

TECHNICAL MANUAL

**OPERATOR'S,
AVIATION UNIT, AND INTERMEDIATE
MAINTENANCE MANUAL
DUAL PURPOSE MOBILE CHECK
AND
ADJUSTMENT/GENERATOR STAND
FOR
T62T-2A AND T62T-2A1 AUXILIARY POWER UNITS;
T62T-40-1 AND T62T-2B AUXILIARY POWER UNITS**

**PART NO.45977-100
NSN 4920-00-176-9236**

This manual supersedes TM 55-4920-319-15, 26 August 1968, including all changes.

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

**HEADQUARTERS, DEPARTMENT OF THE ARMY
7 OCTOBER 1980**

CHANGE
NO. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 4 April 1994

Operator's
Aviation Unit, and Intermediate Maintenance Manual
Dual Purpose Mobile Check
and
Adjustment/Generator Stand
for

**T62T-2A and T62T-2A1 AUXILIARY POWER UNITS;
T62T-40-1 and T62T-2B AUXILIARY POWER UNITS
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HEADQUARTERS
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Operator's
 Aviation Unit and Intermediate
 Maintenance Manual

DUAL PURPOSE MOBILE CHECK
 AND
 ADJUSTMENT/GENERATOR STAND
 FOR
 T62T-2A AND T62T-2A1 AUXILIARY POWER UNITS

PART NO. 45977-100
 NSN 4920-00-176-9236

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WARNING AND FIRST AID DATA PAGE

For artificial respiration and other first aid data, refer to FM-21-11.

WARNING

Exhaust duct and APU combustor section are hot during operation. Keep clear of combustibles. Avoid physical contact to preclude personal injury.

WARNING

Deflate tire before separating wheel rims. Inflated tire pressure will separate rim halves with extreme force.

WARNING

Batteries generate hydrogen, a highly explosive gas. Do not smoke or have an open flame in the area where batteries are being serviced.

WARNING

Prolonged contact with lubricating oil, Military Specification MIL-L-23699 or MIL-L-7808, may cause a skin rash. These areas of 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 adequately ventilated to keep mist and fumes to a minimum.

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel; wear ear muffs or earplugs which were fitted by a trained professional.

WARNING

Avoid contact with control console high-voltage components during operation of the AC generator.

GENERAL INFORMATION

MAINTENANCE FORMS, RECORDS, AND REPORTS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750. The Army Maintenance Management System.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Procedures for destroying Army materiel to prevent enemy use are listed in TM 750-244-1-4.

EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). EIR can and must be submitted by anyone who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to do a procedure; just simply tell why the design is unfavorable or why a procedure is difficult. EIR may be submitted on SF 368 (Quality Deficiency Report). Mail directly to Commander, US Army Troop Support and Aviation Materiel Readiness Command, ATTN: DRSTS- MEM, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished to you.

NOTE

Except for the RPSTL, this manual has not been prepared according to military specifications; but, despite the limitations of its contents, the publication does provide the essential data needed to operate and maintain the equipment.

TECHNICAL MANUAL

No 55-4920-424-13&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 7 October 1980

Operator's
Aviation Unit, and Intermediate
Maintenance Manual

DUAL PURPOSE MOBILE CHECK AND
ADJUSTMENT/GENERATOR STAND
FOR
T62T-2A AND T62T-2A1 AUXILIARY POWER UNITS;
T62T-40-1 AND T62T-2B AUXILIARY POWER UNITS
PART NO. 45977-100
NSN 4920-00-176-9236

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished directly to you.

Table of Contents

See Appendix E for data applicable to Operation and Checks of the T62T-40-1 and T62T-2B Auxiliary Power Units.

	Paragraph	Page
SECTION I.	INTRODUCTION AND DESCRIPTION	
	Introduction	1-1 1-1
	Purpose	1-3 1-1
	Arrangement of Manual	1-5 1-1
	Description	1-7 1-1
	Electrical System	1-9 1-3
	Battery	1-11 1-3
	Control Console.....	1-13 1-3
	Instrument Panel.....	1-16 1-3
	Thermocouple.....	1-17 1-7
	Tachometer Generator	1-19 1-7
	Fuel System	1-21 1-7
	Fuel Tank	1-23 1-8
	Boost Pump.....	1-25 1-8
	Fuel Filer.....	1-27 1-8
	Air Inlet Silencer.....	1-29 1-9
	Exhaust Duct Assembly	1-31 1-9
	Speed Increaser	1-33 1-9
	Fire Extinguisher.....	1-35 1-9
	Trailer Assembly.....	1-37 1-9
SECTION II.	PREPARATION FOR USE, STORAGE, OR SHIPMENT	
	Unpacking And Depreservation.....	2-1 2-1
	Preparing The Battery For Use	2-3 2-1

TABLE OF CONTENTS (CONT)

	Paragraph	Page
Preparing The Speed Increaser For Use	2-5	2-1
Preparing The Fuel System For Use	2-7	2-2
Preservation of the Fuel System	2-9	2-3
Preparation For Storage	2-11	2-3
Preparation For Shipment	2-13	2-4
SECTION III. OPERATING INSTRUCTIONS		
General	3-1	3-1
Mounting The APU on The Check Stand	3-3	3-1
Preliminary Checks	3-5	3-3
Purging The APU Fuel System	3-7	3-3
Adjustment	3-9	3-4
Operation of The APU.....	3-11	3-7
APU Testing	3-13	3-9
AC Power Operation	3-14	3-9
APU Stopping	3-20	3-10
APU Removal	3-21	3-10
SECTION IV. MAINTENANCE INSTRUCTIONS		
General	4-1	4-1
Cleaning.....	4-3	4-1
Periodic Lubrication.....	4-5	4-1
Inspection and Maintenance Intervals	4-7	4-3
SECTION V. ILLUSTRATED PARTS BREAKDOWN		
General.....		5-1
SECTION VI. TROUBLESHOOTING		
General	6-1	6-1
Troubleshooting Electrical Controls	6-3	6-5
AC Generator System	6-9	6-6
Exhaust Temperature Switch	6-13	6-6
SECTION VII. REPAIR AND REPLACEMENT INSTRUCTIONS		
General.....	7-1	7-1
Front Axle Assembly	7-3	7-1
Rear Axle Assembly	7-10	7-4
Adjustment of Brakes	7-15	7-6
Fuel Boost Pump	7-17	7-7
Fuel Filter	7-20	7-7
Tachometer Generator	7-24	7-8
Thermocouple	7-27	7-8
AC Generator	7-30	7-9
DC Starter-Generator	7-33	7-10
Oil Seals	7-36	7-10
Oil Sight Glass	7-39	7-11
Battery	7-42	7-12
Tires	7-46	7-12

TABLE OF CONTENTS (CONT)

APPENDIX A.	REFERENCE	Page A-1
B.	MAINTENANCE ALLOCATION CHART	B-1
C.	REPAIR PARTS AND SPECIAL TOOLS LIST	C-1
D.	EXPENDABLE SUPPLIES AND MATERIALS LIST	D-1

LIST OF ILLUSTRATIONS

Figure	Title	Page
1-1	Dual Purpose Mobile Check and Adjustment/Generator Stand	1-2
1-2	Table of Leading Particulars	1-4
1-3	Mobile Check Stand Major Components	1-5
1-4	Console Instrument Panel	1-7
1-5	Fuel System Schematic	1-8
2-1	Preservation, Packaging, Packing, And Marking Requirements.....	2-5
3-1	Mounting and Connecting the APU.....	3-2
3-2	Fuel-Control Adjustment.....	3-5
4-1	Table of Periodic Lubrication.....	4-1
4-2	Mobile Check Stand, Lubrication Diagram	4-2
4-3	Draining the Speed Increaser Lubricating Oil	4-2
4-4	Table of Periodic Inspection and Maintenance	4-3
5-1	Dual Purpose Mobile Check and Adjustment/Generator Stand	5-3
5-2	Control Console Assembly	5-12
5-3	Dual Purpose Mobile Check and Adjustment Stand Trailer	5-18
5-4	Running Gear	5-22
5-5	Speed Increaser Assembly.....	5-28
5-6	Fuel Filter Assembly.....	5-30
6-1	Table of Troubleshooting Procedures	6-1
FO-1	Wiring Diagram, Mobile Check Stand Part No. 45977-100.....	FO-1
FO-2	Schematic Diagram, Mobile Check Stand Part No. 45977-100.....	FO-2

SECTION I

INTRODUCTION AND DESCRIPTION

1-1. INTRODUCTION.

1-2. This technical manual provides all instructions necessary for the operation and maintenance of the Dual Purpose Mobile Check and Adjustment/Generator Stand, identified by Part Number 45977-100. The Mobile Check and Adjustment/Generator Stand (figure 1-1), hereafter referred to as the Mobile Check Stand, is manufactured by the Solar Division of International Harvester Company, 2200 Pacific Highway, San Diego, California.

1-3. PURPOSE.

1-4. The Mobile Check Stand provides the components and controls necessary to functionally test the Models T-62T-2A and T-62T-2A1 Auxiliary Power Units (APU) prior to installation in the aircraft, or upon removal from the aircraft, or to check and adjust the units after minor repair or overhaul. The Mobile Check Stand with either APU installed, can provide the aircraft with ac power for checkout after aircraft repair, or for aircraft preflight checks.

1-5. ARRANGEMENT OF MANUAL.

1-6. The manual is divided into nine sections. Section I identifies the equipment and describes the components and their functions. Section II gives the procedures necessary to prepare the equipment for use. Section III describes the adjustments required and the connections necessary for operating the equipment. Section IV lists the inspections and preventive maintenance procedures required to ensure efficient operation. Section V lists all replaceable parts, assemblies, sub-assemblies, and detail parts of the mobile check stand. Section VI describes the troubleshooting procedures and remedies. Section VII gives the instructions for removal, repair, and replacement of components.

1-7. DESCRIPTION.

1-8. The mobile check stand is an open-frame carrier, pivot-plated on two pairs of wheels mounted with pneumatic tires. Mounting provisions for the models T-62T-2A, and T-62T-2A1 auxiliary power units are incorporated together with the necessary electrical and fuel connections between the unit and the check stand components. The mobile check stand is equipped with a steering towbar and a mechanical hand brake system. It is weatherproofed to provide protection of critical components from the elements. The major assemblies mounted on the check stand are: the battery, control

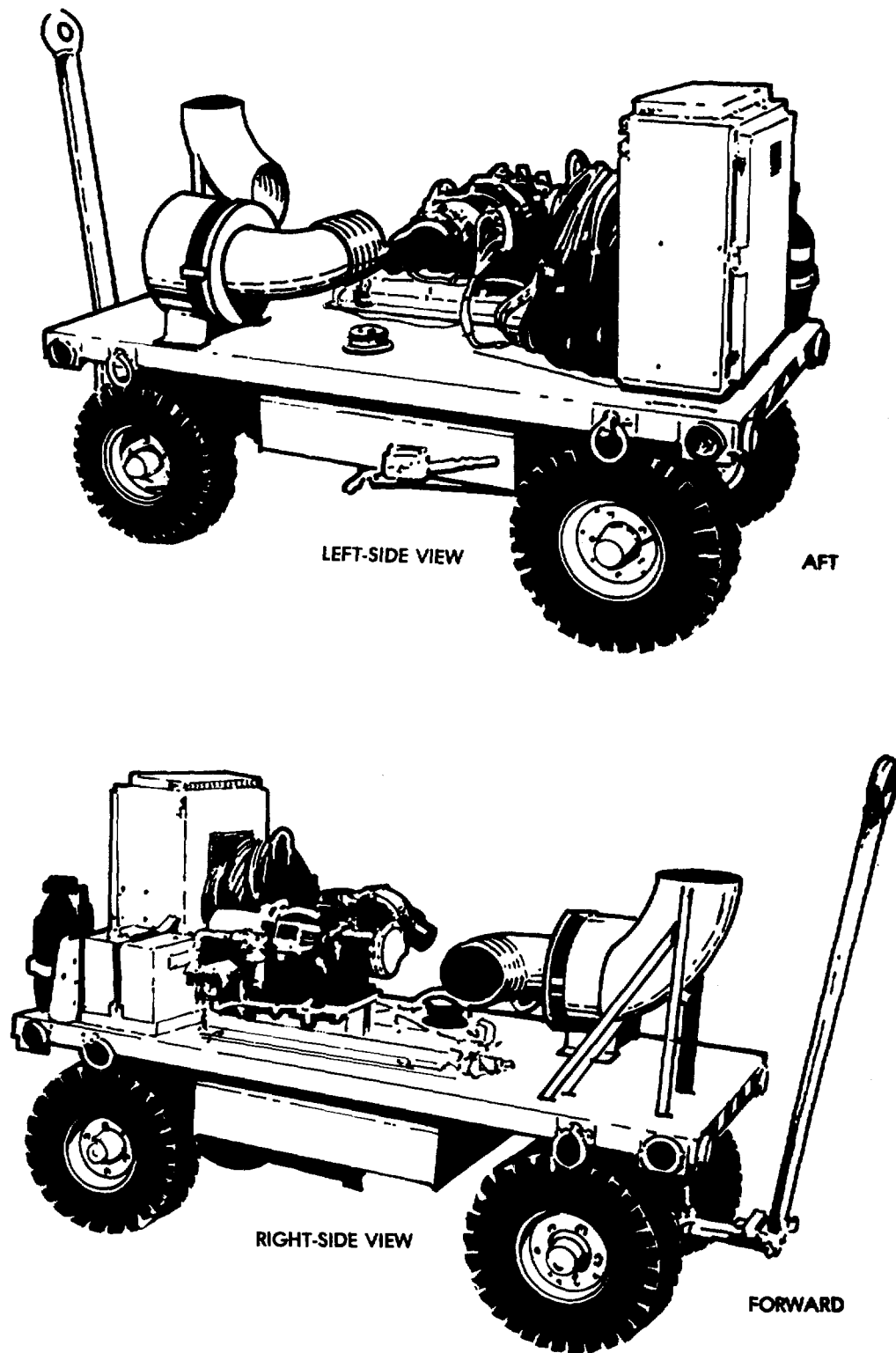


Figure 1-1. Dual Purpose Mobile Check and Adjustment/Generator Stand

console, thermocouple, tachometer generator, air inlet silencer, exhaust duct, speed increaser, and the fire extinguisher. See figure 1-2 for Table of Leading Particulars.

1-9. ELECTRICAL SYSTEM.

1-10. The electrical system provides starting power for the APU, and the controls necessary for automatic operation. The instrument panel and relays, within the control console, are connected by cables to the battery. Cable connections from the console attach to the engine control harness receptacle, to the ac generator output power cable, and to the do starter-generator for operation of the APU.

1-11. BATTERY. (See figure 1-3.)

1-12. A 24-volt, 34-ampere hour, nickel-cadmium battery, conforming to the requirements of MS24498-1, furnishes dc power for cranking the APU, and control power for the electrical controls. The battery is mounted on the right side of the trailer, confined in a shallow frame (retainer), and secured to the retainer with studs and clamps. The battery is shipped with electrolyte, and only a slight freshening charge prior to use is recommended. Bringing the battery up to full charge can be accomplished during APU checkout operation. Refer to paragraph 7-45 for battery maintenance procedures.

1-13. CONTROL CONSOLE. (See figure 1-3.)

1-14. The control console is located on the aft, left side of the trailer, and provides a weatherproof housing for the control system components and the instrument panel. The check stand control system simulates the aircraft controls. The console is bolted to two support channels which, in turn, are bolted to the top of the trailer frame. A door on the console provides easy access to the electrical control system components. The top of the console houses the instrument panel; a cover, hinged to the console structure, protects the instrument panel from the elements. Four engine control harness assemblies are connected to the control components. The control system components include a reverse current cutout, dc ammeter shunt, circuit breaker, rectifier, transformer, relays, contactor, resistors, voltage regulators, and wire assemblies necessary to automatically control, regulate, and protect the APU through all phases of operation.

1-15. INSTRUMENT PANEL. (See figure 1-4.)

1-16. The instrument panel, housed in the top of the control console, simulates the aircraft controls. It contains manually-actuated switches to operate the APU, and gages and lights to indicate conditions of the APU during operation. All indicator lights and instruments are visible when the instrument panel cover is lifted. The panel is divided into three groups of controls; ac generator control, turbine control, and dc generator control. The ac generator control group contains the ac ammeter, voltmeter, frequency meter, LOAD CB OPEN light, LOAD CONTACTOR CLOSED light, AC GEN FAILED light, VOLTS-AMPS phase selector switch, and the AC GEN ON-OFF-RESET-TEST switch. The turbine control group contains the tachometer (percent speed indicator), pyrometer (exhaust temperature indicator), OVERSPEED light, HIGH EXH TEMP light, LOW OIL PRESS light, 90% SEQ CHECK light, DC GEN CONTROLS circuit breaker, TURBINE CONTROLS circuit breaker, TURBINE CONTROLS RESET switch, and the TURBINE START-ON-OFF switch. The dc generator control group contains the dc volt-ammeter, OVERVOLTAGE DC light, DC GEN ON light, and the DC GEN ON-OFF/RESET switch.

Length (towbar up)	85.25 inches
Width	37.50 inches
Height (towbar up)	61.70 inches
Cubic content	134 cubic feet
Ground clearance	9.70 inches
Weight	1000 pounds
Tire size	6.00 x 9, 6 ply
Tire pressure	40 to 45 psig
Wheels	Split-rim type
Brakes	Hand-operated, mechanical (rear wheels only)
Fuel	Jet fuel conforming to MIL-J-5624, Grade JP-4, JP-5, or gasoline conforming to MIL-G-5572, Grade 115/145
Fuel filter	Disposable element
Fuel tank	40 gallons
Battery	24-volt, 34-ampere hour, nickel-cadmium
Fire extinguisher	Dry chemical 2.5 pounds
Instrumentation (unit testing conditions)	
Engine speed	Tachometer
Exhaust gas temperature	Temperature indicator
High exhaust temperature	Indicator light
Load circuit breaker open	Indicator light
Load contactor closed	Indicator light
AC generator failed	Indicator light
AC generator voltage	AC voltmeter
AC generator amperage	AC ammeter
AC generator frequency	Frequency meter
Circuit breaker	Indicator light
Overvoltage dc	Indicator light
DC generator on	Indicator light
DC generator voltage and amperage	Volt-ammeter
Low oil pressure	Indicator light
Overspeed	Indicator light
90% sequence check	Indicator light
Towing speeds (maximum)	
Paved highways	20 mph
Graded gravel roads	10 mph
Rough surface	2 mph
Turning angle	45 degrees (maximum)

Figure 1-2. Table of Leading Particulars

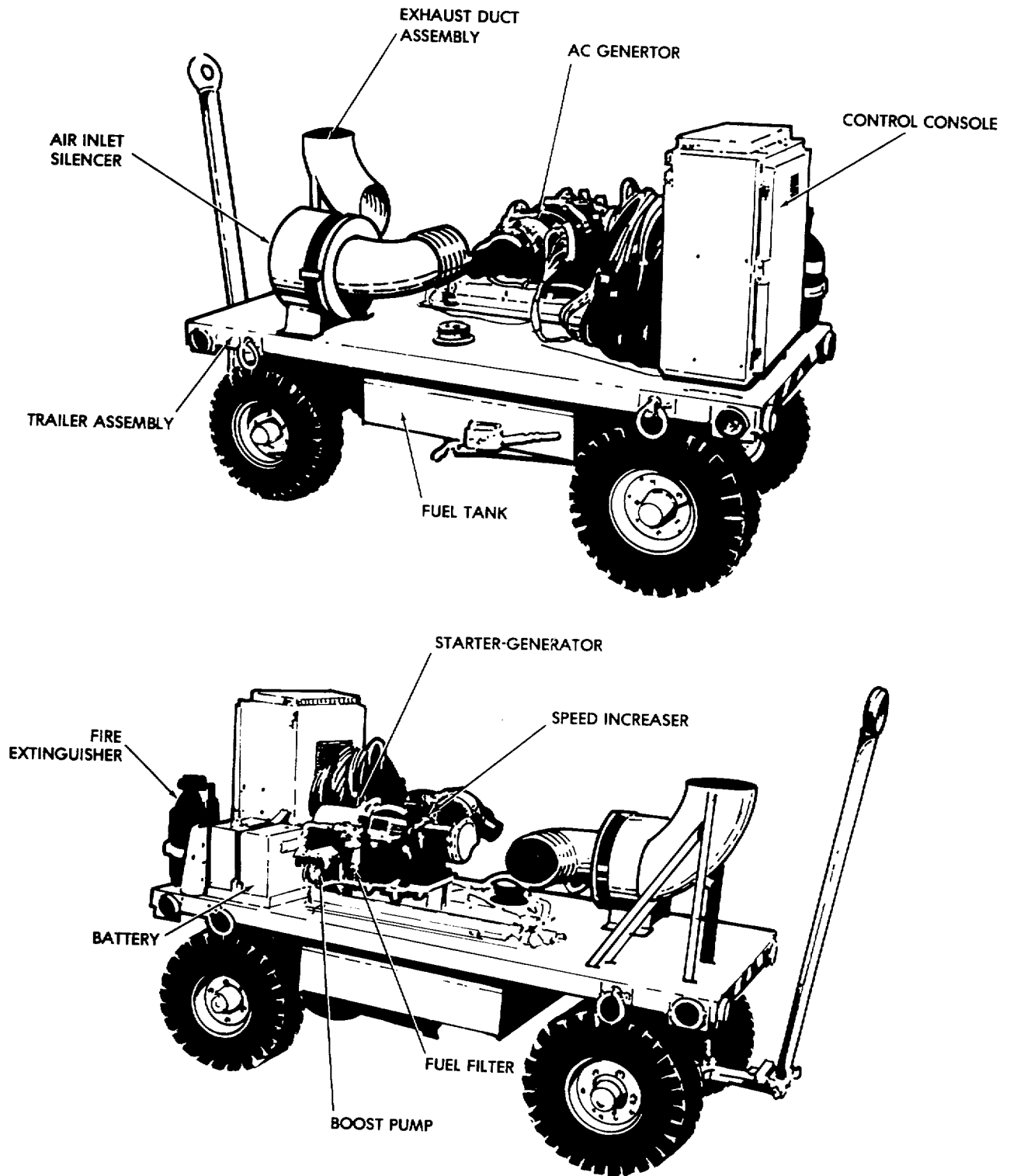
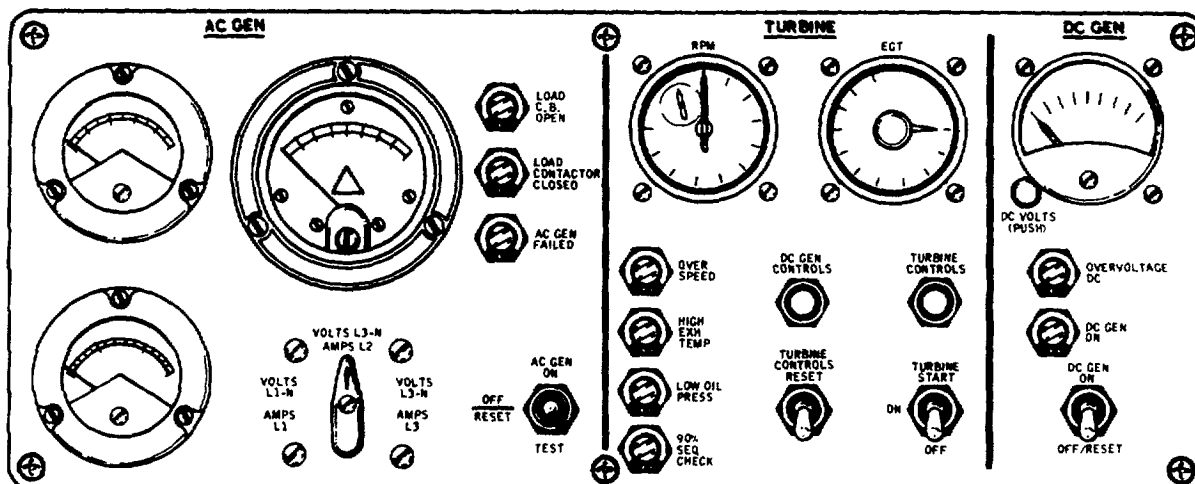


Figure 1-3. Mobile Check Stand Major Component



TM268

Figure 1-4. Console Instrument Panel

1-17. THERMOCOUPLE.

1-18. The thermocouple is stowed on the left side of the engine support frame. When in use, the thermocouple is installed on the top side of the APU exhaust outlet. The thermocouple probe projects into the exhaust stream and senses exhaust gas temperature at the chromel-alumel junction. A small voltage is generated and converted to an indication (degrees centigrade) on the exhaust temperature indicator during engine operation.

1-19. TACHOMETER GENERATOR.

1-20. The tachometer generator is stowed inside the hinged door of the control console. When in use, the tachometer generator is mounted in tandem with the speed switch on the APU, and generates a small voltage which is converted to an indication on the engine speed indicator instrument during engine operation.

1-21. FUEL SYSTEM. (See figure 1-5.)

1-22. The fuel system consists of a fuel tank, an electric motor-driven fuel boost pump, a disposable-element type fuel filter, and connecting rigid and flexible plumbing. The filter and boost pump are mounted on a support bracket, which is bolted to the engine support frame on the trailer. All components provide a complete and independent fuel system for the operation of the APU while on the trailer. A flexible hose, connected to a dummy fitting during storage, connects the fuel system to the APU.

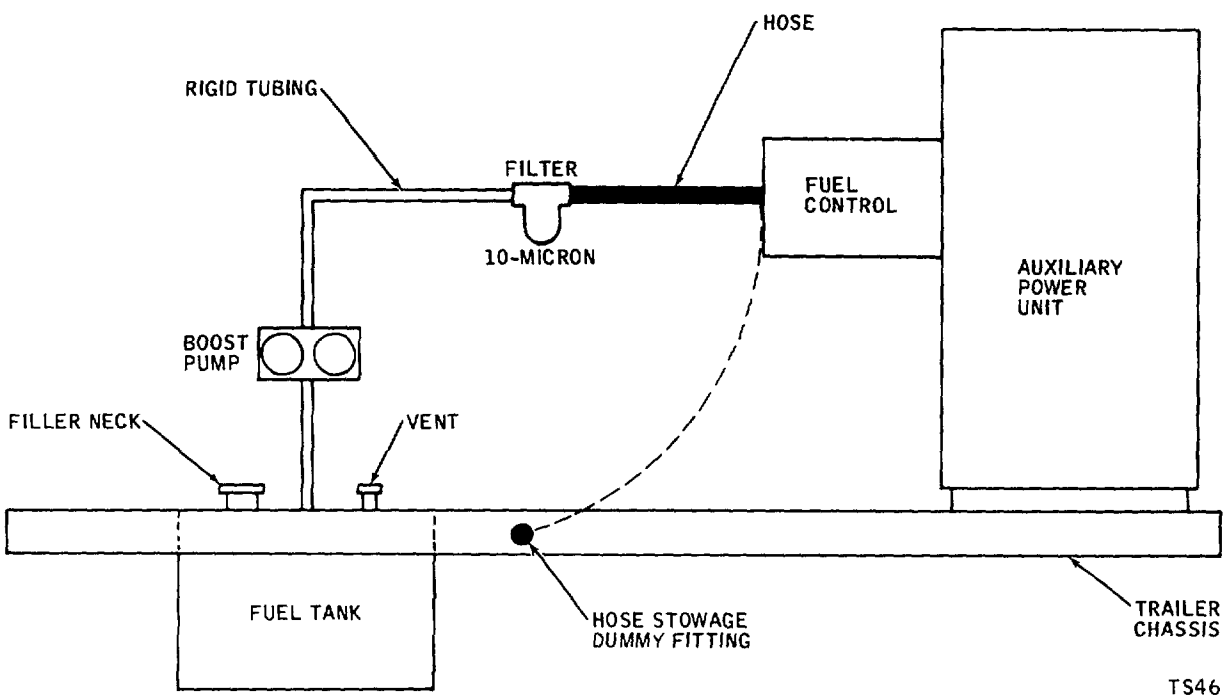


Figure 1-5. Fuel System Schematic

1-23. FUEL TANK. (See figure 1-3.)

