58 (18).
- (28) Install two washers (14) and cover (15) on terminal block TB1 (16) with two washers (14), lockwashers (13), and nuts (12).



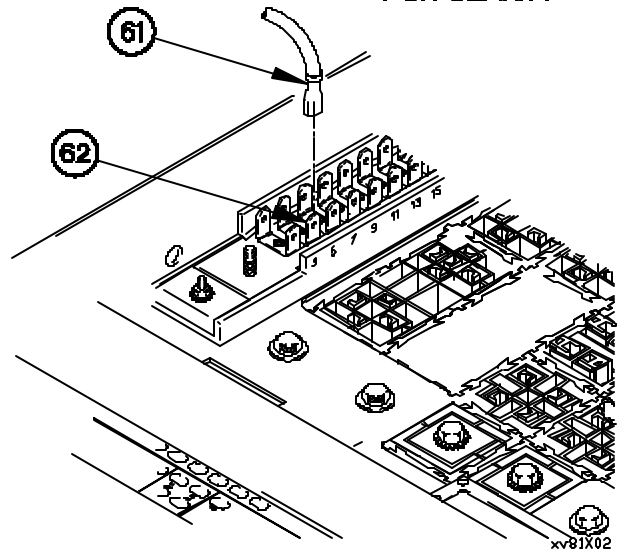
- (29) Install terminal lug TL20 (10) on +24 VDC connector X1 (11) with lockwasher (9) and screw (8).

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

(30) Connect terminal lug TL14 (6) to terminal block TB2 connector 43 (7).



WIRING REMOVED FOR CLARITY



(31) Install terminal lug TL21 (4) on ground stud (5) with washer (3), lockwasher (2), and nut (1).

c. Follow-on Maintenance

- (1) Install power distribution panel (TM 9-2320-365-20-3).
- (2) Install kick panel (TM 9-2320-365-20-4).
- (3) Connect batteries (TM 9-2320-365-20-3).
- (4) Operate equipment, check for proper operation.

End of Task

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly
- c. Assembly
- d. Installation
- e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10)
- Batteries discounted (para 7-48)
- Equipment and mounting base(s) removed.
- Digitization power cable, removed (para 20-88)
- RH seat removed, (para 16-14)

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-150lb-in. (Item 58 Appendix C)
- Socket Wrench Set (Item 49, Appendix C)

Materials/Parts

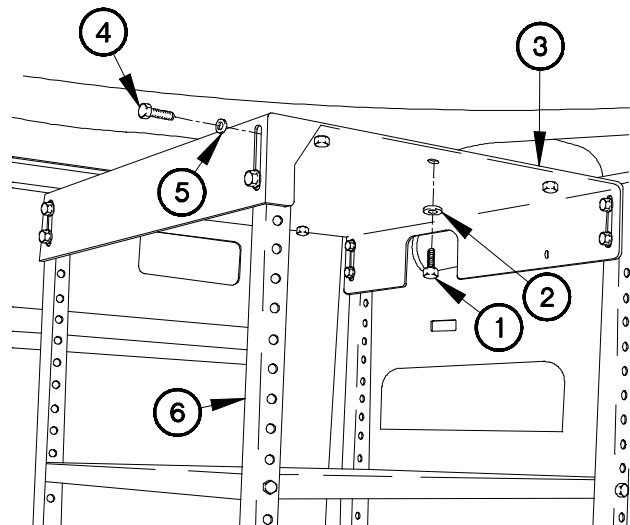
- Ties, Cable, Plastic (Item 76, Appendix D)
- Sealant (Item 68.2, Appendix D)

Personnel Required

(2)

a. Removal.

- (1) Remove six screws (1) and washers (2) from top support (3).
- (2) Remove eight screws (4), washers (5), and top support (3) from rack assembly (6).



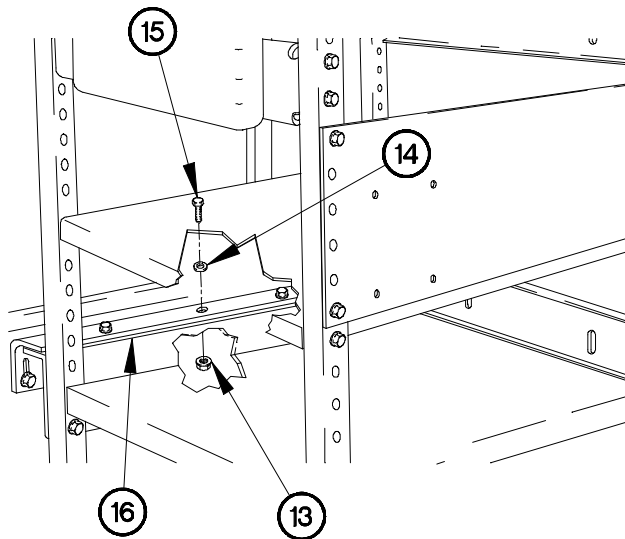
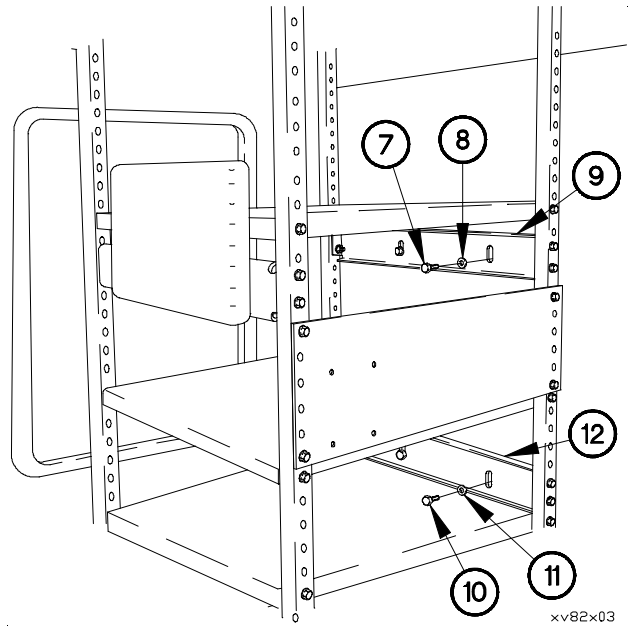
xv82A01

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

CAUTION

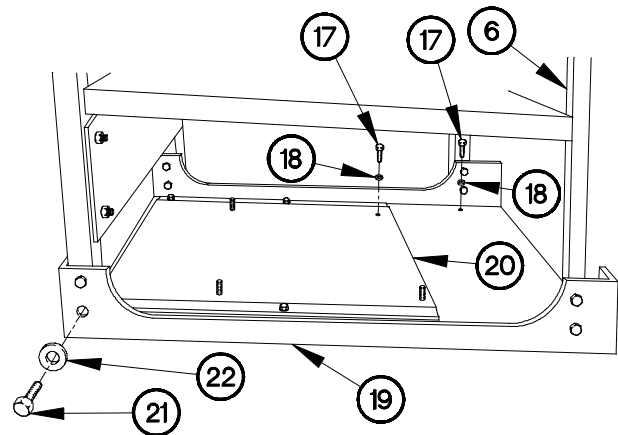
Spacers may be used with vehicles equipped with rear panels. Use caution when removing screws so that washers do not fall behind panel or disassembly may be required to recover washers.

- (3) Remove two screws (7) and washers (8) from rear upper support (9).
- (4) Remove two screws (10) and washers (11) from rear mid support (12).



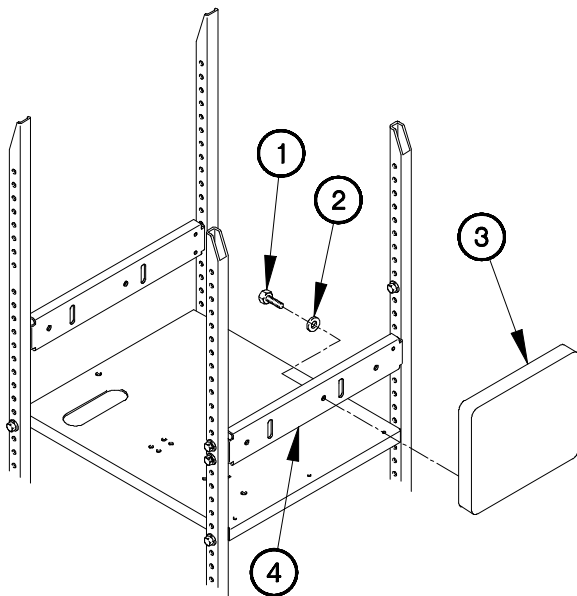
- (5) Remove three self-locking nuts (13), washers (14), and screws (15) from outer side support (16). Discard self-locking nuts.

- (6) Remove two screws (17) and washers (18) from bottom support (19).
- (7) Remove four screws (17), washers (18), and MTS plate (20) from bottom support (19).
- (8) Remove eight screws (21) and washers (22) from bottom support (19).
- (9) Remove rack assembly (6) from bottom support (19).
- (10) Remove rack assembly (6) and bottom support (19) from cab.



xv82x05

b. Disassembly.



xv82a03

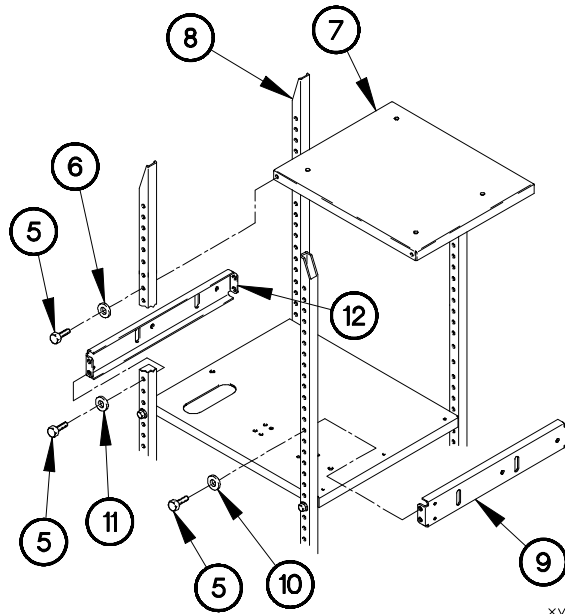
- (1) Remove four screws (1), washers (2), and head pad (3) from head pad base (4).

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

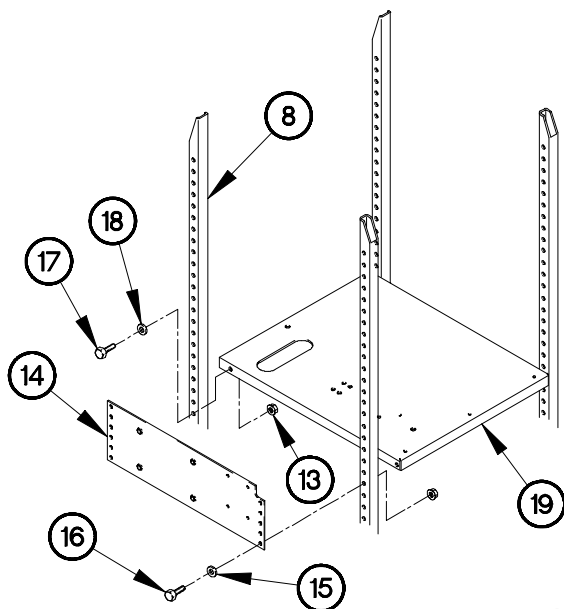
NOTE

Note shelf and brace locations prior to removal.

- (2) Remove four screws (5), washers (6), and SINGGAR shelf (7) from support legs (8).
- (3) Remove four screws (5), washers (10), and head pad brace (9) from four support legs (8).
- (4) Remove four screws (5), washers (11), and top rear wall brace (12) from support legs (8).



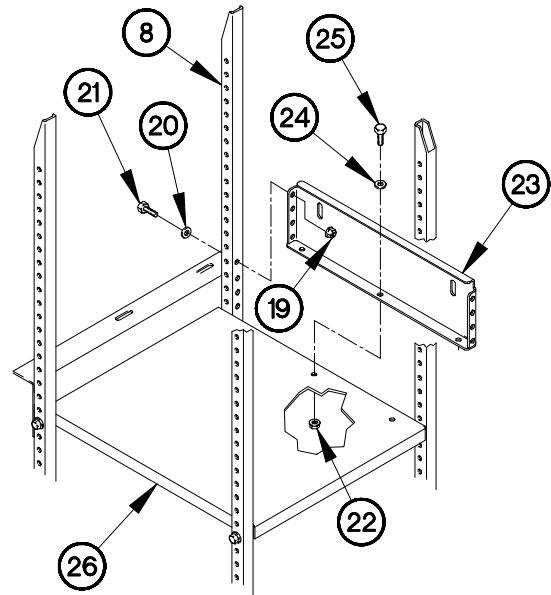
xv82a.04



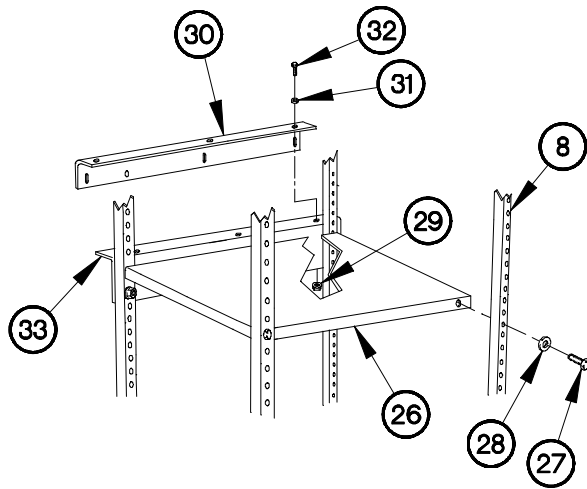
xv82a.05

- (5) Remove four self-locking nuts (13), PLGR/M42 alarm plate (14), four washers (15), and screws (16) from support legs (8). Discard self-locking nuts.
- (6) Remove four screws (17), washers (18), and power distribution panel (19) from support legs (8).

- (7) Remove four self-locking nuts (19), washers (20), and screws (21) from support legs (8). Discard self-locking nuts.
- (8) Remove three self-locking nuts (22), rear M10 support (23), three washers (24), and screws (25) from EPLRS shelf (26). Discard self-locking nuts.



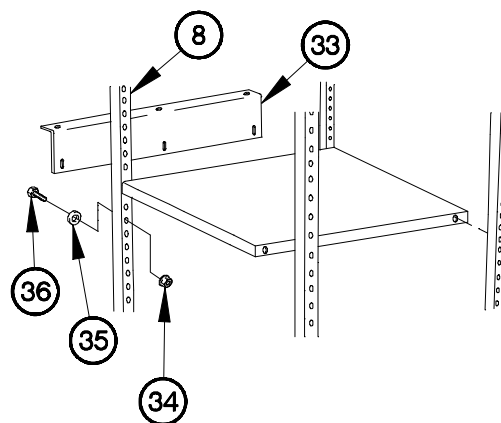
xv82a06



xv82a07

- (9) Remove four screws (27), washers (25), and EPLRS shelf (26) from support legs (8).
- (10) Remove three self-locking nuts (29), outer side support (30), three washers (31), and screws (32) from inter side support (33). Discard self-locking nuts.

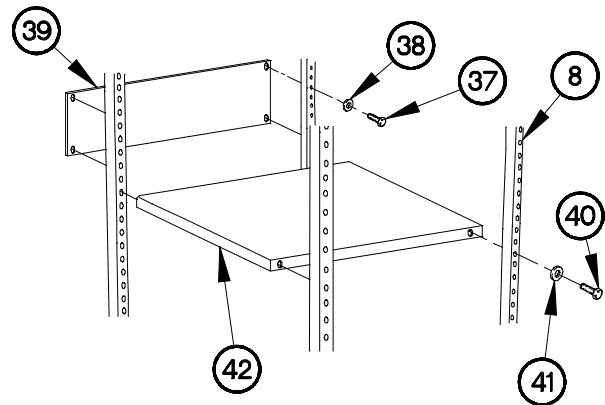
- (11) Remove two self-locking nuts (34), inter side support (33), two washers (35), and screws (36) from support legs (8).



xv82a15

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

- (12) Remove four screws (37), washers (35), and stiffening plate (39) from four support legs (8).
- (13) Remove four screws (40), washers (41), and support legs (8) from FBCB2 shelf (42).

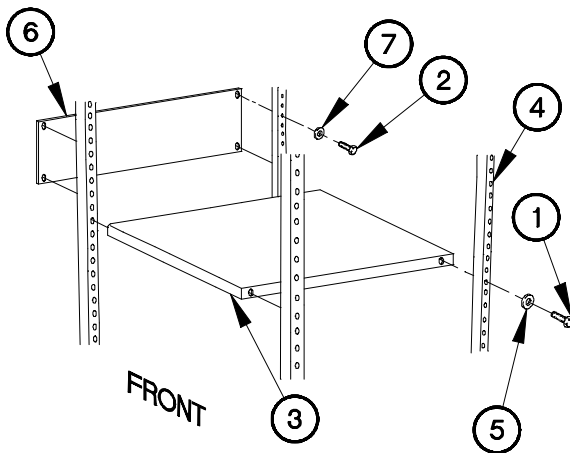


xv82a.08

c. Assembly.

WARNING

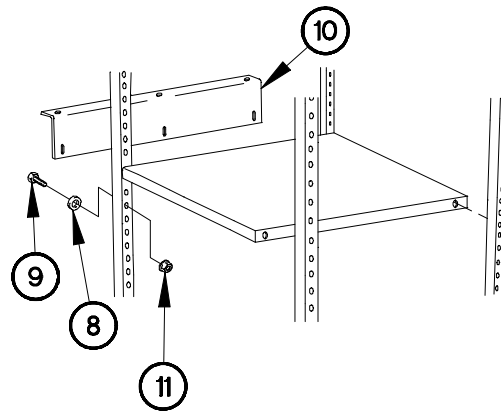
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



xv82a.09

- (1) Apply sealant to threads of four screws (1 and 2).
- (2) Install FBCB2 (3) on four support legs (4) with washers (5) and screws (1).
- (3) Install stiffening plate (6) on support legs (4) with four washers (7) and screws (2).

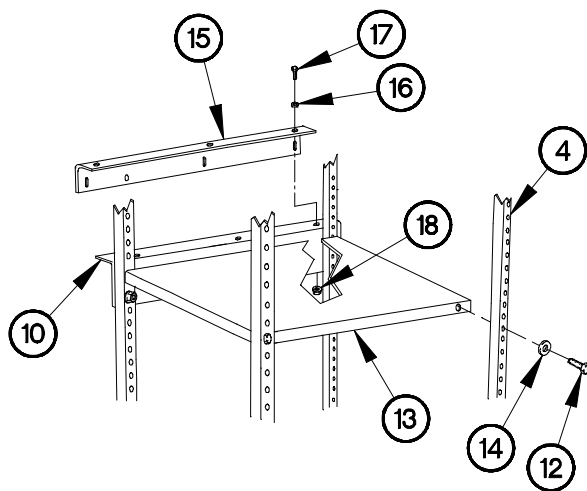
- (4) Position two washers (8) and screws (9) in inter side support (10) with two self locking nuts (11).
- (5) Tighten two self-locking nuts (11) to 110-120 lb-in. (12-14 N•m).



xv82a16

WARNING

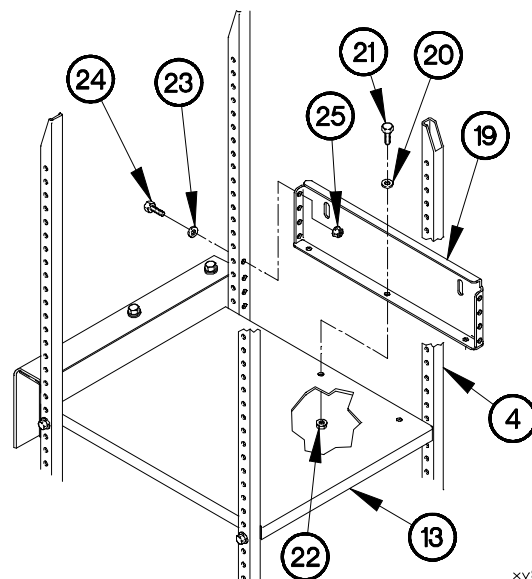
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



xv82a018

- (6) Apply sealant to threads of four screws (12).
- (7) Install EPLRS shelf (13) and inter side support (10) on support legs (4) with four washers (14) and screws (12).
- (8) Position outside support (15) on inter side support (10) with three washers (16), screws (17), and self-locking nuts (18).

- (9) Position mid rear support (19) on EPLRS shelf (13) with three washers (20), screws (21), and self locking nuts (22).
- (10) Position four washers (23) and screws (24) in support legs (4) with self-locking nuts (25).
- (11) Tighten three self-locking nuts (22) and four self-locking nuts (25) to 110-120 lb-in. (12-13 N•m).



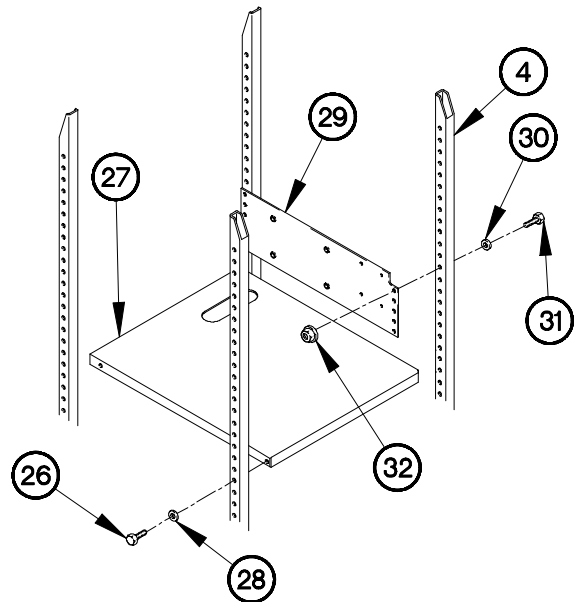
xv82a11

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

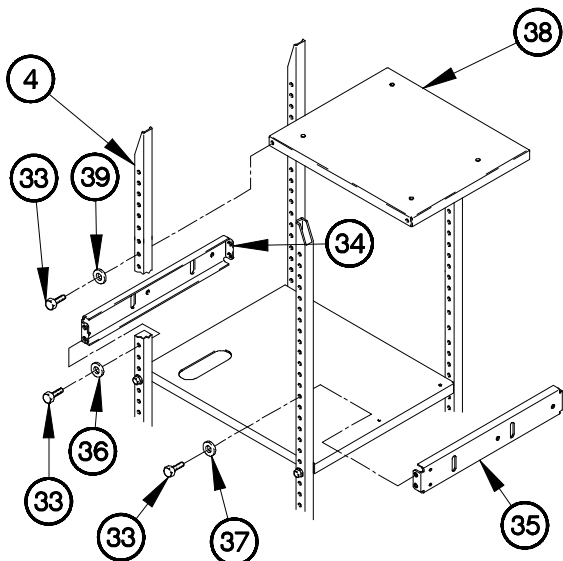
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (12) Apply sealant to threads of four screws (26).
- (13) Install power distribution shelf (27) in support legs (4) with four washers (28) and screws (26).
- (14) Position PLGR/M42 alarm plate (29) on support legs (4) with four washers (30), screws (31), and self-locking nuts (32).
- (15) Tighten four self-locking nuts (32) to 110-120 lb-in. (12-13 N•m).
- (16) Apply sealant to threads of 12 screws (33).



xv82a12



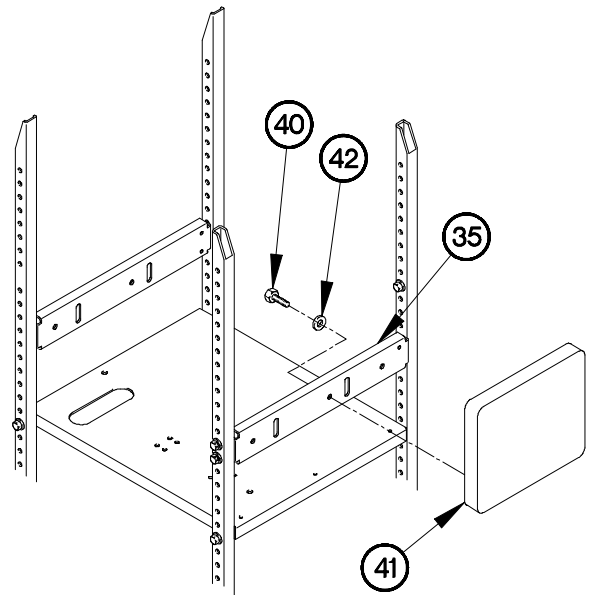
xv82a13

- (17) Install top rear wall bracket (34) and front head pad bracket (35) on support legs (4) with four washers (36 and 37) and screws (33).
- (18) Install SINGGAR shelf (38) on support legs (4) with four washers (39) and screws (33).

WARNING

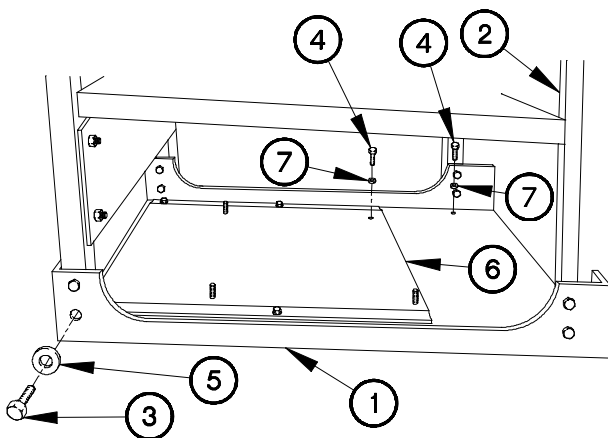
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (19) Apply sealant to threads of four screws (40).
- (20) Install head pad (41) on front head pad brace (35) with four washers (42) and screws (39).



xv82a14

d. Installation.

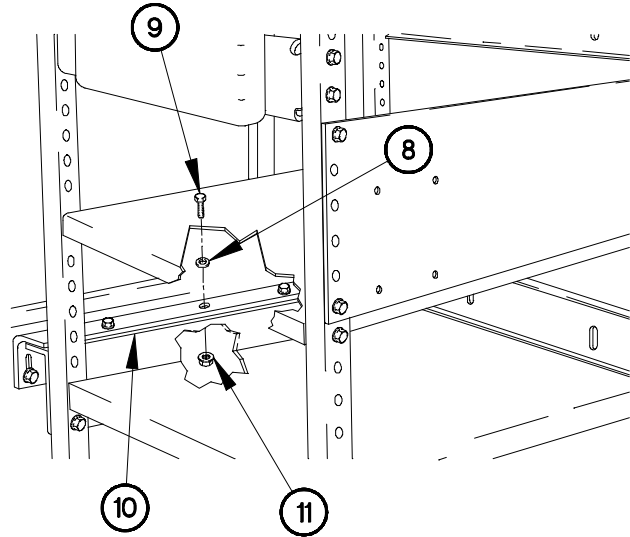


xv82x08

- (1) Position bottom support (1) and rack assembly (2) in cab.
- (2) Apply sealant to threads of eight screws (3) and six screws (4).
- (3) Position rack assembly (2) on bottom support (1) with eight washers (5) and screws (3).
- (4) Tighten eight screws (3) to 110-120 lb-in. (12-14 N•m).
- (5) Position MTS plate (6) on bottom support (1) with four washers (7) and screws (4).
- (6) Position two washers (7) and screws (4) in bottom support (1).

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

- (7) Position three washers (8) and screws (9) in outer side support (10) with three self-locking nuts (11).



xv82x06

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

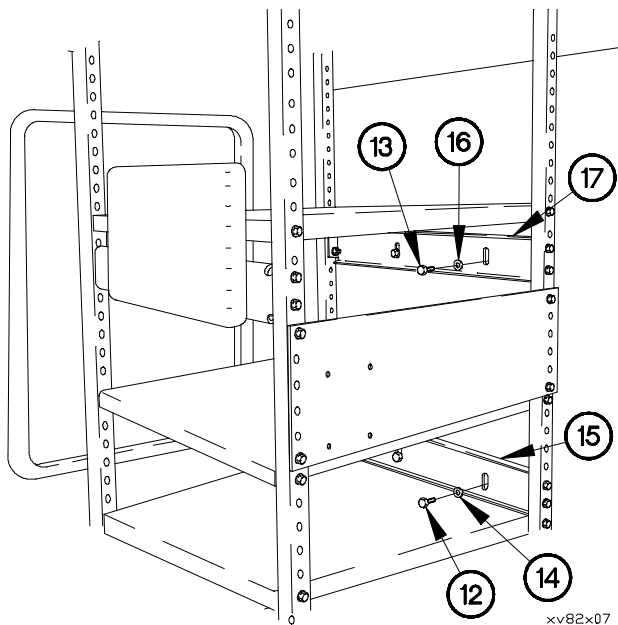
- (8) Apply sealant to threads of two screws (12 and 13).

CAUTION

Add spacers behind support to vehicles equipped with rear panels. Failure to comply may result in damage to equipment.

- (9) Position two washers (14) and screws (12) in lower rear support (15).

- (10) Position two washers (16) and screws (13) in upper rear support (17).

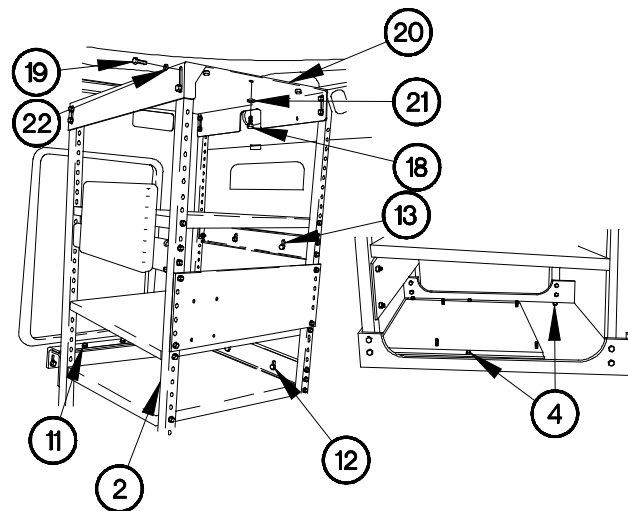


xv82x07

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (11) Apply sealant to threads of six screws (18) and eight screws (19).
- (12) Position top support (20) on rack assembly (2) with six washers (21) and screws (18).
- (13) Position eight washers (22) and screws (19) in top support (20).
- (14) Tighten two screws (12 and 13) to 70-85 lb-in. (8-10 N•m).
- (15) Tighten three self-locking nuts (11) to 110-120 lb-in. (12-13 N•m).
- (16) Tighten six screws (18) to 70-85 lb-in. (8-10 N•m).
- (17) Tighten eight screws (19) to 110-120 lb-in. (12-13 N•m).



xv82a.02

e. Follow-on Maintenance

- (1) Install RH seat (Para 16-15)
- (2) Install digitization power cable (Para 20-81)
- (3) Install mounting base(s) and equipment.
- (4) Connect batteries (Para 7-57)

End of Task

20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR

This task covers:

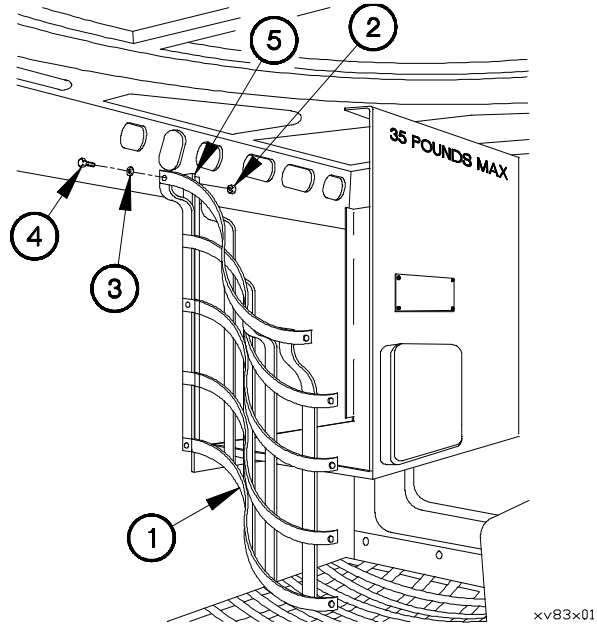
a. Removal	d. Installation
b. Disassembly	e. Follow-On Maintenance
c. Assembly	

INITIAL SETUP

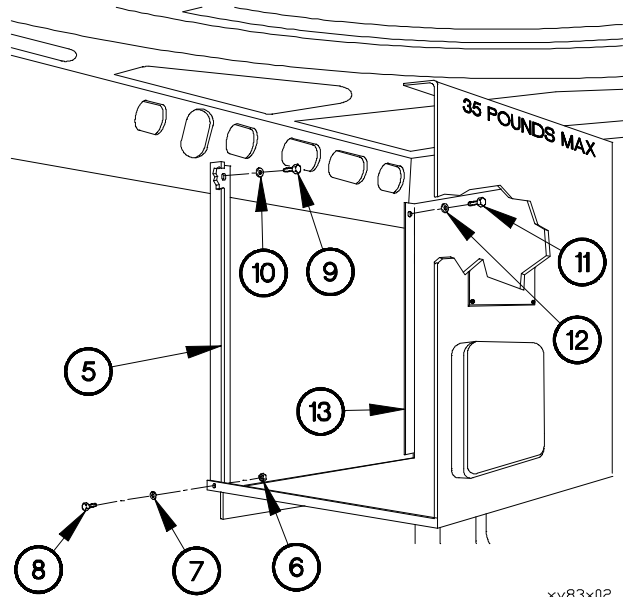
<p>Equipment Conditions Engine shut down (TM 9-2320-365-10) Remove contents from AFT Storage Box</p> <p>Tools and Special Tools Drill, electric (Item 7, Appendix C) Drill set, twist (Item 8, Appendix C) Tool Kit, Blind Rivet (Item 43, Appendix C) Tool Kit, Genl Mech (Item 44, Appendix C) Wrench Set, Socket (Item 49, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 59 Appendix C)</p>	<p>Materials/Parts Nut, self-locking (13) (Item 146.1, Appendix G) Rivet (4) (Item 259, Appendix G) Washer, Spring (3) (Item 283, Appendix G) Sealant (Item 55.1, Appendix D)</p> <p>Personnel Required (2)</p>
---	--

a. Removal.

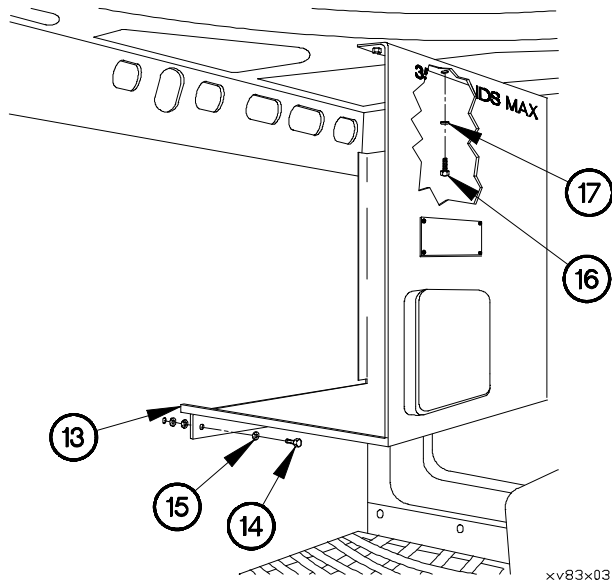
- (1) Unwrap webbing (1).
- (2) Remove three nuts (2), webbing (1), washers (3), and screws (4) from angle (5).



- (3) Remove nut (6), washer (7), and screw (8) from angle (5).
- (4) Remove screw (9), washer (10), and angle (5) from cab.
- (5) Remove two screws (11) and washers (12) from AFT Storage Box (13).



xv83x02



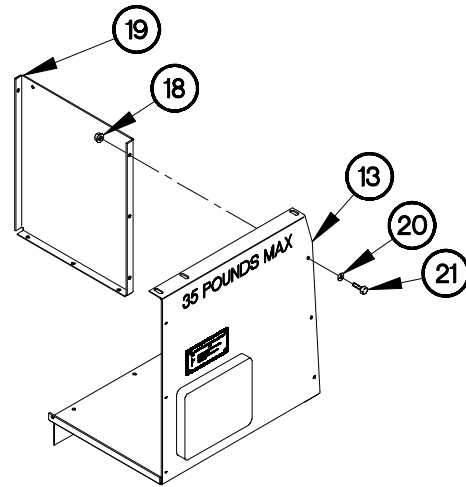
xv83x03

- (6) Remove three screws (14) and washers (15) from AFT Storage Box (13).
- (7) Remove three screws (16), washers (17), and AFT Storage Box (13) from cab.

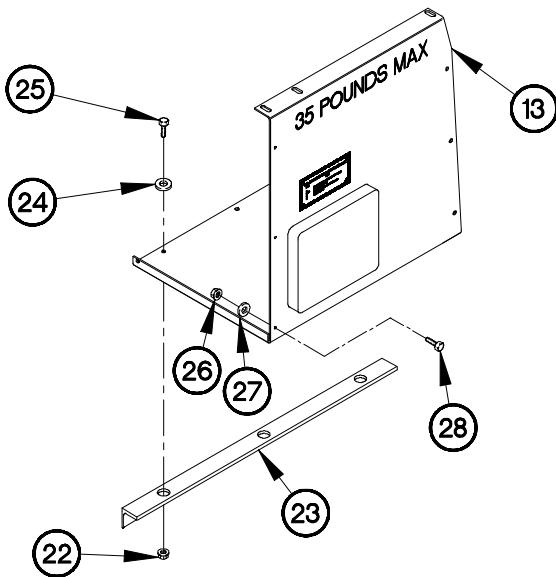
20-90. DIGITIZATION KIT AFT STORAGE BOX REPLACEMENT/REPAIR (CONT)

b. Disassembly.

- (1) Remove six self-locking nuts (18), side panel (19), six washers (20), and screws (21) from AFT Storage Box (13). Discard self-locking nuts.



xv83x04



xv83x05

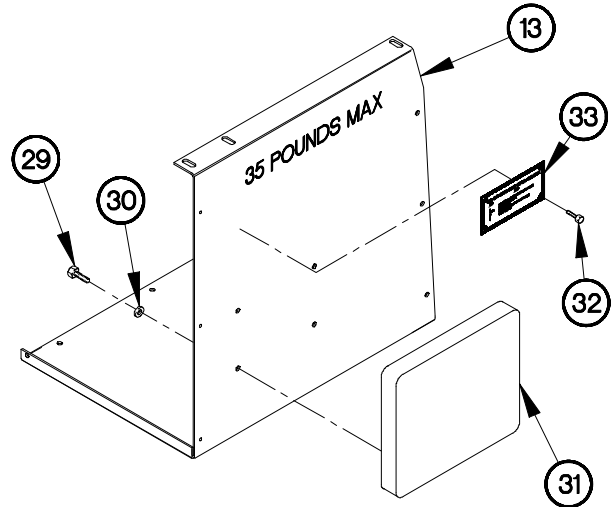
- (2) Remove three self-locking nuts (22), bracket (23), three washers (24), and screws (25) from AFT Storage Box (13). Discard three self-locking nuts.
- (3) Remove three nuts (26), lockwashers (27), and snap screws (28) from AFT Storage Box (13).

- (4) Remove four screws (29), washers (30), and headrest (31) from AFT Storage Box (13).

WARNING

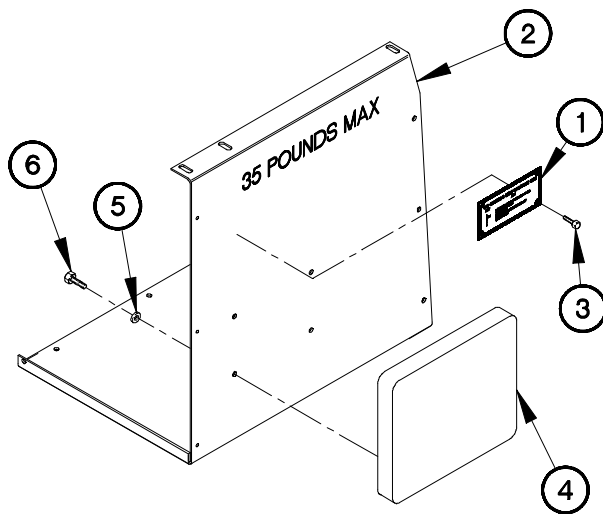
Wear appropriate eye protection when drilling out rivets. Failure to comply may result in injury to personnel.

- (5) Remove four rivets (32) and data plate (33) from AFT Storage Box (13).



xv83x06

c. Assembly.



xv83x07

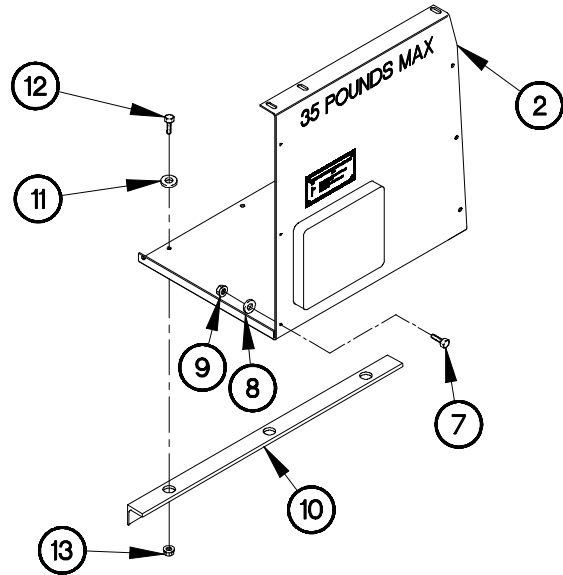
- (1) Install data plate (1) on AFT Storage Box (2) with four rivets (3).
- (2) Position headrest (4) on AFT Storage Box (2) with four washers (5) and screws (6).
- (3) Tighten four screws (6) to 70-85 lb-in. (8-10 N•m).

20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR (CONT)

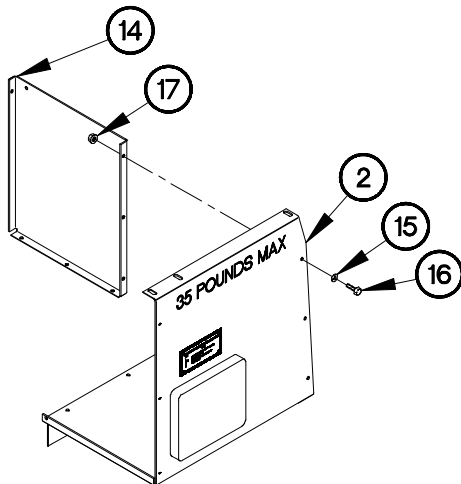
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (4) Apply sealant to threads of three snap screws (7).
- (5) Install three snap screws (7) on AFT Storage Box (2) with three lockwashers (8) and nuts (9).
- (6) Position bracket (10) on AFT Storage Box (2) with three washers (11) screws (12) and self-locking nuts (13).
- (7) Tighten three self-locking nuts (13) to 95-110 lb-in. (11-12 N•m).



xv83x08



- (8) Position side panel (14) on AFT Storage Box (2) with six washers (15), screws (16), and self-locking nuts (17).
- (9) Tighten six self-locking nuts (17) to 95-110 lb-in. (11-12 N•m).

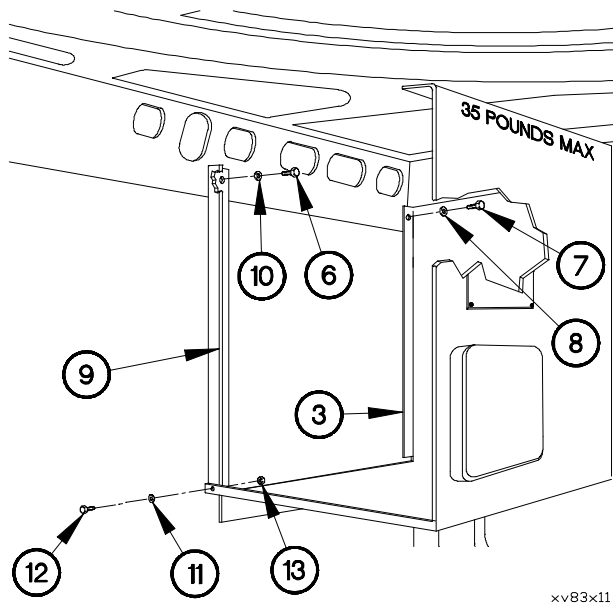
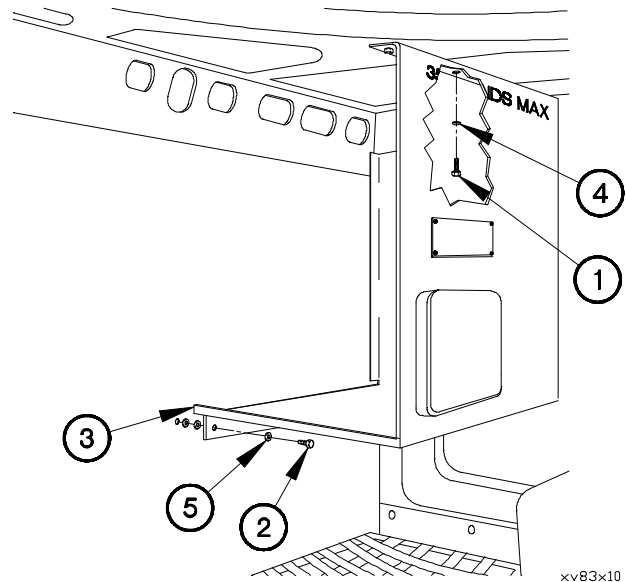
xv83x09

d. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

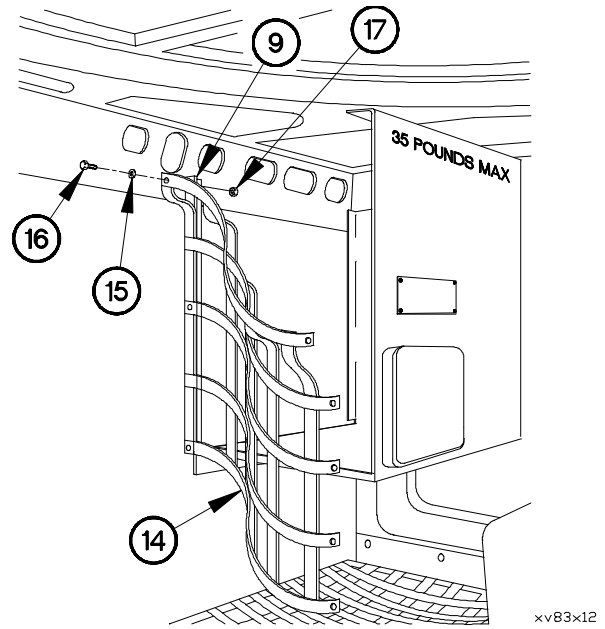
- (1) Apply sealant on threads of three screws (1 and 2).
- (2) Position AFT Storage Box (3) in cab with three washers (4) and screws (1).
- (3) Position three washers (5) and screws (2) in AFT Storage Box (3).
- (4) Tighten three screws (1 and 2) to 70-85 lb-in. (8-10 N•m).



- (5) Apply sealant to threads of screws (6 and 7).
- (6) Position washer (8) and screw (7) in AFT Storage Box (3).
- (7) Position angle (9) on cab with washer (10) and screw (6).
- (8) Position angle (9) on AFT Storage Box (3) with washer (11), screw (12), and self-locking nut (13).
- (9) Tighten two screws (6 and 7) to 70-85 lb-in. (8-10 N•m).
- (10) Tighten self-locking nut (13) to 95-110 lb-in. (11-12 N•m).

20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR (CONT)

- (11) Position webbing (1) on angle (5) with three washers (3), screws (4), and self-locking nuts (2).
- (12) Tighten three self-locking nuts (2) to 95-110 lb-in. (11-12 N•m).
- (13) Snap webbing (1).



End of Task

20-91. DIGITIZATION KIT DRIVER'S STORAGE BOX REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly
- c. Assembly
- d. Installation
- e. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

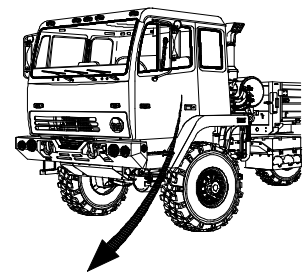
Engine shut down (TM 9-2320-365-10)
 Co-Driver's Storage Box, removed (TM 9-2320-365-20-5)

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)
 Wrench, Torque, 0-200 lb in (Item 58, Appendix-C)
 Wrench Set, Socket (Item 49, Appendix C)

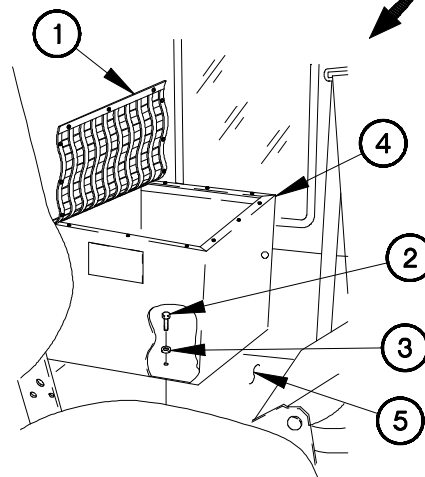
Materials/Parts

Lockwasher (9) (Item 89, Appendix G)



a. Removal.

- (1) Unsnap webbing (1).
- (2) Remove six screws (2) and washers (3) from Driver's Storage Box (4).
- (3) Remove Driver's Storage Box (4) from cab floor (5).

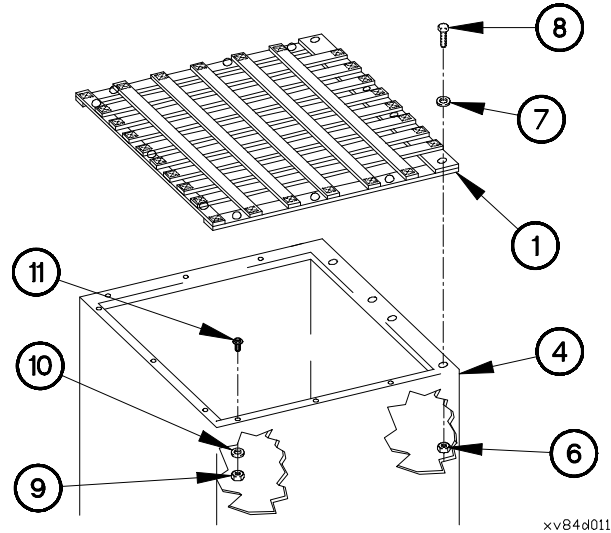


xv84r011

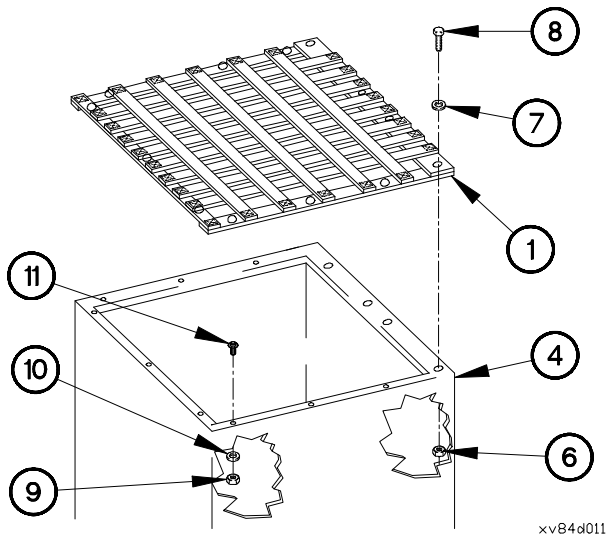
20-91. DIGITIZATION KIT DRIVER'S STORAGE BOX REPLACEMENT/REPAIR (CONT'D)

b. Disassembly.

- (1) Remove four nuts (6), washers (7), screws (8), and webbing (1) from Driver's Storage Box (4).
- (2) Remove nine nuts (9), lockwashers (10), and snap screws (11) from Driver's Storage Box (4). Discard lockwashers.



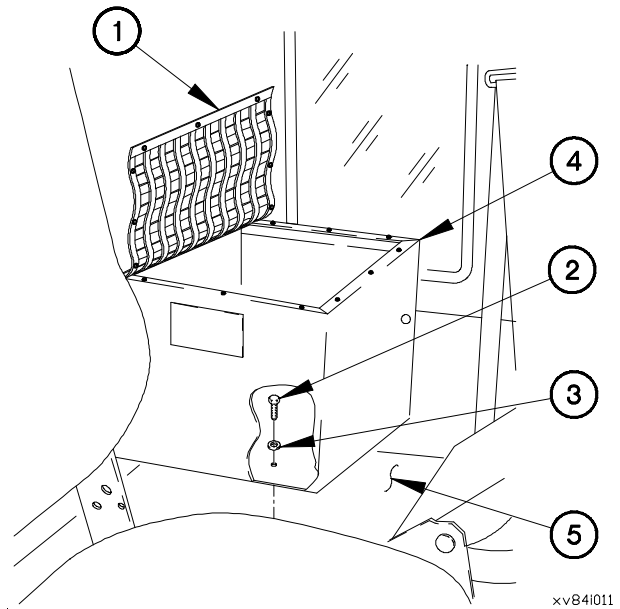
c. Assembly.



- (1) Install nine snap screws (11) on Driver's Storage Box (4) with nine lockwashers (10) and nuts (9).
- (2) Install webbing (1) on Driver's Storage Box (4) with four washers (7), screws (8), and nuts (6).

d. Installation.

- (1) Position Driver's Storage Box (4) in mounting location on cab floor (5).
- (2) Position six washers (3) and screws (2) in Driver's Storage Box (4).
- (3) Tighten six screws (2) to 70-85 lb-in. (8-10 N•m).
- (4) Snap webbing (1).

**e. Follow-On Maintenance.**

Install Co-Driver's Storage Box (TM 9-2320-365-20)

End of Task.

20-92. DIGITIZATION KIT CO-DRIVER'S SEAT REPLACEMENT/REPAIR

This task covers:

- | | |
|----------------|-----------------|
| a. Removal | c. Assembly |
| b. Disassembly | d. Installation |

INITIAL SETUP

Equipment Conditions

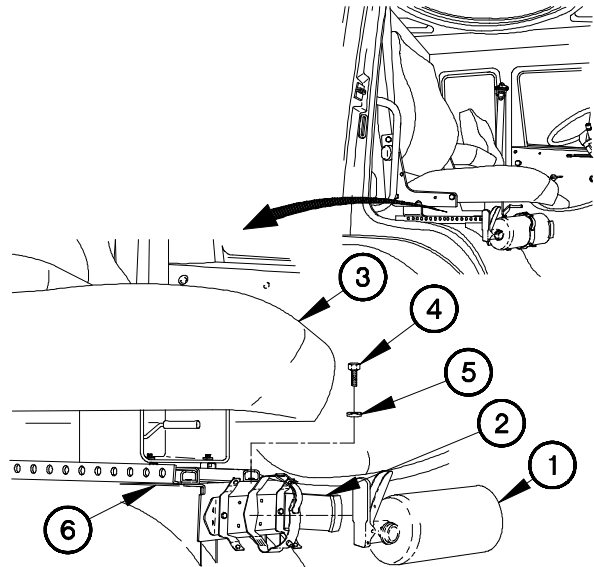
Engine shut down (TM 9-2320-365-10-1)

Tools and Special Tools

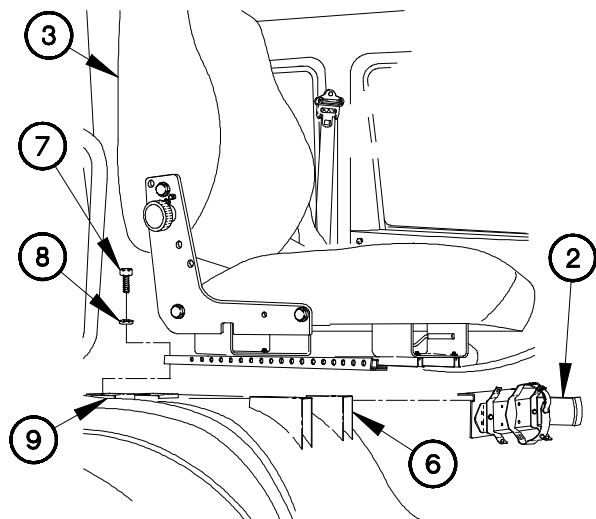
Tool Kit, Genl Mech (Item 46, Appendix C)

a. Removal.

- (1) Remove fire extinguisher (1) from bracket (2).
- (2) Slide seat (3) toward back of vehicle.
- (3) Remove two screws (4) and washers (5) from front seat mount (6).



xv85x01

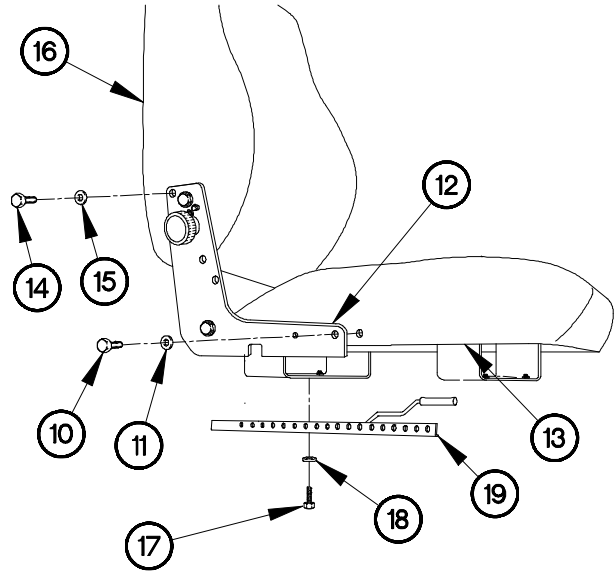


xv85x02

- (4) Slide seat (3) toward front of vehicle.
- (5) Remove two screws (7) and washers (8) from rear seat mount (9).
- (6) Remove seat (3) and bracket (2) from seat mounts (6 and 9).

b. Disassembly.

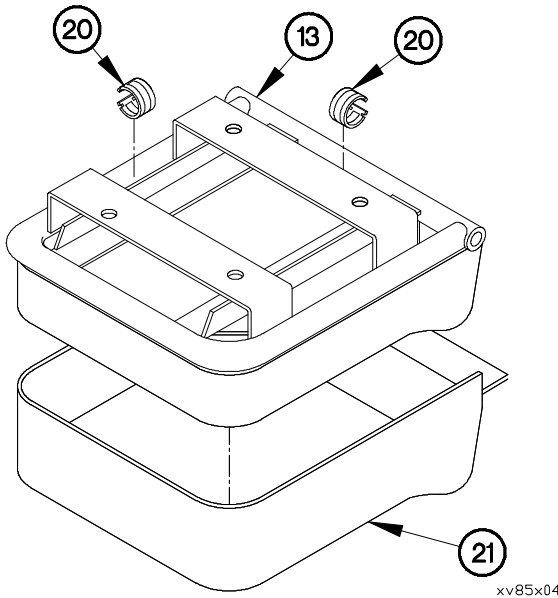
- (1) Remove four bolts (10) and washers (11) from two seat hinges (12).
- (2) Remove seat bottom (13) from two seat hinges (12).
- (3) Remove two bolts (14), washers (15), and two seat hinges (12) from seat back (16).
- (4) Remove two bolts (17), washers (18), and seat adjuster (19) from seat bottom (13).



xv85x03

WARNING

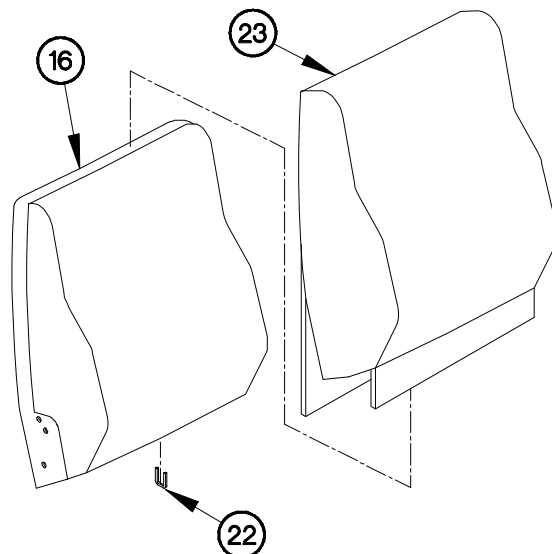
Wear appropriate eye protection when removing spring rings. Spring rings are under tension and can act as projectiles when being removed. Failure to comply may result in injury to personnel.



xv85x04

- (5) Remove 10 hog rings (20) from seat bottom cover (21).
- (6) Remove seat bottom cover (21) from seat bottom (13).

- (7) Remove five hog rings (22) from seat back cover (23).
- (8) Remove seat back cover (23) from seat back (16).



xv85x05

20-92. DIGITIZATION KIT CO-DRIVER'S SEAT REPLACEMENT/REPAIR

c. Assembly.

NOTE

Plastic film is provided in replacement seat cover kit.

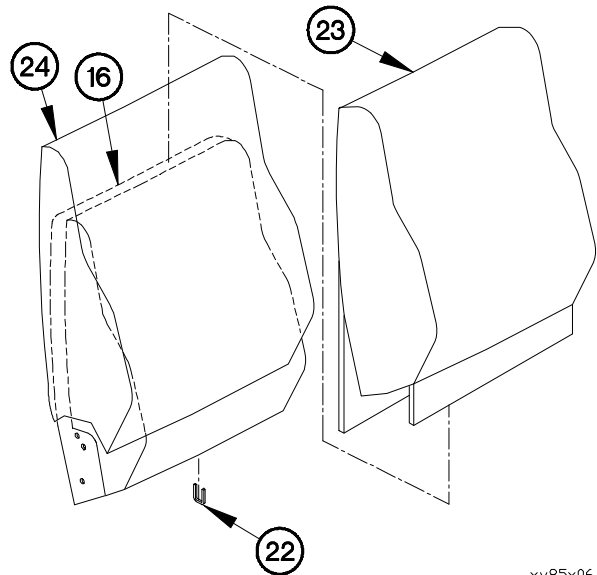
- (1) Position plastic film (24) over seat back (16).
- (2) Position seat back cover (23) over plastic film (24) and seat back (16).

WARNING

Wear appropriate eye protection when installing spring rings. Spring rings are under tension and can act as projectiles when being removed. Failure to comply may result in injury to personnel.

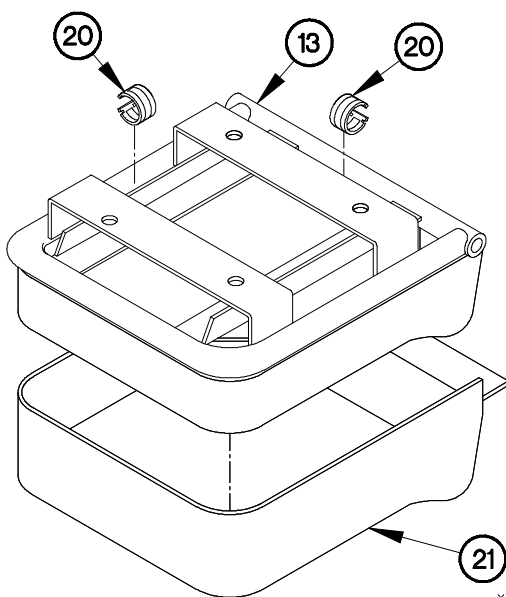
CAUTION

Ensure hog rings are crimped over support wires on bottom of seat back. Failure to comply may result in damage to equipment.



xv85x06

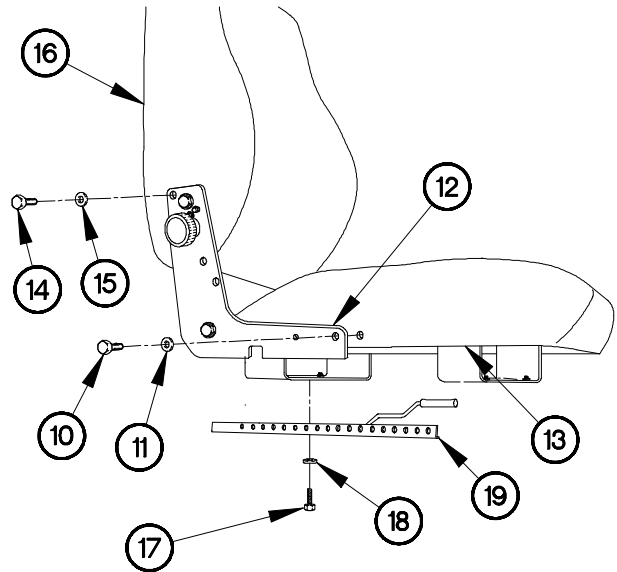
- (3) Pull seat back cover (23) tight over seat back (16) and install five hog rings (22) equally spaced on seat back cover (23).



xv85x04

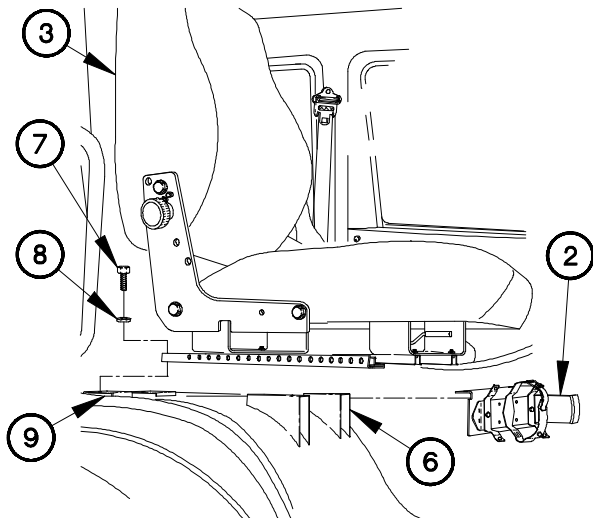
- (4) Position seat bottom cover (21) on seat bottom (13).
- (5) Pull seat bottom cover (21) tight over seat bottom (13) and install 10 hog rings (20) on seat bottom cover (21).

- (6) Install seat adjuster (19) on seat bottom (13) with two washers (18) and bolts (17).
- (7) Install two seat hinges (12) on seat back (16) with two washers (15) and bolts (14).
- (8) Install seat bottom (13) on two seat hinges (12) with four washers (11) and bolts (10).



xv85x03

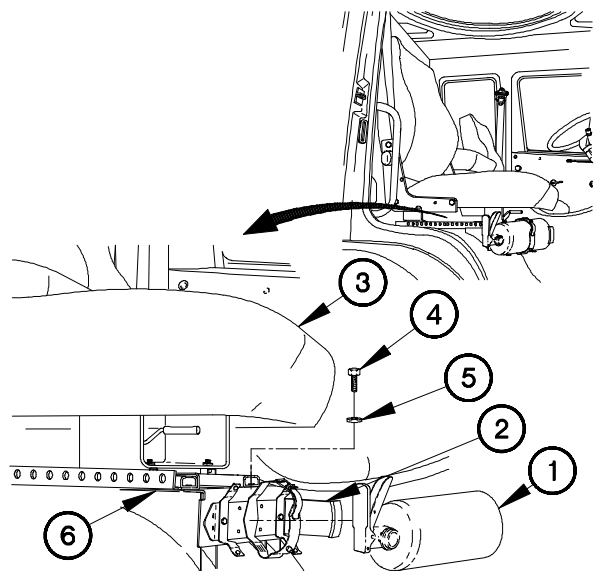
d. Installation.



xv85x02

- (1) Position bracket (2) and seat (3) on seat mounts (6 and 9).
- (2) Slide seat (3) toward front of vehicle.
- (3) Install two washers (8) and screws (7) on rear seat mount (9).

- (4) Slide seat (3) toward rear of vehicle.
- (5) Install two washers (5) and screws (4) on front seat mount (6) and bracket (2).
- (6) Install fire extinguisher (1) on bracket (2).



xv85x01

End of Task.

20-93. RH CONVEX MIRROR INITIAL INSTALLATION

This task covers:

- a. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10)

Tools and Special Tools

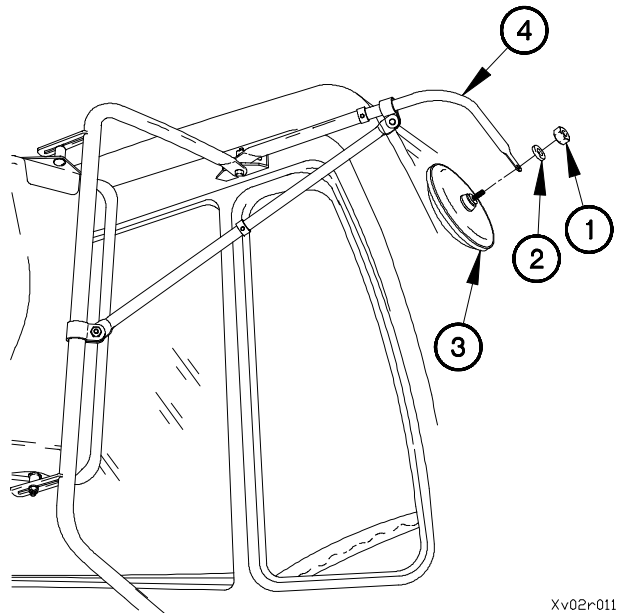
Tool Kit, Genl Mech (Item 44, Appendix C)
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

Personnel Required

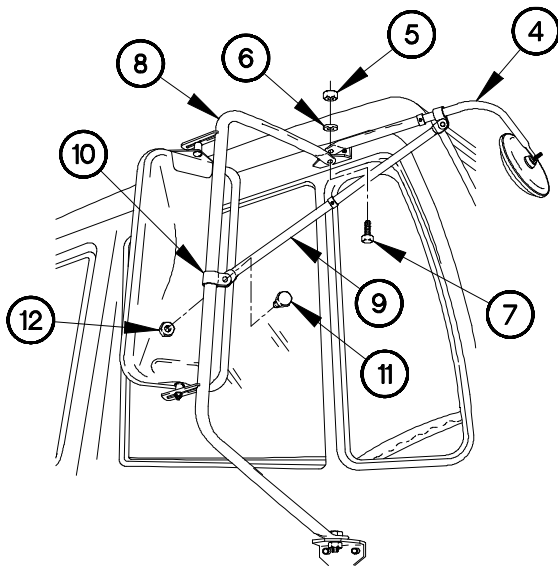
(2)

a. Removal.

- (1) Remove nut (1) and washer (2) from Mirror (3).
- (2) Position mirror (3) on bracket arm (4) with washer (2) and nut (1).



Xv02r011

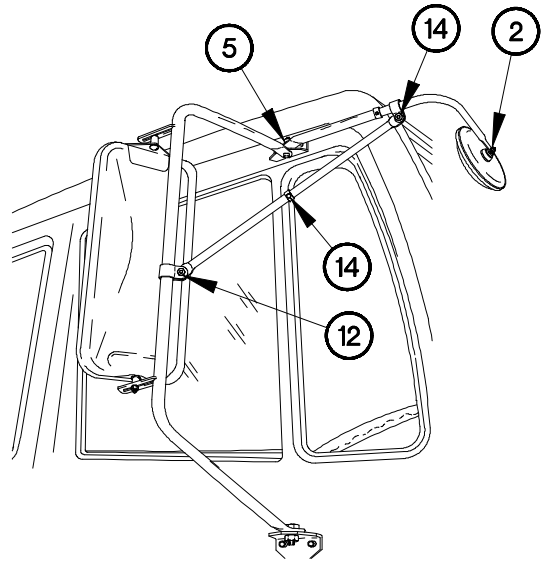


Xv02r021

- (3) Remove nut (5), washer (6), and screw (7) from mirror arm (8).
- (4) Position bracket arm (9) on mirror arm (8) with clamp (10), screw (11), and nut (12).
- (5) Position bracket arm (4) on mirror arm (8) with screw (7), washer (6), and nut (5).

20-93. RH CONVEX MIRROR INITIAL INSTALLATION (CONT)

- (6) Tighten nut (5) to 156-204 lb-in. (17-23 N•m).
- (7) Tighten (2) to 36-60 lb-in. (4-6 N•m).
- (8) Tighten nut (12) to 84-108 lb-in. (9-12 N•m).
- (9) Tighten two set screws (14) to 36-60 lb-in. (4-6 N•m).



Xv021011

End of Task.

20-94. CONVEX MIRROR INITIAL INSTALLATION

This task covers:

- a. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10)

Tools and Special Tools

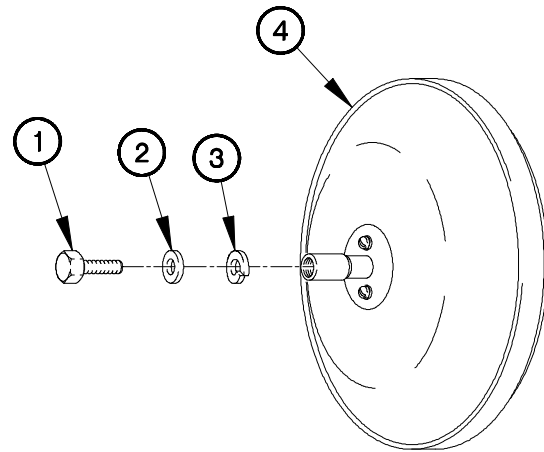
Tool Kit, Genl Mech (Item 46, Appendix C)
 Wrench, Torque 0-200 lb-in (Item 59, Appendix C)
 Lockwashers (3) (Item 105.3, Appendix G)

a. Installation.

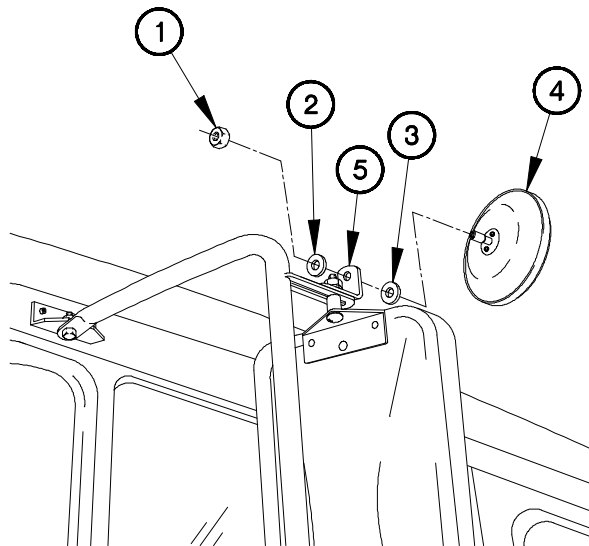
NOTE

Perform step (1) on convex mirror mounted with bracket.

- (1) Remove bolt (1), washer (2), and lockwasher (3) from convex mirror (4).



Xv03r011



Xv03l011

NOTE

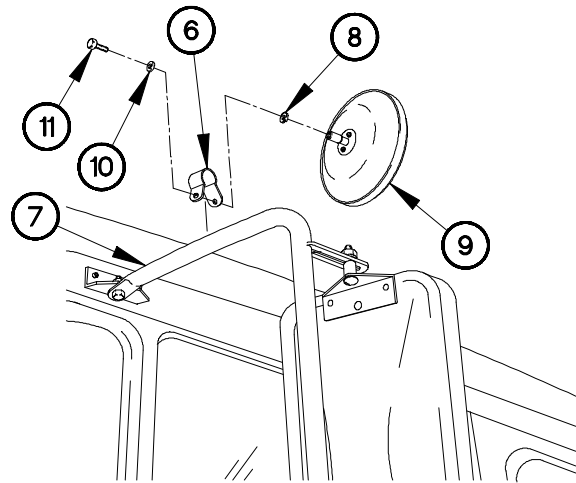
Perform step (2) on convex mirror mounted with clamp.

- (2) Position convex mirror (4) on bracket (5) with lockwasher (3), washer (2), and bolt (1).

NOTE

Perform steps (3) and (4) on convex mirror with clamp.

- (3) Position clamp (6) on mirror arm (7).
- (4) Install washer (8) and convex mirror (9) on clamp (6) with lockwasher (10) and bolt (11).
- (5) Tighten bolts (1 and 11) to 56-68 lb-in. (6-7 N•m).



Xv031021

End of Task.

20-95. RIM COVER INITIAL INSTALLATION

This task covers:

- a. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10-1)

Tools and Special Tools

Tool Kit, Genl Mech (Item 46, Appendix C)

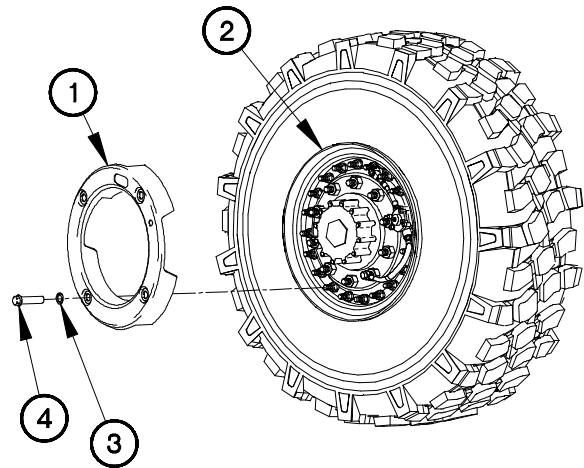
Wrench, Torque 1-175 lb-in (Item 58, Appendix C)

a. Installation.

NOTE

Slotted hole in rim cover is aligned with pressure valve extension.

- (1) Position rim cover (1) on wheel (2) with four washers (3) and bolts (4).
- (2) Tighten four bolts (1) to 71-95 lb-ft (96-128 N•m).



End of Task.

XV041011

CHAPTER 21

ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	21-1
21-1. INTRODUCTION	21-1
Section II. MAINTENANCE PROCEDURES	21-2
21-2. MACHINE GUN RING REPLACEMENT	21-2
21-3. MACHINE GUN RING LOWER PLATFORM REPLACEMENT	21-5
21-4. MACHINE GUN RING TOP PLATFORM REPLACEMENT	21-7
21-5. MACHINE GUN RING CENTER SEAT REPLACEMENT	21-8
21-6. MACHINE GUN RING ROOF SUPPORT REPLACEMENT	21-10
21-7. SMALL ARMS MOUNT REPLACEMENT	21-12

Section I. INTRODUCTION

21-1. INTRODUCTION

This chapter contains maintenance instructions for replacing armament/sighting and fire control materiel components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

21-2. MACHINE GUN RING REPLACEMENT	
This task covers:	
a. Removal	b. Installation
INITIAL SETUP	
<p>Equipment Conditions Engine shut down (TM 9-2320-365-10).</p>	<p>Tools and Special Tools (Cont) Crowfoot Attachment, Socket Wrench (Item 10, Appendix B)</p>
<p>Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)</p>	<p>Personnel Required (2)</p>

a. Removal.

- (1) Remove 12 screws (1) and washers (2) from machine gun ring (3).
- (2) Position three wooden blocks on cab roof (4).

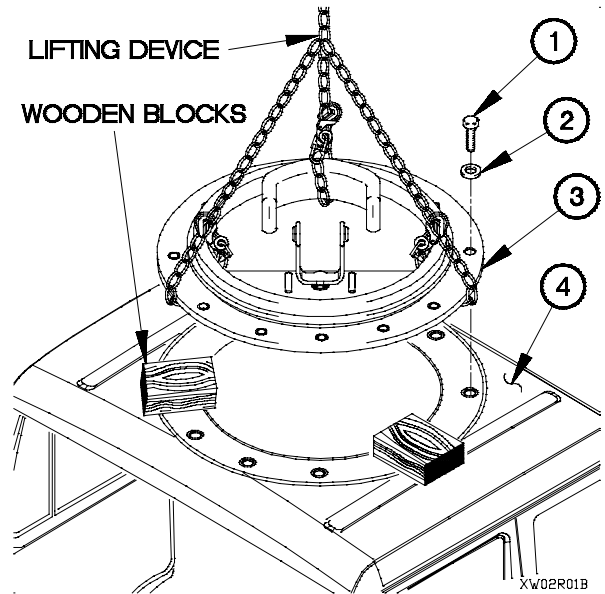
WARNING

Machine gun ring assembly weighs approximately 350 lbs (159 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

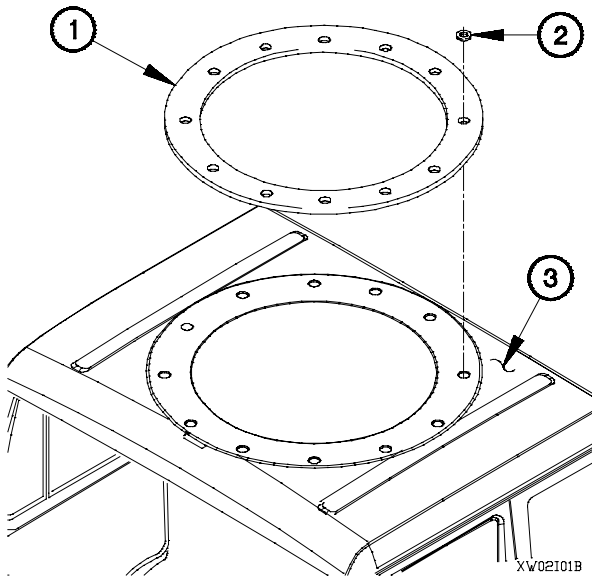
Steps (3) through (7) require the aid of an assistant.

- (3) Position machine gun ring (3) on three wooden blocks.
- (4) Re-position lifting device on machine gun ring (3).



- (5) Remove machine gun ring (3) from cab roof (4).
- (6) Remove three wooden blocks from cab roof (4).
- (7) Remove 12 washers (5) and ring spacer (6) from cab roof (4).

b. Installation.



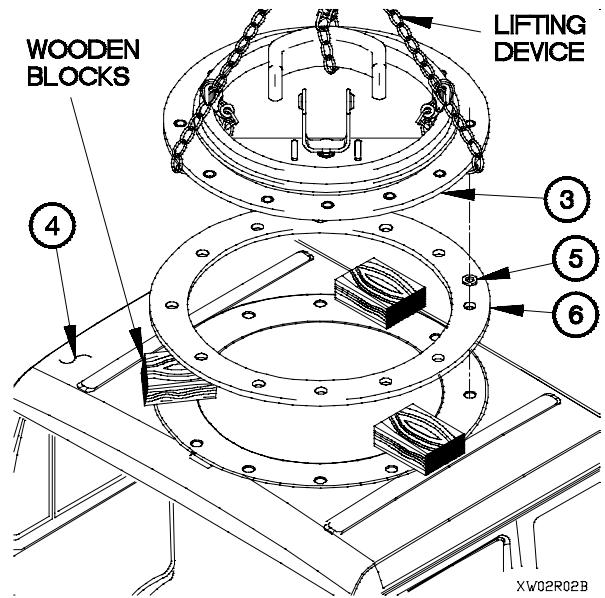
WARNING

Machine gun ring assembly weighs approximately 350 lbs (159 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Steps (2) through (6) require the aid of an assistant.

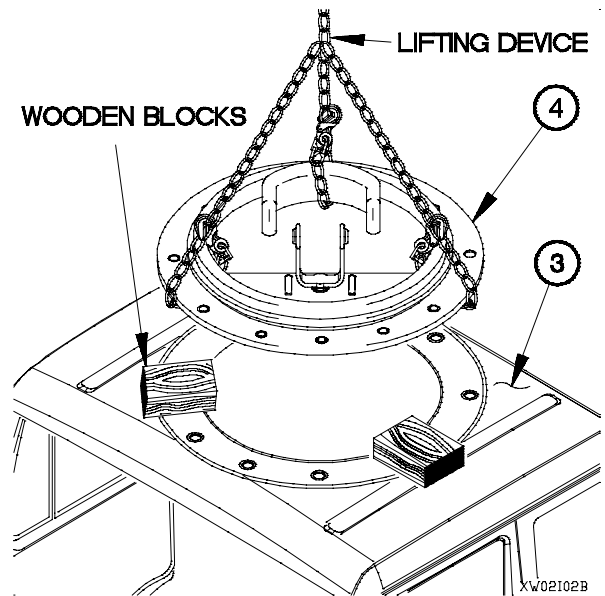
- (2) Position three wooden blocks on cab roof (3).
- (3) Position machine gun ring (4) on cab roof on three wooden blocks.



NOTE

- Align ring spacer and washers with threaded holes in cab roof.
- Ring spacer should have 1/4 in. (0.635 cm) clearance from inner lip of cab roof to allow free rotation of machine gun ring.

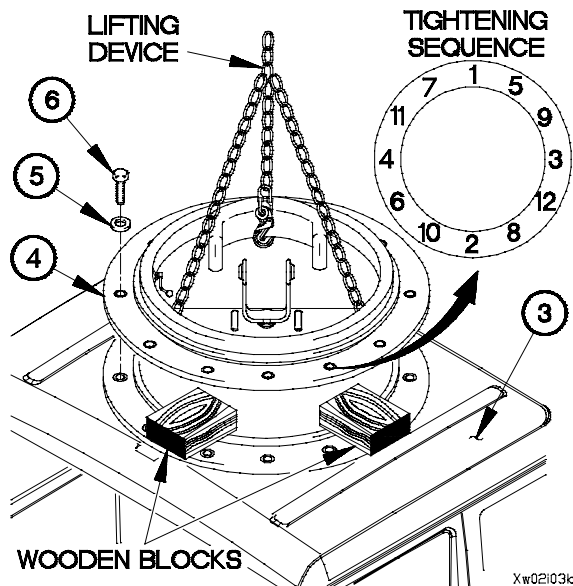
- (1) Position ring spacer (1) and 12 washers (2) on cab roof (3).