1-24. The fuel tank is a 40-gallon-capacity aluminum tank built into the trailer frame. The tank has a four-inch diameter filler neck, an overboard vent, and a drain fitting for draining condensation or for draining the tank prior to shipping or storage. A standpipe and fitting connects to the fuel boost pump through rigid tubing. The tank filler cap incorporates a dipstick fuel indicator.

1-25. BOOST PUMP. (See figure 1-3.)

1-26. The fuel boost pump is an electric motor-driven pump bolted to a support bracket on the right side of the trailer. The boost pump draws fuel from the fuel tank and routes it through the fuel filter to the fuel control on the APU. A minimum of 5 psig fuel boost pressure is sufficient to ensure fuel flow to the fuel system of the APU.

1-27. FUEL FILTER. (See figure 1-3.)

1-28. A replaceable-element, low-pressure fuel filter is bolted to a support bracket on the right side of the trailer. A pressure relief valve within the filter head assembly is set to relieve at 10 to 12 psi differential pressure. The filter provides 10-micron filtration of the fuel before entry into the fuel system of the APU.

1-29. AIR INLET SILENCER. (See figure 1-3.)

1-30. The air inlet silencer is a sound suppressor, bolted to thin blocks on the forward left side of the trailer. The silencer consists of a labyrinth-type annular muffler, lined with acoustical material, a 90-degree adapter elbow, a flexible coupling, and clamps. During engine operation, the air inlet silencer is clamped to the air inlet shroud of the APU. The labyrinth formed by the insulated silencer assembly reduces the noise of intake air to the APU during engine operation.

1-31. EXHAUST DUCT ASSEMBLY. (See figure 1-3.)

1-32. The exhaust duct assembly is a welded assembly bolted to the frame at the forward end of the trailer. The exhaust duct assembly consists of two duct halves, six support angles, and four mounting plates. The exhaust duct assembly directs the APU exhaust and noise upward.

1-33. SPEED INCREASER. (See figure 1-3.)

1-34. The speed increaser, mounted on a support frame that is bolted to the trailer, incorporates an axial (straight-through), 6000-rpm pad on which the dc starter-generator is mounted, and a right-angle, 8000-rpm pad on which the ac generator is mounted. The APU is mounted on the speed increaser, and through the APU output speed of 6000 rpm, the speed increaser drives the generators at their respective speeds. The speed increaser is self-contained with an integral oil sump and a splash oil lubricating system.

1-35. FIRE EXTINGUISHER. (See figure 1-3.)

1-36. The portable, manually-operated, fire extinguisher is mounted in a support bracket at the aft, right end of the trailer, and secured in place by a clamp attached to the fire extinguisher support bracket. The fire extinguisher is a 2.5-pound dry chemical type extinguisher.

1-37. TRAILER ASSEMBLY. (See figure 1-3.)

1-38. The trailer provides the base and mounting provisions for the check stand components and the APU. The chassis frame consists of aluminum sheets welded into a platform on which the APU and speed increaser support frame is mounted. The chassis frame is supported on the rear axle by a pivot plate bolted to the chassis frame, and with drag links mounted in automotive-type rubber bushings. The chassis frame is supported on the front axle by a plate bolted to the chassis frame and secured to the axle with U-bolts. A towbar, pivoting on the front axle and controlling tie rods to the front wheels, provides steering for the trailer. The rear wheels are equipped with a mechanical parking brake system, connected by linkage to a brake handle on the left side of the trailer. The parking brake mechanical linkage is welded to the fuel tank. The four, split-rim wheels are mounted with pneumatic tires and tubes. Tiedown rings and reflectors are bolted on the side of the chassis frame.

SECTION II

PREPARATION FOR USE, STORAGE, OR SHIPMENT

2-1. UNPACKING AND DEPRESERVATION.

2-2. The check stand is preserved and packed for shipment and long-time storage. After uncrating, the fuel system must be depreserved, and various stand components prepared for use. Perform the following inspections and preparations on the check stand prior to immediate use.

- a. Inspect exhaust duct for foreign objects and damage.
- b. Inspect air inlet silencer, elbow duct, flexible coupling, and clamps for damage.
- c. Remove all packing material from control console. Inspect console, doors, and instruments for damage.
- d. Inspect cables and harnesses for damage and for loose connections. Tighten all loose connections.
- e. Inspect reflectors and tiedown rings for damage and security.
- f. Inspect running gear, steering, towbar, and parking brake for operation.
- g. Inflate tires to 45 psig air pressure.

2-3. PREPARING THE BATTERY FOR USE.

2-4. The battery contains electrolyte when shipped, and must be given a freshening charge prior to use. Perform the freshening charge in accordance with instructions in TM-11-6140-203-15-1-Connect the quick-disconnect power cable connector to the terminal pins on the battery after the freshening charge.

2-5. PREPARING THE SPEED INCREASER FOR USE. (See figure 4-3.)

2-6. The speed increaser must be serviced prior to use, as follows:

- a. Remove all packing and sealing material from speed increaser.
- b. Place a suitable waste container under oil drain plug (3).
- c. Remove, as a single unit, magnetic plug (1), O-ring (2), oil drain plug (3) and O-ring (4); drain oil from speed increaser oil sump. Discard O-ring (4).

Note

When installing new O-rings on speed increaser, apply a light film of lubricating oil (item 7, App D) on new O-ring prior to installation.

- d. Reinstall oil drain plug (3) and new O-ring (4).
- e. Remove breather cap and filler plug (6) and O-ring (7) and fill speed increaser oil sump with lubricating oil (item 4, App D) to OIL LEVEL mark on sight glass (5).
- f. Install breather cap and filler plug (6), and new O-ring (7). Wipe any spilled oil from speed increaser, and surrounding area.

2-7. PREPARING THE FUEL SYSTEM FOR USE.

2-8. The fuel system must be depreserved prior to use, as follows:

- a. Place a suitable container under fuel tank drain fitting.
- b. Remove drain fitting, and drain residual preservative oil from tank.
- c. Flush tank with one gallon or more of clean fuel (items 9 and 10, App D) or with gasoline (item 10, App D). Drain flushing fluid from tank, and reinstall drain plug.
- d. Remove fuel filter bowl, and pour out any residual preservative oil. Reinstall filter bowl using new O-ring.
- e. Purge the fuel system, as follows:
 - (1) Add clean fuel to fuel tank.
 - (2) Disconnect flexible fuel supply line from dummy fitting. Place open end of flexible line in a suitable waste fuel container.
 - (3) Push in TURBINE CONTROLS circuit breaker. See figure 1-4.
 - (4) Move START-ON-OFF switch to ON. Boost pump will operate and fuel will flow through flexible line.
 - (5) Move START-ON-OFF switch to OFF after clean fuel, free of air bubbles, flows out of flexible line.
 - (6) Pull TURBINE CONTROLS circuit breaker.
 - (7) Connect flexible fuel supply line to dummy fitting, to maintain fuel system cleanliness.

2-9. PRESERVATION OF THE FUEL SYSTEM.

2-10. The fuel system must be preserved prior to storage or shipment, as follows:

- a. Place a suitable container under fuel tank drain fitting.
- b. Remove drain fitting and drain all fuel from fuel tank. Reinstall drain fitting.
- c. Put one to two gallons of lubricating oil (item 8, App D) into fuel tank.
- d. Remove fuel filter bowl, and pour fuel from bowl; reinstall bowl.
- e. Disconnect tank-to-pump fuel supply line at boost pump. Connect a flexible line to pump, and place open end of line in a one-gallon-capacity container filled with lubricating oil (item 8, App D).
- f. Disconnect flexible fuel supply line from dummy fitting. Place open end of flexible line in a suitable waste fuel container.
- g. Push in TURBINE CONTROLS circuit breaker. (See figure 1-4.)
- h. Move START-ON-OFF switch to ON. Boost pump will operate and preservative oil will flow through flexible line.
- i. Move START-ON-OFF switch to OFF when preservative oil flows out flexible line.
- j. Pull TURBINE CONTROLS circuit breaker.
- k. Connect flexible fuel supply line to dummy fitting.
 - l. Disconnect flexible line from boost pump, and connect tank-to-pump fuel supply line to boost pump.
- m. Remove fuel tank drain fitting and drain all preservative oil from tank. Reinstall drain fitting.
- n. Wipe any spilled oil from stand surface and from stand components.

2-11. PREPARATION FOR STORAGE.

2-12. The check stand must be prepared for storage, as follows:

- a. Perform fuel system preservation in accordance with instructions in paragraph 2-10.
- b. Disconnect power cable from battery.
- c. Remove battery from stand; forward battery to an applicable storage area.
- d. Remove fire extinguisher from stand; forward extinguisher to an applicable storage area.

- e. Cover all cable connectors, and secure cables and harnesses to convenient structures, or to receptacles provided.
- f. Place a suitable container under oil drain plug on speed increaser. Remove plug and drain lubricating oil from speed increaser. Reinstall drain plug.
- g. Cover all openings on stand equipment.

Note

If anticipated storage is longer than 90 days, mount check stand on blocks and do not set parking brakes.

- h. Set parking brakes.
- i. Cover check stand with an adequate cover if it is to be stored outdoors.

2-13. PREPARATION FOR SHIPMENT.

2-14. The mobile check stand may be transported by land, air, or sea provided adequate safeguards are used. Prepare the stand for shipment per figure 2-1 and as follows:

- a. Transporting the check stand by land:
 - (1) Preserve fuel system in accordance with paragraph 2-10.
 - (2) Drain fuel tank and speed increaser oil sump. Refer to applicable steps in paragraph 2-12 for draining procedure.
 - (3) Cover all openings, secure all loose items, and adequately protect all parts subject to damage during transit.
 - (4) Secure check stand to shipping carrier by fastening lines to tiedown rings along sides of trailer.
 - (5) Use a canvas cover over check stand during inclement weather, and over dusty terrain.
- b. Transporting the check stand by air:
 - (1) Perform steps a. (1) through a. (4), preceding.
 - (2) Remove battery. A battery will be installed at destination.
- c. Transporting the check stand by sea:
 - (1) Perform steps a. (1) through a. (4), preceding.
 - (2) Remove battery. A battery will be installed at destination.
 - (3) Crate check stand, using standard crating practices for sea transport.

CONTINUATION SHEET <small>(TSARCOM Reg 746-1 (J))</small>		REF NO OF DOCUMENT BEING CONTINUED TM55-4920-424-13&P	PAGE	OF		
NAME OF OFFEROR OR CONTRACTOR						
SECTION G - PRESERVATION/PACKAGING/PACKING PREPARATION FOR DELIVERY (OVERHAUL)						
<small>All specifications and standards applicable to the requirements herein shall be the issue in effect on date of invitations for bids.</small>						
NOMENCLATURE Dual Purpose Mobile Check and Adjustment/ Generator Stand		STOCK NUMBER 4920-00-176-52 36				
		PART NUMBER 45977-100				
NET WEIGHT	SHIPPING DIMENSIONS 7.61' X 4.49' X 6'	GROSS WEIGHT 1100 Lbs.	CUBIC FEET 205			
1. PRESERVATION AND PACKAGING <input type="checkbox"/> LEVEL A <input type="checkbox"/> LEVEL B <input type="checkbox"/> PACKAGING SHALL BE IN ACCORDANCE WITH SPECIFICATION MIL-P-116. THE FOLLOWING DETAILED REQUIREMENTS SHALL APPLY:						
UNIT	PKG QTY	METHOD	PRESERVATIVE	WRAP	DUNNAGE	CONTAINER
	I	I	MIL-C-16173 GR. 2	MIL-B-121 Grade A	Wood Block and Bracing	PPP-C-650 Crate Style A Heavy Duty
<input type="checkbox"/> a. ITEMS SHALL BE PRESERVED AND PACKAGED IN ACCORDANCE WITH MIL-STD-1188 <input type="checkbox"/> b. OTHER						
2. PACKING <input checked="" type="checkbox"/> LEVEL A <input type="checkbox"/> LEVEL B <input type="checkbox"/> a. ITEMS, PRESERVED AND PACKAGED AS ABOVE, SHALL BE PACKED IN SNUG-FITTING FIBERBOARD CONTAINERS CONFORMING TO WEATHER-RESISTANT CLASS OF PPP-B-636. <input type="checkbox"/> b. ITEMS, PRESERVED AND PACKAGED AS ABOVE, SHALL BE PACKED IN SNUG-FITTING CONTAINERS CONFORMING TO PPP-B-601, STYLE 1, OVERSEAS TYPE. <input type="checkbox"/> c. ITEMS, PRESERVED AND PACKAGED AS ABOVE, SHALL BE PACKED IN ACCORDANCE WITH MIL-STD-1188 <input checked="" type="checkbox"/> d. NO PACKING REQUIRED (THE UNIT CONTAINER IS THE SHIPPING CONTAINER). <input type="checkbox"/> e. OTHER						
3. MARKING <input type="checkbox"/> a. MARKING OF SHIPMENTS THE CONTRACTOR SHALL MARK ALL SHIPMENTS UNDER THIS CONTRACT IN ACCORDANCE WITH THE EDITION OF MIL-STD-129, "MARKING FOR SHIPMENT AND STORAGE," IN EFFECT AS OF THE DATE OF THE SOLICITATION. <input type="checkbox"/> b. MARKING SHALL CONFORM TO REQUIREMENTS OF MIL-STD-1188 <input type="checkbox"/> c. MATERIEL CONDITION MARKING SHALL BE APPLIED IN ACCORDANCE WITH MIL-STD-129. A MATERIEL CONDITION TAG OF THE APPLICABLE TYPE WILL BE <u>SECURELY</u> ATTACHED DIRECTLY TO ALL UNINSTALLED OR STORED AERONAUTICAL OR AIR DELIVERY ITEMS. WHEN SUCH ITEMS ARE PLACED OR STORED IN CARTONS, PACKAGES, CRATES OR METAL SHIPPING CONTAINERS, A DUPLICATE MATERIEL CONDITION TAG OR LABEL WILL BE <u>SECURELY</u> ATTACHED TO THE EXTERIOR OF THE PACKAGE OR CONTAINER IN SUCH A MANNER THAT WILL AFFORD MAXIMUM PROTECTION FROM HANDLING AND WEATHER. TAGS WILL BE COMPLETED EITHER BY TYPEWRITTEN OR PRINTED BLACK LEAD PENCIL ENTRIES. ITEMS OF A COMMON OR NONTECHNICAL NATURE (i.e., common hardware, bulk materials, etc.) THE SERVICEABILITY OF WHICH IS OBVIOUS, AND THE IDENTITY AND INSPECTION REQUIREMENTS ADEQUATELY INDICATED BY COMMERCIAL TAGS, LABELS OR MARKINGS, MAY BE RECEIVED, STORED, ISSUED OR SHIPPED WITHOUT MATERIEL CONDITION TAGS. <input checked="" type="checkbox"/> d. EXTERIOR SHIPPING CONTAINERS OF SIMS (Selected Item Management System) MATERIEL SHALL BE MARKED WITH SIM PROJECT CODE DISC LABELS IN ACCORDANCE WITH MIL-STD-129. THE CONTRACTING OFFICER WILL PROVIDE SIM PROJECT CODE LABELS ON REQUEST. THEY ARE AVAILABLE IN TWO SIZES, 3 X 3 AND 9 X 9. SPECIFY ON YOUR ORDER THE SIZE AND QUANTITY REQUIRED.						
APPROVED BY Nathan Silverman Packaging Specialist <i>Nathan Silverman</i>		ORGANIZATION DRSTS-SDP	DATE 19 Feb 80			

Figure 2-1. Preservation, Packaging and Marking Requirements.

SECTION III

OPERATING INSTRUCTIONS

3-1. GENERAL.

3-2. The Mobile Check Stand is a control unit providing a mounting platform, electrical controls, and components necessary for operating the models T-62T-2A and T-62T-2A1 auxiliary power units. The check stand, independent of the APU, cannot be turned on or off. Its components function only as a part of the power unit. The starting and stopping procedures given in this section are for the purpose of operating the auxiliary power unit, either for testing the APU, for furnishing external ac power to the aircraft or for charging the battery.

3-3. MOUNTING THE APU ON THE CHECK STAND.

CAUTION

Place removed APU components in a safe place to prevent loss. These parts will be reinstalled on APU after removal of unit from check stand.

3-4. To mount the APU on the check stand, remove the thermocouple boss cap. Refer to TM 55-2835-203-24 for removal procedures for this APU component.

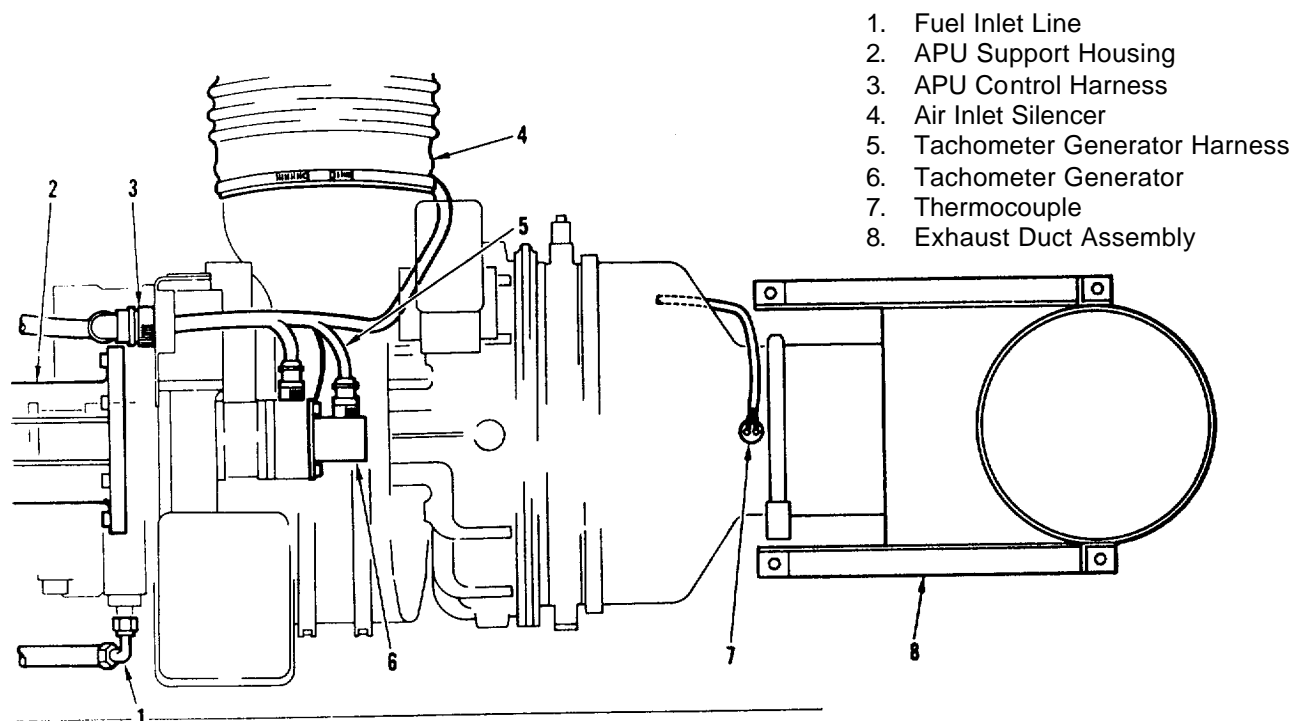
a. Preparation.

- (1) Position check stand and set hand brake (pull brake handle up).
- (2) Prepare stand, battery, speed increaser, and fuel system for use. Refer to Section II for preparation procedures.
- (3) Remove metal cover from pad on speed increaser. Save nuts and washers for use in attaching APU to speed increaser.
- (4) Check APU output shaft spline drive adapter on speed increaser for damage. Wipe clean if necessary.

b. Mounting the APU. (See figures 3-1 and 5-1.)

Note

A support for the aft section of the APU is provided on the forward section of the trailer. Carefully rest APU on this support while engaging spline drive adapter.



TA102

Figure 3-1. Mounting and Connecting the APU

- (1) Using a suitable hoist assembly, or equivalent, position APU and engage spline drive adapter. Move APU forward until it contacts face of speed increaser mounting pad.
 - (2) Secure APU to speed increases with nuts and washers removed in step a. (3), preceding.
 - (3) Secure APU to bracket assembly (122, figure 5-1) with wing bolt assembly (121).
 - (4) Install flexible duct section from air inlet silencer (4, figure 3-1) to air inlet shroud on APU. Secure flexible duct with clamp provided.
- c. Connecting the APU. (See figure 3-1.)
- (1) Remove protective cap from fuel inlet filter fitting on APU, and connect flexible fuel supply line (1) from check stand. Install protective cap on check stand dummy fitting.
 - (2) Connect check stand control harness (3) to harness receptacle on APU. Tighten harness connector securely.
 - (3) Install tachometer generator (6)(furnished with stand) on aft pad of APU speed switch, using coupling, nuts, and washers furnished with stand.

- (4) Remove thermocouple (7) from its stowage bracket on check stand, and connect it to thermocouple boss on top of combustor exhaust outlet. Tighten thermocouple securely.

CAUTION

Do not transport mobile check stand over rough terrain with APU installed. Vibrations and shock may damage vital APU parts.

3-5. PRELIMINARY CHECKS.

3-6. The following checks should be made prior to operating the auxiliary power unit.

- a. Check plumbing and electrical wiring connections for security of attachment.

CAUTION

Do not operate APU with air inlet screen removed. Ensure operating area is clean of loose items. The greatest hazard to a gas turbine engine is possible ingestion of foreign material into the engine compressor.

- b. Direct stand to allow safe exit of exhaust gas.
- c. Check tires for sufficient air pressure (40 to 45 psig).
- d. Check fuel tank dipstick for sufficient quantity of fuel.
- e. Check speed increaser oil sight glass for full quantity of lubricating oil.

CAUTION

Jet thrust of APU may roll stand if parking brake is not applied (brake handle up).

- f. Ensure that parking brakes are applied (brake handle up).
- g. Check all gages on instrument panel for zero indication.
- h. Check that all switches on instrument panel are in the OFF position, and that circuit breakers are pulled.
- i. Check APU oil sump for full quantity of engine lubricating oil (3 U. S. quarts).
- j. Purge APU fuel system. Refer to paragraph 3-7 for purging procedure.

3-7. PURGING THE APU FUEL SYSTEM.

3-8. The following purging procedure is for the purpose of depreserving, or purging, the APU fuel system when a preserved or repaired engine is to be operated.

- a. Disconnect harness connector from APU ignition exciter input. Insulate connector to prevent accidental contact.

Note

If desired, fuel lines may be disconnected from fuel solenoid valves rather than from fuel manifold and start fuel nozzle. Connect suitable drain lines to fuel solenoid valves, and place open ends of drain lines into a waste fuel container (one-quart minimum capacity).

- b. Disconnect APU fuel lines from fuel manifold and from start fuel nozzle.
- c. Connect suitable drain lines to disconnected lines, and place open ends of drain lines into a waste fuel container (one-quart minimum capacity).
- d. Push in TURBINE CONTROLS circuit breaker. (See figure 1-4.)
- e. Move START-ON-OFF switch to ON.
- f. Move RESET switch to RESET.
- g. Move START-ON-OFF switch from ON to START, and motor APU until airfree fuel flows through drain lines; then, move START-ON-OFF switch from START to OFF.
- h. Pull TURBINE CONTROLS circuit breaker.
- i. Disconnect drain lines, and connect APU fuel lines to fuel solenoid valves, or to fuel manifold and start fuel nozzle.
- j. Reconnect harness connector to APU ignition exciter.

3-9. ADJUSTMENT.

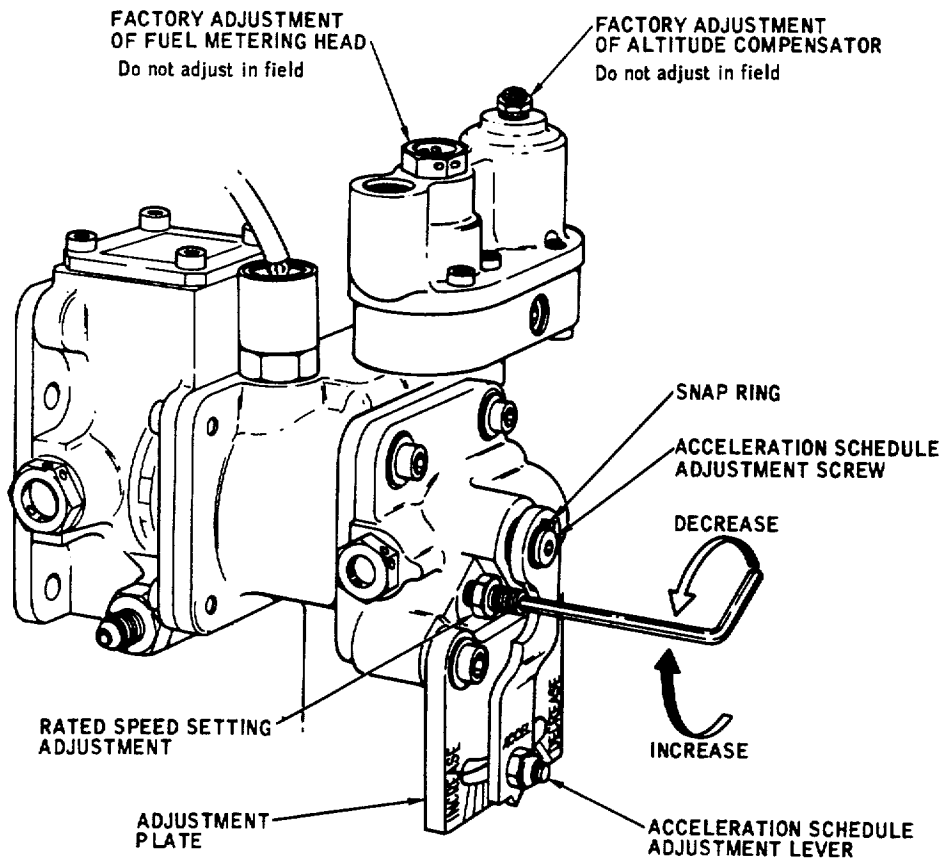
3-10. Only the adjustment procedure for the APU fuel control is given in this section. For procedures for other APU components refer to TM 55-2835-203-24.

- a. Rated speed setting adjustment. (See figure 3-2.)

Note

Clockwise rotation increases speed; counterclockwise rotation decreases speed. A one-quarter turn (90 degrees) in either direction will change the speed accordingly by approximately 65 rpm (approximately 1.5 percent speed).

- (1) Insert a 3/32-inch hex-type wrench in setscrew. Loosen locknut and turn setscrew in required direction.



TM272

Figure 3-2. Fuel Control Adjustment

- (2) Adjust engine speed to 102 percent under no-load condition.

CAUTION

The rated speed setting adjusting setscrew can easily be damaged by over-tightening locknut. Tighten locknut 1/8-turn beyond fingertight.

- (3) Perform final adjustment with engine running. Tighten locknut after final adjustment.

- b. Acceleration schedule adjustment, T-62T-2A. (See figure 3-2.)

Note

Clockwise rotation increases acceleration schedule fuel flow; counterclockwise rotation decreases fuel flow. Adjustment is critical; no not adjust in increments greater than 1/8 turn. Initial position of acceleration schedule adjustment screw should be carefully noted.

- (1) Adjust acceleration schedule adjustment screw to obtain proper acceleration.

CAUTION

Do not exceed 1100°F (593°C) maximum exhaust gas temperature.

- (a) Increase acceleration schedule fuel flow if engine hesitates during acceleration or if engine takes longer than 15 seconds to obtain rated speed (100%).
- (b) Decrease acceleration schedule fuel flow if maximum exhaust gas temperature is greater than 1090°F (588°C) during acceleration.
- (c) Make a minimum of two starts between adjustments. Disregard characteristics of first start after adjustment.
- (2) With acceleration schedule adjustment lever located in the mid-position of adjustment plate slot, place lever on acceleration adjustment screw. Install snap ring. Maintain screw adjustment obtained in (1) preceding; lock wing nut.
- (3) Maintain adjustments of (1) and (2) preceding throughout all testing of engine on test stand.
- c. Acceleration schedule adjustment, T-62T-2A1. (See figure 3-2.)

Note

Clockwise rotation increases acceleration schedule fuel flow; counterclockwise rotation decreases fuel flow. Adjustment is critical and the initial position of setscrew should be carefully noted.

- (1) Adjust acceleration schedule adjustment screw to obtain 1050°F (566°C) maximum temperature during starting.
- (2) Place acceleration schedule adjustment lever in the minimum schedule position (full counterclockwise end of slot in adjustment plate). Maintain adjustment of (1) preceding. Install snap ring, lock wing nut.

- (3) Maintain adjustments of (1) and (2) preceding throughout all testing of the engine on test stand.

CAUTION

To avoid high exhaust gas temperature, do not operate APU on test stand with acceleration schedule adjustment lever in mid-position of adjustment slot.

- (4) Upon completion of testing, prior to removing APU from test stand, move acceleration schedule adjustment lever to mid-position of adjustment slot.

3-11. OPERATION OF THE APU.

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel; wear ear muffs or earplugs which were fitted by a trained professional.

3-12. Starting. (See figure 1-4.)

- a. Place instrument panel switches in the following positions:
 - (1) START-ON-OFF switch to OFF.
 - (2) DC GEN ON-OFF/RESET switch to OFF.
 - (3) AC GEN ON-OFF-TEST switch to OFF.
 - (4) AC selector switch to any marked position.
- b. Push in TURBINE CONTROLS circuit breaker.
- c. Push in DC GEN CONTROLS circuit breaker.
- d. Move START-ON-OFF switch from OFF to ON.
 - (1) Fuel boost pump starts.
 - (2) HIGH EXHAUST TEMP, OVERSPEED, and LOW OIL PRESSURE indicator lights illuminate.
- e. Press to test all remaining indicator lights at this time, if desired.
- f. Move RESET switch to RESET, then release. 90% SEQ CHECK light illuminates.
- g. Move START-ON-OFF switch from ON to START, then release.

Note

HIGH EXH TEMP, LOW OIL PRESSURE and OVER-SPEED lights extinguish as APU accelerates. At 90 percent speed, the 90% SEQ CHECK light extinguishes.

Note

If APU does not light off because of entrapped air in APU fuel system, loosen electrical connector from fuel pressure switch, but keep connector engaged. Crank APU and disconnect pressure switch connector at 10 percent speed. As soon as APU lights off, reconnect connector, and tighten securely.

- h. Observe that APU accelerates smoothly to 102 percent speed.

WARNING

Exhaust duct and APU combustor section are hot during operation. Keep clear of combustibles. Avoid physical contact to preclude personal injury.

- i. To charge battery, allow APU to reach operating speed. Move DC GEN ON-OFF/RESET switch to ON. **DO NOT OVERCHARGE BATTERY**. Press button on dc volt-ammeter to read dc volts. Refer to TM-11-6140-203-15-1 for charging times.
- j. If EXHAUST TEMP indicator indicates abnormally high (or low) temperatures during starting, adjust APU fuel control unit. Refer to paragraph 3-10 for fuel control adjustment procedure.
- k. If 90% SEQ CHECK light does not extinguish, or extinguishes before 90 percent engine speed is reached, adjust speed switch. Refer to TM 55-2835-203-24 for adjustment procedure.
- l. If LOW OIL PRESS light does not extinguish after APU cranking is initiated, APU lubricating oil system or low oil pressure switch has malfunctioned. Stop cranking APU and correct malfunction before initiating another start. Refer to TM 55-2835-203-24 to correct this malfunction.
- m. If cranking cycle is accomplished without a lightoff, fuel control unit (fuel pump or acceleration control), ignition exciter, spark plug, or fuel nozzles may be malfunctioning. Refer to TM 55-2835-203-24 for corrective procedures.

CAUTION

Do not attempt to restart APU after a malfunction shutdown until malfunction has been corrected.

- n. If APU shuts down because of overspeed, the OVERSPEED light will illuminate. The APU fuel control unit, speed switch, or main fuel solenoid valve may be malfunctioning. Refer to TM 55-2835-203-24 for corrective procedures.

- o. If APU shuts down because of high exhaust gas temperature, the HIGH EXH TEMP light will illuminate. The reason for this shutdown may be due to loading APU prior to attaining 100 percent rated speed, residual fuel remaining in combustor, a restriction in air inlet or exhaust outlet, or a failure in the engine (resulting in increased drag). Correct these conditions accordingly. Also, the fuel control may be out of adjustment. Refer to paragraph 3-10 for fuel control adjustment procedures.
- p. If APU shuts down because of low oil pressure, the LOW OIL PRESS light will illuminate. This condition may be caused by low oil level in the APU, malfunctioning oil pump, clogged oil filter, electrical discontinuity, or a malfunctioning oil pressure switch. Refer to TM 55-2835-203-24 to correct these malfunctions.

Note

Rated speed (100 percent engine speed) corresponds to 4200 rpm of the tachometer generator, 6000 rpm of the reduction drive output and 56,000 rpm of the turbine.

3-13. APU Testing. After APU has automatically accelerated to rated speed, it is protected by three automatic safety devices; a speed switch, a high exhaust temperature device, and a low oil pressure switch.

- a. Speed Adjustment. After APU attains 100 percent rated speed (400-cycle ac) at no load, adjust fuel control rated speed setting adjustment screw to obtain 102 percent engine speed. Run APU for approximately 10 minutes and carefully check for fuel and oil leaks.

Note

Engine should shut down when rated speed is exceeded by 10 percent. The ENGINE SPEED indicator registers in percent. The small hand makes one revolution for each 10 percent.

- b. Thermal Protective Device. It APU exceeds the temperature limit of 1120°F (604.4°C).
- c. Low Oil Pressure Switch. The low oil pressure switch is set to shut down APU if decreasing oil pressure reaches 6 ± 1 psig.

3-14. AC POWER OPERATION.

3-15. The mobile check stand may be used to furnish 115/200-volt, 400-cycle; ac power for aircraft preflight operations, or other needs. A 50-foot power cable is provided with the check stand, and is equipped with a connector to engage the ac power input receptacle on the aircraft.

CAUTION

To preclude damage to electrical components, always monitor check stand controls during ac generator operation to avoid operation at low frequency, high frequency, or low voltage. Avoid contact with high-voltage components in the control console during operation of the ac generator.

3-16. Before connecting power cable to aircraft, start APU. With APU at operating speed, move AC GEN switch to the TEST position. Check voltages on all three phases using the ac selector switch.

3-17. Connect power cable to aircraft receptacle, and move AC GEN switch to ON. LOAD CONTACTOR CLOSED light will illuminate. An AC FREQUENCY meter is provided on the instrument panel. AC volts and amperes may be read on the AC VOLTS and AC AMPERES meters provided on the instrument panel by selecting the phase desired with the AC, selector switch.

3-18. The ac overvoltage relay will operate to remove the ac generator from the line if an overvoltage condition exists. The AC GEN FAILED light will illuminate. An engine malfunction shutdown will also cause the ac generator to go off the line.

3-19. Move AC GEN switch to OFF before stopping APU after an ac power utilization run. The CLOSED light will extinguish.

3-20. APU STOPPING.

- a. Move AC GEN switch to OFF.
- b. Pull DC GEN CONTROLS circuit breaker.
- c. Move START-ON-OFF switch to OFF.
- d. Pull TURBINE CONTROLS circuit breaker.

3-21. APU REMOVAL.

3-22. Removal of the APU from the mobile check stand is the reverse of the installation procedures given in paragraph 3-4. Perform the following steps after removal of the APU from the check stand.

- a. Disconnect battery.
- b. Install metal cover on pad of speed increaser. Secure cover to prevent loss of spline drive adapter.
- c. Remove tachometer generator from APU speed switch, and stow in receiver inside control console door. Place nuts, washers, and drive coupling adapter in a cloth bag and stow with tachometer generator for future use.

- d. Connect flexible fuel line to dummy fitting, and tighten line securely.
- e. Connect check stand control harness connector to dummy receptacle, and tighten connector securely.
- f. Stow thermocouple to avoid damage to wire harness. Tighten thermocouple swivel nut securely.

SECTION IV
MAINTENANCE INSTRUCTIONS

4-1. GENERAL.

4-2. Maintenance of the mobile check stand consists of periodic lubrication, specified in figure 4-1, and of performing the inspection checks described in figure 4-4. Common repair procedures are not given; such repairs should be made in accordance with standard practices. When an item is unique or sufficiently complex so as to require special instructions and precautions, the repair procedures are given in Section VII.

4-3. CLEANING.

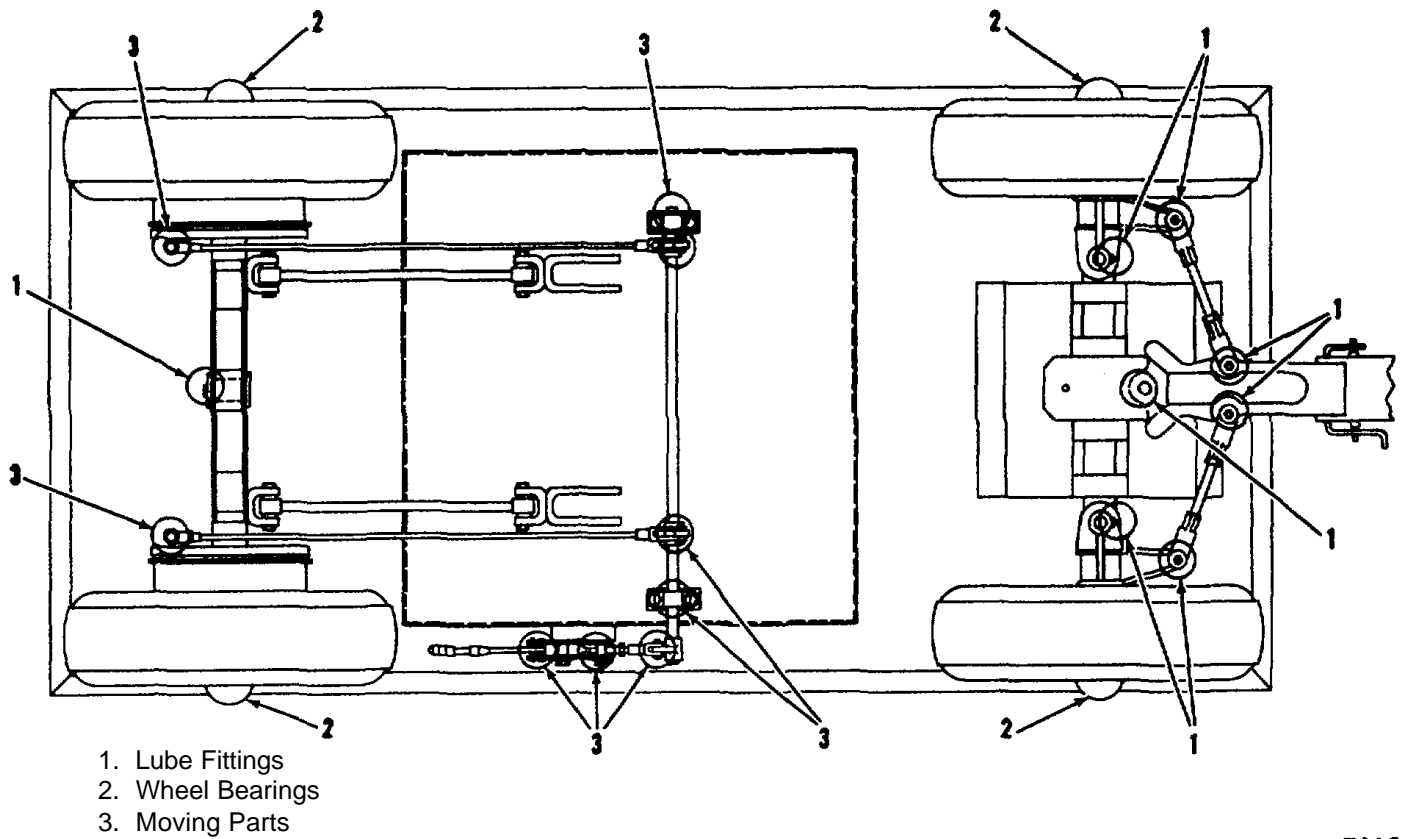
4-4. Clean metal parts with cleaning solvent (item 1, App D). Wipe clean with a clean dry cloth. Parts may be sprayed or immersed in the solvent, whichever is convenient. Apply service-approved corrosion-preventive compounds on all steel parts after cleaning. Clean all electrical parts with a soft-bristle brush or a lint-free cloth. Remove all traces of corrosion or other deposits that may interrupt electrical continuity.

4-5. PERIODIC LUBRICATION.

4-6. Perform periodic lubrication of the check stand in the manner and at the intervals prescribed in figure 4-1.

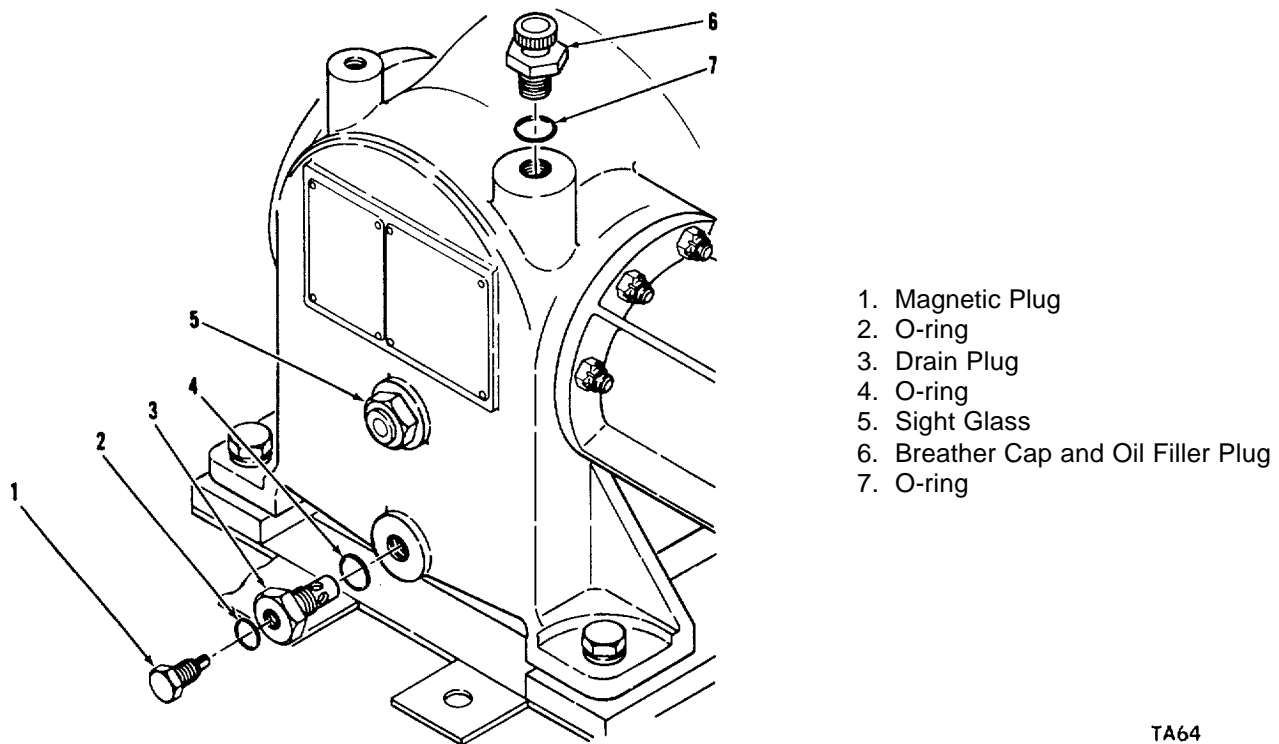
Figure & Index No.	Item	Interval	Method	Lubricant
1, Fig. 4-2	Lube Fittings	180 Days	Grease Gun	Item 2, App D
2, Fig. 4-2	Wheel Bearings	180 Days	Hand Pack	Item 2, App D
3, Fig. 4-2	Moving Parts	180 Days	Oil Can	Item 3, App D
Fig. 4-3	Speed Increaser	180 Days	Drain and Fill	Item 4, App D

Figure 4-1. Table of Periodic Lubrication



TA63

Figure 4-2. Mobile Check Stand, Lubrication Diagram



TA64

Figure 4-3. Draining the Speed Increaser Lubricating Oil

4-7. INSPECTION AND MAINTENANCE INTERVALS.

4-8. Perform periodic inspection and maintenance of the items listed in figure 4-4 at the intervals indicated. During periods of frequent use or of operation in severe climatic or environmental conditions, the inspection and maintenance schedule should be altered accordingly.

Item	Interval	Method	Inspection and Maintenance
Battery	30 Days	Visual and Operational	<ul style="list-style-type: none"> a. Inspect vent openings for restrictions. b. Check level of electrolyte. c. Check connections for security of attachment. d. Check caps and case for leaks and cracks. e. Clean corroded areas. <p style="text-align: center;">Note</p> <p>Refer to TM-11-6140-203-15-1 when performing further battery maintenance.</p>
Fire Extinguisher	30 Days	Visual and Operational	<ul style="list-style-type: none"> a. Check clamp and support bracket for security of attachment. b. Check all moving parts for corrosion and damage. c. Inspect horn for cracks and chips. d. Weigh, recharge if required, and perform all inspections and maintenance prescribed by the manufacturer.

Figure 4-4. Table of Periodic Inspection and Maintenance (Sheet 1 of 6)

Item	Interval	Method	Inspection and Maintenance
Tires	30 Days	Visual	<ul style="list-style-type: none"> a. Check for cuts, cracks, excessive or abnormal wear on any surface. b. Check for proper air pressure (40 to 45 psig).
Control Console and Instrument Panel	60 Days	Visual	<ul style="list-style-type: none"> a. Check connectors for dirt and corrosion. b. Check harnesses and cable for security of attachment and chafing. c. Check all external relay connections for security (power off). d. Check ground connections for security. e. Check all insulation for chafing and wear. f. Check mounting bolts and lugs for security of attachment. g. Check circuit breakers for operation. h. Check warning lights for defective lamps.
Harnesses, Cables, Wire Assemblies, and Terminal Blocks	60 Days	Visual and Operational	<ul style="list-style-type: none"> a. Check continuity of all harnesses, cables, and wire assemblies. b. Check all connectors for bent pins. c. Check wire insulation for chafing and wear.

Figure 4-4. Table of Periodic Inspection and Maintenance (Sheet 2 of 6)

Item	Interval	Method	Inspection and Maintenance
Harnesses, Cables Wire Assemblies, and Terminal Blocks (Cont)	60 Days	Visual and Operational	d. Check that terminal assemblies are secure and properly mounted.
Brakes and Linkage Assembly	90 Days	Visual and Operational	<ul style="list-style-type: none"> a. Test that parking brakes hold check stand when load is applied. b. Check locking and unlocking action of brake lever. c. Check all attaching parts for security of attachment, stripped threads, and corrosion. d. Check brake lining adjustment.
Fuel Filter and Fuel Lines	90 Days	Visual	<ul style="list-style-type: none"> a. Clean filter case. b. Check that seal is flexible and free of cracks. c. Install new element and new O-rings. d. Check all lines and fittings for stripped threads, and for security of attachment.
Fuel Tank	90 Days	Visual	<ul style="list-style-type: none"> a. Inspect fuel tank for leaks. b. Check drain fittings for damage and security of attachment. c. Check filter cap and dipstick for damage and for loose fit on the filler neck. d. Check dipstick for readability of measurement and for security of attachment to the filler cap.

Figure 4-4. Table of Periodic Inspection and Maintenance (Sheet 3 of 6)

Item	Interval	Method	Inspection and Maintenance
Speed Increaser	90 Days	Visual	<ul style="list-style-type: none"> a. Check all nuts and bolts for stripped threads, and for security of attachment. b. Remove cover from input shaft housing. Check input shaft for cracks, wear, chipped splines, and chipped teeth. c. Check oil sight glass for leaks, cracks, and clearness. d. Check oil breather for restricted vents. e. Check oil filter cap and fitting for stripped threads.
Grounding Wires and Post	90 Days	Visual	<ul style="list-style-type: none"> a. Check wires for fraying. b. Check attaching nuts and post for stripped threads. c. Check wire terminals, nuts, and washers for corrosion, and for security of attachment.
Lubrication Fittings	90 Days	Visual	Check that all lubrication fittings are installed and undamaged. See figure 4-2 for location of lubrication fittings.
Air Inlet Silencer	180 Days	Visual	<ul style="list-style-type: none"> a. Check clamps for cracks and stripped threads. b. Check chain for worn or broken links. c. Check flexible coupling for tears, cuts, and wear.

Figure 4-4. Table of Periodic Inspection and Maintenance (Sheet 4 of 6)

Item	Interval	Method	Inspection and Maintenance
Air Inlet Silencer (Cont)	180 Days	Visual	<ul style="list-style-type: none"> d. Check elbow for dents and cracks. e. Check all welds for cracks. f. Check insulation and screens for tears, security of attachments, and for accumulation of foreign particles which may be ingested by the APU.
Exhaust Duct Assembly	180 Days	Visual	<ul style="list-style-type: none"> a. Inspect all welds for cracks.
Frame	180 Days	Visual	<ul style="list-style-type: none"> a. Examine all structural components of the trailer, such as angles, beams, supports, and welded sections for cracks, weakness, and failures. b. Check all components for security of attachment. c. Check all attaching parts for stripped threads and corrosion. d. Check reflectors for broken glass. e. Check all stowage equipment for security of attachment.
Running Gear	180 Days	Visual and Operational	<ul style="list-style-type: none"> a. Check wheels for alignment and proper training. b. Check wheel rims for cracks and dents, and attaching hardware for stripped threads.

Figure 4-4. Table of Periodic Inspection and Maintenance (Sheet 5 of 6)

Item	Interval	Method	Inspection and Maintenance
Running Gear (Cont)	180 Days	Visual and Operational	<ul style="list-style-type: none"> c. Remove wheel hub assemblies and check bearings for damage, flat spots, corrosion, and freedom of movement. d. Check bearing races for scoring, nicks, and looseness. e. Check grease seals and retainers for wear and damage. f. Check brake shoes and lining for damage and wear. g. Check brake drums for scoring and wear. h. Check all attaching hardware for cracks and stripped threads. i. Check steering mechanism for freedom of movement. j. Check tie rods for looseness and play.
Speed Increaser	180 Days	Visual	<ul style="list-style-type: none"> a. Remove generators and the aft metal cover, and check oil seals for leaks. b. Drain oil. Inspect oil drain plug for stripped threads. Separate magnetic plug from drain plug, and check internal spring for corrosion and freedom of movement. Inspect magnet for metal particles, and for magnetization.

Figure 4-4. Table of Periodic Inspection and Maintenance (Sheet 6 of 6)

4-9. APPLICABLE SPECIFICATIONS.

4-10. Refer to figure 4-5 for a table listing the Government Specifications applying to the maintenance and restoration of the check stand to service use.

Use/Item	Specification	Remarks
Compound, Chemical Film	MIL-G-5541	Apply to exposed unpainted trailer parts.
Finish Painting, Trailer	MIL-T-704, FED STD 595, Color 13538	Two coats.
Greasing, Wheel Bearings, and General Lubrication	MIL-G-10924	Apply to wheel bearings and lubrication fittings.
Lettering, Black	FED STD 595, Color No. 17038	Stenciled.
Lettering, Red	FED STD 595, Color No. 11136	Stenciled.
Lubrication, Brake Linkage	MIL-L-7870	Apply with oil can on moving parts.
Primer, Trailer Assembly	MIL-T-704	One coat.
Servicing, Speed Increaser	MIL-L-23699	Fill to "OIL LEVEL" mark.
Striping, Black	FED STD 595, Color No. 17038	Stenciled.
Welding, Trailer Assembly	MIL-W-8604	Noncritical welding.

Figure 4-5. Table of Applicable Specifications

SECTION V

ILLUSTRATED PARTS BREAKDOWN

5-1. GENERAL.

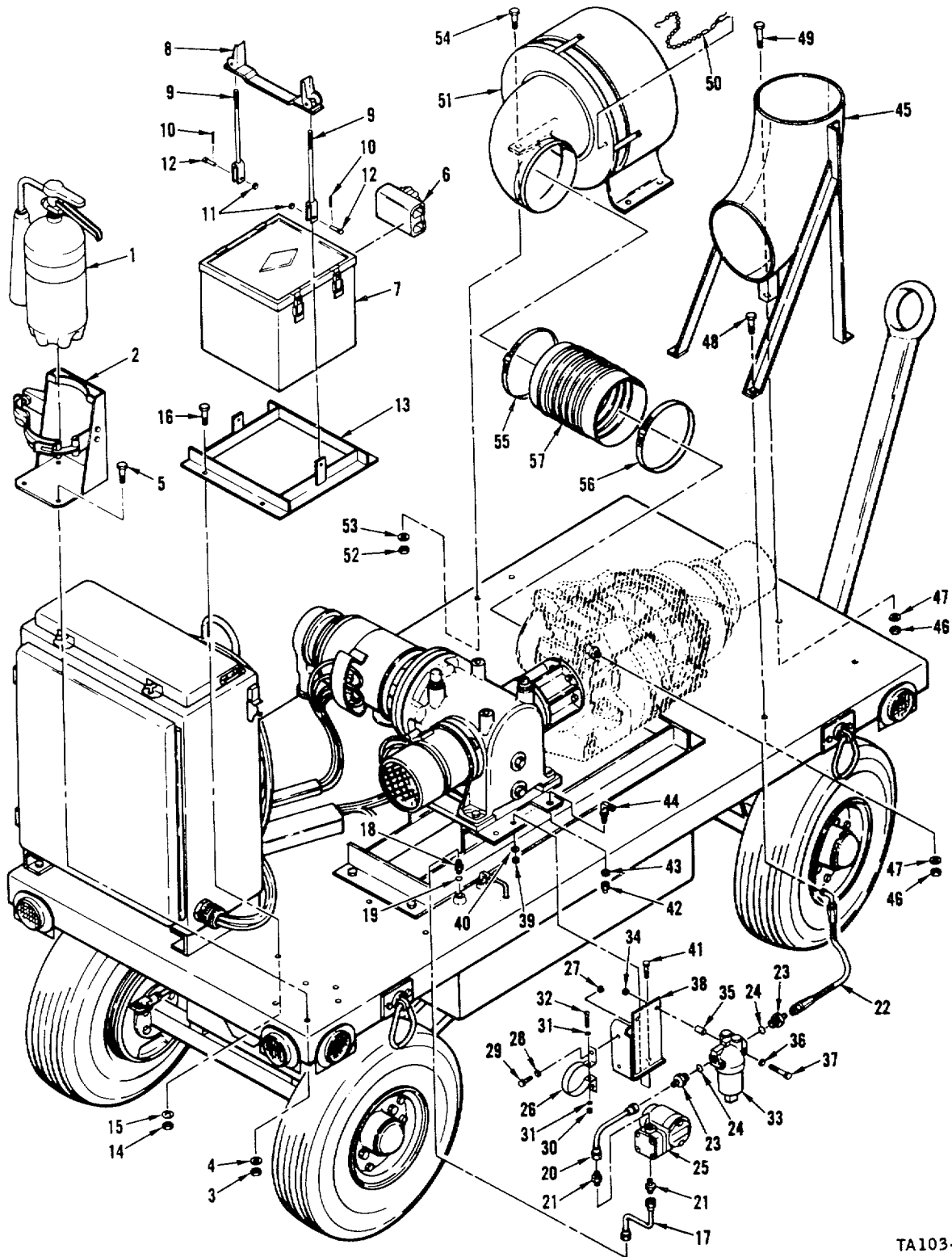
5-2. This section contains an Illustrated Parts Breakdown (IPB) of the mobile check stand. Each illustration is accompanied by a list containing the manufacturer's part number, nomenclature, and quantity per assembly.