21-2. MACHINE GUN RING REPLACEMENT (CONT)

- (4) Re-position lifting device on machine gun ring (4).
- (5) Remove three wooden blocks from cab roof (3).
- (6) Position machine gun ring (4) on cab roof (3).
- (7) Position 12 mounting washers (5) and screws (6) in machine gun ring (4).
- (8) Tighten mounting screws (6) to 49-61 lb-ft (66-82 N.m).

End of Task.



21-3. MACHINE GUN RING LOWER PLATFORM REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Materials/Parts

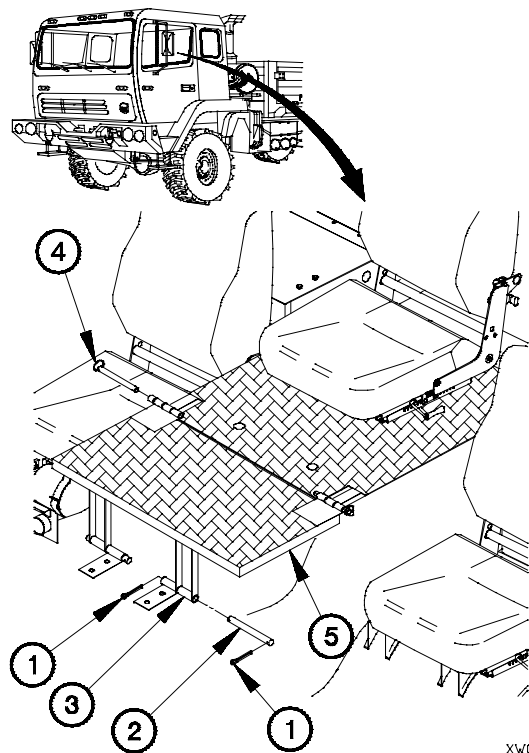
Pin, Cotter (2) (Item 204, Appendix G)

Tools and Special Tools

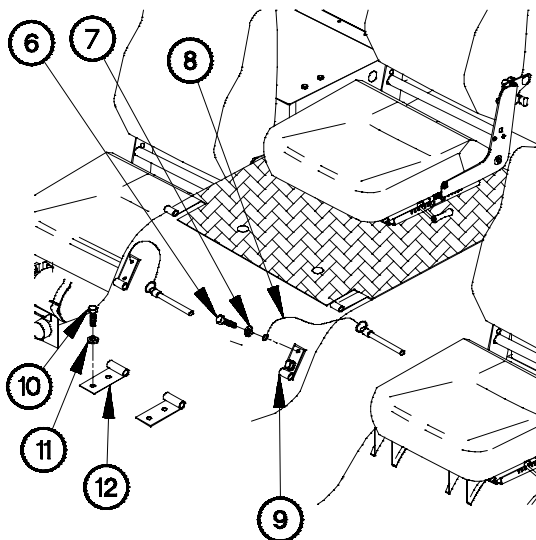
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Remove four cotter pins (1) and straight pins (2) from two legs (3). Discard cotter pins.
- (2) Remove two quick-release pins (4) from lower platform (5).
- (3) Remove lower platform (5) from cab.



XW03R011



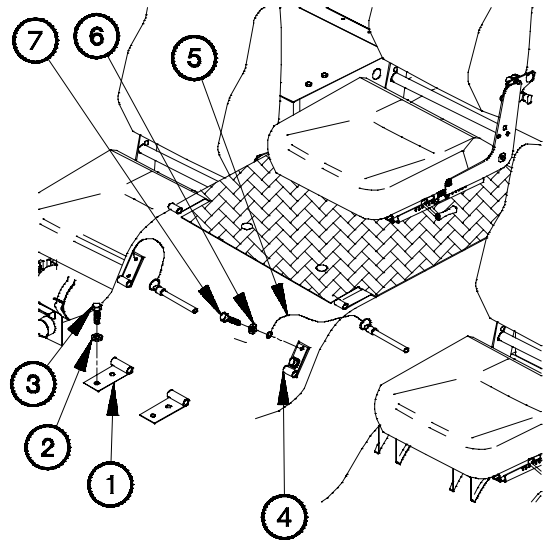
XW03R021

- (4) Remove four screws (6), washers (7), and two lanyards (8) from two brackets (9).
- (5) Remove two brackets (9) from cab floor.
- (6) Remove four screws (10), washers (11), and two brackets (12) from cab floor.

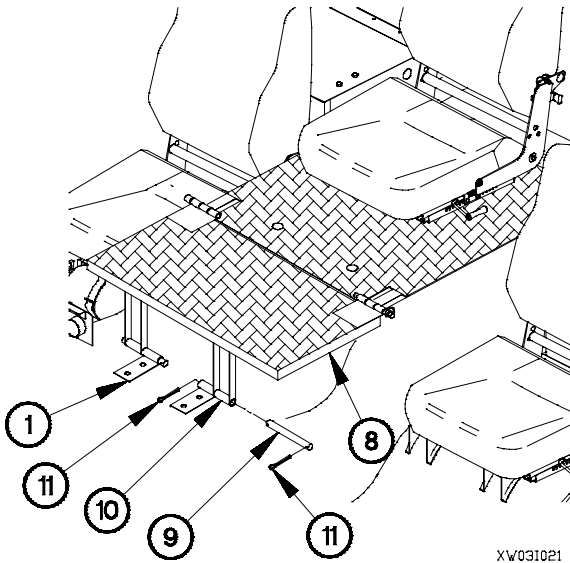
21-3. MACHINE GUN RING LOWER PLATFORM REPLACEMENT (CONT)

b. Installation.

- (1) Install two brackets (1) with four washers (2) and screws (3).
- (2) Install two brackets (4) and lanyards (5) with four washers (6) and screws (7).



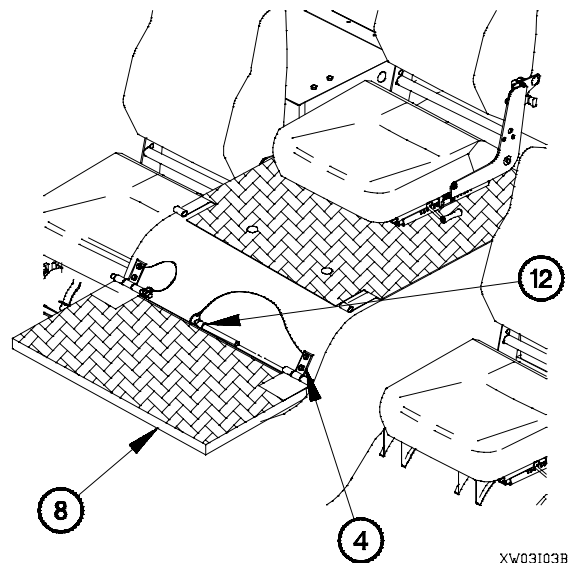
XW031011



XW031021

- (3) Position lower platform (8) on two brackets (1).
- (4) Install two straight pins (9) in legs (10).
- (5) Install four cotter pins (11) in two straight pins (9).

- (6) Place lower platform (8) in storage position.
- (7) Install two quick-release pins (12) in lower platform (8) and two brackets (4).



XW03103B

End of Task.

21-4. MACHINE GUN RING TOP PLATFORM REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Machine gun ring, center seat removed (para 21-5).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Remove two screws (1) and washers (2), from top platform (3).
- (2) Remove top platform (3) from vehicle.

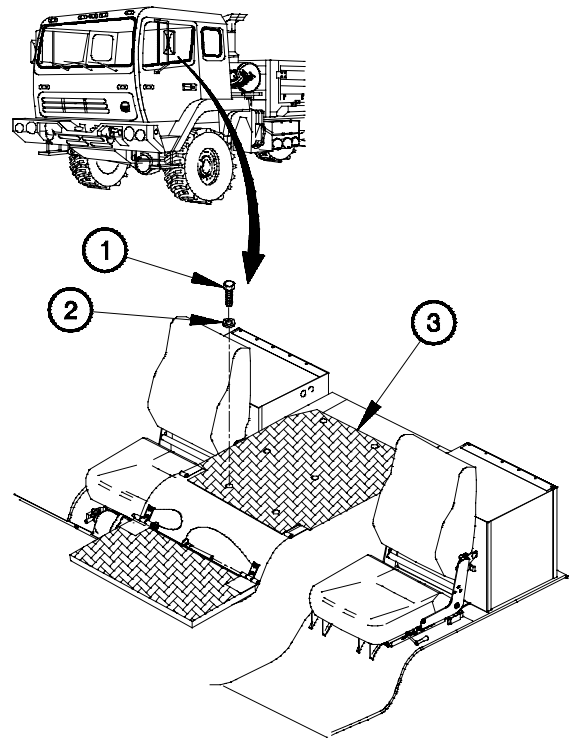
b. Installation.

- (1) Position top platform (3) in vehicle with two washers (2) and screws (1).
- (2) Tighten two screws (1) to 71-89 lb-in. (8-10 N-m).

c. Follow-On Maintenance.

Install machine gun ring center seat (para 21-5).

End of Task.



XW04X011

21-5. MACHINE GUN RING CENTER SEAT REPLACEMENT	
This task covers:	
a. Removal	b. Installation
INITIAL SETUP	
Equipment Conditions Engine shut down (TM 9-2320-365-10).	Materials/Parts Sealing Compound (Item 65, Appendix D) Spacer (4) (Item 259.1, Appendix G)
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)	

a. Removal.

- (1) Fold back of center seat (1) down and slide fully forward.

NOTE

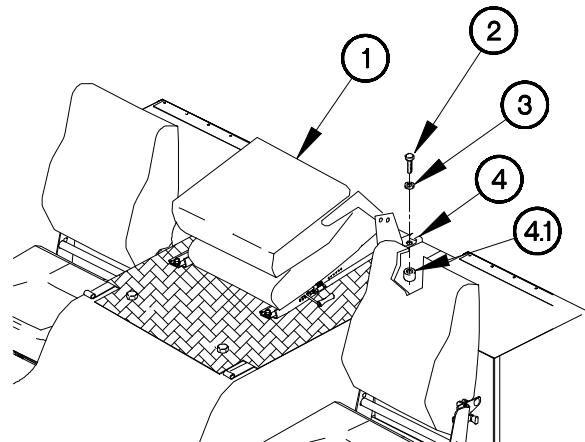
Perform step (2) on vehicles with cabs S/N 12075G or lower. Cab S/N located on B pillar.

- (2) Remove two screws (2) and washers (3) from seat mount (4).

NOTE

Perform step (3) on vehicles with cab S/N 12076G or higher.

- (3) Remove two screws (2), washers (3), and spacers (4.1) from seat mount (4). Discard spacers.



xw05r012

- (4) Slide center seat (1) fully rearward.

NOTE

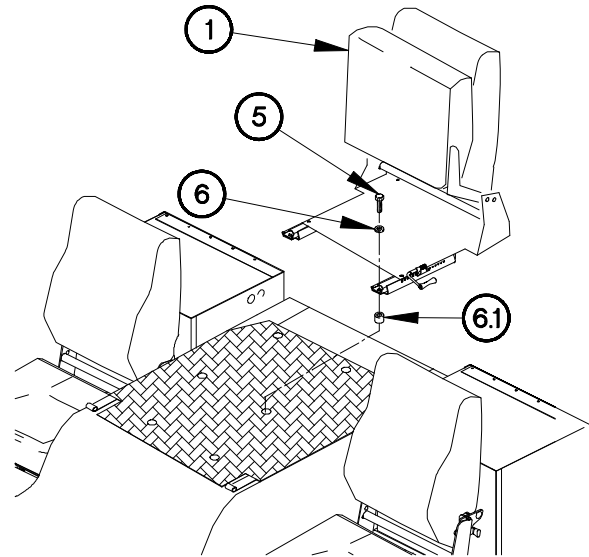
Perform step (5) on vehicles with cabs S/N 12075G or lower.

- (5) Remove two screws (5), washers (6), and center seat (1) from vehicle.

NOTE

Perform step (6) on vehicles with cab S/N 12076G or higher.

- (6) Remove two screws (5), washers (6), spacers (6.1), and center seat (1) from vehicle. Discard spacers.



XW05R02B

21-5. MACHINE GUN RING CENTER SEAT REPLACEMENT (CONT)

b. Installation.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to threads of two screws (1).

NOTE

- Perform step (2) on vehicles with cabs S/N 12075G or lower. Cab S/N located on B pillar.
- Install center seat in folded and raised position with seat rails in the forward position.

- (2) Position center seat (2) on platform (3).

NOTE

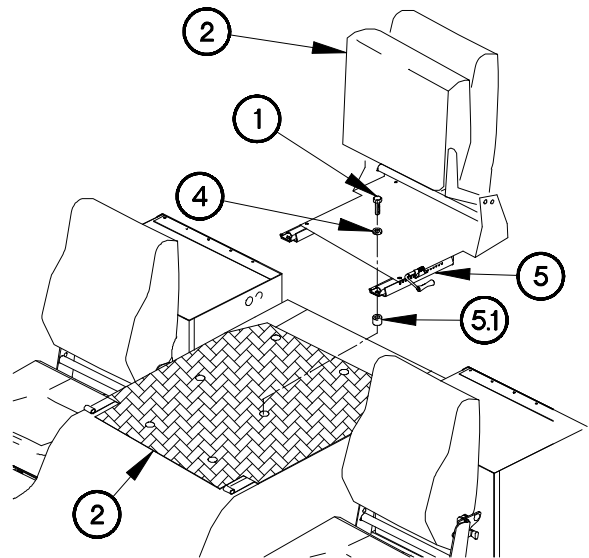
- Flat sides of screw will be in line with seat tracks.
- Perform step (3) on vehicles with cabs S/N 12075G or lower.

- (3) Position two washers (4) and screws (1) in seat mount (5).

NOTE

Perform step (4) on vehicles with cabs S/N 12076G or higher.

- (4) Position two spacers (5.1), washers (4), and screws (1) in seat mounts (5).
- (5) Slide center seat (2) fully forward.
- (6) Fold center seat (2) down.



XW05101

b. Installation.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

NOTE

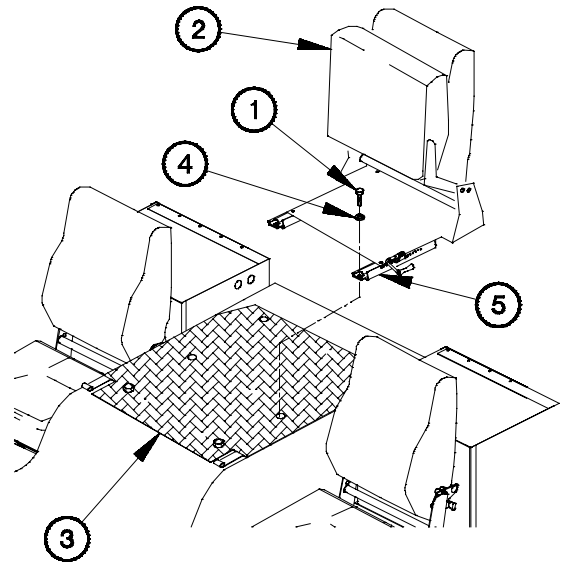
Install center seat in folded and raised position with seat rails in the forward position.

- (1) Apply sealing compound to threads of two screws (1).
- (2) Position center seat (2) on platform (3).

NOTE

Flat sides of screw will be in line with seat tracks.

- (3) Position two washers (4) and screws (1) in seat mount (5).
- (4) Slide center seat (2) fully forward.
- (5) Fold center seat (2) down.



Xw05i01b

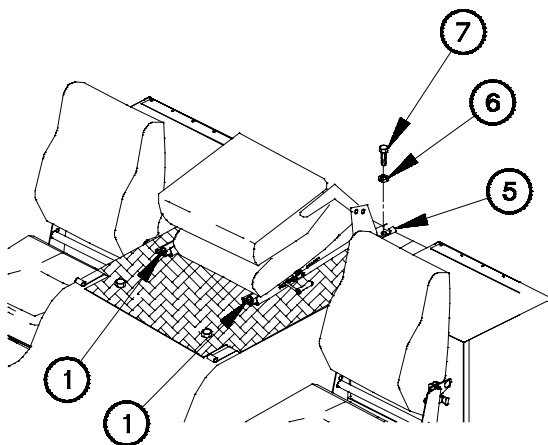
- (6) Position two washers (6) and screws (7) in seat mount (5).

NOTE

When tightening screws, flat sides of screws are to be in line with track sides.

- (7) Tighten two screws (1 and 7) to 14-18 lb-ft (19-24 N.m).

End of Task.



Xw05i02b

21-6. MACHINE GUN RING ROOF SUPPORT REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Tools and Special Tools (Cont)

Wrench, Torque 0-200 lb-in. (Item 58, Appendix C)

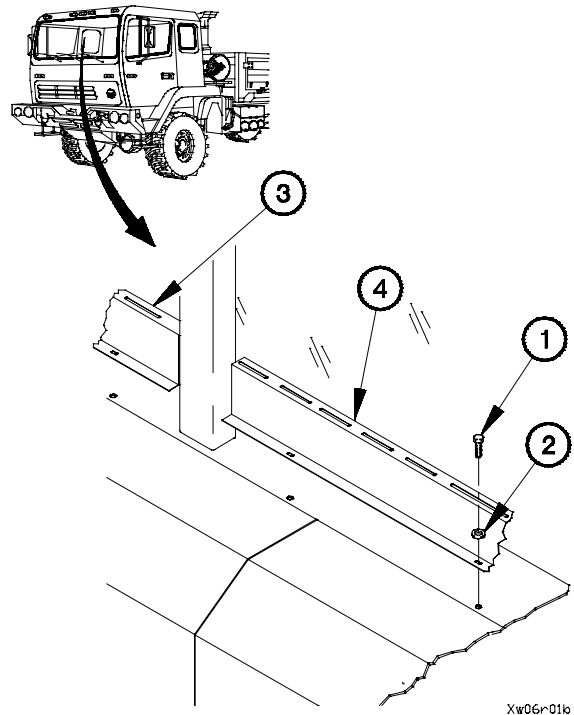
Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

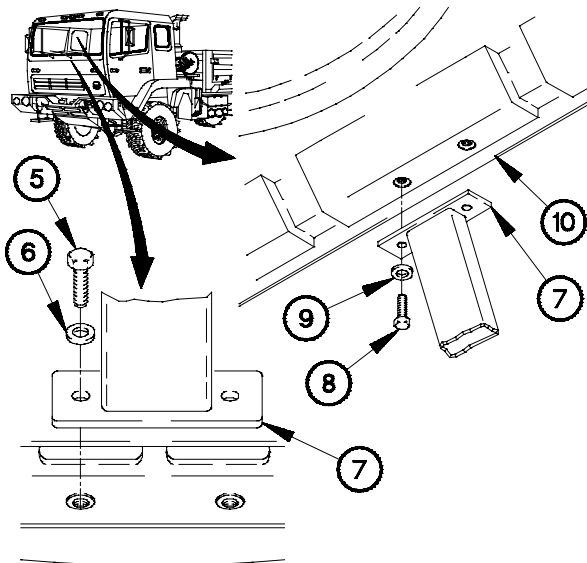
Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

a. Removal.

- (1) Remove six screws (1), washers (2), LH defrost cover (3), and RH defrost cover (4) from vehicle.



XW06R01b

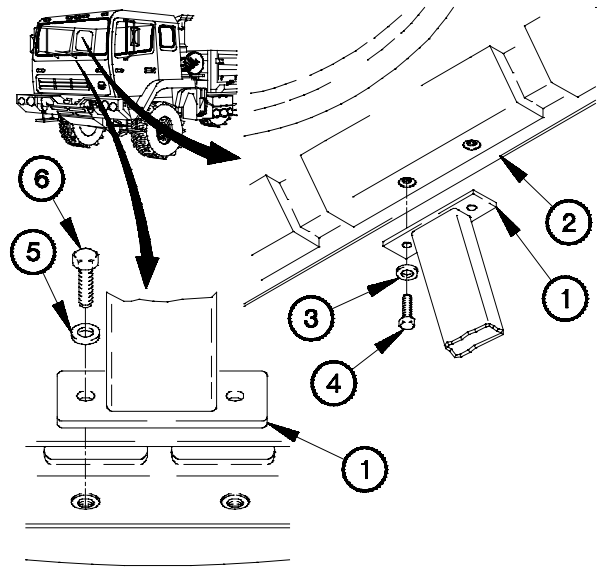


XW06R02B

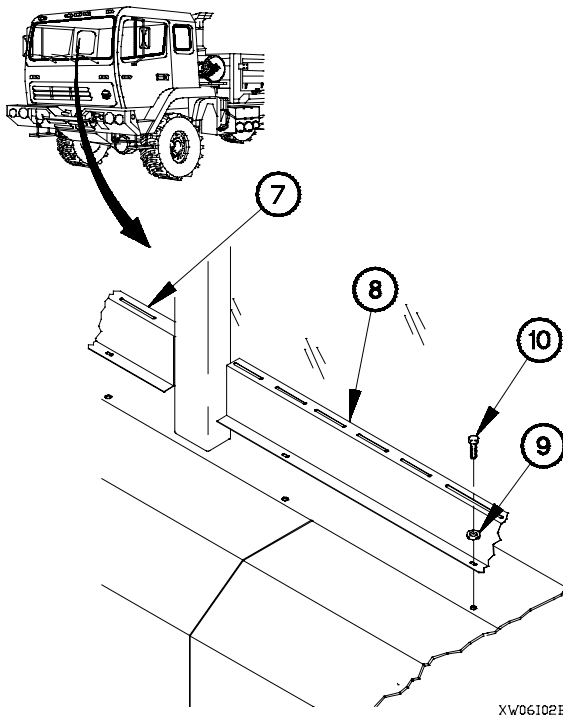
- (2) Remove two screws (5) and washers (6) from roof support (7).
- (3) Remove two screws (8) and washers (9) from roof support (7).
- (4) Remove roof support (7) from cab roof (10).

b. Installation.

- (1) Position roof support (1) on cab roof (2) with two washers (3) and screws (4).
- (2) Position two washers (5) and screws (6) in roof support (1).
- (3) Tighten two screws (4 and 6) to 21-27 lb-ft (29-37 N·m).



XW06101B



XW06102B

- (4) Position LH defrost cover (7) and RH defrost cover (8) in vehicle with six washers (9) and screws (10).
- (5) Tighten six screws (10) to 22-27 lb-in. (2-3 N·m).

End of Task.

21-7. SMALL ARMS MOUNT REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Tools and Special Tools

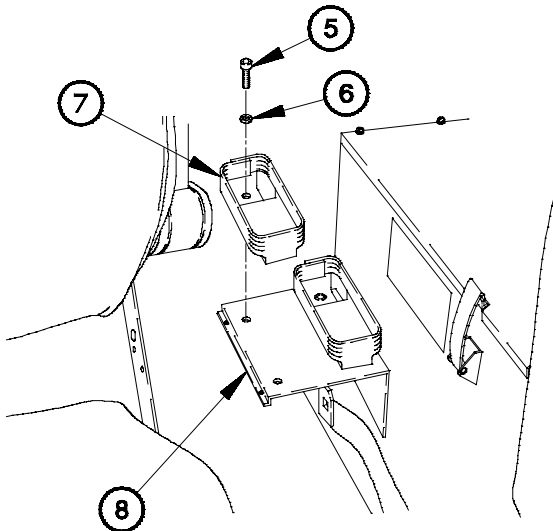
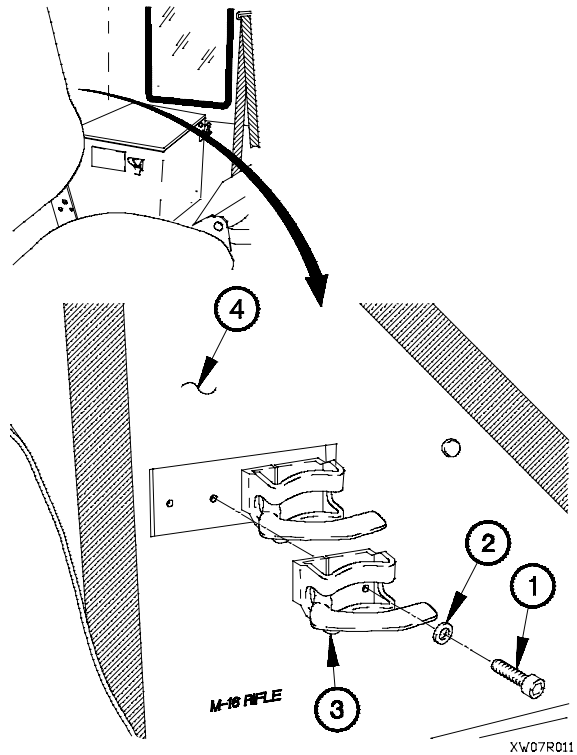
Tool Kit, Genl Mech (Item 44, Appendix C)
 Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
 Socket Set, Socket Wrench (Item 35, Appendix C)

a. Removal.

NOTE

All three small arms mounts are removed the same way. Driver's side shown.

- (1) Remove two screws (1), washers (2), and storage rack (3) from back wall of cab (4).



- (2) Remove two screws (5), washers (6), and weapon support (7) from support (8).

XW07R021

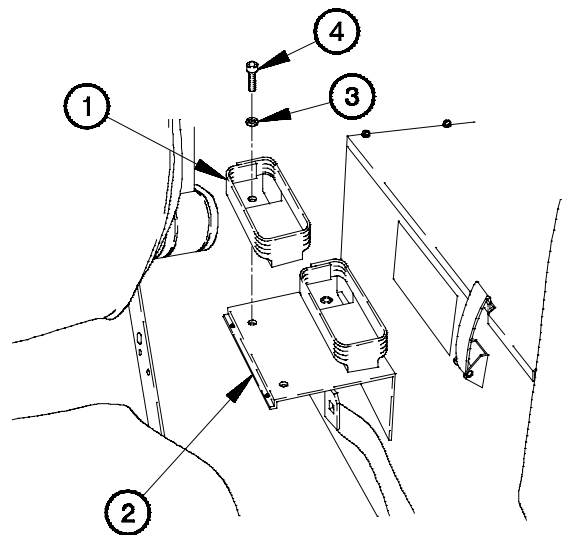
XW07R011

b. Installation.

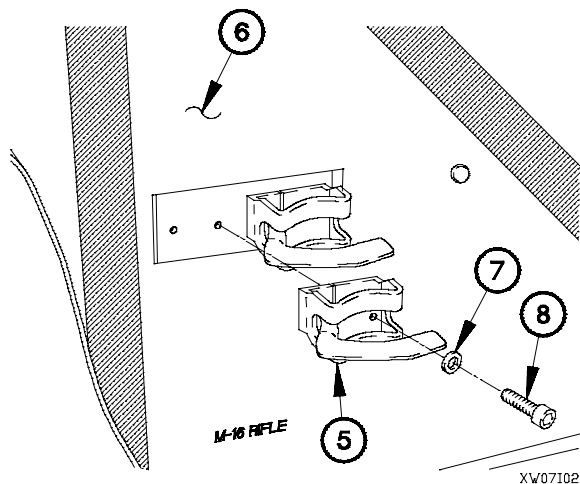
NOTE

All three small arms mounts are installed the same way. Driver's side shown.

- (1) Position weapon support (1) on support (2) with two washers (3) and screws (4).
- (2) Tighten two screws (4) to 36-44 lb-in. (4-5 N·m).



XW071011



XW071021

- (3) Position storage rack (5) on back wall of cab (6) with two washers (7) and screws (8).
- (4) Tighten two screws (8) to 36-44 lb-in. (4-5 N·m).

End of Task.

CHAPTER 22 ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	22-1
22-1. INTRODUCTION	22-1
Section II. MAINTENANCE PROCEDURES	22-2
22-2. WARNING LIGHT CABLE ASSEMBLY REPLACEMENT	22-2

Section I. INTRODUCTION

22-1. INTRODUCTION

This chapter contains maintenance instructions for replacing electrical illuminating equipment authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

22-2. WARNING LIGHT CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Batteries disconnected (para 7-48).
- Rear cab liner removed (para 16-13).
- Kick panel removed (para 16-3).

Material/Parts

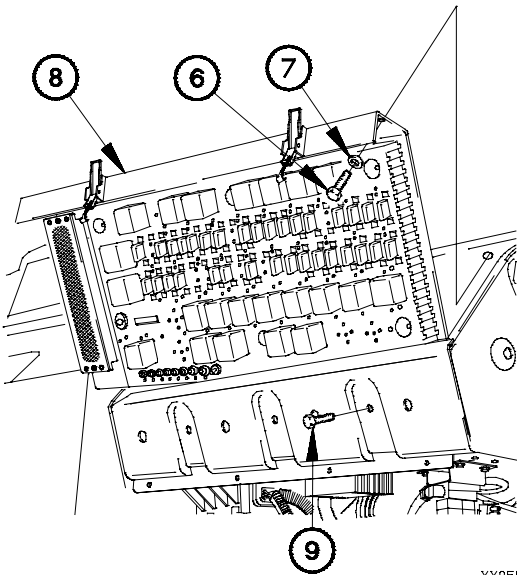
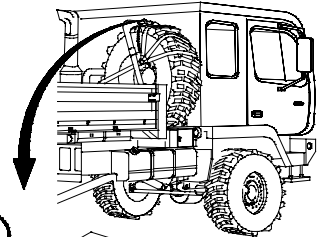
- Ties, Cable, Plastic (Item 76, Appendix D)

Tools and Special Tools

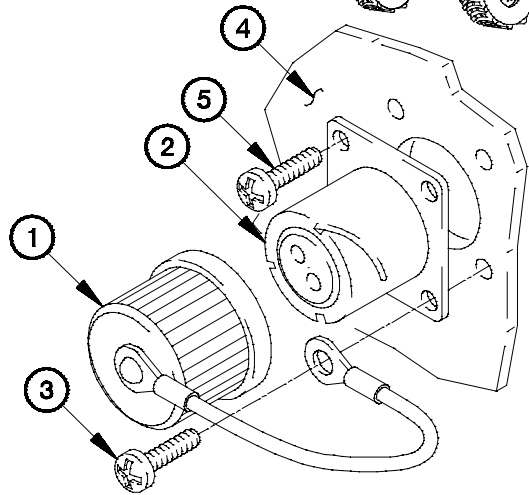
- Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Remove dustcap (1) from connector J62 (2).
- (2) Remove screw (3) and dustcap (1) from cab (4).
- (3) Remove three screws (5) and connector J62 (2) from cab (4).



XX05R021



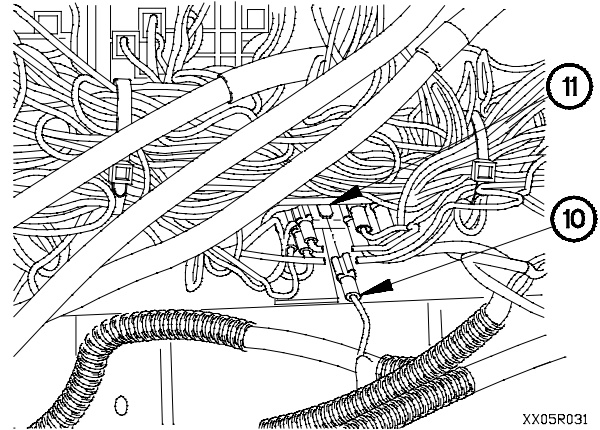
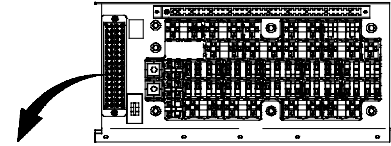
XX05R011

- (4) Remove three screws (6) and washers (7) from PDP (8).
- (5) Remove three screws (9) from PDP (8).
- (6) Lift PDP (8) outward to gain access.

NOTE

Remove plastic cable ties as required.

- (7) Disconnect terminal lug TL14 (10) from terminal board TB2 (11) position 12.



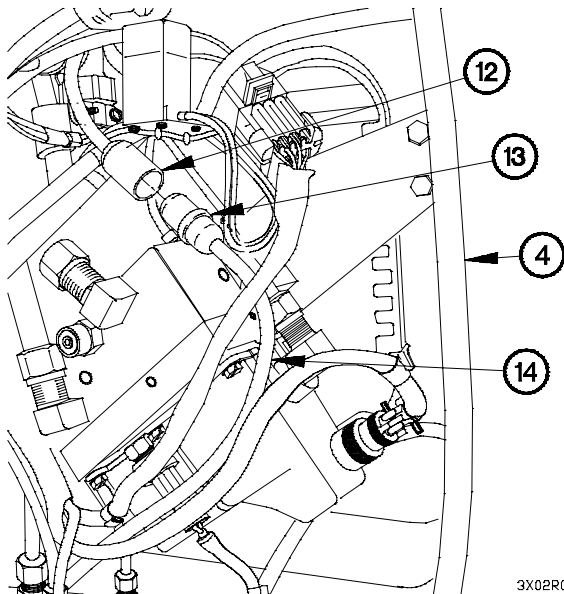
XX05R031

- (8) Disconnect connector J65 (12) from connector P65 (13).

NOTE

Note routing of warning light cable assembly prior to removal.

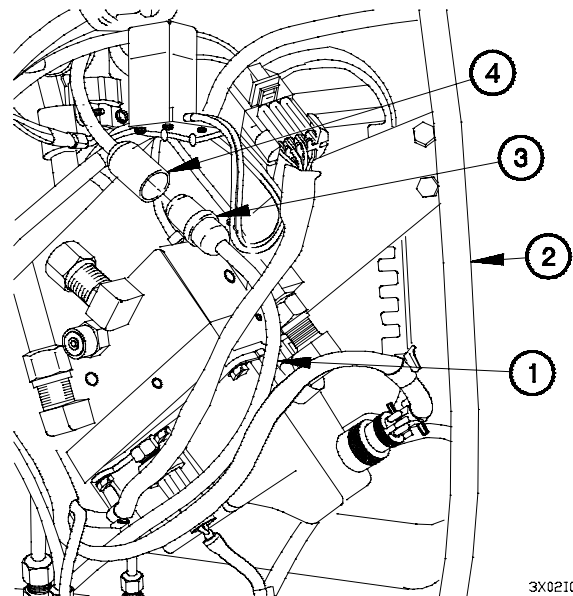
- (9) Remove warning light cable assembly (14) from cab (4).



3X02R041

b. Installation.

- (1) Position warning light cable assembly (1) in cab (2).
- (2) Connect connector P65 (3) to connector J65 (4).



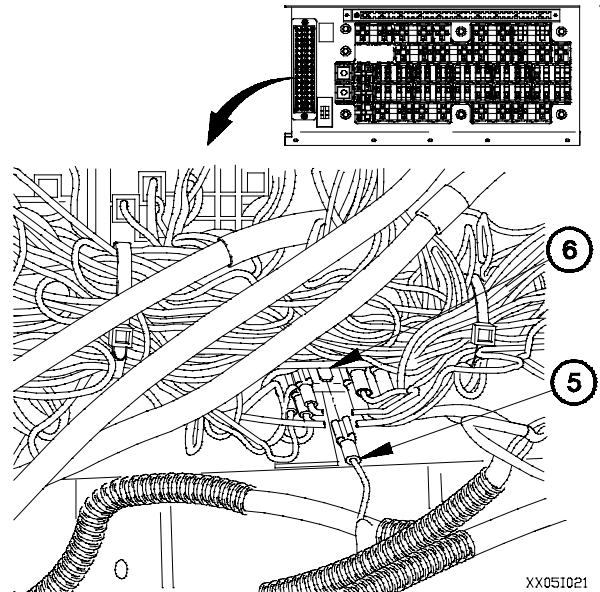
3X02I011

22-2. WARNING LIGHT CABLE ASSEMBLY REPLACEMENT (CONT)

NOTE

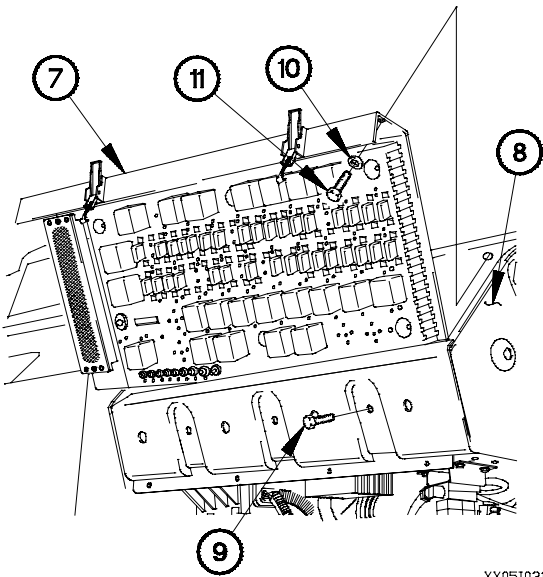
Install plastic cable ties as required.

- (3) Connect terminal lug TL14 (5) to terminal board TB2 (6) position 12.



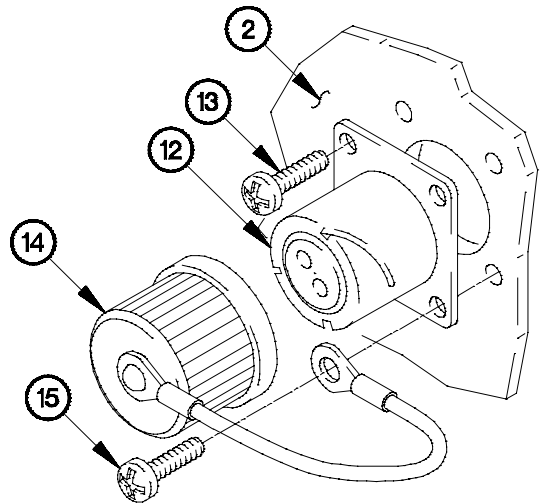
XX051021

- (4) Position PDP (7) on dashboard (8).
- (5) Install three screws (9) in PDP (7).
- (6) Install three washers (10) and screws (11) in PDP (7).



XX051031

- (7) Install connector J62 (12) in cab (2) with three screws (13).
- (8) Install dustcap (14) on cab (2) with screw (15).
- (9) Install dustcap (14) on connector J62 (12).



XX051041

c. Follow-On Maintenance.

- (1) Install rear cab liner (para 16-13).
- (2) Install kick panel (para 16-3).
- (3) Connect batteries (para 7-48).
- (4) Operate warning lights and check for proper operation (TM 9-2320-365-10).

End of Task.

CHAPTER 23 AIR SYSTEM MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	23-1
23-1. INTRODUCTION	23-1
Section II. MAINTENANCE PROCEDURES	23-2
23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT	23-2
23-3. AIR TRANSPORTABILITY AIR HOSES REPLACEMENT	23-8
23-4. INVERSION VALVE REPLACEMENT	23-11
23-5. SHUTTLE VALVE REPLACEMENT	23-13
23-6. AIR DRYER REPLACEMENT/REPAIR	23-15
23-7. WET TANK REPLACEMENT	23-31
23-8. PRESSURE SWITCH REPLACEMENT	23-35

Section I. INTRODUCTION

23-1. INTRODUCTION

This chapter contains maintenance instructions for replacing, repairing, and adjusting air system components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT	
This task covers:	
a. Hose Locations	b. Follow-On Maintenance
INITIAL SETUP	
Equipment Conditions Engine shut down (TM 9-2320-365-10). Air tanks drained (TM 9-2320-365-10).	Materials/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Cap and Plug Set (Item 15, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D)
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C)	

a. Hose Locations.

WARNING

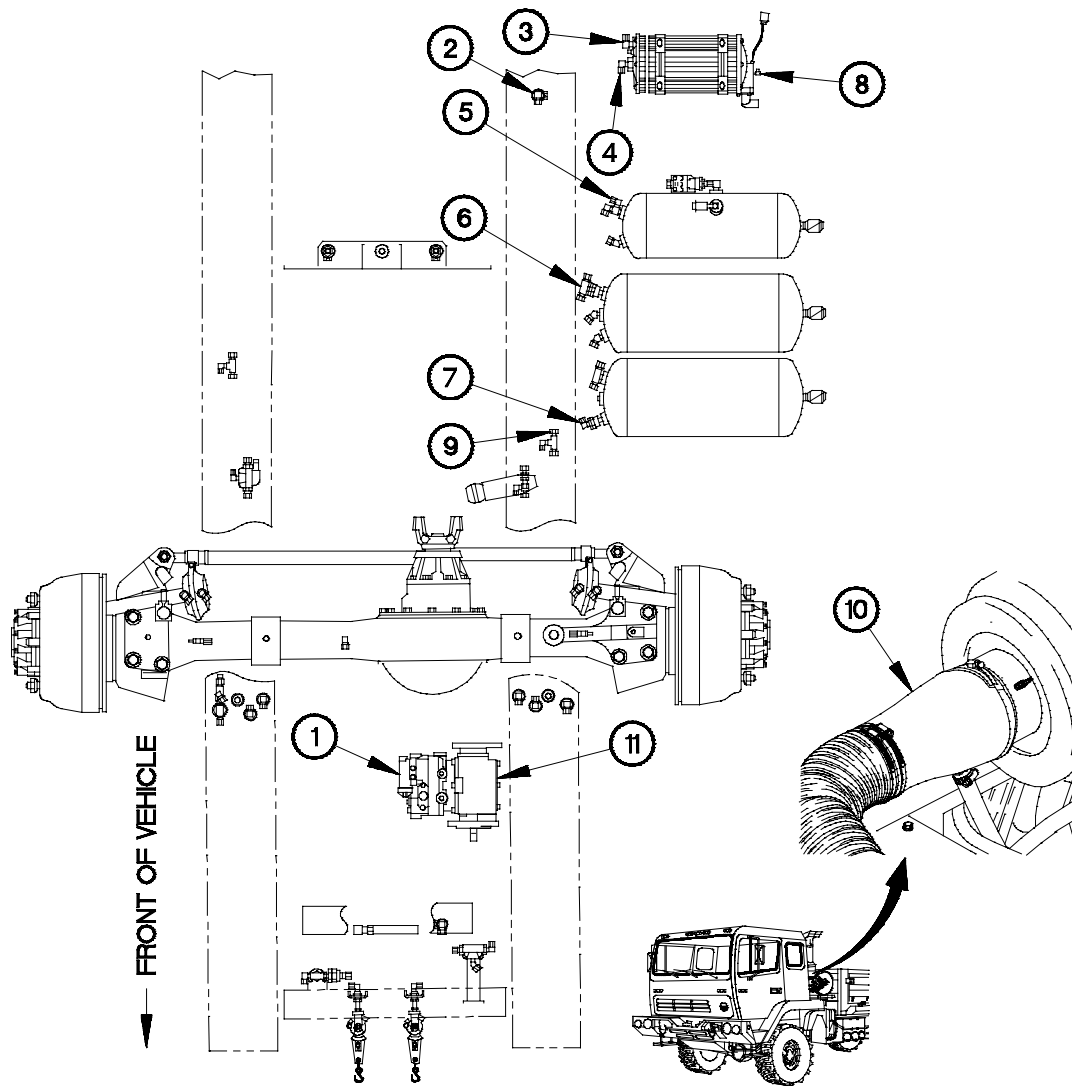
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hose connections to prevent contamination. Failure to comply may result in damage to equipment.

NOTE

- This task shows locations of primary air supply and CTIS air hoses on the vehicle. It may not be necessary to remove all hoses at one time.
- Tag hoses and connection points prior to removal.
- Note location of plastic cable ties prior to removal.
- Remove plastic cable ties as required.
- Inspect air hoses and fittings for cracks, kinks, nicks, stripped threads, and cuts. Replace damaged parts.



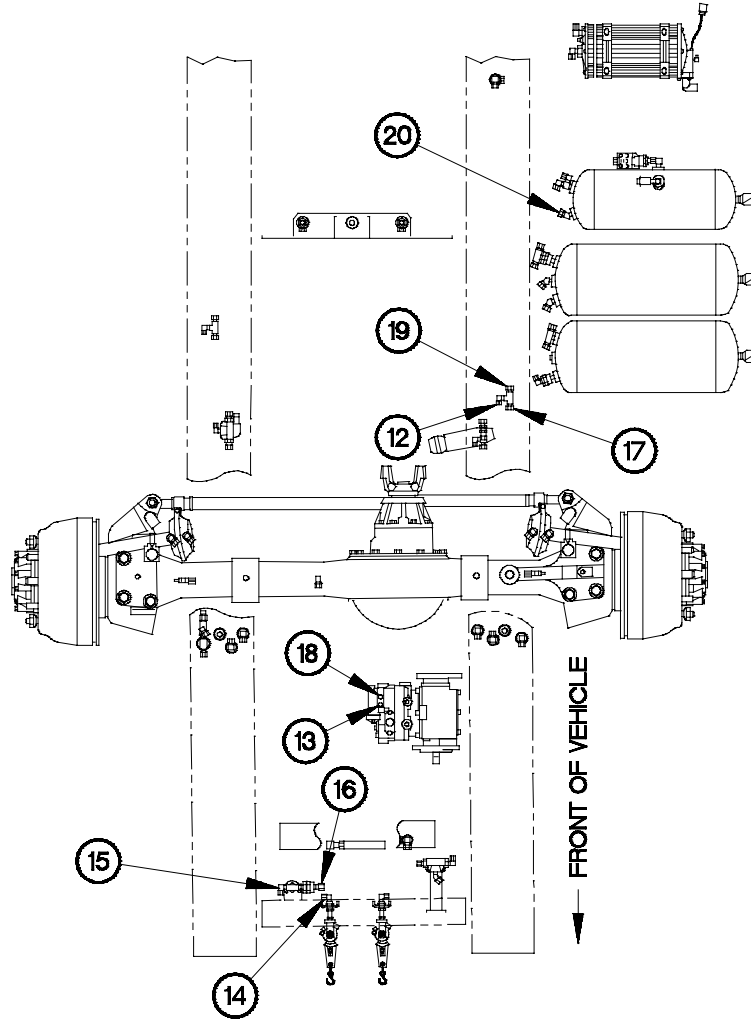
XY02A01B

Figure 23-1. Primary Air Supply Hose Locations

Table 23-1. Primary Air Supply Hose Locations

HOSE NAME	FROM	TO
Primary supply	Air compressor output fitting (1)	Bulkhead fitting (2)
Primary supply tie	Bulkhead fitting (2)	Air dryer input fitting (3)
Wet tank supply	Air dryer output fitting (4)	Wet tank supply fitting (5)
Primary tank supply	Wet tank supply fitting (5)	Primary tank supply fitting (6)
Secondary tank supply	Primary tank supply fitting (6)	Secondary tank supply fitting (7)
Air dryer pressure	Air dryer bottom fitting (8)	Hose fitting (9)
Air compressor intake hose	Intake air cleaner (10)	Air compressor (11)

23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT (CONT)



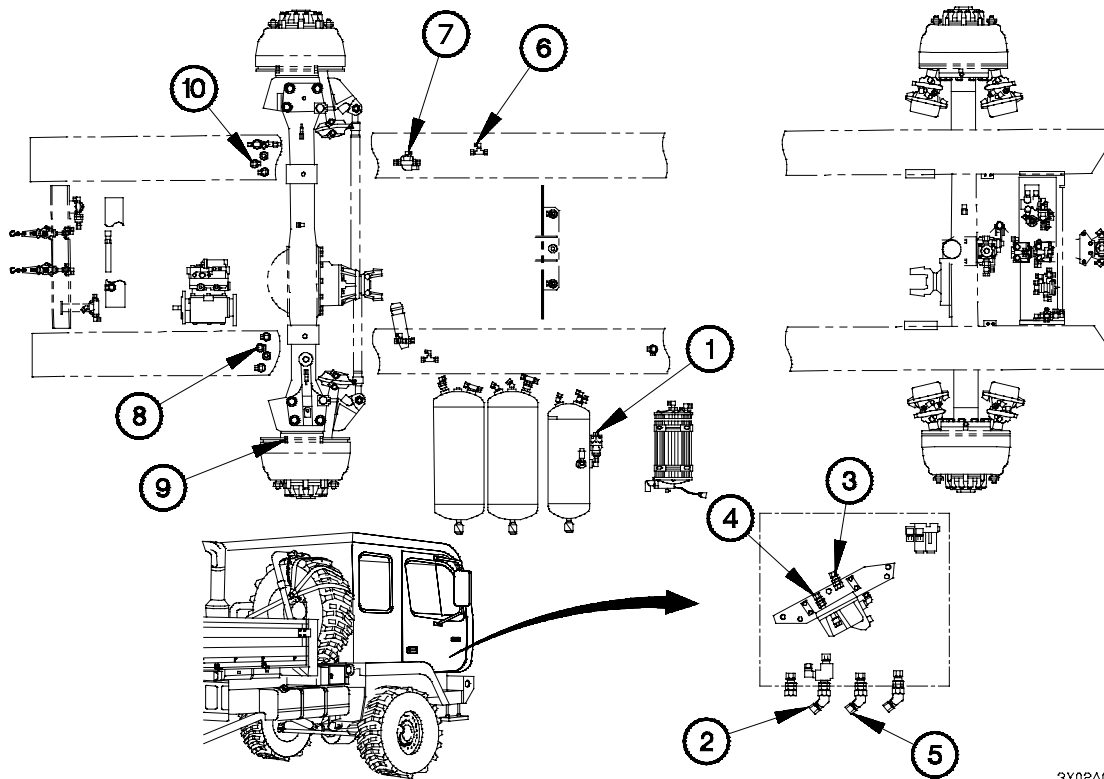
XY02A02B

Figure 23-1. Primary Air Supply Hose Locations (Cont)

Table 23-1. Primary Air Supply Hose Locations (Cont)

HOSE NAME	FROM	TO
Governor input #1	Hose fitting (12)	Governor input #1 fitting (13)
Emergency supply	Emergency supply fitting (14)	Hose fitting (15)
Emergency supply tie #1	Gladhand check valve fitting (16)	Hose fitting (17)
Governor input #2	Hose fitting (17)	Governor input #2 fitting (18)
Emergency supply tie #2	Hose fitting (19)	Wet tank fitting (20)

Figure 23-2. Central Tire Inflation System (CTIS) Air Hose Locations



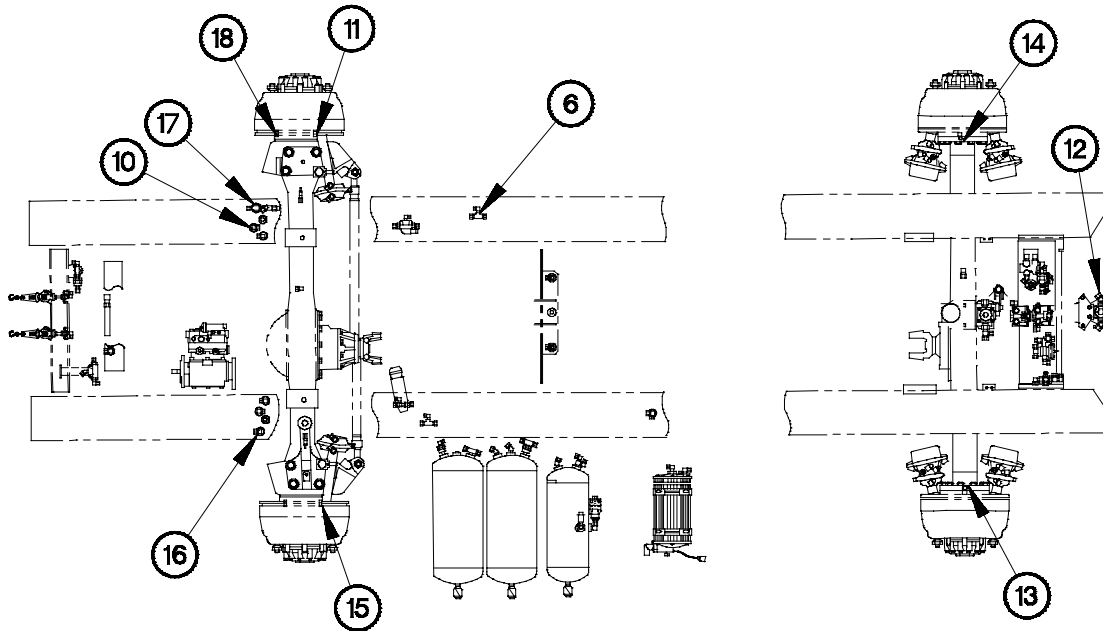
3Y02A031

Table 23-2. Central Tire Inflation System (CTIS) Air Hose Locations

HOSE NAME	FROM	TO
Main air supply	Tank pressure valve fitting (1)	Cab bulkhead fitting (2)
CTIS manifold input	Cab bulkhead fitting (2)	CTIS manifold valve input fitting (3)
CTIS manifold output	CTIS manifold output fitting (4)	Cab bulkhead fitting (5)
CTIS air supply	Cab bulkhead fitting (5)	Two way splitter (6)
Supply tie	Two way splitter fitting (6)	Front quick release valve fitting (7)
Left front supply hose	Front quick release valve fitting (7)	Left front bulkhead fitting (8)
Left front drum supply	Left front bulkhead fitting (8)	Left front drum fitting (9)
Right front supply hose	Front quick release valve fitting (7)	Right front bulkhead fitting (10)

23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT (CONT)

Figure 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)



3Y02A041

Table 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)

HOSE NAME	FROM	TO
Right front drum supply	Right front bulkhead fitting (10)	Left front drum fitting (11)
Rear main supply	Two way splitter fitting (6)	Rear quick release valve (12)
Left rear drum supply	Rear quick release valve fitting (12)	Left rear drum fitting (13)
Right rear drum supply	Rear quick release valve fitting (12)	Right rear drum fitting (14)
Left front drum vent	Left front drum fitting (15)	Bulkhead fitting (16)
Vent tie	Bulkhead fitting (16)	Bulkhead fitting (17)
Right front drum vent	Bulkhead fitting (17)	Right front brake fitting (18)

Figure 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)

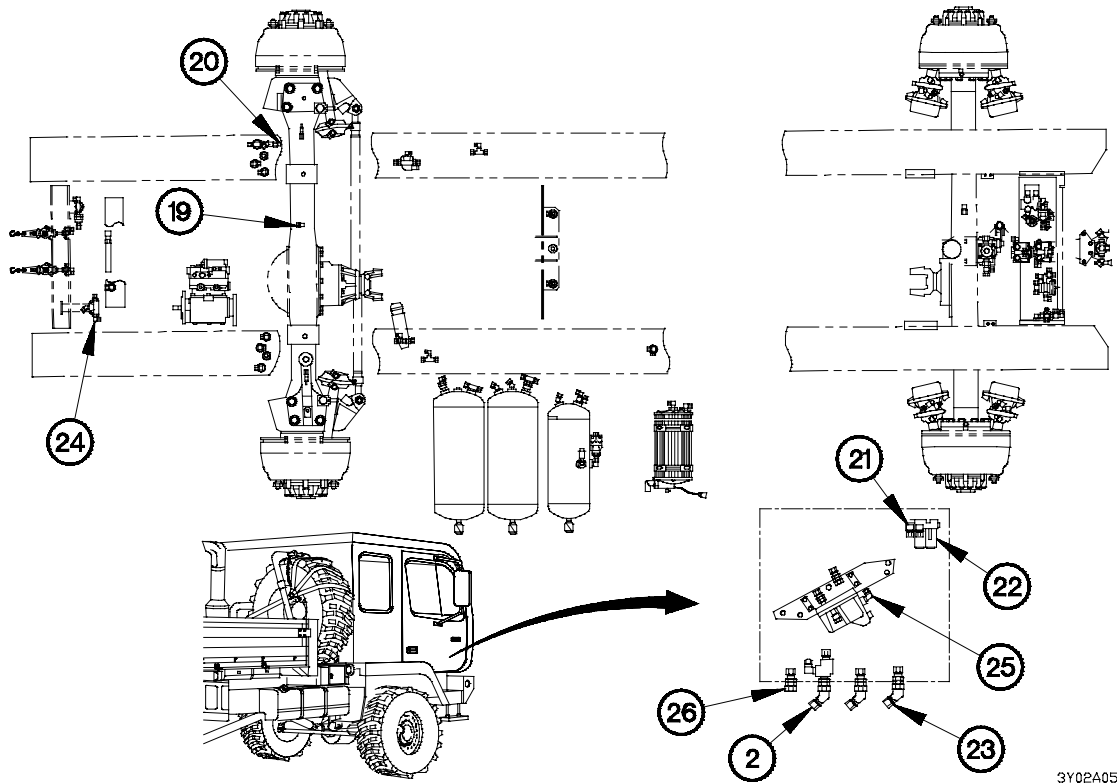


Table 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)

HOSE NAME	FROM	TO
Axle vent	Axle vent fitting (19)	Vent fitting (20)
Fan supply	Bulkhead fitting (2)	Solenoid valve fitting (21)
Fan supply tie #1	Solenoid valve fitting (22)	Bulkhead fitting (23)
Fan supply tie #2	Bulkhead fitting (23)	Fan input fitting (24)
Manifold vent	Manifold fitting (25)	Bulkhead fitting (26)

b. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check around air hoses and fittings for air leaks.
- (3) Shut down engine (TM 9-2320-365-10).

End of Task.

23-3. AIR TRANSPORTABILITY AIR HOSES REPLACEMENT	
This task covers:	
a. Hose Locations	b. Follow-On Maintenance
INITIAL SETUP	
Equipment Conditions Engine shut down (TM 9-2320-365-10). Air tanks drained (TM 9-2320-365-10).	Materials/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Cap and Plug Set (Item 15, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D)
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C)	

a. Hose Locations.

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hose connections to prevent contamination. Failure to comply may result in damage to equipment.

NOTE

- This task shows locations of air transportability air hoses on the vehicle. It may not be necessary to remove all hoses at one time.
- Tag hoses and connection points prior to removal.
- Note location of plastic cable ties prior to removal.
- Remove plastic cable ties as required.
- Inspect air hoses and fittings for cracks, kinks, nicks, stripped threads and cuts. Replace damaged parts.

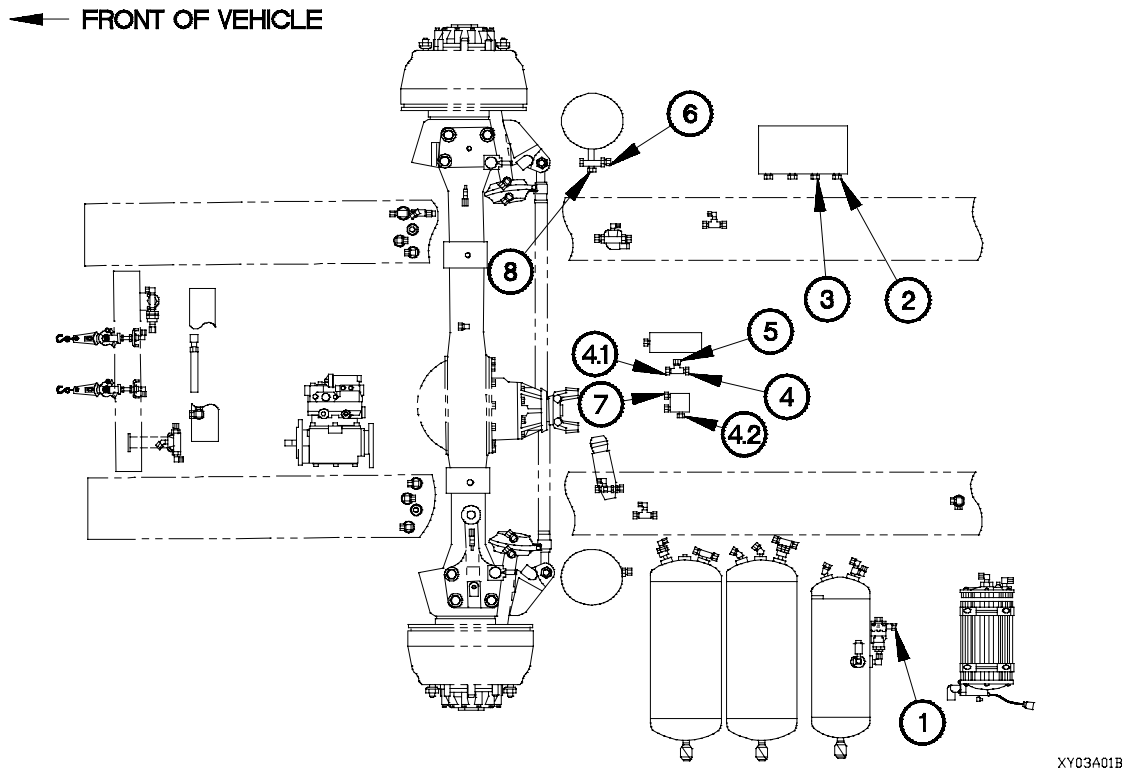


Figure 23-3. Air Transportability Air Hose Locations

Table 23-3. Air Transportability Air Hose Locations

HOSE NAME (NUMBER)	FROM	TO
Wet tank supply (501)	Wet tank pressure valve fitting (1)	Manifold input (2)
Cab leveling valve tee supply (506)	Manifold output (3)	Cab leveling valve tee fitting (4)
Cab leveling valve supply (522)	Cab leveling valve tee fitting (4.1)	Cab leveling valve input fitting (4.2)
Check valve tie (503)	Cab leveling valve tee fitting (5)	Check valve output fitting (6)
Passenger cylinder (504)	Cab leveling valve fitting (7)	Passenger cylinder fitting (8)

23-3. AIR TRANSPORTABILITY AIR HOSES REPLACEMENT (CONT)

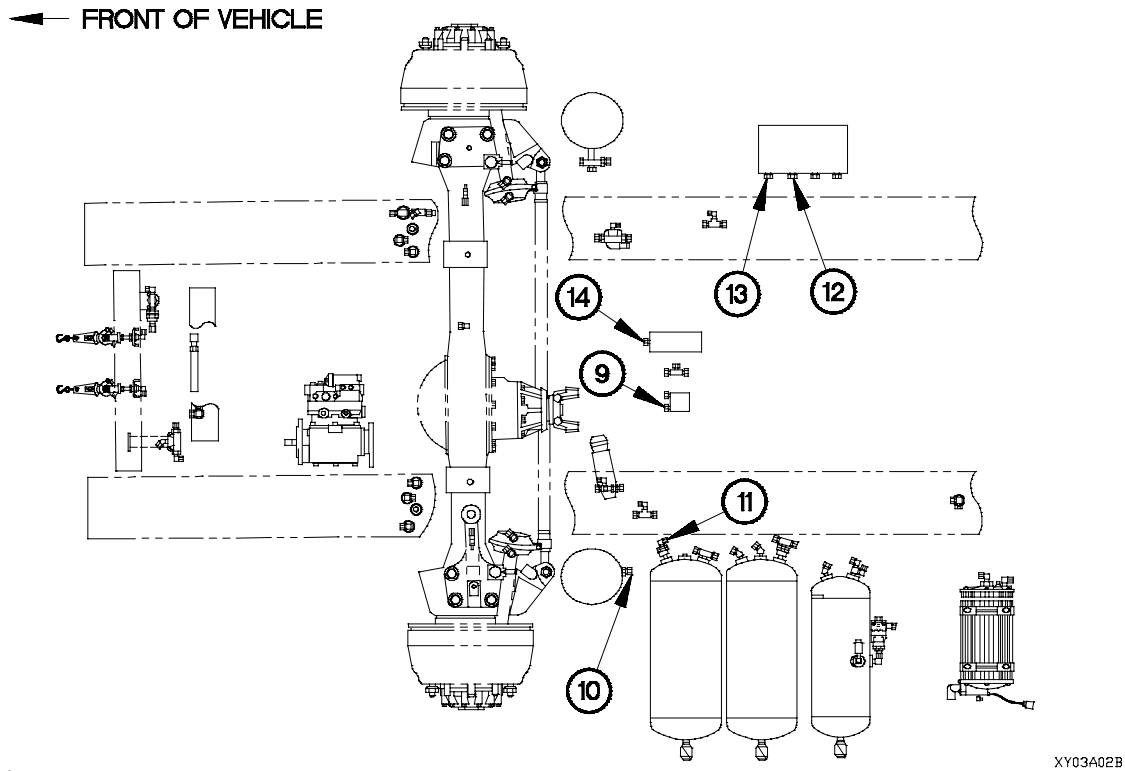


Figure 23-3. Air Transportability Air Hose Locations (Cont)

Table 23-3. Air Transportability Air Hose Locations (Cont)

HOSE NAME (NUMBER)	FROM	TO
Driver cylinder (505)	Cab leveling valve fitting (9)	Driver cylinder fitting (10)
Inversion valve supply (502)	Inversion valve fitting (11)	Manifold input (12)
Air/hydraulic supply (507)	Manifold output fitting (13)	Air/hyd power unit fitting (14)

b. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check around air hoses and fittings for air leaks.
- (3) Shut down engine (TM 9-2320-365-10).

End of Task.

23-4. INVERSION VALVE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- Cab raised (TM 9-2320-365-10).
- Air tanks drained (TM 9-2320-365-10).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Goggles, Industrial (Item 15, Appendix C)

Materials/Parts

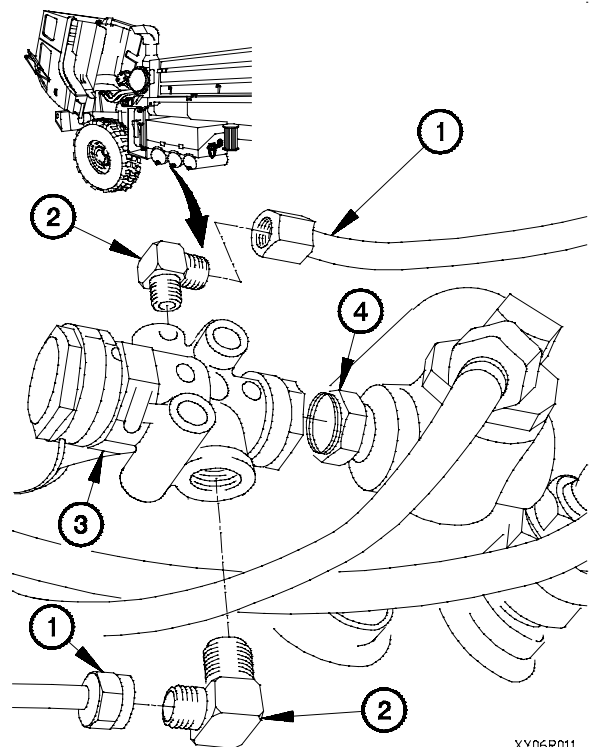
- Antiseize Compound (Item 63, Appendix D)

a. Removal.

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

- (1) Disconnect two air hoses (1) from 90-degree fittings (2).
- (2) Remove inversion valve (3) from fitting (4).
- (3) Remove two 90-degree fittings (2) from inversion valve (3).



XY06R011

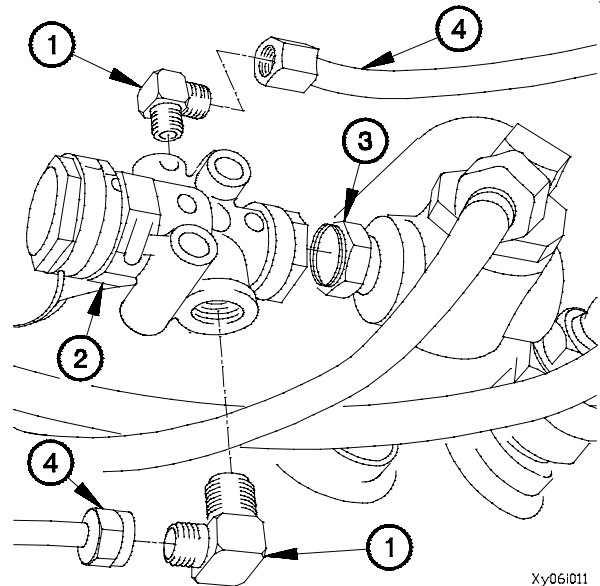
23-4. INVERSION VALVE REPLACEMENT (CONT)

b. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap or water. Failure to comply may result in injury to personnel.

- (1) Apply antiseize compound to threads of two 90-degree fittings (1).
- (2) Install two 90-degree fittings (1) on inversion valve (2).
- (3) Install inversion valve (2) on fitting (3).
- (4) Connect two air hoses (4) to 90-degree fittings (1).



Xy061011

c. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check for air leaks around inversion valve.
- (3) Shut down engine (TM 9-2320-365-10).

End of Task.

23-5. SHUTTLE VALVE REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Inversion valve removed (para 23-4).

Materials/Parts

Antiseize Compound (Item 63, Appendix D)

Tools and Special Tools

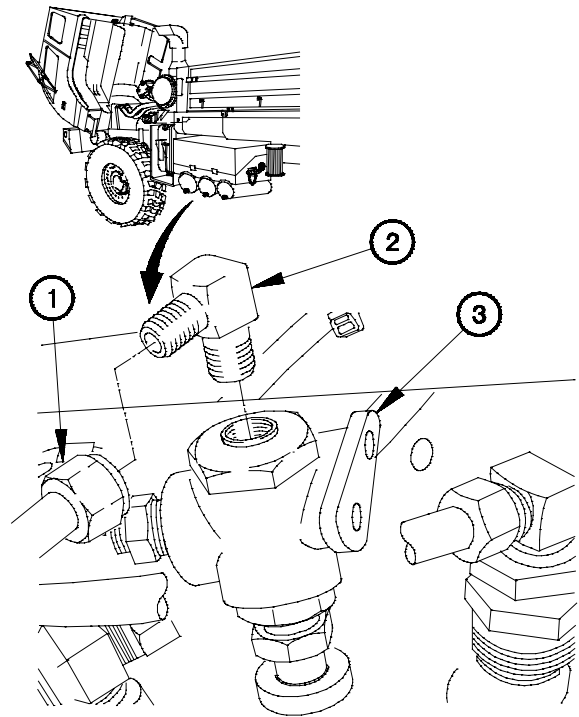
Goggles, Industrial (Item 15, Appendix C)
 Tool Kit, Genl Mech (Item 44, Appendix C)

WARNING

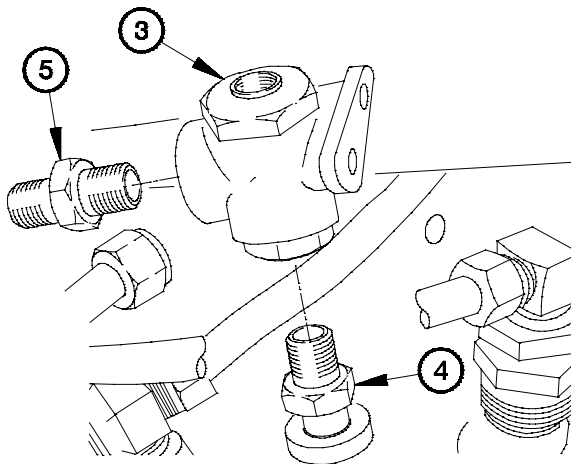
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

- (1) Disconnect air hose (1) from 90-degree fitting (2).
- (2) Remove 90-degree fitting (2) from shuttle valve (3).



XY07R011



XY07R021

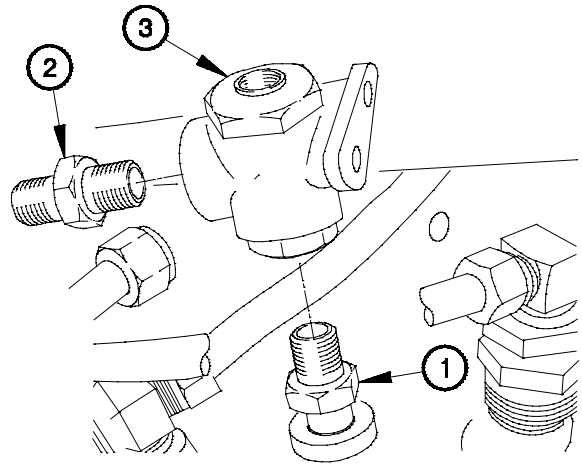
- (3) Remove shuttle valve (3) from adapter (4).
- (4) Remove adapter (5) from shuttle valve (3).

23-5. SHUTTLE VALVE REPLACEMENT (CONT)

b. Installation.

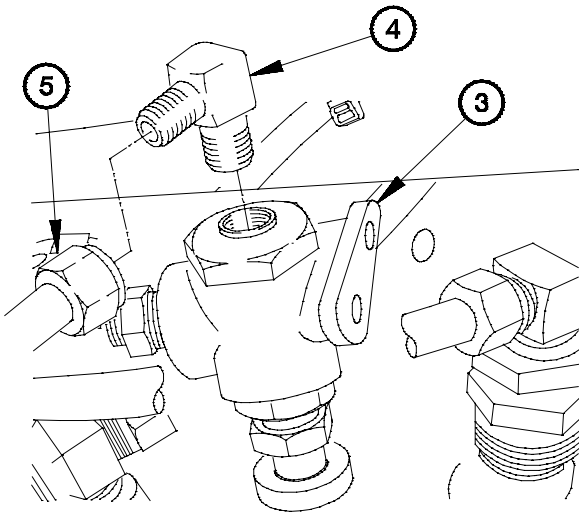
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



XY071011

- (1) Apply antiseize compound to threads of adapter (1) and adapter (2).
- (2) Install shuttle valve (3) on adapter (1).
- (3) Install adapter (2) in shuttle valve (3).



XY071021

- (4) Apply antiseize compound to threads of 90-degree fitting (4).
- (5) Install 90-degree fitting (4) on shuttle valve (3).
- (6) Connect air hose (5) to 90-degree fitting (4).

c. Follow-On Maintenance.

- (1) Install inversion valve (para 23-4).
- (2) Start engine (TM 9-2320-365-10).
- (3) Check for air leaks around shuttle valve and inversion valve.
- (4) Shut down engine (TM 9-2320-365-10).

End of Task.

23-6. AIR DRYER REPLACEMENT/REPAIR

This task covers:

- | | |
|----------------|--------------------------|
| a. Removal | d. Installation |
| b. Disassembly | e. Follow-On Maintenance |
| c. Assembly | |

INITIAL SETUP

Equipment Conditions

- Air tanks drained (TM 9-2320-365-10).
- Batteries disconnected (para 7-48).

Tools and Special Tools

- Goggles, Industrial (Item 15, Appendix C)
- Tool Kit, Genl Mech (Item 44, Appendix C)
- Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)
- Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C)
- Wrench Set, Socket (Item 48, Appendix C)
- Purge Valve Tool (Item E-22, Appendix E)
- Hammer, Hand (Item 18, Appendix C)

Materials/Parts

- Nut, Plain, Hex (Item 36, Appendix D)
- Ties, Cable, Plastic (Item 76, Appendix D)
- Parts Kit, Dehydrator (Item 196, Appendix G)
- Nut, Self-Locking (4) (Item 149, Appendix G)
- Boot Kit, Exhaust (Item 3, Appendix G)
- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

Personnel Required

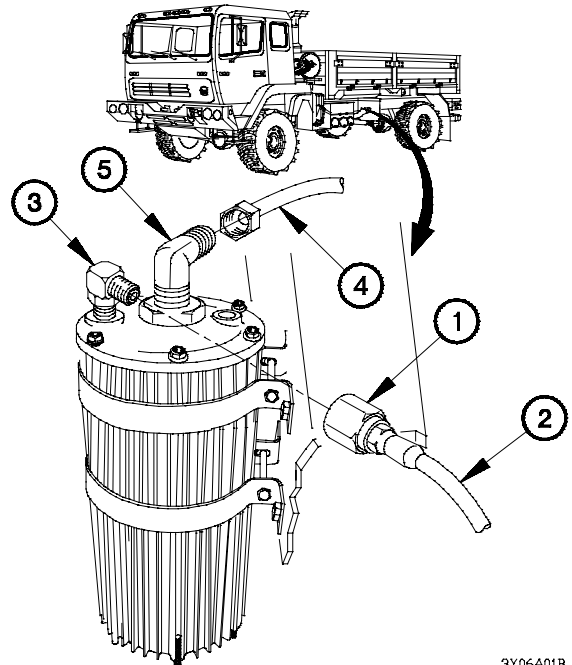
(2)

a. Removal.

WARNING

- Air dryer may contain air pressure. Loosen input air hose connector slowly to vent off air pressure. Failure to comply may cause injury to personnel.
- Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

- (1) Loosen input air hose nut (1).
- (2) Disconnect input air hose (2) from 90-degree fitting (3).
- (3) Disconnect outlet air hose (4) from 90-degree fitting (5).



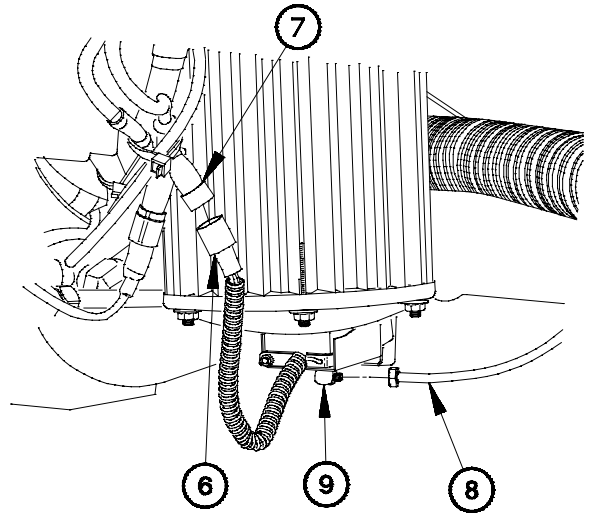
3Y06A01B

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

NOTE

Remove plastic cable ties as required.

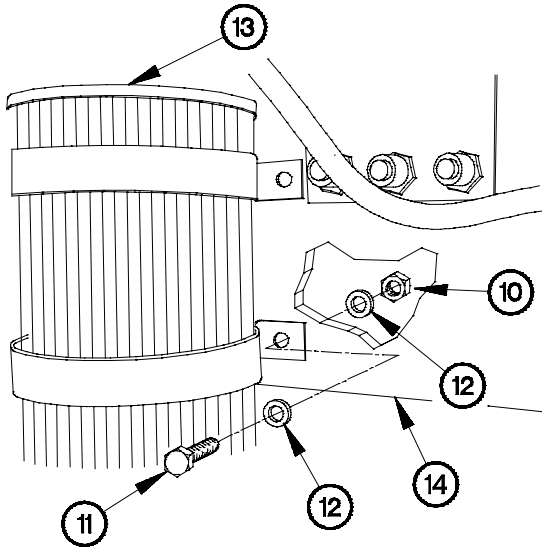
- (4) Disconnect air dryer electrical connector (6) from connector P80 (7).
- (5) Disconnect air hose (8) from 90-degree fitting (9).



XY11A02-

NOTE

- Note the position of retaining bands on air dryer prior to removal.
 - Step (6) requires the aid of an assistant.
- (6) Remove four self-locking nuts (10), screws (11), eight washers (12), and air dryer (13) from frame (14). Discard self-locking nuts.

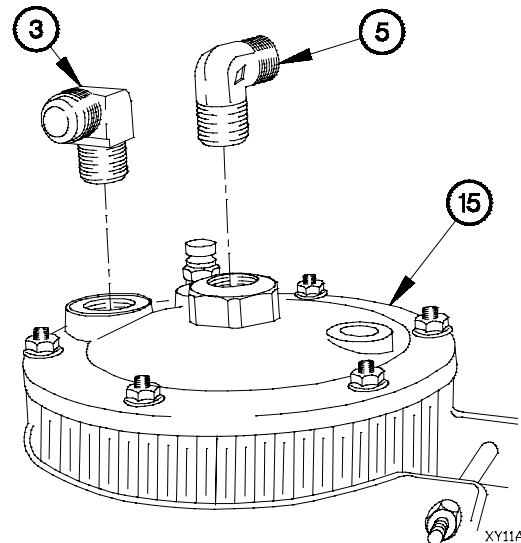


XY11A03-

NOTE

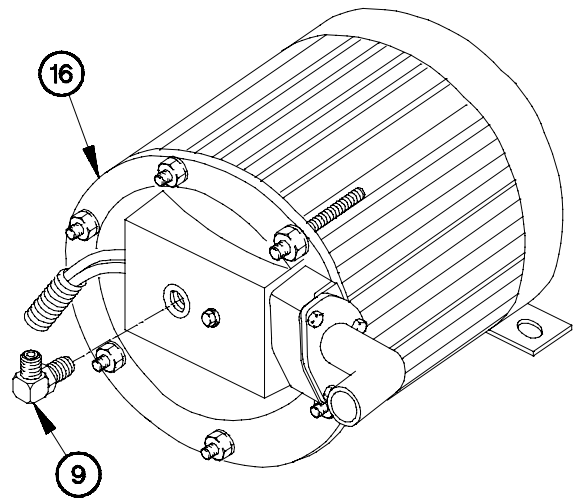
Tag fittings and connection points prior to removal.

- (7) Remove 90-degree fittings (3 and 5) from top cover (15).



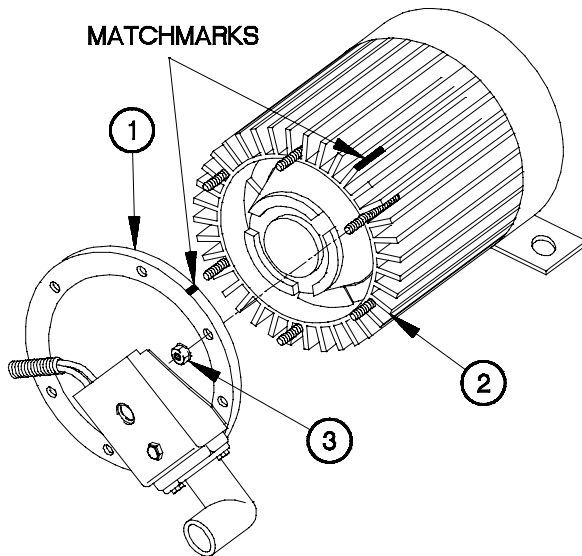
XY11A04-

(8) Remove 90-degree fitting (9) from lower cover (16).



XY11A05-

b. Disassembly.

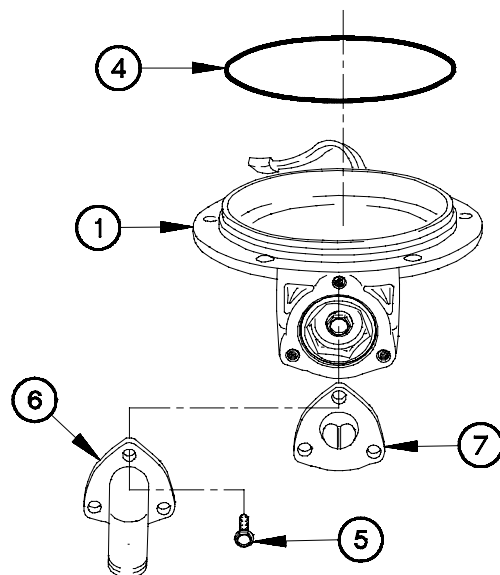


XY11B01A

- (1) Match mark lower cover (1) to air dryer housing (2).
- (2) Remove six flange nuts (3) from lower cover (1).
- (3) Remove lower cover (1) from air dryer housing (2).

(4) Remove preformed packing (4) from lower cover (1). Discard preformed packing.

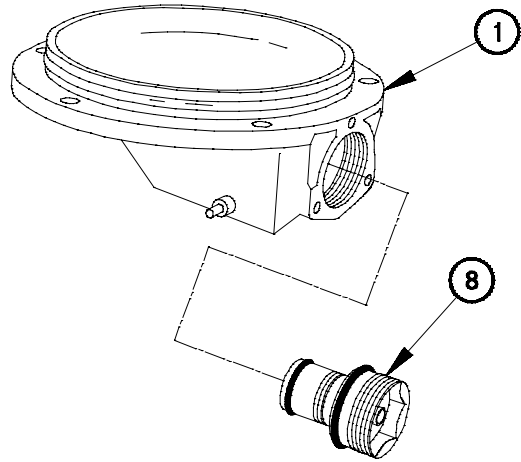
(5) Remove three screws (5), purge exhaust fitting (6), and exhaust boot (7) from lower cover (1). Discard exhaust boot.



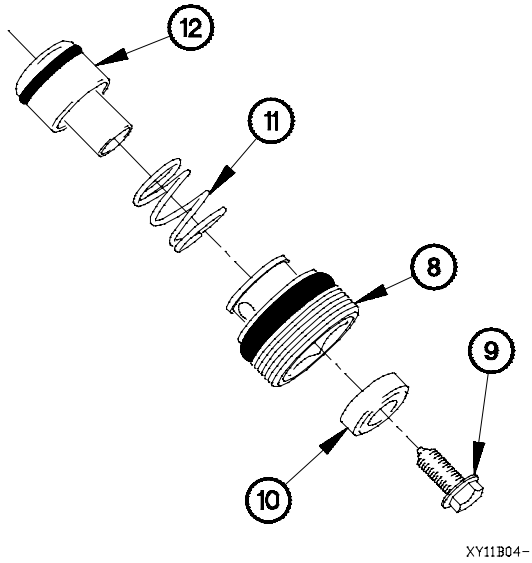
XY11B02A

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

- (6) Deleted.
- (7) Turn purge valve (8) to the left until removed from lower cover (1).
- (8) Deleted.



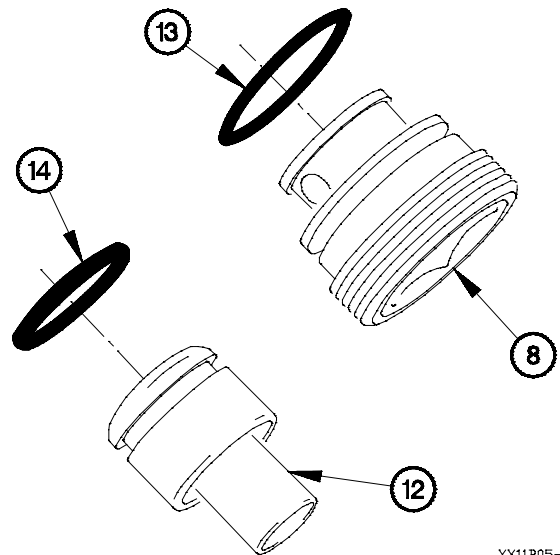
XY11B03B



XY11B04-

- (9) Remove screw (9), purge valve seat (10), spring (11), and purge piston (12) from purge valve (8). Discard purge valve seat.