5-3. Items that are purchased by Solar and used without alteration are identified by the vendor's part number. The vendor's name and address is indicated by a five-digit number, following the part nomenclature. The codes for the listed vendors are in accordance with the Federal Supply Code for Manufacturers, Cataloging Handbook H4-1.

5-4. This Illustrated Parts Breakdown provides supply information for all replaceable parts of the mobile check stand. The exploded views of assemblies and component parts reflect engineering drawing breakdown and are not necessarily suitable for use as guides to procedures for service or maintenance. However, procedures described in other sections of this manual reference applicable illustrations in this section for identification and location of parts.

<u>Code</u>	<u>Vendor</u>	<u>Code</u>	<u>Vendor</u>
G88042	Army Air Force drawings under custodianship of the Air Force	14892	Brake and Steering Division of The Bendix Corp. South Bend, Indiana
05277	Westinghouse Electric Corp. Semi-conductor Dept. Youngwood, Pennsylvania	22573	Saginaw Products Corp. Gardena, California
08484	Breeze Corporations Inc. Union, New Jersey	25497	Metermaster Los Angeles, California
10424	Magesco Inc. Alhambra, California	33525	Walter Kidde and Co., Inc. Belleville, New Jersey
14704	Crydom Laboratories, Inc. Garden Grove, California	44655	Ohmite Manufacturing Co. Skokie, Illinois

<u>Code</u>	<u>Vendor</u>	<u>Code</u>	<u>Vendor</u>
52793	Saginaw Products Corp. Saginaw, Michigan	82121	Electro Switch Corp. Weymouth, Massachusetts
57733	Stewart-Warner Corp. Chicago, Illinois	82647	Metals and Control Inc., Control Products Groups Attleboro, Massachusetts
59730	Thomas and Betts Co. Elizabeth, New Jersey	85735	Monadnock Paper Mills Inc. Bennington, New Hampshire
65092	Weston Instruments Inc. Weston-Newark Newark, New Jersey	86831	Roylyn Inc. Glendale, California
70040	AC Spark Plug Corp. of General Motors Corp. Flint, Michigan	91812	Janco Corp. Burbank, California
72741	Dorman Products Co., Inc. Cincinnati, Ohio	97424	General Electric Co., Aerospace Electrical Equipment Dept. Lynn, Massachusetts
74063	Hartman Electric Mfg. Co. Mansfield, Ohio	97484	Technical Development Co. Glenolden, Pennsylvania
76680	National Seal Division of Federal-Mogul-Bower Bearings Inc. Redwood City, California	98003	Nielsen Hardware Corp, Hartford, Connecticut
81321	Purolator Products Inc. Rahway, New Jersey	98376	Zero Mfg. Co. West Division Burbank, California

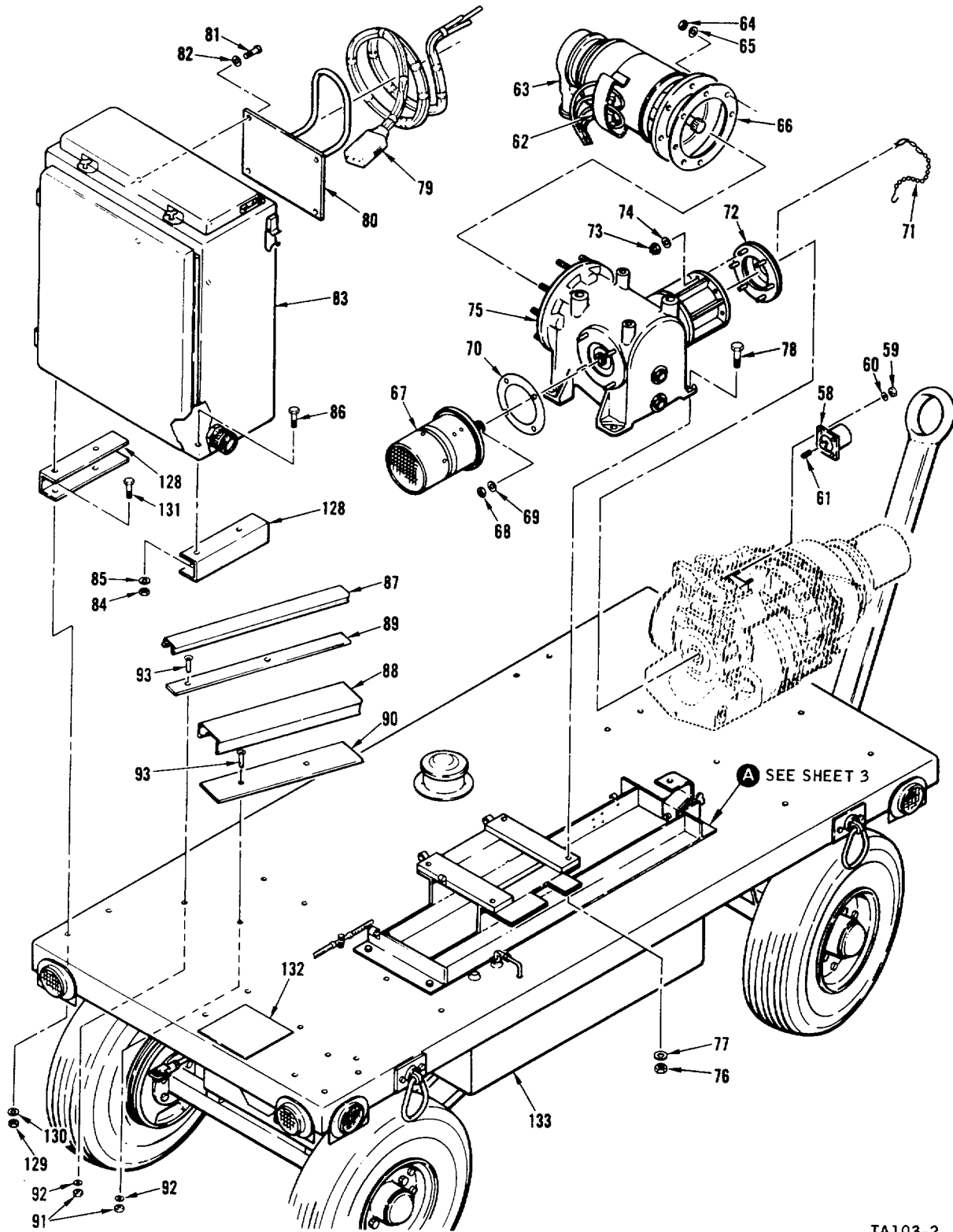


TA103-1

Figure 5-1. Dual Purpose Mobile Check and Adjustment/Generator Stand (Sheet 1 of 3)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-1-	45977-100		STAND, Mobile check and adjustment/ generator, dual purpose	1
-1	891519	.	EXTINGUISHER, Fire (33525)	1
-2	870752	.	BRACKET, Clamp-type (33525) (ATTACHING PARTS)	1
-3	MS21045-6	.	LOCKNUT	4
-4	AN960-616	.	WASHER	4
-5	AN6-7A	.	BOLT -----*-----	4
-6	MS25182-2	.	RECEPTACLE	1
-7	MS24498-1	.	BATTERY (Government furnished)	1
-8	AN3156-3	.	CLAMP	2
-9	21590-0	.	STUD (ATTACHING PARTS)	2
-10	MS24665-151	.	PIN	2
-11	AN960C416L	.	WASHER	2
-12	MS20392-3C11	.	PIN -----*-----	2
-13	47702-0	.	RETAINER, Battery (ATTACHING PARTS)	1
-14	MS21045-6	.	LOCKNUT	4
-15	AN960-616	.	WASHER	4
-16	AN6-7A	.	BOLT -----*-----	4
-17	47704-0	.	LINE ASSEMBLY	1
-18	AN815-6	.	UNION	1
-19	MS29512-06	.	O-RING	1
-20	47705-0	.	LINE ASSEMBLY	1
-21	AN816-6	.	NIPPLE	2
-22	47706-1	.	HOSE ASSEMBLY	1
-23	AN919-12	.	REDUCER	2
-24	MS29512-08	.	O-RING	2
-25	5656748	.	PUMP, Fuel, electric (70040) (ATTACHING PARTS)	1
-26	5620653	.	BRACKET (70040)	1
-27	MS20364-624C	.	LOCKNUT	2
-28	AN960-616	.	WASHER	2
-29	MS35266-108	.	SCREW	2
-30	MS21045-4	.	LOCKNUT	1
-31	AN960-416L	.	WASHER	2
-32	AN520-416-28	.	SCREW -----*-----	1
-33	46424-1	.	FILTER ASSEMBLY, Fuel (See figure 5-6 for detail breakdown) (ATTACHING PARTS)	1
-34	MS21045	.	LOCKNUT	2
-35	37327-1	.	SPACER	2

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	UNITS PER ASSY
5-1-36	AN960-416L	. WASHER	2
-37	AN4-27A	. BOLT	2
		-----*	
-38	47703-0	. BRACKET, Fuel pump and filter (ATTACHING PARTS)	1
-39	MS21045-6	. LOCKNUT	2
-40	AN960-616	. WASHER	2
-41	AN6-10A	. BOLT	2
		-----*	
-42	AN929-6	. CAP	1
-43	AN924-6	. NUT	1
-44	AN833-6	. ELBOW	1
-45	105438-0	. DUCT ASSEMBLY, Exhaust (ATTACHING PARTS)	1
-46	MS21045-4	. LOCKNUT	4
-47	AN960-416L	. WASHER	4
-48	AN4-10A	. BOLT	3
-49	AN4-6A	. BOLT	1
		-----*	
-50	RS-108-090	. CHAIN ASSEMBLY (86831)	1
-51	24304-300	. SILENCER ASSEMBLY, Air inlet (ATTACHING PARTS)	1
-52	MS21045-6	. LOCKNUT	4
-53	AN960-616	. WASHER	4
-54	AN6-6A	. BOLT	4
		-----*	
-55	QS600M116W	. CLAMP (08484)	1
-56	45977-6	. CLAMP	1
-57	NAS1375A28- SB020	. DUCT	1



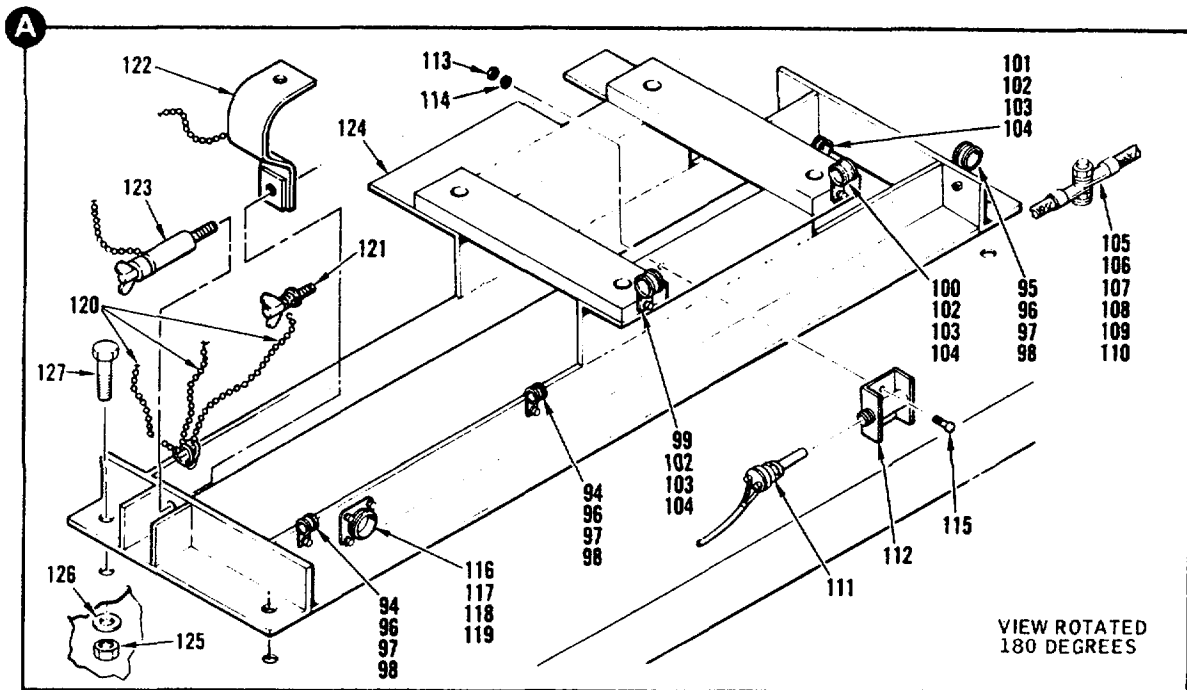
TA103-2

Figure 5-1. Dual Purpose Mobile Check and Adjustment/Generator Stand (Sheet 2 of 3)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-1-58	No Number	.	TACHOMETER GENERATOR *, Miniature, per MIL-G-26611, Type GEU-7A, (Government- furnished) (ATTACHING PARTS)	1
-59	MS21045-4	.	LOCKNUT*	4
-60	AN960-416L	.	WASHER* -----*	4
-61	7923165	.	ADAPTER* (70040)	1
-62	900615C1	.	COVER, Terminal block, ac generator	1
-63	31220-002	.	GENERATOR, AC (Government- furnished) (ATTACHING PARTS)	1
-64	MS21045-6	.	LOCKNUT	8
-65	AN960-616	.	WASHER -----*	8
-66	48616-1	.	GASKET	1
-67	23032-020	.	STARTER-GENERATOR, DC (Government-furnished) (ATTACHING PARTS)	1
-68	MS21045 -5	.	LOCKNUT	4
-69	AN960-516	.	WASHER -----*	4
-70	AN4044-1	.	GASKET	1
-71	RS-161-100	.	CHAIN ASSEMBLY (86831)	1
-72	47698-0	.	COVER ASSEMBLY (ATTACHING PARTS)	1
-73	MS21045-6	.	LOCKNUT	6
-74	AN960-616	.	WASHER -----*	6
-75	47954-0	.	SPEED INCREASER ASSEMBLY (See figure 5-5 for partial breakdown) (ATTACHING PARTS)	1
-76	MS21045-8	.	LOCKNUT	4
-77	AN960-816	.	WASHER	4
-78	AN8-21A	.	BOLT -----*	4
-79	45977-1	.	CABLE ASSEMBLY, External power, 3-phase, ac plug	1
-80	47709-0	.	HANGER, Power cable (ATTACHING PARTS)	1
-81	AN6-6A	.	BOLT	3
-82	AN960-616	.	WASHER -----*	3

*Loose parts

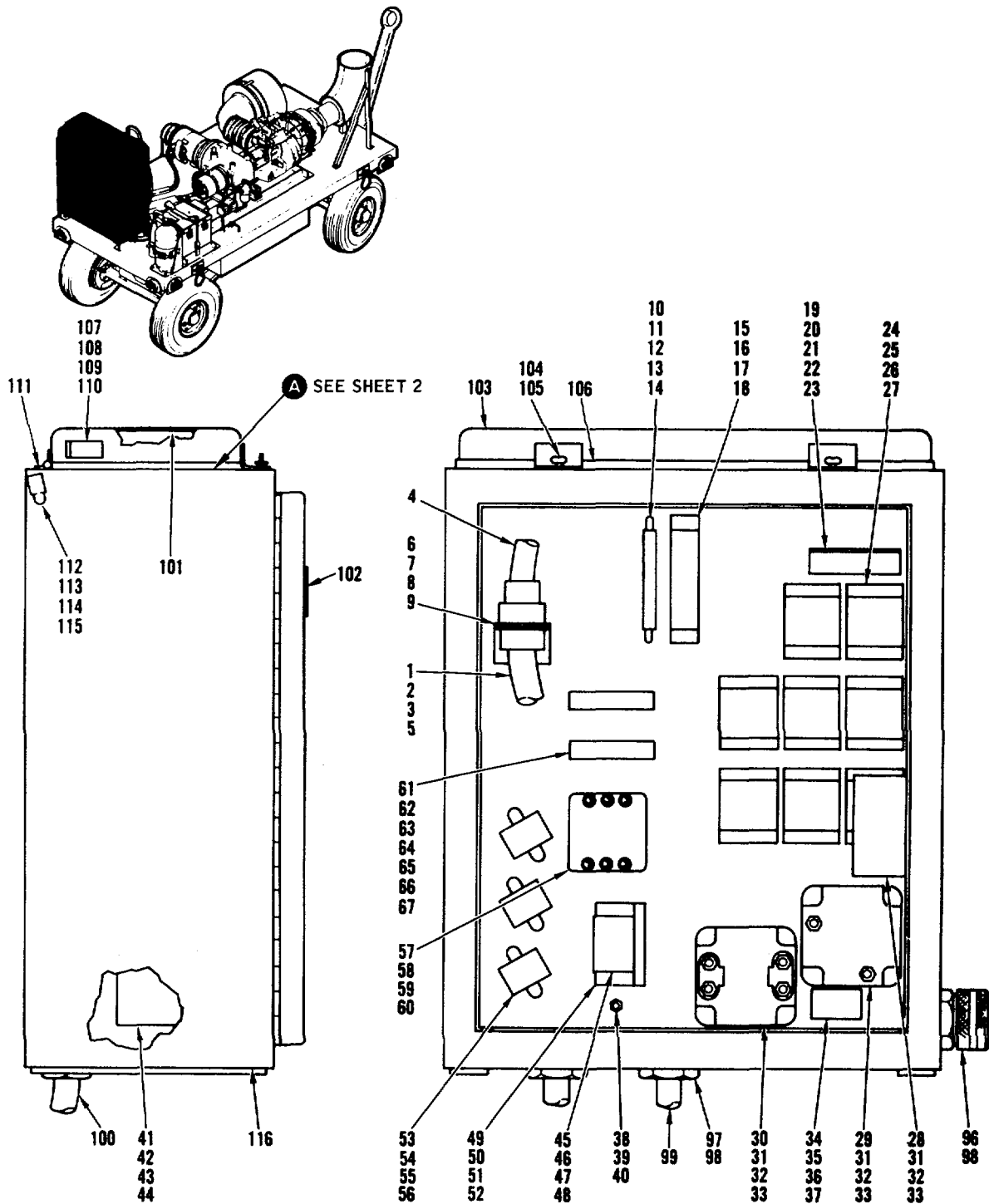
FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7 DESCRIPTION	UNITS PER ASSY
5-1-83	105439-0	. CONSOLE ASSEMBLY, Control (See figure 5-2 for detail breakdown) (ATTACHING PARTS)	1
-84	MS21045-6	. LOCKNUT	4
-85	AN960-616	. WASHER	4
-86	AN6-10A	. BOLT -----*-----	4
-87	45977-3	. COVER, AC control	1
-88	45977-5	. COVER, Engine control	1
-89	45977-2	. BASE, AC control (ATTACHING PARTS)	1
-90	45977-4	. BASE, Engine control	1
-91	MS21044N08	. LOCKNUT	4
-92	AN960-8L	. WASHER	4
-93	AN505-8-11	. SCREW -----*-----	4
-94	MS21919H4	. CLAMP	2
-95	MS21919H12	. CLAMP (ATTACHING PARTS)	1
-96	MS21045-3	. LOCKNUT	3
-97	AN960-10	. WASHER	6
-98	MS16998-29	. CAPSCREW -----*-----	3
-99	MS21919H8	. CLAMP	1
-100	MS21919H10	. CLAMP	1
-101	MS21919H4	. CLAMP (ATTACHING PARTS)	1
-102	MS16998-27	. CAPSCREW	3
-103	MS35337-43	. LOCKWASHER	3
-104	AN960-10	. WASHER -----*-----	3
-105	MS21045-6	. LOCKNUT	1
-106	AN935-616	. LOCKWASHER	2
-107	AN960-616	. WASHER	2
-108	AN316-6	. NUT	1
-109	AN960D616	. WASHER	2
-110	MS16998-76	. CAPSCREW	1
-111	29217-1	. THERMOCOUPLE	1
-112	47708-0	. BRACKET, Thermocouple stowage (ATTACHING PARTS)	1
-113	MS21045-3	. LOCKNUT	2
-114	AN960-10	. WASHER	2
-115	AN3 -5A	. BOLT -----*-----	2



TA103-3

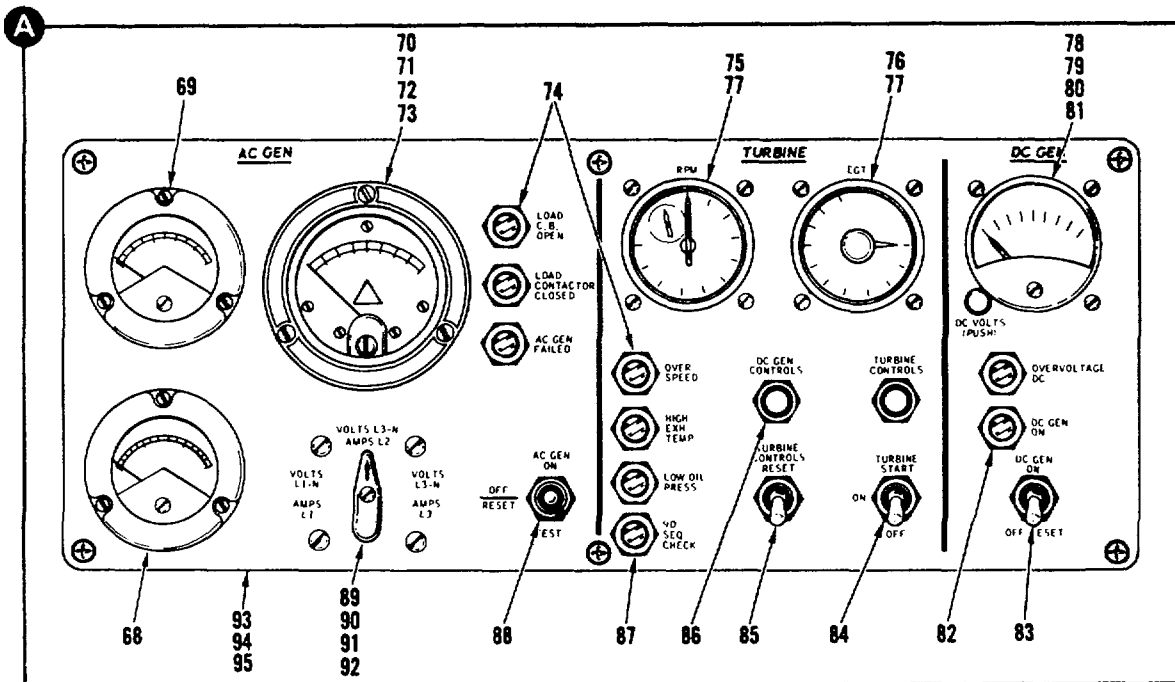
Figure 5-1. Dual Purpose Mobile Check and Adjustment/Generator Stand (Sheet 3 of 3)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	UNITS PER ASSY
5-1-116	MS3105-20	. RECEPTACLE (ATTACHING PARTS)	1
-117	MS21044N04	. LOCKNUT	4
-118	AN960-4L	. WASHER	4
-119	AN515-4R10	. SCREW	4
		-----*	
-120	RS-161-080	. CHAIN ASSEMBLY (86831)	3
-121	104653-0	. BOLT ASSEMBLY, Wing	1
-122	104652-0	. BRACKET ASSEMBLY, Support (ATTACHING PARTS)	1
-123	104654-0	. BOLT ASSEMBLY, Shoulder	1
		-----*	
-124	47696-100	. FRAME ASSEMBLY, Engine support (ATTACHING PARTS)	1
-125	MS21045-6	. LOCKNUT	4
-126	AN960-616	. WASHER	4
-127	AN6-10A	. BOLT	4
		-----*	
-128	47710-1	. CHANNEL (ATTACHING PARTS)	2
-129	MS21045-6	. LOCKNUT	4
-130	AN960-616	. WASHER	4
-131	AN6-7A	. BOLT	4
		-----*	
-132	47903-2	. PLATE, Identification	1
-133	47693-100	. TRAILER, Mobile check and adjustment stand, dual purpose (See figure 5-3 for detail breakdown)	1



TM269-1

Figure 5-2. Control Console Assembly (Sheet 1 of 2)