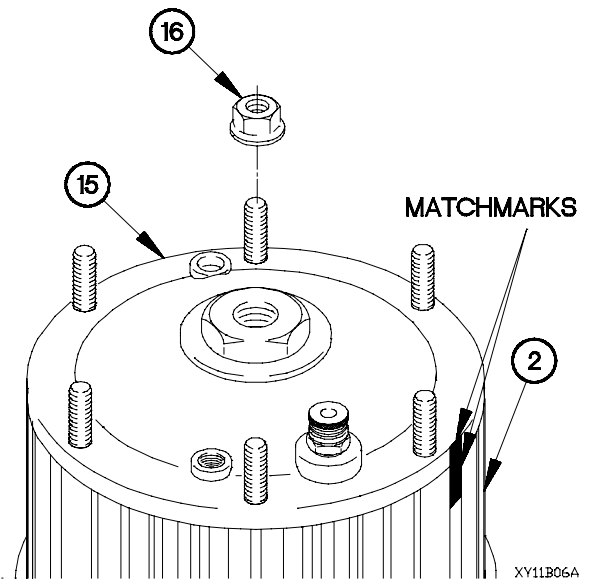
- (10) Remove preformed packing (13) from purge valve (8). Discard preformed packing.
- (11) Remove preformed packing (14) from purge piston (12). Discard preformed packing.



XY11B05-

(12) Match mark top cover (15) to air dryer housing (2).

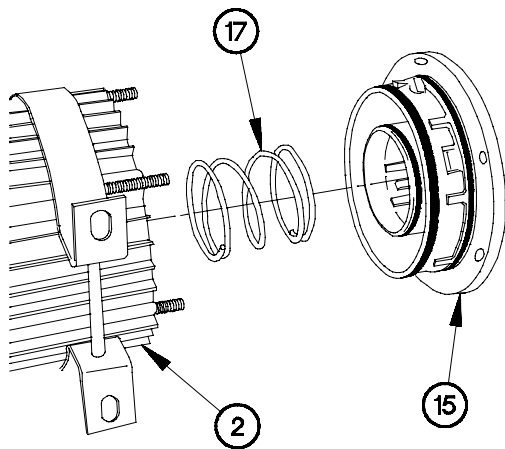
(13) Remove six flange nuts (16) from top cover (15).



NOTE

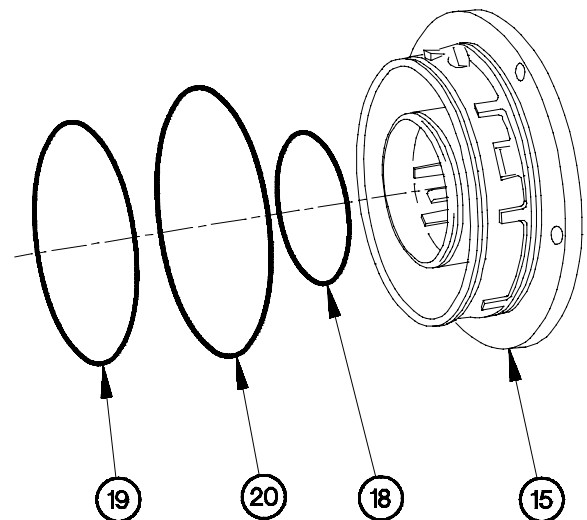
It may be necessary to tap on top cover to loosen.

(14) Remove top cover (15) and spring (17) from air dryer housing (2).



XY11B07A

(15) Remove preformed packings (18, 19 and 20) from top cover (15). Discard preformed packings.



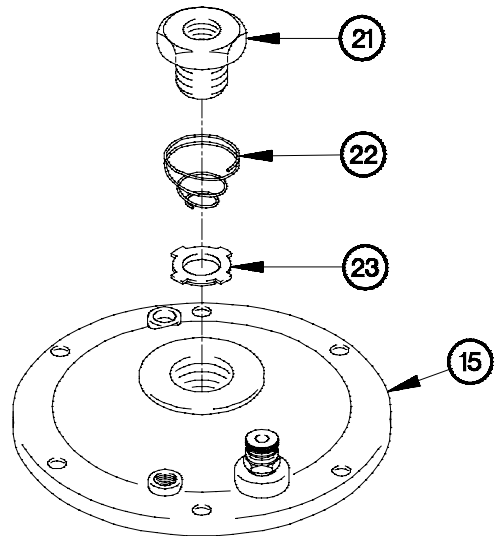
XY11B08A

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

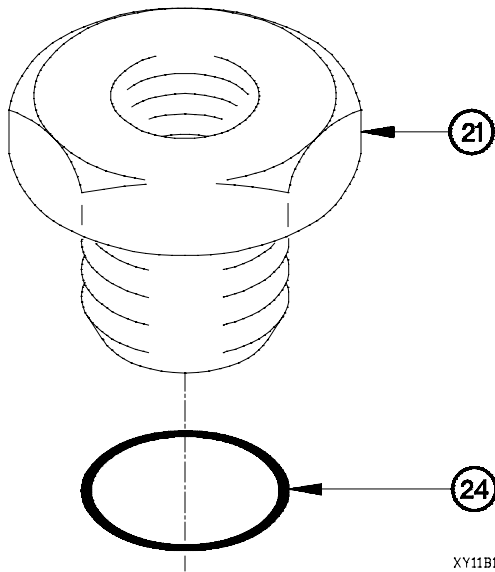
NOTE

Note orientation of valve disc prior to removal.

- (16) Remove check valve end cap (21), spring (22), and valve disc (23) from top cover (15).



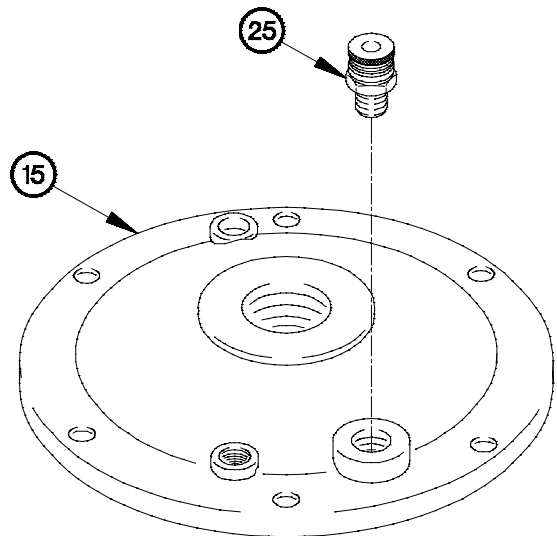
XY11B09B



XY11B10A

- (17) Remove preformed packing (24) from check valve end cap (21). Discard preformed packing.

- (18) Remove relief valve (25) from top cover (15).

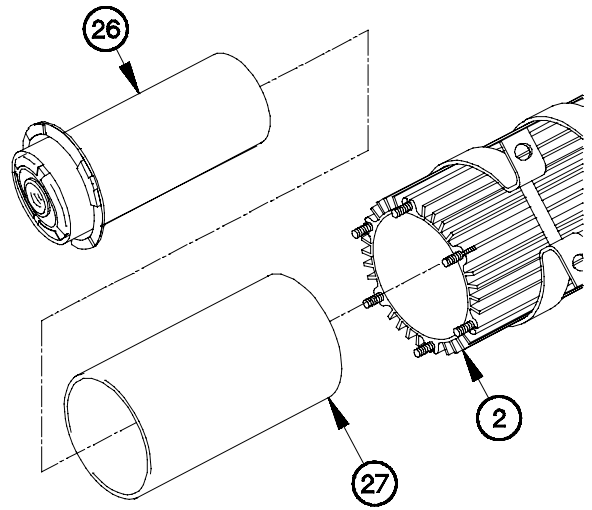


XY11B11A

NOTE

Desiccant canister and inner aluminum shell can be removed as one unit.

- (19) Remove desiccant canister (26) and inner aluminum shell (27) from air dryer housing (2).
- (20) Remove desiccant canister (26) from inner aluminum shell (27).

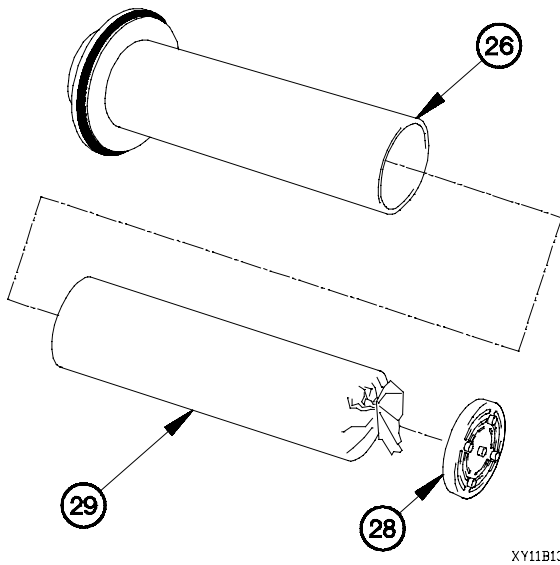


XY11B12A

NOTE

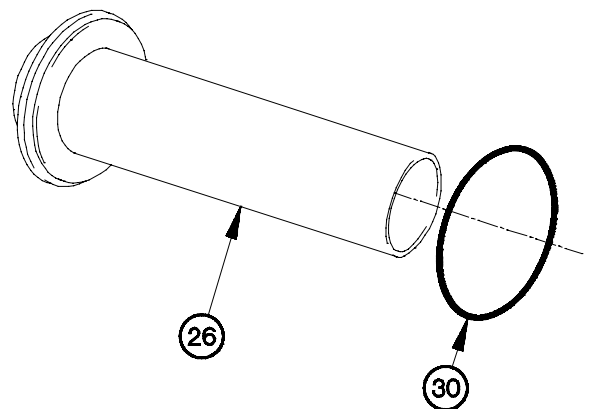
Desiccant follower will come out with desiccant. Retrieve for reuse.

- (21) Remove desiccant follower (28) and desiccant cartridge (29) from desiccant canister (26). Discard desiccant cartridge.



XY11B13A

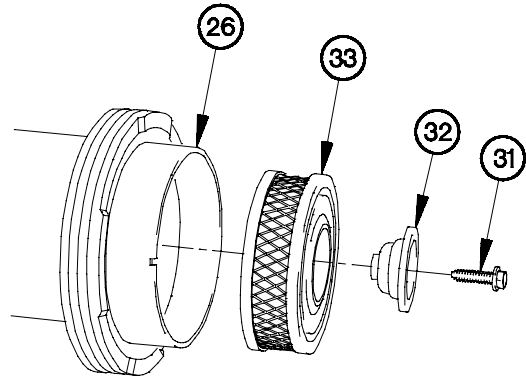
- (22) Remove preformed packing (30) from desiccant canister (26). Discard preformed packing.



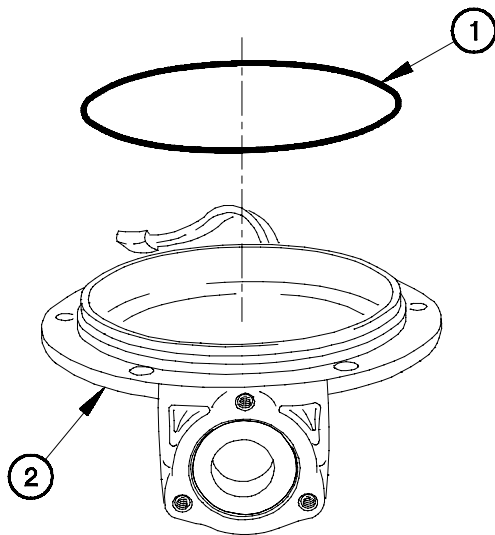
XY11B14A

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

- (23) Remove screw (31) and filter retainer (32) from filter element (33).
- (24) Remove filter element (33) from desiccant canister (26). Discard filter element.



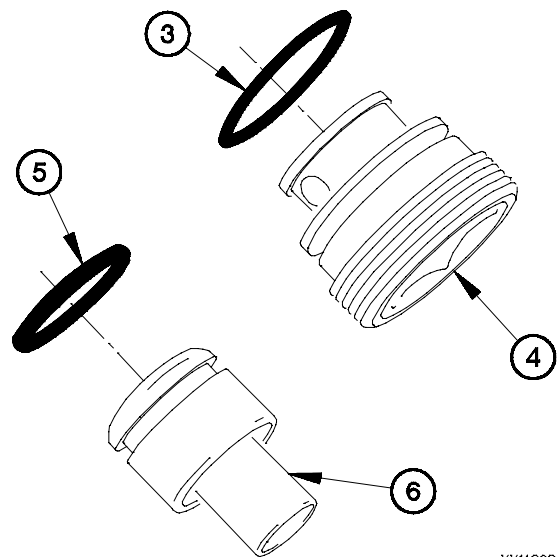
c. Assembly.



XY11C01-

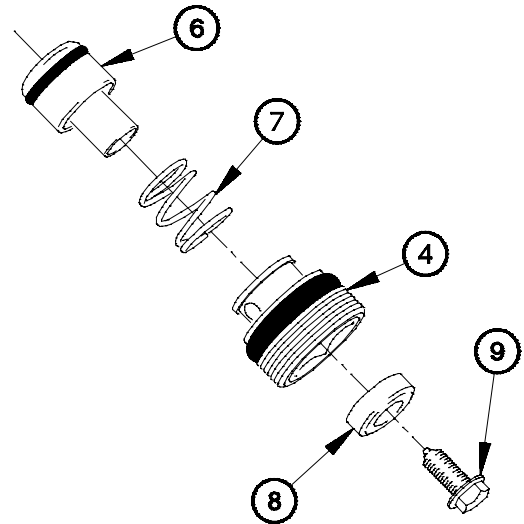
- (1) Install preformed packing (1) on lower cover (2).

- (2) Install preformed packing (3) on purge valve (4).
- (3) Install preformed packing (5) on purge piston (6).

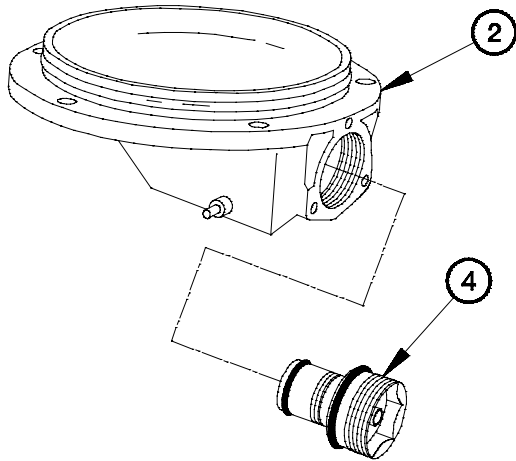


XY11C02-

- (4) Position spring (7), purge piston (6), purge valve seat (8), and screw (9) on purge valve (4).
- (5) Tighten screw (9) to 50-80 lb-in. (6-9 N·m).



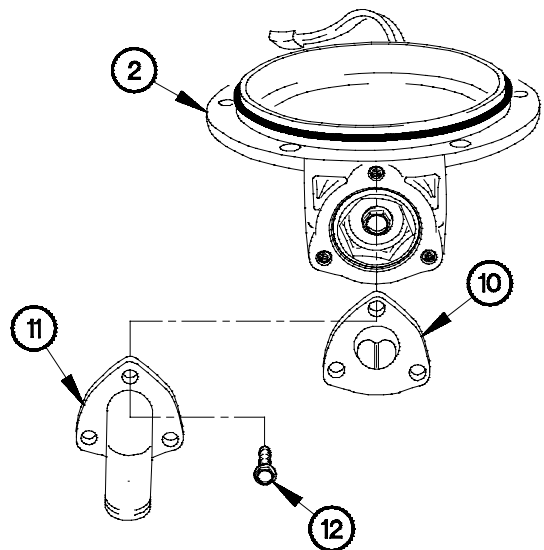
XY11C03-



XY11C04B

- (6) Position purge valve (4) in lower cover (2).
- (7) Install nut in purge valve (4).
- (8) Tighten purge valve (4) to 35-50 lb-in. (4-6 N·m).
- (9) Remove nut from purge valve (4).

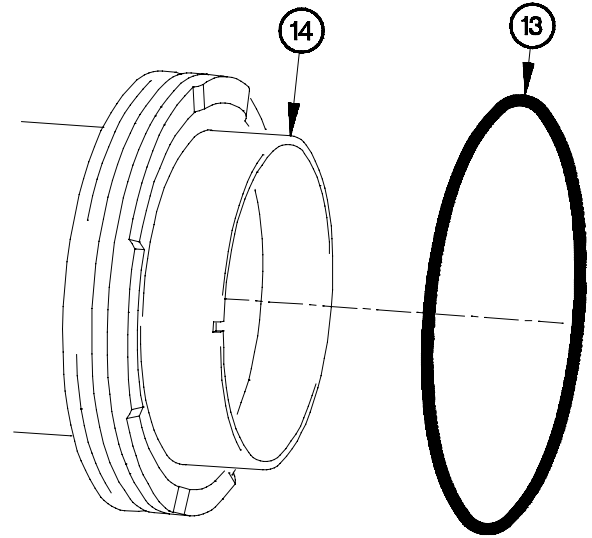
- (10) Position exhaust boot (10) and purge exhaust fitting (11) on lower cover (2) with three screws (12).
- (11) Tighten three screws (12) to 50-70 lb-in. (6-8 N·m).



XY11C05-

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

(12) Install preformed packing (13) on desiccant canister (14).

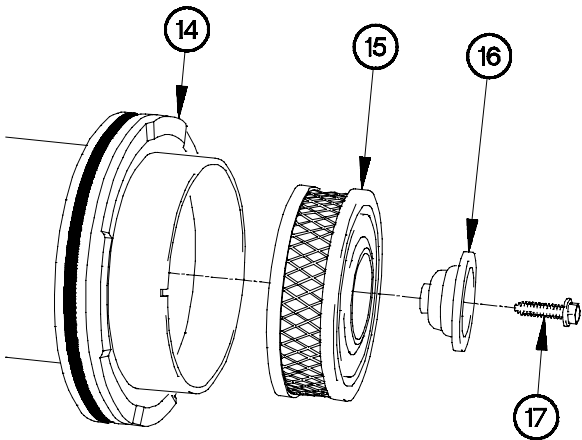


XY11C06A

(13) Position filter element (15) on desiccant canister (14).

(14) Position filter retainer (16) and screw (17) in desiccant canister (14).

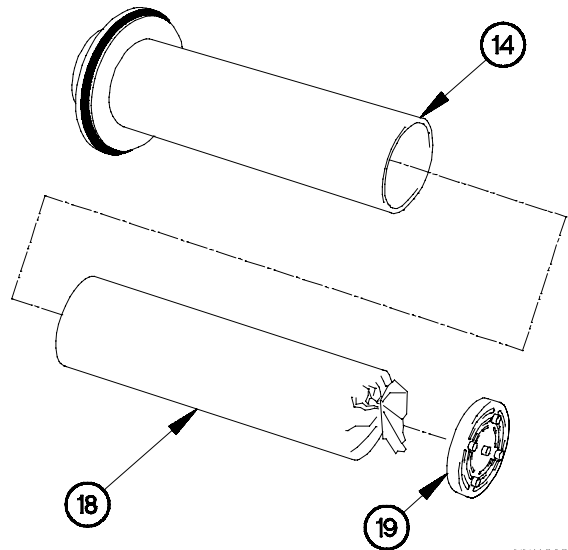
(15) Tighten screw (17) to 60-90 lb-in. (7-10 N-m).



XY11C07A

(16) Slide desiccant cartridge (18) in desiccant canister (14).

(17) Install desiccant follower (19) in desiccant canister (14).

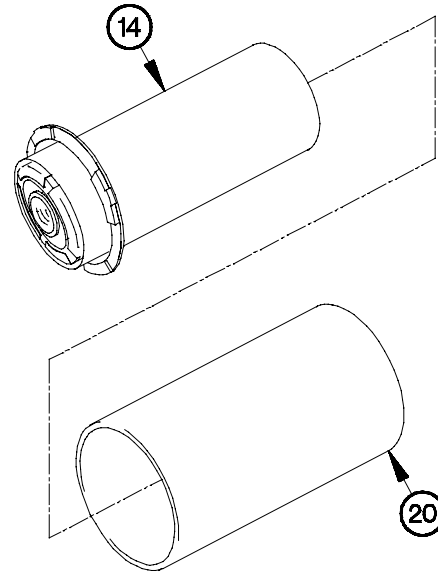


XY11C08A

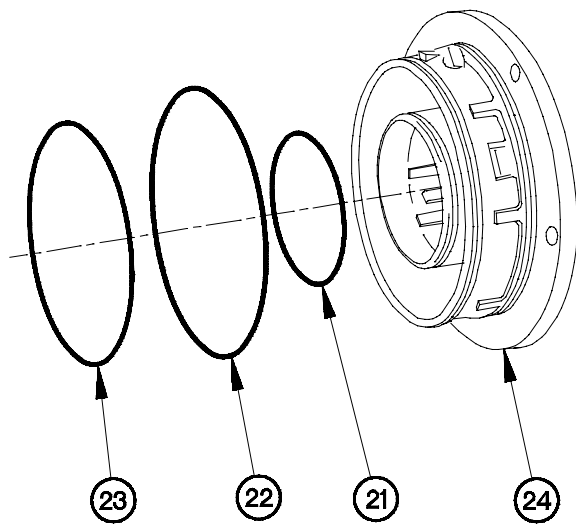
CAUTION

Use caution when installing desiccant canister in inner aluminum shell. Preformed packing can easily be damaged. Failure to comply may result in damage to equipment.

- (18) Install desiccant canister (14) in inner aluminum shell (20).



XY11C09A



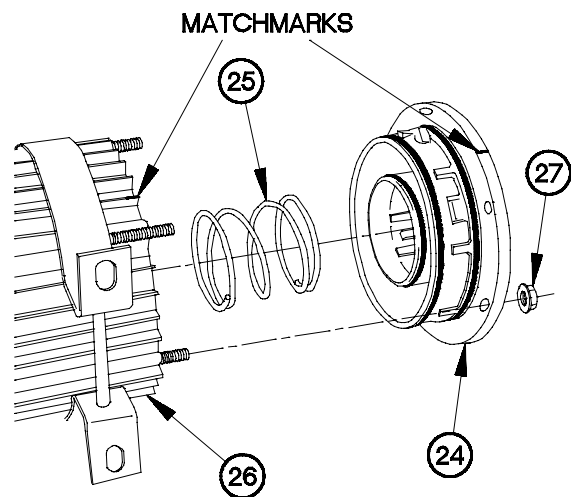
XY11C10-

- (19) Install preformed packings (21, 22 and 23) on top cover (24).

- (20) Position spring (25) and top cover (24) on air dryer housing (26) with matchmarks aligned.

- (21) Position six flange nuts (27) on top cover (24).

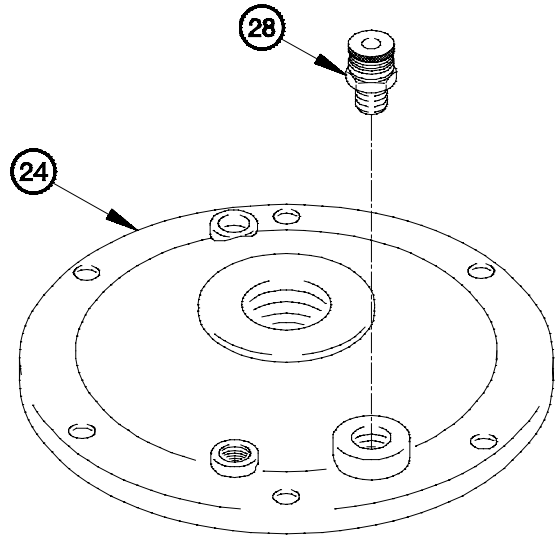
- (22) Tighten six flange nuts (27) to 150-200 lb-in. (17-23 N-m).



XY11C11A

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

(23) Install relief valve (28) in top cover (24).



XY11C12A

NOTE

Install valve disc with rubber side down.

(24) Install valve disc (29) in top cover (24).

NOTE

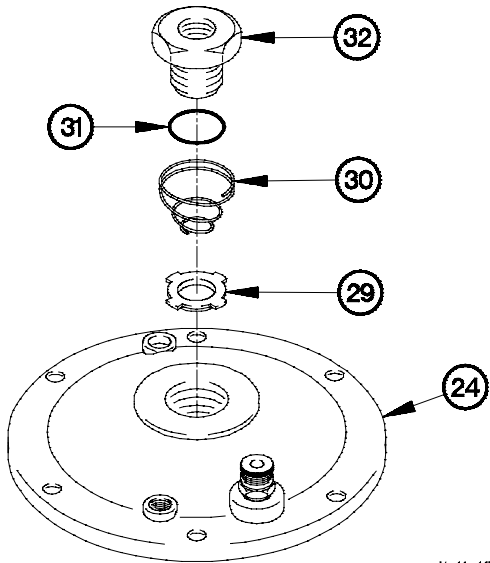
Install spring with small end toward valve disc.

(25) Install spring (30) in top cover (24).

(26) Install preformed packing (31) on check valve end cap (32).

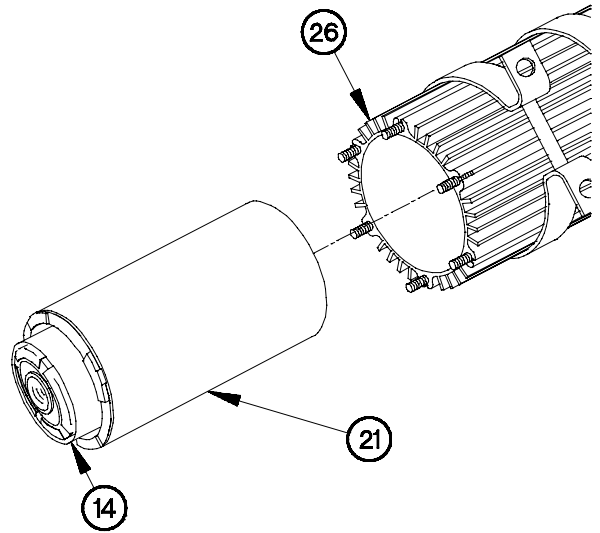
(27) Position check valve end cap (32) on top cover (24).

(28) Tighten check valve end cap (32) to 35-50 lb-ft (47-68 N·m).

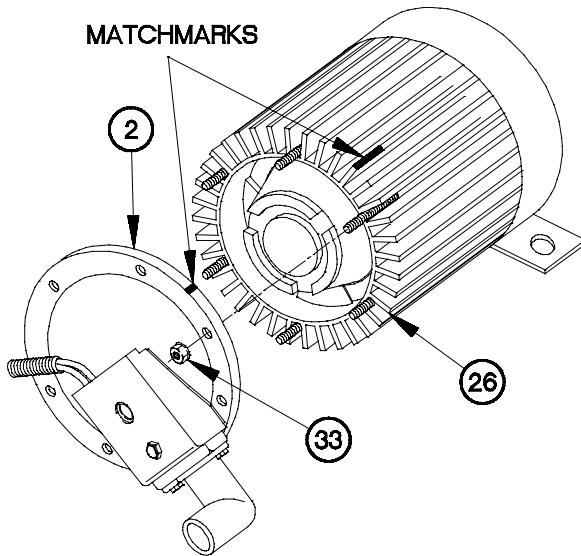


Xy11c13b

(29) Install desiccant canister (14) and inner aluminum shell (21) in air dryer housing (26).



XY11C14A



XY11C15A

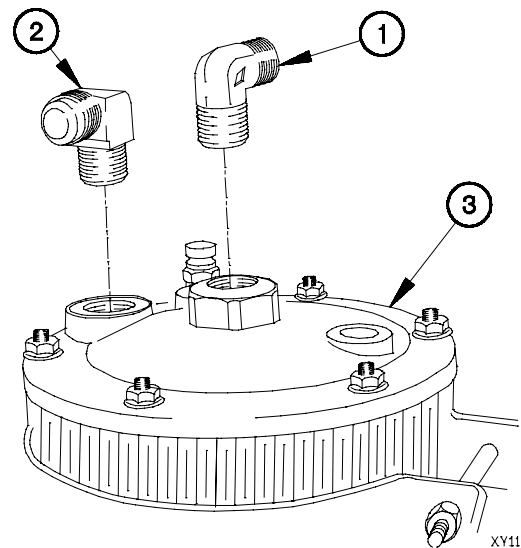
(30) Position lower cover (2) on air dryer housing (26) with matchmarks aligned.

(31) Position six flange nuts (33) on lower cover (2).

(32) Tighten six flange nuts (33) to 150-200 lb-in. (17-23 N-m).

d. Installation.

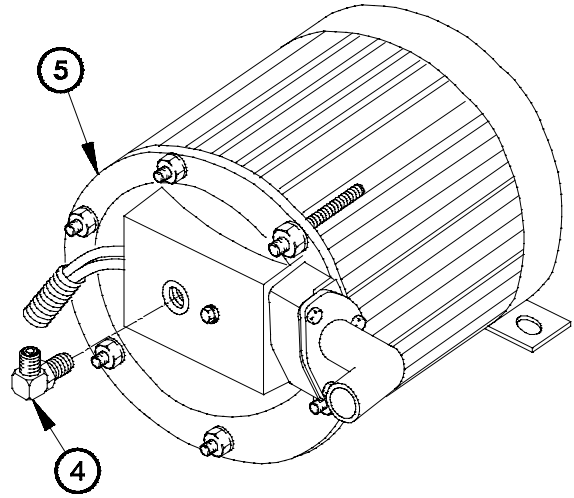
(1) Install 90-degree fittings (1 and 2) in top cover (3).



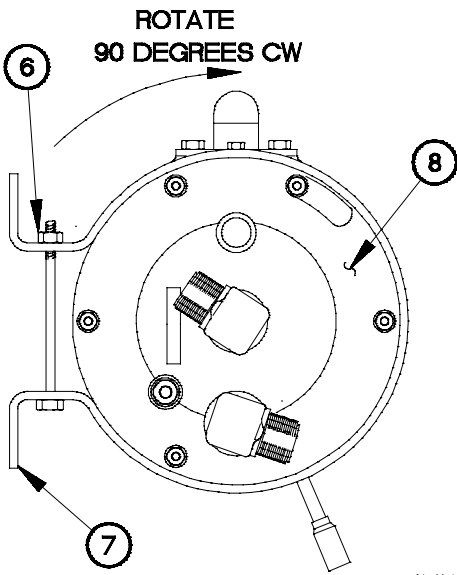
XY11D01-

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

(2) Install 90-degree fitting (4) in lower cover (5).



XY11D021



Xy11a03b

CAUTION

When installing a new air dryer, it is necessary to change the orientation of the retaining bands. Failure to comply may result in damage to equipment.

NOTE

Perform steps (3) through (5) if installing a new air dryer.

(3) Loosen two nuts (6) on retaining bands (7).

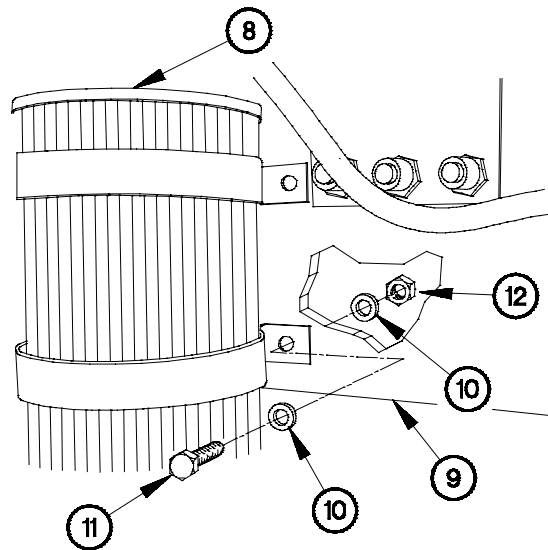
NOTE

Position retaining bands on air dryer as noted in removal.

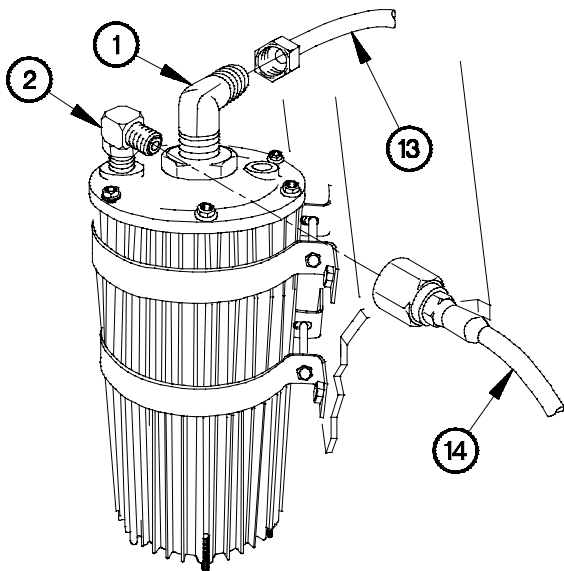
(4) Rotate two retaining bands (7) 90-degrees clockwise as viewed from top of air dryer (8).

(5) Tighten two nuts (6) on retaining bands (7).

- (6) Position air dryer (8) on frame (9) with eight washers (10), four screws (11), and self-locking nuts (12).
- (7) Tighten four self-locking nuts (12) to 34-42 lb-ft (47-57 N-m).



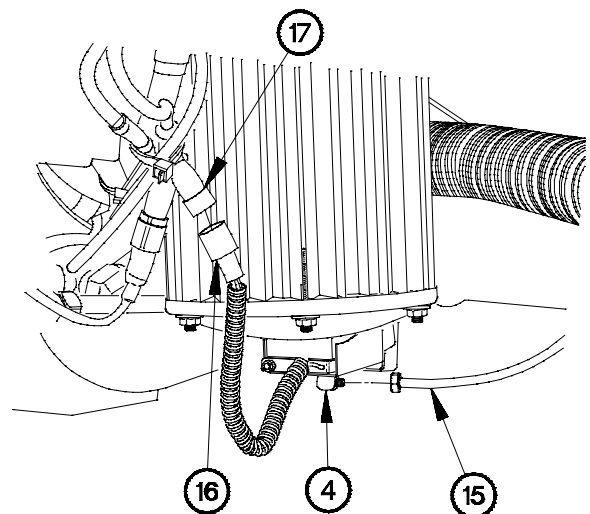
XY11D041



XY11D051

- (8) Connect output air hose (13) to 90-degree fitting (1).
- (9) Connect input air hose (14) to 90-degree fitting (2).

- (10) Connect air hose (15) to 90-degree fitting (4).
- (11) Connect air dryer electrical connector (16) to connector P80 (17).



XY11D061

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

e. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Start engine (TM 9-2320-365-10) and allow air pressure to build up to normal pressure.
- (3) Check air dryer and air hoses for air leaks.
- (4) Shut down engine (TM 9-2320-365-10).

End of Task.

23-7. WET TANK REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Pressure protection valve removed (para 11-27).

Tools and Special Tools

Goggles, Industrial (Item 15, Appendix C)
 Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
 Antiseize Compound (Item 63, Appendix D)
 Nut, Self-Locking (2) (Item 122.1, Appendix G)

WARNING

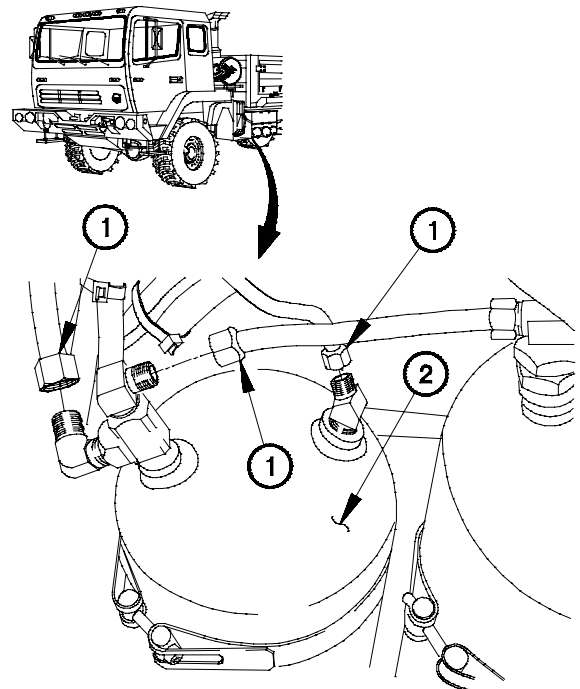
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

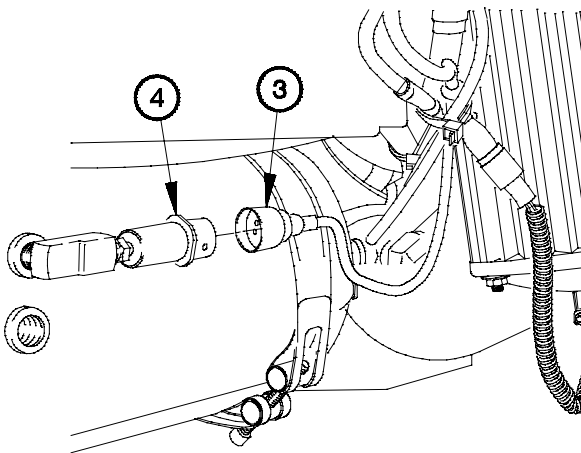
NOTE

Tag hoses and connectors prior to removal.

- (1) Disconnect three air hoses (1) from wet tank (2).



XY12R01B



XY12R02B

- (2) Disconnect connector P84 (3) from pressure switch (4).

23-7. WET TANK REPLACEMENT (CONT)

NOTE

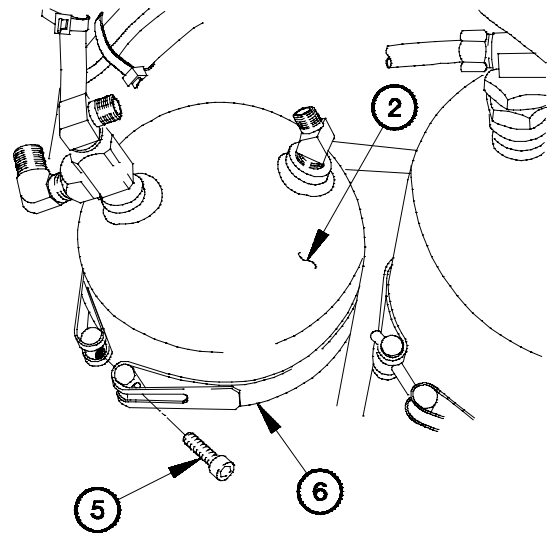
- Vehicles may be equipped with either corrosive enhanced clamps or non-corrosive enhanced clamps. Corrosive enhanced clamps have a self-locking nut and cork lining. When removing a non-corrosive enhanced clamp, replace it with a corrosive enhanced clamp.
- Perform steps (3) through (5) on vehicles not equipped with corrosive enhanced clamps.

(3) Remove two screws (5) from clamps (6).

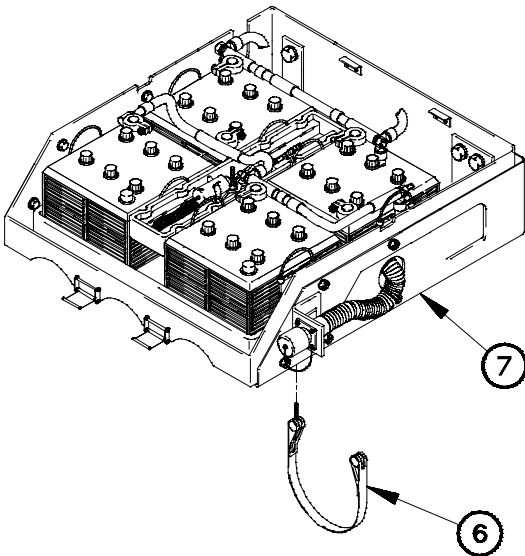
NOTE

Note the orientation of wet tank prior to removal.

(4) Remove wet tank (2) from two clamps (6).



XY12R03B



XY12R04B

(5) Remove two clamps (6) from battery box (7). Discard clamps.

NOTE

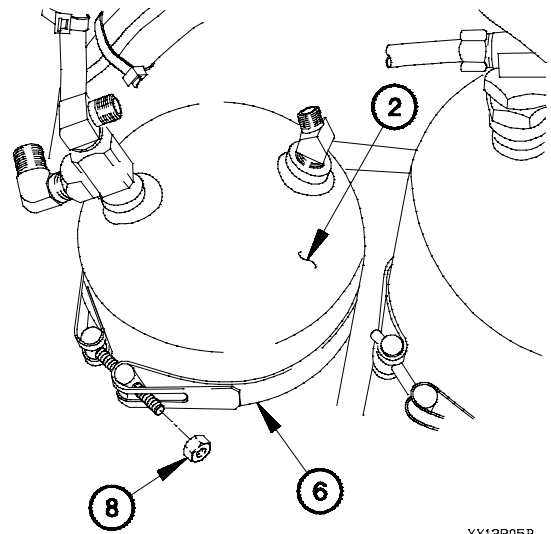
Perform steps (6) and (7) on vehicles equipped with corrosive enhanced clamps.

- (6) Remove two self-locking nuts (8) from clamps (6). Discard self-locking nuts.

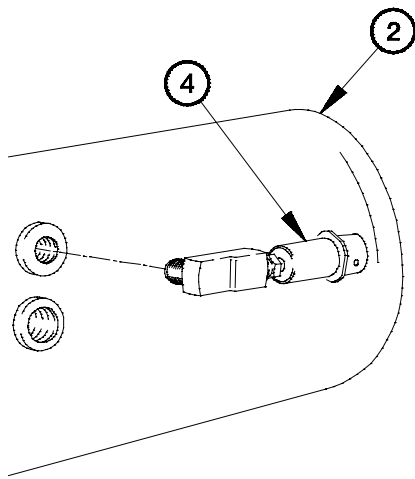
NOTE

Note the orientation of wet tank prior to removal.

- (7) Remove wet tank (2) from two clamps (6).

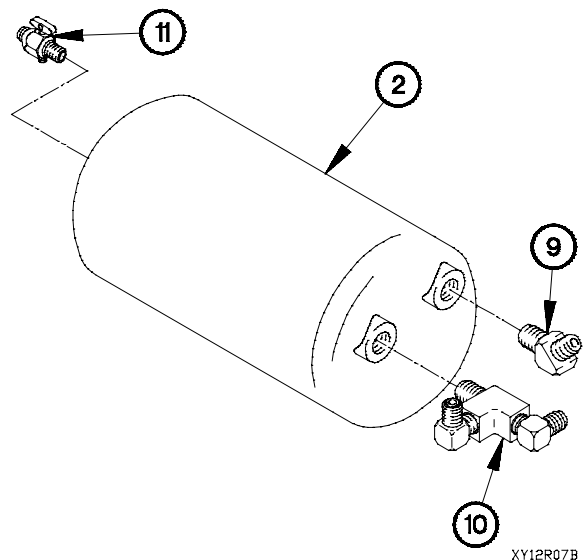


XY12R05B



XY12R06B

- (8) Remove pressure switch (4) from wet tank (2).

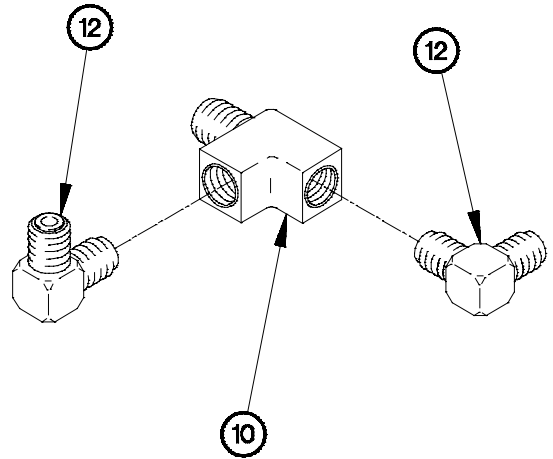


XY12R07B

- (9) Remove 45-degree fitting (9) from wet tank (2).
- (10) Remove street tee fitting (10) from wet tank (2).
- (11) Remove drain valve (11) from wet tank (2).

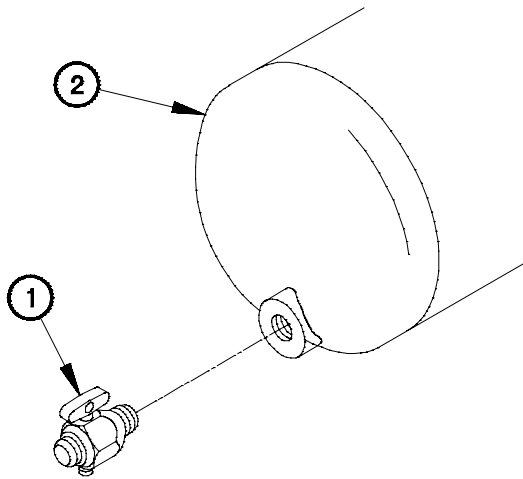
23-7. WET TANK REPLACEMENT (CONT)

(12) Remove two 90-degree fittings (12) from street tee fitting (10).



XY12R08B

b. Installation.



XY12I01-

WARNING

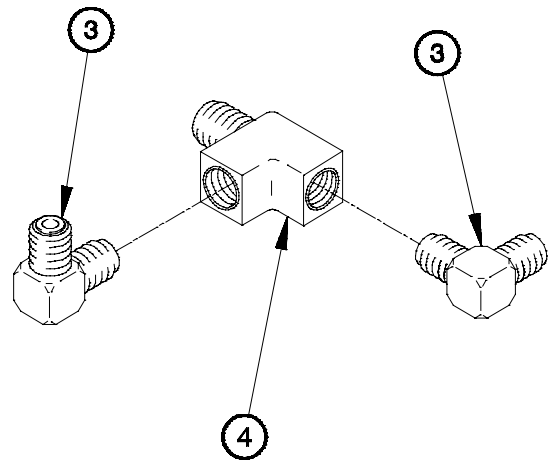
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply antiseize compound to threads of drain valve (1).
- (2) Install drain valve (1) in wet tank (2).

WARNING

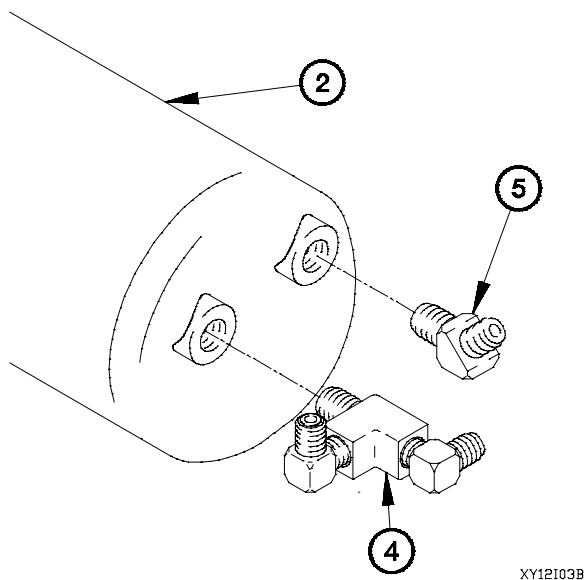
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (3) Apply antiseize compound to threads of two 90-degree fitting (3).
- (4) Install two 90-degree fittings (3) on street tee fitting (4).



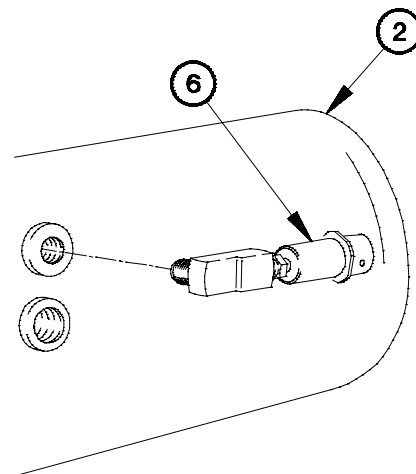
XY12102B

- (5) Apply antiseize compound to threads of street tee fitting (4).
- (6) Install street tee fitting (4) in wet tank (2).
- (7) Apply antiseize compound to threads of 45-degree fitting (5).
- (8) Install 45-degree fitting (5) in wet tank (2).



XY12103B

- (9) Apply antiseize compound to threads of pressure switch (6).
- (10) Install pressure switch (6) in wet tank (2).



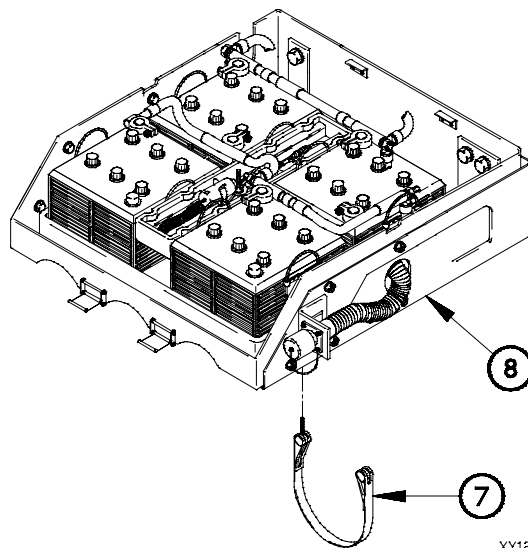
XY12104B

23-7. WET TANK REPLACEMENT (CONT)

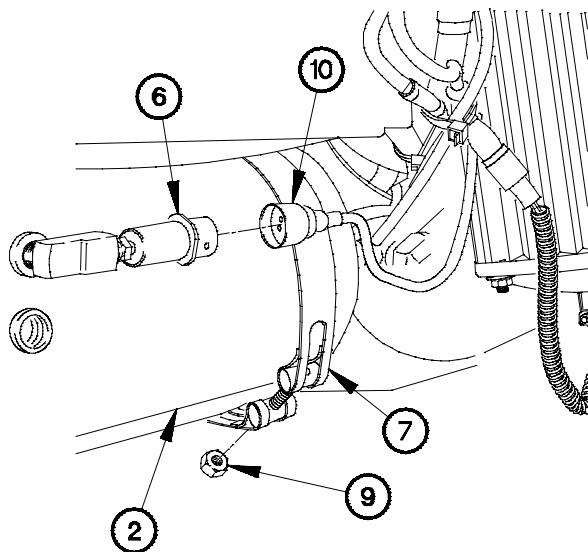
NOTE

Perform step (11) on vehicles not previously equipped with corrosive enhanced clamps.

(11) Position two clamps (7) on battery box (8).



XY12105B



XY12106B

(12) Position wet tank (2) in two clamps (7) with self-locking nuts (9).

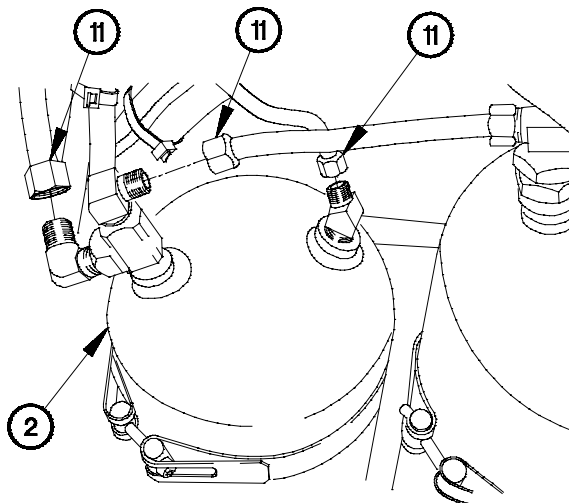
(13) Tighten two self-locking nuts (9) to 4-5 lb-ft (5-7 N·m).

(14) Connect connector P84 (10) to pressure switch (6).

(15) Connect three air hoses (11) to wet tank (2).

c. Follow-on Maintenance.

- (1) Install pressure protection valve (para 11-29).
- (2) Start engine (TM 9-2320-365-10).
- (3) Check air hoses and wet tank fittings for air leaks.
- (4) Shut down engine (TM 9-2320-365-10).



XY12107B

End of Task.

23-8. PRESSURE SWITCH REPLACEMENT

This task covers:

- a. Removal
- b. Installation
- c. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

- Engine shut down (TM 9-2320-365-10).
- Air tanks drained (TM 9-2320-365-10).

Tools and Special Tools

- Tool Kit, Genl Mech (Item 44, Appendix C)
- Goggles, Industrial (Item 15, Appendix C)

Materials/Parts

- Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)
- Antiseize Compound (Item 14, Appendix D)

WARNING

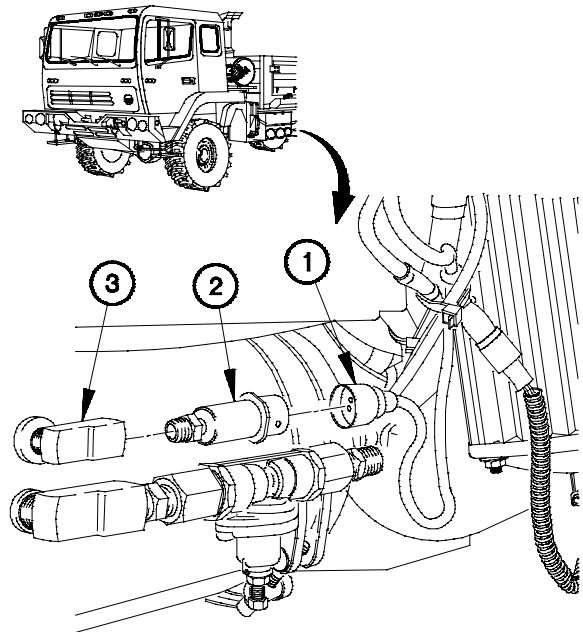
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

NOTE

Tag connectors prior to removal.

- (1) Disconnect connector P84 (1) from pressure switch (2).
- (2) Remove pressure switch (2) from 90-degree fitting (3).



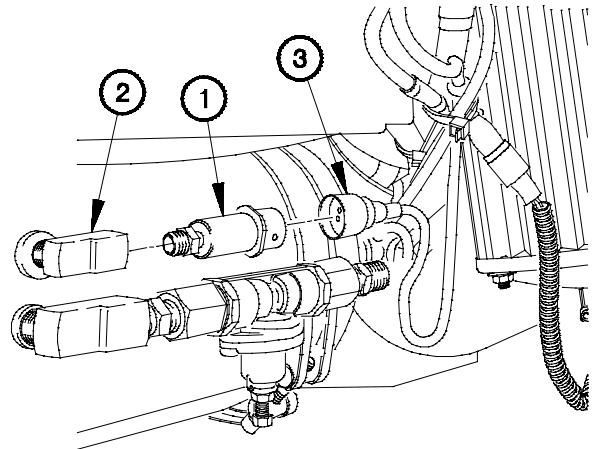
XY13R01B

23-8. PRESSURE SWITCH REPLACEMENT (CONT)

b. Installation

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.



XY13101B

- (1) Apply antiseize compound to threads of pressure switch (1).
- (2) Install pressure switch (1) in 90-degree fitting (2).
- (3) Connect connector P84 (3) to pressure switch (1).

c. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check air pressure switch fitting for air leaks.
- (3) Shut down engine (TM 9-2320-365-10).

End of Task.

CHAPTER 24 GAGES (NON-ELECTRICAL) MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	24-1
24-1. INTRODUCTION	24-1
Section II. MAINTENANCE PROCEDURES	24-2
24-2. AIR FILTER RESTRICTION GAUGE REPLACEMENT	24-2

Section I. INTRODUCTION

24-1. INTRODUCTION

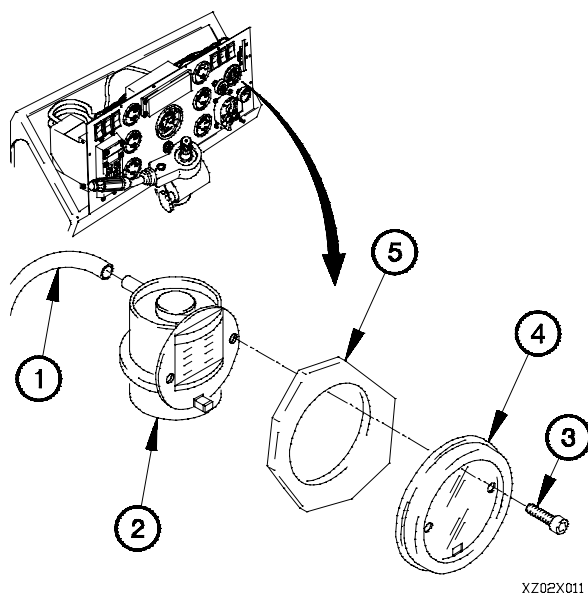
This chapter contains maintenance instructions for replacing non-electrical gages authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

24-2. AIR FILTER RESTRICTION GAUGE REPLACEMENT	
This task covers:	
a. Removal b. Installation	c. Follow-On Maintenance
INITIAL SETUP	
Equipment Conditions Batteries disconnected (para 7-48). Instrument panel assembly removed for access (para 7-15).	Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Disconnect vacuum hose (1) from AIR FILTER RESTRICTION GAUGE (2).
- (2) Remove two screws (3) and AIR FILTER RESTRICTION GAUGE faceplate (4) from instrument panel assembly (5).
- (3) Remove AIR FILTER RESTRICTION GAUGE (2) from instrument panel assembly (5).



b. Installation.

- (1) Position AIR FILTER RESTRICTION GAUGE (2) in instrument panel assembly (5).
- (2) Install AIR FILTER RESTRICTION GAUGE faceplate (4) on instrument panel assembly (5) with two screws (3).
- (3) Connect vacuum hose (1) to AIR FILTER RESTRICTION GAUGE (2).

c. Follow-On Maintenance.

- (1) Install instrument panel assembly (para 7-15).
- (2) Connect batteries (para 7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check operation of AIR FILTER RESTRICTION GAUGE.
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

APPENDIX A REFERENCES

A-1. SCOPE

This appendix lists all forms, field manuals, technical manuals, and other publications referenced in this manual. Those publications that should be consulted for additional information about vehicle operations are also listed.

A-2. PUBLICATIONS INDEX

The following index should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

Consolidated Index of Army Publications and Blank Forms DA Pam 25-30

A-3. FORMS

The following forms pertain to this manual. See DA Pam 25-30 for index of blank forms. See DA Pam 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

Equipment Control Record	DA Form 2408-9
Equipment Inspection and Maintenance Worksheet	DA Form 2404
Maintenance Request	DA Form 2407
Packaging Improvement Report	DD Form 6
Processing and Deprocessing Record of Shipping, Storage, and Issue of Vehicles and Spare Engines	DD Form 1397
Product Quality Deficiency Report	SF 368
Recommended Changes to Publications and Blank Forms	DA Form 2028
Report of Item Discrepancy (ROID)	SF 364

A-4. OTHER PUBLICATIONS

The following publications contain information pertinent to the LMTV and associated equipment.

a. Safety.

First Aid	FM 4-25.11
Security of Tactical Wheeled Vehicles	TB 9-2300-422-20
Safety Inspection and Testing of Lifting Devices	TB 43-0142

A-4. OTHER PUBLICATIONS (CONT)

b. LMTV.

Direct Support and General Support Maintenance Manual for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) TM 9-2320-365-34

Hand Receipt Covering Contents of Components of End Item (COEI), Basic Issue Items (BII), and Additional Authorization List (AAL), for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicles (LMTV) TM 9-2320-365-10-HR

Operator's Manual for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) TM 9-2320-365-10

Unit, Direct Support, and General Support Repair Parts and Special Tools List for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) TM 9-2320-365-24P

Warranty Program for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) TB 9-2300-365-15

c. General Vehicle Operation.

Army Motor Transport Units and Operations FM 55-30

Deleted

Manual for the Wheeled Vehicle Driver FM 21-305

Safety Prevention of Motor Vehicle Accidents AR 385-55

Vehicle Recovery Operations FM 20-22

d. General Maintenance and Repair.

Army Oil Analysis Program TB 43-0211

Camouflage Pattern Painting FM 5-20

Charging System Troubleshooting DA Pam 750-33

Color, Marking, and Camouflage Painting of Military Vehicles TB 43-0209

Cooling Systems: Tactical Vehicles TM 750-254

Corrosion Prevention and Control Including Rustproofing Procedures for Tactical Vehicles and Trailers TB 43-0213

Description, Use, Bonding Techniques, and Properties of Adhesives TB ORD 1032

Equipment Improvement Report and Maintenance Digest: TACOM Equipment TB 43-0001-39-1

Equipment Improvement Report and Maintenance Summary TM 43-0143

Installation Instructions for Installation Kit, Electronic Equipment, MK-2700/VRC (NSN 5895-01-421-0814) (EIC: N/A) to Permit Installation of Radio Set AN/VRC-87/88/90 Series into M1078, M1080, M1081, M1083-M1086, M1088-M1094 and M1096 Family of Medium Tactical Vehicles TB 11-5820-890-20-101

Installation Instructions for Installation Kit, Electronic Equipment, MK-2715/VRC (NSN 5895-01-421-0812) (EIC: N/A) to Permit Installation of Radio Set AN/VRC-89/91/92 Series into M1078, M1080, M1081, M1083-M1086, M1088-M1094 and M1096 Family of Medium Tactical Vehicles TB 11-5820-890-20-92

Metal Body Repair and Related Operations FM 43-2

Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals TM 9-247

Operator's and Organizational Maintenance Manual for Radio Sets TM 11-5820-498-12

Operator's and Organizational Maintenance Manual Including Repair Parts and Special Tools List Simplified Test Equipment for Internal Combustion Engines Reprogrammable (STE/ICE-R) (NSN 4910-01-222-6589) TM 9-4910-571-12&P

Operator's Manual, Radio Set, AN/VRC-46 TM 11-5820-401-10-1

Operator's Manual, Radio Set, AN/VRC-90A TM 11-5820-890-10-1

Operator's, Unit, Direct Support, and General Support Maintenance Manual
for Lead-Acid Storage Batteries TM 9-6140-200-14

Ordnance Tracked and Wheeled Vehicle Hull and Chassis Wiring, Repair of TB ORD 650

Organizational Care, Maintenance, and Repair of Pneumatic Tires and Inner Tubes TM 9-2610-200-14

Painting Instructions for Field Use TM 43-0139

Purging, Cleaning, and Coating Interior Ferrous and Terne Sheet Vehicle Fuel Tanks TB 43-0212

Repair of Tents, Canvas, and Webbing FM 10-16

Rigging Techniques, Procedures, and Applications FM 5-125

Use and Care of Hand Tools and Measuring Tools TM 9-243

Use of Antifreeze Solutions and Cleaning Compounds in Engine Cooling Systems TB 750-651

Welding Theory and Application TM 9-237

e. Cold Weather Operation.

Basic Cold Weather Manual FM 31-70

Northern Operations FM 31-71

Operation and Maintenance of Ordnance Materiel in Cold Weather (0° to -65°F) FM 9-207

f. Decontamination.

Decontamination Operations Facilities & Equipment TB 700-4

NBC Protection FM 3-4

NBC Decontamination FM 3-5

g. Maintenance of Special Purpose Kits.

Operator and Organizational Maintenance Manual for Chemical Alarm TM 3-6665-225-12

Operator's and Unit Maintenance Manual Including Repair Parts and Special Tools
List for Decontaminating Apparatus: M13 TM 3-4230-214-12&P

Operator's, Organizational, Direct Support, and General Support Maintenance Manual
Including Repair Parts and Special Tools List for Various Machine Gun Mounts TM 9-1005-245-14

Operator's, Organizational, Direct Support, and General Support Maintenance
Manual, Air Conditioner, Horizontal Compact, 18,000 BTU/HR, 208 Volt, 3 Phase,
50/60 Hertz, Model F18H-3S TM 5-4120-384-14

Unit and Direct Support Maintenance, Repair Parts and Special Tools List for
Heater, Space, Multifuel with Blower, 60,000 BTU/HR, 120V, Model UH-68G,
NSN 4520-01-203-4410, and Model UH-68GI, NSN 4520-01-297-6803 TM 5-4520-253-23P

h. General.

Operator's Manual (M998 Series) TM 9-2320-280-10

Operator's Manual (M1008 Series) TM 9-2320-289-10

Operator's Manual (M35 Series) TM 9-2320-361-10

Operator's Manual (M939 Series) TM 9-2320-272-10

Principles of Automotive Vehicles TM 9-8000

Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use
(US Army Tank-automotive and Armaments Command) TM 750-244-6

Route Reconnaissance and Classification FM 5-36

Soldier's Manual MOS 88M Motor Transport Operator, Skill Levels 1/2 STP 55-88-M12-SM

A-4. OTHER PUBLICATIONS (CONT)

i. Land, Sea, and Air Shipment.

Airdrop of Supplies and Equipment: Rigging 2 1/2-Ton Trucks FM 10-520
Containerization of Military Vehicles MTMCTEA Ref 95-55-23
Lifting and Tiedown of U.S. Military Helicopters MTMCTEA Ref 95-55-21
Marine Lifting and Lashing Handbook MTMCTEA Ref 95-55-22
Marine Terminal Lifting Guidance MTMCTEA Pam 56-1
Multiservice Helicopter External Air Transport: Basic Operations and Equipment FM 55-450-3
Multiservice Helicopter External Air Transport: Dual-Point Load Rigging Procedures FM 55-450-5
Multiservice Helicopter External Air Transport: Single-Point Load Rigging Procedures FM 55-450-4
Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military
Vehicles and Other Outsize/Overweight Equipment (in TOE Line Sequence) TB 55-46-1
Tiedown Handbook for Rail Movements MTMCTEA Pam 55-19
Tiedown Handbook for Truck Movements MTMCTEA Ref 92-55-20

APPENDIX B MAINTENANCE ALLOCATION CHART (MAC)

SECTION I

INTRODUCTION

B-1. The Army Maintenance System MAC.

a.This introduction (Section I) provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance System concept.

b.The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Unit/Field - includes two subcolumns, C (Operator/Crew) and O (Unit) maintenance.

Direct Support/Field - includes an F subcolumn.

General Support/Sustainment - includes an H subcolumn.

Depot/Sustainment - includes a D subcolumn.

c.Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d.Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance Functions. Maintenance functions are limited to and defined as follows:

a.**Inspect.** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g. by sight, sound, or feel).

b.**Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c.**Service.** Operations required periodically to keep an item in proper operating condition; e.g. to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemicals fluids, or gases.

d.**Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

e.**Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.

f.**Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments or Test, Measurement, and Diagnostic Equipment (TMDE) used in precision measurement. Consists of comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

TM 9-2320-365-20-5

g.**Remove/Install.** To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h.**Replace.** To remove an unserviceable item and install a serviceable counterpart in its place. "Replace " is authorized by the MAC and assigned maintenance level is shown as the 3d position code of the SMR code.

i.**Repair.** The application of maintenance services¹ including fault location/troubleshooting², removal/installation, and disassembly/assembly³ procedures, and maintenance actions⁴ to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j.**Overhaul.** That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k.**Rebuild.** Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

B-3. Explanation of Columns in the MAC, Section II.

a.**Column 1, Group Number.** Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

b.**Column 2, Component/Assembly.** Column 2 contains the item names of components , assemblies, subassemblies, and modules for which maintenance is authorized.

c.**Column 3, Maintenance Function.** Column 3 lists the functions to be performed on the items listed in Column 2. (For detailed explanation of these functions, see Paragraph B-2.)

d.**Column 4, Maintenance Level.** Column 4 specifies each level of maintenance authorized to perform each function listed in Column 3, by indicating work time required (expressed in man-hours in whole hours or decimals) in the appropriate subcolumn. This work-time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work-time figures are to be shown for each level. The work-time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions.

¹Services - Inspect, test, service, adjust, align calibrate, and/or replace.

²Fault location/troubleshooting - The process of investigating and detecting the cause of equipment malfunction; the act of isolating a fault within a system or Unit Under Test (UUT).

³Disassembly/assembly - The step-by-step breakdown (taking apart) of a spare/functional group coded item, to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

⁴Actions - Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

- C Operator or crew maintenance
- O Unit/Field maintenance
- F Direct Support/Field maintenance
- L Specialized Repair Activity (SRA)⁵
- H General Support/Sustainment maintenance
- D Depot/Sustainment maintenance

e. **Column 5, Tools and Test Equipment Reference Code.** Column 5 specifies, by code, those common tools sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated functions. Codes are keyed to tools and test equipment in Section III.

f. **Column 6, Remarks.** When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks contained in Section IV.

B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III.

a. **Column 1, Reference Code.** The tool and test equipment reference code correlates with a code used in the MAC, Section II column 5.

b. **Column 2, Maintenance Level.** The lowest level of maintenance authorized to use the tool or test equipment.

c. **Column 3, Nomenclature.** Name or identification of the tool or test equipment.

d. **Column 4, National Stock Number.** The National Stock Number of tool or test equipment.

e. **Column 5, Tool Number.** The manufacturer's part number, model number, or type number.

B-5. Explanation of Columns in Remarks, Section IV.

a. **Column 1, Remarks Code.** The code recorded in column 6, Section II.

b. **Column 2, Remarks.** This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

⁵This maintenance level is not included in Section II, Column (4) of the Maintenance Allocation Chart. Functions to this level of maintenance are identified by a work-time figure in the "H" column of Section II, Column (4), and an associated reference code is used in the Remarks column (6). This code is keyed to Section IV, Remarks, and the SRA complete repair application is explained there.

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0100	ENGINE ASSEMBLY	Inspect		0.1				78	
		Test		1.5	0.3			78,79	
		Adjust			3.0			56,60,78,80	
		Service		0.8				57,59,78	
		Replace			7.0			16,56,59,61,78,79	
		Repair		0.4	1.6	3.3		16,31,32,44,56,59,60,61,78,79	
0101	CYLINDER HEAD ASSEMBLY	Inspect			0.1			78	
		Replace			2.0			44,56,59,60,78	
		Repair				2.5		56,59,60,61,62,78,81	
0102	CRANKSHAFT	Replace				16.0		56,57,60,71,78	
		Repair			3.8	16.0		16,31,32,56,59,60,61,78	
0103	FLEXPLATE, ENGINE	Replace			6.5			56,59,78	
		Repair			1.0			56,49,78	
0104	PISTON ASSEMBLY	Replace				9.0		56,57,59,60,62,78,79	
		Repair				0.6		78	
0105	CAMSHAFT ASSEMBLY	Replace				3.1		14,56,57,49,60,78	
		Repair				1.2		56,78	
0105	ROCKER ARM AND PUSH RODS	Replace			2.0			44,59,60,61,78	
		Repair			0.3			44,78	
0106	COOLER, ENGINE OIL	Replace			1.3			56,78	
		Repair			0.3			56,78	
0108	MANIFOLDS, INLET AND EXHAUST	Replace			1.5			56,60,61,78,79	
0301	INJECTOR ASSEMBLY, FUEL	Replace			2.1			44,57,78,80	
		Adjust			1.6			56,78,79,80	
0304	AIR INTAKE SYSTEM	Service		0.3					
		Repair		0.3				46,57	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0304	INTAKE AIR CLEANER	Service		0.2					
		Replace		0.8			6,46,57, 78		
		Repair		0.4			57,78		
0305	TURBOCHARGER	Replace			0.8		56,61,78,79		
0306	FUEL TANK	Inspect	0.1						
		Replace		1.5			57,59,78		
0308	GOVERNOR, ENGINE SPEED	Replace			1.0			57,60,76,78,79	
		Repair		0.5	0.7		57,78		
0309	FILTER, FUEL/WATER SEPARATOR	Inspect	0.2						
		Service	0.2	0.3			78		
		Replace		0.5			57,78		
0311	ETHER STARTING AID	Replace		0.6			57,59,78		
0312	ACCELERATOR/HAND THROTTLE	Replace		0.5				57,78	
		Adjust		0.2			57,78		
0401	EXHAUST MUFFLER/PIPES	Inspect	0.1	0.2					
		Replace		0.9			57,59,78		
		Inspect	0.1						
0501	RADIATOR/CHARGE AIR COOLER	Replace		2.5				2,27,53,59,78	
		Service		1.5			59,79		
		Repair		0.6	2.0		2,27,53,59,78		
		Replace		0.5			46,57,78		
0501	RADIATOR OVERFLOW TANK	Repair		0.3			78		
		Replace		1.0			57,59,78,86		
0503	HOSES, WATER	Replace		0.5			57,59,78,86		
0504	PUMP, WATER	Replace		0.8			15,57,59,78,86		
0505	CLUTCH, ENGINE FAN	Inspect		1.0				57	
		Replace		1.5			2,53,57, 78		
		Repair			1.2		56,59,60,61,78,79		

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0601	ALTERNATOR, 100 AMP	Inspect		0.2					
		Test		0.5	1.5			59,63,78	
		Replace		1.0				59,78	
		Repair		0.2	0.5			38,56,57,59,63,78,79	
0603	STARTING MOTOR, ENGINE	Inspect		0.1					
		Test		0.5	0.5			57,63	
		Replace		1.5				2,9,57,59,78	
		Repair			2.1			52,56,59,60,76,78	
0606	SOLENOID, FUEL SHUTOFF	Replace			1.0			60,78,80	
0607	CABLE ASSEMBLY, DASHBOARD	Test		0.5				56	
		Replace		2.9				57,59,76,78	
		Repair		1.0	0.6			56,57,61,78	
0607	DISPLAY, LIGHTED INDICATOR	Test		0.3					
		Replace		0.5				78,86	
		Repair		0.3				78	
		Inspect	0.1						
0609	LIGHT ASSEMBLY, BACKUP	Replace		0.8				57,78	
		Repair		0.3				78	
		Inspect	0.1						
0609	LIGHT, BLACKOUT DRIVE	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	TAILLIGHT ASSEMBLY, COMPOSITE	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	LIGHT ASSEMBLY, FRONT TURN SIGNAL AND PARK	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	HEADLIGHT	Inspect	0.1						
		Adjust		0.4				78	
		Replace		1.0				57,59,78	
0610	AUDIBLE ALARM	Inspect	0.1						
0611	HORN, CAB	Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0612	BOX ASSEMBLY, BATTERY	Replace		0.4				57,78	A
		Inspect	0.1					57,78	
		Test		0.5				57	
		Service		0.3				57,59,78	
		Replace		1.0				63	
0613	CABLE ASSEMBLY, LH/RH CAB AND DOOR MARKER LIGHTS	Repair		0.2				78	
		Inspect	0.1					63	
		Replace		0.8				63	
0613	CABLE ASSEMBLY, LOWER, CAB MARKER LIGHTS, M1081	Repair		0.7				78	
		Inspect	0.1					63	
		Replace		0.6				78,86	
0613	CABLE ASSEMBLY, UPPER, CAB CLEARANCE AND MARKER LIGHTS, M1081	Repair		0.5				63	
		Inspect	0.1					78	
		Replace		1.0				63	
0613	CABLE ASSEMBLY, STE/ICE-R	Repair		0.5	0.8			63	
		Inspect	0.1					57,78	
		Replace		1.2				63	
0613	CABLE ASSEMBLY, CAB CLEARANCE AND MARKER LIGHTS	Repair		0.5	0.8			48,78,86	
		Inspect	0.1					63	
		Replace		0.5				78	
0613	CABLE ASSEMBLY, WARNING LIGHT	Repair		0.3	0.5			63	
		Inspect	0.1					78	
		Replace		0.5				63	
0613	CABLE ASSEMBLY, WINDSHIELD WASHER PUMP/EMI	Repair		0.3				63	
		Inspect	0.1					57,78	
		Replace		2.3				63	
0613	CABLE ASSEMBLY, ENGINE CONTROL	Repair		0.5	0.5			59,78	
		Inspect	0.1					63	
		Replace		0.8				63	
0613	CABLE ASSEMBLY, FRONT INTERVEHICULAR, 12 VDC	Repair		0.2	1.3			63	
		Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0613	CABLE ASSEMBLY, FRONT LIGHTS	Replace		2.0				57,59,78,86	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, REAR LIGHTS	Replace		2.8				57,59,78	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, PTO	Replace		1.6				57,59,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, REAR INTERVEHICULAR, 24 VDC	Replace		0.6				59,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, START AND CHARGING	Replace		2.0				57,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, WINCH CONTROL VALVE	Replace		1.8				57,59,78	
		Repair		0.5	0.8			63	
0705	WTEC II VEHICLE INTERFACE MODULE (VIM)	Replace		0.6				78	
		Repair		0.8				78	
0708	TORQUE CONVERTER	Adjust			0.9			18,59,60,78	
		Remove/Install			0.8			56,59,60,61,78	
		Repair			1.3			30,56,59,60,62,78	
0710	TRANSMISSION	Inspect		0.4				78	
		Service		1.5				57,59,78	
		Replace			7.0			56,59,60,61,78,79,84	
		Repair		0.4	2.7	1.9		3,18,19,24,25,27,41,56,57,59,60,61,78,79,84	
0710	MODULE, FRONT SUPPORT	Remove/Install				2.0		56,57,59,60,61,78	
		Repair				0.7		30,56,57,59,60,61,78	
0710	MODULE, PLANETARY GEAR (P1)	Remove/Install				2.0		59,60,71,78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0710	MODULE, PLANETARY (P2)	Repair				1.5		59,60,71,78	
		Remove/Install				2.0		3,56,59,60,61,78	
		Repair				1.9		3,19,56,59,60,61,71,78	
0710	PLANETARY CARRIER (P3)	Remove/Install				2.0		3,56,60,78	
		Repair				1.9		3,27,56,60,78	
0710	MODULE, MAIN SHAFT	Remove/Install				2.0		59,60,78	
0710	MODULE, CONVERTER HOUSING	Repair				0.4		59,60,78	
		Remove/Install				4.3		3,56,57,59,60,78	
0710		Repair				2.0		3,19,25,56,57,59,60,78	
		Remove/Install				2.0		56,57,59,60,78	
0713	CLUTCH ASSEMBLY, C3/C4/C5, TRANSMISSION	Remove/Install				2.0		56,57,59,60,78	
		Repair				1.0		41,56,57,59,60,78	
0713	MODULE, ROTATING CLUTCH	Remove/Install				2.0		3,56,59,60,78	
		Repair				2.4		3,19,24,56,59,60,78	
0714	VALVE ASSEMBLY, CONTROL MODULE	Remove/Install				2.0		56,59,60,61,78,79	
0714	BODY ASSEMBLY, MAIN VALVE	Repair		1.0		2.5		59,61,78,79	
		Service		1.5				57,59,78	
0714		Remove/Install				2.0		56,59,60,61,78,79	
		Repair		1.5		2.5		56,59,60,61,78,79	
0801	MODULE, TRANSFER CASE	Adjust				1.0			
		Remove/Install				2.0		21,56,57,59,60,61,71,74,78,79	
		Repair				1.1		23,27,33,50,56,57,60,78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0802	HOUSING ASSEMBLY, C6 AND C7 CLUTCH	Remove/Install					2.0	56,59,60,61,78	
Repair						0.8	19,23,26,27,28,29,56,59,60,61,62,71,78		
0802	CONTROL VALVE ASSEMBLY	Remove/Install					2.0	56,59,61,78,79	
Repair						1.0	56,59,61,78,79		
0804	PUMP ASSEMBLY, OIL	Replace					1.0	79	
Repair						0.8	79		
0900	PROPELLER SHAFT	Inspect		0.1					
Service			0.5					59	
Repair			0.6					57,59,78	
Replace			0.5					57,59,78	
1000	AXLE ASSEMBLY, FRONT	Inspect	0.1	0.3	0.7			78	
Adjust					1.0			57,79	
Service			0.5					59,78	
Replace					4.5			56,57,59,60,61,70,78	
Repair			2.3	2.2	6.0			56,57,59,60,61,78	
1002	CARRIER ASSEMBLY, DIFFERENTIAL	Inspect		0.1	0.1	0.1		78,79	
Service					0.3			78	
Replace					4.6			21,56,57,59,60,78,79	
Repair					2.7			56,57,59,60,78,79	
1004	STEERING KNUCKLE, AXLE	Inspect			0.2				
Adjust					2.5			79	
Service					0.3			79	
Replace					5.1			56,57,59,60,71,78	
1100	AXLE ASSEMBLY, REAR	Inspect	0.1	0.4	0.7				
Service			0.8					57,59,78	
Replace					4.5			34,56,57,59,60,78,84	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
1102	CARRIER ASSEMBLY, DIFFERENTIAL	Repair			0.9		6.0	21,56,57,59,60,78,84,85	
		Inspect		0.1	0.1		1.0	78,79	
		Service			0.3			78	
		Replace					4.6	21,56,57,59,60,78,79,85	
1202	BRAKE ASSEMBLY, FRONT AXLE	Repair					2.7	21,37,56,57,59,60,71,73,78	
		Inspect		0.1		1.0		59,78,79	
		Adjust		0.4				57,59,78	
1202	BRAKE ASSEMBLY, REAR AXLE	Repair		1.5	0.5			57,59,78,83	
		Inspect		0.1		1.0		59,78,79	
		Adjust		0.4				57,59,78	
1208	BRAKE AIR CHAMBER	Repair		1.5	0.5			57,59,78,83	
		Inspect		0.1					
1209	AIR COMPRESSOR	Replace		0.5				57,59,78	
		Adjust		0.6				59,78	
1311	WHEEL ASSEMBLY, PNEUMATIC TIRE	Replace				1.2		56,60,61,78,79	
		Inspect	0.1					57	B
1313	TIRE, PNEUMATIC	Replace	1.0	1.2				57,59	
		Repair		2.0				57,59	
1401	STEERING SYSTEM	Replace		2.0				57,59	
		Inspect		0.2					
1407	STEERING GEAR ASSEMBLY	Adjust				1.0		56,60,78	
		Repair		1.0		1.5		54,56,57,59,60,61,78,79	
1410	PUMP, POWER STEERING	Replace				4.0		56,60,78	
		Replace				1.5		47,56,59,60,78	
1411	HOSES, POWER STEERING	Replace		0.3				57,59,78,88	
1413	HYDRAULIC RESERVOIR,	Service	0.1	0.5				78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
1501	POWER STEERING	Replace		0.8				59,78,86	
	FRAME ASSEMBLY	Inspect	0.1	0.3					
		Repair		0.8	14.0			56,57,59,60,61,78,79	
1504	RETAINER, SPARE TIRE	Inspect	0.1	0.1					
		Replace		3.0				57,59,78	
		Repair		0.6				57,59,78	
1601	LEAF SPRING ASSEMBLIES	Inspect	0.1	0.2					
		Service		0.3				57	
		Replace			2.7			56,57,59,60,78,79	
1604	SHOCK ABSORBERS	Inspect	0.1	0.3					
		Replace		0.5				57,59,78	
1605	STABILIZER BAR, REAR	Inspect		0.2					
		Replace		2.0				57,59,68,78	
		Repair		1.5				57,78	
1801	CAB BODY, STANDARD	Inspect	0.1						
		Replace			60.0			56,57,60,61,78,79	
1801	CAB BODY, AIR DROP	Repair		0.6				57,59,78	
		Inspect	0.1						
1801	CAB BODY, AIR DROP	Replace			60.0			56,57,60,61,78,79	
		Repair		0.6				57,59,78	
1801	CAB DOORS, STANDARD	Inspect	0.1						
		Replace			1.0			55,59,78	
		Repair		2.7				49,57,78	
1801	CAB DOORS, AIR DROP	Inspect	0.1						
		Replace			1.0			55,59,78	
		Repair		2.7				49,57,78	
1801	SUPPORT ASSEMBLY, CAB FRONT	Inspect	0.1						
		Repair		1.1				57,59,78	
		Replace			3.0			8,13,57,59,60,78,79	
1801	SUPPORT ASSEMBLY, CAB REAR	Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
1802	WINDSHIELD	Replace		1.0				57,59,78	
		Repair		0.8				57,78	
1802		Replace			0.6			55,59,78	
1802	FENDER, VEHICULAR, FRONT	Inspect	0.1						
		Replace		2.0				57,59,78	
		Repair		0.5				57,78	
1803	ROOF, CAB, M1081	Replace		1.0				45,50,57,59,78	
		Replace		1.0				57,78	
1805		Replace		1.0				57,78	
1806	FLOOR COVERING, CAB SEATS	Replace							
1808	TOOL BOX ASSEMBLY	Inspect	0.1						
		Replace		0.5				47,57,59,78	
		Repair		0.5				57,59,78	
1808	STOWAGE BOX, CAB	Replace		0.8				57,78	
		Repair		0.5				57,78	
1810		Inspect	0.1						
	BODY, CARGO	Replace			4.0			56,57,59,60,78	
		Repair		0.5				57,59,78	
1812		Inspect	0.1	0.1					
	BODY ASSEMBLY, VAN	Repair		0.5				20,35,36,42,43,47,57,59,64,72,76,78	
		Repair		0.5				36,64,78	
1812		Replace		1.9				78	
	DOOR, ACCESS, LEFT	Inspect	0.1						
		Replace		2.3				78	
		Repair		0.1				57,59,78	
1812	DOOR, ACCESS, RIGHT	Inspect	0.1						
		Replace		1.4				78	
		Repair		0.4				57,59,78	
1812	WINDOW SASH ASSEMBLY	Inspect	0.1						
		Replace		0.2				78	
		Repair		0.4				57,59,78	
1812	BOX ASSEMBLY, RELAY	Inspect	0.1	0.1					
		Replace		0.6				78	
		Repair		0.1				78	
	FAN ASSEMBLY	Test	0.1	0.5				59,78	
1812		Inspect	0.1						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
2001	WINCH, 11K SELF-RECOVERY (SRW)	Replace		1.8				20,76,78	
		Repair		0.5				78	
		Inspect	0.1	4.0					
		Service		0.2				59	
2004	POWER TAKEOFF ASSEMBLY (PTO)	Replace			1.0			59,60,78	
		Repair			0.9			59,60,78	
		Inspect	0.1						
		Replace			1.0			56,57,59,60,78	
2202	MOTOR, WIPER, WINDSHIELD	Repair			0.8			56,57,59,60,78	
		Test		0.5					
2207	HEATER ASSEMBLY, PERSONNEL	Replace		1.0				78	
2210	DECALS	Replace		2.0				57,59,78	
2401	POWER UNIT, AIR/HYDRAULIC	Repair		1.0				57,59,78	
		Inspect	0.1	1.0				78	
2402	MANIFOLD, HYDRAULIC	Inspect	0.1						
		Test		0.2					
		Replace		1.5				51,57,59,78	
		Repair		1.0				51,57,59,78	
2402	LATCH, HYDRAULIC, CAB	Inspect	0.1						
		Adjust		0.5				57,59,78	
		Replace		0.5				57,59,78	
2404	SUSPENSION CYLINDER	Inspect							
2406	FILTER, HYDRAULIC	Replace							
		Service		0.3				59,78	
2408	RESERVOIR, HYDRAULIC	Replace		0.2				59,78	
		Replace		1.0				57,59,78	

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
3303	HEATER KIT, M1079	Repair		0.5				57,59,78	
		Inspect	0.1						
		Remove/Install		2.5				78	
3307	ALTERNATOR KIT, 200 AMP	Inspect	0.1	0.2					
		Test		0.5				59	
		Remove/Install		2.0				57,59,78	
		Replace		1.0				57,59,78	
		Repair			0.5			56,57,60,62,78	
3307	ALTERNATOR, 200 AMP	Inspect		0.2					
		Test		0.5	1.5			59,63,78	
		Replace		1.0				57,59,78	
		Repair		0.2	0.5			56,57,60,61,63,78	
3307	CRANE (LMHC), MATERIAL HANDLING, LIGHT	Inspect	0.1	0.1					
		Repair		0.5				59,76,78	
		Replace		0.5					
3307	WEIGHT BLOCK AND WIRE ROPE, LMHC	Test		0.5					
		Inspect	0.1						
		Replace		0.1				59,78	
3307	WINCH, LMHC	Repair		0.5				59,78	
		Test			0.5				
		Inspect	0.1						
3307	MAST/SWING ASSEMBLY, LMHC	Replace			0.5			59,78	
		Repair			1.0			59,78	
		Test		0.5					
3307	CONTROL BOX, LMHC	Inspect	0.1						
		Replace		0.1					
		Repair		0.5				76,78	
3307	TROOPSEAT KIT	Test	0.1	0.5					
		Remove/Install	1.0						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1) Group Number	(2) Component/Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			FIELD		SUSTAINMENT				
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
3307	COVER KIT, CARGO SOFT TOP	Inspect	0.1						
		Replace		1.0					
		Repair		0.5				78	
3307	AIR CONDITIONER KIT, M1079	Remove/Install	1.5						
		Inspect	0.1						
		Replace		2.0					
3307	WARNING LIGHT ASSEMBLY, AMBER	Repair		0.5					
		Inspect	0.1						
		Remove/Install		1.5				59,78	
3401	MACHINE GUN RING KIT	Inspect	0.1						
		Remove/Install			4.0			56,57,60,78,79,84	
		Repair		1.1				10,57,78	
3402	MOUNT, SMALL ARMS	Inspect	0.1						
		Replace		0.3				78	
3909	CABLE ASSEMBLY, WARNING LIGHT	Inspect	0.1						
		Replace		0.5				78	
4316	AIR HOSE, CTIS	Inspect	0.1						
		Replace		0.4				59,78	
4317	VALVE, INVERSION	Replace		0.5				59,78	
4321	AIR DRYER	Inspect	0.1	0.1					
		Replace		1.0				57,59,78	
		Repair		0.6				57,59,78	
4702	GAUGE, AIR FILTER RESTRICTION	Replace		0.5				78	

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	O,F	ADAPTER, RADIATOR	4910-01-170-4928	J29003-A
2	O	ADAPTER, SOCKET WRENCH	5120-00-240-8702	11655788-2
2.1	O	BASE, MAGNETIC		P5646
3	H	BUSHING DRIVER SET	5120-01-391-3541	J35922
4	O	CRIMPING TOOL, TERMINAL, HAND	5120-00-165-3912	M22520/1-01
5	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-078-3809	10935497
6	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-293-1010	5120-293-1282
7	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-181-6754	GGG-C-1507
8	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-074-7557	FCOM19
9	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-236-9996	FCOM15
10	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1091	FCO32
11	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1119	SCO34
12	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1122	SCO40
12.1	O	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1126	SCO48
13	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-348-9473	AN8508-19A
13.1	O	DISPENSER, SEALANT	5120-00-061-1283	45RCT
13.2	F	DRILL SET, STOPCOLLAR	5133-01-383-7665	1955
14	H	DRIVER KIT, BEARING	4910-01-032-3128	8S0602
14.1	O	FRAME, HAND HACKSAW	5110-00-289-9657	163-20
15		DELETED		
16	O,F	GAGE, BELT TENSION	6635-01-143-2237	GA-424
17	O,F	GAGE, PRESSURE, 0-150 psi	6685-00-474-5721	111T1D05A01
18	F,H	GAGE, PROFILE	5220-01-388-1460	J-38548-1
19	H	HANDLE, DRIVE	5120-00-377-2259	J8092
20	O	HEATER, GUN TYPE, ELECTRIC	4940-00-561-1002	500A
21	F,H	HOLDING BAR, PINION	5120-01-166-0573	J3453
21.1	O	INDICATOR, DIAL		P36491
22	O	INSERTER AND REMOVER, ELECTRICAL CONTACT	5120-00-915-4588	MS3447-16
23	H	INSERTER AND REMOVER, SPRING	5120-01-388-3660	J38573
24	H	INSERTER AND REMOVER, SPRING	5120-01-388-4436	J35923
25	H	INSERTER, BEARING AND BUSHING	5120-01-388-7841	J-38565

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
26	H	INSERTER, BEARING AND BUSHING	5120-01-389-0658	J35921-1
27	H	INSERTER, BEARING AND BUSHING	5120-01-390-1104	J 38569
28	H	INSERTER, BEARING AND BUSHING	5120-01-390-1105	J 38568-3
29	H	INSERTER, BEARING AND BUSHING	5120-01-391-5133	J 38579
30	F,H	INSERTER, BEARING AND BUSHING	5120-01-414-7398	J38566
31	F	INSERTER, SEAL	5120-01-362-2026	1U7430
32	F	INSERTER, SEAL	5120-01-362-2027	1U7598
33	F	INSTALLER, SEAL	N/A	J38574
33.1	F	JACK, DOLLY TYPE HYDRAULIC	4910-01-396-5044	TTJ3
34	F	JACK, LEVELING SUPPORT, VEHICLE	2590-00-231-7418	10876244
35.1	O	KEY, SOCKET HEAD SCREW	5120-01-355-1670	AWML2.5
35.2	F	LIFTING SADDLE ASSEMBLY		TTJ-ZIFA
36	O	LINK, CHAIN, END	4010-00-932-5013	NAS1049-16
36.1	F	NOSE ASSEMBLY		99-3307
36.2	O	PLIERS, HOG RING STAPLE	5120-01-413-8837	0012
37	H	PULLER KIT, UNIVERSAL	5180-00-089-3660	A57QB
38	F	PULLER KIT, UNIVERSAL	5180-01-124-1903	1P3075
39	O	REMOVER, ELECTRICAL CONTACT	5120-00-148-9844	MS3448-001B
40	F	RIVETER, BLIND, HAND	5120-01-289-4310	HP-2
40.1	F	RIVETER, BLIND, PNEUMATIC	5130-01-232-4042	245
41	H	RIVETER, YOKE, HAND	5120-01-415-3558	J-39354
42	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-00-180-0881	5120-00-180-0881
43	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-053-4158	FAM5A
44	O,F,H	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-055-1308	ANSIB18.3.2M
45	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-079-8032	SAM8A
46	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-160-8862	S 6 HBS
47	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3462	SA10A
47.1	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3483	FA5LE
48	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3497	TMP12A
49	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3519	F23D
50	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3526	FP24
51	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3527	FP32A
52	F,H	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3536	FTX40A
53	O	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3574	GFA8A

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
53.1	F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-430-5715	SZ-21
54	O	SEPARATOR, BALL JOINT	5120-01-255-8238	2287
55	F	SETTING TOOL, WINDSHIELD	5120-01-316-4995	CRL216
56	O,F	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-348-7696	SC4910-95CLA02
57	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0650	SC4910-95CLA72
58	O	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0653	SC4910-95CLA73
59	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0654	SC4910-95CLA74
60	F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0705	SC4910-95CLA31
61	F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0706	SC4910-95CLA62
62	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0707	SC4910-95CLA63
63	O,F	SHOP EQUIPMENT, FUEL AND ELECTRICAL	4910-00-754-0714	SC4910-95CLA01
64	O	SLING, EYE	3940-01-334-0749	EE1-202
65	F	SLING, MULTIPLE LEG	3940-00-777-5744	A170
66	H	SOCKET SET, SOCKET WRENCH	5120-01-195-0640	208FA
67	F,H	SOCKET, SOCKET WRENCH	5120-01-068-5643	5555M
68	O	SOCKET, SOCKET WRENCH	5120-01-161-5907	GLDH382
69	F	SOCKET, SOCKET WRENCH	5120-01-335-0784	TW321
70	O	SOCKET, SOCKET WRENCH	5120-01-144-5324	ANS 1913A
71	F	SOLDERING AND BRAZING OUTFIT, RESISTANCE HEATING	3439-00-460-7198	SC4940-95-CLB20
72	O	SOLDERING IRON, ELECTRIC	3439-01-036-3308	3112-S3-40W
73	H	STAND, DIFFERENTIAL CARRIER REPAIR	4910-01-085-7729	J3409-D
74	H	STAND, MAINTENANCE, AUTOMOTIVE ENGINE	4910-00-808-3372	J29109
75	F	TOOL, DISTORTER	5120-01-119-1748	5P-7312
76	O,F	TOOL KIT, AUTO FUEL AND ELECTRICAL SYSTEM REPAIR	5180-00-754-0655	SC4910-95CLA50
77	F	TOOL KIT, BODY AND FENDER	5180-00-754-0643	SC5180-90-N34
78	O,F,H	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033	SC5180-90-CL-N26
79	F,H	TOOL KIT, GENERAL MECHANIC'S	5180-00-699-5273	SC5180-90-CL-N05
80	F	TOOL KIT, INTERNAL COMBUSTION ENGINE	5180-01-356-8155	1U6680
81	H	TOOL KIT, DIESEL INJECTOR	5180-01-466-3966	143-2099
82	F	TOOL OUTFIT, HYDRAULIC	4940-01-036-5784	SC4940-95-CL-B07

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
83	O	TOOL, SPRING REMOVAL	5120-01-360-1918	TV940010
84	F	WRENCH SET, CROWFOOT, RATCHETING	5120-00-293-0013	GGG-W-646
85	F	WRENCH SET, SOCKET	5120-00-148-3706	ANSI-B107.5
86	O	WRENCH, TORQUE, 0-75 LB-IN.	5120-01-112-9532	TQSC6A

Section IV. REMARKS FOR THE LMTV VEHICLE

Remarks Code	Remarks
A	Battery service will be in accordance with TM 9-6140-200-14.
B	Repair of tires will be in accordance with TM 9-2610-200-14.