TM269-2

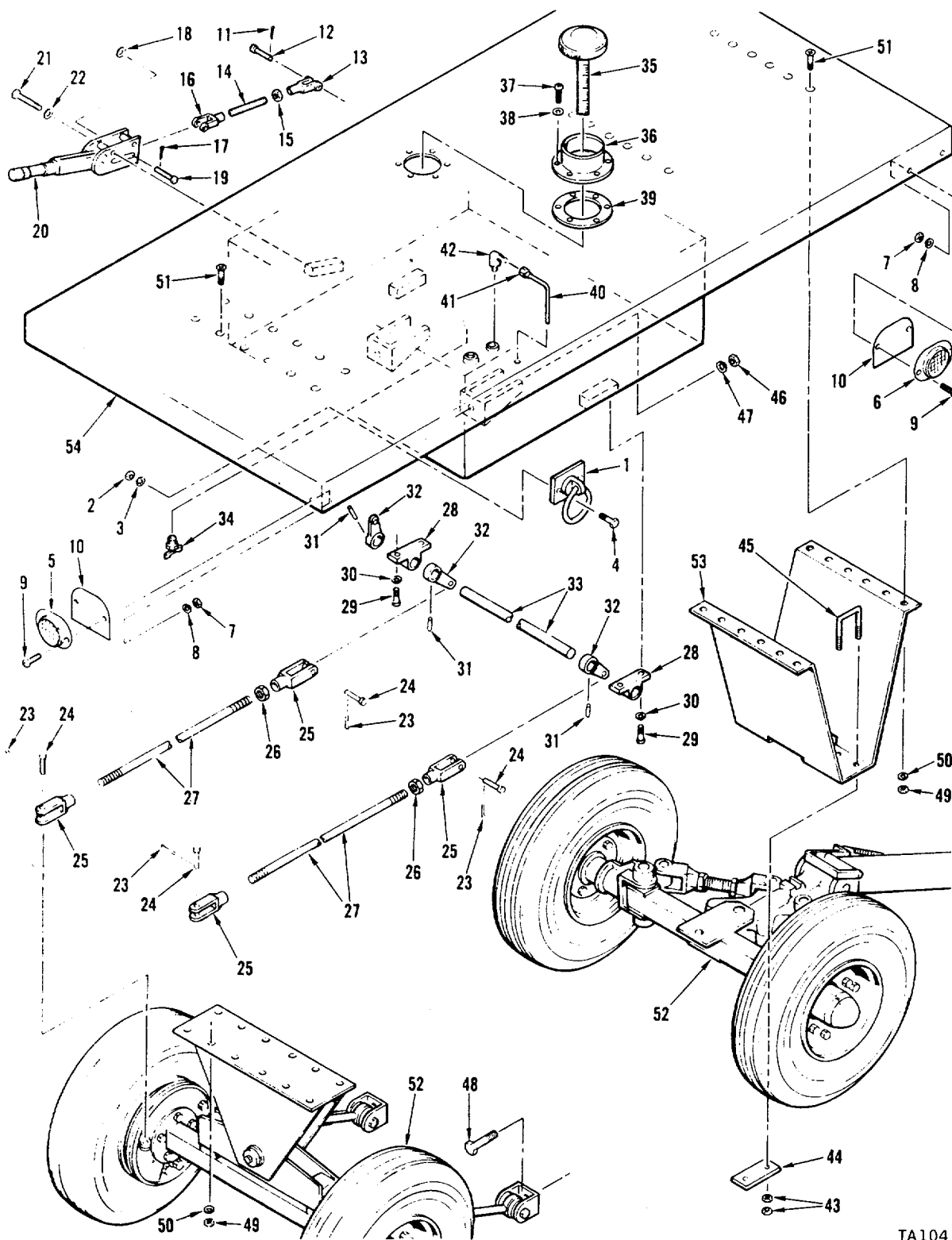
Figure 5-2. Control Console Assembly (Sheet 2 of 2)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	UNITS PER ASSY
5-2-	105439-0	CONSOLE ASSEMBLY, Control (See figure 5-1 for next assembly)	Ref
-1	MS21045-04	. LOCKNUT	4
-2	MS27183-4	. WASHER	8
-3	MS35206-218	. SCREW	4
-4	105436-10	. HARNESS ASSEMBLY, Engine control	1
-5	105436-20	. HARNESS ASSEMBLY, Engine control	1
-6	105802-1	. BRACKET, Electric disconnect (ATTACHING PARTS)	1
-7	MS21045-3	. LOCKNUT	3
-8	MS27183-9	. WASHER	3
-9	MS35207-265	. SCREW	3
		-----*-----	
-10	0560A	. RESISTOR, Adjustable (44655)	1
-11	No. 9	. BRACKET, Mounting (44655) (ATTACHING PARTS)	2
-12	MS21045-06	. LOCKNUT	2
-13	MS27183-6	. WASHER	4
-14	MS35206-228	. SCREW	2
		-----*-----	
-15	AN5534-2	. RESISTOR (ATTACHING PARTS)	1
-16	MS21045-08	. LOCKNUT	2
-17	MS27183-7	. WASHER	4
-18	MS35206-247	. SCREW	2
		-----*-----	
-19	368M	. RECTIFIER (05277)	1
-20	38141-2	. BRACKET, Rectifier (ATTACHING PARTS)	1
-21	MS21045-08	. LOCKNUT	2
-22	MS27183-7	. WASHER	4
-23	MS35206-245	. SCREW	2
		-----*-----	
-24	MS24568D1	. RELAY (ATTACHING PARTS)	8
-25	MS21045-08	. LOCKNUT	32
-26	MS27183-7	. WASHER	64
-27	MS35206-245	. SCREW	32
		-----*-----	
-28	51065-014	. REGULATOR, DC static voltage (Government-furnished)	1
-29	A700AW	. CUTOUT, Reverse control (74063)	1

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-2-30	AM711CJ	.	RELAY, Starter dropout (74063) (ATTACHING PARTS)	1
-31	MS21045-3	.	LOCKNUT	12
-32	MS27183-9	.	WASHER	24
-33	MS35207-265	.	SCREW	12
			-----*-----	
-34	8200-120	.	SHUNT, DC Ammeter (91812) (ATTACHING PARTS)	1
-35	MS21045-3	.	LOCKNUT	2
-36	MS27183-9	.	WASHER	4
-37	MS35207-266	.	SCREW	2
			-----*-----	
-38	MS21045-3	.	LOCKNUT	2
-39	MS27183-9	.	WASHER	4
-40	MS35207-267	.	SCREW	1
-41	114ES249-10	.	REGULATOR, AC voltage (Government-furnished) (ATTACHING PARTS)	1
-42	MS21045-3	.	LOCKNUT	4
-43	MS27183-9	.	WASHER	8
-44	MS35207-265	.	SCREW	4
			-----*-----	
-45	13AMC37-206-60	.	CIRCUIT BREAKER (82647) (ATTACHING PARTS)	1
-46	MS35206-228	.	SCREW	6
-47	AMS35338-41	.	LOCKWASHER	6
-48	MS27183-6	.	WASHER	6
			-----*-----	
-49	105795-1	.	BRACKET, Circuit breaker (ATTACHING PARTS)	1
-50	MS21045-3	.	LOCKNUT	4
-51	MS27183-9	.	WASHER	8
-52	MS35207-265	.	SCREW	4
			-----*-----	
-53	880-6-1001	.	TRANSFORMER, Current (65092) (ATTACHING PARTS)	3
-54	MS21045-3	.	LOCKNUT	6
-55	MS27183-9	.	WASHER	12
-56	MS35207-263	.	SCREW	6
			-----*-----	
-57	B138FH	.	CONTACTOR, AC power (74063) (ATTACHING PARTS)	1
-58	MS21045-3	.	LOCKNUT	4
-59	MS27183-9	.	WASHER	8
-60	MS35207-265	.	SCREW	4
			-----*-----	

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-2-61	MS20341-6S	.	NUT	10
-62	MS35338-41	.	LOCKWASHER	10
-63	MS27183-6	.	WASHER	10
-64	MS27212-15	.	BOARD	2
			(ATTACHING PARTS)	
-65	MS21045-04	.	LOCKNUT	4
-66	MS27183-4	.	WASHER	8
-67	MS35206-218	.	SCREW	4
			-----*-----	
-68	MM6602-16A	.	AMMETER, AC (25497)	1
-69	2524-1101003	.	VOLTMETER (65092)	1
-70	CL400	.	METER, Frequency (14704)	1
			(ATTACHING PARTS)	
-71	MS21045-06	.	LOCKNUT	3
-72	MS27183-6	.	WASHER	3
-73	MS35206-233	.	SCREW	3
			-----*-----	
-74	MS25041-6-327	.	LIGHT	6
-75	No Number	.	INDICATOR, Tachometer, per MIL-I-25623, Type MU-1	1
-76	No Number	.	INDICATOR, Temperature, per MIL-I-9443, Type MJ-2	1
-77	MS28055-11	.	FLANGE ASSEMBLY (Furnished with attaching hardware)	2
-78	8DW53BAC212	.	VOLT-AMMETER, DC (97424) (ATTACHING PARTS)	1
-79	MS21045-06	.	NUT	3
-80	MS27183-6	.	WASHER	3
-81	MS35206-233	.	SCREW	3
			-----*-----	
-82	MS25041-7-327	.	LIGHT	2
-83	MS24524-23	.	SWITCH	1
-84	MS27407-5	.	SWITCH	1
-85	MS24525-26	.	SWITCH	1
-86	MS25244-10	.	CIRCUIT BREAKER	2
-87	MS25041-8-327	.	LIGHT	1
-88	MS24523-31	.	SWITCH	1
-89	PN67A	.	SWITCH, Selector (82121) (ATTACHING PARTS)	1
-90	MS35206-264	.	SCREW	4
-91	MS35338-43	.	LOCKWASHER	4
-92	MS27183-9	.	WASHER	4
			-----*-----	

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-2-93	105596-1	.	PANEL, Instrument, console (ATTACHING PARTS)	1
-94	MS35206-245	.	SCREW	6
-95	MS27183-7	.	WASHER	12
			-----*	
-96	2559	.	CONNECTOR, Insulated (59730)	1
-97	1945	.	NIPPLE, Insulated, chase (59730)	2
-98	144	.	LOCKNUT (59730)	3
-99	105436-30	.	HARNESS ASSEMBLY, Engine control	1
-100	105436-30	.	HARNESS ASSEMBLY, Engine control	1
-101	105595-1	.	PLATE, Instruction	1
-102	44163-2	.	PLATE, Identification	1
	105437-0	.	CONSOLE ASSEMBLY	1
-103	105437-20	.	COVER ASSEMBLY	1
			PARTIAL BREAKDOWN FOLLOWS	
-104	99785-2	.	CROSS PIN, Stud (85735)	2
-105	W98293-2-200	.	STUD (85735)	2
-106	ZSP5-510	.	GASKET (98376)	1
-107	47697 -6	.	HOOK	1
			(ATTACHING PARTS)	
-108	MS21044N06	.	LOCKNUT	2
-109	AN960-6L	.	WASHER	2
-110	MS35206-228	.	SCREW	2
			-----*	
-111	MS35822-1D	.	HINGE	1
-112	HC265SS	.	CATCH (98003)	1
			(ATTACHING PARTS)	
-113	MS21044N06	.	LOCKNUT	2
-114	AN960-6L	.	WASHER	2
-115	MS35206-228	.	SCREW	2
			-----*	
-116	105437-10	.	ENCLOSURE ASSEMBLY	1



TA104

Figure 5-3. Dual Purpose Mobile Check and Adjustment Stand Trailer

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-3-	47693-100		TRAILER, Mobile check and adjustment stand, dual purpose (See figure 5-1 for next higher assembly)	Ref
	107724-0	.	TRAILER ASSEMBLY, Test stand	1
-1	48B7796	. .	RING, Tiedown (G88042) (ATTACHING PARTS)	4
-2	MS51967-8	. .	NUT	8
-3	MS35338-46	. .	LOCKWASHER	8
-4	MS90725-60	. .	SCREW	8
			-----*-----	
-5	MS35387-1	. .	REFLECTOR (Red)	4
-6	MS35387-2	. .	REFLECTOR (Amber) (ATTACHING PARTS)	4
-7	MS51967-2	. .	NUT	16
-8	MS35338-44	. .	LOCKWASHER	16
-9	MS35206-281	. .	SCREW	16
			-----*-----	
-10	107724-17	. .	PLATE	8
-11	MS24665-283	. .	PIN	1
-12	C2	. .	PIN, Clevis (72741)	1
-13	Y3	. .	CLEVIS (72741)	1
-14	107724-15	. .	ROD, Threaded	1
-15	MS51968-5	. .	NUT	1
-16	Y3	. .	CLEVIS (72741) (ATTACHING PARTS)	1
-17	MS24665-283	. .	PIN	1
-18	AN960-516	. .	WASHER	1
-19	MS20392-4C41	. .	PIN	1
			-----*-----	
-20	31110	. .	LEVER ASSEMBLY, Brake (52793) (ATTACHING PARTS)	1
-21	MS90725-66	. .	SCREW	2
-22	MS35338-46	. .	LOCKWASHER	2
			-----*-----	
-23	MS24665-283	. .	PIN	4
-24	C7	. .	PIN, Clevis (72741)	4
-25	Y4	. .	CLEVIS (72741)	4
-26	MS51968-8	. .	NUT	2
-27	107724-13	. .	ROD	2
-28	7004	. .	BLOCK, Pillow (10424) (ATTACHING PARTS)	2
-29	MS90725-60	. .	SCREW	4
-30	MS35338-46	. .	LOCKWASHER	4
			-----*-----	

FIGURE & INDEX NUMBER	PART NUMBER	1	2	3	4	5	6	7	DESCRIPTION	UNITS PER ASSY
5-3-31	MS9048-234	.	.						PIN	3
-32	7005	.	.						ARM, Lever (52793)	3
-33	107724-14	.	.						ROD	1
-34	MS35782-3	.	.						DRAIN COCK	1
-35	107724-10	.	.						CAP ASSEMBLY, Fuel tank (Riveted)	1
-36	ND2420	.	.						FILLER NECK (ATTACHING PARTS)	1
-37	MS24621-42	.	.						SCREW	6
-38	MS27183-42	.	.						WASHER	6
									-----*	
-39	107724-18	.	.						GASKET	1
-40	107724-8	.	.						TUBE	1
-41	AN817-2D	.	.						NUT	1
-42	MS20822-2D	.	.						ELBOW	1
-43	MS51967-14	.	.						NUT	16
-44	107724-21	.	.						PLATE	4
-45	107724-19	.	.						U-BOLT	4
-46	MS51967-14	.	.						NUT	2
-47	MS35338-48	.	.						LOCKWASHER	2
-48	MS90725-111	.	.						SCREW	2
-49	MS51967-2	.	.						NUT	24
-50	MS35338-44	.	.						LOCKWASHER	24
-51	MS24667-30	.	.						SCREW	24
-52	20672	.	.						GEAR, Running (52793)(See figure 5-4 for detail breakdown)	1
-53	107724-16	.	.						MOUNT, Front	1
-54	107724-1	.	.						FRAME	1

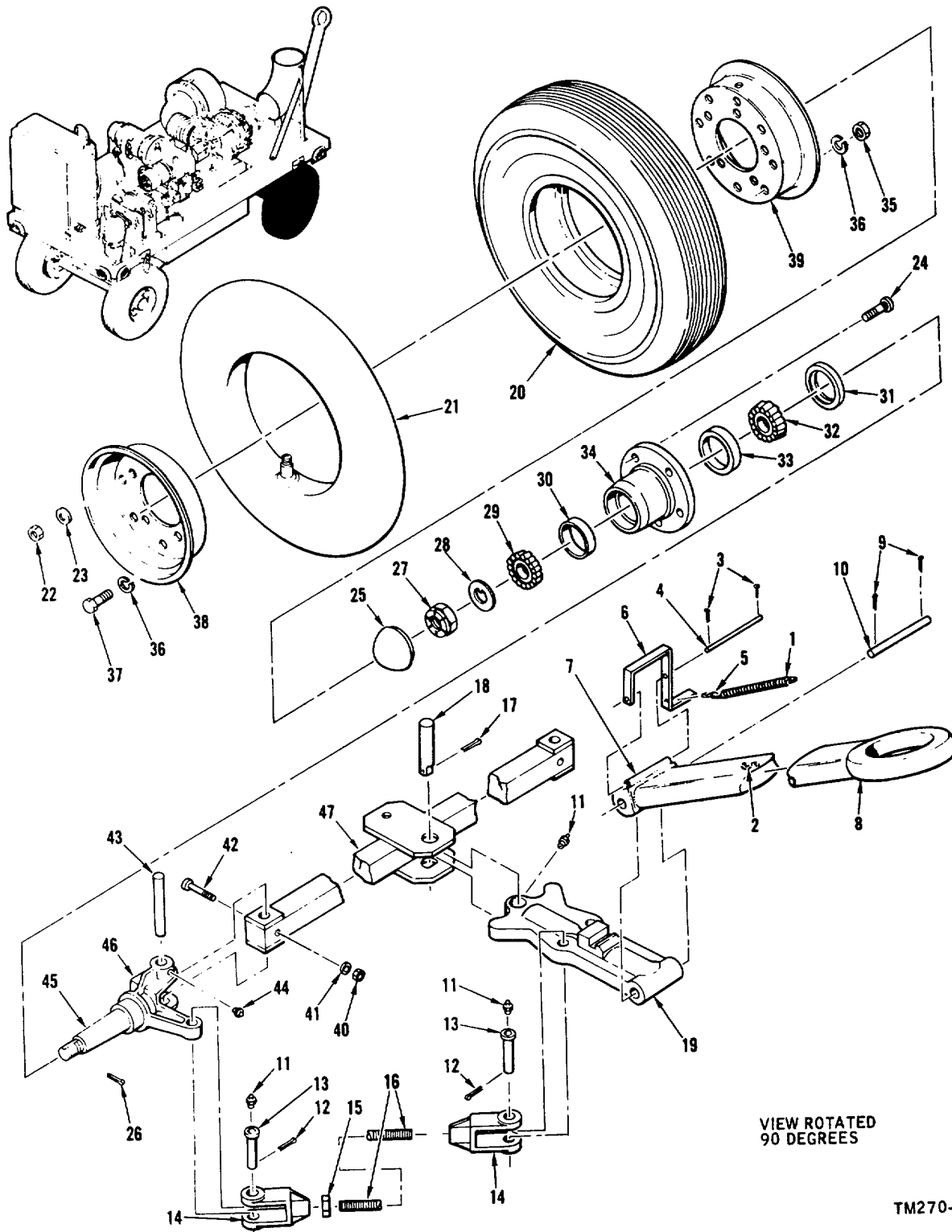


Figure 5-4. Running Gear (Sheet 1 of 2)

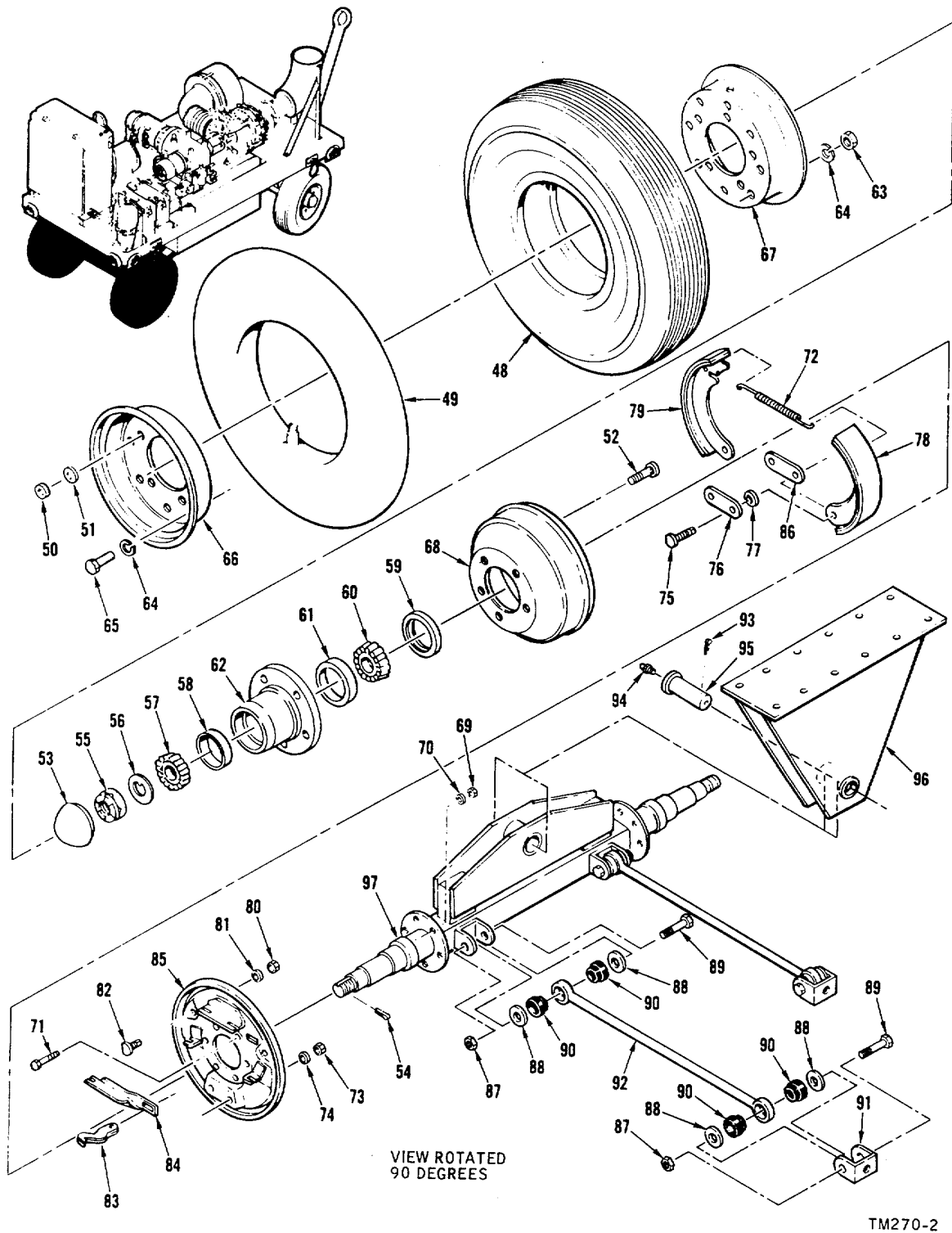


Figure 5-4. Running Gear (Sheet 2 of 2)

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-4-	20672		GEAR, Running (52793) (See figure 5-3 for next higher assembly)	Ref
	20842	.	LATCH ASSEMBLY, Towbar (52793)	1
-1	COMM	. .	SPRING (1/16 ID x 7 1/16 OD x 6 inches)	1
-2	COMM	. .	S-HOOK	1
-3	COMM	. .	PIN, Cotter (1/8 x 1 inch)	2
-4	21013	. .	PIN, Pivot	1
	21012	. .	LATCH	1
-5	COMM	. . .	S-HOOK (1/8 x 1 1/2 inches)	1
-6	COMM	. . .	LATCH (5/16 x 1 x 13 1/16 inches, C.R.S.)	1
-7	21014	. .	BUSHING (52793)	1
-8	6954-1	. .	TOWBAR ASSEMBLY (52793)	1
-9	COMM	. .	PIN, Cotter (1/8 x 1 1/4 inches)	2
-10	C6954B	. .	PIN, Pivot (52573)	1
-11	1610B	. .	FITTING, Lube (57733)	5
-12	MS24665-495	. .	PIN	4
-13	6812B	. .	PIN, Clevis (52793)	4
-14	6809	. .	CLEVIS (52793)	4
-15	AN316-12R	. .	NUT	2
-16	6899-14	. .	ROD, Tie (52793)	2
-17	MS24665-500	. .	PIN	1
-18	6998	. .	PIN, Pivot (52793)	1
-19	20195	. .	CENTER STEERING ARM (22573)	1
-20	COMM	. .	TIRE (6.00 x 9, 6-ply, arctic)	2
-21	COMM	. .	TUBE (6.00 x 9, 6-ply, arctic)	2
	6403-AL	. .	HUB ASSEMBLY (52793)	2
-22	MS35690-822	. .	NUT	5
-23	AN935-816	. .	LOCKWASHER	5
-24	6440	. .	BOLT, Hub (52793)	5
-25	6394	. .	CAP, Hub (52793)	1
-26	AN380-4-7	. .	PIN	1
-27	AN320-16	. .	NUT	1
-28	5316	. .	WASHER, Tongued (52793)	1
-29	15123	. .	CONE, Bearing (52793)	1
-30	15245	. .	CUP, Bearing (52793)	1
-31	13021	. .	GREASE SEAL ASSEMBLY (52793)	1
-32	24720	. .	CONE, Bearing (52793)	1
-33	24780	. .	CUP, Bearing (52793)	1
-34	6404-AL	. .	CANTILEVER MOUNTING HUB, Large (52793)	1
	6408-AL	. .	SHELL ASSEMBLY, 4.00-9 (52793)	2
-35	AN325-6	. .	NUT	8
-36	MS35338-46	. .	LOCKWASHER	16

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-4-37	60-6-7	. .	BOLT, Hexagon head (52793)	8
-38	6408-1AL	. .	SHELL-HALF, 4.00-9 (52793)	1
-39	6408-2AL	. .	SHELL-HALF, 4.00-9 (52793)	1
-40	AN315-6	. .	NUT	2
-41	MS35338-46	. .	LOCKWASHER	2
-42	MS90726-68	. .	CAPSCREW	2
-43	6813	. .	PIN, King (52793)	2
	20709	. .	STEERING KNUCKLE ASSEMBLY (52793)	2
-44	1610B	. .	FITTING, Lube (57733)	2
-45	20200	. .	SPINDLE (52793)	1
-46	6805	. .	KNUCKLE, Steering (52793)	1
-47	20720	. .	AXLE, Front (52793)	1
-48	COMM	. .	TIRE (6.00 x 9, 6-ply, arctic)	2
-49	COMM	. .	TUBE (6.00 x 9, 6-ply, arctic)	2
	6403-AL	. .	HUB ASSEMBLY (52793)	2
-50	MS35690-822	. .	NUT	5
-51	AN935-816	. .	LOCKWASHER	5
-52	30796*	. .	STUD, Hub (52793)	5
-53	6394	. .	CAP, Hub (52793)	1
-54	AN380-4-7	. .	PIN	1
-55	AN320-16	. .	NUT	1
-56	5316	. .	WASHER, Tongued (52793)	1
-57	15123	. .	CONE, Bearing (52793)	1
-58	15245	. .	CUP, Bearing (52793)	1
-59	13021	. .	GREASE SEAL ASSEMBLY (52793)	1
-60	24720	. .	CONE, Bearing (52793)	1
-61	24780	. .	CUP, Bearing (52793)	1
-62	6404-AL	. .	CANTILEVER MOUNTING HUB, Large (52793)	1
	6408-AL	. .	SHELL ASSEMBLY, 4.00-9 (52793)	2
-63	AN325-6	. .	NUT	8
-64	MS35338-46	. .	LOCKWASHER	16
-65	60-6-7	. .	BOLT, Hexagon head (52793)	8
-66	6408-1AL	. .	SHELL-HALF, 4.00-9 (52793)	1
-67	6408-2AL	. .	SHELL-HALF, 4.00-9 (52793)	1
-68	30447	. .	DRUM, Parking brake (52793)	2
	20694	. .	BRAKE ASSEMBLY (Set) (52793)(Bendix Part No. 302283LH and 302284RH) (14892)	1
-69	COMM	. .	NUT	12
-70	COMM	. .	WASHER	12
-71	COMM	. .	BOLT (6-3/8 dia., hex-head)	12
-72	41545	. .	SPRING, Shoe return (14892)	2
-73	48069	. .	NUT, Anchor pin (14892)	4
-74	41665	. .	LOCKWASHER (14892)	4

*Hub bolt, P/N 6440 must be removed and replaced with P/N 30796 at time of assembly.

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-4-75	39953	. .	PIN, Anchor (14892)	4
-76	39956	. .	PLATE, Anchor pin (14892)	2
-77	41876	. .	CAM, Anchor pin (14892)	4
-78	41485	. .	SHOE AND LINING ASSEMBLY (14892)	2
-79	44489	. .	SHOE AND LINING ASSEMBLY (14892)	2
-80	901626-K6	. .	NUT, Eccentric (14892)	2
-81	901008	. .	LOCKWASHER (14892)	2
-82	45771	. .	ECCENTRIC, Shoe adjusting (14892)	2
-83	48646	. .	LEVER ASSEMBLY, Brake actuating (14892)	2
-84	48647	. .	STRUT, Brake actuating lever (LH)(14892)	2
	48648	. .	STRUT, Brake actuating lever (RH)(14892)	2
-85	47313	. .	PLATE ASSEMBLY, Backing (LH)(14892)	1
	47314	. .	PLATE ASSEMBLY, Backing (RH)(14892)	1
			PARTIAL BREAKDOWN FOLLOWS	
-86	43886	. . .	PLATE, Reinforcement (14892)	1
	20712	. .	STABILIZER ASSEMBLY (52793)	2
-87	20712-5	. .	LOCKNUT (5/8-18 NF)(52793)	2
-88	20712-3	. .	WASHER (1-3/8 OD x 5/8 ID x 3/16 inch)(52793)	4
-89	20712-4	. .	BOLT (5/8-18 NF x 3-3/4 inches) (52793)	2
-90	20712-2	. .	BUSHING, Rubber (Monroe No. 50450)(52793)	2
-91	20715	. .	U-BRACKET (52793)	1
-92	20714	. .	BAR, Stabilizer (52793)	1
-93	MS24665-360	. .	PIN	1
-94	1610B	. .	FITTING, Lube (57733)	1
-95	20716	. .	PIN, Trunnion (52793)	1
-96	20717	. .	PLATE ASSEMBLY (52793)	2
-97	20723	. .	AXLE, Rear (52793)	1

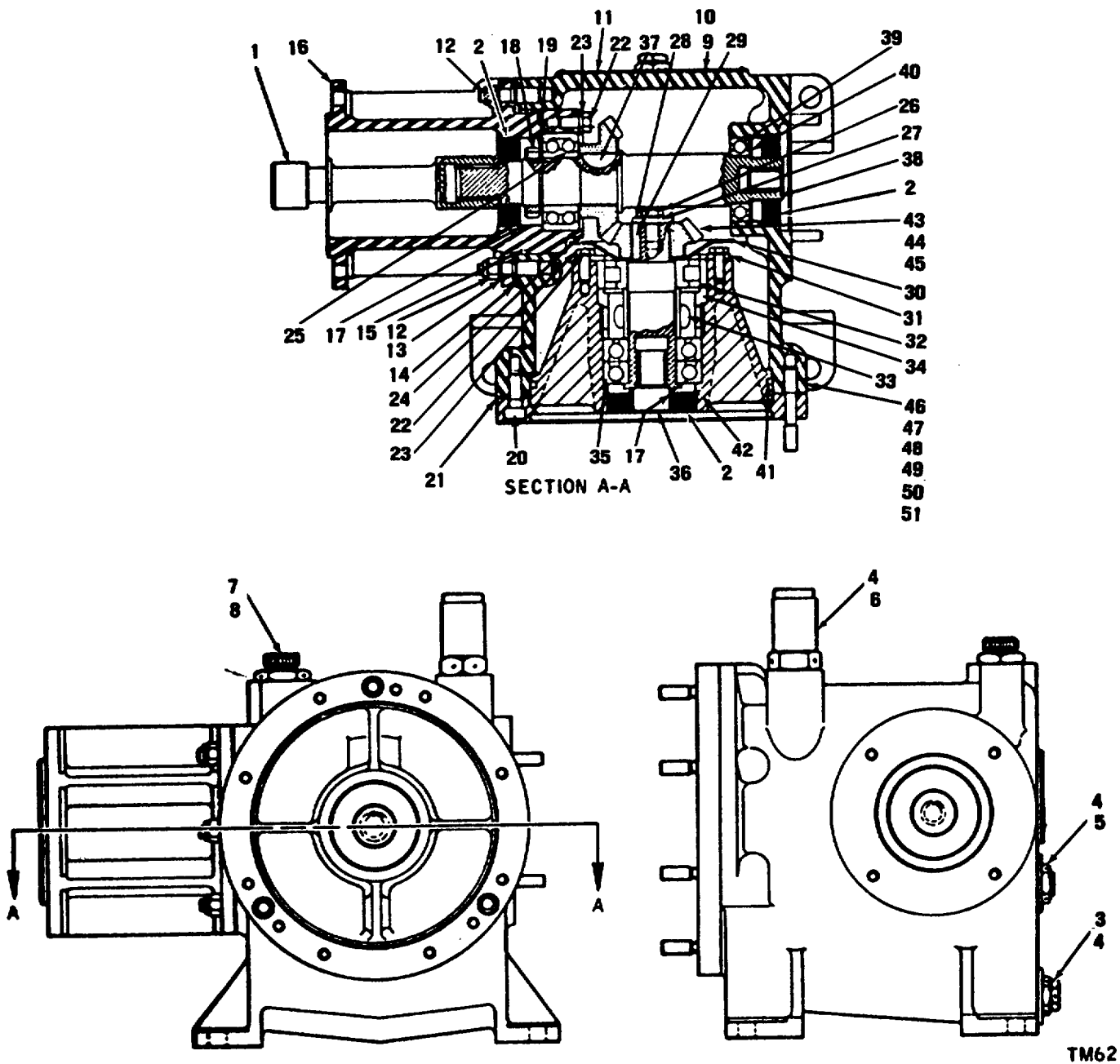
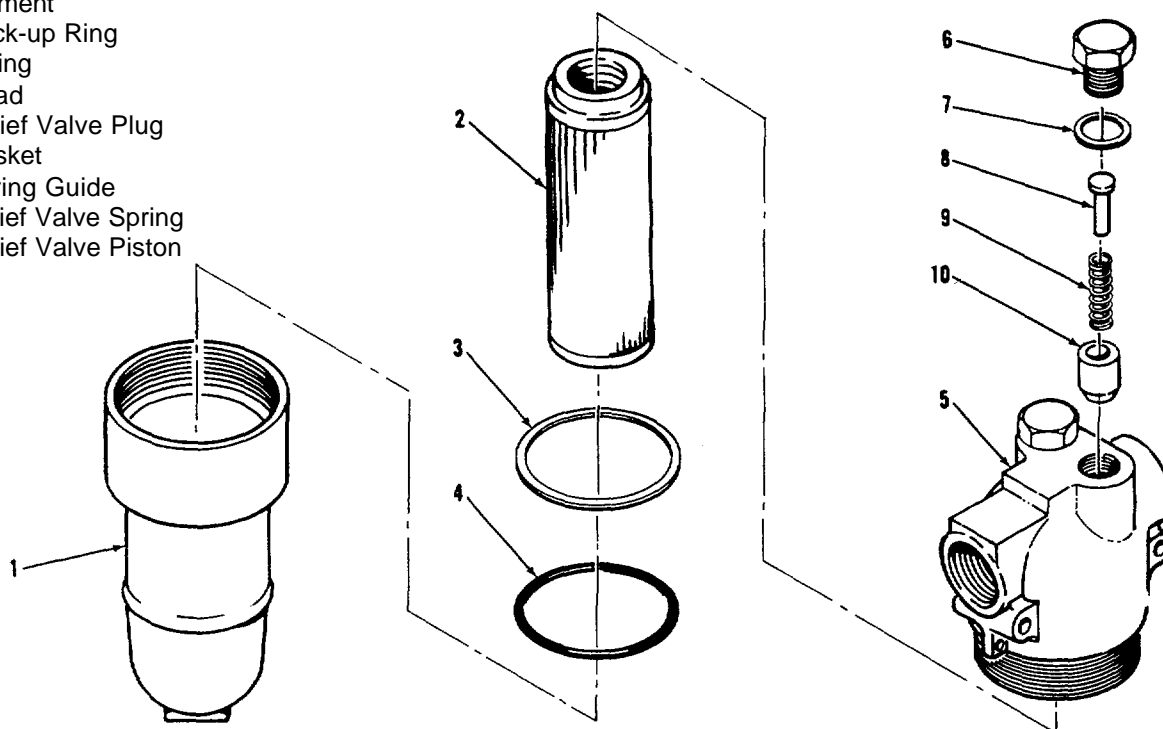


Figure 5-5. Speed Increaser Assembly

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7 DESCRIPTION	UNITS PER ASSY
5-5-	47954-0	SPEED INCREASER ASSEMBLY (See figure 5-1 for next higher assembly)	Ref
PARTIAL BREAKDOWN FOLLOWS*			
-1	47969-1	. QUILL, Shaft input	1
-2	451845J	. SEAL, Oil (76680)	3
-3	A-734	. PLUG, Drain (97484)	1
-4	34666-8	. O-Ring	3
-5	S-53	. PLUG, Liquid level (97484)	1
-6	A-862	. VENT, Breather (97484)	1
-7	B-7238	. CAP, Breather (97484)	1
-8	34666-12	. O-Ring	

*Field-serviced components of the speed increaser assembly.

1. Case
2. Element
3. Back-up Ring
4. O-ring
5. Head
6. Relief Valve Plug
7. Gasket
8. Spring Guide
9. Relief Valve Spring
10. Relief Valve Piston



TM150

Figure 5-6. Fuel Filter Assembly

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
5-6-	46424-1		FILTER ASSEMBLY, Fuel (See figure 5-1 for next higher assembly)	Ref
-1	NO NUMBER	.	CASE (Part of filter assembly, Type PR30E)(81321)	1
-2	51399	.	ELEMENT, Fuel filter (81321)	1
-3	32152	.	RING, Backup (81321)	1
-4	30323	.	O-Ring (81321)	1
-5	NO NUMBER	.	HEAD (Part of filter assembly, Type PR306)(81321)	1
-6	30107	.	PLUG, Relief valve (81321)	2
-7	36978-6	.	GASKET (81321)	2
-8	30106	.	GUIDE, Spring (81321)	2
-9	30442	.	SPRING, Relief valve (81321)	2
-10	30105	.	PISTON, Relief valve (81321)	2

SECTION VI
TROUBLESHOOTING

6-1. GENERAL.

6-2. System troubles listed in figure 6-1 may be the result of the probable cause indicated. Many of the troubles listed are based on practical experience; however, the causes listed are not the only faults that can cause the specified trouble. Unique situations will require special approaches. Repair instructions recommended in the REMEDY column are referenced in the applicable paragraph in Section VII. Figure 6-1 lists troubleshooting data in the following manner:

- a. Trouble. Various troubles that may be encountered during check stand operation.
- b. Probable Cause. The probable cause of a particular trouble are listed in the order in which they are most likely to occur under standard operating conditions.
- c. Remedy. Remedies are similarly arranged, but in order of complexity, starting with the simplest remedy. Refer to the wiring diagram and electrical schematic enclosed in an envelope in back of this manual when performing electrical checks.

Trouble	Probable Cause	Remedy
1. Front wheels do not track with rear wheels.	a. Wheels not aligned.	Align wheels, using standard alignment procedures.
	b. Loose axle "U" bolts, allowing axle to slip on front plate assembly.	Align axle on front plate assembly, and tighten "U" bolts.

Figure 6-1. Table of Troubleshooting Procedures (Sheet 1 of 5)

Trouble	Probable Cause	Remedy
<p>1. Front wheels do not track with rear wheels. (Cont)</p>	<p>c. Excessive wear in kingpin, knuckle assembly, tie rods, or wheel bearings.</p>	<p>Lift the trailer to remove weight from wheels. Grasp top and bottom of tire and apply push-pull motion (in on top, out on bottom, and vice versa). If the wheel assembly movement, measured at the tire outer edge, is 1/8-inch, or more, replace kingpin, knuckle assembly, and/or bearings as necessary.</p> <p>Secure steering mechanism. Grasp front and rear of tire and apply push-pull motion (in on front, out on rear, and vice versa). If the wheel assembly movement, measured at the tire outer edge, is 1/8 inch, or more, replace tie rods, tie rod ends, and/or bearings as necessary.</p> <p style="text-align: center;">WARNING</p> <p>Deflate tire before separating wheel rims. Inflated tire pressure will separate the rim halves with extreme force.</p>
<p>2. Tire wear uneven.</p>	<p>d. Wheel rim bent or cracked.</p> <p>a. Wheels out of alignment.</p> <p>b. Improper inflation.</p>	<p>Replace wheel.</p> <p>Align wheels, using standard alignment procedures.</p> <p>Inflate the tires to 40 to 45 psig. Cross-switch tires. Replace badly worn tires.</p>
<p>3. Brakes do not hold against load.</p>	<p>a. Improper brake adjustment.</p>	<p>Adjust brakes. Refer to paragraph 7-15 for brake adjustment procedures.</p>

Figure 6-1. Table of Troubleshooting Procedures (Sheet 2 of 5)

Trouble	Probable Cause	Remedy
3. Brakes do not hold against load. (Cont)	b. Brake linings worn.	1. Adjust linkage if minor wear. Straighten rod and linkage if slightly bent. Replace any portion of the linkage assemblies if excessively worn or damaged beyond repair. 2. If worn beyond adjustment, replace shoe and lining assemblies. Refer to paragraph 7-14 for brake shoe and lining replacement procedures.
	c. Grease seals leaking grease on linings or on brake drum.	Remove wheels and replace seals. Clean lining. Replace shoe and lining assembly if saturated.
4. Brakes will not release.	a. Worn or damaged parts in brake handle assembly or linkage.	Replace worn or damaged parts.
	b. Brake shoe return spring broken.	Replace shoe return spring.
5. Shimmy or side sway while towing.	a. Low tire air pressure.	Check tires for proper air pressure (40 to 45 psig).
	b. Wheels not aligned.	Align wheels, using standard alignment procedures.
WARNING		
Deflate tire before separating wheel rims. Inflated tire pressure will separate the rims with extreme force.		

Figure 6-1. Table of Troubleshooting Procedures (Sheet 3 of 5)

Trouble	Probable Cause	Remedy
<p>5. Shimmy or side sway while towing. (Cont)</p>	<p>c. Bent wheel.</p> <p>d. Worn or bent steering linkage or tie rods.</p> <p>e. Loose or worn knuckle assembly.</p>	<p>Replace wheel.</p> <p>Straighten rod and linkage if slightly bent.</p> <p>Replace any portion of the linkage assemblies if excessively worn or damaged beyond repair.</p> <p>Tighten, or replace knuckle assembly.</p>
<p>6. Fuel not reaching APU.</p>	<p>a. Fuel supply low.</p> <p>b. Loose connections, crimps, or restrictions in fuel lines.</p> <p>c. Restricted fuel intake tube, or tank breather vent clogged.</p> <p>d. Defective fuel boost pump.</p> <p>e. Fuel filter clogged.</p> <p>f. Entrapped air in the fuel system.</p>	<p>Check fuel level, and add fuel if necessary.</p> <p>Tighten loose connections. Clear restrictions, and replace all damaged lines.</p> <p>Remove restrictions.</p> <p>Check fuel boost pump for proper operation.</p> <p>Replace filter element. Refer to paragraph 7-23 for replacement procedure.</p> <p>Purge the fuel system. Refer to paragraph 2-8 or 3-8, whichever purging procedure is applicable.</p>
<p>7. Battery voltage low.</p>	<p>Weak or dead cells.</p>	<p>Recharge or replace the battery.</p>

Figure 6-1. Table of Troubleshooting Procedures (Sheet 4 of 5)

Trouble	Probable Cause	Remedy
8. Control Console.		Malfunctions of the APU are not fully discussed in this manual. When APU troubles occur, follow the troubleshooting instructions outlined in TM 55-2835-203-24 to isolate the cause. Troubles traced to the control console must be located by a continuity check to find the defective component. Refer to paragraphs 6-3 through 6-14 for control system malfunction information. Refer to drawings in enclosure for continuity checks.

Figure 6-1. Table of Troubleshooting Procedures (Sheet 5 of 5)

6-3. TROUBLESHOOTING ELECTRICAL CONTROLS.

6-4. Malfunctions in the APU controls should be traced only after it has been established that the battery is in good condition and that all electrical connections are correctly and tightly connected. It is recommended that APU electrical components be checked for proper operation before troubleshooting the check stand control components.

6-5. Before performing any troubleshooting procedures, always verify that the power supply components to the APU controls are functioning properly, furnishing 24-volt dc power to the control circuits, and are charging the battery. The following components comprise the power supply to the APU.

- Battery
- Circuit breaker CB1
- Circuit breaker CB2
- Reverse current cutout K6
- Starter dropout relay K7
- B contacts of relay K2
- Indicator light DS6
- DC starter-generator G#
- DC voltage regulator VR1
- Resistor R3

6-6. If fuel supply problems are encountered, first check switch S1, and then check the boost pump for proper operation.

6-7. If the fuel control system does not operate correctly, carefully check the function of each APU control component and the corresponding relay contacts in the console.

Relay and Contacts

K1, contacts A, B, C, D
 K2, contacts A, B, C, D
 K3, contacts B
 K4, contacts B
 K5, contacts B, C

APU Components

Fuel pressure switch
 Hour meter
 Ignition exciter
 Start fuel valve
 Main fuel valve

6-8. Malfunctions are indicated by the low oil pressure indicator light DS1, high exhaust indicator light DS2, and overspeed indicator light DS3, and controlled by the following corresponding relay contacts.

Relay and Contacts

K1, contacts C, D
 K2, contacts A, D
 K3, contacts A, D
 K4, contacts A, D
 K5, contacts A, D

Rectifier

CR1

If malfunction circuits indicate faults, or if false APU shutdown occurs, carefully check all malfunction circuit components.

6-9. AC GENERATOR SYSTEM.

6-10. Malfunctions in the ac system should be traced by verifying that the ac power switch S101, auxiliary contacts of relay K101, and the circuit breaker closed indicator light DS5 are functioning properly.

6-11. If power is not available at the aircraft terminals, the ac generator G101, voltage regulator Z101, ac power contactor K101, and the ac power cable should be checked.

6-12. Problems with proper readouts of ac voltages and amperes should be traced by checking the ac selector switch S102, current transformers CT101, CT102, and CT103, voltmeter M101, and ammeter M102.

6-13. EXHAUST TEMPERATURE SWITCH.

6-14. Improper operation of the APU control system may be traced to the APU exhaust thermal switch. The switch may be checked with a Jet-Cal test instrument, or equivalent. The normally closed switch contacts should open at 1120 to 1130°F (604 to 610°C).

SECTION VII
REPAIR AND REPLACEMENT INSTRUCTIONS

7-1. GENERAL.

7-2. The following maintenance data includes removal, inspection, disassembly, reassembly, and installation of the mobile check stand components. When maintenance and inspection checks or troubleshooting remedies require the repair of a component the following repair instructions apply.

- a. Remove all electrical connections when accessible and feasible. Tag all parts to facilitate reinstallation.
- b. Cap all lines, and seal all openings to prevent entry of dirt, chips, or other foreign material.
- c. Replace all gaskets and O-rings. Lubricate gaskets, O-rings, flanges and oil seals with oil (item 4, App D).
- d. All parts safetied with lockwire or cotter pins prior to removal or disassembly shall be resafetied in the same manner upon reassembly or installation with new wire or new cotter pins.

7-3. FRONT AXLE ASSEMBLY.

7-4. Removal of King Pin. (See figure 5-4.)

- a. Mount front of trailer on a suitable support with front tires clearing ground. Set parking brakes (brake handle up).
- b. Remove cotter pin (12). Slide clevis pin (13) through forward arm of steering knuckle (46) and move tie rod (16) away from steering knuckle.
- c. Remove nut (40), lockwasher (41), and screw (42) securing king pin (43) in front axle (47).
- d. Support tire, wheel, hub assembly, knuckle assembly, as a unit, and carefully slide king pin (43) through steering knuckle (46) and front axle (47). Remove wheel and knuckle assembly from front axle.

7-5. Installation of King Pin.

- a. Carefully position tire, wheel, hub assembly, and knuckle assembly, as a unit, over front axle (47).
- b. Apply a light film of grease (item 2, App D) on a new king pin (43) and install in knuckle assembly and front axle.
- c. Secure king pin in place with screw (42), lockwasher (41), and nut (40).
- d. Position tie rod (16) over forward arm of knuckle assembly and install clevis pin (13). Secure clevis pin with new cotter pin (12).
- e. Lubricate new king pin with grease (item 2, App D).

7-6. Removal of Front Wheel Bearings. (See figure 5-4.)

- a. Mount front of trailer on a suitable support with front tires clearing ground. Set parking brakes (brake handle up).
- b. Remove nuts (22) and lockwashers (23), and remove tire and wheel from hub (34).
- c. Remove hub cap (25), cotter pin (26), nut (27), and tongued washer (28).
- d. Slide hub (34) from spindle (45).

CAUTION

Cover bearing surfaces on knuckle assembly to prevent contamination.

- e. Remove bearing cones (29, 32), bearing cups (30, 33), and grease seal assembly (31) from hub (34).

CAUTION

Cover open ends of hub to prevent contamination.

7-7. Assembly and Installation of Front Wheel Bearings. (See figure 5-4.)

- a. Assemble new bearing cones (29, 32) and new bearing cups (30, 33) as sets, and handpack with grease (item 2, App D).
- b. Install new bearing cone and bearing cup set (32, 33) in hub (34).
- c. Install new grease seal assembly (31) in hub.
- d. Slide hub over bearing surface of steering knuckle (46).
- e. Install new bearing cone and bearing cup set (29, 30) over bearing surface of spindle (45), ensuring bearing cup (30) is properly seated in hub.

- f. Install tongued washer (28) and nut (27). Tighten nut (27) to seat entire hub assembly.
- g. Position tire and wheel on hub and secure with lockwashers (23) and nuts (22).
- h. Loosen nut (27) just enough to allow wheel to turn freely but with no side play.
- i. Install new cotter pin (26).
- j. Install hub cap (25).

7-8. Removal of Knuckle Assembly. (See figure 5-4.)

- a. Mount front of trailer on a suitable support with front tires clearing ground. Set parking brakes (brake handle up.)
- b. Remove nuts (22) and lockwashers (23), and remove tire and wheel from hub (34).
- c. Remove hub cap (25), cotter pin (26), nut (27), and tongued washer (28).
- d. Slide hub (34) with bearing cones, cups, and seal, as an assembly, from knuckle assembly.

CAUTION

Cover open ends of hub to prevent contamination of seal and bearings.

- e. Remove cotter pin (12). Slide clevis pin (13) through forward arm of steering knuckle (46), and move tie rod (16) away from steering knuckle.
- f. Remove nut (40), lockwasher (41), and screw (42) securing king pin (43) in front axle (47).
- g. Carefully slide king pin (43) through knuckle assembly and front axle. Remove knuckle assembly from front axle.
- h. Remove lube fittings (44) from knuckle assembly.

7-9. Installation of Knuckle Assembly. (See figure 5-4.)

- a. Install lube fittings (44) on new knuckle assembly.
- b. Position knuckle assembly over front axle (47).
- c. Apply a light film of grease (item 2, App D) on king pin (43) and install in knuckle assembly and front axle.
- d. Secure king pin in place with screw (42), lockwasher (41), and nut (40).

- e. Position tie rod (16) over forward arm of knuckle assembly, and install clevis pin (13). Secure clevis pin with new cotter pin (12).
- f. Lubricate king pin and knuckle assembly with grease (item 2, App D).
- g. Slide hub (34) with bearing cones, cups, and seal, as an assembly, onto bearing surfaces of knuckle assembly.
- h. Install tongue washer (28), and nut (27). Tighten nuts (27) to seat entire hub assembly.
- i. Position tire and wheel on the hub and secure with lockwashers (23) and nuts (22).
- j. Loosen nut (27) just enough to allow wheel to turn freely but with no side play.
- k. Install new cotter pin (26).
- l. Install hub cap (25).

7-10. REAR AXLE ASSEMBLY.

7-11. Removal of Rear Wheel Bearings. (See figure 5-4.)

- a. Mount aft end of trailer on a suitable support with rear tires clearing ground. Block front tires.
- b. Release parking brakes (brake handle down).
- c. Remove nuts (50) and lockwashers (51), and remove tire and wheel from hub (62).
- d. Remove hub cap (53), cotter pin (54), nut (55), and tongue washer (56).
- e. Slide hub (62) and brake drum (68), as an assembly, from rear axle (97).

CAUTION

Cover bearing surfaces on rear axle to prevent contamination.

- f. Remove bearing cones (57, 60), bearing cups (58, 61), and grease seal assembly (58) from hub (62).

CAUTION

Cover open ends of hub to prevent contamination.

7-12. Assembly and Installation of Rear Wheel Bearings. (See figure 5-4.)

- a. Assemble new bearing cones (57, 60) and new bearing cups (58, 61) as sets, and handpack with grease (item 2, App D).

- b. Install new bearing cone and bearing cup set (60, 61) in hub (63).
- c. Install new grease seal assembly (59) in hub.
- d. Slide hub and brake drum over aft bearing surface on rear axle.
- e. Install new bearing cone and new bearing cup set (57, 60) on forward bearing, surface of rear axle, ensuring bearing cup (60) is properly seated in hub.
- f. Install tongued washer (56), and nut (55).
- g. Tighten nut (55) to seat entire hub assembly.
- h. Position tire and wheel on hub and secure with lockwashers (51) and nuts (50).
- i. Loosen nut (55) just enough to allow wheel to turn freely, but with no side play.
- j. Install new cotter pin (54).
- k. Install hub cap (53).

7-13. Removal of Brake Shoe and Lining Assemblies. (See figure 5-4.)

- a. Mount aft end of trailer on a suitable support with tires clearing ground. Block front tires.
- b. Release parking brakes (brake handle down).
- c. Remove hub cap (53), cotter pin (54), nut (55), and tongued washer (56).
- d. Slide tire and wheel, together with hub (62) and brake drum (68) from rear axle (97).

CAUTION

Cover bearing surfaces of shaft and open ends of hub assembly to prevent contamination.

- e. Disconnect brake linkage from brake actuating lever (83).
- f. Remove spring (72) from shoe and lining assemblies (78).
- g. Remove nuts (73), lockwashers (74), anchor pins (75), anchor pin plate (76), and reinforcement plate (77). Remove shoe and lining assemblies (78) from backing plate (85).
- h. Remove brake actuating lever (83) and strut (84) from slot in backing plate (85).

7-14. Assembly and Installation of Brake Shoe and Lining Assemblies. Installation of the brake shoe and lining assemblies is the reverse of the removal procedure given in paragraph 7-13, except as follows:

- a. Apply a light film of Lubriplate (item 6, App D): (1) contact points of brake shoe and backing plate: (2) contact points of brake actuating lever and backing plate: (3) contact surface of anchor pin plate and backing plate: and (4) anchor pin threads.

Note

While performing adjustments, feeler gage must be a snug fit and must extend through entire width of lining. Clearance is to be determined at closest point of full width.

- b. For initial adjustment of brake shoe and lining assemblies, insert a feeler gage between lining and drum nearest shoe adjusting eccentric. Turn eccentric clockwise and obtain a 0.008-inch clearance between lining and drum. Tighten eccentric nut.
- c. Insert a feeler gage between lining and drum nearest anchor pins. Adjust anchor pins and obtain a 0.005-inch clearance between lining and drum. Tighten anchor pin nut.

7-15. ADJUSTMENT OF BRAKES. (see figure 5-4.)

7-16. Proper brake action and proper brake lining contact is obtained by adjustment at three points. These are the knurled brake handle, the brake shoe adjusting eccentrics (cams), and the rod and clevis connections of the brake linkage. The following steps outline the procedure for complete adjustment of the brake system.

- a. Mount aft end of trailer on a suitable support with tires clearing ground. Block front tires.
- b. Release parking brakes (brake handle down).
- c. Turn knurled adjustment section of brake handle counterclockwise and release all tension in brake linkage.
- d. Hold adjusting cam in position with an open-end wrench, and loosen cam locking nut.
- e. Spin wheel and turn adjusting cam in proper direction to expand brake shoe until a heavy drag is reached, then gradually turn back adjusting cam until wheel turns freely.
- f. Make this adjustment at top and bottom cams for each brake shoe. Hold adjusting cam in position and tighten cam locking nut.
- g. Turn knurled section of brake handle clockwise, taking up slack in linkage, until brakes are fully applied when brake handle is in "up" position.

- h. Check that brakes are fully released when brake handle is in the "down" position.
- i. If additional adjustments are required, make adjustments at rod and clevis connections of brake linkage, as necessary.

7-17. FUEL BOOST PUMP.

7-18. Removal of Fuel Boost Pump. (See figure 5-1.)