APPENDIX C TOOLS IDENTIFICATION LIST

Section I. INTRODUCTION

C-1. INTRODUCTION

This appendix lists common tools, supplements, and special tools/fixtures that are suggested for maintenance tasks performed at the Unit Maintenance level.

C-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item, e.g., "Bar, Pry (Item 1, Appendix C)."

b. Column (2) - Item Name. This column contains the nomenclature for the item.

c. Column (3) - National Stock Number. This is the national stock number assigned to the item which you can use to requisition it.

d. Column (4) - Part Number. This provides the Government, manufacturer, or vendor part number for the item.

e. Column (5) - Reference. This column contains the shop catalog (SC), technical manual, or other publication which provides an illustration and description of the item, or lists whether the item is fabricated.

APPENDIX C Section II. TOOLS IDENTIFICATION LIST

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
1	ADAPTER, SOCKET WRENCH	5120-00-227-8088	A-A-2172	SC 4910-95-CL-A74
2	ADJUSTING TOOL, BRAKE SHOE	5120-00-154-3029	J34061	SC 4910-95-CL-A74
3	APRON, RUBBER	8145-00-082-6108	MIL-A-41829	SC 4910-95-CL-A74
4	CAPS, VISE JAW	5120-00-221-1506	GGG-C-137	SC 4910-95-CL-A74
5	DISPENSING PUMP, HAND DRIVEN	4930-00-263-9886	43D15069	SC 4910-95-CL-A74
6	DRILL SET, TWIST	5130-00-293-0983	58	SC 4910-95-CL-A74
7	DRILL, PORTABLE, ELECTRIC	5130-00-293-1849	W-D-661	SC 4910-95-CL-A74
8	DRILL, TWIST	5133-01-120-3519		SC 4910-95-CL-A74

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
9	FISHING TOOL, PNEUMATIC TIRE VALVE	5120-00-516-4220	991	SC 4910-95-CL-A74
10	GAGE, DEPTH, MICROMETER	5210-00-619-4045	445BZ-6RL	CTA 50-909
11	GAGE, TIRE PRESSURE	4910-01-117-2994	955	SC 4910-95-CL-A72
12	GAGE, WHEEL ALIGNMENT	5210-01-223-3701	WA361	SC 4910-95-CL-A72
13	GLOVES, RUBBER	8415-00-641-4601	ZZ-G-381	SC 4910-95-CL-A74
14	GLOVES, WELDER'S	8415-00-268-7859	A-A-50022	SC 4910-95-CL-A72
15	GOGGLES, INDUSTRIAL	4240-00-052-3776	A-A-1110	SC 4910-95-CL-A74
16	GUN, LUBRICATING	4930-00-253-2478	1142	SC 4910-95-CL-A74
17	HAMMER, HAND	5120-00-224-4130	A-A-1292	SC 4910-95-CL-A74
18	HAMMER, HAND	5120-01-065-9037	57-533	SC 4910-95-CL-A72
19	HOSE ASSEMBLY, NONMETALLIC	4720-00-356-8557	ZZ-H-461	SC 4910-95-CL-A74
20	IRON, TIRE	5120-00-765-8536	T48A	SC 4910-95-CL-A74
21	JACK, HYDRAULIC, HAND	5120-00-224-7330	D120	SC 4910-95-CL-A74
22	MULTIMETER, DIGITAL	6625-01-139-2512	T00377	SC 4910-95-CL-A74
23	MULTIPLIER, TORQUE WRENCH	5120-00-574-9318	292	SC 4910-95-CL-A72
24	PAN, DRAIN	4910-00-387-9592	450	SC 4910-95-CL-A72
25	PAN, WASH	4940-00-617-9859	5582281	SC 4910-95-CL-A72
26	PRESSURE TESTER, RADIATOR	4910-01-170-4929	J24460-01	SC 4910-95-CL-A74
27	PULLER KIT, MECHANICAL	5120-00-313-9496	1178	SC 4910-95-CL-A74
28	PULLER, BATTERY TERMINAL	5120-00-944-4268	21	SC 4910-95-CL-A74
29	RESPIRATOR, AIR FILTER	4240-00-022-2524	GGG-M-125/6	SC 4910-95-CL-A72
30	SCALE, WEIGHING	6670-00-254-4634	AAA-5-133	SC 4910-95-CL-A72
31	SLING, CARGO	1670-00-823-5043	63J4261-13	CTA 50-970
32	SLING, ENDLESS	3940-00-675-5003	PD101-96	CTA 50-970
33	SOCKET SET, IMPACT	5120-01-117-0466	4151MMY	SC 4910-95-CL-A74
34	SOCKET SET, SOCKET WRENCH	5120-01-073-2821	217FMY	SC 4910-95-CL-A72

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
35	SOCKET SET, SOCKET WRENCH	5120-01-117-3876	221FSMY	SC 4910-95-CL-A02
36	SOCKET, SOCKET WRENCH	5120-00-181-6813	5530	SC 4910-95-CL-A74
37	SOCKET, SOCKET WRENCH	5120-00-232-5681	1242	SC 4910-95-CL-A74
38	SOCKET, SOCKET WRENCH	5120-01-112-0581	SIMM190	SC 4910-95-CL-A74
39	STE/ICE-R	4910-01-222-6589	12259266	SC 4910-95-CL-A74
40	TAPE, MEASURING	5210-00-081-4719	GA508A	CTA 50-970
40.1	TEST KIT, RADIATOR	4910-00-728-8227		SC 4910-95-CL-A74
40.2	TAP AND DIE SET	5136-01-119-0005	TDM99117	SC 4910-95-CL-A72
40.3	TAP, THREAD, CUTTING	5136-00-729-5692	B94.9 1/2 13 UNCHSGH3	SC 4910-95-CL-A72
41	TESTER, ANTIFREEZE AND BATTERY	6630-00-105-1418	10425	SC 4910-95-CL-A74
42	TOOL KIT, AUTO FUEL	5780-00-754-0655		SC 5180-95-CL-A50
43	TOOL KIT, BLIND RIVET	5180-01-201-4978	D-100-MIL-1	SC 4910-95-CL-A72
44	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033		SC 5180-90-N26
44.1	TOOL KIT, ELECTRICAL CONTACT REPAIR	5780-00-876-9336	7550526	SC 4940-95-B09
45	TRESTLE, MOTOR VEHICLE MAINTENANCE	4910-00-251-8013	306	SC 4910-95-CL-A72
46	WISE, MACHINIST	5120-00-293-1439	504M2	SC 4910-95-CL-A74
47	WRENCH SET, SOCKET	5120-00-081-2305	GGG-W-641	SC 4910-95-CL-A74
48	WRENCH SET, SOCKET	5120-00-204-1999	GGG-W-641	SC 4910-95-CL-A74
49	WRENCH SET, SOCKET	5120-00-322-6231	51200017510	SC 4910-95-CL-A74
50	WRENCH, ADJUSTABLE	5120-00-264-3793	2117080	SC 4910-95-CL-A72
51	WRENCH, ADJUSTABLE, AUTOMOTIVE	5120-00-449-8083	1B7536	SC 4910-95-CL-A74
51.1	WRENCH, BOX AND OPEN END	5120-00-228-9518	1174	SC 4910-95-CL-A74
52	WRENCH, BOX AND OPEN END	5120-00-277-8833	1244	SC 4910-95-CL-A74
53	WRENCH, BOX AND OPEN END	5120-00-277-8834	GGG-W-636	SC 4910-95-CL-A74
54	WRENCH, PIPE	5120-00-277-1461		SC 4910-95-CL-A74

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) ITEM NUMBER	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) REFERENCE
55	WRENCH, PIPE	5120-00-277-1485		SC 4910-95-CL-A74
56	WRENCH, STRAP, ADJUSTABLE	5120-00-020-2947	A91C	SC 4910-95-CL-A74
57	WRENCH, TORQUE, 0-175 lb- ft	5120-00-640-6364	1753LDF	SC 4910-95-CL-A72
58	WRENCH, TORQUE, 0-200 lb- in.	5120-00-853-4538	F2001	SC 4910-95-CL-A72
58.1	WRENCH, TORQUE, 0-300 lb- in.	5120-00-776-1841	2163993	SC 4910-95-CL-A74
59	WRENCH, TORQUE, 0-600 lb- ft	5120-00-221-7983	SW130-301	SC 4910-95-CL-A72

APPENDIX D EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists expendable and durable items that you will need to operate and maintain the LMTV vehicle. This listing is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except medical, class V repair parts, and heraldic items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

D-2. EXPLANATION OF COLUMNS

- a. **Column (1) - Item Number.** This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item, e.g., "Oil, Lubricating (Item 25, Appendix D).
- b. **Column (2) - Level.** This column identifies the lowest level of maintenance that requires the item.
- c. **Column (3) - National Stock Number.** This is the national stock number assigned to the item which you can use to requisition it.
- d. **Column (4) - Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number.** This provides the other information you need to identify the item.
- e. **Column (5) - Unit of Measure.** This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	O	4730-00-248-9340	Adapter, Pipe to Tube (81343) 4-4 010103B	ea
1.1	O	4730-01-453-9651	Adapter, Straight, Pipe to Boss (19207) 12421890-001	ea
1.2	O	4730-01-457-4025	Adapter, Straight, Pipe to Tube (96906) MS51503B4-4	ea
1.3	O	4730-00-760-3525	Adapter, Straight, Tube to Boss (81361) C116-3-71	ea
2	O	8040-00-273-8717	Adhesive (81348) MMM-A-121	pt
3	O	8040-00-152-0063	Adhesive (81348) MMM-A-1617 TY 3	bt
4	O	8040-01-250-3969	Adhesive (05972) 242	ea
5	O	8040-01-117-7872	Adhesive (04963) 08031	tu
6	O	8040-00-117-8510	Adhesive (71984) 3145 RTV Clear	tu
7	O	8040-00-776-9602	Adhesive (73168) 80055-31	kt
8	O	8040-00-118-2695	Adhesive (72799) RTV162	kt

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
9	O	8040-01-446-7842	Adhesive (01139) RTV123	ca
10	O	8040-01-331-7473	Adhesive (81349) (MIL-A-46106 GP3TY1)	tu
11	O	8040-01-331-7470	Adhesive (81349) (MIL-A-46106 GP1TY1)	tu
11.1	O	8040-00-728-3088	Adhesive (78500) 1199-T-3842 6 oz	kt
12	C	6850-00-174-1806	Antifreeze, Arctic Type (81349) (MIL-A-11755) 55 gl drum	dr
13	C	6850-01-441-3218 6850-01-441-3221 6850-01-441-3257	Antifreeze, Multi-Engine Type (58536) (A-A-52624A) Type I (Green) - 1 gal Type I (Green) - 5 gal Type II (Purple) - 5 gal	dr gal co co
14	O	8030-00-597-5367	Antiseize Compound (81349) (MIL-A-907)	lb
14.1	O	5110-00-277-4588	Blade, Hand Hacksaw (54940) 31-51024	ea
14.2	O	5340-01-454-4336	Bracket, Angle (0FW39) 12421859-001	ea
15	O	5340-00-450-5718	Cap and Plug Set 10935405	ea
15.1	O	5340-01-423-0972	Clamp, Loop (18076) S630H-20	ea
16	O	6850-00-926-2275	Cleaning Compound, Windshield (81349) O-C-1901 16 oz bottle	bt
17	O	7920-00-044-9281	Cloth, Cleaning (81349) (MIL-C-85043)	bx
18	O	8030-00-062-6950 8030-01-149-1731 8030-00-837-6557 8030-00-903-0931	Corrosion Preventive Compound (81349) (MIL-C-16173) Grade 1 - 1 qt can Grade 2 - 1 qt can Grade 3 - 1 pt can Grade 4 - 1 pt can	qt qt pt pt
19	O	8030-00-033-4291	Corrosion Preventive Compound (MIL-C-82594) 8 oz can	bt
19.1	O	2540-01-460-8048	Cover, Seat, Vehicular (27797) WM1059	ea
19.2	O	2540-01-463-8394	Cover, Seat, Vehicular (0FW39) WM1058	ea
20	C	9150-00-664-0047	Damping Fluid (81348) VV-D-1078 1 lb can	lb
21	O	7520-01-209-1152	Dispenser, Pressure Sensitive Adhesive Tape (75037) STD-0-9	ea
21.1	O	4730-01-454-1233	Elbow, Pipe to Boss (19207) 12421891-001	ea
21.2	O	4730-00-863-9098	Elbow, Pipe to Tube (30780) 4VBTXB	ea
22	O	5330-01-325-6993	Gasket Forming Compound (05972) 515	ea
22.1	O		Gasket Maker, RTV Silicone (05972) 5699	ea

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
23	C		Grease, Automotive and Artillery (GAA) (81349) (MIL-G-10924)	
		9150-01-197-7688	2-1/4 oz tube	tu
		9150-01-197-7690	1.75 lb can	cn
		9150-01-197-7689	6.5 lb can	cn
		9150-01-197-7692	35 lb can	cn
24	O	9150-00-530-6814	Grease, Wire Rope-Exposed Gear (81349) (MIL-G-18458)	cn
			35 lb can	
25	O	9150-00-935-4018	Grease, Molybdenum Disulfide (81349) (MIL-G-21164)	ca
			14 oz cartridge	
25.1	O	4720-00-988-3842	Hose Assembly, Nonmetallic (50599) R25679-1	ea
25.2	O	4720-01-384-0995	Hose Assembly, Nonmetallic (19207) 12421858-006	ea
25.3	O	4720-01-453-9530	Hose Assembly, Nonmetallic (0FW39) 12421857	ea
25.4	O	4720-01-469-9208	Hose Assembly, Nonmetallic (19207) 12418004-002	ea
26	C		Hydraulic Fluid A (MIL-H-5606)	
		9150-00-252-6383	1 qt can	cn
		9150-00-223-4134	1 gl can	cn
27	O	7510-00-145-0559	Ink, Marking Stencil (MIL-I-43553)	oz
28	O	7510-01-386-0787	Inking Pad, Rubber Stamp	ea
29	O	9150-01-360-1905	Insulating Compound, Electrical	tu
30	O	5970-00-838-5951	Insulation Sleeving, Electrical (06090) CRN3-16BLACK	ft
30.1	O	5970-01-378-3018	Insulation Sleeving, Electrical (06090) ATUM-1/4-0-4FT	lg
31	O	5970-01-422-3579	Insulation Sleeving, Electrical (06090) ATUM 1/2 4 ft length	lg
32	O	1650-00-166-4834	Lockwire (90166) 68A32	ea
33	O	9150-01-360-1905	Lubricant, Solid Film (MIL-L-46147) 16 oz can	cn
34	O	4730-00-019-0608	Nipple, Pipe	ea
35	O	4730-00-825-7304	Nipple, Tube MS51501B4	ea
36	O	5310-00-059-4265	Nut, Plain, Hex	ea

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
36.1	C		Oil, Commercial Burner Fuel, Grade FO-1 (ASTM D396)	
36.2	C		Oil, Commercial Burner Fuel, Grade FO-2 (ASTM D396)	
37	C	9140-00-286-5282	Oil, Fuel Diesel, DF-A, Arctic (VV-F-800) (81348) 5 gl can	cn
		9140-00-286-5283	Bulk	gl
		9140-00-286-5284	55 gl drum, 16 gauge	dr
		9140-00-286-5285	55 gl drum, 18 gauge	dr
38	C	9140-00-286-5286	Oil, Fuel, Diesel, DF-1, Winter (VV-F-800) (81348) Bulk	gl
		9140-00-286-5287	5 gl can	cn
		9140-00-286-5288	55 gl drum, 16 gauge	dr
		9140-00-286-5289	55 gl drum, 18 gauge	dr
39	C	9140-00-286-5294	Oil, Fuel, Diesel, DF-2, Regular (VV-F-800) (81348) Bulk	gl
		9140-00-286-5295	Can	cn
		9140-00-286-5296	55 gl drum, 16 gauge	dr
		9140-00-286-5297	55 gl drum, 18 gauge	dr
40	C	9150-00-402-2372	Oil, Lubricating, Arctic (MIL-L-46167) 5 gl can	cn
		9150-00-491-7197	55 gl drum	dr
41	C	9150-00-035-5390	Oil, Lubricating, Gear, GO 75W (MIL-L-2105C) 1 qt can	cn
		9150-00-035-5391	5 gl can	cn
42	C	9150-01-035-5392	Oil, Lubricating, Gear, 80W-90 (MIL-L-2105C) 1 qt can	qt
		9150-01-035-5393	5 gl can	cn
		9150-01-035-5394	55 gl drum, 16 gauge	dr
43	C	9150-00-183-7807	Oil, Lubricating, OE/HDO 10 (MIL-L-2104) Bulk	gl
		9150-00-186-6668	5 gl can	cn
		9150-00-191-2772	55 gl drum	dr
44	C	9150-00-189-6727	Oil, Lubricating, OE/HDO 10W (MIL-L-2104) 1 qt can	cn
45	C	9150-01-152-4117	Oil, Lubricating, OE/HDO 15W-40 (MIL-L-2104) 1 qt can	cn
		9150-01-152-4118	5 gl can	cn
		9150-01-152-4119	55 gl drum	dr

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
46	C	9150-00-183-7808 9150-00-186-6681 9150-00-188-9858 9150-00-189-6729	Oil, Lubricating, OE/HDO 30 (SAE 30) (MIL-L-2104) Bulk 1 qt can 5 gl can 55 gl drum, 18 gauge	gl cn cn dr
47	C	9150-00-405-2987 9150-00-189-6730 9150-00-188-9862	Oil, Lubricating, OE/HDO 40 (MIL-L-2104) Bulk 1 qt can 5 gl can	gl cn cn
48	O	5350-00-067-7639	Paper, Abrasive (28124) 02347 pg contains 100 sheets	pg
49	O	8010-01-146-2650	Polyurethane Coating (MIL-C-46168)	kt
50	O	8030-00-181-8372	Primer, Sealing Compound (05972) 747-56	cn
51	C	7920-00-205-1711	Rag, Wiping A-A-531	be
52		DELETED		
53	O	4020-00-855-2767	Rope, Fibrous (MIL-R-17343) 75 ft	cl
54	O	7520-00-634-2442	Rubber Stamp Set, Fixed Type	ea
55	O	5330-01-337-1108	Rubber Strip (12624) V4062	ft
56	O	5330-01-181-6482	Rubber Strip (19207) 12328583-3	ft
56.1	O	5305-00-021-3740	Screw, Cap, Hex Hd (97942) 645A560H43	ea
56.2	O	5305-01-299-4602	Screw, Cap, Hex Hd (64678) 000933 006058	ea
56.3	O	5305-01-454-5938	Screw, Cap, Hex Hd (19207) 12419954-093	ea
57	O	5305-01-296-0019	Screw, Cap, Socket Head (06888) SHCM75275 50 ct box	bx
58	O	1015-01-255-4144	Sealant, Pipe, Teflon (19207) 12297953 50 ml tube	tu
59	O	8030-00-081-2327	Sealing Compound (05972) 079-21	bx
60	O	8030-00-111-2762	Sealing Compound (05972) 290-31	bt
61	O	8030-00-133-3164	Sealing Compound (05972) 571-31	bt
62	O	8030-00-148-9833	Sealing Compound (05972) 271-21	bx
63	O	8030-00-204-9149	Sealing Compound (05972) 592-41	tu
64	O	8030-00-656-1426	Sealing Compound (81349) (MIL-S-45180)	pt
65	O	8030-01-025-1692	Sealing Compound (05972) 242-41 (MIL-S-46163)	bt
66	O	8030-01-088-8140	Sealing Compound (52571) 9001512-0011	bt

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
67	O	8030-00-753-5006 8030-00-753-4599 8030-00-723-2746 8030-00-685-0915	Sealing Compound (81349) (MIL-S-8802TY2CLB-2) 2 oz cartridge 6 oz can 12 oz can 24 oz can	ca kt kt kt
68	O	8030-01-155-3238	Sealing Compound (11083) 6V6640	ml
68.1	O	8030-01-371-8405	Sealing Compound (83574) PR-1422 B-1/2 6 oz	ca
68.2	O	8030-01-255-4144	Sealant (19207) 12297953	tb
68.3	O	8030-00-956-2397	Sealing Compound 104	tb
69	C	7930-00-634-3935	Soap, Laundry (81348) P-S-1792	lb
70	O	3439-00-006-7764	Solder, Tin Alloy (81348) SN63WRAP3	sl
71	C	6850-00-281-1985 6850-00-664-5685	Solvent, Dry Cleaning SD (P-D-680) 1 gl can 1 qt can	cn cn
71.1	O		Strap, Tiedown, Electrical Components (06383) PLP2S	ea
72	O		Tape, Adhesive (0SHR6) 70P00002	ea
72.1	O	9320-01-244-0046	Tape, Adhesive, Rubber (18876) MIS-41157-08 180 ft	ro
73	O	8030-00-889-3534	Tape, Antiseizing (81349) (MIL-T-27730)	ea
74	O	5640-00-103-2254	Tape, Duct (39428) 1791K70	ea
75	O	5970-00-644-3167	Tape, Insulation, Electrical (80063) TL83	ro
75.1	O	4730-00-138-8050	Tee, Pipe (81343) 8-8-8 140424C	ea
76	O	5975-01-379-4997	Ties, Cable, Plastic (06383) PLT 35-C-O	hd
	C		Turbine Fuel, Aviation, Kerosene Type (MIL-T-83133), Grade JP-8	
	C	9140-00-255-7764 9140-00-273-2378 9140-00-273-2377	Turbine Fuel, (MIL-F-16884), (NATO Code No. F75 or F-72) 5 gl can 55 gl drum 1 gl can	cn dr cn
	C	9130-00-273-2380	Turbine Fuel, (MIL-F-5624), Grade JP-4 (NATO Code No. F40) Drum, 16 gage	dr
	C	9130-01-305-5596 9130-01-250-6353	Turbine Fuel, (MIL-T-5624), Grade JP-5 (NATO Code No. F-44) Bulk Drum, 16 gage	gl dr
77	O	6145-01-148-2263	Wire, Electrical (80009) 175-0825-00 50 ft	ft

APPENDIX E

ILLUSTRATED LIST OF MANUFACTURED ITEMS

Section I. INTRODUCTION

E-1. INTRODUCTION

This appendix includes complete instructions for manufacturing or fabricating authorized items locally. All bulk materials needed to manufacture an item are listed by part number or specification number. Figures are provided as needed. See standards and specifications DoD-Std-00100D(AR) and ANSI Y14.5M1982 for required details.

Section II. MANUFACTURED ITEMS INDEX

ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
Brake Adjusting Tool Support		E-2
Brake Plunger Seal Driver		E-3
Cab Support Tool		E-4
Headlight Adjustment Screen		E-5
M1079 Blackout Shield Seals		E-6
M1079 Door Gaskets		E-7
M1079 Window Sash Glazing Seals		E-8
Relay Test Wire		E-9
Wheel Bearing Shim Tool Rest		E-10
12414690-001	Pneumatic Tube	E-11
12414690-002	Pneumatic Tube	E-11
12414690-004	Pneumatic Tube	E-11
12414690-005	Pneumatic Tube	E-11
12414690-010	Pneumatic Tube	E-11
12414690-101	Pneumatic Tube	E-11
12414690-102	Pneumatic Tube	E-11
12414690-103	Pneumatic Tube	E-11
12414690-104	Pneumatic Tube	E-11
12414690-105	Pneumatic Tube	E-11
12414690-106	Pneumatic Tube	E-11
12414690-107	Pneumatic Tube	E-11
12414690-108	Pneumatic Tube	E-11
12414690-109	Pneumatic Tube	E-11
12414690-112	Pneumatic Tube	E-11
12414690-113	Pneumatic Tube	E-11
12414690-115	Pneumatic Tube	E-11
12414690-117	Pneumatic Tube	E-11
12414690-118	Pneumatic Tube	E-11
12414690-119	Pneumatic Tube	E-11
12414690-120	Pneumatic Tube	E-11
12414690-121	Pneumatic Tube	E-11
12414690-122	Pneumatic Tube	E-11
12414690-123	Pneumatic Tube	E-11
12414690-124	Pneumatic Tube	E-11
12414690-125	Pneumatic Tube	E-11
12414690-126	Pneumatic Tube	E-11
12414690-127	Pneumatic Tube	E-11
12414690-201	Pneumatic Tube	E-11
12414690-202	Pneumatic Tube	E-11

Section II. MANUFACTURED ITEMS INDEX (CONT)

ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
12414690-203	Pneumatic Tube	E-11
12414690-205	Pneumatic Tube	E-11
12414690-206	Pneumatic Tube	E-11
12414690-207	Pneumatic Tube	E-11
12414690-208	Pneumatic Tube	E-11
12414690-209	Pneumatic Tube	E-11
12414690-210	Pneumatic Tube	E-11
12414690-211	Pneumatic Tube	E-11
12414690-212	Pneumatic Tube	E-11
12414690-213	Pneumatic Tube	E-11
12414690-214	Pneumatic Tube	E-11
12414690-215	Pneumatic Tube	E-11
12414690-216	Pneumatic Tube	E-11
12414690-217	Pneumatic Tube	E-11
12414690-218	Pneumatic Tube	E-11
12414690-219	Pneumatic Tube	E-11
12414690-220	Pneumatic Tube	E-11
12414690-221	Pneumatic Tube	E-11
12414690-222	Pneumatic Tube	E-11
12414690-223	Pneumatic Tube	E-11
12414690-224	Pneumatic Tube	E-11
12414690-225	Pneumatic Tube	E-11
12414690-226	Pneumatic Tube	E-11
12414690-227	Pneumatic Tube	E-11
12414690-228	Pneumatic Tube	E-11
12414690-229	Pneumatic Tube	E-11
12414690-230	Pneumatic Tube	E-11
12414690-231	Pneumatic Tube	E-11
12414690-301	Pneumatic Tube	E-11
12414690-302	Pneumatic Tube	E-11
12414690-303	Pneumatic Tube	E-11
12416381P1	Non-Metallic Electrical Cable Conduit	E-12
12416381P10	Non-Metallic Electrical Cable Conduit	E-12
12416381P11	Non-Metallic Electrical Cable Conduit	E-12
12416381P12	Non-Metallic Electrical Cable Conduit	E-12
12416381P13	Non-Metallic Electrical Cable Conduit	E-12
12416381P14	Non-Metallic Electrical Cable Conduit	E-12
12416381P15	Non-Metallic Electrical Cable Conduit	E-12
12416381P16	Non-Metallic Electrical Cable Conduit	E-12
12416381P17	Non-Metallic Electrical Cable Conduit	E-12
12416381P2	Non-Metallic Electrical Cable Conduit	E-12
12416381P20	Non-Metallic Electrical Cable Conduit	E-12
12416381P21	Non-Metallic Electrical Cable Conduit	E-12
12416381P22	Non-Metallic Electrical Cable Conduit	E-12
12416381P23	Non-Metallic Electrical Cable Conduit	E-12
12416381P26	Non-Metallic Electrical Cable Conduit	E-12
12416381P3	Non-Metallic Electrical Cable Conduit	E-12
12416381P30	Non-Metallic Electrical Cable Conduit	E-12
12416381P32	Non-Metallic Electrical Cable Conduit	E-12
12416381P34	Non-Metallic Electrical Cable Conduit	E-12
12416381P35	Non-Metallic Electrical Cable Conduit	E-12

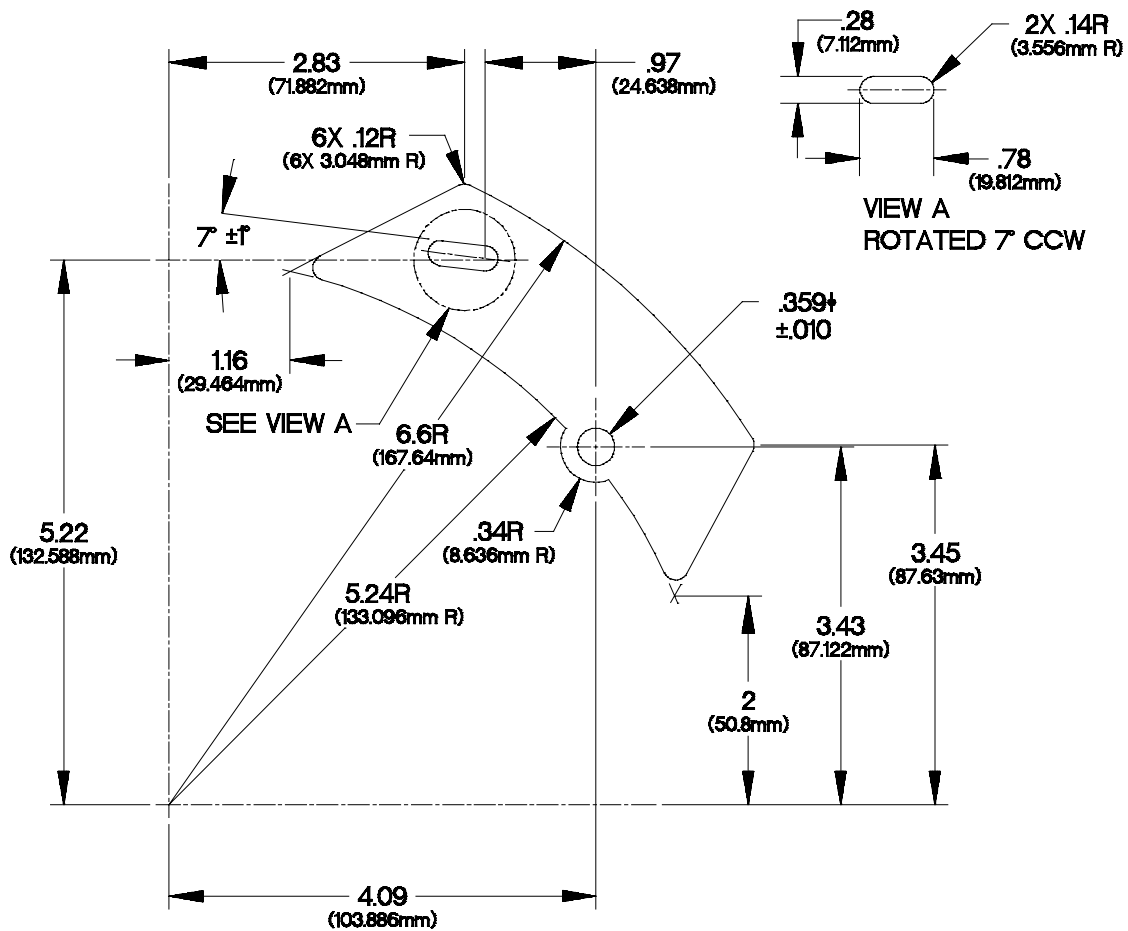
ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
12416381P36	Non-Metallic Electrical Cable Conduit	E-12
12416381P37	Non-Metallic Electrical Cable Conduit	E-12
12416381P38	Non-Metallic Electrical Cable Conduit	E-12
12416381P4	Non-Metallic Electrical Cable Conduit	E-12
12416381P5	Non-Metallic Electrical Cable Conduit	E-12
12416381P6	Non-Metallic Electrical Cable Conduit	E-12
12416381P7	Non-Metallic Electrical Cable Conduit	E-12
12416381P8	Non-Metallic Electrical Cable Conduit	E-12
12416381P9	Non-Metallic Electrical Cable Conduit	E-12
12418037	Steering Gear Return Hose	E-13
12418460-001	Transmission Oil Cooler Hose	E-13
12418460-002	Transmission Oil Cooler Hose	E-13
12418763	Lanyard Assembly	E-14
12420196	Lanyard Assembly	E-14
12420197-001	Non-Metallic Vent Air Hose	E-15
12420197-002	Non-Metallic Vent Air Hose	E-15
12420197-003	Non-Metallic Vent Air Hose	E-15
12420197-004	Non-Metallic Vent Air Hose	E-15
12420197-005	Non-Metallic Vent Air Hose	E-15
12420197-006	Non-Metallic Vent Air Hose	E-15
12420198-001	Non-Metallic Vent Air Hose	E-15
12420198-002	Non-Metallic Vent Air Hose	E-15
12420308-457	Personnel Heater Air Duct Hose	E-16
12420308-760	Personnel Heater Air Duct Hose	E-16
12420489	Block Seal	E-17
3256-H-1048	CTIS Seal Driver	E-18
3256-K-1051	Wheel Hub Grease Seal Driver	E-19
Dimmer Switch Test Wire		E-20
Purge Valve Tool		E-21

Section III. MANUFACTURED ITEMS

E-2. BRAKE ADJUSTING TOOL SUPPORT

Make the brake adjusting tool support from 0.134 in. (3.4 mm) flat steel stock according to the following instructions. Refer to the parts list and **Figure E-1. Brake Adjusting Tool Support** for details.

Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, ASTM A569 Sheet, Hot Rolled	6.0 in. (152.4 mm) x 6.0 in. (152.4 mm) x 0.134 in. (3.4 cm)	2

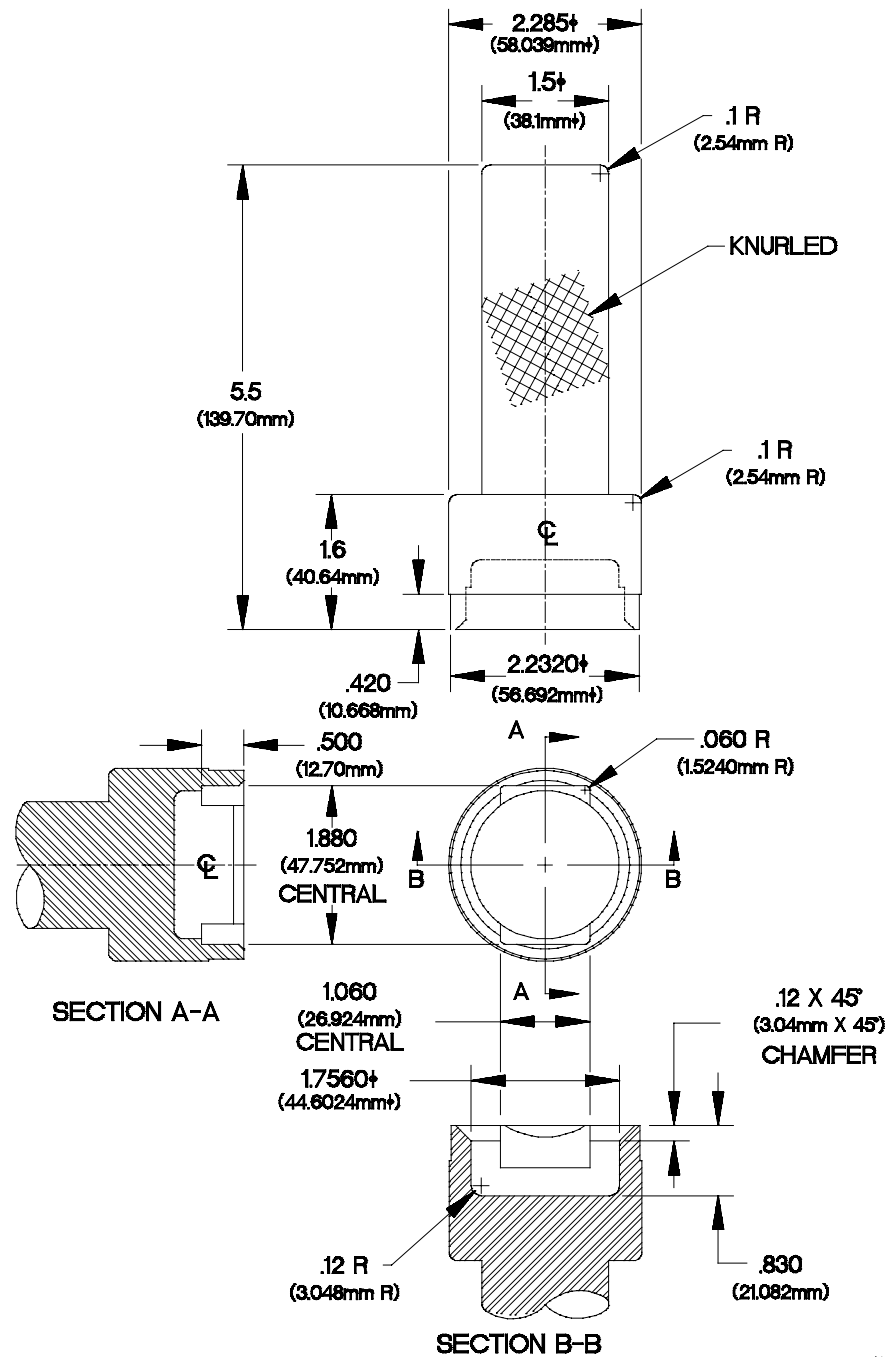


XAPPE011

Figure E-1. Brake Adjusting Tool Support

- a. All dimensions are in inches (millimeters).
- b. Cut steel sheet as shown by dimensions on **Figure E-1. Brake Adjusting Tool Support**.
- c. De-burr and remove sharp edges.

E-3. BRAKE PLUNGER SEAL DRIVER



XAPPE021

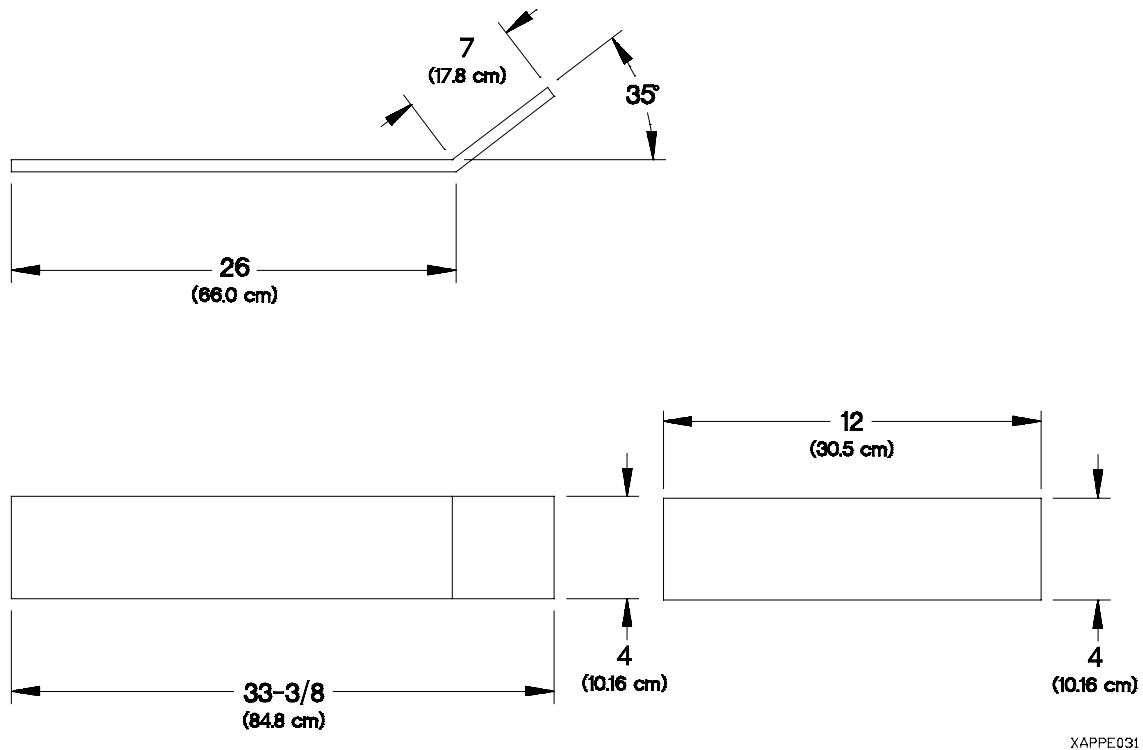
Figure E-2. Brake Plunger Seal Driver

- a. All dimensions are in inches (millimeters).
- b. Manufacture from round steel stock.
- c. De-burr and remove sharp edges.

E-4. CAB SUPPORT TOOL

Make the cab support tool from .38 inch (.96 cm) flat steel stock and angle iron stock according to the following instructions. Refer to the parts list and **Figure E-3. Cab Support Tool Strut and Cab Rest** for details.

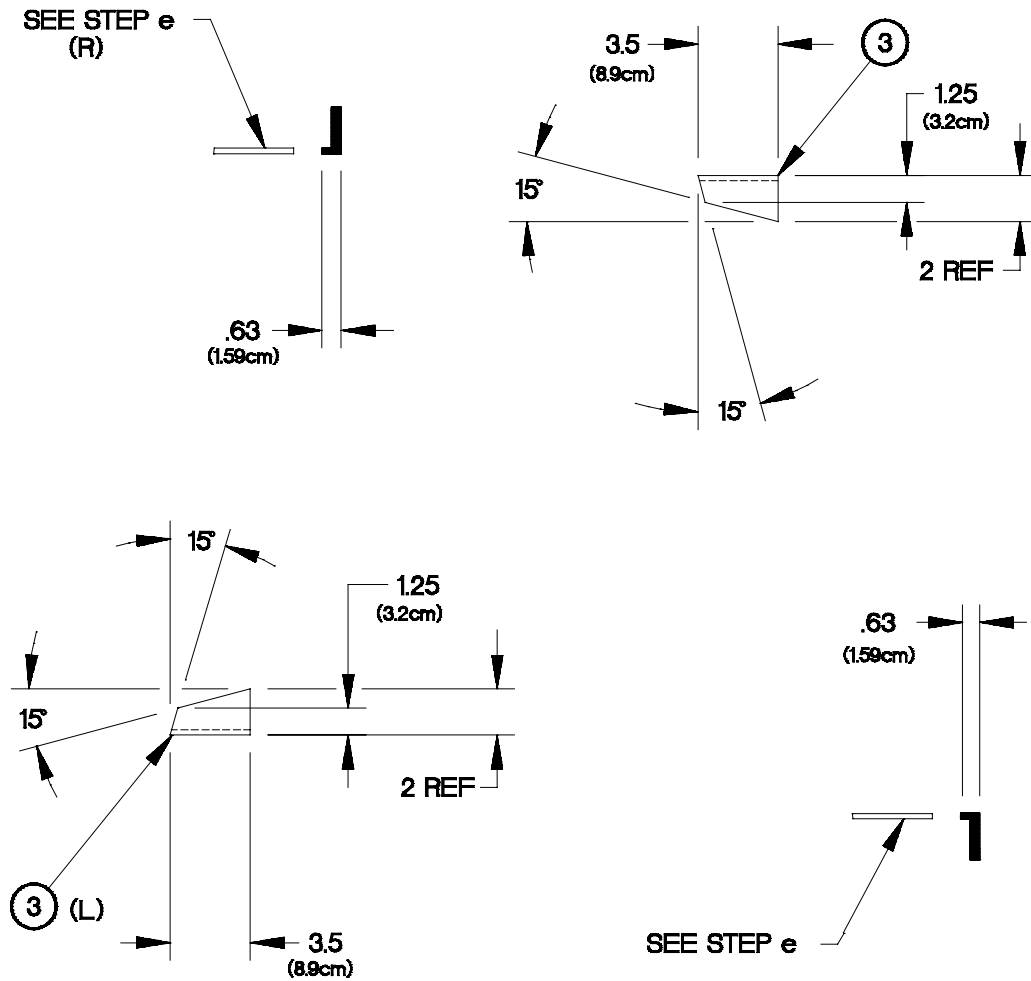
Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, Flat Bar	4.0 in. (10.2 cm) X 33.38 in. X (84.8 cm) X 0.38 in. (0.96 cm)	1
2	N/A	Steel, Flat Bar	4.0 in. (10.2 cm) X 12.0 in. (30.5 cm) X 0.38 in. (0.96 cm)	1
3	N/A	Angle Iron	2.0 in. (5.1 cm) X 2.0 in. (5.1 cm) X 3.5 in. (8.9 cm)	2
4	H.S.105VW-1	Insulgrip, CSA 105 C		



XAPPE031

Figure E-3. Cab Support Tool Strut and Cab Rest

- a. All dimensions are in inches (centimeters).
- b. Cut cab support tool strut (1) from steel flat bar and bend to shape as shown in **Figure E-3. Cab Support Tool Strut and Cab Rest**.
- c. Cut cab support tool cab rest (2) from steel flat bar.
- d. De-burr and remove sharp edges.

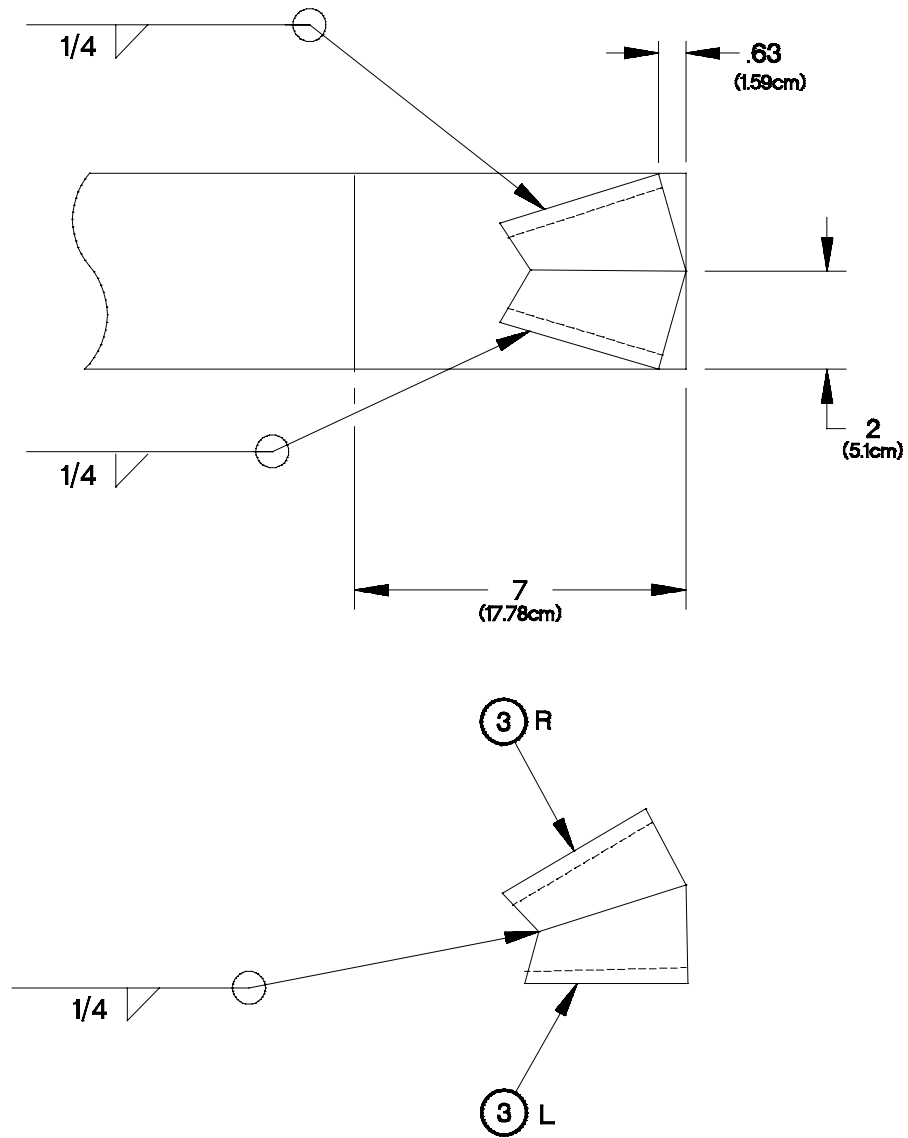


XAPPE041

Figure E-4. Cab Support Tool Seat

- e. Remove flange side of cab support tool seats (3) as shown in **Figure E-4. Cab Support Tool Seat**.
- f. Cut cab support tool seats (3) L and (3) R according to dimensions and left/right orientation shown on **Figure E-4. Cab Support Tool Seat**.
- g. De-burr and remove sharp edges.

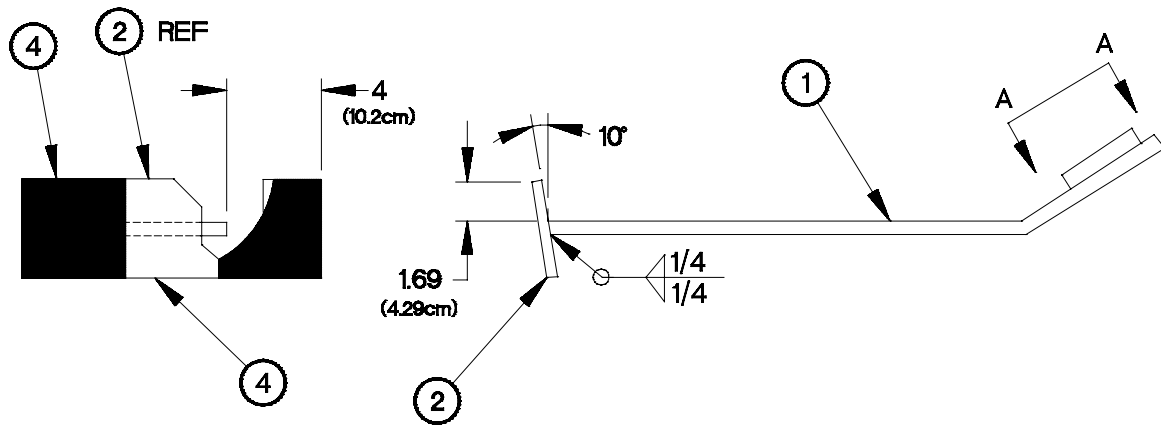
E-4. CAB SUPPORT TOOL (CONT)



XAPPE051

Figure E-5. Cab Support Tool Seat Layout

- h. Position and clamp cab support tool seats (3) L and (3) R together as shown by dimensions on **Figure E-5. Cab Support Tool Seat Layout.**
- i. Weld cab support tool seat (3) L to cab support tool seat (3) R as identified on assembly table and **Figure E-5. Cab Support Tool Seat Layout.**
- j. Position and clamp cab support tool seats (3) L and (3) R to cab support tool strut (1) as shown by dimensions on **Figure E-5. Cab Support Tool Seat Layout.**
- k. Weld items clamped in step (f) as shown in **Figure E-5. Cab Support Tool Seat Layout.**
- l. De-burr and remove sharp edges.



XAPPE061

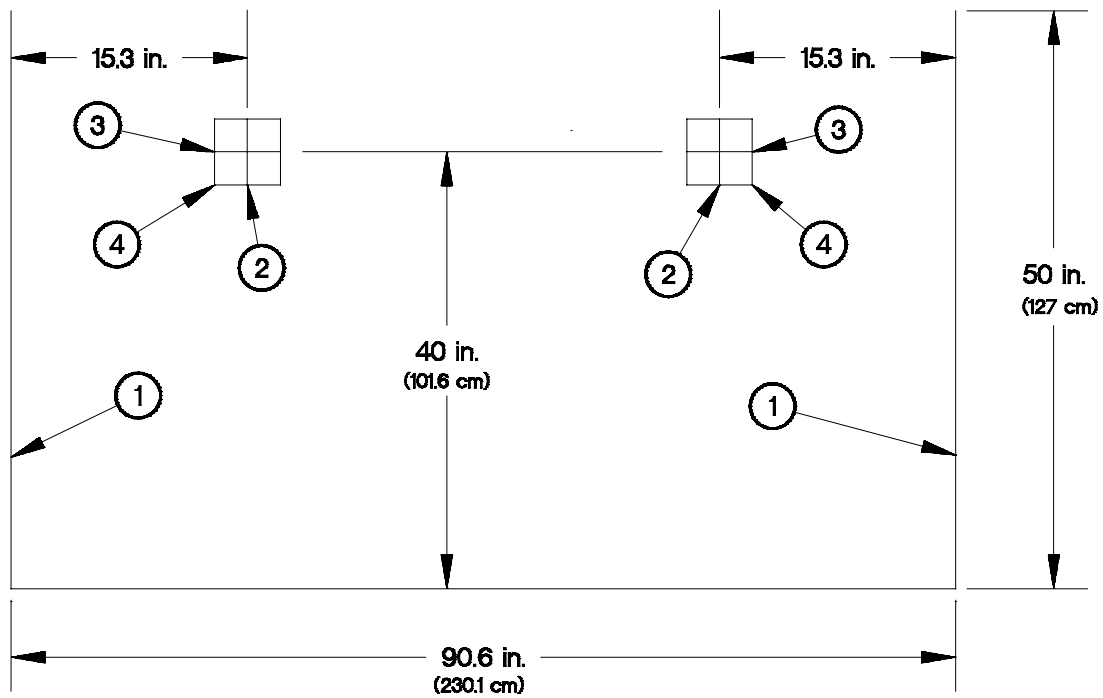
Figure E-6. Cab Support Tool Assembly

- m. Position and clamp cab support tool strut (1) to cab support tool cab rest (2) as shown by dimensions on **Figure E-6. Cab Support Tool Assembly**, before insulgrip (4) is applied.
- n. Weld cab support tool strut (1) to cab support tool cab rest (2).
- o. Apply Insulgrip (4) to cab support tool cab rest (2) as described on material container.

E-5. HEADLIGHT ADJUSTMENT SCREEN

The headlight adjustment screen may be drawn on any vertical surface at least 50 in. (127 cm) high and 100 in. (254 cm) wide.

- a. Draw two vertical lines (1) 50 in. (127 cm) high and 90.6 in. (230 cm) apart (centered on headlight adjustment screen).
- b. Locate two points 40 in. (101.6 cm) from floor and 13 in. (33 cm) toward the center from each vertical line (1).
- c. Draw vertical line (2) about 3-5 in. (8-13 cm) centered on each of the two points.
- d. Draw horizontal line (3) about 3-5 in. (8-13 cm) centered on each of the two points.
- e. Measure out 4 in. (10 cm) along each vertical line (2) and horizontal line (3) from each of the two points to make 8 in. (20 cm) squares (4).



XAPPE101

Figure E-7. Headlight Adjustment Screen

E-6. M1079 BLACKOUT SHIELD SEALS

Fabricate the M1079 blackout shield seals according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
Blackout Shield Header Seal	942P00001	0SHR6	28-3/4 in. (730 mm)
Blackout Shield Jamb Seal (van body serial numbers 001 through 190)	942P00001	0SHR6	63-3/8 in. (1610 mm)
Blackout Shield Jamb Seal (van body serial number 191 and higher)	942P00001	0SHR6	33 in. (838 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.

E-7. M1079 DOOR GASKETS

Fabricate the M1079 door gaskets according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
LH Door Gasket	12416417	19207	214 in. (5435 mm)
RH Door Gasket	12416417	19207	197 in. (5004 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.
- c. Glue ends of gasket to each other using adhesive MIL-A-46106 GP1TY1 (Item 11, Appendix D).

E-8. M1079 WINDOW SASH GLAZING SEALS

Fabricate the M1079 window sash glazing seals according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
Window Sash Top/Bottom Seal	941P00001	0SHR6	26-13/16 in. (681 mm)
Window Sash Side Seal (van body serial numbers 001 through 190)	941P00001	0SHR6	28-1/2 in. (724 mm)
Window Sash Side Seal (van body serial number 191 and higher)	941P00001	0SHR6	12-11/16 in. (322 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.

NOTE

Cut miters so that short side of seal faces toward glass.

- c. Cut 45-degree miters on ends of window sash seals.

E-9. RELAY TEST WIRE

Fabricate the relay test wire according to the following steps. Refer to the following parts list for materials.

Material Description	National Stock Number	Cut Length
Wire, Electrical (MIL-W-16878)	6145-00-330-3318	6 in. (152 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut a length of wire six inches (152 mm) long.
- c. Remove approximately 3/4 in. (19 mm) of electrical insulation from each end of wire.

E-10. WHEEL BEARING SHIM TOOL REST

Fabricate the wheel bearing shim tool rest according to the following steps. Refer to the following parts list for materials.

Part Number	National Stock Number	Description
QQ-T-570	9510-00-866-1037	Bar, Metal

- a. Dimensions are in inches (millimeters).
- b. Cut metal bar to 9.0 inches (228.6 mm) long.
- c. De-burr and remove sharp edges from ends of metal bar.

E-11. PNEUMATIC TUBES FABRICATION
--

Cut pneumatic tubes from bulk tubing stock listed **Table E-1. Pneumatic Tube Lengths**. Use a fine-toothed hacksaw or suitable cutting device and cut tubing to required length.

Table E-1. Pneumatic Tube Lengths

Tube Part Number	Bulk Tubing Part Number	Cut Length	
		inches	cm
12414690-001	NT-100-4 (79470)	18.1	46.0
12414690-002	NT-100-4 (79470)	16.0	40.6
12414690-004	NT-100-4 (79470)	74.8	190.0
12414690-005	NT-100-4 (79470)	69.7	177.0
12414690-010	NT-100-4 (79470)	180.0	457.2
12414690-101	J844TYBSIZE 3/8 (81343)	18.0	45.7
12414690-102	J844TYBSIZE 3/8 (81343)	35.4	90.0
12414690-103	J844TYBSIZE 3/8 (81343)	20.9	53.0
12414690-104	J844TYBSIZE 3/8 (81343)	13.8	35.0
12414690-105	J844TYBSIZE 3/8 (81343)	11.8	30.0
12414690-106	J844TYBSIZE 3/8 (81343)	20.5	52.0
12414690-107	J844TYBSIZE 3/8 (81343)	39.0	99.0
12414690-108	J844TYBSIZE 3/8 (81343)	15.4	39.0
12414690-109	J844TYBSIZE 3/8 (81343)	23.0	58.4
12414690-112	J844TYBSIZE 3/8 (81343)	80.0	198.0
12414690-113	J844TYBSIZE 3/8 (81343)	11.4	29.0
12414690-115	J844TYBSIZE 3/8 (81343)	82.8	210.2
12414690-117	J844TYBSIZE 3/8 (81343)	156.5	397.5
12414690-118	J844TYBSIZE 3/8 (81343)	11.8	30.0
12414690-119	J844TYBSIZE 3/8 (81343)	269.5	684.5
12414690-120	J844TYBSIZE 3/8 (81343)	11.9	30.2
12414690-121	J844TYBSIZE 3/8 (81343)	43.0	109.2
12414690-122	J844TYBSIZE 3/8 (81343)	44.1	112.0
12414690-123	J844TYBSIZE 3/8 (81343)	259.4	659.0
12414690-124	J844TYBSIZE 3/8 (81343)	288.2	732.0
12414690-125	J844TYBSIZE 3/8 (81343)	10.8	27.3
12414690-126	J844TYBSIZE 3/8 (81343)	17.0	43.2
12414690-127	J844TYBSIZE 3/8 (81343)	17.0	43.2

E-11. PNEUMATIC TUBES FABRICATION (CONT)

Table E-1. Pneumatic Tube Lengths (Cont)

Tube Part Number	Bulk Tubing Part Number	Cut Length	
		inches	cm
12414690-201	C608-100BLK (13174)	14.8	37.5
12414690-202	C608-100BLK (13174)	14.0	35.7
12414690-203	C608-100BLK (13174)	6.5	16.5
12414690-205	C608-100BLK (13174)	14.5	36.8
12414690-206	C608-100BLK (13174)	14.9	37.7
12414690-207	C608-100BLK (13174)	15.5	39.5
12414690-208	C608-100BLK (13174)	6.7	17.0
12414690-209	C608-100BLK (13174)	19.5	49.5
12414690-210	C608-100BLK (13174)	15.5	39.3
12414690-211	C608-100BLK (13174)	8.0	20.3
12414690-212	C608-100BLK (13174)	16.9	43.0
12414690-213	C608-100BLK (13174)	118.5	301.0
12414690-214	C608-100BLK (13174)	124.0	315.0
12414690-215	C608-100BLK (13174)	163.0	414.0
12414690-216	C608-100BLK (13174)	160.0	406.4
12414690-217	C608-100BLK (13174)	62.6	159.0
12414690-218	C608-100BLK (13174)	119.8	304.2
12414690-219	C608-100BLK (13174)	69.0	175.3
12414690-220	C608-100BLK (13174)	45.5	115.6
12414690-221	C608-100BLK (13174)	12.6	32.0
12414690-222	C608-100BLK (13174)	5.5	14.0
12414690-223	C608-100BLK (13174)	14.6	37.1
12414690-224	C608-100BLK (13174)	170.0	431.8
12414690-225	C608-100BLK (13174)	174.0	442.0
12414690-226	C608-100BLK (13174)	103.5	263.0
12414690-227	C608-100BLK (13174)	32.8	83.2
12414690-228	C608-100BLK (13174)	3.5	8.9
12414690-229	C608-100BLK (13174)	62.2	158.1
12414690-230	C608-100BLK (13174)	14.6	37.0
12414690-231	C608-100BLK (13174)	60.5	153.7
12414690-301	PFT-10B-BLK-100 (61424)	19.0	48.3
12414690-302	PFT-10B-BLK-100 (61424)	56.0	142.2
12414690-303	PFT-10B-BLK-100 (61424)	118.1	300.0

E-12. NON-METALLIC ELECTRICAL CABLE CONDUIT FABRICATION
--

Make conduit to cover electrical cables described on 1241638 from bulk tube stock listed in **Table E-2. Non-Metallic Electrical Cable Conduit Lengths**. Use a fine-toothed hacksaw or suitable cutting device and cut hose/tube to required length.

Table E-2. Non-Metallic Electrical Cable Conduit Lengths

Tube Part Number	Bulk Tube Part Number	Cut Length	
		inch	cm
12416381P1	49008	8.9	22.6
12416381P10	49008	17.8	45.2
12416381P11	49008	29.9	75.9
12416381P12	49008	33.0	83.8
12416381P13	49008	13.9	35.3
12416381P14	49008	4.0	10.2
12416381P15	49008	17.4	44.2
12416381P16	49008	3.2	8.1
12416381P17	49008	4.5	11.4
12416381P2	49008	16.2	41.1
12416381P20	27413	32.8	83.3
12416381P21	27413	9.2	23.4
12416381P22	27413	8.0	20.3
12416381P23	27413	23.3	59.2
12416381P26	49008	2.5	6.4
12416381P3	27413	7.3	18.5
12416381P30	49007	17.0	43.2
12416381P32	49005	1.7	4.3
12416381P34	49005	20.7	52.6
12416381P35	49005	21.8	55.4
12416381P36	49005	5.5	14.0
12416381P37	49005	8.0	20.3
12416381P38	49008	3.7	9.4
12416381P4	49008	12.0	30.5
12416381P5	49008	26.0	66.0
12416381P6	49008	7.7	19.6
12416381P7	49008	26.7	67.8
12416381P8	49008	5.2	13.2
12416381P9	49008	16.8	42.7

E-13. STEERING GEAR RETURN HOSE AND TRANSMISSION OIL COOLER HOSES FABRICATION

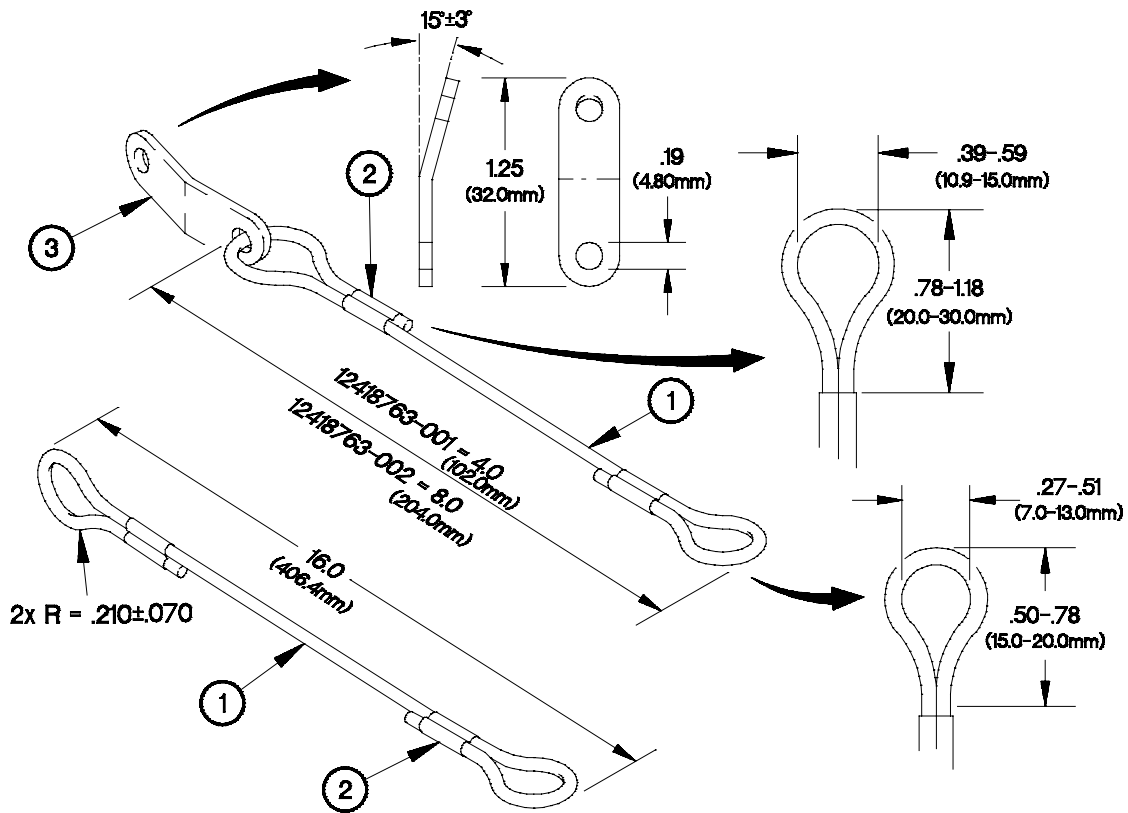
Cut the following hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

Hose Part Number	Bulk Hose Part Number	Cut Length	
		inches	cm
12418037	A110 (30327)	75.5	191.7
12418460-001	MS521302B110360 (96906)	17.5	44.4
12418460-002	MS521301A206R (96906)	16.0	40.6

E-14. LANYARD ASSEMBLIES P/N 12418763 AND 12420196 FABRICATION

Make the following lanyard assemblies from bulk cable material, sleeves, and tab material and assemble according to **Figure E-8. Lanyard Assembly**. The following parts list identifies part numbers and lengths of cut pieces.

Item	Part Number	Material Description	Size	Qty
1	MIL-W-83420 Type 1, Comp B	1/16 in. stranded wire cable	4 in. (102 mm)	1
2	MS51844-22	Sleeve		2
3	N/A	Tab, Stainless Steel ASTM A617	.06 in. (16 cm) X .37 in. (9.5 mm) X 1.25 in. (32 mm)	1



XAPPE131

Figure E-8. Lanyard Assembly

- a. All dimensions are in inches (millimeters).
- b. Make from bulk cable and flat steel material as identified in parts list.
- c. Drill two 0.19 in. (4.8 mm) diameter holes through tab material as shown on **Figure E-14. Lanyard Assembly.**
- d. De-burr and remove sharp edges.
- e. Bend tab as shown on **Figure E-14. Lanyard Assembly.**
- f. Form loops on cable ends and insert sleeve material over cable on one end of cable and over cable and through sleeve at other end of cable as shown in **Figure E-14. Lanyard Assembly.**
- g. Crimp two sleeves over cable ends.

E-15. NON-METALLIC VENT AIR HOSES FABRICATION

Cut the following vent air hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

Hose Part Number	Bulk Hose Part Number	Cut Length	
		inches	cm
12420197-001	483666 (02280)	180.0	457.2
12420197-002	483666 (02280)	120.0	304.8
12420197-003	483666 (02280)	96.0	243.8
12420197-004	483666 (02280)	36.0	91.4
12420197-005	483666 (02280)	156.0	396.2
12420197-006	483666 (02280)	72.0	182.9
12420198-001	881-16 (98441)	120.0	304.8
12420198-002	11657469	36.0	91.4

E-16. PERSONNEL HEATER AIR DUCT HOSE FABRICATION

Cut the following hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

Hose Part Number	Bulk Hose Part Number	Cut Length	
		inches	cm
12420308-457	8711054 (19207)	18.3	46.4
12420308-760	8711054 (19207)	30.4	77.2

E-17. BLOCK SEAL 12420489 FABRICATION

Make block seal from P/N (0VXY8) STN2.38X.5. Use a suitable cutting tool to cut seal to 0.52 inch (1.3 cm) long.

E-18. CTIS SEAL DRIVER 3256-H-1048

Used on Front and Rear Axle CTIS Seals.

NOTES ON USE OF DRIVER

- 1) SEAL END OF DRIVER TO BE CLEAN OF DEBRIS, DIRT, NICKS AND BURRS
- 2) DO NOT USE A METAL HAMMER ON DRIVER
A RUBBER, PLASTIC, WOOD OR SOME OTHER DEAD BLOW TYPE Mallet IS TO BE USED
- 3) SLIGHTLY GREASE SEAL END OF DRIVER PRIOR TO INSTALLING SEAL

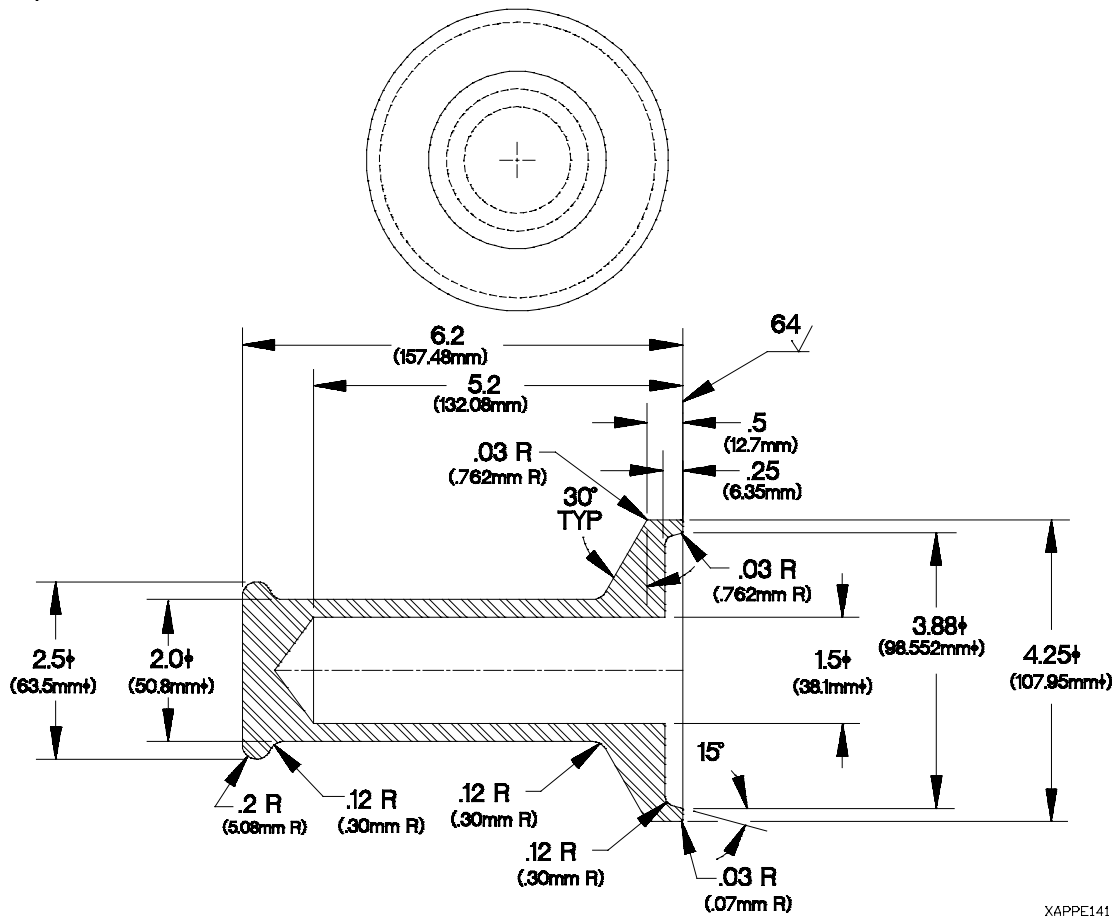


Figure E-9. CTIS Seal Driver

- a. All dimensions are in inches (millimeters).
- b. Manufacture from round steel stock.
- c. De-burr and remove sharp edges.

E-19. WHEEL HUB GREASE SEAL DRIVER 3256-K-1051

NOTES ON USE OF DRIVER

- 1) SEAL END OF DRIVER TO BE CLEAN OF DEBRIS, DIRT, NICKS AND BURRS
- 2) DO NOT USE A METAL HAMMER ON DRIVER
A RUBBER, PLASTIC, WOOD OR SOME OTHER DEAD BLOW TYPE Mallet IS TO BE USED
- 3) SLIGHTLY GREASE SEAL END OF DRIVER PRIOR TO INSTALLING SEAL

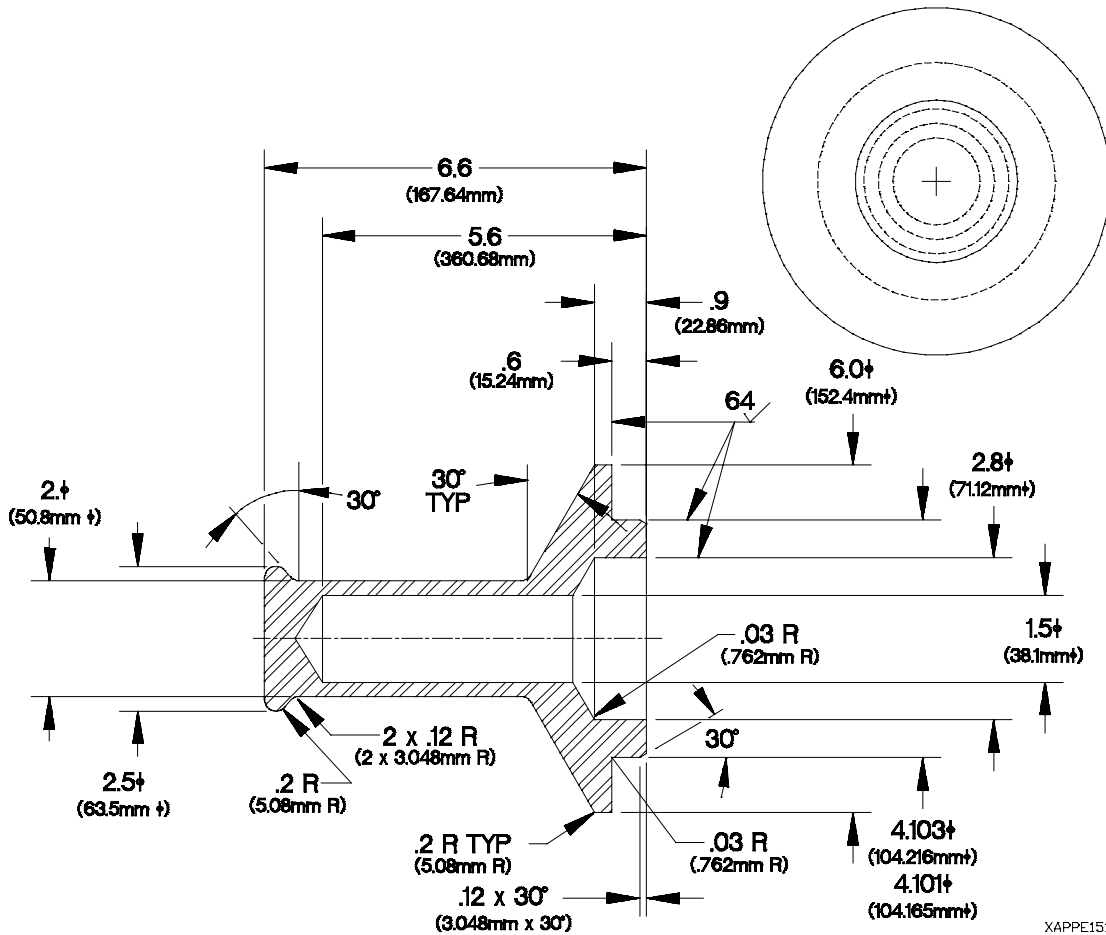


Figure E-10. Wheel Hub Grease Seal Driver

- a. All dimensions are in inches (millimeters).
- b. Manufacture from round steel stock.
- c. De-burr and remove sharp edges.

E-20. DIMMER SWITCH TEST WIRE

Fabricate the dimmer switch test wire according to the following steps. Refer to the following parts list for materials.

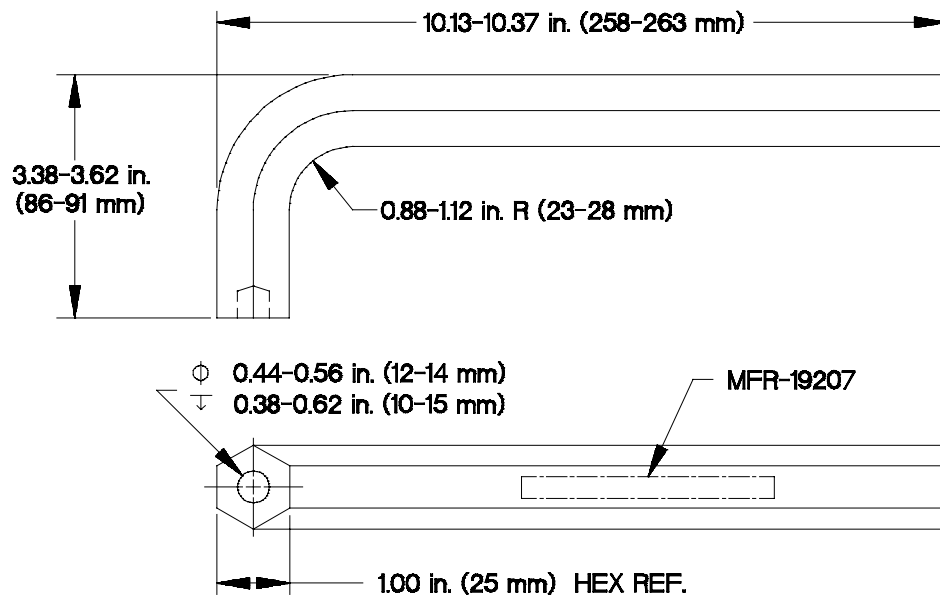
Material Description	National Stock Number	Quantity	Cut Length
Wire, Electrical (M168678/14BKE9)	6145-01-229-4134	1	12 in (305 mm)
Pin, Grooved, Headless (12258939-1)	5315-01-156-6314	1	
Contact, Electrical (12258939-2)	5999-01-150-8808	1	

- a. Dimensions are in inches (millimeters).
- b. Cut a length of electrical wire approximately 12 in. (305 mm) long.
- c. Remove approximately 1/4 in. (6 mm) of insulation from each end of electrical wire.
- d. Crimp headless grooved pin on one end of electrical wire.
- e. Crimp electrical contact on opposite end of electrical wire.

E-21. PURGE VALVE TOOL

Fabricate Purge Valve Tool according to the following instructions. Refer to Figure E-11. Purge Valve Tool for details.

Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, ASTM A 108 or A576 Grade 1015-1025, BAR (Ref UNS G10150-G10250). Finish Black Oxide Coat, Class I, IAW MIL-C-13924.	14.0 in. (356 mm)	1



Xappe17b

Figure E-11. Purge Valve Tool

- All dimensions are in inches (cm).
- Cut steel bar (1) and bend to shape as shown in Figure E-11.
- Dimensional limits apply after coating.
- All edges shall be broken and free from burrs.
- Metal Stamp, electro etch, or engrave with the following marking IAW MIL-STD-130: 19207-12379968 MFR-19207.

APPENDIX F TORQUE LIMITS

F-1. GENERAL

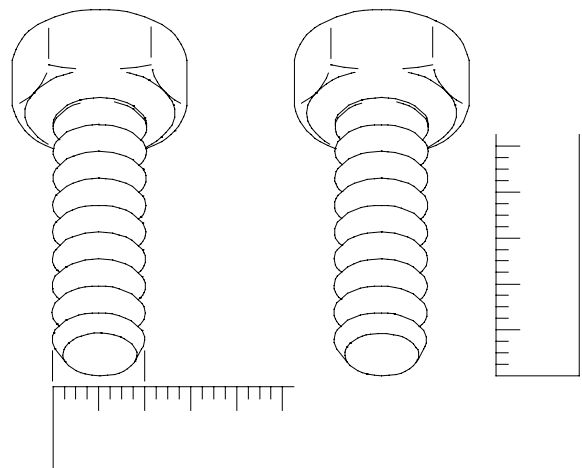
This appendix provides general torque limits for screws and nuts used on the vehicle. Special torque limits are shown in the maintenance procedures for applicable components. Use the general torque limit given in this appendix when specific torque limits are not given in the maintenance procedure. These general torque limits can not be applied to screws that retain rubber components. The rubber components will be damaged before the torque limit is reached. If a special torque limit is not given in the maintenance instructions for a fastener which retains a rubber component, tighten the screw or nut until it touches metal, then tighten one more turn. Whenever possible, the tightening force (torque) should be applied to the nut side of the fastener group.

F-2. TORQUE LIMITS

Refer to [Table F-1. Torque Limits for SAE and ANSI Fasteners](#) for torque limits on standard (SAE and ANSI) screws and free spinning nuts. Refer to [Table F-2. Torque Limits for SAE and ANSI Prevailing Torque Nuts](#) for torque limits on standard (SAE and ANSI) self-locking nuts. Refer to [Table F-3. Torque Limits for Metric Screws and Free Spinning Nuts](#) for torque limits on metric screws and free spinning nuts. Refer to [Table F-4. Torque Limits for Metric Prevailing Torque Nuts](#) for torque limits on metric self-locking nuts.

F-3. USE OF TORQUE TABLES

- (1) Measure the diameter of the screw to be installed.
- (2) Count the number of threads per inch.
- (3) Under the heading DIAMETER look down the column until the diameter of the screw is found. (There are usually two lines beginning with the same diameter.)
- (4) Under the heading THREADS PER INCH (SAE and ANSI) or THREAD PITCH (metric), find the number of threads per inch that matches the number counted in step (2).
- (5) To find the grade of the screw, match the markings on the head to the correct picture under CAPSCREW HEAD MARKINGS on the torque table.
- (6) Look down the column under the picture found in step (5) until the torque limit (lb-ft or N·m) for the diameter and threads per inch (or thread pitch, in the case of metric fasteners) of the screw are located.



XAPPF01A

APPENDIX F TORQUE LIMITS

Table F-1. Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts

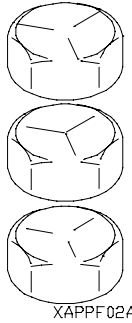
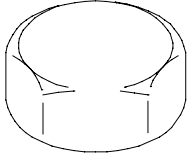
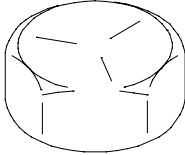
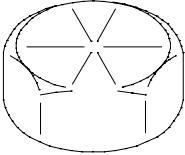
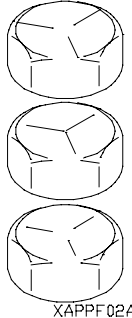
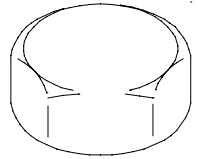
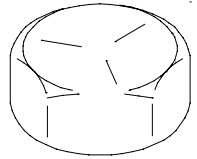
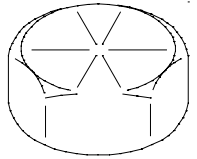
 <p style="text-align: center; margin-top: 5px;">NOTE Manufacturer's marks may vary. These are all SAE Grade 5.</p>		Material Grade Markings						
		 XAPPF03A SAE Grade 2	 XAPPF04A SAE Grade 5	 XAPPF051 SAE Grade 8				
		Torque						
Diameter	Threads per inch							
inch		lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	
1/4	20	3-5	5-7	5-7	8-10	8-10	10-14	
1/4	28	4-6	5-7	6-8	9-11	8-12	12-16	
1/4	32	4-6	5-7	7-9	9-11	9-13	12-16	
5/16	18	7-9	9-13	11-15	15-21	15-21	21-29	
5/16	24	8-10	11-15	12-16	17-23	17-23	24-32	
5/16	32	9-11	12-16	14-18	18-24	19-25	27-34	
3/8	16	13-17	17-23	20-26	27-35	28-38	38-50	
3/8	24	15-19	20-26	22-30	31-41	32-42	43-57	
3/8	32	15-21	21-27	24-32	33-43	33-45	55-61	
7/16	14	20-28	28-38	32-42	43-57	44-60	61-81	
7/16	20	23-31	31-41	35-47	48-64	49-67	68-90	
7/16	28	25-33	33-45	37-51	51-69	54-72	73-97	
1/2	13	32-42	43-57	49-65	66-88	68-92	93-123	
1/2	20	35-47	48-64	55-73	74-98	77-103	105-139	
1/2	28	38-50	51-67	58-78	79-105	82-110	111-149	
9/16	12	55-61	62-82	70-94	95-127	98-132	134-178	
9/16	18	50-68	69-91	78-104	105-141	109-147	149-199	
9/16	24	53-71	72-96	82-110	111-149	115-155	158-210	
5/8	11	62-84	85-113	95-129	131-175	136-182	184-246	
5/8	18	70-94	96-128	108-146	148-198	154-206	209-279	
5/8	24	73-99	100-134	114-154	155-207	161-217	219-293	

Table F-1. Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts (Cont)

 Manufacturer's marks may vary. These are all SAE Grade 5		Material Grade Markings					
		 SAE Grade 2	 SAE Grade 5	 SAE Grade 8	Torque		
Diameter	Threads per inch	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m
inch							
11/16	24	99-133	135-181	153-207	209-279	217-291	296-394
3/4	10	110-148	150-200	171-229	232-310	240-324	328-438
3/4	16	123-165	168-224	190-256	259-345	269-361	366-488
3/4	20	127-171	174-232	197-265	268-358	278-374	379-505
13/16	20			252-340	345-459	357-481	487-649
7/8	9			275-369	374-498	387-521	528-704
7/8	14			303-407	413-551	427-575	583-777
7/8	20			319-429	435-579	450-606	614-818
15/16	20			395-531	538-718	558-750	760-1014
1	8			411-553	560-748	581-781	792-1056
1	12			450-606	614-818	636-856	867-1155
1	20			483-649	658-878	681-917	929-1239
1-1/16	18			576-776	782-1044	813-1095	1109-1479
1-1/8	7			507-683	693-923	824-1108	1123-1497
1-1/8	12			570-766	776-1034	923-1241	1258-1678
1-1/8	18			600-806	817-1089	971-1307	1324-1766
1-3/16	18			709-953	966-1288	1149-1545	1566-2088
1-1/4	7			716-964	976-1302	1161-1563	1584-2112
1-1/4	12			793-1067	1081-1441	1286-1730	1754-2338
1-1/4	18			831-1117	1132-1510	1346-1812	1835-2447
1-5/16	18			965-1299	1316-1754	1565-2105	2134-2846
1-3/8	6			939-1263	1281-1707	1523-2049	2076-2768

APPENDIX F TORQUE LIMITS

Table F-2. Dry Torque Limits for SAE and ANSI Prevailing Torque Nuts

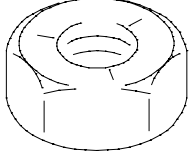
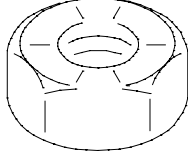
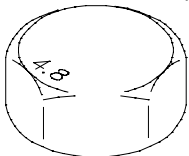
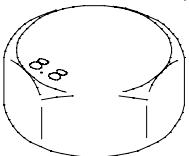
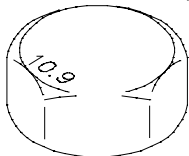
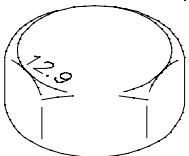
		Material Grade Markings				
		 XAPPF061 SAE Grade 5				 XAPPF071 SAE Grade 8
Hole Diameter	Threads per inch	Torque				
		lb-ft	N-m	lb-ft	N-m	
1/4	20	10-12	14-16	15-17	20-24	
1/4	28	12-14	16-18	14-18	21-25	
5/16	18	20-24	27-33	26-32	36-44	
5/16	24	22-26	30-36	29-35	40-48	
3/8	16	35-41	47-55	48-58	65-77	
3/8	24	38-46	53-63	53-63	72-86	
7/16	14	55-65	74-88	75-91	103-123	
7/16	20	60-70	81-97	80-98	110-132	
1/2	13	86-102	116-138	113-137	154-184	
1/2	20	92-110	125-149	127-153	177-207	
9/16	12	120-144	162-194	168-202	229-273	
9/16	18	135-161	183-219	179-217	244-294	
5/8	11	165-199	226-270	226-272	306-368	
5/8	18	181-219	246-296	244-296	331-401	
3/4	10	296-354	402-480	395-479	538-648	
3/4	16	310-376	422-508	424-516	576-698	
7/8	9	460-554	625-749	612-746	833-1009	
7/8	14	503-607	684-822	652-800	888-1082	
1	8	686-828	933-1121	941-1141	1280-1544	

Table F-3. Dry Torque Limits for Metric Screws and Free Spinning Nuts

		Material Grade Markings							
		 XAPPF081 Metric Grade 4.8	 XAPPF091 Metric Grade 8.8	 XAPPF101 Metric Grade 10.9	 XAPPF111 Metric Grade 12.9				
Diameter	Thread Pitch	Torque							
		lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m
6	1	3	4-5	5-7	7-9	7-9	10-13	8-11	11-15
8	1.25	7-9	9-11	13-17	17-23	17-23	23-31	21-27	27-37
8	1	7-9	9-13	14-18	18-24	19-25	25-33	21-29	29-39
10	1.5	13-17	17-23	25-33	33-45	34-46	46-62	40-54	54-72
10	1.25	14-18	18-24	26-34	35-47	36-48	49-65	42-56	57-77
10	0.75	15-19	21-27	29-39	39-53	40-54	54-72	47-63	63-85
12	1.75	22-30	30-40	43-57	58-78	60-80	81-107	69-93	94-126
12	1.5	23-31	32-42	46-60	61-81	63-83	85-113	73-97	99-131
12	1.25	24-32	33-45	47-63	65-85	65-87	88-118	76-102	104-138
12	1	26-34	34-46	49-65	67-89	68-90	93-123	80-106	108-144
14	2	36-48	48-74	69-91	93-125	95-127	129-173	112-148	151-201
14	1.5	39-51	52-70	75-99	99-135	103-137	140-186	120-160	163-217
15	1	51-69	69-93	100-132	135-179	137-183	187-249	160-214	218-290
16	2	55-73	75-99	107-143	145-193	148-198	201-267	173-231	235-313
16	1.5	59-79	80-106	114-152	155-207	158-210	214-286	184-246	250-334
18	1.5			166-222	225-301	230-306	311-415	268-358	364-486
20	2.5			209-279	283-377	289-385	392-522	338-450	458-610
20	1.5			232-308	315-419	321-427	435-579	375-499	508-678
20	1			244-324	330-440	337-449	457-609	394-524	534-712
22	2.5			285-379	387-515	394-524	534-712	461-613	624-832
22	1.5			313-417	424-566	432-576	586-782	664-884	900-1200
24	3			361-481	489-653	499-665	677-903	584-778	791-1055
24	2			394-524	534-712	545-725	738-984	725-965	982-1310
25	1.5			467-621	633-843	645-859	875-1167	754-1004	1023-1363

APPENDIX F TORQUE LIMITS

Table F-4. Dry Torque Limits for Metric Prevailing Torque Nuts

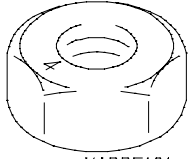
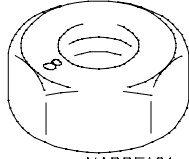
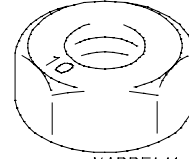
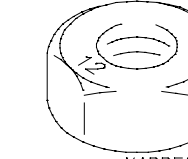
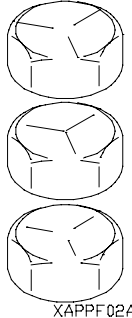
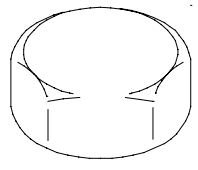
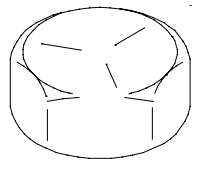
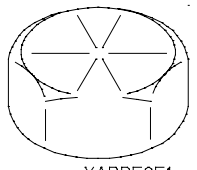
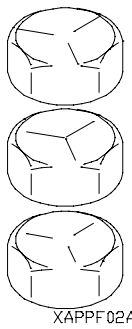
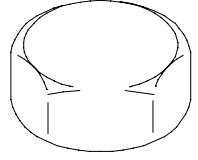
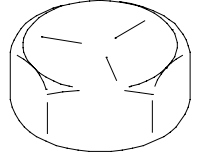
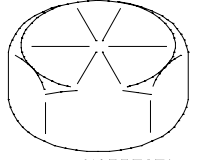
		Material Grade Markings							
		 XAPPF121 Metric Grade 4.8	 XAPPF131 Metric Grade 8.8	 XAPPF141 Metric Grade 10.9			 XAPPF151 Metric Grade 12.9		
Diameter	Thread Pitch	Torque							
		lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m
6	1	5-6	7-8	7-9	10-12	10-12	14-17	11-14	15-19
8	1.25	12-14	16-18	18-22	24-30	24-30	32-40	27-33	36-46
8	1	12-14	16-20	19-23	25-31	25-31	34-42	28-36	38-48
10	1.5	21-25	28-34	33-41	44-56	44-56	60-76	50-64	68-86
10	1.25	21-25	29-35	34-42	46-58	46-58	63-79	53-67	71-91
10	0.75	23-27	31-37	37-47	49-63	50-64	68-86	57-73	77-99
12	1.75	33-41	46-56	55-69	74-94	75-95	102-128	85-109	115-147
12	1.5	35-43	47-57	56-72	77-97	78-98	106-134	89-113	120-152
12	1.25	36-44	48-60	58-74	79-101	81-103	109-139	91-117	125-159
12	1	37-45	50-62	61-77	82-104	84-106	114-144	95-121	129-165
14	2	53-65	72-88	87-109	117-149	118-150	160-204	134-172	182-232
14	1.5	57-69	76-94	92-116	125-159	126-160	171-217	143-183	194-248
16	2	79-97	107-131	130-166	177-225	178-228	243-309	204-262	277-355
16	1.5	82-102	112-138	138-176	187-239	189-241	256-328	215-277	292-376
18	1.5			197-253	267-343	271-347	367-471	309-399	420-542
20	2.5			248-318	337-431	342-438	464-594	391-503	530-682
20	1.5			271-349	369-473	374-480	507-651	428-552	580-750
20	1			283-365	384-494	390-502	529-681	447-577	606-784
22	2.5			335-429	455-583	460-592	624-802	526-680	714-922
22	1.5			363-467	492-634	499-643	676-872	730-950	990-1290
24	3			420-540	569-733	577-743	783-1009	662-856	897-1161
24	2			453-583	614-792	622-804	844-1090	803-1043	1088-1416

Table F-5. Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts

 <p>NOTE Manufacturer's marks may vary. These are all SAE Grade 5.</p>		Material Grade Markings					
		 XAPPF03A SAE Grade 2	 XAPPF04A SAE Grade 5	 XAPPF051 SAE Grade 8	Torque		
Diameter	Threads per inch	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m
inch							
1/4	20	4	6	6	8	9	12
1/4	28	5	7	7	9	10	14
5/16	18	8	11	13	18	18	24
5/16	24	9	12	14	19	20	27
3/8	16	15	20	23	31	35	47
3/8	24	17	23	25	34	35	47
7/16	14	24	33	35	47	55	75
7/16	20	25	34	40	54	60	81
1/2	13	35	47	55	75	80	108
1/2	20	40	54	65	88	90	122
9/16	12	50	68	80	108	110	149
9/16	18	55	75	90	122	130	176
5/8	11	70	95	110	149	170	231
5/8	18	80	108	130	176	180	244
3/4	10	120	163	200	271	280	380
3/4	16	140	190	220	298	320	434
7/8	9	110	149	300	407	460	624
7/8	14	120	163	320	434	500	678
1	8	160	217	440	597	680	922
1	12	170	231	480	651	740	1003
1-1/8	7	220	298	600	814	960	1302
1-1/8	12	260	353	660	895	1080	1464

APPENDIX F TORQUE LIMITS

Table F-5. Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts (Cont)

 <p style="text-align: center; font-size: small;">XAPPF02A</p> <p style="text-align: center; font-size: small;">Manufacturer's marks may vary. These are all SAE Grade 5</p>		Material Grade Markings					
		 <p style="text-align: center; font-size: small;">XAPPF03A</p> <p style="text-align: center;">SAE Grade 2</p>		 <p style="text-align: center; font-size: small;">XAPPF04A</p> <p style="text-align: center;">SAE Grade 5</p>		 <p style="text-align: center; font-size: small;">XAPPF051</p> <p style="text-align: center;">SAE Grade 8</p>	
		Diameter		Threads per inch		Torque	
inch		lb-ft	N·m	lb-ft	N·m	lb-ft	N·m
1-1/4	7	320	434	840	1139	1360	1844
1-1/4	12	360	488	920	1248	1500	2034
1-3/8	6	420	570	1100	1492	1780	2414
1-3/8	12	460	624	1260	1709	2040	2766

APPENDIX G MANDATORY REPLACEMENT PARTS

Section I. INTRODUCTION

G-1. SCOPE

This appendix lists mandatory replacement parts you will need to maintain the LMTV vehicle.

G-2. EXPLANATION OF COLUMNS

- a. Column (1) - Item Number.** This number is assigned to each entry in the listing and is referenced in the Initial Setup of the applicable task under Materials/Parts.
- b. Column (2) - Nomenclature.** Name or identification of the part.
- c. Column (3) - Part Number.** The manufacturer's part number.
- d. Column (4) - National Stock Number.** The National stock number of the part.

Section II. MANDATORY REPLACEMENT PARTS LIST

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
1	BLADE, WINDSHIELD WIPER	105.384	2540-01-364-1621
2	BOLT, MACHINE	12414307-065	5306-01-382-5054
3	BOOT KIT, EXHAUST	DQ6025	4730-01-417-3197
4	BUMPER, RUBBER	12419182	5340-01-410-8397
5	BUSHING, SLEEVE	7-199-002668	3120-01-367-6894
6	CHANNEL, RUBBER	ZZR765/2-001A7	9390-01-420-4560
7	CLAMP	12421183-005	4730-01-447-4312
8	CLAMP	12421183-006	4730-01-447-4313
9	DECAL	12340917	7690-01-256-4909
10	FASTENER TAPE	MIL-F-21840	8315-00-006-9855
11	FASTENER TAPE	50-534718-19	8315-00-935-6762
12	FILTER ASSEMBLY	75223-11	2940-01-417-9333
13	FILTER ELEMENT	1048011	2940-01-385-8931
14	FILTER ELEMENT, FLUID	R22146	2910-01-360-6366
14.1	FILTER ELEMENT, FLUID	ST117073098-000	2910-01-467-4594
15	FILTER ELEMENT, FLUID	29507750	2940-01-361-2406
16	FILTER ELEMENT, FLUID	599791	4460-01-284-2344

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
17	FILTER ELEMENT, FLUID	931558	2940-01-363-4377
18	FILTER ELEMENT, INTAKE AIR CLEANER	P52-7750	2940-01-361-2407
19	FILTER, AIR	12416539	
20	FILTER, AIR	12416563	4730-01-398-5654
21	FILTER, FUEL	7E9763	2940-01-363-3089
22	FILTER, OIL	1R0739	2940-00-029-0388
23	GASKET	F337576M6	
24	GASKET	M28840/24HA	5935-01-421-9754
25	GASKET	QS-1181	5330-01-058-3788
26	GASKET	10-36675-18	5330-00-298-0190
26.1	GASKET	11446	5330-00-247-4174
27	GASKET	119-2940	5330-01-424-7905
28	GASKET	12421469	5330-01-453-2980
29	GASKET	12422254	
30	GASKET	13848	5330-01-211-0717
31	GASKET	350700	5330-01-295-3053
32	GASKET	350903	5330-00-576-4626
33	GASKET	352200	5330-01-421-6105
34	GASKET	352302	5330-01-421-6107
35	GASKET	353400	5330-01-421-6102
36	GASKET	353806	5330-01-421-6103
37	GASKET	353810	5330-01-450-6666
38	GASKET	355148	5330-01-423-0596
39	GASKET	355175	5330-01-423-0623
40	GASKET	3K3257	5330-01-305-6550
40.1	GASKET	3N4087	5330-01-061-8003
41	GASKET	4P1624	5330-01-360-5934
42	GASKET	9Y8103	5330-01-360-5931
42.1	GASKET AND PREFORMED PACKING SET	9X8318	5330-01-360-9098
43	GASKET, FUEL FILTER	7C1159	5330-01-360-5941
44	NOT USED		

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
45	GASKET, THERMOSTAT	2W7212	5330-01-347-3206
46	GROMMET, NONMETALLIC	MS35489-6	5325-00-263-6632
47	GROMMET, NONMETALLIC	12417598	5325-01-375-1299
48	GROMMET, NONMETALLIC	12421402	5325-01-440-2178
49	GROMMET, NONMETALLIC	4082-37634-01	5325-01-194-3076
50	GROMMET, NONMETALLIC	50S12-1-1AA	5325-01-145-0105
51	GROMMET, NONMETALLIC	8741442	5325-00-088-6147
51.1	HEAD, FLUID FILTER	7632-002-144	2940-01-387-4397
52	INSULATOR, TANK	A1394J	5970-01-385-7317
53	INSULATOR, TANK	A1394K	5970-01-385-7262
54	KIT, FILTER	29503829	
55	KIT, FILTER	29526899	5330-01-453-0770
56	NOT USED		
57	LAMP, INCANDESCENT	CM7-7373	6240-00-270-6824
58	LAMP, INCANDESCENT	CM7376	6240-00-499-6278
59	LATCH, BAIL HEAD	68-20-101-10	2540-01-232-2470
60	LOCKNUT	0770-023-003	5310-01-423-3725
61	LOCKWASHER	ABCH207-LW-1/2	
62	LOCKWASHER	ABCH207-LW-3/8	
63	LOCKWASHER	B7949000161	
64	LOCKWASHER	D70336/1-20	5310-01-110-7933
65	LOCKWASHER	D70336/3-50	5310-01-439-2542
66	LOCKWASHER	D70336/3-52	5310-01-439-2543
66.1	LOCKWASHER	MS35333-78	5310-01-110-7953
66.2	LOCKWASHER	ERNA245	5310-00-584-5272
67	LOCKWASHER	MS35335-30	5310-00-209-0788
68	LOCKWASHER	MS35335-31	5310-00-596-7693
69	LOCKWASHER	MS35335-33	5310-00-209-0786
70	LOCKWASHER	MS35335-36	5310-00-550-3503
71	LOCKWASHER	MS35335-38	5310-00-616-6354
72	LOCKWASHER	MS35335-58	5310-00-209-1366
73	LOCKWASHER	MS35335-61	5310-00-527-3634
74	LOCKWASHER	MS35335-62	5310-00-184-9562

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
75	LOCKWASHER	MS35337-25	5310-00-013-8502
76	LOCKWASHER	MS35338-100	5310-00-261-8278
77	LOCKWASHER	MS35338-102	5310-00-167-0671
78	LOCKWASHER	MS35338-103	5310-00-184-8971
79	LOCKWASHER	MS35338-135	5310-00-933-8118
80	LOCKWASHER	MS35338-136	5310-00-929-6395
81	LOCKWASHER	MS35338-137	5310-00-933-8119
82	LOCKWASHER	MS35338-138	5310-00-933-8120
83	LOCKWASHER	MS35338-139	5310-00-933-8121
84	LOCKWASHER	MS35338-140	5310-00-974-6623
85	LOCKWASHER	MS35338-141	5310-00-984-7042
86	LOCKWASHER	MS35338-143	5310-00-933-8778
87	LOCKWASHER	MS35338-158	5310-00-883-9417
88	LOCKWASHER	MS35338-171	5310-01-130-9066
89	LOCKWASHER	MS35338-42	5310-00-045-3299
90	LOCKWASHER	MS35338-43	5310-00-045-3296
91	LOCKWASHER	MS35338-45	5310-00-407-9566
92	LOCKWASHER	MS35338-46	5310-01-334-4710
93	LOCKWASHER	MS35338-51	5310-00-584-7888
94	LOCKWASHER	MS35340-44	5310-00-682-5930
95	LOCKWASHER	MS51414-1	5310-01-235-2057
96	LOCKWASHER	MS51414-2	5310-01-310-1098
97	LOCKWASHER	MS51848-50	5310-01-033-8615
98	LOCKWASHER	N9015	5310-01-369-6073
99	LOCKWASHER	N9018	5310-01-032-4827
100	LOCKWASHER	N9459	5310-01-348-8393
101	LOCKWASHER	N9461	5310-01-348-8392
101.1	LOCKWASHER	XP1113	5310-01-460-5991
101.2	LOCKWASHER	10241	5310-01-416-3010
101.3	LOCKWASHER	10030	
102	LOCKWASHER	1229-S-513C	5310-01-062-3384
102.1	LOCKWASHER	12414570-011	5310-01-374-3292

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
102.2	LOCKWASHER	12414570-013	5310-01-374-4515
103	LOCKWASHER	12414570-015	5310-01-388-2043
103.1	LOCKWASHER	12414570-019	5310-01-470-2362
104	LOCKWASHER	12414570-021	5310-01-374-4516
105	LOCKWASHER	MS35338-40	5310-00-543-2410
106	LOCKWASHER	MS35338-47	5310-00-550-3741
107	NOT USED		
108	LOCKWASHER	1729B262	5310-00-964-7811
109	NOT USED		
110	NUT, BLIND RIVET	MS27130-S136	5310-01-409-4435
111	NUT, BLIND RIVET	MS27130-S148	5310-01-370-5548
112	NUT, BLIND RIVET	12421403-060	
113	NUT, BLIND RIVET	12421403-065	
114	NUT, BLIND RIVET	12421634-017	
115	NUT, BLIND RIVET	12442158-5	
115.1	NUT, PLAIN, ROUND	1727N40	5310-00-123-2572
116	NUT, SELF-LOCKING	DIN-934STM6	5310-01-342-2739
117	NUT, SELF-LOCKING	MS16228-10C	5310-00-245-8826
118	NUT, SELF-LOCKING	MS16228-5C	5310-00-584-7992
119	NUT, SELF-LOCKING	MS20500-524	5310-00-208-4023
120	NUT, SELF-LOCKING	MS21042-04	5310-00-811-6419
121	NUT, SELF-LOCKING	MS21042-5	5310-00-807-1469
122	NUT, SELF-LOCKING	MS21044C08	5310-00-982-6814
122.1	NUT, SELF-LOCKING	MS21045L5	5310-00-857-5559
123	NUT, SELF-LOCKING	MS21083N08	5310-00-941-6019
124	NUT, SELF-LOCKING	MS21083N6	5310-00-926-1852
125	NUT, SELF-LOCKING	MS51922-1	5310-00-088-1251
126	NUT, SELF-LOCKING	MS51922-2	5310-00-929-1807
127	NUT, SELF-LOCKING	MS51922-33	5310-00-225-6993
128	NUT, SELF-LOCKING	MS51922-5	5310-00-959-7600
129	NUT, SELF-LOCKING	N9406	5310-01-362-6171
130	NUT, SELF-LOCKING	N9410	5310-01-348-8398

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
130.1	NUT, SELF-LOCKING	N9453	5310-01-348-8314
131	NUT, SELF-LOCKING	N9467	5310-01-350-4257
131.1	NUT, SELF-LOCKING	N9556	5310-01-423-0880
132	NUT, SELF-LOCKING	12301125	5310-01-210-0199
132.1	NUT, SELF-LOCKING	12411174-008	
133	NUT, SELF-LOCKING	12412476-04	5310-01-466-0565
134	NUT, SELF-LOCKING	12414308-002	5310-01-381-2819
135	NUT, SELF-LOCKING	12414308-003	5310-01-377-1549
136	NUT, SELF-LOCKING	12414308-004	5310-01-369-5703
137	NUT, SELF-LOCKING	12414308-007	5310-01-046-0186
138	NUT, SELF-LOCKING	12414308-017	5310-01-381-9830
139	NUT, SELF-LOCKING	12414308-018	5310-01-369-3337
140	NUT, SELF-LOCKING	12414308-019	5310-01-369-9522
141	NUT, SELF-LOCKING	12414308-020	5310-01-381-9849
142	NUT, SELF-LOCKING	12414308-021	5310-01-369-3338
143	NUT, SELF-LOCKING	12414308-022	5310-01-417-1262
144	NUT, SELF-LOCKING	12414308-025	5310-01-367-6706
145	NUT, SELF-LOCKING	12414308-027	5310-01-369-3339
146	NUT, SELF-LOCKING	12414315-003	5310-01-374-1382
147	NUT, SELF-LOCKING	12414315-005	5310-01-372-3023
148	NUT, SELF-LOCKING	12414315-006	5310-01-369-3332
149	NUT, SELF-LOCKING	12414315-009	5310-01-365-7236
150	NUT, SELF-LOCKING	12414315-012	5310-01-369-3331
151	NUT, SELF-LOCKING	12414315-017	5310-01-368-8065
152	NUT, SELF-LOCKING	12414420-004	5310-01-370-0010
152.1	NUT, SELF-LOCKING	12417642-002	5310-01-374-3288
153	NUT, SELF-LOCKING	12419003	5310-01-376-0773
154	NUT, SELF-LOCKING	270W10000	
155	NUT, SELF-LOCKING	29514660	
156	NUT, SELF-LOCKING	7951286	5310-00-789-0398
157	PACKING, PREFORMED	A82777	5330-00-579-6495
158	PACKING, PREFORMED	F4001-16	5331-01-466-0354
158.1	PACKING, PREFORMED	J515-16-3	5331-01-465-3634

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
158.2	PACKING, PREFORMED	J515-4-1	5331-01-387-9490
159	PACKING, PREFORMED	J515-8-1	5330-00-292-8171
160	PACKING, PREFORMED	5999807	5331-01-456-9156
161	PACKING, PREFORMED	MS28775-011	5330-00-582-2133
162	PACKING, PREFORMED	MS28775-227	5330-00-576-9731
162.1	PACKING, PREFORMED	MS28775-910	5331-00-448-6753
163	PACKING, PREFORMED	MS28778-10	5330-00-285-9842
164	PACKING, PREFORMED	MS28778-12	5330-00-251-8839
165	PACKING, PREFORMED	MS28778-16	5330-00-816-3546
166	PACKING, PREFORMED	MS28778-4	5330-00-805-2966
166.1	PACKING, PREFORMED	MS28778-6	5331-00-804-5695
167	PACKING, PREFORMED	MS9955-113	5330-01-374-2325
168	PACKING, PREFORMED	M25988/1-246	5330-01-189-6351
168.1	PACKING, PREFORMED	M83461/1-442	5330-01-183-0987
169	PACKING, PREFORMED	OR420A	5330-01-389-6028
170	PACKING, PREFORMED	11639519-1	5330-00-463-0200
170.1	PACKING, PREFORMED	12422548-004	5331-01-059-1141
171	PACKING, PREFORMED	1509	5330-00-172-1919
171.1	PACKING, PREFORMED	195045	5331-00-618-5361
171.2	PACKING, PREFORMED	19755	5331-01-415-9632
171.3	PACKING, PREFORMED	198336	5331-00-584-1840
172	PACKING, PREFORMED	2M4453	5330-00-074-3768
173	PACKING, PREFORMED	22617-16	5330-01-168-0885
174	PACKING, PREFORMED	23043446	5330-01-424-6629
174.1	PACKING, PREFORMED	250192	5331-01-417-5105
174.2	PACKING, PREFORMED	251216	5330-01-417-5107
175	PACKING, PREFORMED	29500969	5330-01-360-7852
176	PACKING, PREFORMED	29503383	5330-01-360-6017
177	PACKING, PREFORMED	3-906N522-90	5330-01-104-1093
178	PACKING, PREFORMED	3-908N522-90	5330-00-929-8171
179	PACKING, PREFORMED	3D2824	5330-00-944-8281
180	PACKING, PREFORMED	3J1907	5330-01-333-6444

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
181	PACKING, PREFORMED	3J7354	5330-00-954-8008
182	PACKING, PREFORMED	3K0360	5330-00-948-6482
183	PACKING, PREFORMED	4J5477	5330-00-855-8059
184	PACKING, PREFORMED	4L9564	5330-00-828-8639
184.1	PACKING, PREFORMED	420828	5340-01-417-3788
185	PACKING, PREFORMED	5-X-1155	5330-01-392-1637
186	PACKING, PREFORMED	5F7054	5330-00-339-6224
187	PACKING, PREFORMED	5P7813	5330-01-335-0042
188	PACKING, PREFORMED	6V8397	5330-00-579-6495
189	PACKING, PREFORMED	673268	
190	PACKING, PREFORMED	673269	5330-01-395-1252
191	PACKING, PREFORMED	7F8267	5330-01-291-7353
192	PACKING, PREFORMED	7320658	5330-00-297-7106
193	PACKING, PREFORMED	9604792-001	5330-01-429-3089
194	PAD, CUSHIONING	12416479-001	2590-01-397-7844
195	PAD, CUSHIONING	12416479-002	2590-01-412-2663
196	PARTS KIT, DEHYDRATOR	RN-60-A	4440-01-337-7324
197	PARTS KIT, SEAL REPLACEMENT	SK10-2	5330-01-350-4474
198	PARTS KIT, SEAL REPLACEMENT	SK10-3	5330-01-350-4472
199	PARTS KIT, SEAL REPLACEMENT	SK10-4	5330-01-343-2745
200	PIN, COTTER	K-2412-Z	5315-01-179-9882
201	PIN, COTTER	MS171659	5315-00-846-8337
202	PIN, COTTER	MS24665-151	5315-00-815-1405
203	PIN, COTTER	MS24665-298	5315-00-234-1861
204	PIN, COTTER	MS24665-385	5315-00-187-9382
205	PIN, COTTER	MS24665-423	5315-00-013-7228
206	PIN, COTTER	MS24665-457	5315-00-187-9393
207	PIN, COTTER	MS24665-459	5315-00-187-9394
208	PIN, COTTER	MS24665-69	5315-00-828-8190
208.1	PIN, COTTER	XB-781-1	5315-01-369-1346
209	NOT USED		

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
210	PIN, SPRING	MS16562-142	5315-00-058-6115
211	PIN, SPRING	MS16552-146	5315-00-853-3814
212	PLASTIC STRIP	352700	5330-01-296-2109
213	RECEPTACLE	50R4-1-1AA	5325-01-049-2049
213.1	REPAIR KIT, GOVERNOR	RN32W	
213.2	RETAINER, PACKING	11863-012	5330-01-417-7795
213.3	RETAINER, PACKING	202624	5330-01-417-7794
214	RETAINER	A-1205-D-2344	5330-01-360-5253
215	RIVET, BLIND	AK42H	5320-00-874-4477
216	RIVET, BLIND	AK43H	5320-00-143-6149
217	RIVET, BLIND	MS20600AD5W12	5320-01-047-0467
217.1	RIVET, BLIND	MS20601B4W2	5320-00-616-5274
218	RIVET, BLIND	MS20604B3W2	5320-00-721-9075
219	RIVET, BLIND	M24243/1-A806	5320-00-850-3256
220	RIVET, BLIND	M24243/1-B302	5320-00-999-0397
221	RIVET, BLIND	M24243/1-D502	5320-00-850-3248
222	RIVET, BLIND	M24243/1-D608	5320-00-850-3246
223	RIVET, BLIND	M24243/1-F402	5320-00-129-9706
223.1	RIVET, BLIND	M24243/1-F608	5320-01-392-0699
223.2	RIVET, BLIND	M24243/1-F610	
224	RIVET, BLIND	M24243/6-A403H	5320-00-882-8388
225	RIVET, BLIND	M24243/6-A405H	5320-01-291-9121
226	RIVET, BLIND	M24243/6-A406H	5320-01-421-0484
227	RIVET, BLIND	M24243/6-A602H	5320-00-956-7362
228	RIVET, BLIND	M24243/6-A604H	5320-00-956-7355
229	RIVET, BLIND	M24243/6-A606H	5320-00-882-8385
230	RIVET, BLIND	M24243/6-A608H	5320-01-032-6534
231	RIVET, BLIND	M24243/7-A402H	5320-00-874-4477
232	RIVET, BLIND	M24243/7-A403H	5320-00-143-6149
233	RIVET, BLIND	M24243/7-A604H	5320-00-420-2165
234	RIVET, BLIND	M24243/7-A606H	5320-00-490-5523

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
235	RIVET, BLIND	SD64BSLF	5320-01-397-3347
236	RIVET, BLIND	206057	5320-01-411-0081
237	RIVET, COMPRESSION	12418469	5320-01-376-0699
237.1	SCREW, CAP	CSH5-24-39	5305-01-479-7857
238	SCREW, CAP	12414475-131	5303-01-363-0703
239	SCREW, CAP	6V-2315	5306-01-433-4753
240	SCREW, MACHINE	MS24693-144	
241	SCREW, MACHINE	MS51958-83	5305-00-071-2095
242	SCREW, SELF-LOCKING	MS16998-61L	5305-01-211-3097
243	SEAL	VC08G1R0B	5330-01-389-6109
244	SEAL	12421431	9320-01-398-6317
245	SEAL	125128-5	
246	SEAL	125128-6	
247	SEAL	355150	5330-01-423-0689
247.1	SEAL	12422401-001	5999-01-478-5940
247.2	SEAL	12422401-002	5999-01-478-5932
247.3	SEAL	12422401-003	5999-01-478-5937
248	SEAL ASSEMBLY, CTIS	A1205-Q-2435	5330-01-360-7753
249	SEAL ASSEMBLY, HUB	A1205-R-2254	5330-01-360-5252
250	SEAL, DOOR	12416467	5330-01-385-3769
251	SEAL RING, METAL	29505809	5330-01-360-5329
252	SEAL, NONMETALLIC	CC3550	5330-01-431-7575
253	SEAL, NONMETALLIC	12417725	5330-01-375-2908
254	SEAL, NONMETALLIC	2418974-1	5330-01-257-1709
255	SEAL, NONMETALLIC	673999	5310-01-454-5553
255.1	SEAL, PLAIN	N72143	5330-01-453-4462
255.2	SEAL, SHAFT	SERUR25-2	5330-01-135-3376
256	SEAL, URETHANE FOAM	12420420-001	5680-01-453-8912
257	SEAL, URETHANE FOAM	12420420-002	5680-01-453-8485
258	SEAL, URETHANE FOAM	12420420-003	5680-01-453-8486
259	SEAL, WEATHER	147P00039	
259.1	SPACER	12422545	5365-01-490-6790

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
260	SPACER, RING	4P2987	5365-01-433-8407
260.1	SPIDER, UNIVERSAL JOINT, VEHICULAR	R279X	
261	SPLICE, CONDUCTOR	12420927-001	5940-01-456-1319
262	SPLICE, CONDUCTOR	12420927-002	5940-01-421-6955
263	STRAIN RELIEF	10280870-3	5975-00-376-1585
263.1	STRIP, RUBBER	12412581	9320-01-399-4888
264	TERMINAL, LUG	MS20659-163	5940-00-113-3145
265	TERMINAL, LUG	MS20659-164	5940-00-113-3148
266	TERMINAL, LUG	MS25036-108	5940-00-143-4780
267	TERMINAL, LUG	MS25036-122	5940-00-113-8190
268	TERMINAL, LUG	12414275-001	
269	TERMINAL, LUG	12416409-006	
269.1	TERMINAL, LUG	12420344	5940-01-082-3321
270	WASHER, FLAT	MS27183-10	5310-00-809-4058
270.1	WASHER, FLAT	12414473-010	5310-01-374-6990
271	WASHER, FLAT	12417948-004	5365-01-436-8308
271.1	WASHER, FLAT	251391	5310-01-417-1041
272	WASHER, FLAT RUBBER	900.032	5330-01-378-7541
273	WASHER, NYLON	MS51859-16	5310-00-964-7811
274	WASHER, SPRING	D63474/1-30	5310-01-413-8475
275	WASHER, SPRING	WW579S18	
276	WASHER, SPRING	110 7289	5310-01-246-1387
277	WASHER, SPRING	12414559-021	5310-01-374-4517
278	WASHER, SPRING	12414560-017	5310-01-395-0820
279	WASHER, SPRING	12414560-018	5310-01-381-3281
280	WASHER, SPRING	12414560-019	5310-01-369-6074
281	WASHER, SPRING	12417503	5310-01-406-6326
282	WASHER, SPRING	12418220	5310-01-372-3495
283	WASHER, SPRING	12414560-009	5310-01-333-5517

APPENDIX H LUBRICATION ORDER AND SERVICES

SECTION I. INTRODUCTION

H-1. GENERAL

The information contained in this appendix provides the lubrication/services requirements for the LMTV vehicle.

- a. **Adherence.** Intervals (on-condition or hardtime) and the related man-hour times are based on normal operation. The man-hour time specified is the time needed to do all the services prescribed for a particular interval. On-condition (OC) oil sample intervals will be applied unless changed by the Army Oil Analysis Program (AOAP) laboratory. Change the hardtime interval if the lubricants are contaminated or if operating the equipment under adverse operating conditions, including longer-than-usual operating hours. The calendar interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken. Hardtime intervals will be applied in the event AOAP laboratory support is not available. Hardtime intervals must be applied during the warranty period.

Intervals shown in this lubrication order and services are based on mileage/calendar, and in some cases mileage alone. An example of a mileage/calendar interval is: **Q**, which means every 3,000 miles (4,827 km) or quarterly (every three months). The lubrication is to be performed at whichever interval occurs first for the vehicle. An example of a mileage alone interval is: **6K**, which stands for every 6,000 miles (9,654 km). The lubrication/services is to be performed at the mileage indicated regardless of the calendar interval.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38 C) and for Type II is 138 F (50 C). Failure to comply may result in serious injury or death to personnel.**
 - **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.**
- b. **Cleaning fittings before lubricating.** Clean parts with dry cleaning solvent (SD P-D-680) (Item 71, Appendix D) or equivalent. Dry before lubricating. Dashed arrows indicate lubrication on both sides of the equipment.
- c. **Lubricating after fording.** If fording occurs, lubricate all fittings below fording depth and check submerged gearboxes for presence of water.
- d. **Lubricating after high-pressure washing.** After a thorough washing, lubricate all grease fittings and oil can points outside and underneath vehicle.
- e. **Level of Maintenance.** The lowest level of maintenance authorized to lubricate a point is Operator/Unit Maintenance (O). Operator/crew (C) may lubricate points authorized for Unit Maintenance (O) when authorized by Unit Maintenance (O).
- f. **Localized views.** A reference to the appropriate localized view is given after most lubrication entries. Localized views begin on page H-9.

H-1. GENERAL (CONT)

g. Interval Symbols. The lubrication/service interval symbols will be used as applicable:

- Q-quarterly/3,000 mi (4,827 km) (whichever occurs first)
- S-semiannually/6,000 mi (9,654 km) (whichever occurs first)
- A-annually/12,000 mi (19,308 km) (whichever occurs first)
- B-biennially/24,000 mi (38,616 km) (whichever occurs first)
- 3K-every 3,000 mi (4,827 km) (no calendar interval)
- 6K-every 6,000 mi (9,654 km) (no calendar interval)
- 12K-every 12,000 mi (19,308 km) (no calendar interval)
- 24K-every 24,000 mi (38,616 km) (no calendar interval)

H-2. OIL FILTERS

Oil filters shall be serviced/changed as applicable, when:

- a. They are known to be contaminated, or clogged;
- b. Service is recommended by AOAP laboratory analysis; or
- c. At prescribed hardtime intervals while vehicle is under warranty, or if AOAP is not available/used as required.

H-3. AOAP SAMPLING INTERVAL

WARNING

- **Engine oil is hot and under pressure. The oil sampling valve releases oil proportionally to the amount of pressure applied to valve. Activate oil sampling valve by pressing in slowly to prevent injury to personnel. Failure to comply may result in injury to personnel.**
- **Wear safety goggles when taking oil sample. Oil is under pressure and could cause injury to personnel. Failure to comply may result in injury to personnel.**

Units participating in AOAP will sample engine oil every 3,000 miles (4,827 km) or 6 months, whichever occurs first and change engine oil as directed by AOAP. Units participating in AOAP will sample transmission oil every 6,000 miles (9,654 km) or 12 months, whichever occurs first and change transmission oil as directed by AOAP. Units participating in AOAP will sample hydraulic system oil initially after 6 weeks or 10 hours of operation, whichever occurs first. After initial oil change samples should be taken every 12 months or 50 hours of operation, whichever occurs first and change hydraulic oil as directed by AOAP.

H-4. WARRANTY HARDTIME STATEMENT

"For equipment under manufacturer's warranty, hardtime oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (such as longer than usual operating hours, extended idling periods, extreme dust)."

SECTION II. LUBRICATION/SERVICE CHART

H-5. LUBRICATION/SERVICE KEY

LUBRICANTS	
Specification	Type
MIL-L-2104 (OE/HDO)	Lubricating Oil, Internal Combustion Engine, Combat/Tactical Service
MIL-L-46167 (OEA)	Lubricating Oil, Internal Combustion Engine, Arctic
MIL-L-2105 (GO)	Lubricating Oil, Gear, Multipurpose
MIL-G-10924 (GAA)	Grease, Automotive and Artillery
MIL-G-18458 (GW)	Grease, Wire-Rope and Exposed Gear
MIL-H-5606 (OHA)	Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordnance

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Engine crankcase	25 qt (24 L)	OE/HDO-15/40	OE/HDO-15/40	OEA
Transmission (total system)	43.3 qt (41 L)	OE/HDO-15/40	OE/HDO-10	OEA
Transmission (at oil change)	31.8 qt (30.0 L)	OE/HDO-15/40	OE/HDO-10	OEA
Transmission (after overhaul)	39.0 qt (37.0 L)	OE/HDO-15/40	OE/HDO-10	OEA
Steering system	5 qt (4.8 L)	OE/HDO-10	OE/HDO-10	OEA
Hydraulic reservoir	27 gal (102.2 L)	OE/HDO-10	OE/HDO-10	OEA
Front axle differential (maximum capacity)	9.5 qt (9.0 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
Rear axle differential (maximum capacity)	18.05 qt (17.1 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
Front axle planetary hubs	11-13 oz (0.33-0.38 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
11K Self-Recovery Winch (SRW)	As Required	GO-85/140	GO-80/90	GO-75
Propeller shaft universal and slip joints	As Required	GAA	GAA	GAA
Tie rod ends	As Required	GAA	GAA	GAA
Towing pintle assembly	As Required	GAA	GAA	GAA
Spring bolts and spring shackles	As Required	GAA	GAA	GAA
Front axle shaft U-joints and steering knuckles	As Required	GAA	GAA	GAA

H-5. LUBRICATION/SERVICE KEY (CONT)

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Front axle inner wheel bearing	As Required	GAA	GAA	GAA
Rear axle inner wheel bearing	As Required	GAA	GAA	GAA
Front lifting beam	As Required	GAA	GAA	GAA
11K Self-Recovery Winch (SRW) cable	As Required	GW	GW	GW
Air/hydraulic power unit	3 pt (1.4 L)	OHA	OHA	OHA
Backup hydraulic pump	19 oz (562 ml)	OHA	OHA	OHA

COOLANT	
Specification	Type
A-A-52624A	Antifreeze, Multi-Engine Type
MIL-A-11755	Antifreeze, Arctic-Type

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Cooling system (engine only)	14 qt (13 L)	A-A-52624A	A-A-52624A	N/A
Cooling system (total system)	43.8 qt (41.5 L)	A-A-52624A	A-A-52624A	N/A
Cooling system, Arctic (total system)	58.3 qt (55.2 L)	N/A	N/A	MIL-A-11755

CLEANING AGENT	
Specification	Type
P-D-680	Dry Cleaning Solvent, SD-II
O-C-1901	Cleaning Compound, Windshield

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +15 F (Above -9 C)	+15 F to -15 F (-9 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
All metal parts as required	N/A	SD-II (all temperatures)		
Windshield washer reservoir	7.5 qt (7.1 L)	2/3 water to 1/3 O-C-1901	1/2 water to 1/2 O-C-1901	1/3 water to 2/3 O-C-1901

For arctic operation refer to FM 9-207.

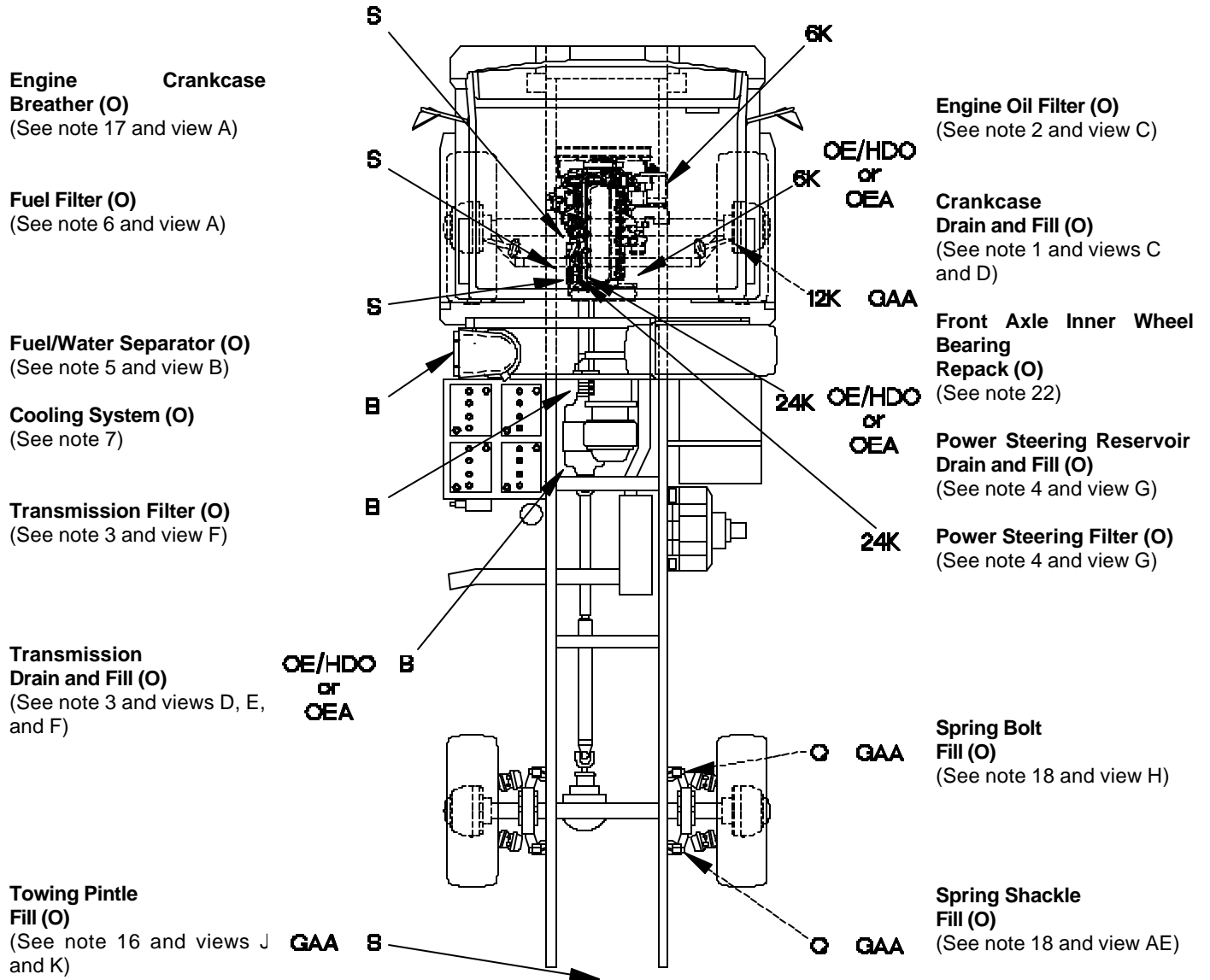
H-6. LUBRICATION/SERVICE INTERVALS

Intervals		Total Man-Hours
Quarterly (Q)	Lubrication performed once every three months or 3,000 mi (4,827 km).*	2.0
Semi-annually (S)	Lubrication performed once every six months or 6,000 mi (9,654 km).*	2.5
Annually (A)	Lubrication performed once every year or every 12,000 mi (19,308 km).*	1.5
Biennially (B)	Lubrication performed once every two years or every 24,000 mi (38,616 km).*	3.5
3K	Lubrication performed once every 3,000 mi (4,827 km).**	1.0
6K	Lubrication performed once every 6,000 mi (9,654 km).**	1.0
12K	Lubrication performed once every 12,000 mi (19,308 km).**	4.0
24K	Lubrication performed once every 24,000 mi (38,616 km).**	0.5
* Whichever occurs first.		
** No calendar interval.		

H-7. LOCATOR VIEWS

LUBRICANT INTERVAL

INTERVAL LUBRICANT



3APPHD11

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

LUBRICANT INTERVAL

INTERVAL LUBRICANT

**Spring Bolt
Fill (O)**
(See note 18 and view H)

**Spring Shackle
Fill (O)**
(See note 18 and view I)

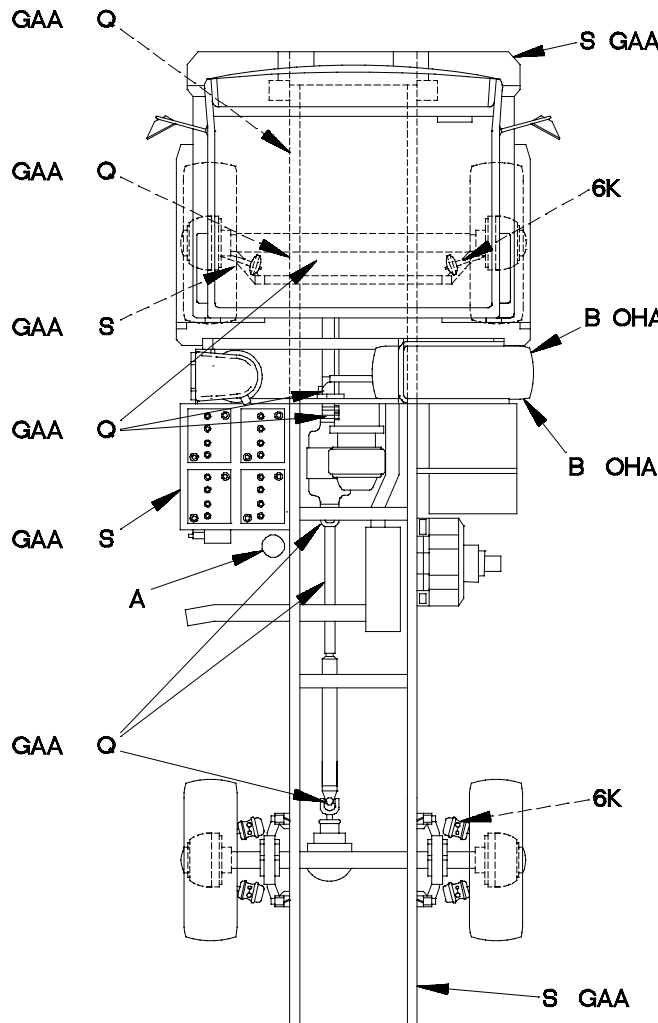
**Tie Rod Ends
Fill (O)**
(See note 13 and view N)

**Universal and Slip Joints
Fill (O)**
(See note 9 and view P)

Battery Posts (O)
(See note 19 and view Q)

Air Dryer (O)
(See note 25 and view AF)

**Universal and Slip Joints
Fill (O)**
(See note 9 and view P)



**11K Self-Recovery Winch
(SRW) Cable Front Roller
Fairlead
Fill (O)**
(See note 23 and views Z
and AA)

**Brake Wedge and Air
Chamber (O)**
(See note 21 and view L)

**Backup Hydraulic Pump
Drain and Fill (O)**
(See note 10 and view R)

**Air/Hydraulic Power Unit
Drain and Fill (O)**
(See note 10 and view S)

**Brake Wedge and Air
Chamber (O)**
(See note 21 and view M)

**11K Self-Recovery Winch
(SRW) Cable Rear Roller
Fairlead
Fill (O)**
(See note 23 and views AB
and AC)

3APP021

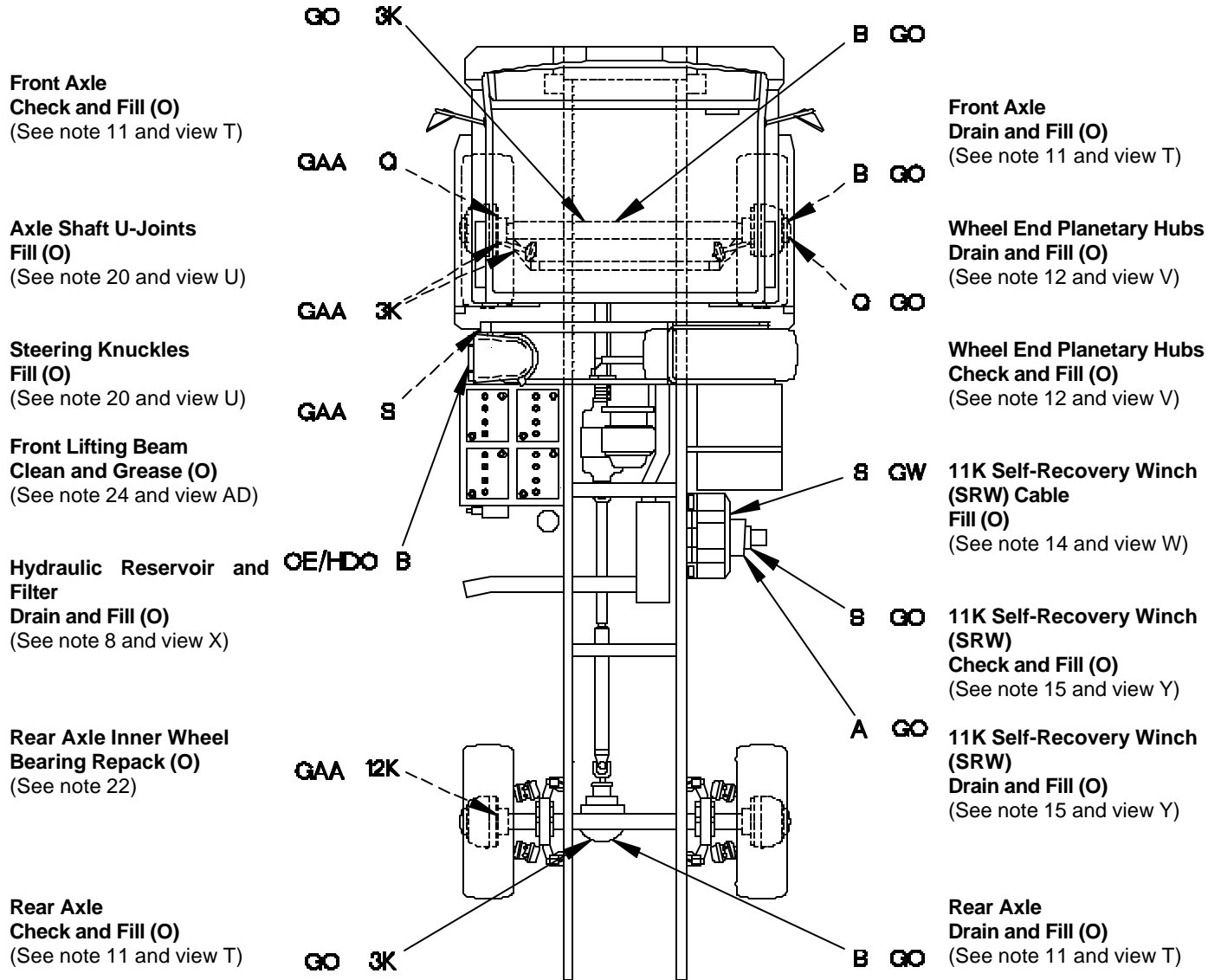
CHASSIS

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

H-7. LOCATOR VIEWS (CONT)

LUBRICANT INTERVAL

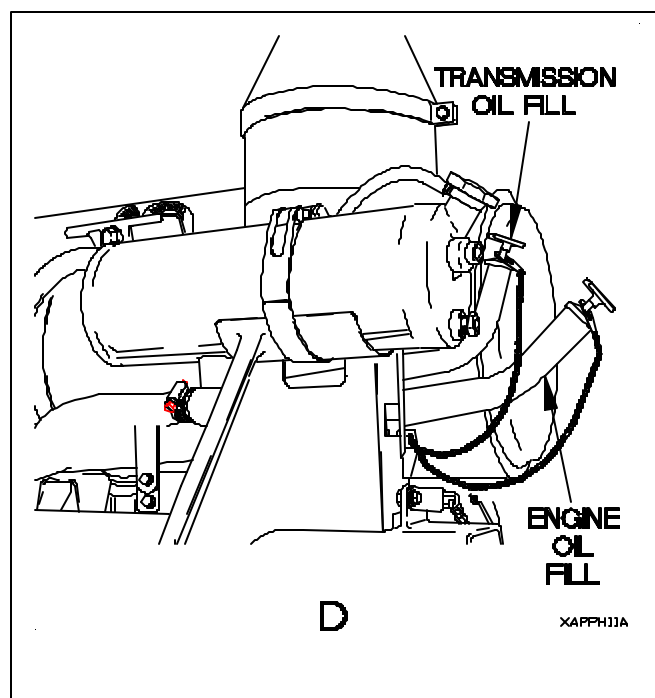
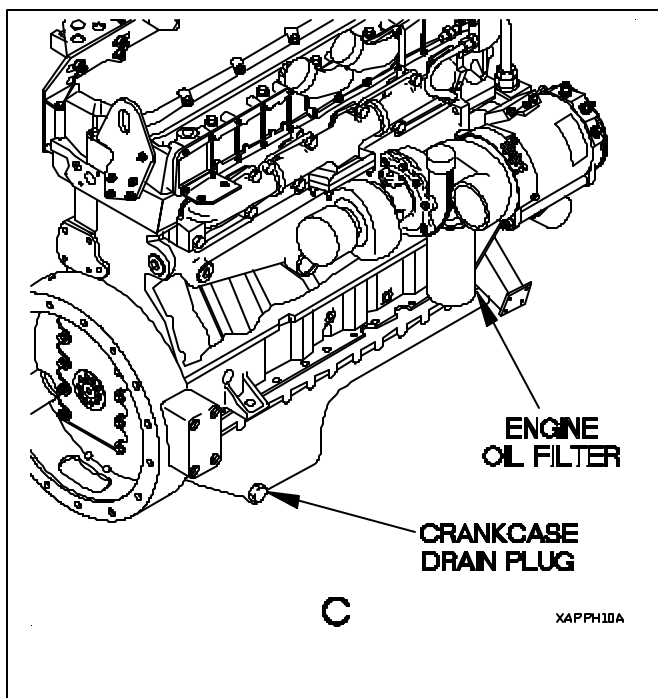
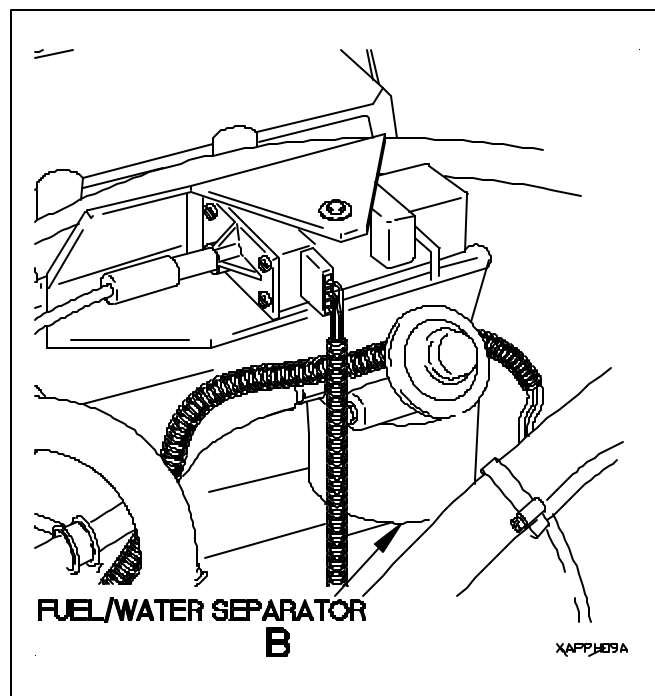
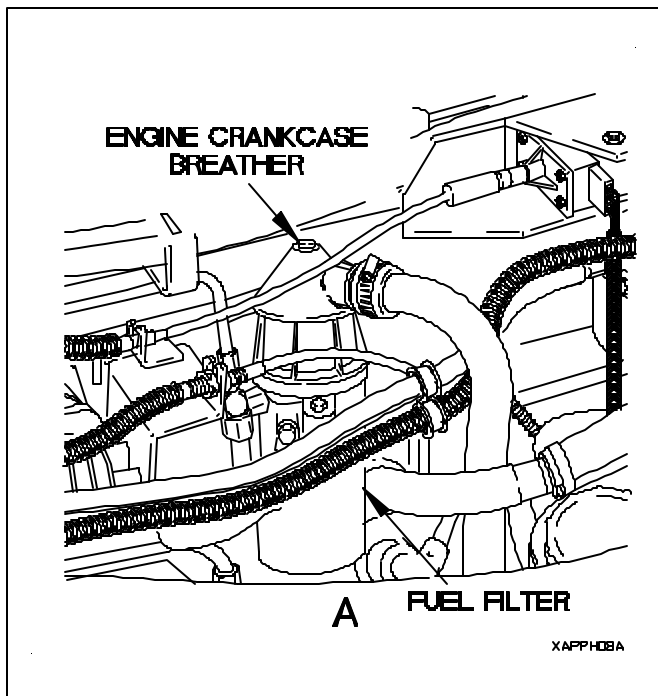
INTERVAL LUBRICANT



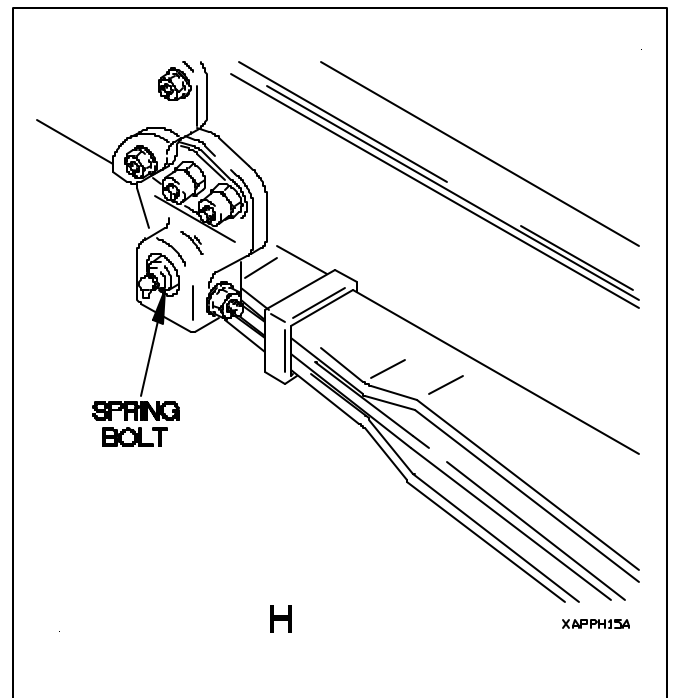
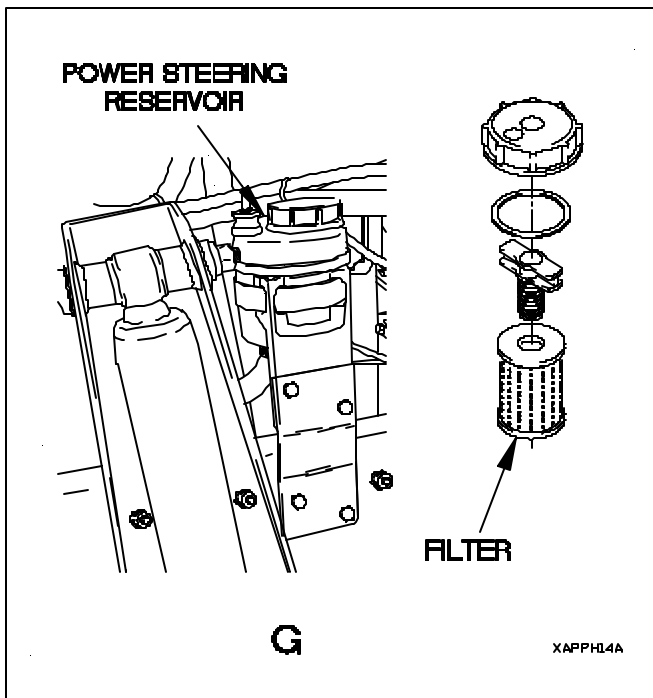
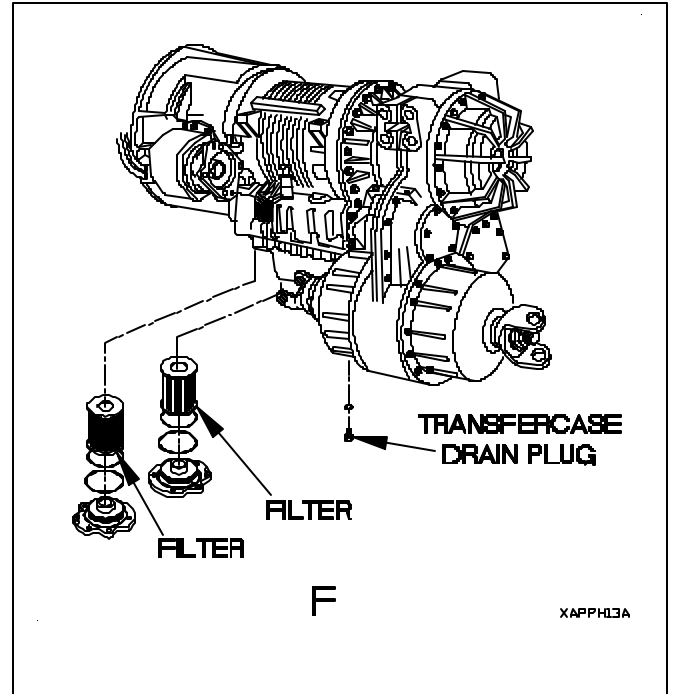
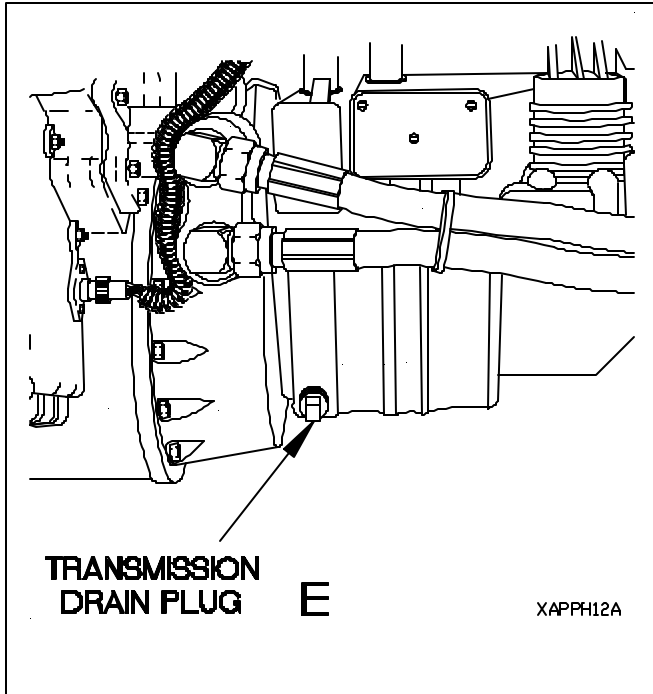
3APP-1131

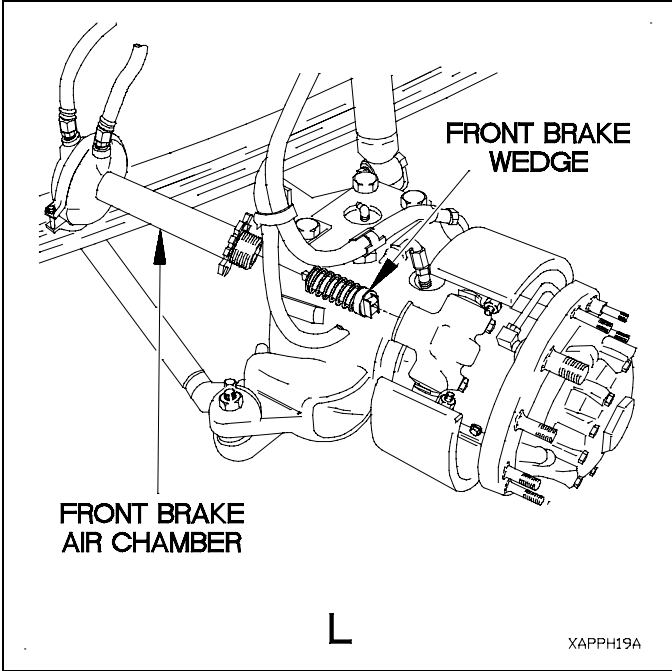
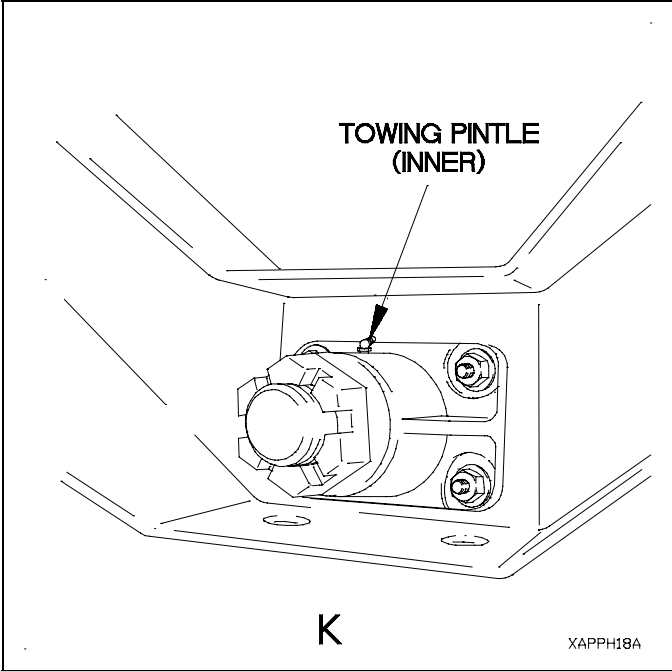
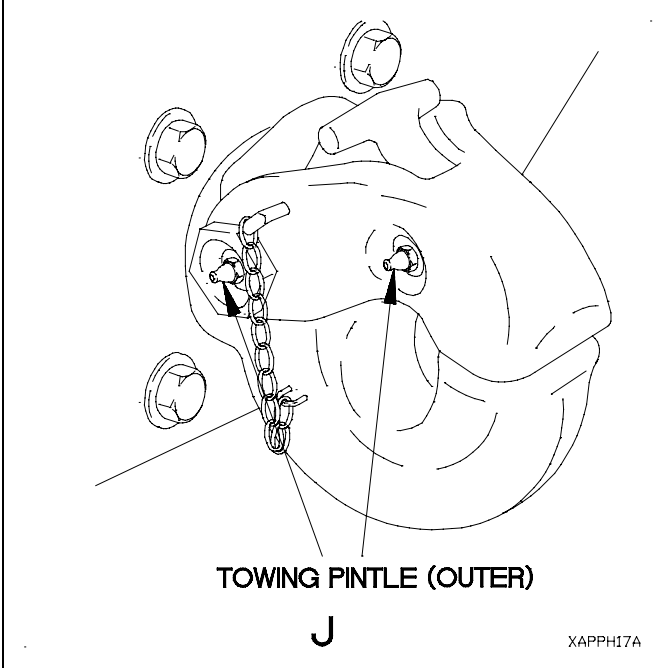
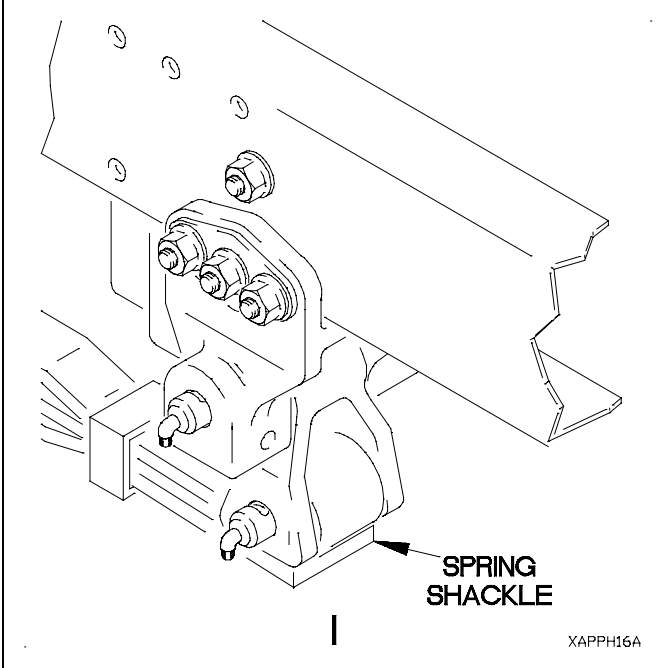
CHASSIS

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

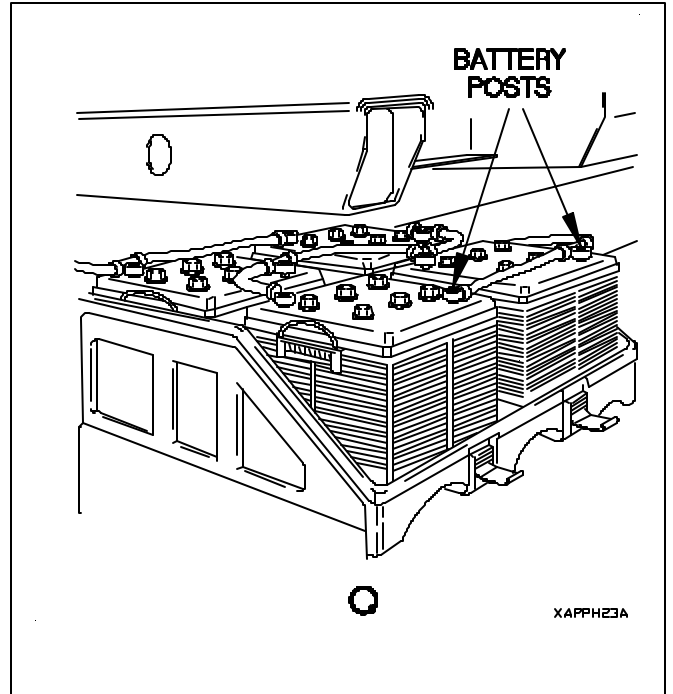
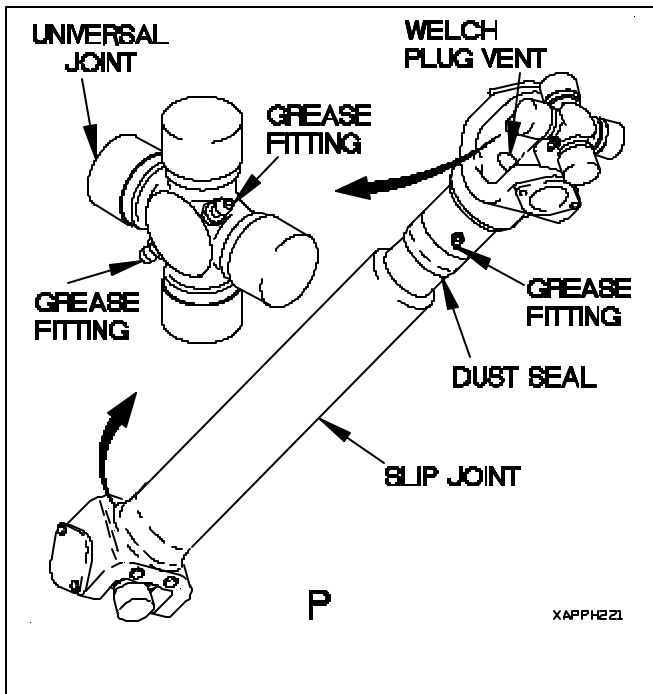
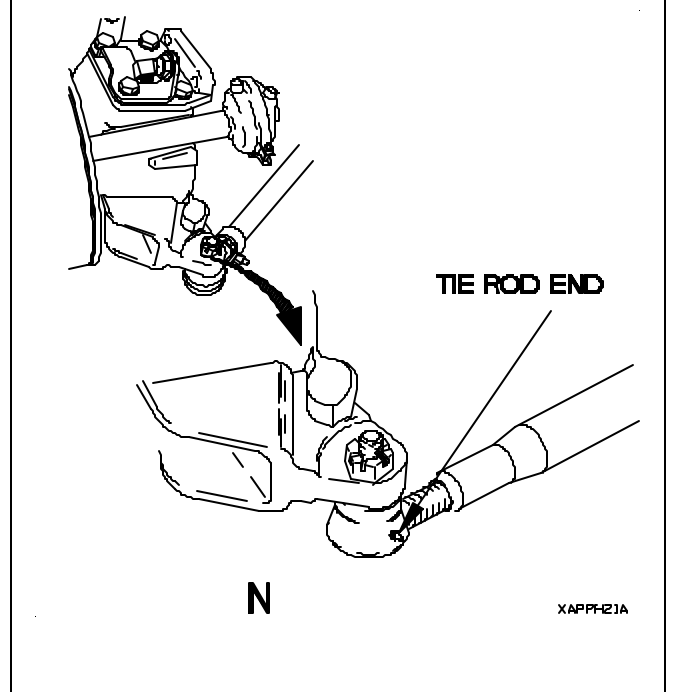
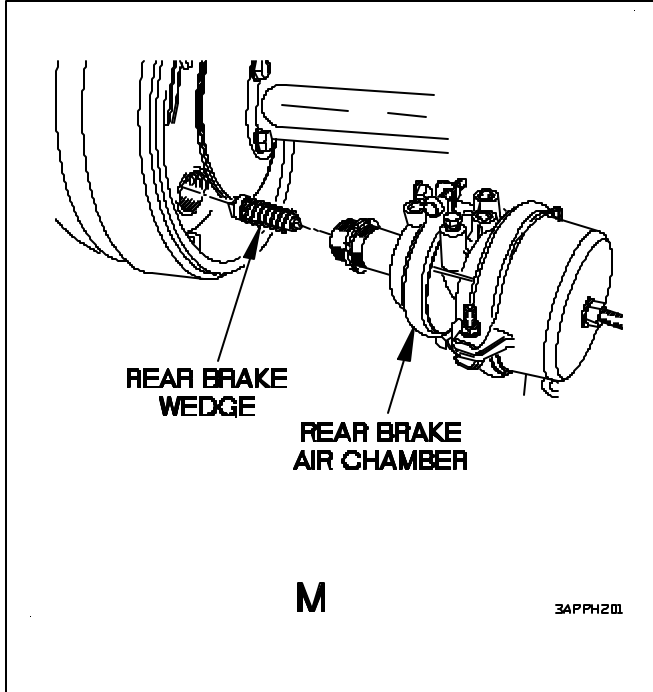