- a. Disconnect electrical harness from fuel pump (25).
- b. Disconnect fuel lines (17, 20) from pump. Cover open ends of fuel lines.
- c. Remove nipples (21) from pump. Cover open ports on pump.
- d. Remove nuts (27), washers (28), and screws (29) securing pump to support bracket (38). Remove pump from bracket.

7-19. Installation of Fuel Boost Pump. Installation of fuel boost pump is the reverse of removal. Refer to drawings located in envelope at back of this manual when connecting electrical harness to fuel boost pump.

7-20. FUEL FILTER.

7-21. Removal of Fuel Filter. (See figure 5-1.)

- a. Disconnect fuel line (20) and hose assembly (22) from fuel filter (33). Cap open end of fuel line and hose.
- b. Remove reducers (23) and O-rings (24). Cover open ports on filter.
- c. Remove nuts (34), spacers (35), washers (36), and bolts (37) securing filter to support bracket (38). Remove filter from bracket.

7-22. Disassembly of Fuel Filter. (See figure 5-6.)

- a. Remove filter case (1) from filter head (5).
- b. Remove filter element (2). Inspect element; discard if dirty, clogged, or damaged.
- c. Remove back-up ring (3) and O-ring (4) from filter case. Discard O-ring (4).
- d. If inspection of filter relief valves is necessary, remove plug (6), gasket (7), spring guide (8), spring (9), and piston (10) of each relief valve from filter head. Discard gasket (7).

7-23. Assembly and Installation of Fuel Filter. (See figures 5-1 and 5-6.)

- a. See figure 5-6. Assembly of the fuel filter is the reverse of disassembly. Use new gasket (7), new O-ring (4), and new filter element (2). Tighten filter case to 20 to 30 pound-feet torque.
- b. See figure 5-1. Installation of the fuel filter is the reverse of removal. Use new O-rings (24), reinstall reducers (23).

7-24. TACHOMETER GENERATOR.

7-25. Removal of Tachometer Generator. (See figure 5-1.)

Note

**An adapter is used to couple the tachometer generator to the speed switch.
Ensure that adapter is removed from tachometer generator or from speed switch.**

- a. Disconnect electrical connector from receptacle on tachometer generator (58). Place a protective cap over threads of receptacle.
- b. Remove nuts (59) and washers (60) attaching tachometer generator to speed switch. Disengage tachometer generator from speed switch.
- c. Remove adapter (61) from either tachometer generator or speed switch. Place adapter (61), nuts (59), and washers (60) in a cloth bag.
- d. Stow tachometer generator and cloth bag in stowage compartment inside console door.

7-26. Installation of Tachometer Generator. (See figure 5-1.)

- a. Remove tachometer generator (58) and cloth bag from stowage compartment inside console door. The cloth bag contains coupling adapter and hardware to attach tachometer generator to speed switch.
- b. Installation of the tachometer generator is the reverse of removal. Refer to figure FO-1 for harness installation.

7-27. THERMOCOUPLE.

7-28. Removal of Thermocouple. (See figure 5-1.)

- a. Disconnect electrical wires from terminal posts of thermocouple (111). Reinstall nuts and washers on terminal posts to prevent loss.
- b. Remove thermocouple (111) from top side of combustor exhaust end by unscrewing integral swivel nut on thermocouple from threaded mounting boss.
- c. Carefully stow thermocouple in stowage bracket (112) by screwing swivel nut on thermocouple on threaded end of stowage bracket. Reconnect electrical wires to terminal posts.

7-29. Installation of Thermocouple. (See figure 5-1.)

- a. Disconnect electrical wires from terminal posts of thermocouple (111). Reinstall nuts and washers on terminal posts to prevent loss.
- b. Remove thermocouple from stowage bracket (112) by unscrewing integral swivel nut on thermocouple from threaded end of stowage bracket.
- c. Install thermocouple on top side of combustor exhaust end by screwing integral swivel nut on thermocouple on threaded mounting boss.
- d. Connect electrical wires to terminal posts on thermocouple. Refer to figure FO-2 for electrical wire connections.

7-30. AC GENERATOR.

7-31. Removal of AC Generator. (See figure 5-1.)

- a. Disconnect electrical cables from ac generator (63).
- b. Loosen attaching nuts (64) and washers (65) securing generator to mounting pad on speed increaser (75).
- c. Support generator fore and aft. Rotate generator slightly counterclockwise so that holes in generator mounting flange will clear nuts and washers loosened in step b, preceding.
- d. Carefully slide generator away from speed increaser until generator drive shaft spline is clear of drive shaft in speed increaser.
- e. Remove and discard gasket (66).

Note

Refer to TM 55-2835-203-24 for complete maintenance of ac generator.

7-32. Installation of AC Generator. (See figure 5-1.)

- a. Installation of ac generator (63) is the reverse of removal.
- b. Apply a light film of lubrication (item 4, App D) to both sides of new gasket (66) and to flange on output pad of speed increaser.
- c. Tighten attaching nuts (64) evenly in a criss-cross pattern.
- d. Reconnect electrical cables to generator. Refer to figure FO-2 for electrical connections.

7-33. DC STARTER-GENERATOR.

7-34. Removal of DC Starter-Generator. (See figure 5-1.)

- a. Disconnect electrical cables from starter-generator (67).
- b. Loosen attaching nuts (68) securing starter-generator to mounting pad on speed increaser (75).
- c. Support starter-generator fore and aft; then remove attaching nuts (68) and washers (69).
- d. Carefully slide starter-generator away from speed increaser until starter-generator drive shaft spline is clear of drive shaft in speed increaser.
- e. Remove and discard gasket (70).

Note

Refer to TM 55-2835-203-24 for complete maintenance of dc starter-generator.

7-35. Installation of DC Starter-Generator. (See figure 5-1.)

- a. Installation of starter-generator (67) is the reverse of removal.
- b. Apply a light film of lubrication (item 4, App D) to both sides of new gasket (70), and to flange on output pad of speed increaser.
- c. Tighten attaching nuts (68) evenly in a criss-cross pattern.
- d. Reconnect electrical cables to dc starter-generator. Refer to figure FO-2 for electrical connections.

7-36. OIL SEALS.

7-37. Removal of Oil Seals.

- a. Remove ac generator from output pad of speed increaser. Refer to paragraph 7-31 for the removal procedure.
- b. Remove dc starter-generator from output pad of speed increaser. Refer to paragraph 7-34 for the removal procedure.
- c. See figure 5-1. Remove cover assembly (72) by removing nuts (73) and washers (74). Reinstall nuts and washers on cover to prevent loss.

CAUTION

When removing oil seals, be careful not to nick drive shaft surfaces or sealing surfaces on bearing bore. If these surfaces are nicked, an oil leak may result.

- d. See figure 5-5. Using a machinist scribe, or equivalent too, insert scribe between metal part of seal (2) and rubber part; then pry seal loose, and forward.
- e. When seal, or metal cover of seal is pried sufficiently forward, use a needlenose pliers, or an equivalent tool, to complete seal removal.
- f. Cover all openings in speed increaser to prevent entry of foreign particles.

7-38. Installation of Oil Seals. (See figure 5-5)

- a. Lubricate inner lip of seal (2) with lubricating oil (item 7, App D).

CAUTION

To prevent damage to seals, always install seals with seal part number and manufacturer's name facing outward.

- b. Install seal on speed increaser using an insert tool, or equivalent driver tool, with a 1.5-inch ID and a 2.5-inch OD.
- c. Install seal so that it bottoms against flange or shoulder of housing.
- d. Use care to prevent deformation of seal and seal contact surface.
- e. Ensure that seal is flush with recessed flange surface of housing within 0.010 inch.
- f. Install generators and cover assembly (72, figure 5-1).

7-39. OIL SIGHT GLASS.

7-40. Removal of Oil Sight Glass. (See figure 5-5.)

- a. Drain lubricating oil from speed increaser. Refer to paragraph 2-6, and perform the applicable steps.
- b. Remove oil sight glass (5) by unscrewing assembly from speed increaser. Remove and discard O-ring (4). Cover opening to prevent entry of foreign particles.

7-41. Installation of Oil Sight Glass. (See figure 5-5.)

- a. Installation of oil sight glass (5) is the reverse of removal.
- b. Apply a light film of lubricating oil (item 4, App D) to new O-ring (4). Install new oil sight glass and new O-ring (4) on speed increaser.
- c. Service speed increaser with lubricating oil. Refer to paragraph 2-6 for the servicing procedure.

- d. Check for oil leaks around oil sight glass.

7-42. BATTERY.

7-43. Removal of Battery. (See figure 5-1.)

- a. Release and remove multi-pin, quick-disconnect power cable connector (6) from terminal pins on battery (7).
- b. Release and remove battery holddown clamp (8) from top of battery.
- c. Carefully lift battery from battery retainer (13).

Note

Refer to TM 11-6140-203-15-1 for complete maintenance of battery.

7-44. Installation of Battery. (See figure 5-1.) Installation of the battery is the reverse of removal. Reconnect quick-disconnect power cable connector to terminal pins on battery.

7-45. Charging the Battery on the Check Stand. The battery can be charged on the check stand during APU checkout. When APU reaches operating speed, pressing the DC GEN CONTROLS circuit breaker will put the dc starter-generator on the line and furnish power to charge the battery.

7-46. TIRES.

7-47. Repair of Tires. Tires may be repaired in accordance with standard procedures.

WARNING

Deflate tire before separating wheel rims. Inflated tire pressure will separate rim halves with extreme force.

APPENDIX A

REFERENCES

A-1. Dictionaries of Terms and Abbreviations.

AR 310-25Dictionary of United States Army Terms
 AR 310-50Authorized Abbreviations and Brevity Codes

A-2. Publication Indexes.

DA PAM 310-1Index of Administration Publications
 DA PAM 310-2Index of Blank Forms
 DA PAM 310-4Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 7, 8, and 9), Supply Bulletins and Lubrication Orders

A-3. Logistics and Storage.

TM 740-90-1Administrative Storage of Equipment
 TM 743-200-1Storage and Materials Handling

A-4. Maintenance of Supplies and Equipment.

AR 750-1Army Material Maintenance Concepts and Policies
 TM 38-750The Army Maintenance Management System (TAMMS)
 TM 43-0139Painting Operations Instructions for Field Use

A-5. Other Publications.

AR 55-38Reporting of Transportation Discrepancies in Shipments
 AR 420-90Fire Prevention and Protection
 AR 700-58.....Packaging Improvement Report
 DA PAM 310-13Military Publications Posting and Filing
 FM-21-11First Aid for Soldiers
 TB 43-180Calibration Requirements for the Maintenance of Army Materiel
 TM 750-244-1-4Procedures for the Destruction of Aviation Ground Support Equipment (FSC 4920) to Prevent Enemy Use
 TM 11-6140-203-15-1Operator, Organizational, Direct Support, General Support, and Depot Maintenance Manual: Aircraft and Nonaircraft Nickel-Cadmium Batteries (General)
 TM 55-2835-203-24Organizational, Direct Support and General Support Maintenance Manual: Auxiliary Power Unit (CH-47 Helicopters)

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. Maintenance Allocation Chart.

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Three Levels of Maintenance concept for army aircraft. These maintenance levels: Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM) and Depot Maintenance are depicted on the MAC as:

AVUM which corresponds to the O code in the Repair Parts and Special Tools List (RPSTL).

AVIM which corresponds to the F code in the Repair Parts and Special Tools List (RPSTL).

Depot which corresponds to the D code in the Repair Parts and Special Tools List (RPSTL).

b. The maintenance to be performed below depot and in the field is described as follows:

(1) Aviation Unit Maintenance (AVUM). AVUM activities will be staffed and equipped to perform high frequency "On-Equipment" maintenance tasks required to retain or return equipment to a serviceable condition. The maintenance capability of the AVUM will be governed by the MAC and limited by the amount and complexity of support equipment, facilities required, and number of spaces and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignment of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources and air mobility requirements.)

(a) Company Size Aviation Units. Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of equipment operational readiness. Perform maintenance inspections and servicing to include daily, intermediate, periodic and special inspections as authorized by the

MAC or higher headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual troubleshooting instructions, Built-In-Test Equipment (BITE), installed instruments, or easy to use Test Measurement and Diagnostic Equipment (TMDE). Replace worn or damaged modules/components which do not require complex adjustments or system alignment and which can be removed/installed with available skills, tools and equipment. Perform operational and continuity checks and make minor repairs. Perform servicing, functional adjustments, and minor repair/replacement. Evacuate unserviceable modules/components and end items beyond the repair capability of AVUM to the supporting AVIM.

(b) Less than Company Size Aviation Units. Aviation elements organic to brigade, group, battalion headquarters and detachment size units are normally small and have less than ten aircraft assigned. Maintenance tasks performed by the aircraft crew chief or assigned aircraft repairman will normally be limited to preventive maintenance inspections, servicing, spot painting, spot drilling, minor adjustments, module/component fault diagnosis and replacement of selected modules/components. Repair functions will normally be accomplished by the supporting AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM). AVIM provides mobile, responsive "One Stop" maintenance support. (Maintenance functions which are not conducive to sustaining air mobility will be assigned to depot maintenance.) Performs all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment. Establishes the Direct Exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level. Inspects, troubleshoots, tests, diagnoses, repairs, adjusts,

calibrates, and aligns system modules/components. Module/component disassembly and repair will support the DX program and will normally be limited to tasks requiring cleaning and the replacement of seals, fittings and items of common hardware. Unserviceable reparable modules/components and end items which are beyond the capability of AVIM to repair will be evacuated to Depot Maintenance. This level will perform special inspections which exceed AVUM capability. Provides quick response maintenance support, on-the-job-training, and technical assistance through the use of mobile maintenance contact teams. Maintains authorized operational readiness float. Provides collections and classification services for serviceable/unserviceable material. Operates a cannibalization activity in accordance with AR 750-50. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting non-divisional AVIM unit.)

B-2. Use of the Maintenance Allocation Chart.

a. The MAC assigns maintenance functions to the lowest level of maintenance based on past experience and the following considerations:

- (1) Skills available.
- (2) Time required.
- (3) Tools and test equipment required and/or

available.

b. Only the lowest level of maintenance authorized to perform a maintenance function is indicated. If the lowest level of maintenance cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) that can accomplish additional tasks will also be indicated.

c. A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.

d. A maintenance function that cannot be performed at the assigned level of maintenance for any reason may be evacuated to the next higher maintenance organization. Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required or directed by the appropriate commander.

e. The assignment of a maintenance function will

not be construed as authorization to carry the associated repair parts in stock. Authority to requisition, stock, or otherwise secure necessary repair parts will be as specified in the repair parts and special tools list appendix.

f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, maintenance functions assigned to a maintenance level may, on a one-time basis and at the request of the lower maintenance level, be specifically authorized by the maintenance officer to the level of maintenance to which the function is assigned. The special tools, equipment, etc. required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of a maintenance function to a lower maintenance level does not relieve the higher maintenance level of the responsibility of the function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.

g. Organizational through depot maintenance of the US Army Electronics Command equipment will be performed by designated US Army Electronics Command personnel.

h. Changes to the MAC will be based on continuing evaluation and analysis by responsible technical personnel and on reports received from field activities.

B-3. Definitions.

a. Inspect. To determine serviceability of an item by comparing its physical, mechanical and electrical characteristics with established standards.

b. Test. To verify serviceability and detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents and air.

d. Adjust. To rectify to the extent necessary to bring into proper operating range.

e. Aline. To adjust specified variable elements of an item to bring to optimum performance.

f. Calibrate. To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the 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 or test equipment being compared with the certified standard.

g. Install. To set up for use in an operational environment such as an emplacement, site or vehicle.

h. Replace. To replace unserviceable items with serviceable assemblies, subassemblies or parts.

i. Repair. To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This includes, but is not limited to, inspection, cleaning, preserving, adjusting, replacing, welding, riveting, and strengthening.

j. Overhaul. To restore an item to a completely serviceable condition as prescribed by maintenance serviceability standards prepared and published for the specific item to be overhauled.

k. Rebuild. To restore an item to a standard as nearly as possible to the original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements (items) using original manufacturing tolerances and specifications, and subsequent reassembly of the item.

B-4. Functional Groups. Standard functional groupings are not considered feasible for aviation ground support equipment due to variation and complexity. Therefore, variations to functional groupings may occur.

B-5. Maintenance Categories and Work Times. The maintenance categories (levels) AVUM, AVIM, and DEPOT are listed on the Maintenance Allocation Chart with individual columns that indicate the work times for maintenance functions at each maintenance level. Work time presentations such as 0.1 indicate the average time it requires a maintenance level to perform a specified maintenance function. If a work time has not been established, the columnar presentation shall indicate "—●—". Maintenance levels higher than the level of maintenance indicated are authorized to perform the indicated function.

B-6. Tools and Test Equipment (Section III). Common tool sets (not individual tools), special tools, test and support equipment required to perform maintenance functions are listed alphabetically with a reference number to permit cross-referencing to column 5 in the MAC. In addition, the maintenance category authorized to use the device is listed along with the item National Stock Number (NSN) and, if applicable, the tool number to aid in identifying the tool/device.

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS							
SECTION II							
STAND, MOBILE CHECK AND ADJUSTMENT - MODEL 45977-100							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
00	STAND, MOBILE CHECK AND ADJUSTMENT MODEL 45977-100, NSN 4920-00-176-9236						
03	<u>CHASSIS</u>						
0301	Axle & steering Assy. (Front)	Inspect Service Repair Replace	0.1 0.2	2.0 2.0		102 102 102	
0302	Axle Assy (Rear)	Inspect Service Repair Replace	0.1 0.2	2.0 2.0		102 102 102	
0303	Brake Assy	Inspect Service Adjust Repair Replace	0.2 0.2 0.5 1.5	3.0		102 102 102 102	
0304	Wheel Assy	Inspect Service Repair Replace	0.1 0.5 0.5	1.0		102 102	
04	<u>POWER PLANT</u>	Inspect Remove Replace	.3	3.0 4.0		116 116	
06	<u>DRIVE TRAIN SYSTEMS</u>						
0601	Speed Increaser Assy	Inspect Remove Repair Replace	0.1	1.5 6.0 1.5		102 112 102	
07	<u>PNEUMATIC SYSTEM</u>						
0701	Silencer Assy & Air Ducts	Inspect Repair Replace	0.1 1.0	2.0		114 102	

MAINTENANCE ALLOCATION CHART

NOMENCLATURE OF END ITEMS							
STAND, MOBILE CHECK AND ADJUSTMENT MODEL 45977-100							
(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY			(5) TOOLS AND EQUIPMENT	(6) REMARKS
			AVUM	AVIM	DEPOT		
08	<u>INSTRUMENT SYSTEM</u>						
0801	Meters & Gauges	Inspect Calibrate Replace	0.2 0.5	1.0		109 102	
09	<u>ELECTRICAL SYSTEM</u>						
0901	Generators	Inspect Repair Replace	0.1 1.5	4.0		109 102	
0902	Electrical Components, Transformers, Relays Circuit Breakers Resistor	Inspect Test Repair Replace	0.1 0.5 1.5	2.5		109 106	
0903	Harness Assy	Inspect Repair Replace	0.1	4.0 8.0		109 109	
0904	Terminals & Connectors	Inspect Replace	0.5 1.0			106	
0905	Lights, Switches	Inspect Test Replace	0.1 0.1 0.2			102 102	
10	<u>FUEL SYSTEM</u>						
1001	Filter & Pumps	Inspect Replace	0.1 .3			102	
012	<u>UTILITY SYSTEMS</u>						
01201	Fire Extinguishing	Inspect Replace	0.1 0.3			102	

SECTION III

TOOL AND TEST EQUIPMENT REQUIREMENT

REF. NO.	MAINT. CAT.	NOMEN.	NSN	TOOL NO.
100	O	Tool Set, AVUM, Set No.	4920-00-159-8727	SC492099CLA90
101	O	Tool Set, AVUM, Set No. 2	4920-00-567-0476	SC492099CLA92
102	O	Tool Kit, Acft Mech Gen	5180-00-323-4692	SC518099CLA01
103	O	Tool Kit, Arfrm Rpmn	5180-00-323-4876	SC518099CLA02
104	O	Tool Kit, Hyd Rpmn	5180-00-323-4891	SC518099CLA03
105	O	Tool Kit, Instr Rpmn	5180-00-323-4913	SC518099CLA05
106	O	Tool Kit, Elec Rpmn	5180-00-323-4915	SC518099CLA06
107	O	Tool Kit, Eng Rpmn	5180-00-323-4944	SC518099CLA07
108	O	Tool Kit, Pwr Trn	5180-00-003-5267	SC518099CLA13
109	F	Shop Set, AVIM, Elec-Instr	4920-00-165-1453	SC492099CLA91ELAM
110	F	Shop Set, AVIM, Hyd	4920-00-165-1454	SC492099CLA91HYAM
111	F	Shop Set, AVIM, Machine Shop	4920-00-405-9279	SC492099CLA91MAAM
112	F	Shop Set, AVIM, Pwr Trn	4920-00-001-4132	SC492099CLA91PTAM
113	AVIM	Shop Set, AVIM, Rtr Shop	4920-00-405-9270	SC492099CLA91ROAM
114	AVIM	Shop Set, AVIM, Sheet Metal	4920-00-166-5505	SC492099CLA91SMAM
115	AVIM	Shop Set, AVIM, Tool Crib	4920-00-472-4183	SC492099CLA91TCAM
116	AVIM	Shop Set, AVIM, Turbine Eng	4920-00-224-3684	492099CLA91ENTAM
117	AVIM	Shop Set, AVIM, Welding	4920-00-163-5093	492099CLA91WEAM

APPENDIX C

REPAIR PARTS AND SPECIAL TOOLS LIST

(Current as of 5 November 1980)

Section I. INTRODUCTION

C-1. Scope.

This appendix lists spares and repair parts; special tools; test, measurement and diagnostic equipment (TMDE); and other special support equipment required for performance of Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) and Depot maintenance of the test stand, auxiliary power unit. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. General.

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. Parts listed in figure end item number sequence.

b. Section III. Special Tools List. Not applicable.

c. Section IV. National Stock Number and Part Number Index. A list, in National Item Identification Number (NIIN) sequence of all National Stock Numbers (NSN) appearing in the listings, followed by a list, in alphameric sequence, of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. Explanation of Columns.

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration on which the item is shown.

(2) Item Number. The number used to identify each item called out in the illustration.

b. Source, Maintenance and Recoverability Codes (SMR).

(1) Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	Definition
PA ---	Item procured and stocked for anticipated or known usage.
PB ---	Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply systems.
PC ---	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
XA ---	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB ---	Item is not procured or stocked. If not available through salvage, requisition.
XD ---	A support item that is not stocked. When required, item will be procured through normal supply channels.
XC ---	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturers part number.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
O ---	Support item is removed, replaced, used at the Aviation Unit Maintenance level.
F ---	Support item is removed, replaced, used at the Aviation Intermediate Maintenance level.
D ---	Support items that are removed, replaced, used at depot, mobile depot, specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

Code	Application/Explanation
O ---	The lowest maintenance level capable of complete repair of the support item is the Aviation Unit Maintenance level.
F ---	The lowest maintenance level capable of complete repair of the support item is the Aviation Intermediate Maintenance level.

Code	Application/Explanation
-------------	--------------------------------

- | | |
|-------|--|
| D --- | The lowest maintenance level capable of complete repair of the support item is the depot level |
| Z --- | Nonreparable. No repair is authorized. |

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Code	Definition
Z ---	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O ---	Reparable item. When uneconomically repairable, condemn and dispose at Aviation Unit Maintenance level
F ---	Reparable item. When uneconomically repairable, condemn and dispose at the Aviation Intermediate level.
D ---	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.

c. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning purposes.

d. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards and inspection requirements, to identify an item or range or items.

NOTE

When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

e. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc.).

C-4. Special Information. Not applicable.

C-5. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Unknown:

(1) First. Find the illustration covering the assemble to which the item belongs.

(2) Second. Identify the item on the illustration and note the illustration figure and item number of the item.

(3) Third. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in ascending NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

C-6. Abbreviation. Not applicable.