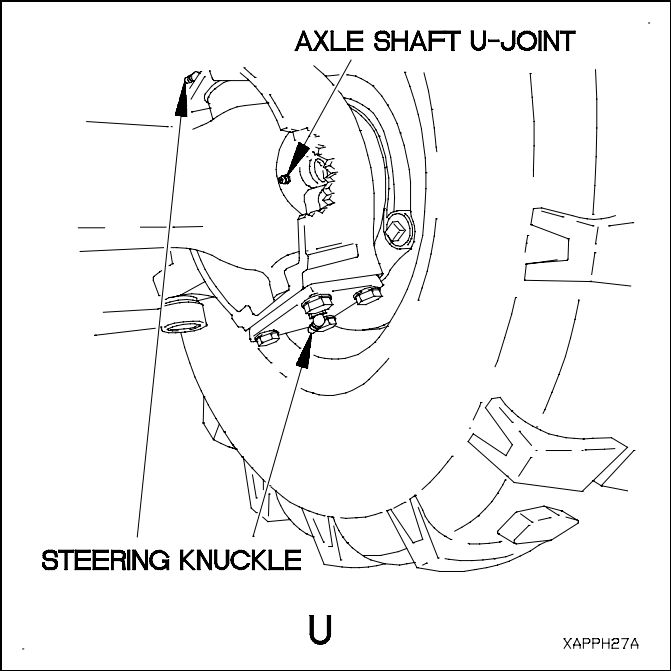
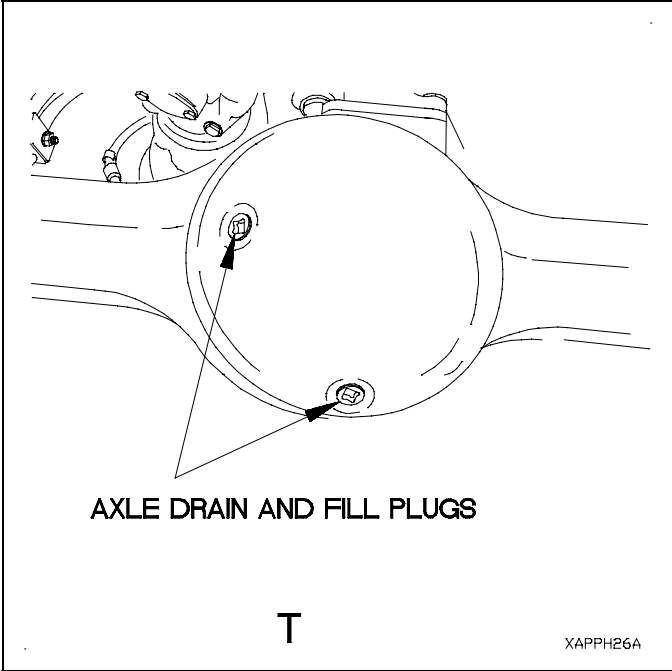
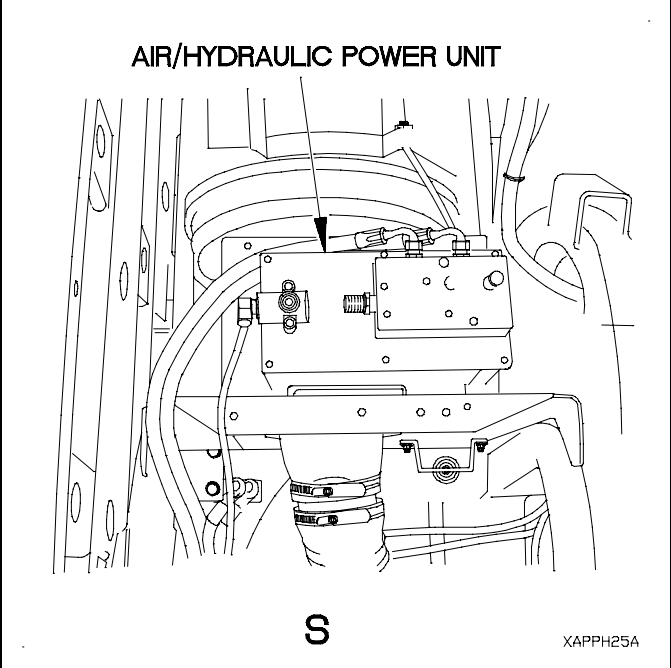
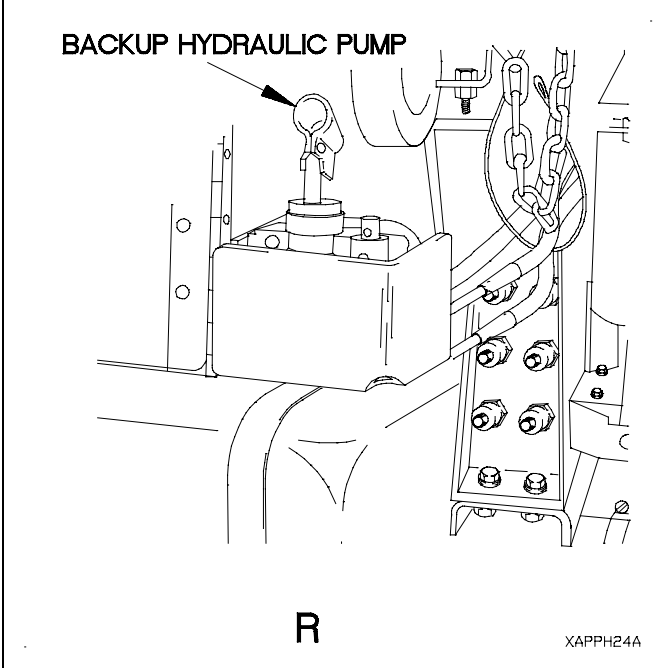
H-8. LOCAL VIEWS (CONT)



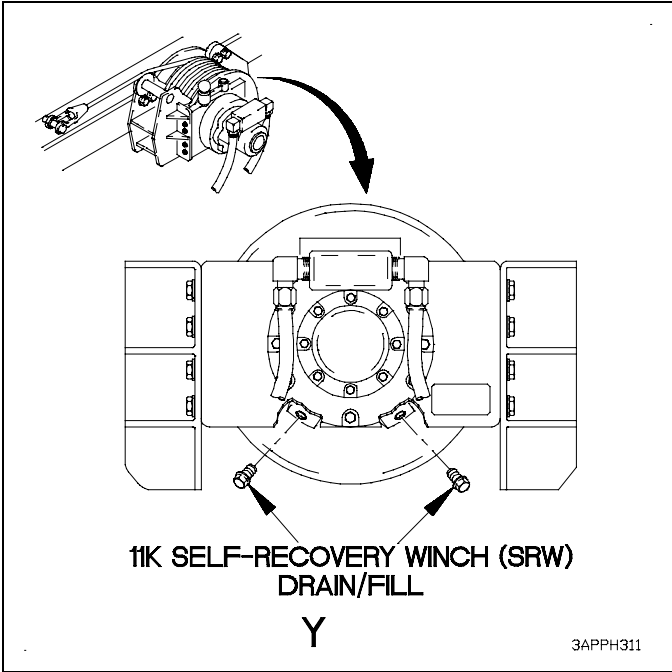
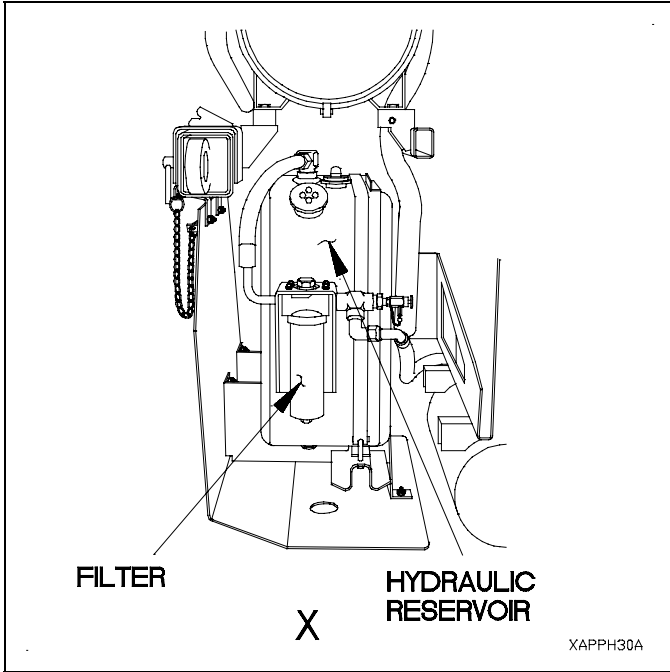
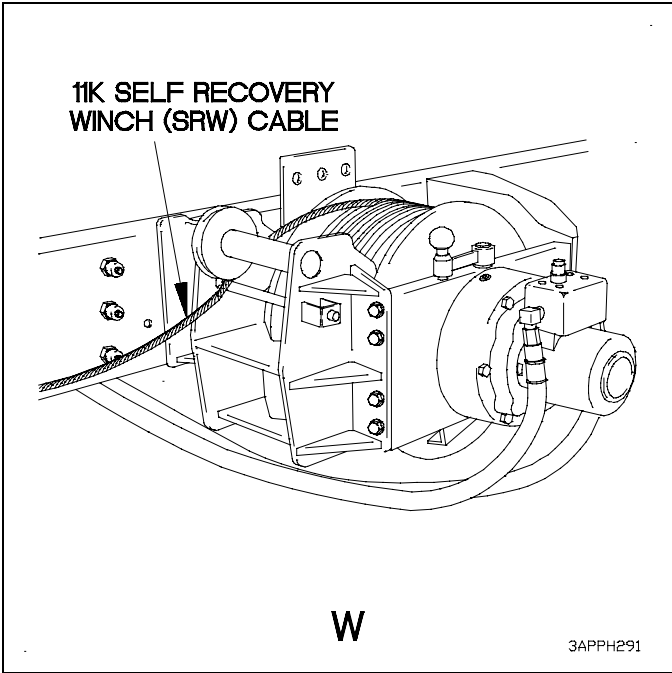
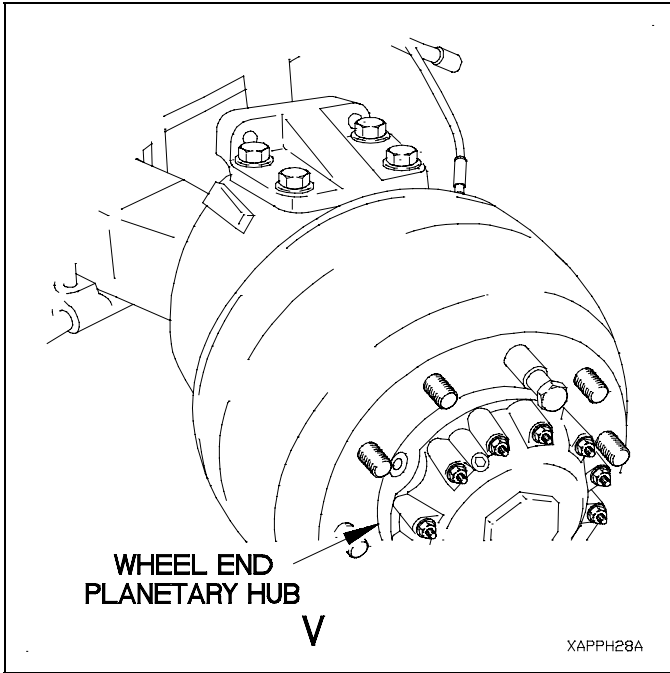


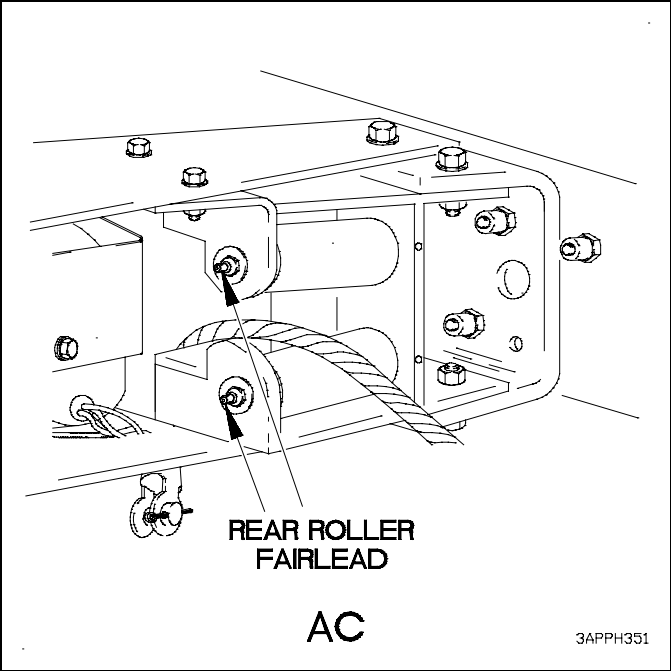
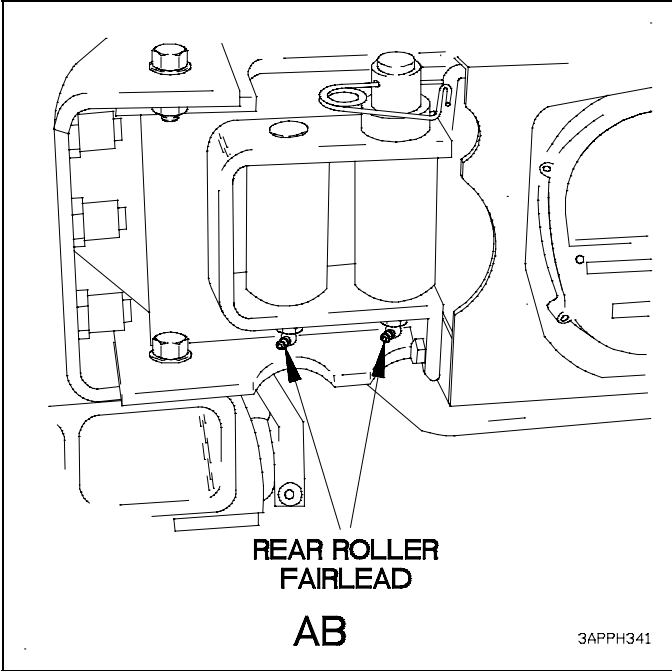
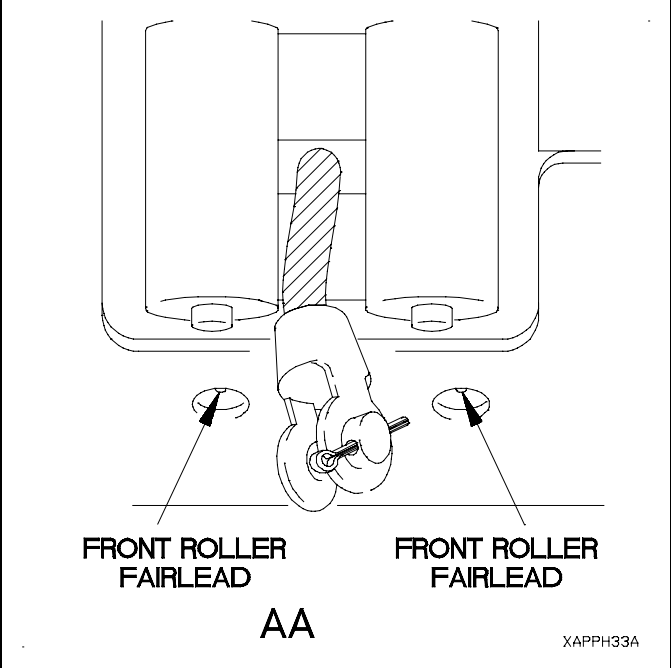
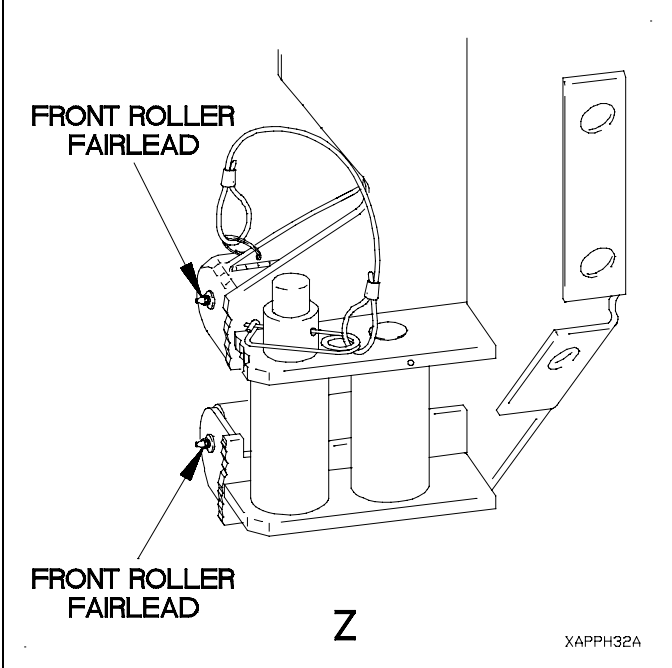
H-8. LOCAL VIEWS (CONT)



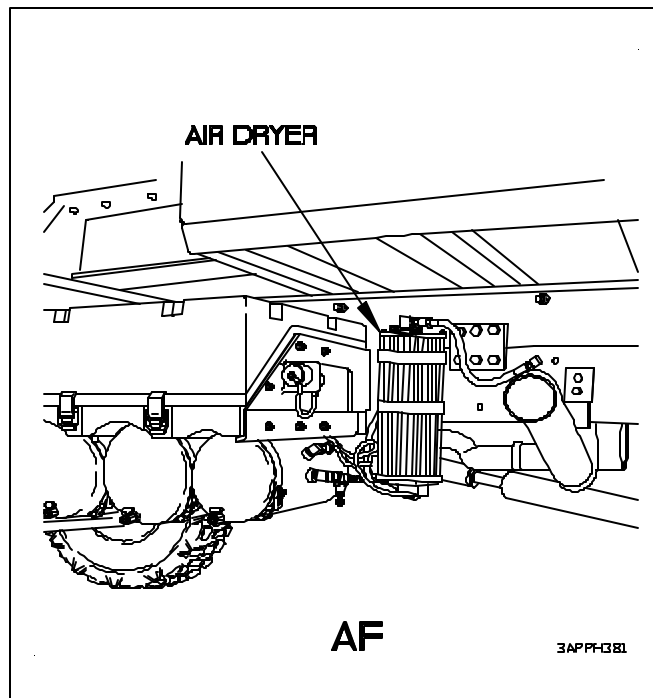
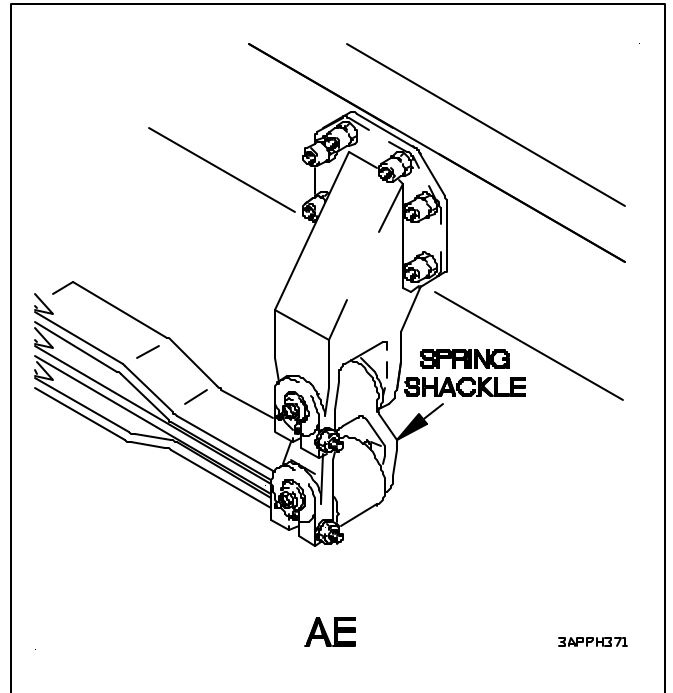
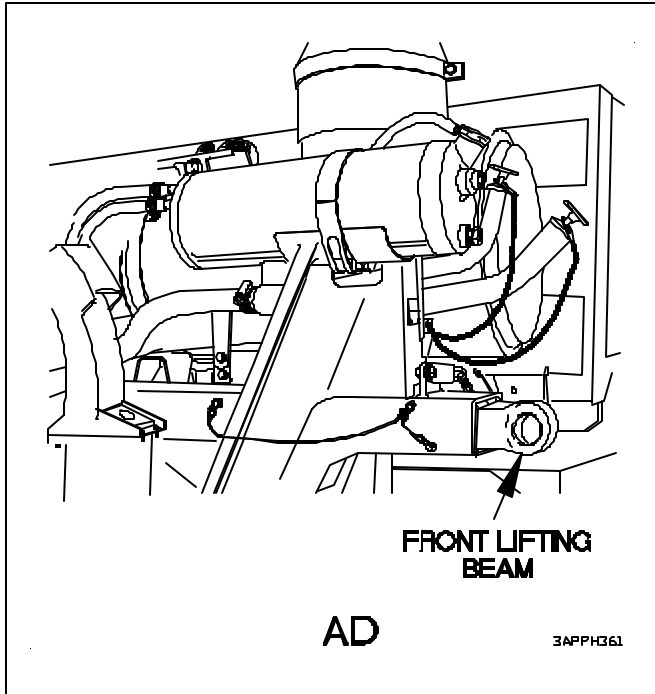


H-8. LUBRICATION LOCAL VIEWS (CONT)





H-8. LOCAL VIEWS (CONT)



H-9. LUBRICATION/SERVICES NOTES

1. **ENGINE CRANKCASE.** Check engine oil level daily. Change engine oil at initial 5,000 miles (8,045 km). During the remainder of the 12,000 mile (19,308 km)/18 month warranty period, Units participating in AOAP will sample engine oil every 3,000 miles (4,827 km) or 6 months, whichever occurs first and change engine oil as directed by AOAP. Units not participating in AOAP, will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first. After expiration of engine warranty period, Units participating in AOAP will perform engine oil change as directed by AOAP. Units not participating in AOAP will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first, or when operating in dusty areas or under severe operating conditions, change the oil every 3,000 miles (4,827 km) or every three months, whichever occurs first. Drain engine oil when engine is warm. Refill engine crankcase with OE/HDO specified for the ambient temperature. Engine oil is full when level is within crosshatch marks on the dipstick. Do not overfill.
2. **ENGINE OIL FILTER.** Filter is replaced each time the crankcase is drained. If water or metal particles are detected during oil filter replacement, notify Direct Support Maintenance personnel before refilling crankcase (para 3-4).
3. **TRANSMISSION.** Check transmission oil level daily. Change transmission oil at initial 5,000 miles (8,045 km). During the remainder of the 24 month/unlimited mileage warranty, Units participating in AOAP will sample transmission oil every 6,000 miles (9,654 km) or 12 months, whichever occurs first and change transmission oil as directed by AOAP. Units not participating in AOAP will perform transmission oil change every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Drain transmission oil when engine is warm. Refill with OE/HDO specified for ambient temperature. Add oil until the proper level is reached (TM 9-2320-365-10). Do not overfill. Replace oil filters each time transmission oil is changed (para 8-9).
4. **POWER STEERING.** Check power steering oil level weekly. Change the oil every 24,000 miles (38,616 km). Disconnect upper and lower hoses from steering gear and drain oil. Refill power steering pump reservoir with OE/HDO specified for the ambient temperature. Reservoir is full when oil is between the two marks on the dipstick. Do not overfill. Remove dipstick, wipe clean and install dipstick fully into reservoir. Remove dipstick and read oil level. Replace oil filter each time power steering oil is changed (para 13-8).
5. **FUEL/WATER SEPARATOR.** Replace filter element every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 4-13).
6. **FUEL FILTER.** The fuel particle filter is replaced when a new fuel/water separator filter element is installed. The normal replacement interval is every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 4-14).
7. **ENGINE COOLANT.** Check engine coolant level daily. Change the coolant and flush the cooling system every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Fill radiator overflow tank with an Ethylene Glycol/water mixture as specified in 0-A-548D. Service the cooling system before the specified interval if:
 - Coolant is heavily contaminated.
 - Engine overheats.
 - Oil cooler has failed allowing oil and coolant to mix.
8. **HYDRAULIC RESERVOIR and FILTER.** Check oil level weekly and make sure oil level gage reads **F (full)**. Units participating in AOAP will sample oil annually and change oil and filter as directed by AOAP. Units not participating in AOAP will change oil and filter every two years. Drain oil and refill hydraulic reservoir with OE/HDO specified for ambient operating temperature. Fill hydraulic reservoir until oil level gage reads **F (full)**. Do not overfill. Replace oil filter each time oil is changed (para 9-12).

H-9. LUBRICATION/SERVICE NOTES (CONT)

9. DRIVE SHAFT UNIVERSAL and SLIP YOKE.

Lubricate drive shafts with GAA every 3,000 miles (4,827 km) or once every three months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first. Perform drive shaft hinging inspection every time drive shafts are serviced (para 9-3).

- UNIVERSAL JOINT:
 - A. Apply grease to both grease fittings until new grease purges from all four bearing caps.
 - B. If grease does not purge from all four bearing caps, perform the following steps:
 - (1) Loosen two screws on bearing cap that does not purge, approximately 1/4 in.
 - (2) Apply grease to grease fitting for bearing cap that does not purge until bearing cap purges.
 - (3) Remove and discard the two screws loosened in step (1).
 - (4) Position two replacement screws in bearing cap and tighten down evenly.
 - (5) Tighten two screws to 26-35 lb-ft (35-47 N m).
- SLIP JOINT:
 - A. Apply grease until grease appears at the vent in the welch plug.
 - B. Place your finger over the welch plug vent and add grease until grease purges from the dust seal.
 - C. If grease does not purge from the dust seal, inspect drive shaft slip yoke (para 9-2).

10. AIR/HYDRAULIC POWER UNIT and BACKUP HYDRAULIC PUMP. Change OHA oil every 24,000 miles (38,616 km) or once every two years, whichever occurs first. To service air/hydraulic power unit and backup hydraulic pump refer to vehicle para 19-7, Air Transportability Hydraulic System Service.

11. ALL AXLE DIFFERENTIALS. Check oil level in differentials every 3,000 miles (4,827 km). Check oil level with vehicle parked on level surface and axle differential at ambient temperature, allowing at least one hour to cool down after vehicle operation. If oil is checked when axle differential is hot, it is normal for oil to spill out of the port due to expansion from the heat. Oil level is considered full if it is within one inch of the bottom of the fill port. If oil spills from the fill port when the axle differential is cool, it is overfull. Allow oil to drain until no more drains out. If the oil level is more than one inch below the bottom of the fill port, refill axle differential with GO specified for the ambient temperature until level with bottom of fill port. Change the oil every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Drain oil when hot after operation.

12. FRONT AXLE WHEEL END PLANETARY HUBS. There are two lube intervals for the front axle wheel end planetary hubs.

- a. Check and fill front axle wheel end planetary hubs every 3,000 miles (4,827 km) or once every three months, whichever occurs first, as follows:
 - (1) Position vehicle on a level surface. Allow 15 minutes for vehicle to cool before checking oil levels.
 - (2) Position fill port at 4 o'clock position. If oil flows from fill port when plug is loosened, let oil drain to correct level. If oil level is below fill port, fill hub with GO specified for the ambient temperature until oil is level with fill port.
- b. Drain and fill front axle wheel end planetary hubs every 24,000 miles (38,616 km) or once every two years, whichever occurs first, following the repacking of the inner wheel bearings or whenever wheel end assemblies are taken apart for other maintenance as follows:
 - (1) Position vehicle on a level surface.
 - (2) Position fill port at the 6 o'clock (down) position.
 - (3) Drain hub oil (allow a minimum of 15 minutes for oil to drain down from vent tubes).
 - (4) Refill hubs with 11-13 ounces of GO specified for the ambient temperature.

13. TIE ROD ENDS. Lubricate tie rod ends with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun, until new grease is seen purging from the boot area. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

14. 11K SELF-RECOVERY WINCH (SRW) CABLE:

CAUTION

Do not use dry cleaning solvent to clean 11K Self-Recovery Winch (SRW) cables. Use of dry cleaning solvent will remove lubricant from inner strands of 11K SRW cables. Failure to comply may result in damage to equipment.

a. After winch operation:

Refer to FM 5-125.

b. Care of wire rope:

Refer to FM 5-125.

c. Inspection of wire rope:

Refer to FM 5-125.

d. Every six months:

- (1) Unwind entire length of 11K SRW cable (TM 9-2320-365-10).
- (2) Soak and clean 11K SRW cable with new OE/HDO 30.
- (3) Wipe off excess OE/HDO 30.
- (4) Coat 11K SRW cable with GW.
- (5) Rewind 11K SRW cable (TM 9-2320-365-10).

15. 11K SRW. Check 11K SRW gear oil level every 6,000 miles (9,654 km) or once every six months, whichever occurs first. Refill 11K SRW with GO specified for ambient temperature. Change oil every 12,000 miles (19,308 km) or once every year, whichever occurs first. Use procedure (a) to check and fill oil level; use procedure (b) to change oil.

a. Check and fill oil level as follows:

- (1) Shift the freespool mechanism to the disengage position so the drum can be freely rotated.
- (2) Rotate the drum to where either plug is near the top of the 11K SRW. Remove the plug.
- (3) Rotate the drum 90 degrees in the direction that allows the other plug to be near the top of the 11K SRW. Remove the plug.

NOTE

Oil level is full if a small amount of oil runs out of lower plug.

- (4) Add oil until a small amount of oil runs out of lower plug hole.
- (5) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (6) Rotate drum until open hole is at top.
- (7) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (8) Tighten plugs to 13-15 lb-ft (18-20 N·m).

H-9. LUBRICATION/SERVICE NOTES (CONT)

b. Change oil as follows:

- (1) Shift the freespool mechanism to the disengage position so the drum can be freely rotated.
- (2) Rotate the drum to where either plug is near the top of the 11K SRW. Remove the plug.
- (3) Rotate the drum 90 degrees in the direction that allows the other plug to be near the top of the 11K SRW. Remove the plug.
- (4) Position drain pan (Item 17, Appendix C) under 11K SRW.
- (5) Rotate the drum until either hole is straight down to the bottom of the 11K SRW. Allow the oil to drain completely.
- (6) Rotate the drum until either hole is at top.

NOTE

Oil level is full if a small amount of oil runs out of lower plug.

- (7) Add oil until a small amount of oil runs out of lower plug hole.
- (8) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (9) Rotate drum until open hole is at top.
- (10) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (11) Tighten plugs to 13-15 lb-ft (18-20 N•m).

16. TOWING PINTLE. Lubricate towing pintle with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun until new grease is seen purging.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). Failure to comply may result in serious injury or death to personnel.**
- **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.**

17. ENGINE CRANKCASE BREATHER. Remove crankcase breather and clean with Dry Cleaning Solvent (SD P-D-680) (Item 71, Appendix D) or equivalent, and replace o-ring seal every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 3-5).

18. FRONT and REAR AXLE SPRING BOLT and SPRING SHACKLE. Lubricate front and rear axle spring bolts and spring shackles with GAA every 3,000 miles (4,827 km) or once every three months, whichever occurs first, using a low pressure lubrication gun until grease appears between pins and bushings at both ends of spring bolt and spring shackle. If pins do not accept grease, notify Direct Support to remove pins. Clean and inspect pins and bushings, replace if necessary. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

19. BATTERY POSTS. Service batteries in accordance with TM 9-6140-200-14, every 6,000 miles (9,654 km) or once every six months, whichever occurs first.

20. FRONT AXLE SHAFT UNIVERSAL JOINTS and STEERING KNUCKLES. Lubricate universal joints every 3,000 miles (4,827 km) or once every three months, whichever occurs first. Lubricate steering knuckles with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

21. BRAKE WEDGE and AIR CHAMBER: BRAKE SPIDER, SELF-ADJUSTER MECHANISM, AND WEDGE ASSEMBLY. Clean and lubricate (with GAA) areas of spider and hardware that contact the brake shoes. Disassemble, clean and lubricate the self-adjuster mechanism. Clean and lubricate the wedge head, rollers and ramps in the plungers. Clean and lubricate every 6,000 miles (9,654 km). If operating conditions are severe or abnormal, service at 3,000 miles (4,827 km) or once every three months, whichever occurs first, or when any of the following occur: Refer to para 11-4 and 11-5.

- Seals are replaced
- Plungers are removed
- Brakes are relined
- Grease becomes contaminated or hardened

22. FRONT and REAR AXLE INNER WHEEL BEARINGS. Repack inner wheel bearings with GAA every 12,000 miles (19,308 km), when semiannual PMCS inspection of service brakes reveals oil leak from inner hub, or whenever wheel end assemblies are taken apart for other maintenance (para 10-2).

23. 11K SRW CABLE ROLLER FAIRLEADS. Lubricate with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

WARNING

- **Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 F (38 C) and for Type II is 138 F (50 C). Failure to comply may result in serious injury or death to personnel.**
- **If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.**

24. FRONT LIFTING BEAM. Remove left and right lifting beams and clean with Dry Cleaning Solvent (SD P-D-680) (Item 71, Appendix D) or equivalent, every 6,000 miles (9,654 km) or once every six months, whichever occurs first. Apply a light coat of GAA to lifting beams. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

25. AIR DRYER. Service air dryer (para 23-6) every 12,000 miles (19,308 km) or annually, whichever occurs first.

26. FRONT AND REAR LEAF SPRING. At initial 1000 miles (1609 km) of vehicle operation, tighten U-bolts to 390-510 lb-ft (529-692 N•m).

APPENDIX J ADDITIONAL AUTHORIZATION LIST (AAL)

Section I. INTRODUCTION

J-1. SCOPE

This appendix lists additional items you are authorized for the support of the LMTV.

J-2. GENERAL

This list identifies items that do not have to accompany the LMTV and that do not have to be turned in with it. These items are all authorized to you by Common Tables of Allowance (CTA), Modification Table of Organization and Equipment (MTOE), Tables of Distribution and Allowances (TDA), or Joint Table of Allowance (JTA).

J-3. EXPLANATION OF LISTING

National Stock Numbers, description, and quantities are provided to help you identify and request the additional items you require to support this equipment.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) National Stock Number	(2) Description (CAGE) Part Number	(3) U/M	(4) Qty Auth
6685-01-193-1733	10,000 PSI Transducer: (19207) 12258956	EA	1

APPENDIX K TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART

Section I. INTRODUCTION

K-1. INTRODUCTION

This appendix lists the various transmission controls and configuration modifications that may be required to permit the transmission to function correctly. This appendix will guide the mechanic through the hardware selection process by identifying compatibility issues between the transmission controls (WTEC II/WTEC III) and the numerous revisions of the Allison MD3070PT transmission (PRE-ID w/ 24-pin connector, PRE-ID w/ 31-pin connector, TID 1, TID 2, and TID 3). Refer to Figure 1. After replacing any component of the transmission controls or the transmission assembly, perform calibration procedures in TM 9-2320-365-20-3 paragraph 8-2 or 8-3.

K-2. EXPLANATION OF COLUMNS

- a. **Column (1) - Installed Controls or Controls Being Installed.** This column lists all of the variables concerning which version of transmission controls are installed in the vehicle, or may need to be installed, to communicate correctly with the transmission.
- b. **Column (2) - Installed Transmission or Transmission Being Installed.** This column lists all of the various revisions of the Allison MD3070PT transmissions that may be installed in the vehicle.
- c. **Column (3) - Required Modification.** This column lists the various electrical interface (hardware) modifications that may be required to allow the transmission controls to communicate with the transmission.

K-3. HOW TO USE THIS CHART

- a. Determine which controls and transmission are installed in the vehicle.
- b. Determine which component requires replacement.
- c. Read across the row to column (3) to determine the required modification.

Section II.

TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART

(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC II (with 24-pin connector)	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	No modification required.
WTEC II (with 24-pin connector)	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install 31-pin connector.
WTEC II (with 24-pin connector)	TID 1 (transmission serial number 6510090786 to 6510142171)	Install 31-pin connector.
WTEC II (with 24-pin connector)	TID 2 (transmission serial number 6510142172 to 6510262116)	Install 31-pin connector and replace transmission internal wiring harness.

TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART (CONT)

(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC II (with 24-pin connector)	TID 3 (transmission serial number 6510262117 and subsequent)	Install 31-pin connector, replace transmission internal wiring harness, and reprogram WTEC II TEPSS. ¹
WTEC II (with 31-pin connector)	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	Install adapter cable assembly.
WTEC II (with 31-pin connector)	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	No modification required.
WTEC II (with 31-pin connector)	TID 1 (transmission serial number 6510090786 to 6510142171)	No modification required.
WTEC II (with 31-pin connector)	TID 2 (transmission serial number 6510142172 to 6510262116)	Replace transmission internal wiring harness.
WTEC II (with 31-pin connector)	TID 3 (transmission serial number 6510262117 and subsequent)	Replace transmission internal wiring harness and reprogram WTEC II TEPSS. ¹
WTEC III (with ECU manufactured prior to October 1999) ²	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	Install adapter cable assembly and ID harness.
WTEC III (with ECU manufactured prior to October 1999) ²	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install ID harness.
WTEC III (with ECU manufactured prior to October 1999) ²	TID 1 (transmission serial number 6510090786 to 6510142171)	No modification required.
WTEC III (with ECU manufactured prior to October 1999) ²	TID 2 (transmission serial number 6510142172 to 6510262116)	No modification required.
WTEC III (with ECU manufactured prior to October 1999) ²	TID 3 (transmission serial number 6510262117 and subsequent)	Reprogram WTEC III ECU ¹ or install new WTEC III ECU (P/N 12421787- 002).
WTEC III (with ECU manufactured after October 1999) ³	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	Install adapter cable assembly and ID harness.
WTEC III (with ECU manufactured after October 1999) ³	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install ID harness.
WTEC III (with ECU manufactured after October 1999) ³	TID 1 (transmission serial number 6510090786 to 6510142171)	No modification required.

¹ Reprogramming can only be accomplished by an authorized Allison Transmission distributor. You must provide the transmission serial number of the transmission being installed to ensure correct reprogramming. If at a later time, an earlier version transmission is installed in a WTEC II equipped vehicle, WTEC II TEPSS will require reprogramming again.

² Vehicle serial number 012477 and lower. Refer to Figure 1.

³ Vehicle serial number 012478 and higher. Refer to Figure 1.

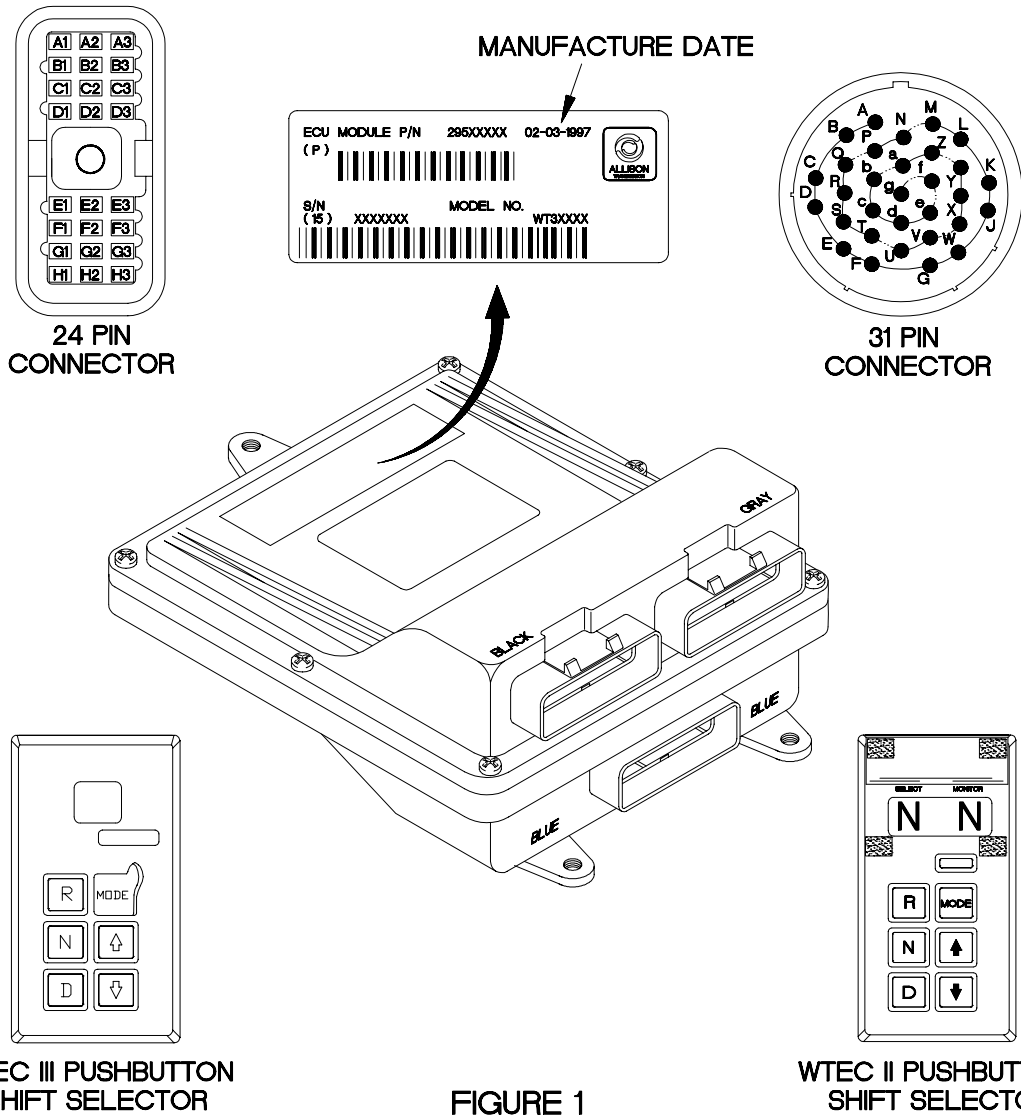
(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC III (with ECU manufactured after October 1999) ³	TID 2 (transmission serial number 6510142172 to 6510262116)	No modification required.
WTEC III (with ECU manufactured after October 1999) ³	TID 3 (transmission serial number 6510262117 and subsequent)	No modification required.

Section III.

MODIFICATION PARTS IDENTIFICATION

Identification	Part Number/NSN	Description
31-pin connector	300130 5935-21-921-1813	Converts a transmission external wiring harness from a 24-pin ("D" type) connector to a 31-pin (round type) connector.
Transmission internal wiring harness	29529474 6150-01-481-8088	Converts a TID 2 transmission to a TID 1 configuration to allow WTEC II controls to communicate with the transmission.
Gasket	29503283 5330-01-360-9035	Required when replacing transmission internal wiring harness.
ID harness	200100 6150-21-921-1191	Allows WTEC III controls to communicate with a PRE-ID transmission.
Adapter cable assembly	29519210 6150-01-420-5987	Adapts a PRE-ID transmission with 24-pin ("D" type) connector to a transmission external wiring harness with a 31-pin (round) connector.

MODIFICATION PARTS IDENTIFICATION (CONT)



4WTEC111

SUBJECT INDEX

Subject	Para	Subject	Para
A		A (Cont)	
Air		Amp (Cont)	
Dryer Replacement/Repair	23-6	200 Amp Terminal Block to Power	
Filter Restriction Gauge Replacement	24-2	Distribution Panel (PDP) 24 VDC Cable	
Introduction, Air System Maintenance	23-1	Replacement	20-68
M1079 Air Conditioner Kit Installation/ Removal	20-81	200 Amp Terminal Block to Reverse	
M1079 Air Conditioner Power Cable		Polarity Relay 12 VDC Load Cable	
Replacement	20-82	Replacement	20-60
Primary and Central Tire Inflation		200 Amp Terminal Block to Reverse	
System (CTIS) Air Hoses		Polarity Relay 24 VDC Load Cable	
Replacement	23-2	Replacement	20-62
Transportability Air Hoses		200 Amp Voltage Regulator	
Replacement	23-3	Replacement	20-57
Alarm		Armament	
Troop Transport Alarm Cable Assembly		Introduction, Armament/Sighting and Fire	
Replacement	20-79	Control Materiel Maintenance	21-1
Troop Transport Alarm Switch, Connector, and Bracket Replacement	20-80		
Alternator		B	
200 Amp Alternator Kit Installation	20-54	Battery	
200 Amp Alternator Kit Removal	20-55	to 200 Amp Terminal Block 12 VDC	
200 Amp Alternator to Terminal Block		Cable Assembly Replacement	20-63
12 VDC Cable Replacement	20-59	to 200 Amp Terminal Block 24 VDC	
200 Amp Alternator to Terminal Block		Cable Assembly Replacement	20-64
24 VDC Cable Replacement	20-61	Boom	
200 Amp Alternator Replacement	20-56	Light Material Handling Crane (LMHC)	
Amp		Boom Replacement	20-74
Battery to 200 Amp Terminal Block 12		Light Material Handling Crane (LMHC)	
VDC Cable Assembly Replacement	20-63	Boom Sheave Replacement	20-75
Battery to 200 Amp Terminal Block 24			
VDC Cable Assembly Replacement	20-64	C	
200 Amp Alternator Kit Installation	20-54	Cable	
200 Amp Alternator Kit Removal	20-55	Battery to 200 Amp Terminal Block 12	
200 Amp Alternator Replacement	20-56	VDC Cable Assembly Replacement	20-63
200 Amp Alternator to Terminal Block		Battery to 200 Amp Terminal Block 24	
12 VDC Cable Replacement	20-59	VDC Cable Assembly Replacement	20-64
200 Amp Alternator to Terminal Block		M1079 Air Conditioner Power Cable	
24 VDC Cable Replacement	20-61	Replacement	20-82
200 Amp Reverse Polarity Relay		M1079 Heater Control Cable	
Replacement	20-58	Replacement	20-43
200 Amp Terminal Block		M1079 Heater Fuel Pump Power Cable	
Replacement	20-69	Replacement	20-49
200 Amp Terminal Block to Power		M1079 Heater Power Cable	
Distribution Panel (PDP) 12 VDC Cable		Replacement	20-42
Replacement	20-65	M1079 Heater Thermostat Cable	
		Replacement	20-45

SUBJECT INDEX (CONT)

Subject	Para	Subject	Para
C (Cont)		C (Cont)	
Cable (Cont)		CTIS	
Troop Transport Alarm Cable Assembly Replacement	20-79	Primary and Central Tire Inflation System (CTIS) Air Hoses Replacement	23-2
Warning Light Cable Assembly Replacement	22-2	D	
200 Amp Alternator to Terminal Block 12 VDC Cable Replacement	20-59	Digitization Kit	
200 Amp Alternator to Terminal Block 24 VDC Cable Replacement	20-61	Aft Storage Box Replacement	20-90
200 Amp Terminal Block to Power Distribution Panel (PDP) 12 VDC Cable Replacement	20-65	Circuit Breaker Replacement	20-87
200 Amp Terminal Block to Power Distribution Panel (PDP) 24 VDC Cable Replacement	20-68	Co-Drivers Seat Replacement	20-92
200 Amp Terminal Block to Reverse Polarity Relay 12 VDC Battery Cable Replacement	20-66	Drivers Storage Box Replacement	20-91
200 Amp Terminal Block to Reverse Polarity Relay 24 VDC Battery Cable Replacement	20-67	Installation	20-86
200 Amp Terminal Block to Reverse Polarity Relay 12 VDC Load Cable Replacement	20-60	Power Cable Replacement	20-88
200 Amp Terminal Block to Reverse Polarity Relay 24 VDC Load Cable Replacement	20-62	Radio Rack Replacement	20-89
Cover		Removal	20-85
Rim Cover Initial Installation	20-4	Dryer	
Crane		Air Dryer Replacement/Repair	23-6
Light Material Handling Crane (LMHC) Assembly/Disassembly	20-70	F	
Light Material Handling Crane (LMHC) Boom Replacement	20-74	Filter	
Light Material Handling Crane (LMHC) Boom Sheave Replacement	20-75	Air Filter Restriction Gauge Replacement	24-2
Light Material Handling Crane (LMHC) Control Box Repair	20-77	Fuel	
Light Material Handling Crane (LMHC) Mast and Swing Assembly Repair	20-78	M1079 Heater Fuel Pump Power Cable Replacement	20-49
Light Material Handling Crane (LMHC) Replacement	20-71	M1079 Heater Fuel Pump Replacement	20-48
Light Material Handling Crane (LMHC) Turret Replacement	20-76	M1079 Heater Fuel Regulator Replacement	20-47
Light Material Handling Crane (LMHC) Weight Block and Wire Rope Replacement/Repair	20-72	M1079 Heater Fuel Tubes/Hoses Replacement	20-46
Light Material Handling Crane (LMHC) Winch Replacement/Repair	20-73	G	
		Gages	
		Introduction, Gages (Non-Electrical) Maintenance	24-1
		H	
		Heater	
		M1079 Heater Deflector/Duct Replacement	20-50
		M1079 Heater Fuel Pump Power Cable Replacement	20-49
		M1079 Heater Fuel Pump Replacement	20-48
		M1079 Heater Fuel Regulator Replacement	20-47

Subject	Para
H (Cont)	
Heater (Cont)	
M1079 Heater Fuel Tubes/Hoses Replacement	20-46
M1079 Heater Control Cable Replacement	20-43
M1079 Heater Kit Installation/Removal	20-41
M1079 Heater Power Cable Replacement	20-42
M1079 Heater Replacement	20-51
M1079 Heater Thermostat Cable Replacement	20-45
M1079 Heater Thermostat Replacement	20-44
Hoses	
Primary and Central Tire Inflation System (CTIS) Air Hoses Replacement	23-2
I	
Inflation	
Primary and Central Tire Inflation System (CTIS) Air Hoses Replacement	23-2
Introduction	
Air System Maintenance	23-1
Armament/Sighting and Fire Control Materiel Maintenance	21-1
Electrical Illuminating Equipment Maintenance	22-1
Gages (Non-Electrical) Maintenance	24-1
Special Purpose Kits Maintenance	20-1
Inversion	
Valve Replacement	23-4
K	
Kit	
M1078/M1081 S-280 Shelter Tiedown Kit Installation/Removal	20-84
M1079 Air Conditioner Kit Installation/Removal	20-81
M1079 Heater Kit Installation/Removal	20-41
200 Amp Alternator Kit Installation	20-54
200 Amp Alternator Kit Removal	20-55
Convex Mirror Kit Initial Installation	20-3
RH Convex Mirror Kit Initial Installation	20-2

Subject	Para
L	
Light	
Amber Warning Light Assembly Repair	20-83
Material Handling Crane (LMHC) Assembly/Disassembly	20-70
Material Handling Crane (LMHC) Boom Replacement	20-74
Material Handling Crane (LMHC) Boom Sheave Replacement	20-75
Material Handling Crane (LMHC) Control Box Repair	20-77
Material Handling Crane (LMHC) Mast and Swing Assembly Repair	20-78
Material Handling Crane (LMHC) Replacement	20-71
Material Handling Crane (LMHC) Turret Replacement	20-76
Material Handling Crane (LMHC) Weight Block and Wire Rope Replacement/Repair	20-72
Material Handling Crane (LMHC) Winch Replacement/Repair	20-73
Warning Light Cable Assembly Replacement	22-2
LMHC	
Light Material Handling Crane (LMHC) Assembly/Disassembly	20-70
Light Material Handling Crane (LMHC) Boom Replacement	20-74
Light Material Handling Crane (LMHC) Boom Sheave Replacement	20-75
Light Material Handling Crane (LMHC) Control Box Repair	20-77
Light Material Handling Crane (LMHC) Mast and Swing Assembly Repair	20-78
Light Material Handling Crane (LMHC) Replacement	20-71
Light Material Handling Crane (LMHC) Turret Replacement	20-76
Light Material Handling Crane (LMHC) Weight Block and Wire Rope Replacement/Repair	20-72
Light Material Handling Crane (LMHC) Winch Replacement/Repair	20-73
Lubrication	
AOAP Sampling Intervals	H-3
General	H-1
Intervals	H-6

SUBJECT INDEX (CONT)

Subject	Para	Subject	Para
L (Cont)		P (Cont)	
Lubrication (Cont)		Platform (Cont)	
Key	H-5	Machine Gun Ring Top Platform	
Local Views	H-8	Replacement	21-4
Locator Views	H-7	Power	
Notes	H-9	M1079 Air Conditioner Power Cable	
Oil Filters	H-2	Replacement	20-82
Warranty Hardtime Statement	H-4	M1079 Heater Fuel Pump Power Cable	
		Replacement	20-49
M		M1079 Heater Power Cable	
Machine Gun		Replacement	20-42
Ring Center Seat Replacement	21-5	200 Amp Terminal Block to Power	
Ring Lower Platform Replacement	21-3	Distribution Panel (PDP) 12 VDC Cable	
Ring Replacement	21-2	Replacement	20-65
Ring Roof Support Replacement	21-6	200 Amp Terminal Block to Power	
Ring Top Platform Replacement	21-4	Distribution Panel (PDP) 24 VDC Cable	
Mast		Replacement	20-68
Light Material Handling Crane (LMHC)		Pressure Switch Replacement	23-8
Mast and Swing Assembly Repair	20-78	Primary and Central Tire Inflation	
M1079		System (CTIS) Air Hoses Replacement	23-2
Heater Control Cable Replacement	20-43	Pump	
Heater Deflector/Duct Replacement	20-50	M1079 Heater Fuel Pump Power Cable	
Heater Fuel Pump Power Cable		Replacement	20-49
Replacement	20-49	M1079 Heater Fuel Pump	
Heater Fuel Pump Replacement	20-48	Replacement	20-48
Heater Fuel Regulator Replacement	20-47		
Heater Fuel Tubes/Hoses		R	
Replacement	20-46	Regulator	
Heater Kit Installation/Removal	20-41	M1079 Heater Fuel Regulator	
Heater Power Cable Replacement	20-42	Replacement	20-47
Heater Replacement	20-51	Relay	
Heater Thermostat Cable		200 Amp Reverse Polarity Relay	
Replacement	20-45	Replacement	20-58
Heater Thermostat Replacement	20-44	200 Amp Terminal Block to Reverse	
		Polarity Relay 12 VDC Battery Cable	
P		Replacement	20-66
Panel		200 Amp Terminal Block to Reverse	
200 Amp Terminal Block to Power		Polarity Relay 12 VDC Load Cable	
Distribution Panel (PDP) 12 VDC Cable		Replacement	20-60
Replacement	20-65	200 Amp Terminal Block to Reverse	
200 Amp Terminal Block to Power		Polarity Relay 24 VDC Battery Cable	
Distribution Panel (PDP) 24 VDC Cable		Replacement	20-67
Replacement	20-68	200 Amp Terminal Block to Reverse	
Platform		Polarity Relay 24 VDC Load Cable	
Machine Gun Ring Lower Platform		Replacement	20-62
Replacement	21-3		

Subject	Para
R (Cont)	
Restriction	
Air Filter Restriction Gauge Replacement	24-2
Reverse	
200 Amp Reverse Polarity Relay Replacement	20-58
200 Amp Terminal Block to Reverse Polarity Relay 12 VDC Battery Cable Replacement	20-66
200 Amp Terminal Block to Reverse Polarity Relay 12 VDC Load Cable Replacement	20-60
200 Amp Terminal Block to Reverse Polarity Relay 24 VDC Battery Cable Replacement	20-67
200 Amp Terminal Block to Reverse Polarity Relay 24 VDC Load Cable Replacement	20-62
Rim Cover Initial Installation	20-4
Ring	
Machine Gun Ring Center Seat Replacement	21-5
Machine Gun Ring Lower Platform Replacement	21-3
Machine Gun Ring Replacement 21-2	
Machine Gun Ring Roof Support Replacement	21-6
Machine Gun Ring Top Platform Replacement	21-4
Roof	
Machine Gun Ring Roof Support Replacement	21-6
S	
Seat	
Machine Gun Ring Center Seat Replacement	21-5
Shelter	
M1078/M1081 S-280 Shelter Tiedown Kit Installation/Removal	20-84
Shuttle Valve Replacement	23-5
Small Arms Mount Replacement	21-7
Special	
Introduction, Special Purpose Kits Maintenance	20-1
Swing	
Light Material Handling Crane (LMHC) Mast and Swing Assembly Repair	20-78

Subject	Para
S (Cont)	
Switch	
Pressure Switch Replacement	23-8
Troop Transport Alarm Switch, Connector, and Bracket Replacement	20-80
System	
Introduction, Air System Maintenance	23-1
T	
Tank	
Wet Tank Replacement	23-7
Terminal Block	
Battery to 200 Amp Terminal Block 12 VDC Cable Assembly Replacement	20-63
Battery to 200 Amp Terminal Block 24 VDC Cable Assembly Replacement	20-64
200 Amp Alternator to Terminal Block 12 VDC Cable Replacement	20-59
200 Amp Alternator to Terminal Block 24 VDC Cable Replacement	20-61
200 Amp Terminal Block Replacement	20-69
200 Amp Terminal Block to Reverse Polarity Relay 12 VDC Battery Cable Replacement	20-66
200 Amp Terminal Block to Reverse Polarity Relay 12 VDC Load Cable Replacement	20-60
200 Amp Terminal Block to Reverse Polarity Relay 24 VDC Battery Cable Replacement	20-62
200 Amp Terminal Block to Reverse Polarity Relay 24 VDC Load Cable Replacement	20-62
200 Amp Terminal Block to Power Distribution Panel (PDP) 12 VDC Cable Replacement	20-65
200 Amp Terminal Block to Power Distribution Panel (PDP) 24 VDC Cable Replacement	20-68
Tiedown	
M1078/M1081 S-280 Shelter Tiedown Kit Installation/Removal	20-84
Transport/Transportability	
Air Transportability Air Hoses Replacement	23-3
Troop Transport Alarm Cable Assembly Replacement	20-79
Troop Transport Alarm Switch, Connector, and Bracket Replacement	2-80

SUBJECT INDEX (CONT)

Subject Para Subject Para

T (Cont)

Tubes
M1079 Heater Fuel Tubes/Hoses
Replacement 20-46
Turret
Light Material Handling Crane (LMHC)
Turret Replacement 20-76

V

Valve
Inversion Valve Replacement 23-4
Shuttle Valve Replacement 23-5
Voltage Regulator
200 Amp Voltage Regulator
Replacement 20-57

W

Warning
Amber Warning Light Assembly
Repair 20-83
Light Cable Assembly Replacement 22-2
Wet Tank Replacement 23-7
Winch
Light Material Handling Crane (LMHC)
Winch Replacement/Repair 20-73
Wire
Light Material Handling Crane (LMHC)
Weight Block and Wire Rope
Replacement/Repair 20-72

GLOSSARY ABBREVIATIONS

A/C	.....	Air Conditioner
AC	.....	Alternating Current
ANSI	.....	American National Standards Institute
CCW	.....	Counterclockwise
CTIS	.....	Central Tire Inflation System
CW	.....	Clockwise
ECU	.....	Electronic Control Unit
EMI	.....	Electromagnetic Interference
LED	.....	Light Emitting Diode
LH	.....	Left Hand
LMHC	.....	Light Material Handling Crane
MAC	.....	Maintenance Allocation Chart
NATO	.....	North Atlantic Treaty Organization
NBC	.....	Nuclear, Biological, or Chemical
NO/NC	.....	Normally Open/Normally Closed
PDP	.....	Power Distribution Panel
PMCS	.....	Preventive Maintenance Checks and Services
PTO	.....	Power Takeoff
RH	.....	Right Hand
SAE	.....	Society of Automotive Engineers
SRW	.....	Self-Recovery Winch
STE/ICE-R	.....	Simplified Test Equipment/Internal Combustion Engine-Reprogrammable
TEPSS	.....	Transmission ECU Pushbutton Shift Selector
TM	.....	Technical Manual
TPS	.....	Throttle Position Sensor

TM 9-2320-365-20-5

TPSS	Transmission Pushbutton Shift Selector
VAC	Volts Alternating Current
VDC	Volts Direct Current
VIM	Vehicle Interface Module
WTEC II	World Transmission Electronic Controls (version 2)
WTEC III	World Transmission Electronic Controls (version 3)

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
04996

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 380934, requirements for TM 9-2320-365-20-5.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE Date you filled out this form
---	---	---------------------------------------

TO: (Forward to proponent of publication or form) (Include ZIP Code)	FROM: (Activity and location) (Include ZIP Code) Enter your mailing address
---	---

PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE Publication Date	TITLE Publication Title
-------------------------	--------------------------	----------------------------

ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON
10	15-33	15-7		4		Item 10. Change Illustration. Reason: Text calls out 90-degree fitting. Art shows straight fitting. Text is correct. Step (4) of removal says to disconnect four hydraulic hoses from manifold. The correct number of hydraulic hoses is five. correct the text to reflect the actual quantity of hydraulic hoses. The supporting illustration is correct.
	19-6	19-2				

* Reference to line numbers within the paragraph or subparagraph.

TYPED NAME, GRADE OR TITLE Your title	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION Your telephone number	SIGNATURE Your signature
--	---	---------------------------------

TO: <i>(Forward direct to addressee listed in publication)</i>	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
Enter your mailing address		Date you filled out this form.

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE				TITLE	
			Publication Date				Your Title	
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your title	Your telephone number	Your signature

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA						Use Part II (<i>reverse</i>) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: (<i>Forward to proponent of publication or form</i>) (<i>Include ZIP Code</i>)						FROM: (<i>Activity and location</i>) (<i>Include ZIP Code</i>)	
PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER						DATE	TITLE
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE					TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE

TO: <i>(Forward direct to addressee listed in publication)</i>	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
---	--	-------------

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
----------------------------	--	-----------

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA						Use Part II (<i>reverse</i>) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: (<i>Forward to proponent of publication or form</i>) (<i>Include ZIP Code</i>)						FROM: (<i>Activity and location</i>) (<i>Include ZIP Code</i>)	
PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER						DATE	TITLE
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE					TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE

TO: <i>(Forward direct to addressee listed in publication)</i>	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
---	--	-------------

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
----------------------------	--	-----------

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA						Use Part II (<i>reverse</i>) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: (<i>Forward to proponent of publication or form</i>) (<i>Include ZIP Code</i>)						FROM: (<i>Activity and location</i>) (<i>Include ZIP Code</i>)	
PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
PUBLICATION/FORM NUMBER						DATE	TITLE
ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
<i>* Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE					TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE

TO: <i>(Forward direct to addressee listed in publication)</i>	FROM: <i>(Activity and location) (Include ZIP Code)</i>	DATE
---	--	-------------

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE		TITLE			
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
----------------------------	--	-----------

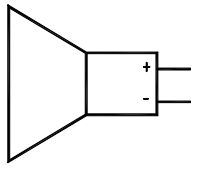

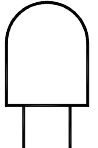
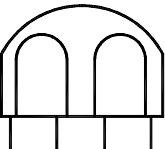


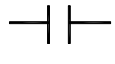
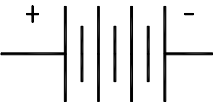
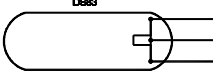
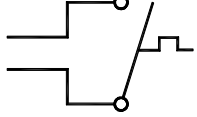
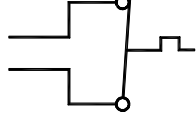
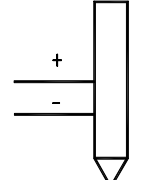
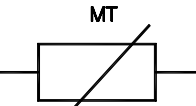
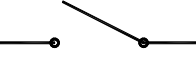
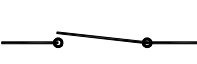
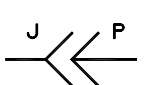
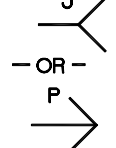
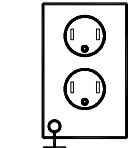


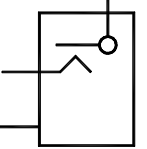


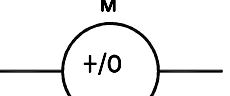

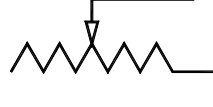
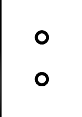
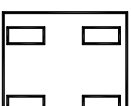
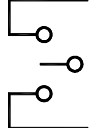
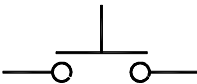
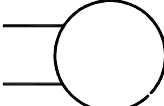
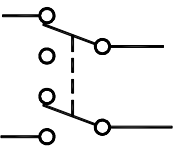
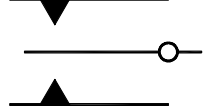
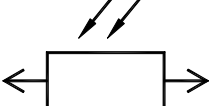

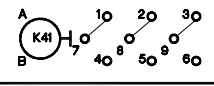
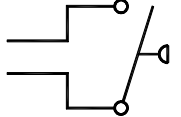
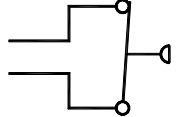
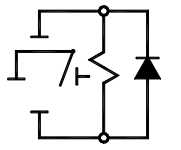
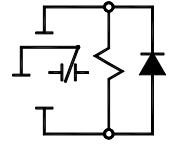



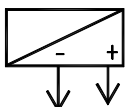


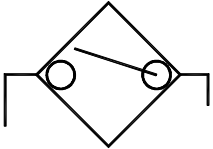

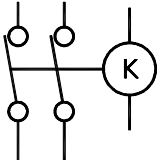
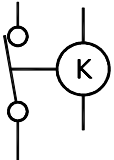


	1	2	3	4	5	6	7	8	9
A									
B	 HORN	 BLACKOUT LAMP	 LAMP	 DUALBEAM LAMP	 GROUND	 POWER LAMP	 OPEN CONTACT	 BATTERY	 FLUORESCENT LIGHT
C	 TEMPERATURE SWITCH OPEN	 TEMPERATURE SWITCH CLOSED	 MAGNETIC PICKUP	 SENSOR	 NORMALLY OPEN	 NORMALLY CLOSED	 CONNECTOR	 RECEPTACLE	 ELECTRICAL OUTLET
D	 MOTOR	 SOLENOID	 LEVEL SENSOR	 FILTER	 LED	 METER OR GAGE	 CLOSED CONTACT	 DIMMER MODULE	 TELEPHONE RECEPTACLE
E	 CIRCUIT BREAKER	 TWO-WAY SWITCH	 PUSHBUTTON	 CIRCULATING PUMP	 DPDT SWITCH	 DPST SWITCH	 PHOTOCELL	 FUSE	 RELAY
F	 PRESSURE SWITCH OPEN	 PRESSURE SWITCH CLOSED	 NORMALLY OPEN	 NORMALLY CLOSED	 ALTERNATOR	 RESISTOR	 TERMINAL LUG	 ELECTRONIC IGNITION UNIT	
G	 DIODE	 SPLICE	 SENSING SWITCH	 MOTOR	 GROUND RELAY	 RELAY	 CIRCUIT BREAKER	 FLASHER	
H									

FIGURE FO-1 ELECTRICAL SYSTEM SCHEMATIC
 FOLDOUT 1 OF 34
 SIZE B ILL. NO. 5WDO11B FP-1/ (FP-2 BLANK)

10				11				12				13				14				15				16				17				18			
CONNECTORS				CONNECTORS (CONTINUED)				CONNECTORS (CONTINUED)				CONNECTORS (CONTINUED)				CONNECTORS (CONTINUED)				CONNECTORS (CONTINUED)				CONNECTORS (CONTINUED)											
NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION				
A13	A66	8	WTEC II TRANSMISSION CONNECTOR A	J154	A271	31	VAN FRONT MARKER LIGHT	P53R	D196	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	P132	B85	10	CAB MARKER LIGHT FRONT LOWER RIGHT																				
A13	A70	8	WTEC II TRANSMISSION CONNECTOR B	J155	B287	32	VAN CURBSIDE MARKER LIGHT	P54	D197	22	LEFT REAR MARKER	P150	B272	31	VAN FRONT MARKER LIGHT																				
A13	A74	9	WTEC II TRANSMISSION CONNECTOR C	J156	B287	32	VAN CURBSIDE MARKER LIGHT	P55	C85	10	CAB MARKER LIGHT FRONT UPPER RIGHT	P151	B272	31	VAN FRONT MARKER LIGHT																				
J1	D285	32	VAN 110 VAC POWER ENTRY	J157	C287	32	VAN ROADSIDE MARKER LIGHT	P55	D206	23	RH FRONT TOP CAB MARKER LIGHT	P152	B272	31	VAN FRONT MARKER LIGHT																				
J2	A185	21	EMI FILTER	J158	C287	32	VAN ROADSIDE MARKER LIGHT	P56	E197	22	MIDDLE REAR MARKER	P153	A272	31	VAN FRONT MARKER LIGHT																				
J2	E285	32	VAN 110 VAC POWER ENTRY	J159	D287	32	VAN REAR CENTER MARKER LIGHT	P57	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT	P154	A272	31	VAN FRONT MARKER LIGHT																				
J3	D205	23	AIRDROP ONLY	J160	E287	32	VAN REAR CENTER MARKER LIGHT	P57	F206	23	LH FRONT TOP CAB CLEARANCE LIGHT	P155	B287	32	VAN CURBSIDE MARKER LIGHT																				
J5	A38	5	VEHICLE HORN	J161	E287	32	VAN REAR CENTER MARKER LIGHT	P58	E197	22	RIGHT REAR MARKER	P156	B287	32	VAN CURBSIDE MARKER LIGHT																				
J6	A38	5	VEHICLE HORN	J162	B273	31	VAN CURBSIDE BLACKOUT LIGHT	P59	C85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT	P157	C287	32	VAN ROADSIDE MARKER LIGHT																				
J7	A188	21	WTEC II TRANSMISSION DIMMER MODULE	J163	B274	31	VAN CURBSIDE EMERGENCY LIGHT	P59	D206	23	RH FRONT TOP CAB CLEARANCE LIGHT	P158	C287	32	VAN ROADSIDE MARKER LIGHT																				
J8	B38	5	BLACKOUT MARKER RIGHT FRONT	J164	H274	31	VAN ROADSIDE BLACKOUT LIGHT	P60	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE	P159	D287	32	VAN REAR CENTER MARKER LIGHT																				
J9	C38	5	FRONT RIGHT TURN SIGNAL	J165	H275	31	VAN ROADSIDE EMERGENCY LIGHT	P60	E206	23	MIDDLE FRONT TOP CLEARANCE LIGHT	P160	E287	32	VAN REAR CENTER MARKER LIGHT																				
J10	B38	5	PARKING LIGHT FRONT RIGHT	J166	C271	31	VAN FRONT EMERGENCY LIGHT	P61	F197	22	RH COMPOSITE LIGHT	P161	D287	32	VAN REAR CENTER MARKER LIGHT																				
J12	D38	5	RIGHT HEADLIGHT	J167	D287	32	VAN REAR EMERGENCY LIGHT	P62	F197	22	RH COMPOSITE LIGHT	P162	B273	31	VAN CURBSIDE BLACKOUT LIGHT																				
J13	C38	5	RIGHT HEADLIGHT	J173	G272	31	VAN 12/24 VDC POWER RECEPTACLE	P63	G197	22	RH COMPOSITE LIGHT	P163	B274	31	VAN CURBSIDE EMERGENCY LIGHT																				
J14	C38	5	RIGHT HEADLIGHT	J209A	C230	26	PTO EQUIPPED	P64	F197	22	RH COMPOSITE LIGHT	P164	G274	31	VAN ROADSIDE BLACKOUT LIGHT																				
J17	H38	5	BLACKOUT DRIVE LIGHT	J209B	D230	26	PTO EQUIPPED	P65	E186	21	ROTARY WARNING LIGHT CONNECTOR	P165	G275	31	VAN ROADSIDE EMERGENCY LIGHT																				
J18	D38	5	LEFT HEADLIGHT	J210	F222	25	CAB - DASH - CENTER - OPTIONS PANEL	P67	A74	9	PRE-BLOCK SEVEN W/P1GTAIL TRANSMISSION EXTERNAL	P166	C272	32	VAN FRONT EMERGENCY LIGHT																				
J19	E38	5	LEFT HEADLIGHT	J215	E230	26	PTO EQUIPPED				WIRING HARNESS TO TRANSMISSION CONNECTOR	P167	D287	31	VAN REAR EMERGENCY LIGHT																				
J19	C177	20	CAB - DASH - LEFT - UNDERDASH	J230	A282	32	VAN CURBSIDE 110 VAC OUTLET	P67	B69	8	TID1, TID2, AND TID3 TRANSMISSION EXTERNAL WIRING	P172	E264	30	DUMP BODY CONNECTOR																				
J20	D38	5	LEFT HEADLIGHT	J231	A283	32	VAN CURBSIDE 110 VAC OUTLET				HARNESS TO TRANSMISSION CONNECTOR	P173	G271	31	VAN 12/24 VDC POWER																				
J22	G38	5	PARKING LIGHT FRONT LEFT	J232	A284	32	VAN CURBSIDE 110 VAC OUTLET	P69	D59	7	ENGINE	P201	G61	7	ENGINE																				
J23	F38	5	FRONT LEFT TURN SIGNAL	J233	H282	32	VAN ROADSIDE 110 VAC OUTLET	P71	E66	8	PRE-BLOCK SEVEN TRANSMISSION OUTPUT SPEED SENSOR	P210	F222	25	CAB - DASH - CENTER - OPTIONS PANEL																				
J24	H38	5	BLACKOUT MARKER LEFT FRONT	J234	H283	32	VAN ROADSIDE 110 VAC OUTLET				CONNECTOR	P210	C227	26	PTO EQUIPPED																				
J25	G85	10	WINDSHIELD WASHER ROTARY PUMP (B3)	J235	H284	32	VAN ROADSIDE 110 VAC OUTLET	P71	E70	8	TID1, TID2, AND TID3 TRANSMISSION OUTPUT SPEED	P215	E230	26	PTO EQUIPPED																				
J27	A43	5	CHASSIS - FRONT	J236	H275	31	VAN ROADSIDE 24 VDC OUTLET				SENSOR CONNECTOR	P216	E229	26	PTO EQUIPPED																				
J31	E55	7	ENGINE	J237	275	31	VAN CURBSIDE 24 VDC OUTLET	P71	E75	9	PRE-BLOCK SEVEN W/P1GTAIL TRANSMISSION OUTPUT	P217	C229	26	PTO EQUIPPED																				
J31X	F175	20	CAB - DASH - LEFT - UNDERDASH	J242	D271	31	VAN A/C				SPEED SENSOR CONNECTOR	P217	B268	30	PTO EQUIPPED																				
J39	G61	7	ENGINE	J244	E271	31	VAN THERMOSTAT	P72	F66	8	PRE-BLOCK SEVEN TRANSMISSION ENGINE SPEED	P901	A209	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J43	G42	5	CHASSIS - FRONT	J245	F271	31	VAN HEATER				SENSOR CONNECTOR	P902A	D214	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J43X	F42	5	CHASSIS - FRONT	J912	B124	14	CAB - DASH - CENTER - HEATER / CTIS ECU	P72	F70	8	TID1, TID2, AND TID3 TRANSMISSION ENGINE SPEED	P903	C212	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J43X	G175	20	CAB - DASH - LEFT - UNDERDASH	J912	D209	24	CAB - DASH - CENTER - OPTIONS PANEL				SENSOR CONNECTOR	P903A	D212	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J50	E85	10	CAB MARKER LIGHT FRONT UPPER LEFT	J913	B122	14	CAB - DASH - CENTER - HEATER / CTIS ECU	P72	E75	9	PRE-BLOCK SEVEN W/P1GTAIL TRANSMISSION ENGINE	P904	C211	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J51	D42	5	CHASSIS - FRONT	J921	G62	7	TROOP TRANSPORT ALARM				SPEED SENSOR CONNECTOR	P904A	D211	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J52	E38	5	CHASSIS - FRONT BUMPER	P2	A185	21	EMI FILTER	P73	F66	8	PRE-BLOCK SEVEN TRANSMISSION THROTTLE POSITION	P905	A211	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J52	B203	23	CHASSIS - FRONT	P3	D204	23	AIRDROP ONLY				SENSOR CONNECTOR	P905A	B211	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J53	F200	23	AIRDROP ONLY	P5	A38	5	VEHICLE HORN	P73	F70	8	TID1, TID2, AND TID3 TRANSMISSION THROTTLE POSITION	P906	A212	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J55	C85	10	CAB MARKER LIGHT FRONT UPPER RIGHT	P6	A38	5	VEHICLE HORN				SENSOR CONNECTOR	P906A	B212	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J57	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT	P8	B38	5	BLACKOUT MARKER RIGHT FRONT	P73	F75	9	PRE-BLOCK SEVEN W/P1GTAIL TRANSMISSION THROTTLE	P908	A215	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J59	C85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT	P9	C38	5	FRONT RIGHT TURN SIGNAL				POSITION SENSOR CONNECTOR	P908A	B215	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J60	D85	10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE	P10	B38	5	PARKING LIGHT FRONT RIGHT	P74	B197	22	LH COMPOSITE LIGHT	P909	A220	25	CAB - DASH - CENTER - OPTIONS PANEL																				
J62	E88	10	ROTARY WARNING LIGHT CONNECTOR	P12	D38	5	RIGHT HEADLIGHT	P76	C197	22	LH COMPOSITE LIGHT	P909A	B220	25	CAB - DASH - CENTER - OPTIONS PANEL																				
J65	E186	21	ROTARY WARNING LIGHT CONNECTOR	P13	C38	5	RIGHT HEADLIGHT	P77	C197	22	LH COMPOSITE LIGHT	P910	C215	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J78	F185	21	CAB RADIO CONNECTOR	P14	C38	5	RIGHT HEADLIGHT	P78	B197	22	LH COMPOSITE LIGHT	P910A	D215	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J80	D78	9	AIR DRYER (EXCEPT DUMP)	P17	H38	5	BLACKOUT DRIVE LIGHT	P80	G51	6	CHASSIS - REAR	P911	C220	25	CAB - DASH - CENTER - OPTIONS PANEL																				
J93	B50	6	CHASSIS - SPARE TIRE	P18	D38	5	LEFT HEADLIGHT	P81	C47	6	CHASSIS - FRONT	P911A	D220	25	CAB - DASH - CENTER - OPTIONS PANEL																				
J95	E38	5	12V INTERVEHICULAR	P18	A177	20	CAB - DASH - LEFT - UNDERDASH	P81	D62	7	STARTER THERMO SWITCH	P912	B124	14	CAB - DASH - CENTER - HEATER / CTIS ECU																				
J95	B206	23	ENGINE	P19	E38	5	LEFT HEADLIGHT	P82	B51	6	FUEL TANK LEVEL SENSOR	P913	B122	14	CAB - DASH - CENTER - HEATER / CTIS ECU																				
J99	E187	21	CHEMICAL ALARM CONNECTOR	P20	D38	5	LEFT HEADLIGHT	P83	B172	20	CAB - DASH - LEFT - UNDERDASH	P913	F209	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J106	F50	6	CHEMICAL DETECTOR RECEPTACLE	P22	G38	5	PARKING LIGHT FRONT LEFT	P84	F51	6	CHASSIS - REAR	P914	A214	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J108	B222	25	CAB - DASH - CENTER - OPTIONS PANEL	P23	F38	5	FRONT LEFT TURN SIGNAL	P85	A197	22	LH SIDE MARKER LIGHT	P914A	B214	24	CAB - DASH - CENTER - OPTIONS PANEL																				
J111	E122	14	CTIS ELECTRONIC CONTROL UNIT	P24	H38	5	BLACKOUT MARKER LEFT FRONT	P86	A197	22	LH REAR MARKER LIGHT	P921	G62	7	TROOP TRANSPORT ALARM																				
J113	G186	21	CTIS PRESSURE TRANSDUCER	P25	G85	10	WINDSHIELD WASHER ROTARY PUMP (B3)	P87	C197	22	BACKUP LIGHT	PBSS	C93	11	WTEC II PUSHBUTTON SHIFT SELECTOR																				
J14	B165	21	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P27	A43	5	CHASSIS - FRONT	P88	H197	22	RH SIDE MARKER LIGHT	PX1	A92	11	ENGINE FAN OFF SWITCH																				
J14	D298	34	WTEC III TRANSMISSION HARNESS (TID1)	P31	E56	7	ENGINE	P89	G197	22	RH REAR MARKER LIGHT	PX10	D107	12	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J14	D303	34	WTEC III TRANSMISSION HARNESS (TID2)	P31X	D56	7	ENGINE	P99	F186	21	CHEMICAL ALARM CONNECTOR	PX11	G107	12	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J15	C154	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P32	F59	7	ENGINE OIL PRESSURE SENSOR	P10	B38	5	PARKING LIGHT FRONT RIGHT	PX12	C112	13	ROTATING WARNING LIGHT SWITCH																				
J16	C159	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P33	H59	7	FUEL/WATER SEPARATOR	P10	E119	14	CTIS ELECTRONIC CONTROL UNIT	PX12A	E112	13	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J17	F161	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P34	E59	7	OIL PRESSURE WARNING LIGHT SWITCH	P111	E122	14	CTIS ELECTRONIC CONTROL UNIT	PX13	F92	11	ETHER STARTER SWITCH																				
J17	B289	33	WTEC III DIAGNOSTIC CONNECTOR	P36	A57	7	WATER COOLER TEMPERATURE	P112	G123	14	CAB - DASH - CENTER - HEATER / CTIS ECU	PX13A	G92	11	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J18	D161	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P37	C57	7	WATER TEMPERATURE SWITCH	P113	F123	14	CTIS ELECTRONIC CONTROL UNIT	PX14	F112	13	FULL HAZARD WARNING SWITCH																				
J19	B169	19	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P38	F61	7	ENGINE SPEED MAGNETIC PICKUP	P115	C290	33	WTEC III - CAB - DASH - RIGHT - KICK PANEL	PX14A	H112	13	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J19	D301	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	P39	G61	7	ENGINE	P116	C185	21	CAB - DASH - RIGHT - UNDERDASH	PX15	C115	13	MAIN LIGHT SWITCH																				
J19	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	P41	B57	7	WATER TEMPERATURE SENSOR	P118	D161	18	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	PX17	A112	13	IGNITION SWITCH																				
J129	F85	10	CAB MARKER LIGHT FRONT LOWER LEFT	P410	E240	27	ARCTIC KIT W/PTO EQUIPPED	P116	E291	33	WTEC III - CAB - DASH - RIGHT - KICK PANEL	PX17A	C112	13	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J130	F85	10	CAB MARKER LIGHT LEFT DOOR	P42	F57	7	ETHER SENSOR SWITCH	P119	A64	8	PRE-BLOCK SEVEN TRANSMISSION CONNECTOR	PX1A	B92	11	CAB - DASH - LEFT - INSTRUMENT PANEL																				
J130	F202	23	12 PIN CONNECTOR	P43	G42	5	CHASSIS - FRONT	P119	A69	8	TID1, TID2, AND TID3 TRANSMISSION CONNECTOR	PX2	D92	11	LAMP TEST SWITCH																				
J131	B85	10	CAB MARKER LIGHT RIGHT DOOR	P43X	F42	5	CHASSIS - FRONT	P119	A73	9	PRE-BLOCK SEVEN W/P1GTAIL TRANSMISSION CONNECTOR	PX20	C188	21	TURN SIGNAL FLASHER																				
J132	B85	10	CAB MARKER LIGHT FRONT LOWER RIGHT	P50	E85	10	CAB MARKER LIGHT FRONT UPPER LEFT	P119	B169	19	CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	PX21	A134	15	WIPER DELAY MODULE																				
J150	B271	31	VAN FRONT MARKER LIGHT	P50	F206	23	LH FRONT TOP CAB MARKER LIGHT	P125	G84	10	WINDSHIELD WASHER ROTARY PUMP (B3)																								
J151	B271	31	VAN FRONT MARKER LIGHT	P51	D190	22	CAB - DASH - RIGHT - POWER DISTRIBUTION PANEL	P129	F85	10	CAB MARKER LIGHT FRONT LOWER LEFT																								
J152	B271	31	VAN FRONT MARKER LIGHT	P52F	E38	5	CHASSIS - FRONT	P130	F85	10	CAB MARKER LIGHT LEFT DOOR																								
J153	A271	31	VAN FRONT MARKER LIGHT	P52R	E196	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	P131	A85	10	CAB MARKER LIGHT RIGHT DOOR																								

FIGURE FO-1 ELECTRICAL SYSTEM SCHEMATIC
 FOLDOUT 2 OF 34
 SIZE B ILL. NO. 5WD01L2B FP-3/ (FP-4 BLANK)

28				29				30				31				32				33				34				35				36																																																																																																																																																																																																			
SWITCHES (CONTINUED)								SOLENOIDS								MISCELLANEOUS (CONTINUED)								MISCELLANEOUS (CONTINUED)																																																																																																																																																																																																											
NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION	NUMBER	ZONE	SH	DESCRIPTION																																																																																																																																																																																												
S17	G288	32	VAN CURBSIDE WINDOW BLACKOUT SWITCH (S/N 001 THROUGH 190)	KS	D47	6	24V AUXILIARY STARTER SOLENOID	E15	E197	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E177	E77	9	LIGHT MATERIAL HANDLING CRANE (LMHC)	E17	G195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E77	E77	9	LMHC REMOTE CONTROL BOX	E18	G194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E77	E77	9	LMHC POWER CABLE	G78	G78	9	LMHC REMOTE CONTROL IN/OUT	E19	F194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	G302	G302	34	WTEC III TRANSMISSION PRESSURE SWITCH	B304	B304	34	WTEC II OUTPUT SPEED SENSOR	E20	E194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E21	D195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E304	E304	34	WTEC II ENGINE SPEED SENSOR	E21	D195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E304	E304	34	WTEC II SUMP TEMP SENSOR	E22	B86	10	CAB - MARKER LIGHTS	E23	D205	23	AIRDROP ONLY	TRANSMISSION				A10	B183	21	WTEC II VEHICLE INTERFACE MODULE	A13	B67	8	WTEC II TRANSMISSION A13 (SERIAL # 29513233)	A13	A72	8	WTEC II TRANSMISSION A13 (SERIAL # 29517497)	A13	A76	9	WTEC II TRANSMISSION A13 (SERIAL # 29513233)	B10	E67	8	PRE-BLOCK SEVEN TRANSMISSION OUTPUT SPEED SENSOR	B10	E72	8	TID1, TID2, AND TID3 TRANSMISSION OUTPUT SPEED SENSOR	B10	E76	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION OUTPUT SPEED SENSOR	MT9	F67	8	PRE-BLOCK SEVEN TRANSMISSION ENGINE SPEED SENSOR	MT9	F72	8	TID1, TID2, AND TID3 TRANSMISSION ENGINE SPEED SENSOR	MT9	F76	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION ENGINE SPEED SENSOR	MT11	F67	8	PRE-BLOCK SEVEN TRANSMISSION THROTTLE POSITION SENSOR	MT11	F72	8	TID1, TID2, AND TID3 TRANSMISSION THROTTLE POSITION SENSOR	MT11	F76	9	PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION THROTTLE POSITION SENSOR	REV	C183	21	WTEC II VEHICLE INTERFACE MODULE	RW	D183	21	WTEC II VEHICLE INTERFACE MODULE	S02	F183	21	WTEC II VEHICLE INTERFACE MODULE	S03	F183	21	WTEC II VEHICLE INTERFACE MODULE	SF01	D183	21	WTEC II VEHICLE INTERFACE MODULE	SF01	D183	21	WTEC II VEHICLE INTERFACE MODULE	SF02	C183	21	WTEC II VEHICLE INTERFACE MODULE	SF04	C183	21	WTEC II VEHICLE INTERFACE MODULE	SF3	F183	21	WTEC II VEHICLE INTERFACE MODULE	SF4	D183	21	WTEC II VEHICLE INTERFACE MODULE																																																								
S18	D269	30	PTO PRESSURE SWITCH	L1	E189	21	FAN SOLENOID	E16	A197	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E22	B86	10	CAB - MARKER LIGHTS	E23	D205	23	AIRDROP ONLY	E24	C85	10	CAB - MARKER LIGHTS	E24	D205	23	AIRDROP ONLY	E25	F86	10	CAB - MARKER LIGHTS	E60	B41	31	24 VDC VAN POWER	E65	B41	5	CHASSIS - FRONT	E66	C41	5	CHASSIS - FRONT	E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E67	D38	5	CHASSIS - FRONT	E68	D40	5	CHASSIS - FRONT	E70	C229	26	PTO EQUIPPED	E71	F173	20	CAB - DASH - LEFT - UNDERDASH	E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET	E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT	E503	B273	31	VAN MARKER LIGHT	E504	B272	31	VAN MARKER LIGHT	E505	B287	32	VAN REAR MARKER LIGHTS	E506	C287	32	VAN REAR MARKER LIGHTS	E514	C274	31	VAN EMERGENCY LIGHT	E516	H272	31	VAN 24 VDC	F2	H271	31	VAN 24 VDC POWER	FL	E183	21	WTEC II VEHICLE INTERFACE MODULE	FL1	G85	10	EMI FILTER	FL2	A184	21	EMI FILTER	FL3	C118	14	FAN MOTOR	GI	D60	7	ALTERNATOR	MPUI	F61	7	ENGINE SPEED MAGNETIC PICKUP	MT3	F60	7	ENGINE OIL PRESSURE SENSOR	MT4	E177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER	MT5	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER	MT6	B57	7	WATER COOLER TEMPERATURE	MT7	B52	6	FUEL TANK LEVEL SENSOR	NS	E183	21	WTEC II VEHICLE INTERFACE MODULE	P/P	B54	6	POLARITY PROTECTION	P/P	D54	6	POLARITY PROTECTION	R11	D50	6	SHUNT	R1	D79	9	AIR DRYER	TB1	C128	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TB2	F130	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X1	C137	16	24 VDC	X2	D137	16	24 VDC	X3	F137	16	GROUND	X5	D137	16	24 VDC	X7	D137	16	24 VDC	PHONE 1	A285	32	VAN PHONE 1	PHONE 2	H287	32	VAN PHONE 2
S19	G177	20	SWITCH/REAR AIR PRESSURE TRANSMITTER	L2	H57	7	FUEL SOLENOID	E17	G195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E23	D205	23	AIRDROP ONLY	E24	C85	10	CAB - MARKER LIGHTS	E24	D205	23	AIRDROP ONLY	E25	F86	10	CAB - MARKER LIGHTS	E60	B41	31	24 VDC VAN POWER	E65	B41	5	CHASSIS - FRONT	E66	C41	5	CHASSIS - FRONT	E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E67	D38	5	CHASSIS - FRONT	E68	D40	5	CHASSIS - FRONT	E70	C229	26	PTO EQUIPPED	E71	F173	20	CAB - DASH - LEFT - UNDERDASH	E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET	E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT	E503	B273	31	VAN MARKER LIGHT	E504	B272	31	VAN MARKER LIGHT	E505	B287	32	VAN REAR MARKER LIGHTS	E506	C287	32	VAN REAR MARKER LIGHTS	E514	C274	31	VAN EMERGENCY LIGHT	E516	H272	31	VAN 24 VDC	F2	H271	31	VAN 24 VDC POWER	FL	E183	21	WTEC II VEHICLE INTERFACE MODULE	FL1	G85	10	EMI FILTER	FL2	A184	21	EMI FILTER	FL3	C118	14	FAN MOTOR	GI	D60	7	ALTERNATOR	MPUI	F61	7	ENGINE SPEED MAGNETIC PICKUP	MT3	F60	7	ENGINE OIL PRESSURE SENSOR	MT4	E177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER	MT5	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER	MT6	B57	7	WATER COOLER TEMPERATURE	MT7	B52	6	FUEL TANK LEVEL SENSOR	NS	E183	21	WTEC II VEHICLE INTERFACE MODULE	P/P	B54	6	POLARITY PROTECTION	P/P	D54	6	POLARITY PROTECTION	R11	D50	6	SHUNT	R1	D79	9	AIR DRYER	TB1	C128	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TB2	F130	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X1	C137	16	24 VDC	X2	D137	16	24 VDC	X3	F137	16	GROUND	X5	D137	16	24 VDC	X7	D137	16	24 VDC	PHONE 1	A285	32	VAN PHONE 1	PHONE 2	H287	32	VAN PHONE 2				
S20	E177	20	SWITCH/FRONT AIR PRESSURE TRANSMITTER	L3	D269	30	PTO SOLENOID	E18	G194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E25	F86	10	CAB - MARKER LIGHTS	E60	B41	31	24 VDC VAN POWER	E65	B41	5	CHASSIS - FRONT	E66	C41	5	CHASSIS - FRONT	E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E67	D38	5	CHASSIS - FRONT	E68	D40	5	CHASSIS - FRONT	E70	C229	26	PTO EQUIPPED	E71	F173	20	CAB - DASH - LEFT - UNDERDASH	E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET	E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT	E503	B273	31	VAN MARKER LIGHT	E504	B272	31	VAN MARKER LIGHT	E505	B287	32	VAN REAR MARKER LIGHTS	E506	C287	32	VAN REAR MARKER LIGHTS	E514	C274	31	VAN EMERGENCY LIGHT	E516	H272	31	VAN 24 VDC	F2	H271	31	VAN 24 VDC POWER	FL	E183	21	WTEC II VEHICLE INTERFACE MODULE	FL1	G85	10	EMI FILTER	FL2	A184	21	EMI FILTER	FL3	C118	14	FAN MOTOR	GI	D60	7	ALTERNATOR	MPUI	F61	7	ENGINE SPEED MAGNETIC PICKUP	MT3	F60	7	ENGINE OIL PRESSURE SENSOR	MT4	E177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER	MT5	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER	MT6	B57	7	WATER COOLER TEMPERATURE	MT7	B52	6	FUEL TANK LEVEL SENSOR	NS	E183	21	WTEC II VEHICLE INTERFACE MODULE	P/P	B54	6	POLARITY PROTECTION	P/P	D54	6	POLARITY PROTECTION	R11	D50	6	SHUNT	R1	D79	9	AIR DRYER	TB1	C128	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TB2	F130	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X1	C137	16	24 VDC	X2	D137	16	24 VDC	X3	F137	16	GROUND	X5	D137	16	24 VDC	X7	D137	16	24 VDC	PHONE 1	A285	32	VAN PHONE 1	PHONE 2	H287	32	VAN PHONE 2																
S23	F52	6	AIR PRESSURE SWITCH FOR CTIS	L4	E233	26	WINCH IN SOLENOID	E19	F194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E67	D38	5	CHASSIS - FRONT	E68	D40	5	CHASSIS - FRONT	E70	C229	26	PTO EQUIPPED	E71	F173	20	CAB - DASH - LEFT - UNDERDASH	E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET	E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT	E503	B273	31	VAN MARKER LIGHT	E504	B272	31	VAN MARKER LIGHT	E505	B287	32	VAN REAR MARKER LIGHTS	E506	C287	32	VAN REAR MARKER LIGHTS	E514	C274	31	VAN EMERGENCY LIGHT	E516	H272	31	VAN 24 VDC	F2	H271	31	VAN 24 VDC POWER	FL	E183	21	WTEC II VEHICLE INTERFACE MODULE	FL1	G85	10	EMI FILTER	FL2	A184	21	EMI FILTER	FL3	C118	14	FAN MOTOR	GI	D60	7	ALTERNATOR	MPUI	F61	7	ENGINE SPEED MAGNETIC PICKUP	MT3	F60	7	ENGINE OIL PRESSURE SENSOR	MT4	E177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER	MT5	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER	MT6	B57	7	WATER COOLER TEMPERATURE	MT7	B52	6	FUEL TANK LEVEL SENSOR	NS	E183	21	WTEC II VEHICLE INTERFACE MODULE	P/P	B54	6	POLARITY PROTECTION	P/P	D54	6	POLARITY PROTECTION	R11	D50	6	SHUNT	R1	D79	9	AIR DRYER	TB1	C128	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TB2	F130	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X1	C137	16	24 VDC	X2	D137	16	24 VDC	X3	F137	16	GROUND	X5	D137	16	24 VDC	X7	D137	16	24 VDC	PHONE 1	A285	32	VAN PHONE 1	PHONE 2	H287	32	VAN PHONE 2																																
S24	E125	14	PARKING BRAKE SWITCH	L5	D233	26	SOLENOID	E20	E194	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E67	D38	5	CHASSIS - FRONT	E68	D40	5	CHASSIS - FRONT	E70	C229	26	PTO EQUIPPED	E71	F173	20	CAB - DASH - LEFT - UNDERDASH	E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET	E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT	E503	B273	31	VAN MARKER LIGHT	E504	B272	31	VAN MARKER LIGHT	E505	B287	32	VAN REAR MARKER LIGHTS	E506	C287	32	VAN REAR MARKER LIGHTS	E514	C274	31	VAN EMERGENCY LIGHT	E516	H272	31	VAN 24 VDC	F2	H271	31	VAN 24 VDC POWER	FL	E183	21	WTEC II VEHICLE INTERFACE MODULE	FL1	G85	10	EMI FILTER	FL2	A184	21	EMI FILTER	FL3	C118	14	FAN MOTOR	GI	D60	7	ALTERNATOR	MPUI	F61	7	ENGINE SPEED MAGNETIC PICKUP	MT3	F60	7	ENGINE OIL PRESSURE SENSOR	MT4	E177	20	SENSOR/FRONT AIR PRESSURE TRANSMITTER	MT5	G177	20	SENSOR/REAR AIR PRESSURE TRANSMITTER	MT6	B57	7	WATER COOLER TEMPERATURE	MT7	B52	6	FUEL TANK LEVEL SENSOR	NS	E183	21	WTEC II VEHICLE INTERFACE MODULE	P/P	B54	6	POLARITY PROTECTION	P/P	D54	6	POLARITY PROTECTION	R11	D50	6	SHUNT	R1	D79	9	AIR DRYER	TB1	C128	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TB2	F130	15	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X1	C137	16	24 VDC	X2	D137	16	24 VDC	X3	F137	16	GROUND	X5	D137	16	24 VDC	X7	D137	16	24 VDC	PHONE 1	A285	32	VAN PHONE 1	PHONE 2	H287	32	VAN PHONE 2																																
S26	C57	7	WATER TEMPERATURE SENSOR	L15	B51	6	CHASSIS - SPARE TIRE	E21	D195	22	ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	E66	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E66	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E67	D38	5	CHASSIS - FRONT	E68	D40	5	CHASSIS - FRONT	E70	C229	26	PTO EQUIPPED	E71	F173	20	CAB - DASH - LEFT - UNDERDASH	E88	B106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E89	C106	12	CAB - DASH - LEFT - INSTRUMENT PANEL	E90	D300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E90	D305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E91	C300	34	WTEC III CAB TRANSMISSION HARNESS (TID1)	E91	C305	34	WTEC III CAB TRANSMISSION HARNESS (TID2)	E501	B275	31	VAN EMERGENCY/BLACKOUT LIGHT/24 VDC OUTLET	E502	G274	31	VAN EMERGENCY/BLACKOUT LIGHT	E503	B273	31	VAN MARKER LIGHT	E504	B272	31	VAN MARKER LIGHT	E505	B287	32	VAN REAR MARKER LIGHTS	E506	C287	32	VAN REAR MARKER LIGHTS	E514	C274	31	VAN EMERGENCY LIGHT	E516	H272	31	VAN 24 VDC	F2	H271	31																																																																																																																																					

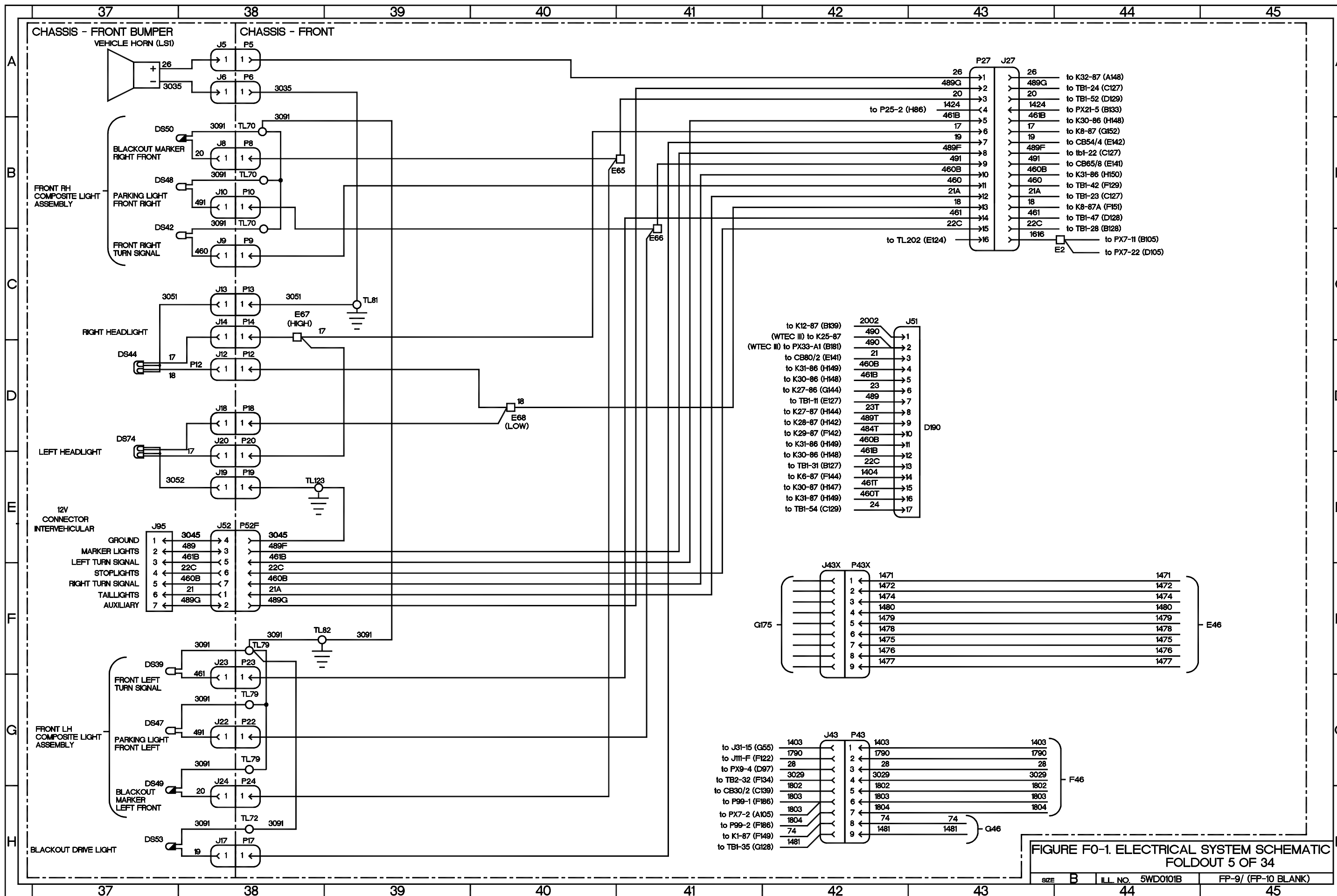


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 5 OF 34

SIZE B ILL. NO. 5WD0101B FP-9/ (FP-10 BLANK)

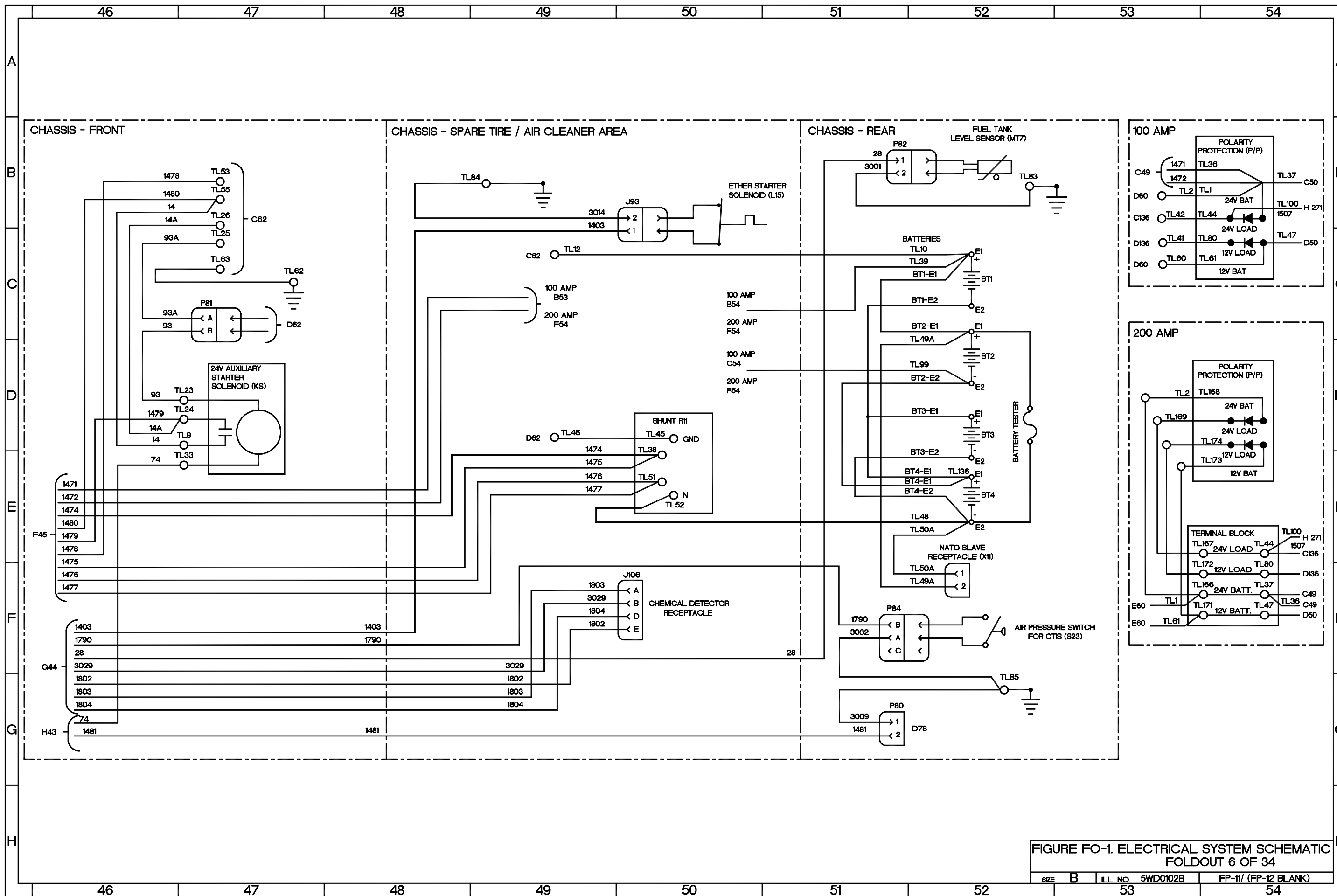


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 6 OF 34

SIZE	B	ILL. NO.	5WD0102B	FP-11/ (FP-12 BLANK)
------	---	----------	----------	----------------------

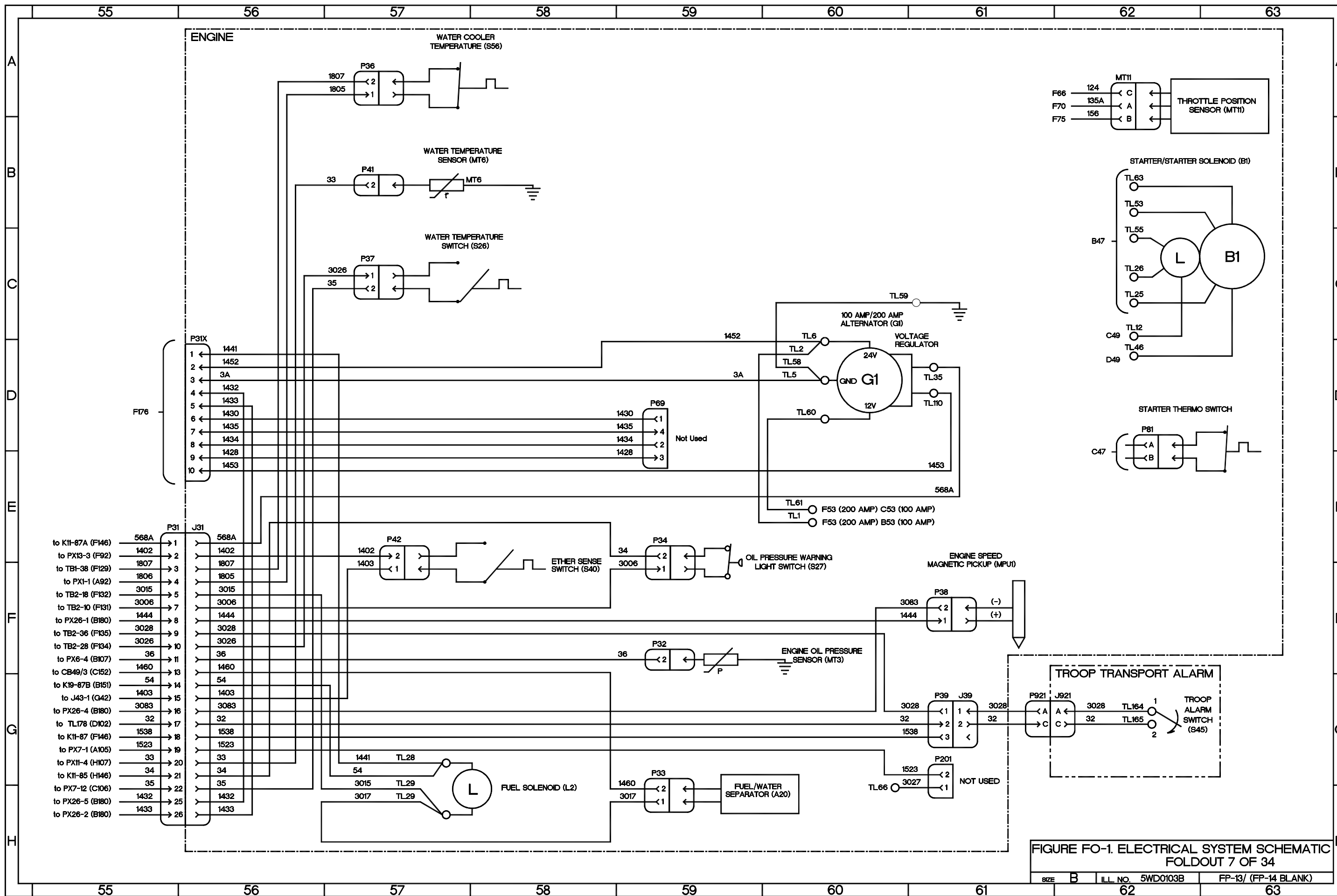


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 7 OF 34

SIZE	B	ILL. NO.	5WD0103B	FP-13/ (FP-14 BLANK)
------	---	----------	----------	----------------------

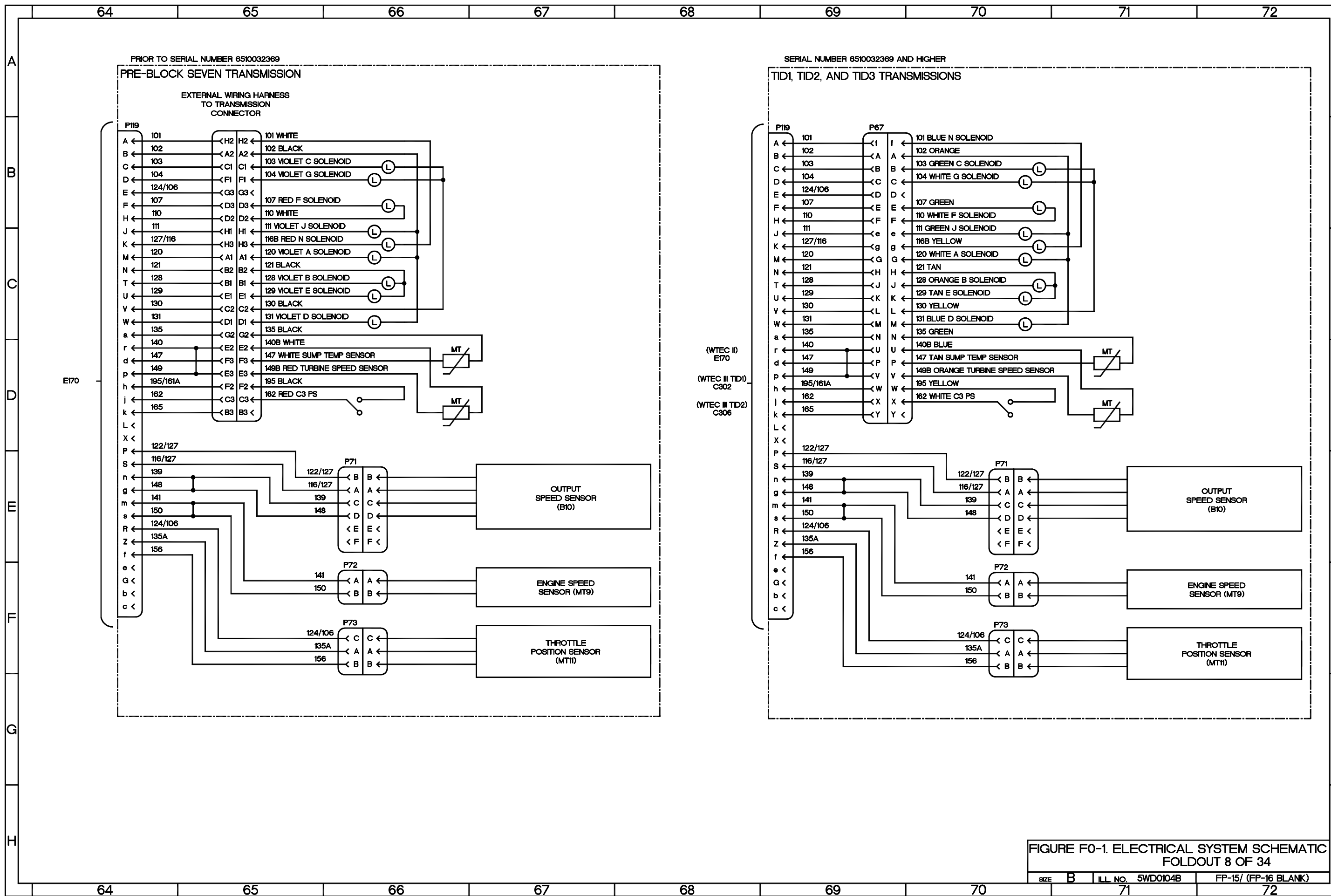


FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 8 OF 34

SIZE B ILL. NO. 5WD0104B FP-15/ (FP-16 BLANK)

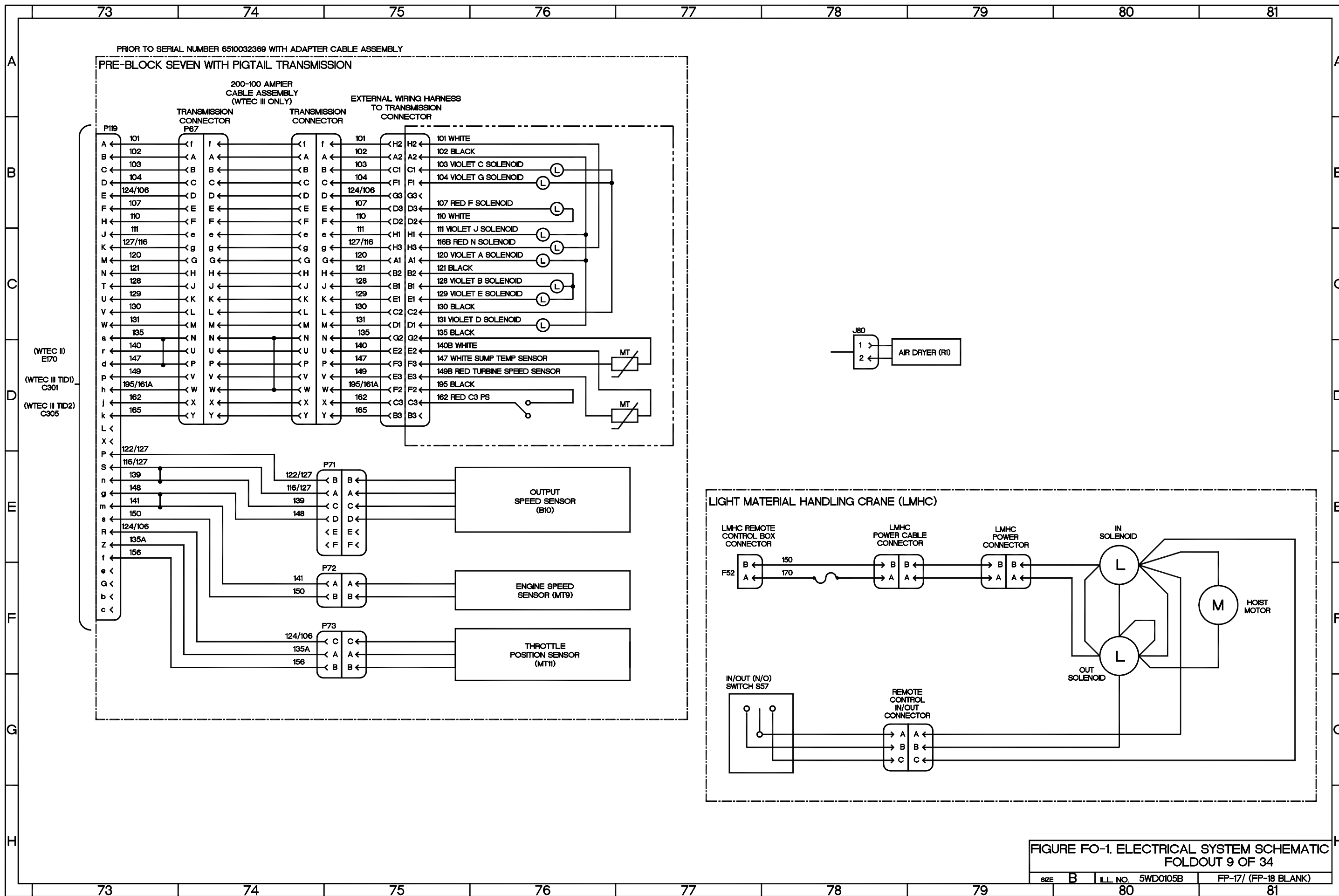


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 9 OF 34

SIZE	B	ILL. NO.	5WD0105B	FP-17/ (FP-18 BLANK)
------	---	----------	----------	----------------------

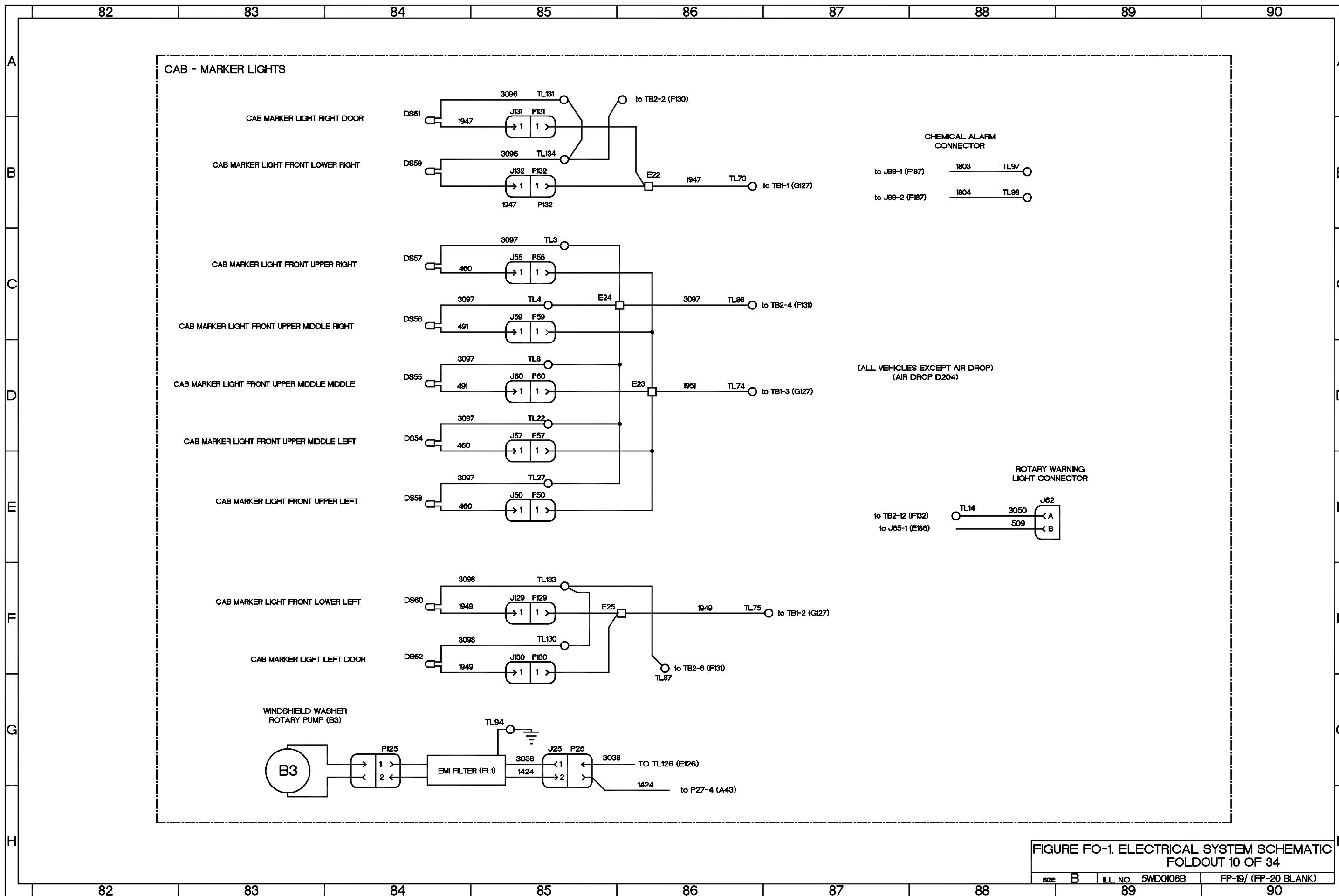


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 10 OF 34

SIZE	B	ILL. NO.	5WD0106B	FP-19/ (FP-20 BLANK)
			89	90

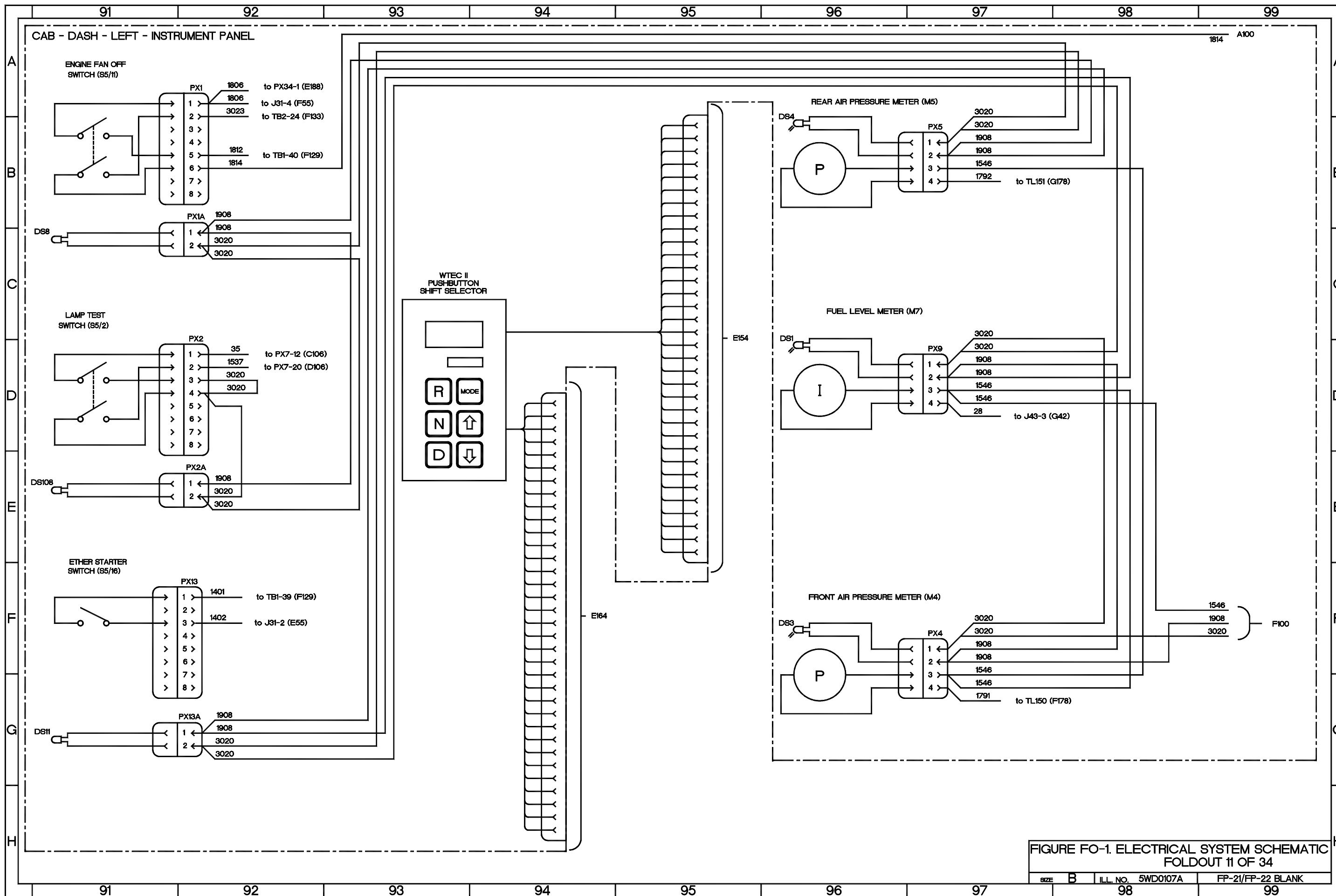


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 11 OF 34

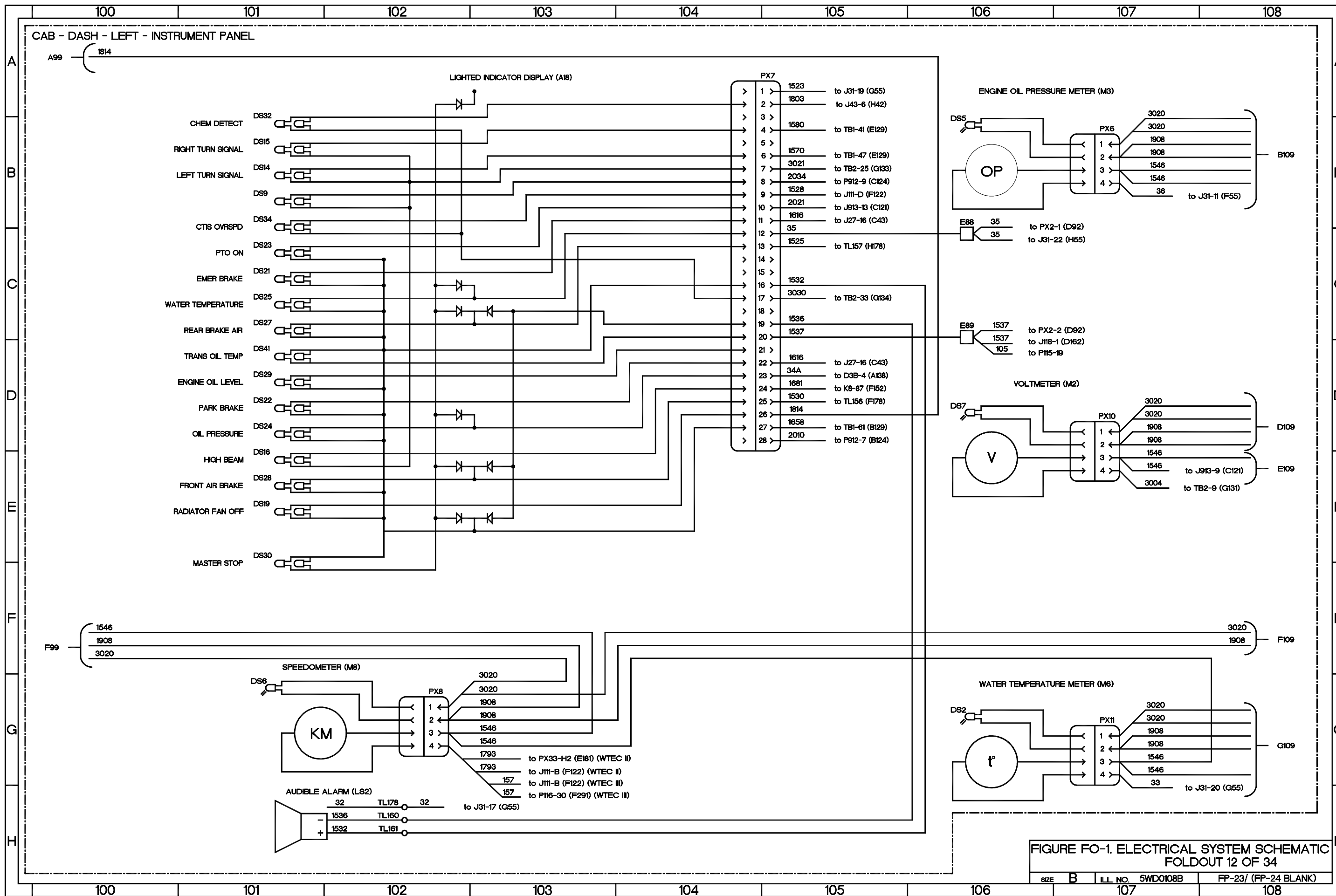


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 12 OF 34

SIZE	B	ILL. NO.	5WD0108B	FP-23/ (FP-24 BLANK)
------	---	----------	----------	----------------------

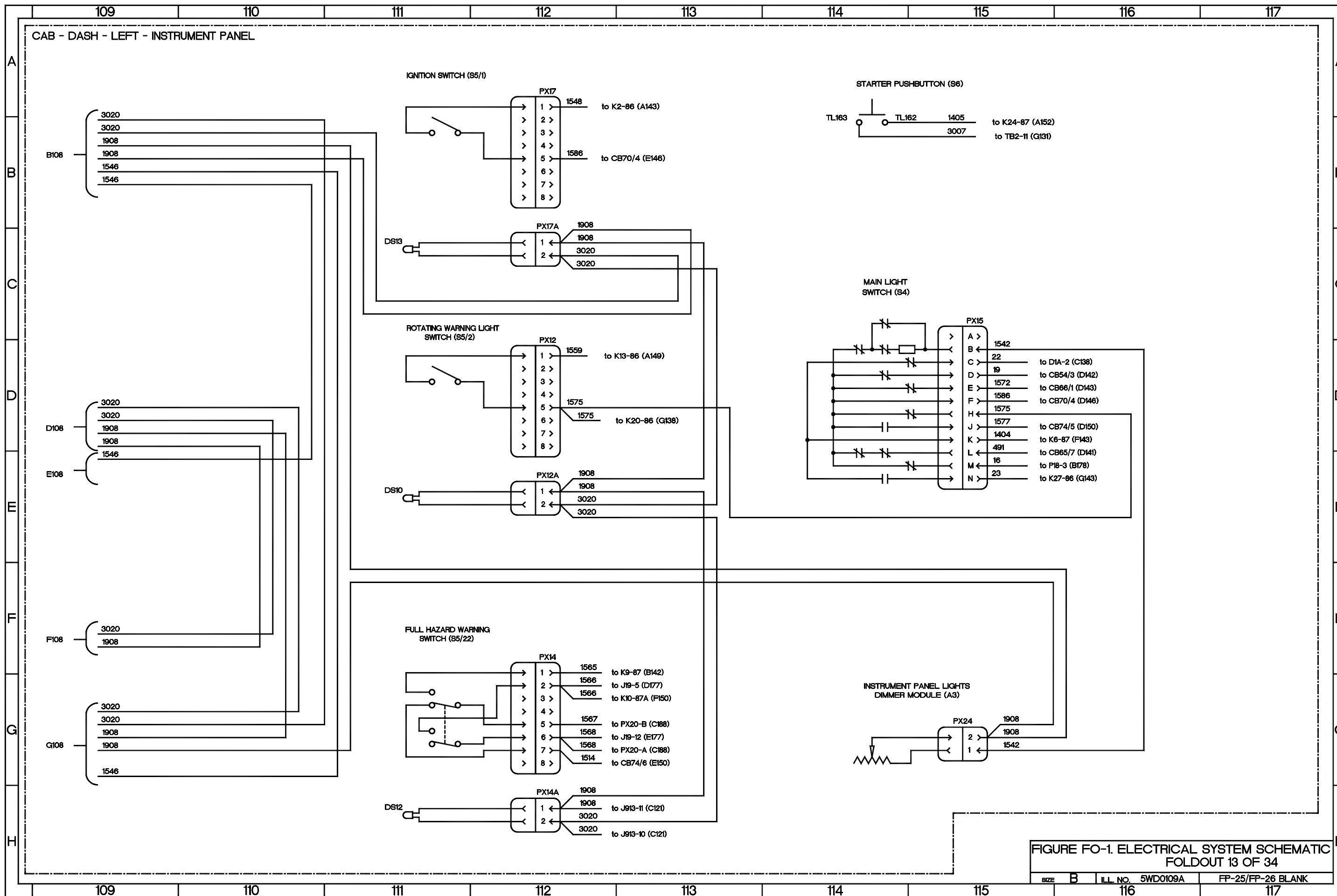


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 13 OF 34

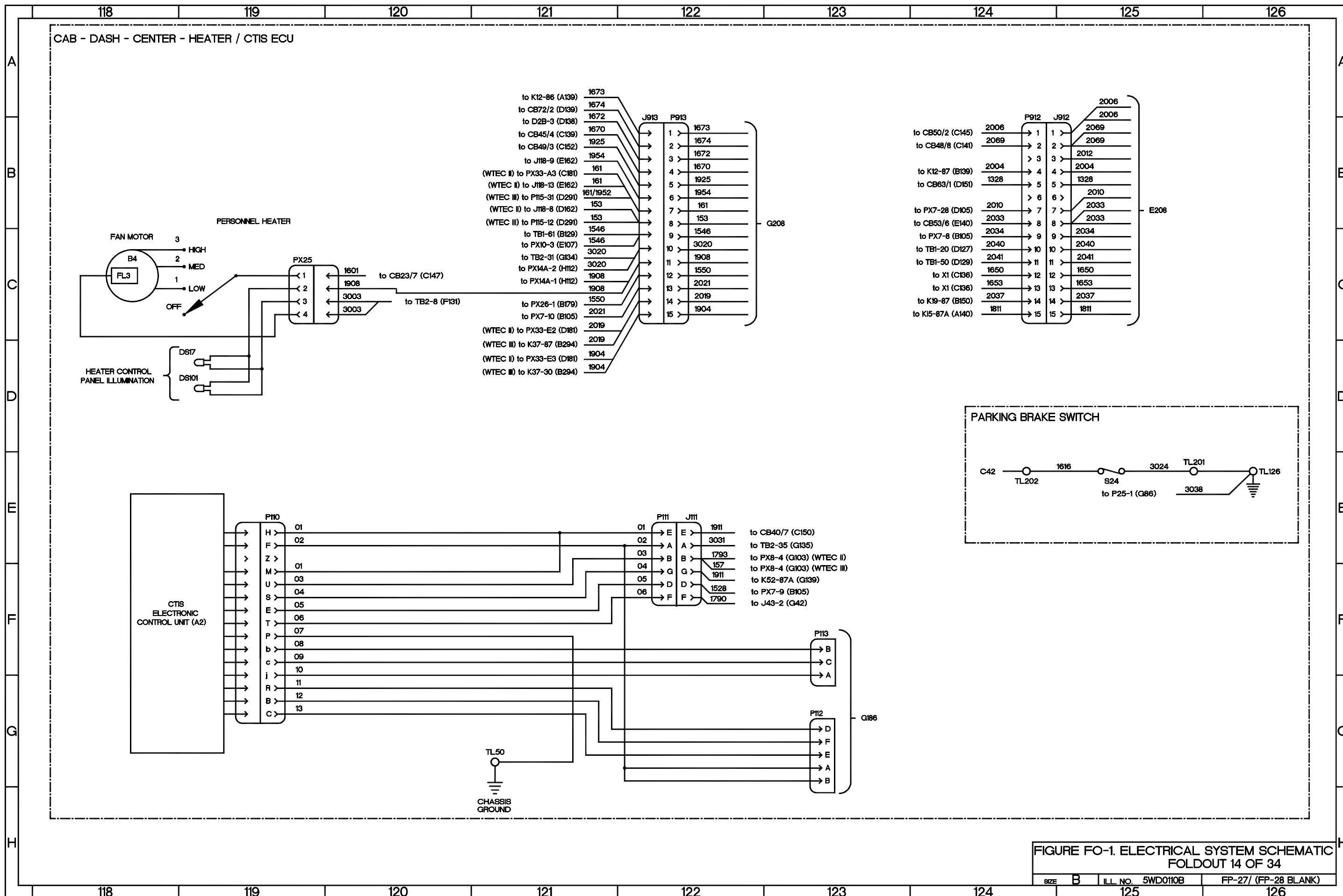


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 14 OF 34

SIZE	B	ILL. NO.	5WD0110B	FP-27/ (FP-28 BLANK)
------	---	----------	----------	----------------------

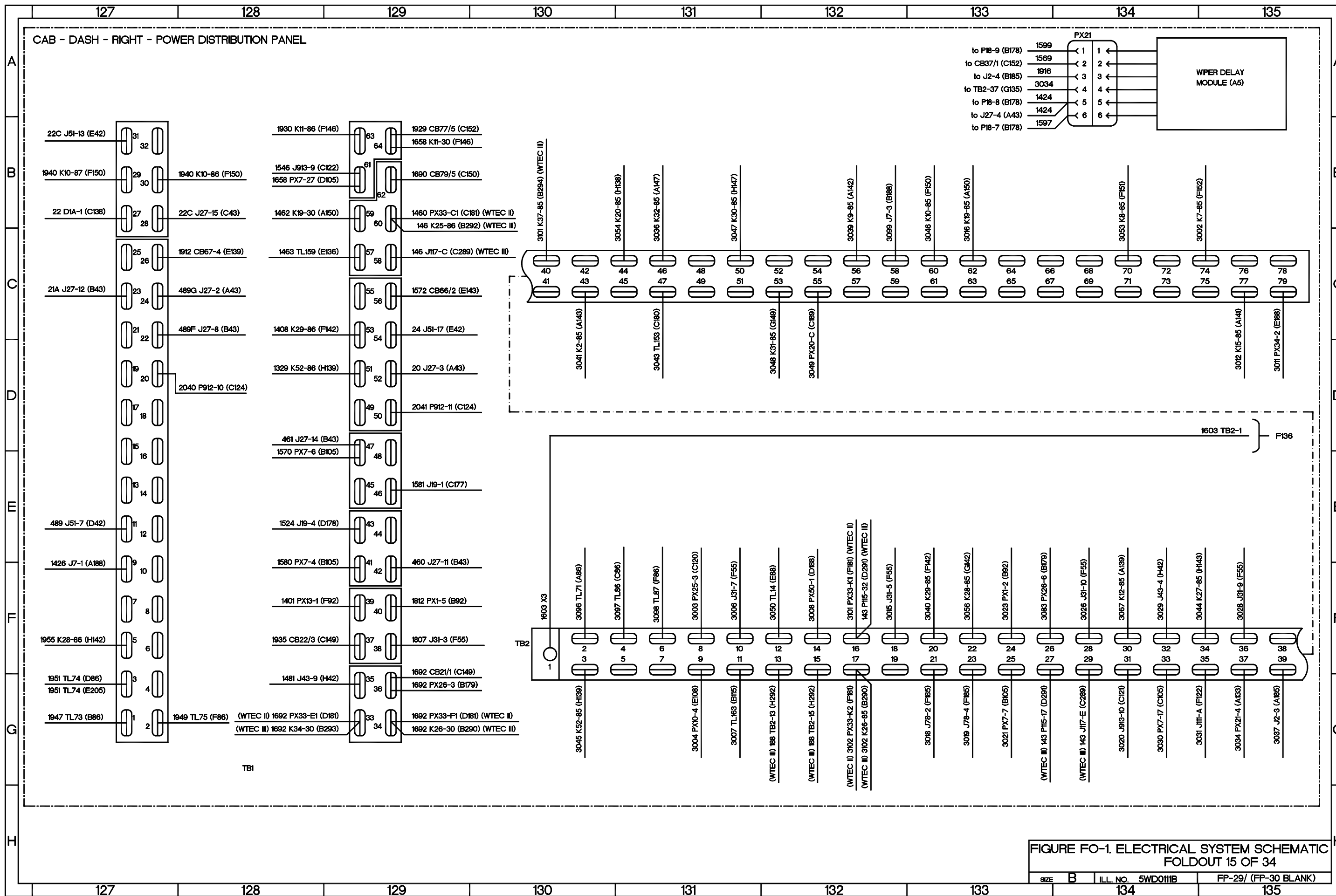
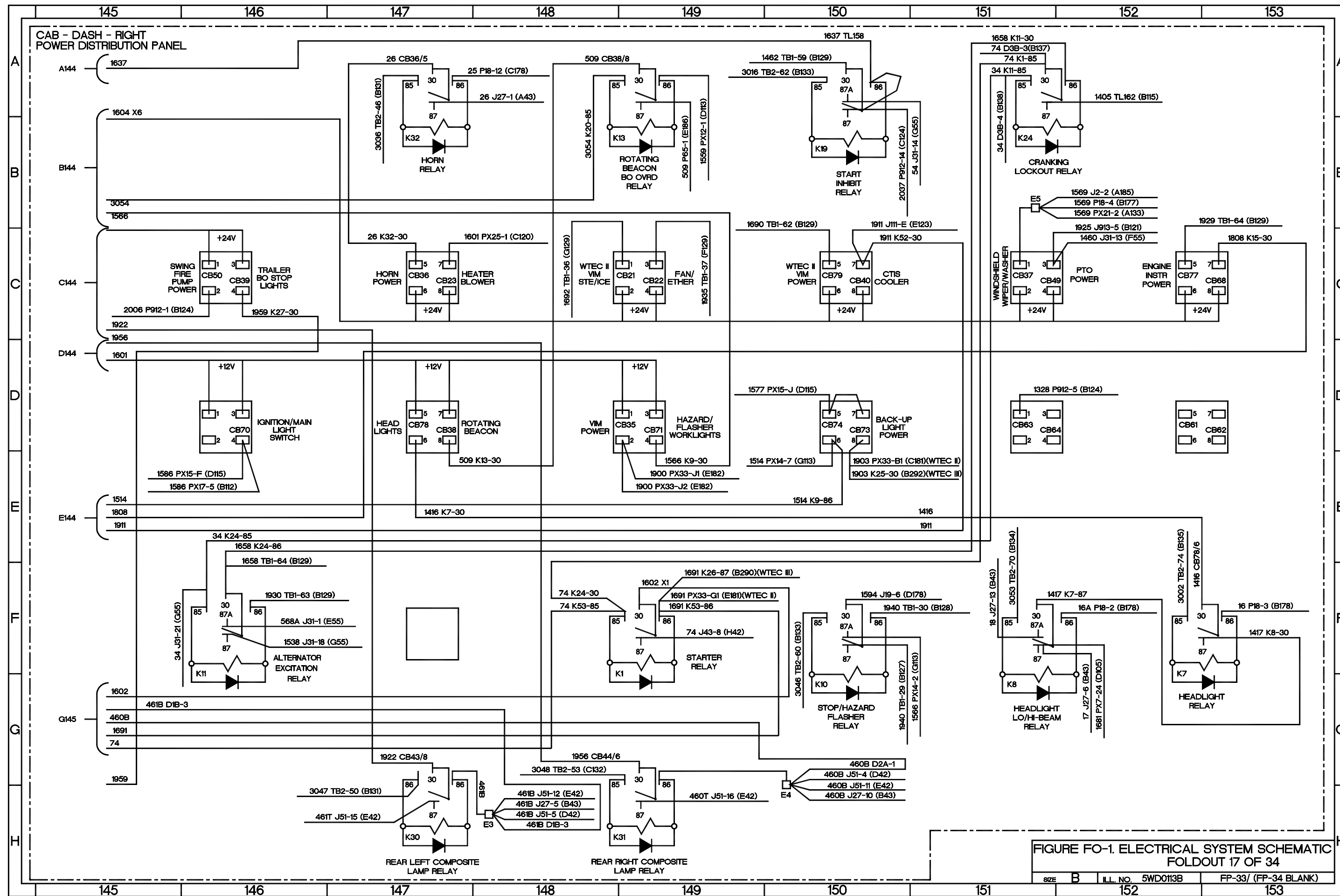


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 15 OF 34

SIZE	B	ILL. NO.	5WD0111B	FP-29/ (FP-30 BLANK)
------	---	----------	----------	----------------------



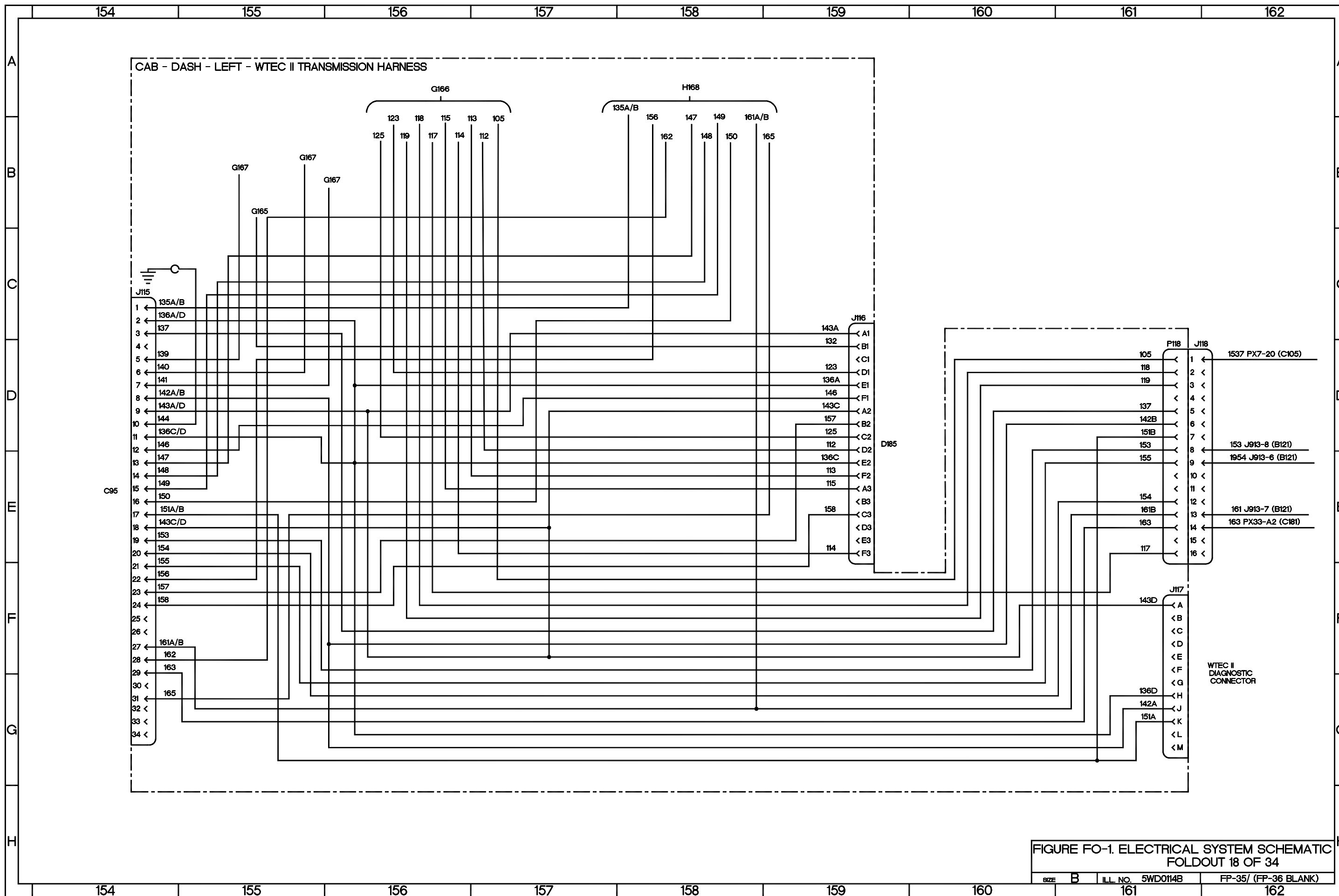


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 18 OF 34

SIZE	B	ILL. NO.	5WD0114B	FP-35/ (FP-36 BLANK)
			161	162

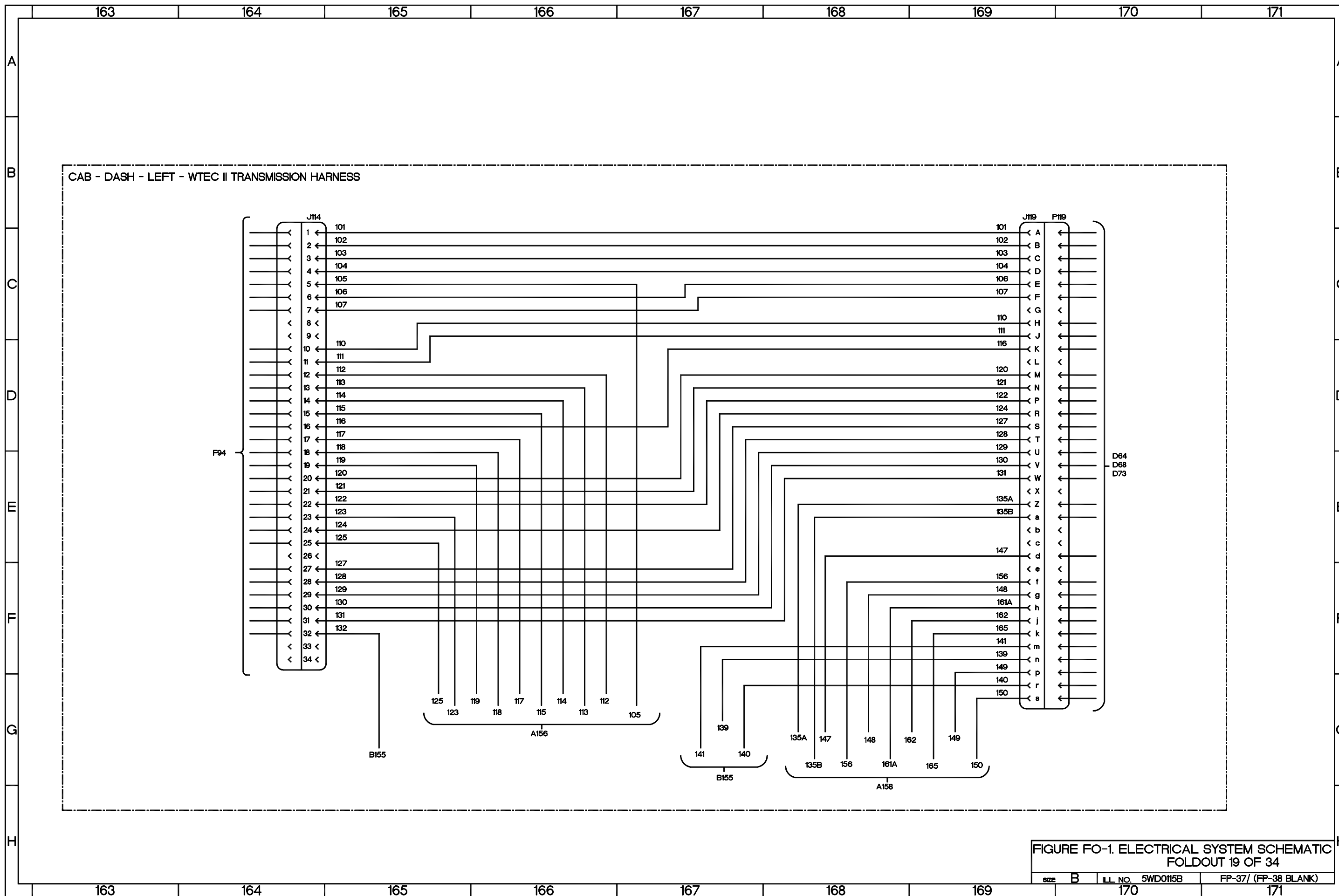


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 19 OF 34

SIZE	B	ILL. NO.	5WD0115B	FP-37/ (FP-38 BLANK)
			170	171

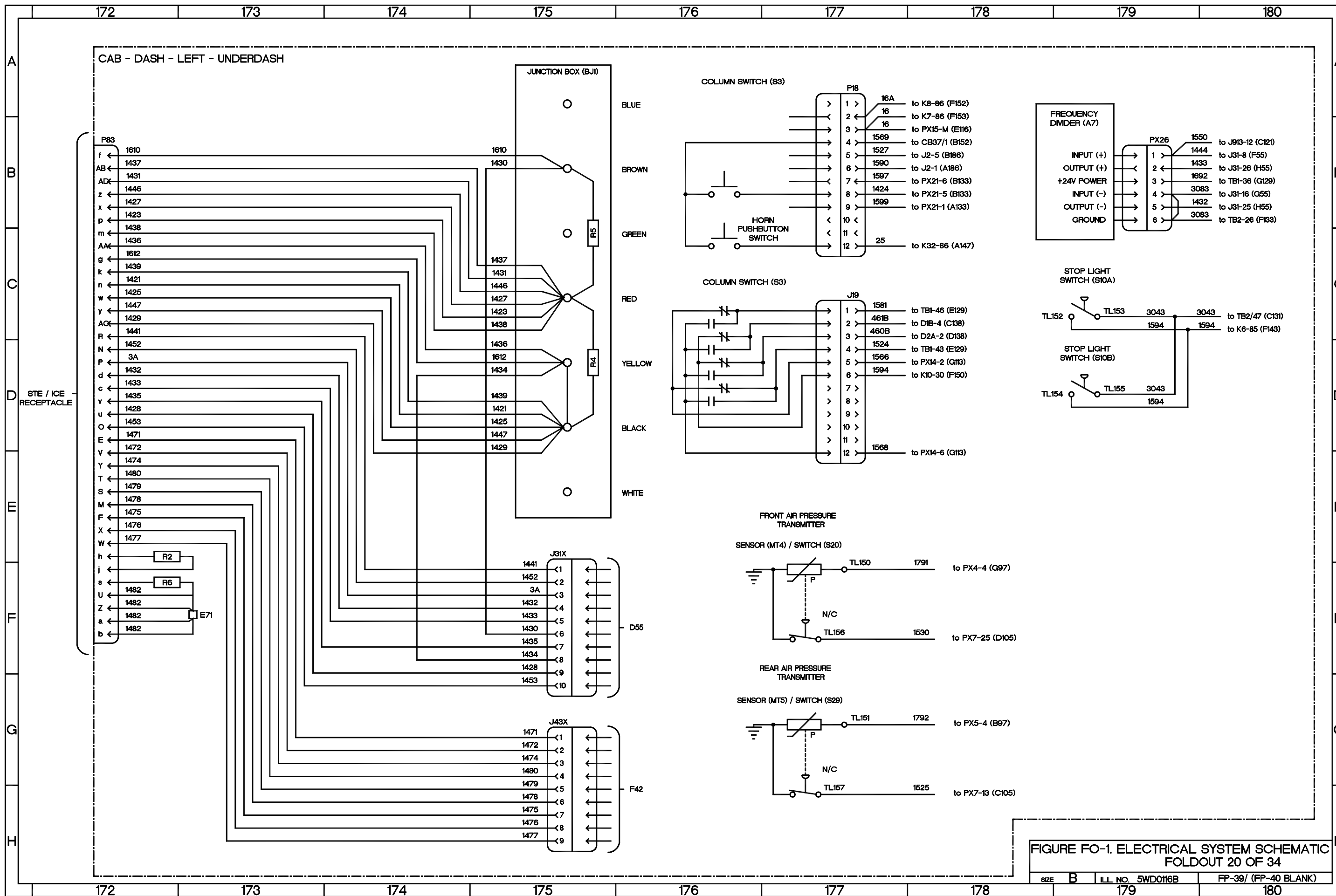


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 20 OF 34

SIZE	B	ILL. NO.	5WD0116B	FP-39/ (FP-40 BLANK)
------	---	----------	----------	----------------------

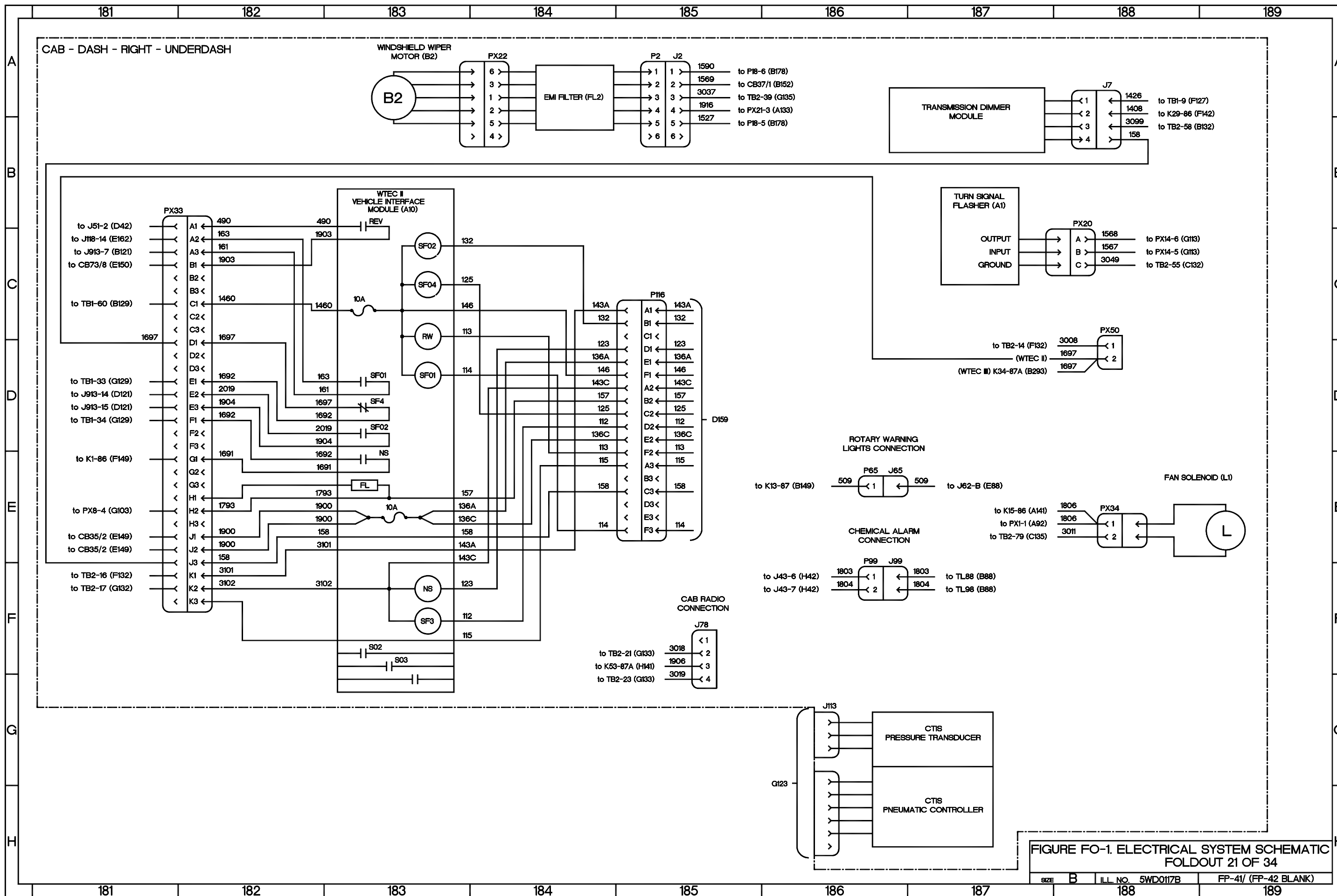
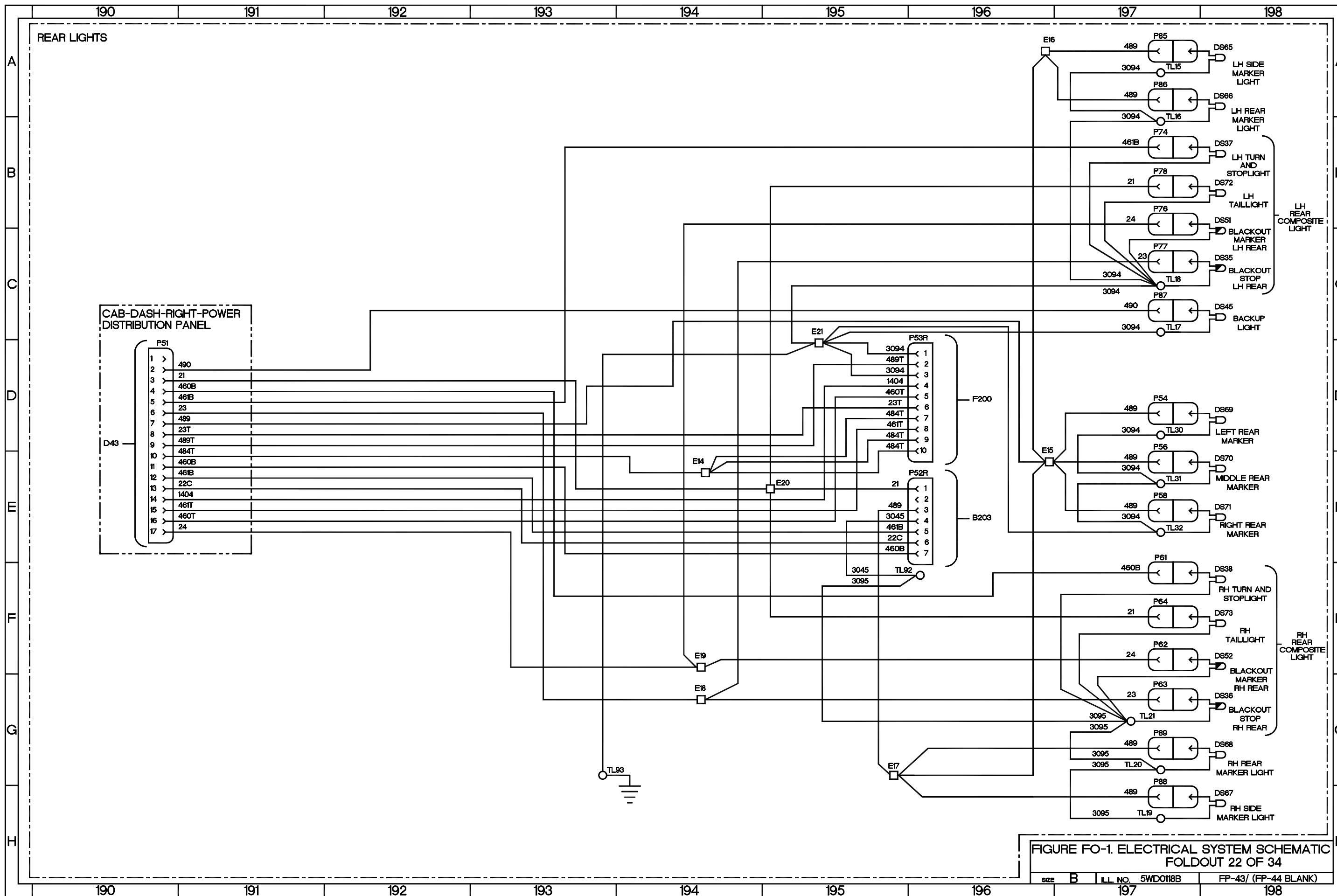


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 21 OF 34

SIZE B ILL. NO. 5WD0117B FP-41/ (FP-42 BLANK)



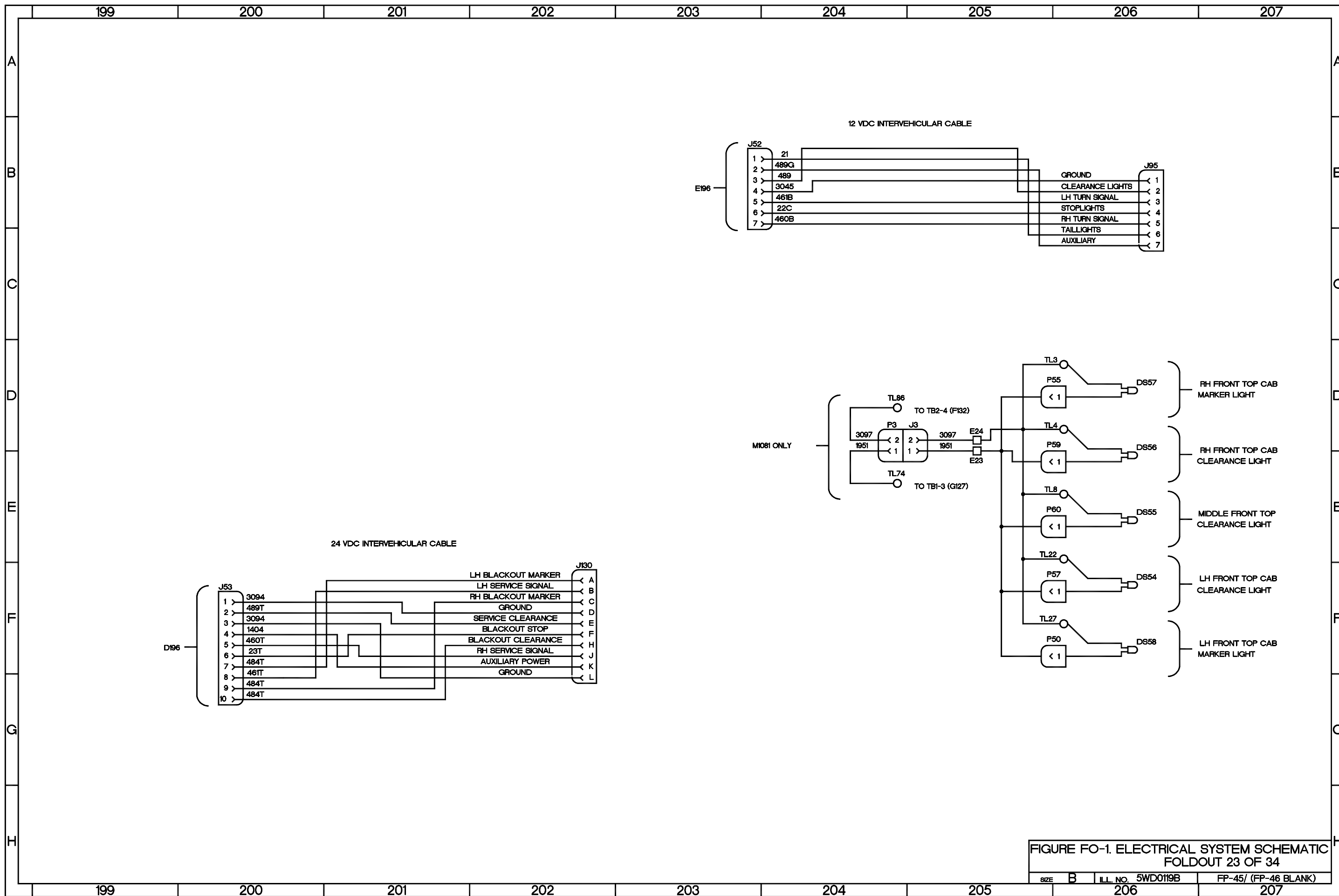


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 23 OF 34

SIZE	B	ILL. NO.	5WD019B	FP-45/ (FP-46 BLANK)
------	---	----------	---------	----------------------

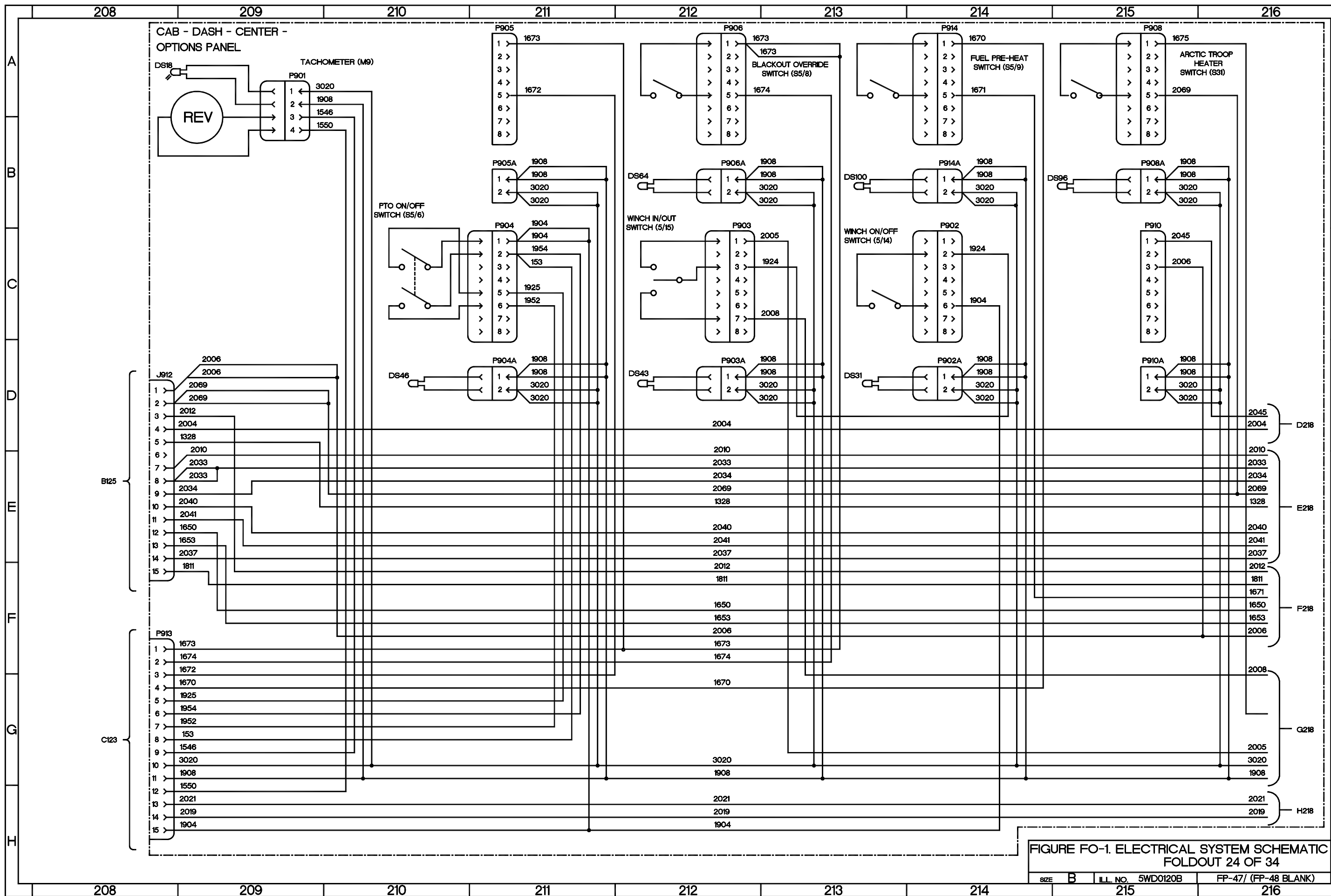


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 24 OF 34
 SIZE B ILL. NO. 5WD0120B FP-47/ (FP-48 BLANK)

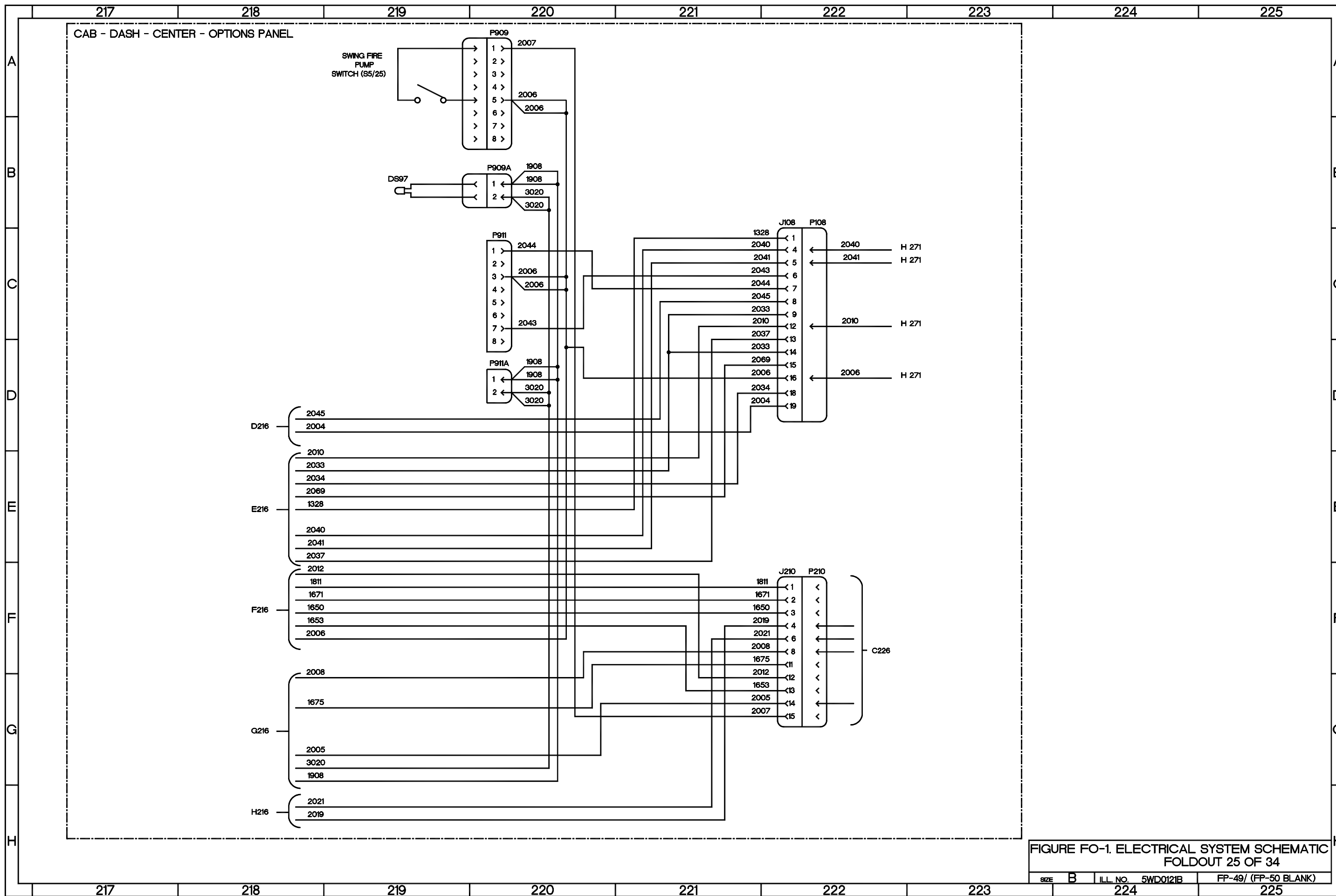


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 25 OF 34

SIZE	B	ILL. NO.	5WD0121B	FP-49/ (FP-50 BLANK)
			224	225

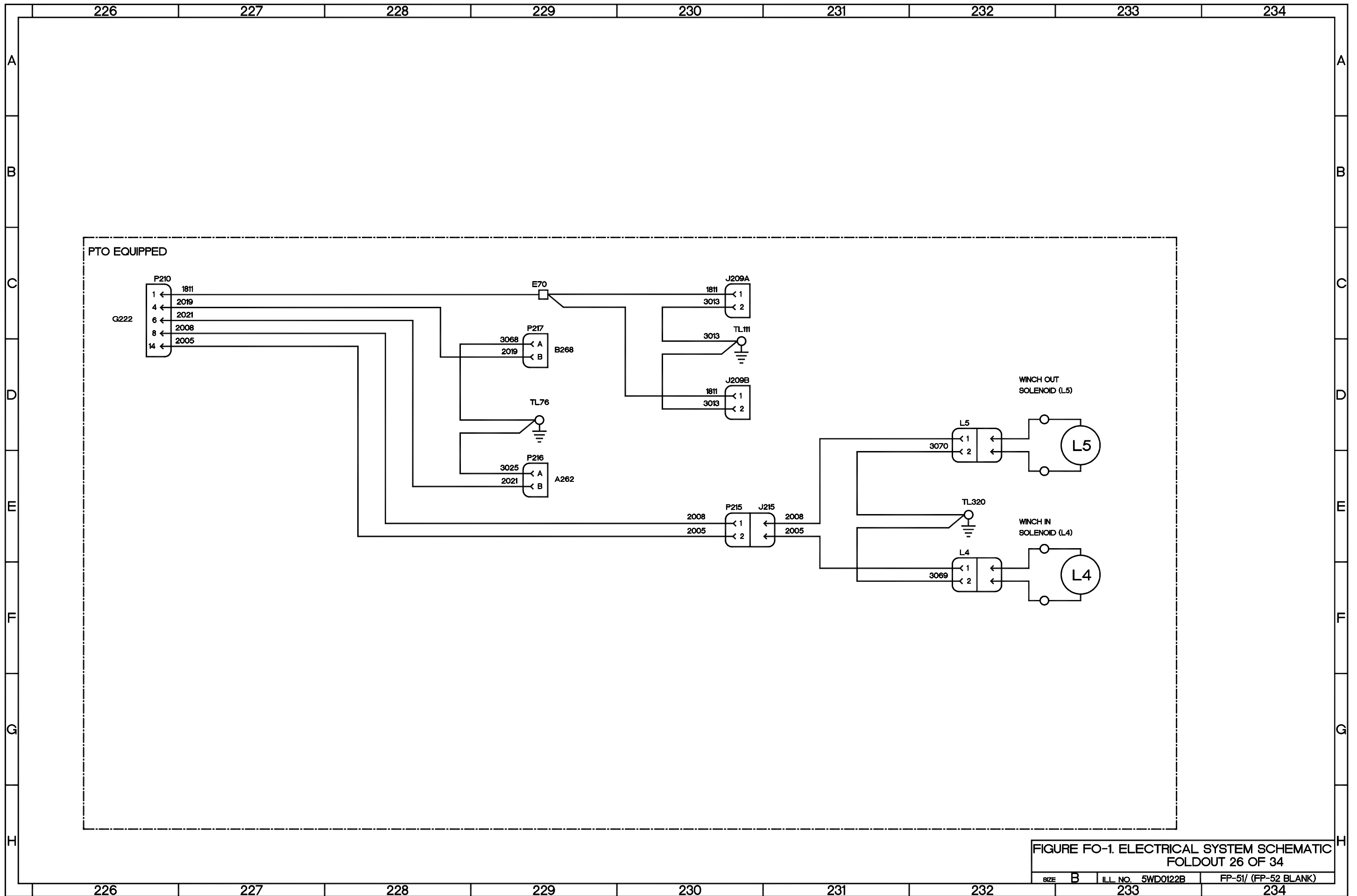


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
 FOLDOUT 26 OF 34
 SIZE B ILL. NO. 5WD0122B FP-51/ (FP-52 BLANK)







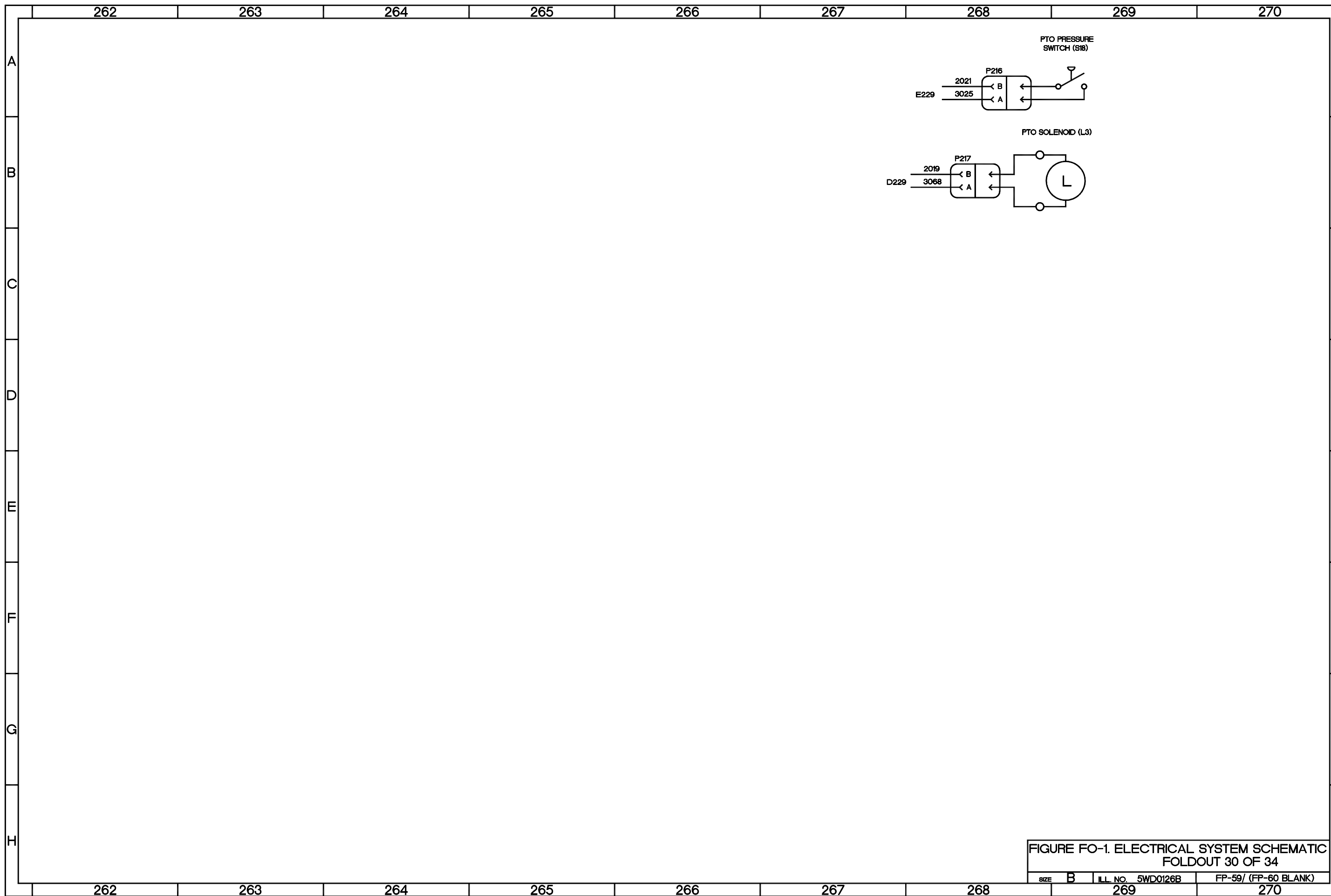


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC
FOLDOUT 30 OF 34

SIZE	B	ILL. NO.	5WD0126B	FP-59/ (FP-60 BLANK)
------	---	----------	----------	----------------------

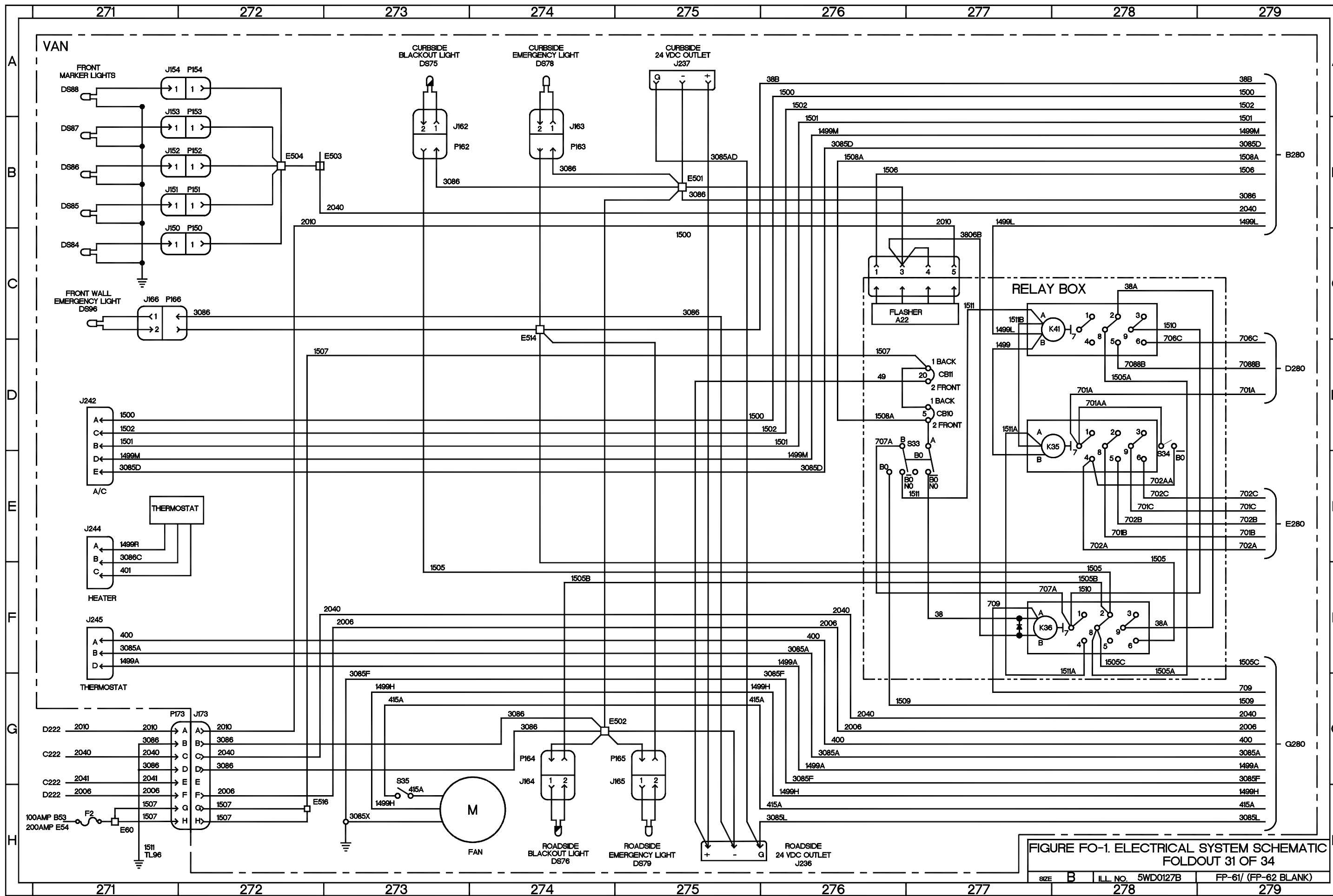


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 31 OF 34

SIZE	B	ILL. NO.	5WD0127B	FP-61/ (FP-62 BLANK)
------	---	----------	----------	----------------------

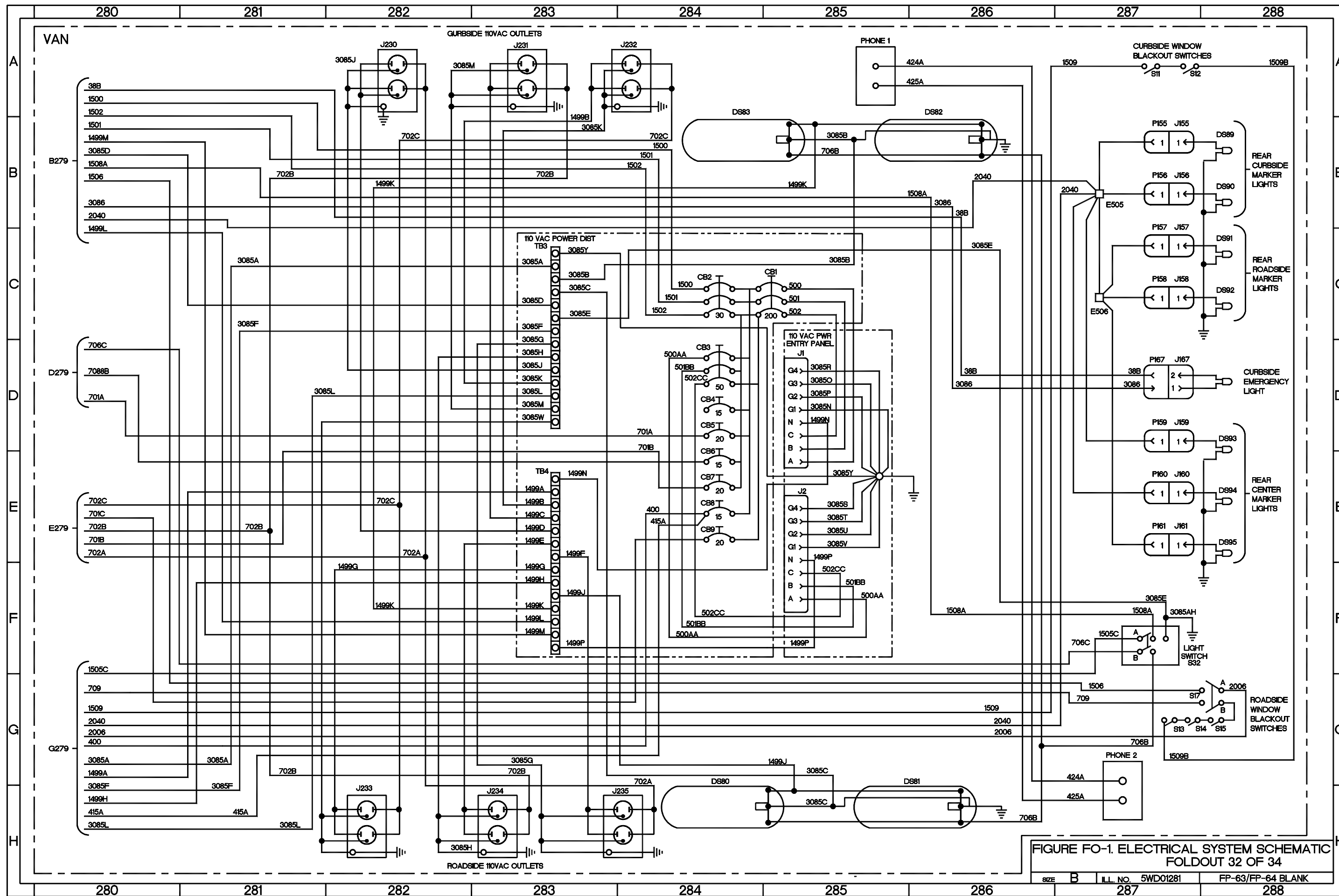


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 32 OF 34

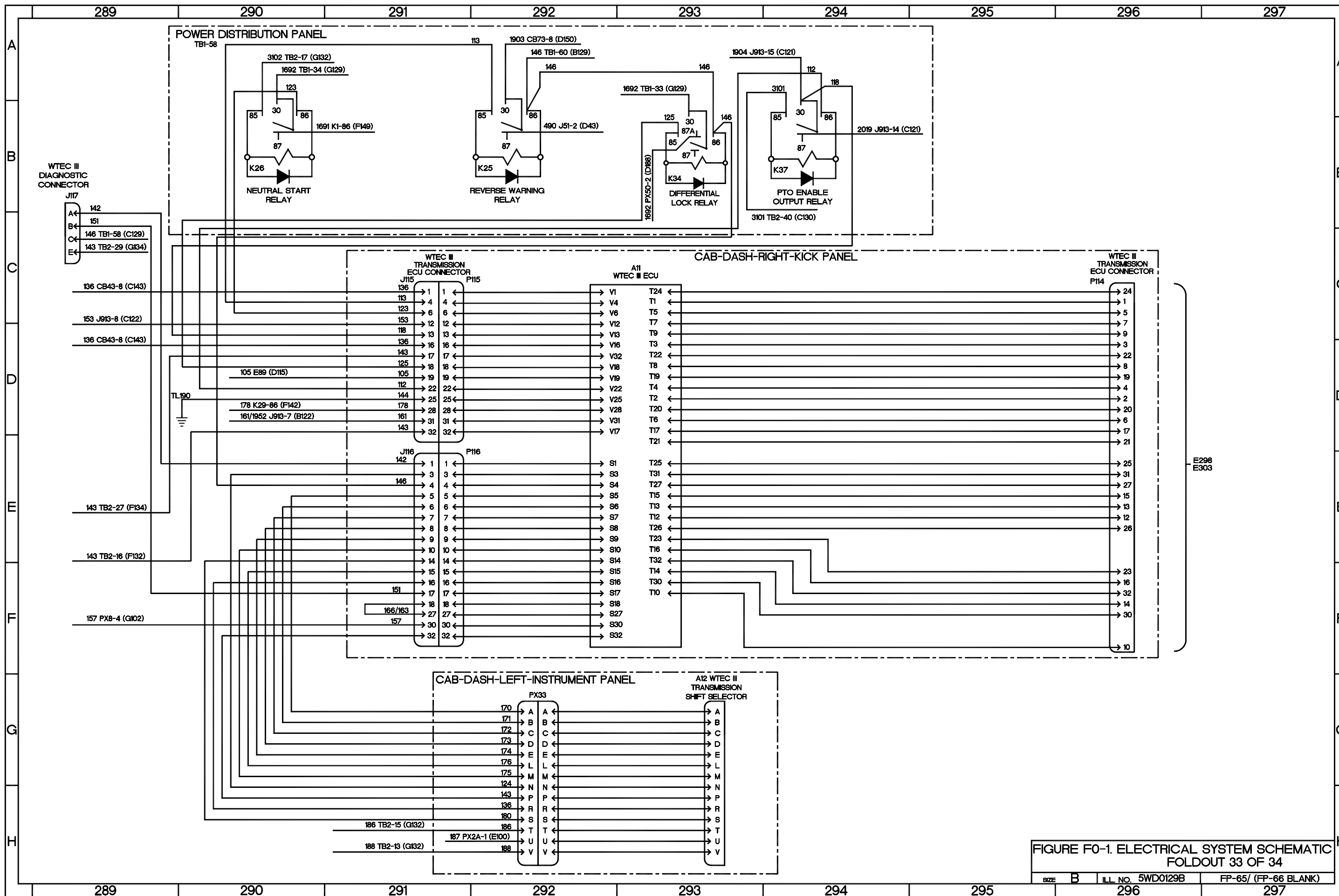


FIGURE F0-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 33 OF 34
 SIZE B ILL. NO. 5WD0129B FP-65/ (FP-66 BLANK)

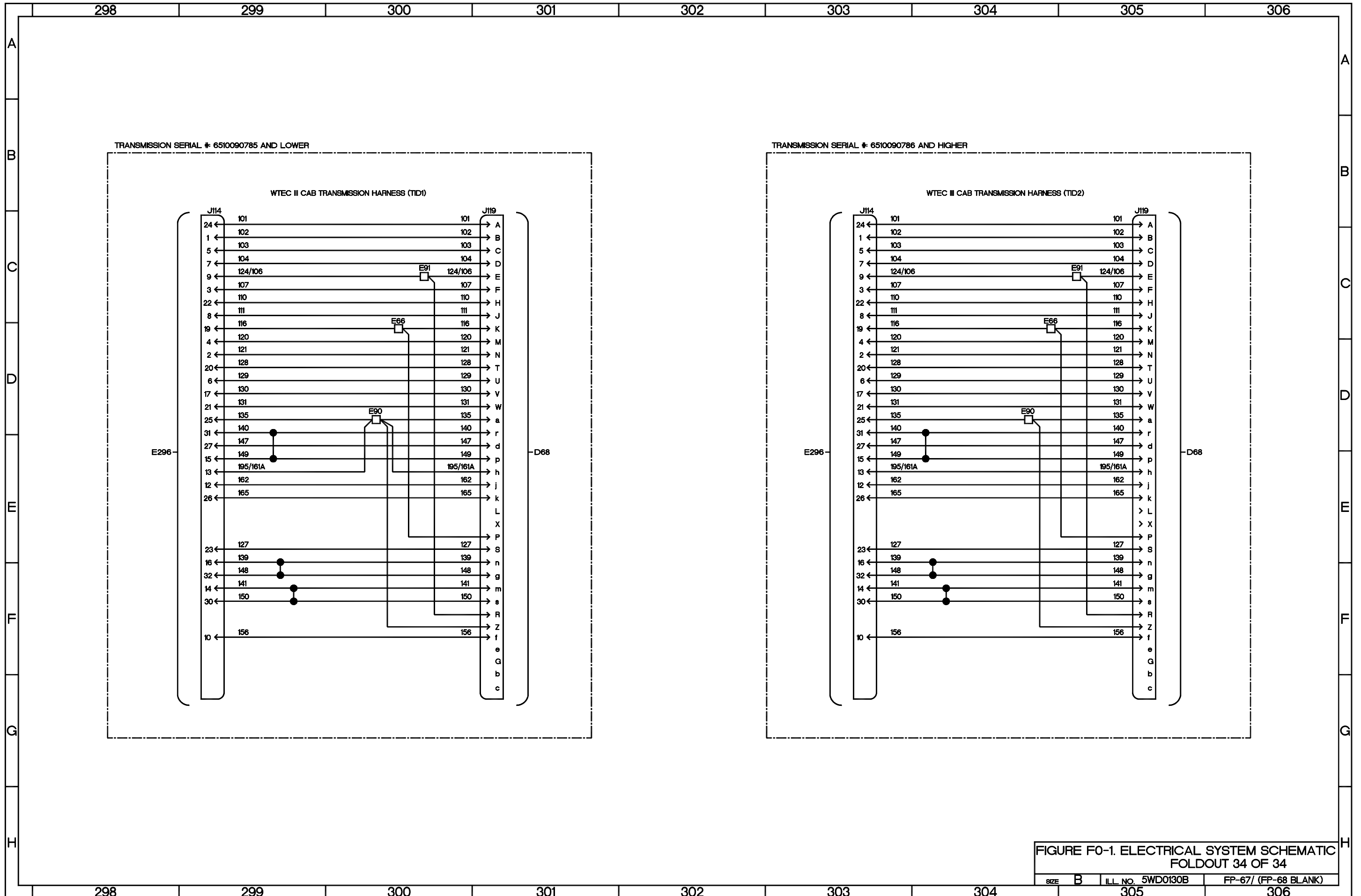


FIGURE FO-1. ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 34 OF 34

SIZE	B	ILL. NO.	5WD0130B	FP-67/ (FP-68 BLANK)
------	---	----------	----------	----------------------

	1	2	3	4	5	6	7	8	9
A									
B									
C									
D									
E									
F									
G									
H									

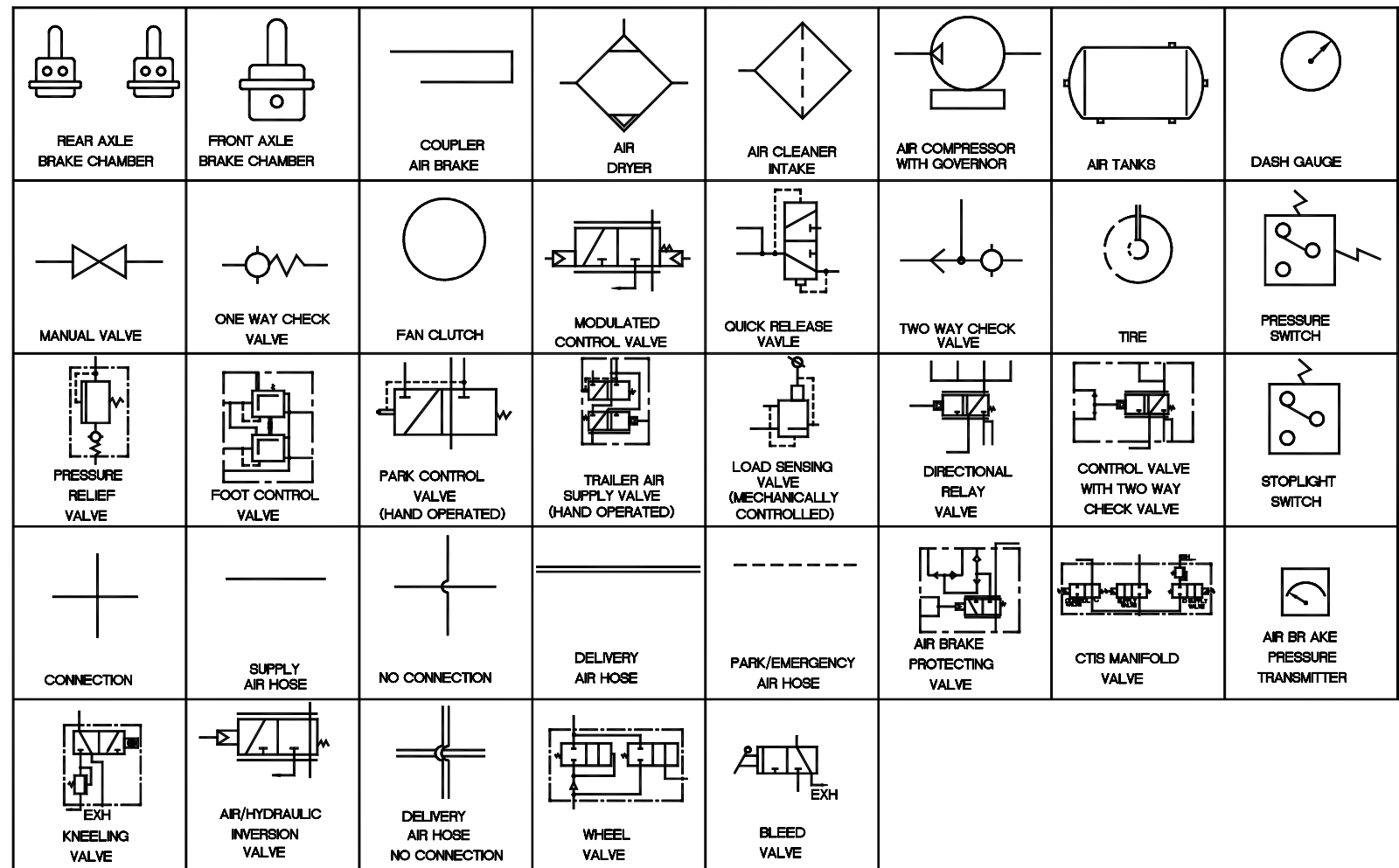
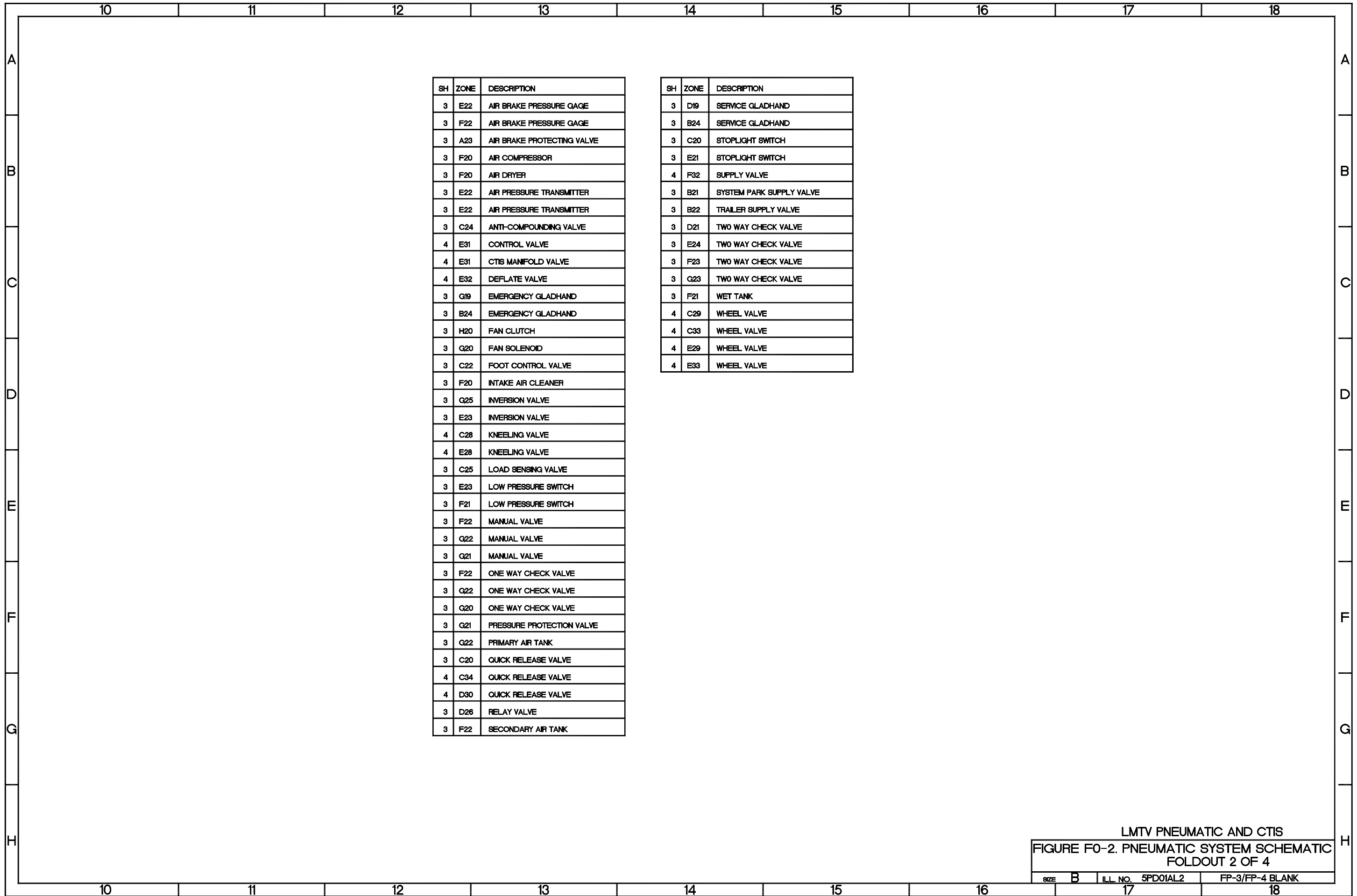


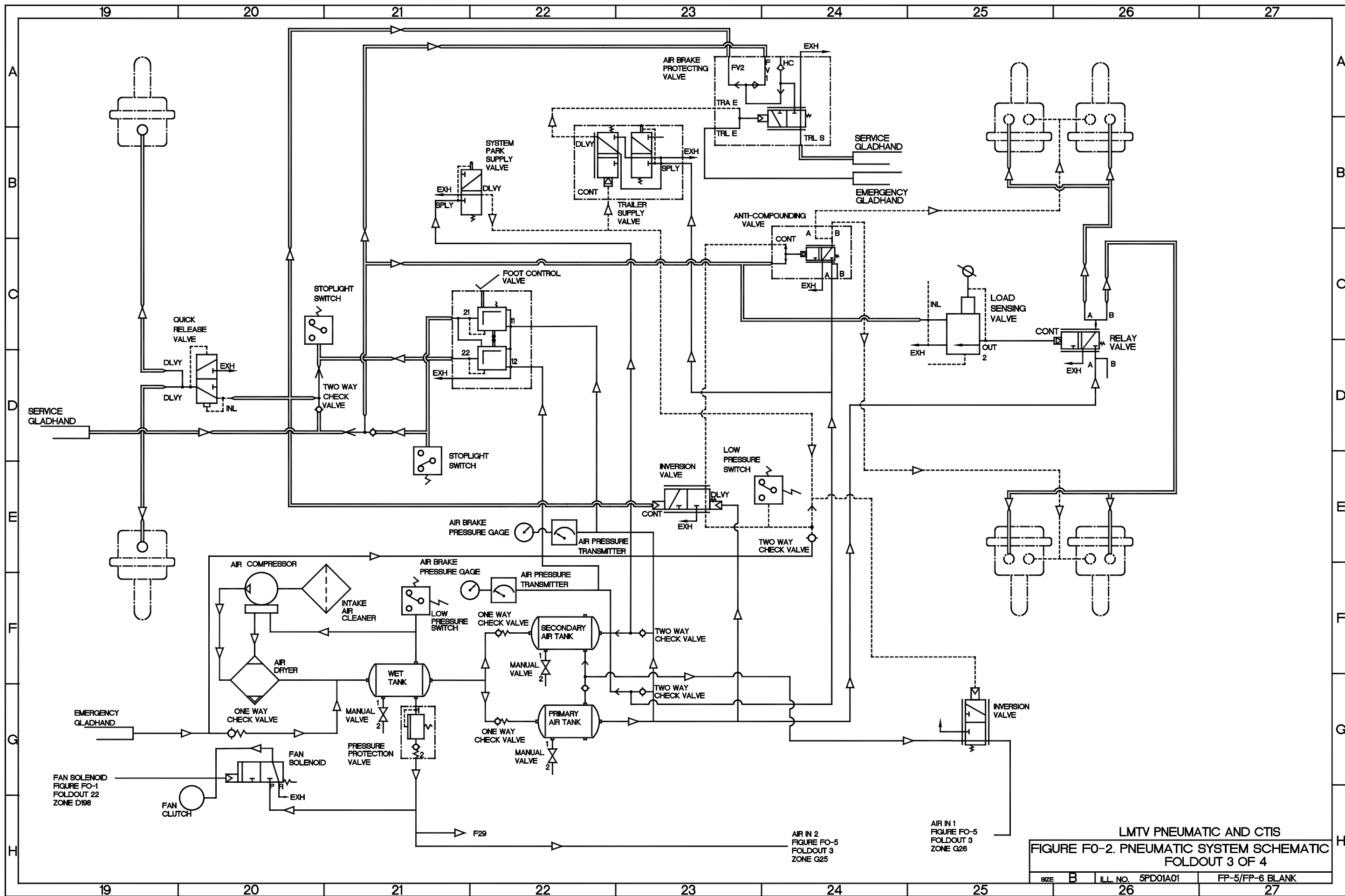
FIGURE F0-2 PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 1 OF 4
SIZE B ILL. NO. 5PD01AL1 FP-1/FP-2 BLANK



SH	ZONE	DESCRIPTION
3	E22	AIR BRAKE PRESSURE GAGE
3	F22	AIR BRAKE PRESSURE GAGE
3	A23	AIR BRAKE PROTECTING VALVE
3	F20	AIR COMPRESSOR
3	F20	AIR DRYER
3	E22	AIR PRESSURE TRANSMITTER
3	E22	AIR PRESSURE TRANSMITTER
3	C24	ANTI-COMPOUNDING VALVE
4	E31	CONTROL VALVE
4	E31	CTIS MANIFOLD VALVE
4	E32	DEFLATE VALVE
3	G19	EMERGENCY GLADHAND
3	B24	EMERGENCY GLADHAND
3	H20	FAN CLUTCH
3	G20	FAN SOLENOID
3	C22	FOOT CONTROL VALVE
3	F20	INTAKE AIR CLEANER
3	G25	INVERSION VALVE
3	E23	INVERSION VALVE
4	C28	KNEELING VALVE
4	E28	KNEELING VALVE
3	C25	LOAD SENSING VALVE
3	E23	LOW PRESSURE SWITCH
3	F21	LOW PRESSURE SWITCH
3	F22	MANUAL VALVE
3	G22	MANUAL VALVE
3	G21	MANUAL VALVE
3	F22	ONE WAY CHECK VALVE
3	G22	ONE WAY CHECK VALVE
3	G20	ONE WAY CHECK VALVE
3	G21	PRESSURE PROTECTION VALVE
3	G22	PRIMARY AIR TANK
3	C20	QUICK RELEASE VALVE
4	C34	QUICK RELEASE VALVE
4	D30	QUICK RELEASE VALVE
3	D26	RELAY VALVE
3	F22	SECONDARY AIR TANK

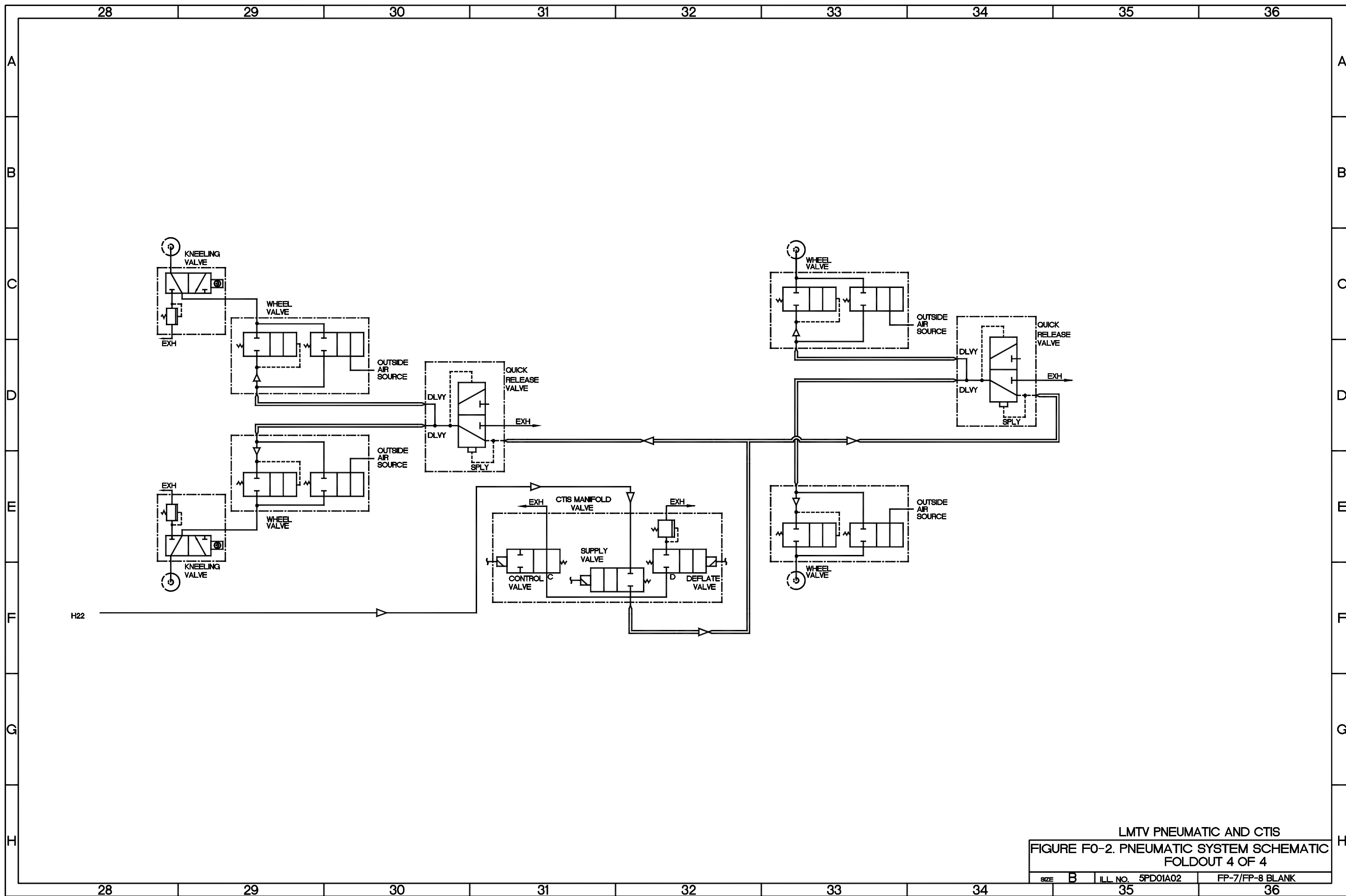
SH	ZONE	DESCRIPTION
3	D19	SERVICE GLADHAND
3	B24	SERVICE GLADHAND
3	C20	STOPLIGHT SWITCH
3	E21	STOPLIGHT SWITCH
4	F32	SUPPLY VALVE
3	B21	SYSTEM PARK SUPPLY VALVE
3	B22	TRAILER SUPPLY VALVE
3	D21	TWO WAY CHECK VALVE
3	E24	TWO WAY CHECK VALVE
3	F23	TWO WAY CHECK VALVE
3	G23	TWO WAY CHECK VALVE
3	F21	WET TANK
4	C29	WHEEL VALVE
4	C33	WHEEL VALVE
4	E29	WHEEL VALVE
4	E33	WHEEL VALVE

LMTV PNEUMATIC AND CTIS
 FIGURE FO-2. PNEUMATIC SYSTEM SCHEMATIC
 FOLDOUT 2 OF 4
 SIZE B ILL. NO. 5PD01A2 FP-3/FP-4 BLANK



LMTV PNEUMATIC AND CTIS
 FIGURE FO-2. PNEUMATIC SYSTEM SCHEMATIC
 FOLDOUT 3 OF 4

SIZE	B	ILL. NO.	5PD01A01	FP-5/FP-6	BLANK
------	---	----------	----------	-----------	-------



LMTV PNEUMATIC AND CTIS
 FIGURE FO-2. PNEUMATIC SYSTEM SCHEMATIC
 FOLDOUT 4 OF 4

SIZE	B	ILL. NO.	5PD01A02	FP-7/FP-8	BLANK
------	---	----------	----------	-----------	-------

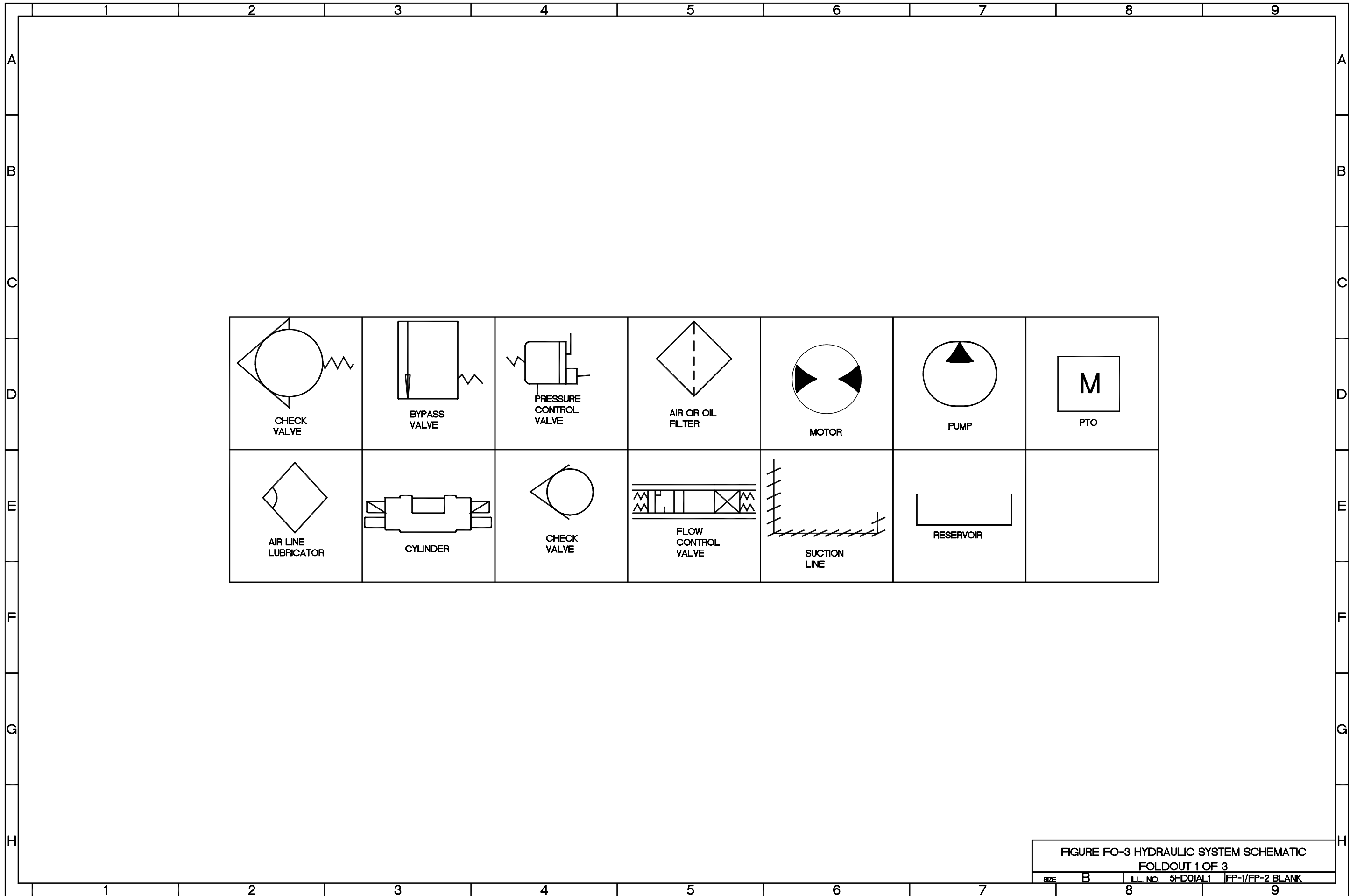
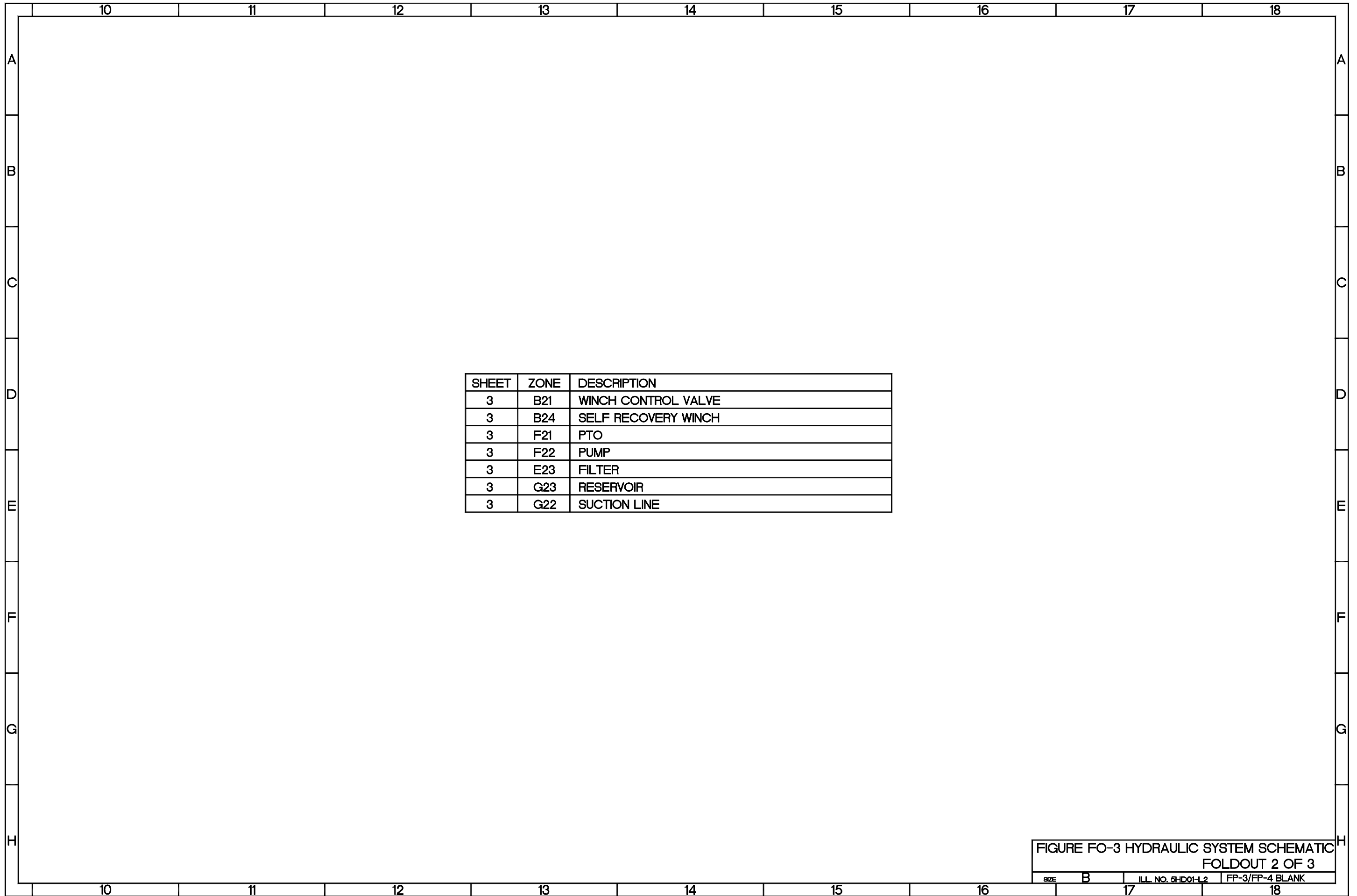


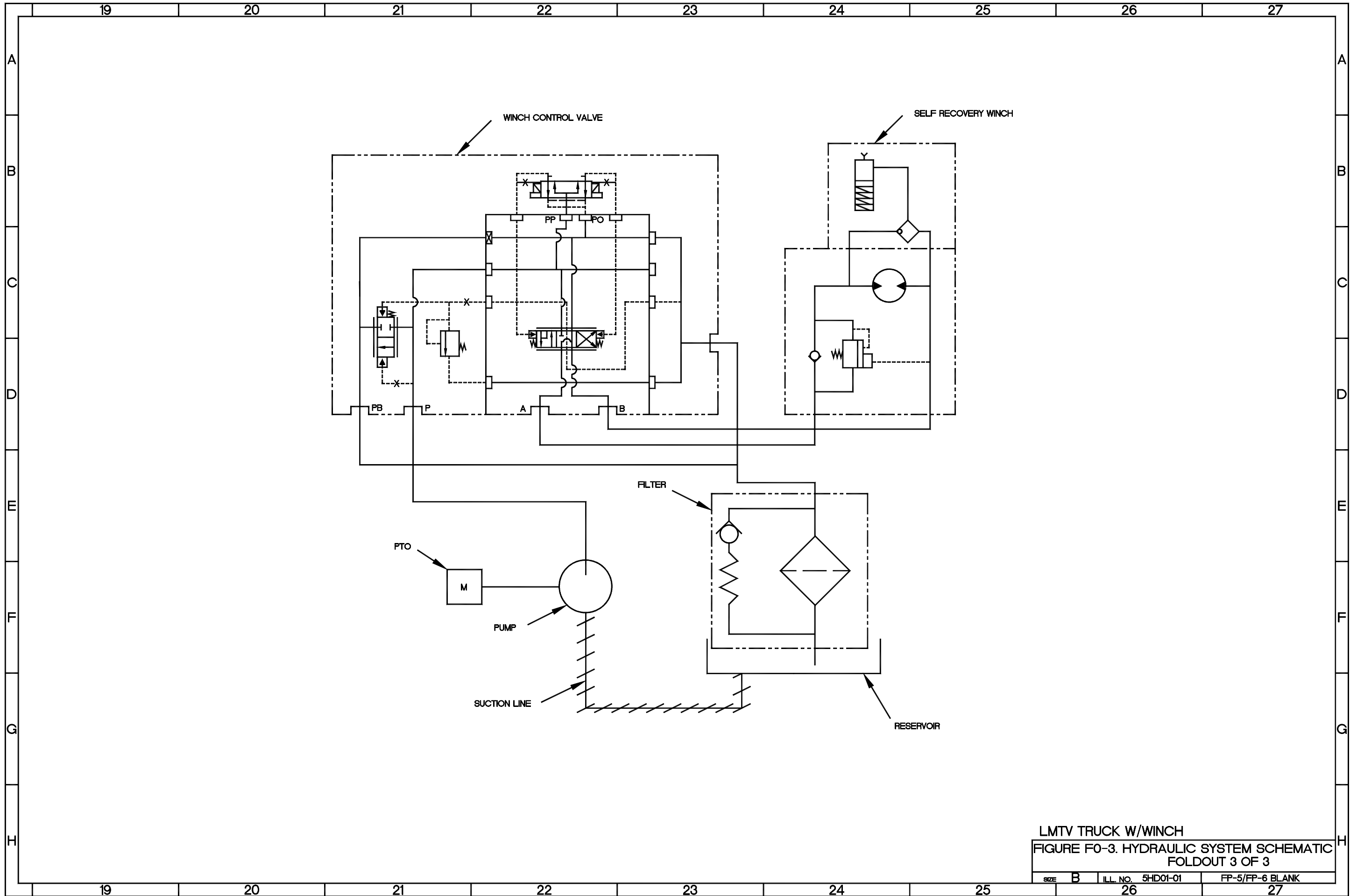
FIGURE FO-3 HYDRAULIC SYSTEM SCHEMATIC
 FOLDOUT 1 OF 3
 SIZE B ILL. NO. 5HDO1AL1 FP-1/FP-2 BLANK



SHEET	ZONE	DESCRIPTION
3	B21	WINCH CONTROL VALVE
3	B24	SELF RECOVERY WINCH
3	F21	PTO
3	F22	PUMP
3	E23	FILTER
3	G23	RESERVOIR
3	G22	SUCTION LINE

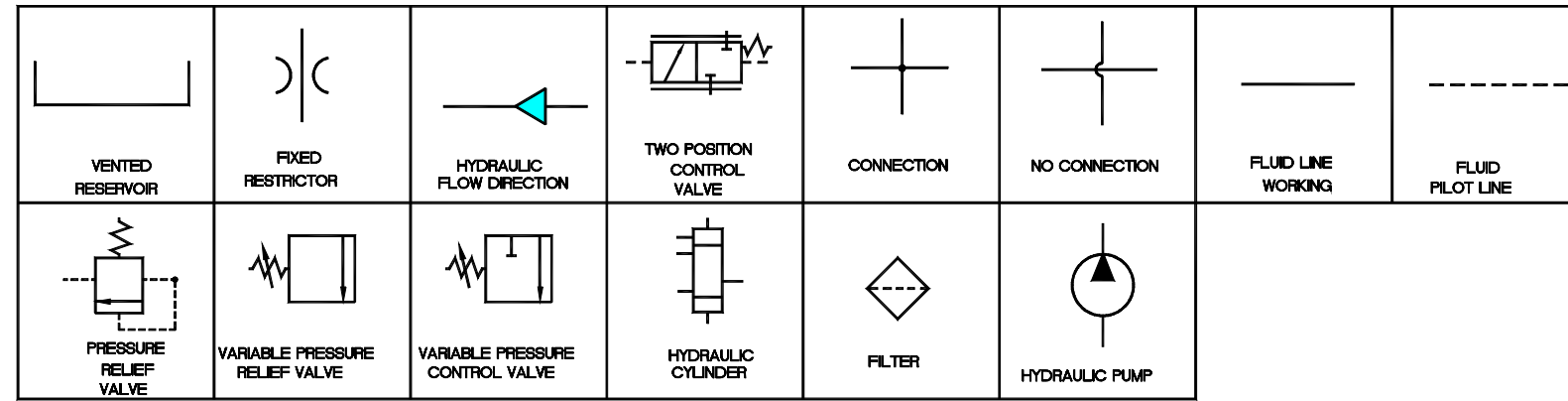
FIGURE FO-3 HYDRAULIC SYSTEM SCHEMATIC
FOLDOUT 2 OF 3

SIZE B ILL. NO. 5HD01-L2 FP-3/FP-4 BLANK



LMTV TRUCK W/WINCH
 FIGURE FO-3. HYDRAULIC SYSTEM SCHEMATIC
 FOLDOUT 3 OF 3

SIZE	B	ILL. NO.	5HD01-01	FP-5/FP-6	BLANK
------	---	----------	----------	-----------	-------



SH	ZONE	DESCRIPTION
2	D11	FILTER
2	D14	FIXED RESTRICTOR
2	E17	HYDRAULIC CYLINDER
2	E13	HYDRAULIC PUMP
2	C13	PRESSURE RELIEF VALVE
2	D13	TWO POSITION CONTROL VALVE
2	E16	VARIABLE PRESSURE CONTROL VALVE
2	E16	VARIABLE PRESSURE RELIEF VALVE
2	C11	VENTED RESERVOIR

FIGURE FO-4 HYDRAULIC STEERING SYSTEM

FOLDOUT 1 OF 2

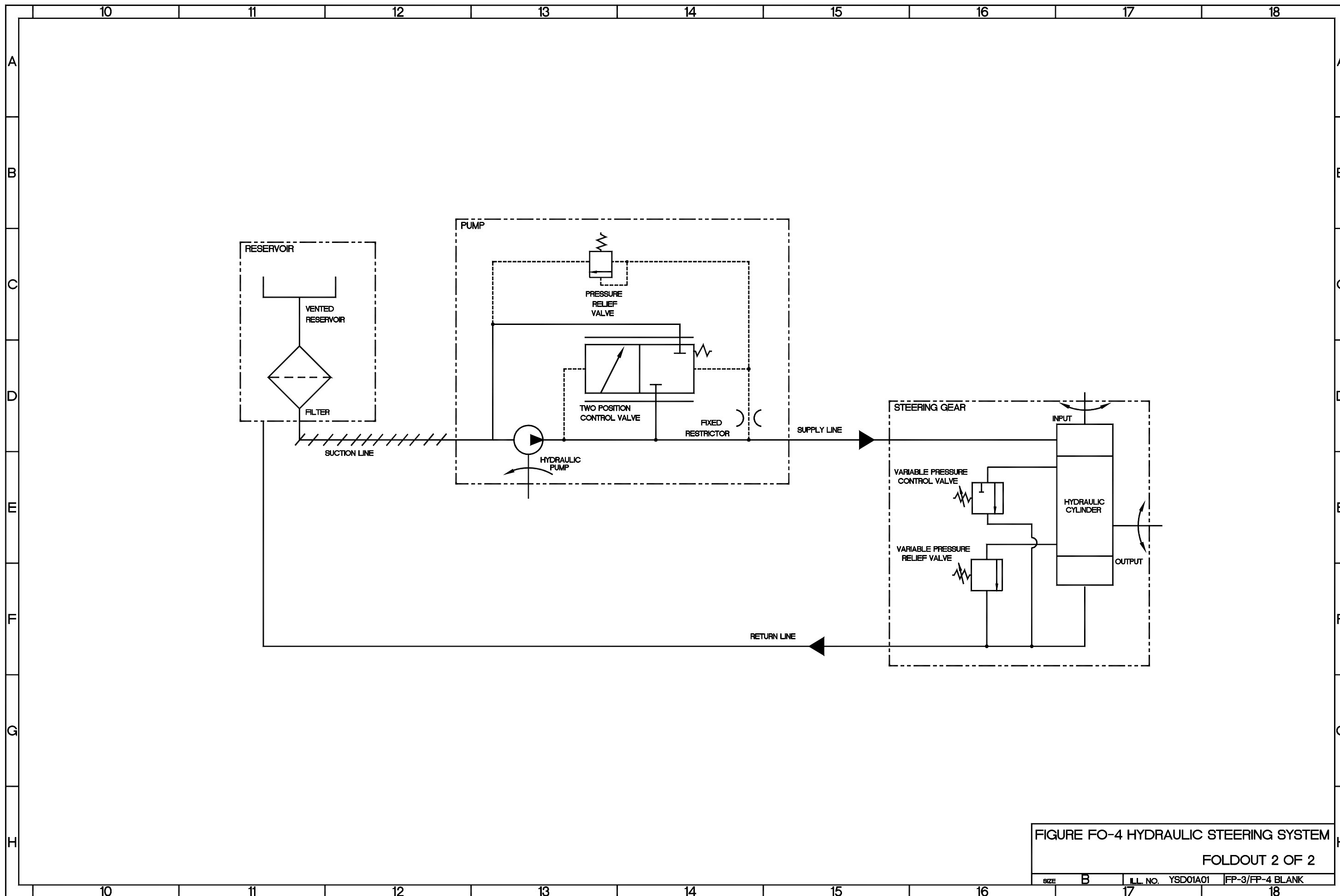


FIGURE FO-4 HYDRAULIC STEERING SYSTEM
 FOLDOUT 2 OF 2
 SIZE B ILL. NO. YSD01A01 FP-3/FP-4 BLANK

	1	2	3	4	5	6	7	8	9
A									
B									
C									
D									
E									
F									
G									
H									


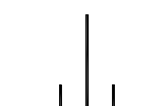


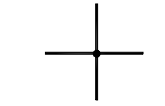
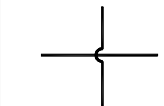
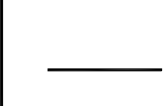

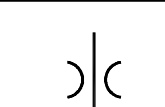


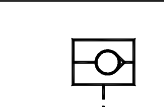
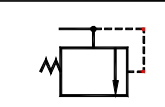
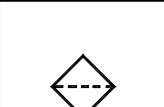



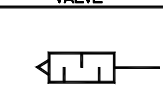
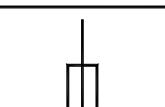
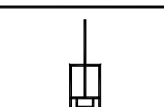
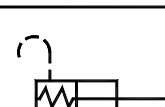
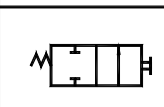

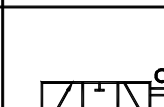
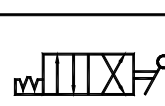
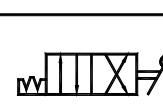
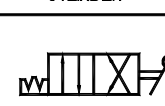
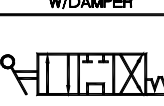
							
VENTED RESERVOIR	ABOVE FLUID LEVEL RESERVOIR	HYDRAULIC FLOW DIRECTION	PNEUMATIC FLOW DIRECTION	CONNECTION	NO CONNECTION	FLUID LINE WORKING	FLUID PILOT LINE
							
FIXED RESTRICTOR	CHECK VALVE	VARIABLE CONTROL CHECK VALVE	CHECK PILOT	PRESSURE RELIEF VALVE	FILTER	HAND PUMP	DETENT
							
TWO POSITION CAB SUSPENSION VALVE	MUFFLER	HYDRAULIC CYLINDER	CAB AIR SUSPENSION W/DAMPER	REAR CAB LATCH	TWO POSITION AIR PUMP VALVE	PRESSURE INTENSIFIER	HEIGHT CONTROL VALVE
							
TWO POSITION CAB TILT VALVE	TWO POSITION SUSPENSION VALVE	TWO POSITION SPARE TIRE VALVE	THREE POSITION SELECTION VALVE				

FIGURE F0-5 AIR TRANSPORTABILITY HYDRAULIC/PNEUMATIC SYSTEM SCHEMATIC
 FOLDOUT 1 OF 3
 SIZE B ILL. NO. YADO1A11 FP-1/FP-2 BLANK

	10	11	12	13	14	15	16	17	18																																																																																																																																														
A	<table border="1"> <thead> <tr> <th>SH</th> <th>ZONE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>3</td><td>A25</td><td>CAB AIR SUSPENSION W/DAMPER</td></tr> <tr><td>3</td><td>F21</td><td>CHECK PILOT</td></tr> <tr><td>3</td><td>A22</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>A23</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>B22</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>B23</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>B25</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>C20</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>C21</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>E19</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>E24</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>E25</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>F19</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>F21</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>G21</td><td>CHECK VALVE</td></tr> <tr><td>3</td><td>A22</td><td>FILTER</td></tr> <tr><td>3</td><td>B22</td><td>FILTER</td></tr> <tr><td>3</td><td>A24</td><td>FILTER</td></tr> <tr><td>3</td><td>B24</td><td>FILTER</td></tr> <tr><td>3</td><td>D19</td><td>FILTER</td></tr> <tr><td>3</td><td>D20</td><td>FILTER</td></tr> <tr><td>3</td><td>D21</td><td>FILTER</td></tr> <tr><td>3</td><td>E19</td><td>FILTER</td></tr> <tr><td>3</td><td>G19</td><td>FILTER</td></tr> <tr><td>3</td><td>G21</td><td>FILTER</td></tr> <tr><td>3</td><td>A22</td><td>FIXED RESTRICTOR</td></tr> <tr><td>3</td><td>B22</td><td>FIXED RESTRICTOR</td></tr> <tr><td>3</td><td>A23</td><td>FIXED RESTRICTOR</td></tr> <tr><td>3</td><td>B23</td><td>FIXED RESTRICTOR</td></tr> <tr><td>3</td><td>F19</td><td>HAND PUMP</td></tr> <tr><td>3</td><td>B25</td><td>HEIGHT CONTROL VALVE</td></tr> <tr><td>3</td><td>B22</td><td>HYDRAULIC CYLINDER</td></tr> <tr><td>3</td><td>B23</td><td>HYDRAULIC CYLINDER</td></tr> <tr><td>3</td><td>C21</td><td>HYDRAULIC CYLINDER</td></tr> <tr><td>3</td><td>F20</td><td>MUFFLER</td></tr> <tr><td>3</td><td>F21</td><td>PRESSURE INTENSIFIER</td></tr> <tr><td>3</td><td>F19</td><td>PRESSURE RELIEF VALVE</td></tr> <tr><td>3</td><td>A24</td><td>REAR CAB LATCH</td></tr> <tr><td>3</td><td>E21</td><td>THREE POSITION SELECTION VALVE</td></tr> <tr><td>3</td><td>D26</td><td>TWO POSITION AIR PUMP VALVE</td></tr> <tr><td>3</td><td>D25</td><td>TWO POSITION CAB SUSPENSION VALVE</td></tr> <tr><td>3</td><td>C24</td><td>TWO POSITION CAB TILT VALVE</td></tr> <tr><td>3</td><td>C23</td><td>TWO POSITION SPARE TIRE VALVE</td></tr> <tr><td>3</td><td>D21</td><td>TWO POSITION SUSPENSION VALVE</td></tr> <tr><td>3</td><td>G22</td><td>VARIABLE CONTROL CHECK VALVE</td></tr> <tr><td>3</td><td>G22</td><td>VENTED RESERVOIR</td></tr> </tbody> </table>									SH	ZONE	DESCRIPTION	3	A25	CAB AIR SUSPENSION W/DAMPER	3	F21	CHECK PILOT	3	A22	CHECK VALVE	3	A23	CHECK VALVE	3	B22	CHECK VALVE	3	B23	CHECK VALVE	3	B25	CHECK VALVE	3	C20	CHECK VALVE	3	C21	CHECK VALVE	3	E19	CHECK VALVE	3	E24	CHECK VALVE	3	E25	CHECK VALVE	3	F19	CHECK VALVE	3	F21	CHECK VALVE	3	G21	CHECK VALVE	3	A22	FILTER	3	B22	FILTER	3	A24	FILTER	3	B24	FILTER	3	D19	FILTER	3	D20	FILTER	3	D21	FILTER	3	E19	FILTER	3	G19	FILTER	3	G21	FILTER	3	A22	FIXED RESTRICTOR	3	B22	FIXED RESTRICTOR	3	A23	FIXED RESTRICTOR	3	B23	FIXED RESTRICTOR	3	F19	HAND PUMP	3	B25	HEIGHT CONTROL VALVE	3	B22	HYDRAULIC CYLINDER	3	B23	HYDRAULIC CYLINDER	3	C21	HYDRAULIC CYLINDER	3	F20	MUFFLER	3	F21	PRESSURE INTENSIFIER	3	F19	PRESSURE RELIEF VALVE	3	A24	REAR CAB LATCH	3	E21	THREE POSITION SELECTION VALVE	3	D26	TWO POSITION AIR PUMP VALVE	3	D25	TWO POSITION CAB SUSPENSION VALVE	3	C24	TWO POSITION CAB TILT VALVE	3	C23	TWO POSITION SPARE TIRE VALVE	3	D21	TWO POSITION SUSPENSION VALVE	3	G22	VARIABLE CONTROL CHECK VALVE	3	G22	VENTED RESERVOIR	A
SH										ZONE	DESCRIPTION																																																																																																																																												
3										A25	CAB AIR SUSPENSION W/DAMPER																																																																																																																																												
3										F21	CHECK PILOT																																																																																																																																												
3										A22	CHECK VALVE																																																																																																																																												
3										A23	CHECK VALVE																																																																																																																																												
3										B22	CHECK VALVE																																																																																																																																												
3										B23	CHECK VALVE																																																																																																																																												
3										B25	CHECK VALVE																																																																																																																																												
3										C20	CHECK VALVE																																																																																																																																												
3										C21	CHECK VALVE																																																																																																																																												
3										E19	CHECK VALVE																																																																																																																																												
3										E24	CHECK VALVE																																																																																																																																												
3										E25	CHECK VALVE																																																																																																																																												
3										F19	CHECK VALVE																																																																																																																																												
3										F21	CHECK VALVE																																																																																																																																												
3										G21	CHECK VALVE																																																																																																																																												
3										A22	FILTER																																																																																																																																												
3										B22	FILTER																																																																																																																																												
3										A24	FILTER																																																																																																																																												
3										B24	FILTER																																																																																																																																												
3										D19	FILTER																																																																																																																																												
3										D20	FILTER																																																																																																																																												
3										D21	FILTER																																																																																																																																												
3										E19	FILTER																																																																																																																																												
3										G19	FILTER																																																																																																																																												
3										G21	FILTER																																																																																																																																												
3										A22	FIXED RESTRICTOR																																																																																																																																												
3										B22	FIXED RESTRICTOR																																																																																																																																												
3										A23	FIXED RESTRICTOR																																																																																																																																												
3										B23	FIXED RESTRICTOR																																																																																																																																												
3										F19	HAND PUMP																																																																																																																																												
3										B25	HEIGHT CONTROL VALVE																																																																																																																																												
3										B22	HYDRAULIC CYLINDER																																																																																																																																												
3										B23	HYDRAULIC CYLINDER																																																																																																																																												
3										C21	HYDRAULIC CYLINDER																																																																																																																																												
3										F20	MUFFLER																																																																																																																																												
3										F21	PRESSURE INTENSIFIER																																																																																																																																												
3										F19	PRESSURE RELIEF VALVE																																																																																																																																												
3										A24	REAR CAB LATCH																																																																																																																																												
3	E21	THREE POSITION SELECTION VALVE																																																																																																																																																					
3	D26	TWO POSITION AIR PUMP VALVE																																																																																																																																																					
3	D25	TWO POSITION CAB SUSPENSION VALVE																																																																																																																																																					
3	C24	TWO POSITION CAB TILT VALVE																																																																																																																																																					
3	C23	TWO POSITION SPARE TIRE VALVE																																																																																																																																																					
3	D21	TWO POSITION SUSPENSION VALVE																																																																																																																																																					
3	G22	VARIABLE CONTROL CHECK VALVE																																																																																																																																																					
3	G22	VENTED RESERVOIR																																																																																																																																																					
B	B																																																																																																																																																						
C	C																																																																																																																																																						
D	D																																																																																																																																																						
E	E																																																																																																																																																						
F	F																																																																																																																																																						
G	G																																																																																																																																																						
H	H																																																																																																																																																						
	10	11	12	13	14	15	16	17	18																																																																																																																																														

FIGURE F0-5 AIR TRANSPORTABILITY
HYDRAULIC/PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 2 OF 3

SIZE B ILL. NO. YAD01AL2 FP-3/FP-4 BLANK

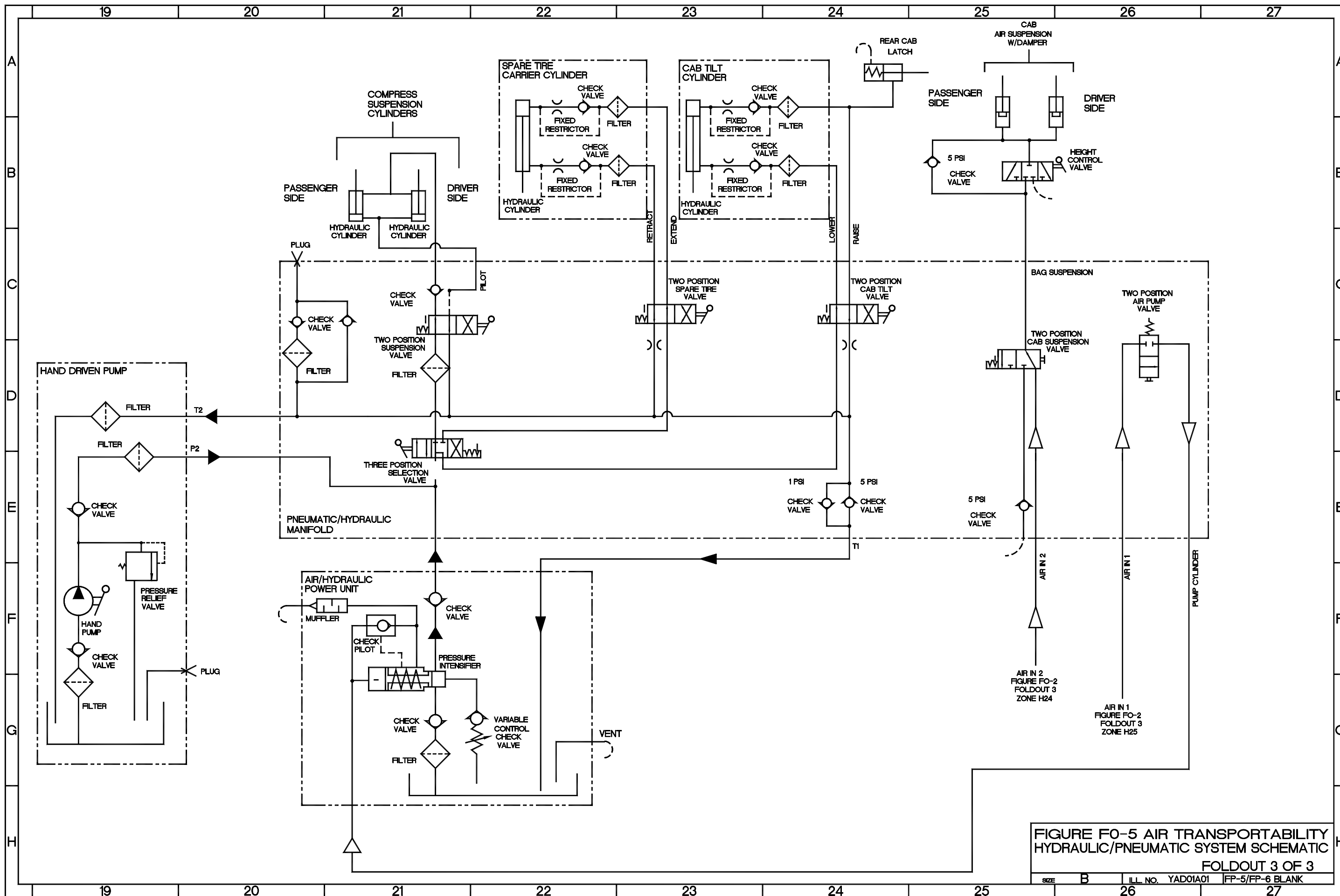


FIGURE FO-5 AIR TRANSPORTABILITY
HYDRAULIC/PNEUMATIC SYSTEM SCHEMATIC
FOLDOUT 3 OF 3
SIZE B ILL. NO. YAD01A01 FP-5/FP-6 BLANK

THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
 1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 Lb
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

LIQUID MEASURE

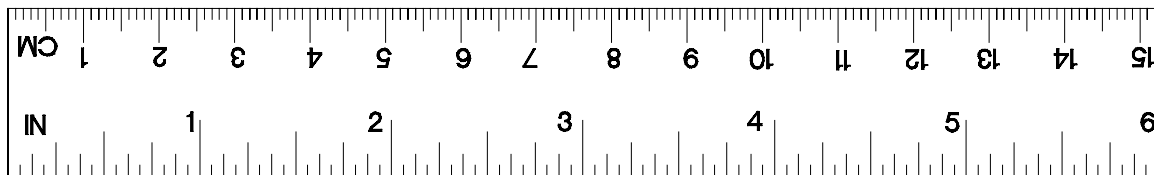
1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

TEMPERATURE

$5/9 (°F - 32) = °C$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5 C° + 32 = F°$

APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>	<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Inches	Centimeters	2.540	Centimeters	Inches	0.394
Inches	Millimeters	25.4	Millimeters	Inches	0.0394
Feet	Meters	0.305	Meters	Feet	3.280
Yards	Meters	0.914	Meters	Yards	1.094
Miles	Kilometers	1.609	Kilometers	Miles	0.621
Square Inches	Square Centimeters	6.451	Sq Centimeters	Square Inches	0.155
Square Feet	Square Meters	0.093	Square Meters	Square Feet	10.764
Square Yards	Square Meters	0.836	Square Meters	Square Yards	1.196
Square Miles	Square Kilometers	2.590	Square Kilometers	Square Miles	0.386
Acres	Square Hectometers	0.405	Sq Hectometers	Acres	2.471
Cubic Feet	Cubic Meters	0.028	Cubic Meters	Cubic Feet	35.315
Cubic Yards	Cubic Meters	0.765	Cubic Meters	Cubic Yards	1.308
Fluid Ounces	Milliliters	29.57	Milliliters	Fluid Ounces	0.034
Pints	Liters	0.473	Liters	Pints	2.113
Quarts	Liters	0.946	Liters	Quarts	1.057
Gallons	Liters	3.785	Liters	Gallons	0.264
Ounces	Grams	28.35	Grams	Ounces	0.035
Pounds	Kilograms	0.454	Kilograms	Pounds	2.205
Pounds (force)	Newtons	4.448	Newtons	Pounds (force)	0.2248
Short Tons	Metric Tons	0.907	Metric Tons	Short Tons	1.102
Pound-Feet	Newton-Meters	1.356	Newton-Meters	Pound-Feet	0.738
Pounds/Sq Inch	Kilopascals	6.895	Kilopascals	Pounds per Sq Inch	0.145
Miles per Gallon	Kilometers per Liter	0.425	Km per Liter	Miles per Gallon	2.354
Miles per Hour	Kilometers per Hour	1.609	Km per Hour	Miles per Hour	0.621



YMET001A

This fine document...

Was brought to you by me:



[Liberated Manuals -- free army and government manuals](#)

Why do I do it? I am tired of sleazy CD-ROM sellers, who take publicly available information, slap “watermarks” and other junk on it, and sell it. Those masters of search engine manipulation make sure that their sites that sell free information, come up first in search engines. They did not create it... They did not even scan it... Why should they get your money? Why are not letting you give those free manuals to your friends?

I am setting this document FREE. This document was made by the US Government and is NOT protected by Copyright. Feel free to share, republish, sell and so on.

I am not asking you for donations, fees or handouts. If you can, please provide a link to liberatedmanuals.com, so that free manuals come up first in search engines:

<A HREF=<http://www.liberatedmanuals.com/>>Free Military and Government Manuals

– Sincerely
Igor Chudov
<http://igor.chudov.com/>