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
						GROUP 01 TEST STAGE ASSEMBLY		
5-1	1	XDFZZ		891519	33525	EXTINGUISHER FIRE.....	EA	1
5-1	2	PDFZZ	4210-00-595-4085	870752	33525	BRACKET, FIRE EXTING.....	EA	1
5-1	3	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	4	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	4
5-1	5	PBFZZ	5306-00-531-8979	AN6-7A	88044	BOLT, MACHINE.....	EA	4
5-1	6	PBFZZ	5935-00-686-0447	MS25182-2	96906	CONNECTOR, PLUG, ELEC.....	EA	1
5-1	7	PBFZZ	6140-00-578-7525	MS24498-1	96906	BATTERY, STORAGE.....	EA	1
5-1	8	PBFZZ	6140-00-321-2281	AN3156-3	88044	RETAINER, BATTERY.....	EA	2
5-1	9	XDFZZ	4920-00-849-3977	21590-0	55820	STUD, BATTERY RETAINER.....	EA	2
5-1	10	PBFZZ	5315-00-815-1405	MS24665-151	96906	PIN, COTTER.....	EA	2
5-1	11	PBFZZ	5310-00-515-7449	AN960C416L	88044	WASHER, FLAT.....	EA	2
5-1	12	PBFZZ	5315-00-811-3791	MS20392-3C11	96906	PIN, STRAIGHT, HEA.....	EA	2
5-1	13	XDFZZ		47702-0	55820	RETAINER BATTERY.....	EA	1
5-1	14	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	15	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	4
5-1	16	PBFZZ	5306-00-531-8979	AN6-7A	88044	BOLT, FLAT.....	EA	4
5-1	17	PBFZZ	4920-00-850-4400	47704-0	55820	TUBE ASSEMBLY, METAL.....	EA	1
5-1	18	PBFZZ	4730-00-187-0486	AN815-6	88044	NIPPLE, TUBE.....	EA	1
5-1	19	PBFZZ	5330-00-263-8030	MS29512-06	96906	PACKING, PREFORME.....	EA	1
5-1	20	PBFZZ	4920-00-850-4404	47705-0	55820	TUBE ASSEMBLY, METAL.....	EA	1
5-1	21	PBFZZ	4730-00-194-1121	AN816-6	88044	ADAPTER, STRAIGHT, PI.....	EA	2
5-1	22	PBFZZ	4920-00-842-5900	47706-1	55820	HOSE ASSEMBLY.....	EA	1
5-1	23	PBFZZ	4730-00-235-1503	AN919-12	88044	REDUCER, TUBE.....	EA	2
5-1	24	PBFZZ	5330-00-263-8031	MS29512-08	96906	PACKING, PREFORME.....	EA	2
5-1	25	PBFZZ	2910-00-076-9157	5656748	70040	PUMP, FUEL, ELECTRICA.....	EA	1
5-1	26	PBFZZ	2910-00-963-8194	5620653	70040	BRACKET, FUEL PJM.....	EA	1
5-1	27	PBFZZ	5310-00-616-1916	MS20364-624C	96906	NUT, SELF-LOCKING, HE.....	EA	2
5-1	28	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	2
5-1	29	PBFZZ	5305-00-053-9366	MS35266-108	96906	SCREW, MACHINE.....	EA	2
5-1	30	PBFZZ	5310-00-061-7325	MS21045-4	96906	NUT, SELF-LOCKING, HE.....	EA	1
5-1	31	PBFZZ	5310-00-167-0835	AN960-416L	88044	WASHER, FLAT.....	EA	2
5-1	32	PBFZZ	5305-00-145-6796	AN520-416-28	88044	SCREW, MACHINE.....	EA	1
5-1	33	XDFZZ	2910-00-902-4468	46424-1	55820	FILTER ASSEMBLY, HYD SEE FIGURE 5-6 FOR BREAKDOWN.....	EA	1
5-1	34	PBFZZ	5310-00-061-7325	MS21045-4	96906	NUT, SELF-LOCKING, HE.....	EA	2
5-1	35	XDFZZ		37327-1	55820	SPACER.....	EA	2
5-1	36	PBFZZ	5310-00-167-0835	AN960-416L	88044	WASHER, FLAT.....	EA	2
5-1	37	PBFZZ	5306-00-151-1409	AN4-27A	88044	BOLT, MACHINE.....	EA	2
5-1	38	XDFZZ		47703-0	55820	BRACKET.....	EA	1
5-1	39	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	2

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-1	40	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	2
5-1	41	PBFZZ	5306-00-208-3636	AN6-10A	88044	BOLT, MACHINE.....	EA	2
5-1	42	PBFZZ	4730-00-949-7422	AN929-6	88044	CAP, TUBE.....	EA	1
5-1	43	PBFZZ	5310-00-282-7817	AN924-6	88044	NUT, PLAIN, HEXAGON.....	EA	1
5-1	44	PBFZZ	4730-00-231-3028	AN833-6	88044	ELBOW, TUBE.....	EA	1
5-1	45	PBFZZ	2990-01-073-3356	105438-0	55820	DUCT ASSEMBLY, EXHAU.....	EA	1
5-1	46	PBFZZ	5310-00-061-7325	MS21045-4	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	47	PBFZZ	5310-00-167-0835	AN960-416L	88044	WASHER, FLAT.....	EA	4
5-1	48	PBFZZ	5306-00-151-1424	AN4-10A	88044	BOLT, MACHINE.....	EA	3
5-1	49	PBFZZ	5306-00-151-1426	AN4-6A	88044	BOLT, MACHINE.....	EA	1
5-1	50	XDFZZ		RS108-090	86831	CHAIN ASSY.....	EA	1
5-1	51	XDFZZ	4920-00-849-3976	24304-300	55820	SILENCERAIR INTAKE.....	EA	1
5-1	52	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	53	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	4
5-1	54	PBFZZ	5306-00-616-1224	AN6-6A	88044	BOLT, MACHINE.....	EA	4
5-1	55	XDFZZ		QS600M116W	08484	CLAMP.....	EA	1
5-1	56	PBFZZ	4910-01-098-2402	45977-6	55820	CLAMP.....	EA	1
5-1	57	PBFZZ	4720-00-226-1024	NAS1375A28SB020	80206	HOSE, AIR DUCT.....	EA	1
5-1	58	PBFZZ	6620-00-585-1503	GEU7A	23669	GENERATOR, TACHOMETE.....	EA	1
5-1	59	PBFZZ	5310-00-061-7325	MS21045-4	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	60	PBFZZ	5310-00-167-0835	AN960-416L	88044	WASHER, FLAT.....	EA	4
5-1	61	PBFZZ	2835-00-015-8630	7923165	70040	ADAPTER, DRIVE.....	EA	1
5-1	62	XDFZZ		90C615C1	55820	COVER, TERMINAL BLOC.....	EA	1
5-1		PBFZZ	5305-00-150-9220	AN503-10-16	88044	SCREW, MACHINE.....	EA	4
5-1	63	PBFDD	6115-00-789-1536	31220-002	31435	GENERATOR, ALTERNATI REFER TO TM 55-6115-491-40 FOR BREAKDOWN.	EA	1
5-1	64	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	8
5-1	65	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	8
5-1	66	PBFZZ	5330-00-934-8476	48616-1	55820	GASKET.....	EA	1
5-1	67	PBFDD	2925-00-912-3993	23032-020	31435	STARTER, GENERATOR, E REFER TO DMWR55-5925-245 FOR BREAKDOWN	EA	1
5-1	68	PBFZZ	5310-00-982-4912	MS21045-5	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	69	PBFZZ	5310-00-167-0820	AN960-516	88044	WASHER, FLAT.....	EA	4
5-1	70	PBFZZ	5330-00-599-5989	AN4044-1	88044	GASKET.....	EA	1
5-1	71	XDFZZ		RS161-100	86881	CHAIN ASSY.....	EA	1
5-1	72	XDFZZ	4920-00-851-1441	47698-0	55820	PLATE ASSEMBLY, RETA.....	EA	1
5-1	73	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	6
5-1	74	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	6
5-1	75	XDFDD	4920-00-851-5522	47954-0	55820	SPEED INCREASER SEE FIGURE 5-5 FOR BREAKDOWN.....	EA	1
5-1	76	PBFZZ	5310-00-062-4954	MS21045-8	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	77	PBFZZ	5310-00-167-0823	AN960-816	88044	WASHER, FLAT.....	EA	4

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-1	78	PBFZZ	5306-00-180-0202	AN8-21A	88044	BOLT, MACHINE	EA	4
5-1	79	XDFZZ		45977-1	81861	CABLE ASSEMBLY	EA	1
5-1	80	PBFZZ		47709-0	55820	HANGER, CABLE	EA	1
5-1	81	PBFZZ	5306-00-616-1224	AN6-6A	88044	BOLT, MACHINE	EA	3
5-1	82	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	3
5-1	83	XDFZZ		105439-100	55820	CONSOLE ASSEMBLY SEE FIGURE 5-2 BREAKDOWN	EA	1
5-1	84	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	85	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	4
5-1	86	PBFZZ	5306-00-208-3636	AN6-10A	88044	BOLT, MACHINE	EA	4
5-1	87	XDFZZ		45977-3	55820	COVER AC CONTROL	EA	1
5-1	88	XDFZZ		45977-5	55820	COVER ENGINE CONTROL.....	EA	1
5-1	89	XDFZZ		45977-2	55820	BASE AC CONTROL.....	EA	1
5-1	90	XDFZZ		45977-4	55820	BASE, ENGINE CONTROL.....	EA	1
5-1	91	PBFZZ	5310-00-811-3494	MS21044N08	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	92	PBFZZ	5310-00-167-0833	AN960-8L	88044	WASHER, FLAT.....	EA	4
5-1	93	XDFZZ		AN505-8-11	88044	SCREW, MACHINE.....	EA	4
5-1	94	PBFZZ	5340-00-296-9441	MS21919H4	96906	CLAMP, LOOP	EA	2
5-1	95	PBFZZ	5340-00-291-5328	MS21919H12	96906	CLAMP, LOOP	EA	1
5-1	96	PBFZZ	5310-00-061-7326	MS21045-3	96906	NUT, SELF-LOCKING, HE.....	EA	3
5-1	97	PBFZZ	5310-00-167-0818	AN960-10	88044	WASHER, FLAT.....	EA	6
5-1	98	PBFZZ	5305-00-983-6652	MS16998-29	96906	SCREW, CAP, SOCKET HE.....	EA	3
5-1	99	PBFZZ	5340-00-571-6044	MS21919H8	96906	CLAMP, LOOP	EA	1
5-1	100	PBFZZ	5340-00-621-3297	MS21919H10	96906	CLAMP, LOOP	EA	1
5-1	101	PBFZZ	5340-00-286-9441	MS21919H4	96906	CLAMP, LOOP	EA	1
5-1	102	PBFZZ	5305-00-983-6651	MS16998-27	96906	SCREW, CAP, SOCKET HE.....	EA	3
5-1	103	PBFZZ	5310-00-167-0662	MS35337-43	96906	WASHER, LOCK.....	EA	3
5-1	104	PBFZZ	5310-00-167-0818	AN960-10	88044	WASHER, FLAT.....	EA	3
5-1	105	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	1
5-1	106	XDFZZ		AN935-616	88044	WASHER, LOCK.....	EA	2
5-1	107	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	2
5-1	108	PBFZZ	5310-00-579-0848	AN316-6	88044	NUT, PLAIN, HEXAGON.....	EA	1
5-1	109	PBFZZ	5310-00-187-2400	AN960D616	88044	WASHER, FLAT.....	EA	2
5-1	110	PBFZZ	5305-00-983-9450	MS16998-76	96906	SCREW, CAP, SOCKET HE.....	EA	1
5-1	111	PBFZZ	6685-00-963-7250	29217-1	55820	THERMOCOUPLE, IMMERS.....	EA	1
5-1	112	XDFZZ		47708-0	55820	BRACKET, THERMOCOUPLE.....	EA	1
5-1	113	PBFZZ	5310-00-061-7326	MS21045-3	96906	NUT, SELF-LOCKING, HE.....	EA	2
5-1	114	PBFZZ	5310-00-167-0818	AN960-10	88044	WASHER, FLAT.....	EA	2
5-1	115	PBFZZ	5306-00-274-2119	AN3-5A	88044	BOLT, MACHINE	EA	2
5-1	116	PBFZZ	5935-00-990-6295	MS3105-20	96906	DUMMY, CONNECTOR, REC	EA	1
5-1	117	PBFZZ	5310-00-851-4944	MS21044N04	96906	NUT, SELF-LOCKING, HE.....	EA	4

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-1	118	PBFZZ	5310-00-167-0831	AN960-4L	88044	WASHER, FLAT.....	EA	4
5-1	119	PBFZZ	5305-00-151-1380	AN515-4R10	88044	SCREW, MACHINE.....	EA	4
5-1	120	XDFZZ		RS161-080	86831	CHAIN ASSY	EA	3
5-1	121	XDFZZ		104653-0	55820	BOLT WING ASSY	EA	1
5-1	122	XDFZZ		104652-0	55820	BRACKET SUPPORT.....	EA	1
5-1	123	XDFZZ		104654-0	55820	BOLT SHOULDER ASSY	EA	1
5-1		XDFZZ		104654-1	55820	. BOLT SHOULDER	EA	1
5-1		XDFZZ		104654-2	55820	. NUT WING.....	EA	1
5-1	124	XDFZZ		47696-100	55820	FRAME ASSY	EA	1
5-1	125	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	126	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	4
5-1	127	PBFZZ	5306-00-208-3636	AN6-10A	88044	BOLT, MACHINE.....	EA	4
5-1	128	XDFZZ		47710-1	55820	CHANNEL SUPPORT.....	EA	2
5-1	129	PBFZZ	5310-00-982-4908	MS21045-6	96906	NUT, SELF-LOCKING, HE.....	EA	4
5-1	130	PBFZZ	5310-00-167-0821	AN960-616	88044	WASHER, FLAT.....	EA	4
5-1	131	PBFZZ	5306-00-531-8979	AN6-7A	88044	BOLT, MACHINE.....	EA	4
5-1	132	XDFZZ		47903-2	55820	PLATE I.D.....	EA	1
5-1		PBFZZ	5320-00-140-4965	AD64AH	07707	RIVET, BLIND	EA	4
5-1	133	XDFFF		47693-100	55820	TRAILER ASSY SEE FIGURE 5-3 FOR BREAKDOWN	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
						GROUP 02 CONTROL CONSOLE ASSEMBLY		
5-2		XDFZZ		105439-100	55820	CONSOLE ASSY, CONTRO.....	EA	1
5-2	1	PBFZZ	5310-00-889-2543	MS21045-04	96906	. NUT, SELF-LOCKING, HE.....	EA	4
5-2	2	PBFZZ	5310-00-950-1310	MS27183-4	96906	. WASHER, FLAT	EA	8
5-2	3	PBFZZ	5305-00-983-6730	MS35206-218	96906	. SCREW, MACHINE	EA	4
5-2	4	XDFZZ		105436-10	55820	. HARNESS ASSY	EA	1
5-2	5	XDFZZ		105436-20	55820	. HARNESS ASSY	EA	1
5-2	6	XDFZZ		105802-1	55820	. BRKT ELEC DISC	EA	1
5-2	7	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	3
5-2	8	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	3
5-2	9	PBFZZ	5305-00-993-1848	MS35207-265	96906	. SCREW, MACHINE	EA	3
5-2	10	PBFZZ	5905-00-114-4978	0560A	44655	. RESISTOR, ADJUSTABLE	EA	1
5-2	11	XDFZZ	5905-00-355-8575	9	44655	. BRACKET MTG.....	EA	2
5-2	12	PBFZZ	5310-00-889-2544	MS21045-06	96906	. NUT, SELF-LOCKING, HE.....	EA	2
5-2	13	PBFZZ	5310-00-082-1404	MS27183-6	96906	. WASHER, FLAT	EA	4
5-2	14	PBFZZ	5305-00-984-4988	MS35206-228	96906	. SCREW, MACHINE	EA	8
5-2	15	XDFZZ		AN5534-2	96906	. RESISTOR	EA	1
5-2	16	PBFZZ	5310-00-889-2549	MS21045-08	96906	. NUT, SELF-LOCKING, HE.....	EA	36
5-2	17	PBFZZ	5310-00-809-8544	MS27183-7	96906	. WASHER, FLAT	EA	4
5-2	18	PBFZZ	5305-00-984-6195	MS35206-247	96906	. SCREW, MACHINE	EA	2
5-2	19	PBFZZ	5961-00-905-7500	368M	05277	. SEMICONDUCTOR DEVIC	EA	1
5-2	20	XDFZZ		38141-2	55820	. BRACKET	EA	1
5-2	21	PBFZZ	5310-00-889-2549	MS21045-08	96906	. NUT, SELF-LOCKING, HE.....	EA	2
5-2	22	PBFZZ	5310-00-809-8544	MS27183-7	96906	. WASHER, FLAT	EA	4
5-2	23	PBFZZ	5310-00-984-6193	MS35206-245	96906	. SCREW, MACHINE	EA	2
5-2	24	PBFZZ	5945-00-681-9716	MS24568D1	96906	. RELAY, ELECTROMAGNET.....	EA	8
5-2	25	PBFZZ	5310-00-889-2549	MS21045-08	96906	. NUT, SELF-LOCKING, HE.....	EA	32
5-2	26	PBFZZ	5310-00-809-8544	MS27183-7	96906	. WASHER, FLAT	EA	64
5-2	27	PBFZZ	5305-00-984-6193	MS35206-245	96906	. SCREW, MACHINE	EA	32
5-2	28	PBFZZ	6110-00-912-3992	51065-014	31435	. REGULATOR, VOLTAGE.....	EA	1
5-2	29	PBFZZ	5945-00-927-2785	A700AW	74063	. RELAY, ELECTROMAGNET.....	EA	1
5-2		XDFZZ		107682-1	55820	. BAR BUS.....	EA	1
5-2	30	PBFZZ	5945-01-080-7228	AM711CJ	74063	. RELAY	EA	1
5-2	31	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	12
5-2	32	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	24
5-2	33	PBFZZ	5305-00-993-1848	MS35207-265	96906	. SCREW, MACHINE	EA	12
5-2	34	XDFZZ	6625-00-581-8317	8200-120	91812	. SHUNT, INSTRUMENT.....	EA	1
5-2	35	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	2
5-2	36	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	4
5-2	37	PBFZZ	5305-00-995-3444	MS35207-266	96906	. SCREW, MACHINE	EA	2

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-2	38	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	2
5-2	39	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	4
5-2	40	PBFZZ	5305-00-993-1851	MS35207-267	96906	. SCREW, MACHINE	EA	1
5-2	41	PBFZZ		51500-098	31435	. REGULATOR	EA	1
5-2	42	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	4
5-2	43	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	8
5-2	44	PBFZZ	5305-00-993-1848	MS35207-265	96906	. SCREW, MACHINE	EA	4
5-2	45	PBFZZ		13MC37-206-60	82647	. CIRCUIT BREAKER	EA	1
5-2	46	PBFZZ	5305-00-984-4988	MS35206-228	96906	. SCREW, MACHINE	EA	6
5-2	47	PBFZZ	5310-00-045-4007	MS35338-41	96906	. WASHER, LOCK.....	EA	6
5-2	48	PBFZZ	5310-00-082-1404	MS27183-6	96906	. WASHER, FLAT	EA	6
5-2	49	XDFZZ		105795-1	55820	. BRACKET	EA	1
5-2	50	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	4
5-2	51	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	8
5-2	52	PBFZZ	5305-00-993-1848	MS35207-265	96906	. SCREW, MACHINE	EA	4
5-2	53	PBFZZ	5950-00-645-7193	880-6-1001	65092	. TRANSFORMER, CURRENT.....	EA	3
5-2	54	PBFZZ	5310-00-061-7326	MS21045-3	96906	. NUT, SELF-LOCKING, HE.....	EA	6
5-2	55	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	12
5-2	56	PBFZZ	5305-00-989-7434	MS35207-263	96906	. SCREW, MACHINE	EA	6
5-2	57	PBFZZ	5945-00-615-7493	B138FH	74063	. RELAY, ELECTROMAGNET.....	EA	1
5-2	58	PBFZZ	5310-00-061-7324	MS21045-3	96906	. NUT, SELF-LOCKING	EA	4
5-2	59	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	8
5-2	60	PBFZZ	5305-00-993-1848	MS35207-265	96906	. SCREW, MACHINE	EA	4
5-2	61	PBFZZ	5310-00-999-4031	MS20341-6S	96906	. NUT, PLAIN, HEXAGON	EA	10
5-2	62	PBFZZ	5310-00-045-4007	MS35338-41	96906	. WASHER, LOCK.....	EA	10
5-2	63	PBFZZ	5310-00-082-1404	MS27183-6	96906	. WASHER, FLAT	EA	10
5-2	64	XDFZZ		MS27212-1-5	96906	. BOARD TERMINAL	EA	2
5-2	65	PBFZZ	5310-00-889-2543	MS21045-04	96906	. NUT, SELF-LOCKING, HE.....	EA	4
5-2	66	PBFZZ	5310-00-950-1310	MS27183-4	96906	. WASHER, FLAT	EA	8
5-2	67	PBFZZ	5305-00-983-6730	MS35206-218	96906	. SCREW, MACHINE	EA	4
5-2	68	PBFZZ		K2125	31822	. AMMETER A.C.	EA	1
5-2	69	PBFZZ		K2123	31822	. VOLTMETER A.C.	EA	1
5-2	70	XDFZZ		4-033	50290	. METER FREQ	EA	1
5-2	71	PBFZZ	5310-00-889-2544	MS21045-06	96906	. NUT, SELF-LOCKING, HE.....	EA	3
5-2	72	PBFZZ	5310-00-082-1404	MS27183-6	96906	. WASHER, FLAT	EA	3
5-2	73	PBFZZ	5305-00-984-4993	MS35207-233	96906	. SCREW, MACHINE	EA	6
5-2	74	PBFZZ	6210-00-926-6905	MS25041-6-327	96906	. LIGHT, INDICATOR	EA	6
5-2	75	PBFZZ	6220-00-557-3023	MIL-I-25623 TYPE MU-1	81349	. INDICATOR, ELECTRICA.....	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-2	76	XDFZZ		MIL-I-9443 TYPE MU-1	81349	. INDICATOR TEMPERATURE.....	EA	1
5-2	78	PBFZZ		K2124	31822	. VOLT-AMMETER	EA	1
5-2	79	PBFZZ	5310-00-889-2544	MS21045-06	96906	. NUT, SELF-LOCKING, HE.....	EA	3
5-2	80	PBFZZ	5310-00-082-1404	MS27183-6	96906	. WASHER, FLAT	EA	3
5-2	81	PBFZZ	5305-00-984-4993	MS35206-233	96906	. SCREW, MACHINE	EA	3
5-2	82	PBFZZ	6210-00-900-6744	MS25041-7-327	96906	. LIGHT, INDICATOR	EA	2
5-2	83	PBFZZ	5930-00-655-4241	MS24524-23	96906	. SWITCH, TOGGLE.....	EA	1
5-2	84	PBFZZ	5930-00-011-7872	MS27407-5	96906	. SWITCH, TOGGLE.....	EA	1
5-2	85	PBFZZ	5930-00-660-3955	MS24525-26	96906	. SWITCH, TOGGLE.....	EA	1
5-2	86	PBFZZ	5925-01-681-4952	MS25244-10	96906	. CIRCUIT BREAKER.....	EA	2
5-2	87	PBFZZ	6210-00-782-5606	MS25041-8-327	96906	. LIGHT, INDICATOR	EA	1
5-2	88	PBFZZ	5930-00-683-1625	MS24523-31	96906	. SWITCH, TOGGLE.....	EA	1
5-2	89	XDFZZ		PN67A	82121	. SWITCH.....	EA	1
5-2	90	PBFZZ	5305-00-984-6211	MS35206-264	96906	. SCREW, MACHINE	EA	4
5-2	91	PBFZZ	5310-00-045-3296	MS35338-43	96906	. WASHER, LOCK.....	EA	4
5-2	92	PBFZZ	5310-00-823-8804	MS27183-9	96906	. WASHER, FLAT	EA	4
5-2	93	XDFZZ		105596-1	55820	. PANEL CONSOLE.....	EA	1
5-2	94	PBFZZ	5305-00-984-6193	MS35206-245	96906	. SCREW, MACHINE	EA	6
5-2	95	PBFZZ	5310-00-809-8544	MS27183-7	96906	. WASHER, FLAT	EA	12
5-2	96	PBFZZ	5975-00-583-2960	2559	59730	. BOX CONNECTOR, ELECT.....	EA	1
5-2	97	PBFZZ	5975-00-752-2703	1945	59730	. CHASE NIPPLE, CONDUI.....	EA	2
5-2	98	PBFZZ	5975-00-152-1071	144	59730	. LOCKNUT, ELECTRICAL.....	EA	3
5-2	99	XDFZZ		105436-30	55820	. HARNESS ASSY	EA	1
5-2	100	XDFZZ		105436-30	55820	. HARNESS	EA	1
5-2	101	XDFZZ		105595-1	55820	. PLATE INSTR.....	EA	1
5-2	102	XDFZZ		44163-2	55820	. PLATE I.D.....	EA	1
5-2		PBFZZ	5320-00-754-0822	MS20470AD4-5	96906	. RIVET, SOLID.....	EA	4
5-2		XDFZZ		105437-100	55820	. CONSOLE ASSY	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
						GROUP 03 TRAILER ASSY, MOBILE TEST STAND		
5-3		XDFZZ		47693-100	55820	TRAILER ASSY	EA	1
5-3		XDFZZ		107724-0	55820	.. TRAILER ASSY	EA	1
5-3	1	PBFZZ	1670-00-294-2954	48B7796	88042	.. RING, CARGO TIE-DOWN	EA	4
5-3	2	PBFZZ	5310-00-732-0558	MS51967-8	96906	.. NUT, PLAIN, HEXAGON	EA	8
5-3	3	PBFZZ	5310-00-820-6652	MS35338-46	96906	.. WASHER, LOCK	EA	8
5-3	4	XDFZZ		MS90725-60	96906	.. SCREW, CAP, HEX HEAD	EA	12
5-3	5	PBFZZ	9905-00-205-2795	MS35387-1	96906	.. REFLECTOR, INDICATING, RED	EA	4
5-3	6	PBFZZ	9905-00-202-3639	MS35387-2	96906	.. REFLECTOR, INDICATING, AMBER	EA	4
5-3	7	PBFZZ	5310-00-761-6882	MS51967-2	96906	.. NUT, PLAIN, HEXAGON	EA	16
5-3	8	PBFZZ	5310-00-582-5965	MS35338-44	96906	.. WASHER, LOCK	EA	16
5-3	9	PBFZZ	5305-00-988-1725	MS35206-281	96906	.. SCREW, MACHINE	EA	16
5-3	10	XDFZZ		107724-17	55820	.. PLATE	EA	8
5-3	11	PBFZZ	5315-00-842-3044	MS24665-283	96906	.. PIN, COTTER	EA	1
5-3	12	XDFZZ	5315-00-061-8534	C2	72741	.. PIN, STRAIGHT, HEADED	EA	1
5-3	13	XDFZZ	5315-00-061-8572	Y3	72741	.. CLEVIS	EA	1
5-3	14	XDFZZ		107724-15	55820	.. ROD, THREADED	EA	1
5-3	15	PBFZZ	5310-00-880-7746	MS51968-5	96906	.. NUT, PLAIN, HEXAGON	EA	1
5-3	16	XDFZZ	5315-00-061-8572	Y3	72741	.. CLEVIS	EA	1
5-3	17	PBFZZ	5315-00-842-3044	MS24665-283	96906	.. PIN, COTTER	EA	1
5-3	18	PBFZZ	5310-00-167-0820	AN960-516	88044	.. WASHER, FLAT	EA	1
5-3	19	XDFZZ		MS20392-4C4L	96906	.. PIN, STRAIGHT, HEADED	EA	1
5-3	20	XDFZZ		31110	52793	.. LEVER ASSY, BRAKE	EA	1
5-3	21	PBFZZ	5305-00-269-3216	MS90725-66	96906	.. SCREW, CAP, HEXAGON H	EA	2
5-3	22	PBFZZ	5310-00-820-6652	MS35338-46	96906	.. WASHER, LOCK	EA	8
5-3	23	PBFZZ	5315-00-842-3044	MS24665-283	96906	.. PIN, COTTER	EA	1
5-3	24	PBFZZ	5315-00-010-3496	C7	72741	.. PIN, STRAIGHT, HEAD ED	EA	4
5-3	25	XDFZZ	5340-00-052-1492	Y4	72741	.. YOKE, SPECIAL	EA	4
5-3	26	PBFZZ	5310-00-732-0559	MS51968-8	96906	.. NUT, PLAIN, HEXAGON	EA	2
5-3	27	XDFZZ		107724-13	55820	.. ROD	EA	2
5-3	28	XDFZZ		7004	10424	.. BLOCK, PILLOW	EA	2
5-3	29	XDFZZ		MS90725-60	96906	.. SCREW, CAP, HEX HEAD	EA	12
5-3	30	PBFZZ	5310-00-820-6652	MS35338-46	96906	.. WASHER, LOCK	EA	8
5-3	31	XDFZZ		MS9048-234	96906	.. PIN, SPRING	EA	3
5-3	32	XDFZZ		7005	52793	.. ARM, LEVER	EA	3
5-3	33	XDFZZ		107724-14	55820	.. ROD	EA	1
5-3	34	PBFZZ	4820-00-174-0339	MS35782-3	96906	.. COCK, DRAIN	EA	1
5-3	35	XDFZZ		107724-10	55820	.. CAP ASSY, FUEL TANK	EA	1
5-3	36	XDFZZ		ND2420	80900	.. FILLER NECK	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-3	37	PBFZZ	5305-00-068-0523	MS24621-42	96906	.. SCREW, TAPPING, THREA	EA	6
5-3	38	PBFZZ	5310-00-014-5850	MS27183-42	96906	.. WASHER, FLAT	EA	6
5-3	39	XDFZZ		107724-18	55820	.. GASKET	EA	1
5-3	40	XDFZZ		107724-8	55820	.. TUBE	EA	1
5-3	41	XDFZZ		AN817-2D	88044	.. NUT, TUBE COUPLING	EA	1
5-3	42	PBFZZ	4730-00-186-9959	MS20822-2D	96906	.. ELBOW, PIPE TO TUBE	EA	1
5-3	43	PBFZZ	5310-00-768-0318	MS51967-14	96906	.. NUT, PLAIN, HEXAGON	EA	16
5-3	44	XDFZZ		107724-21	55820	.. PLATE	EA	4
5-3	45	XDFZZ		107724-19	55820	.. U-BOLT	EA	4
5-3	46	PBFZZ	5310-00-768-0318	MS51967-14	96906	.. NUT, PLAIN, HEXAGON	EA	16
5-3	47	PBFZZ	5310-00-584-5272	MS35338-48	96906	.. WASHER, LOCK	EA	2
5-3	48	PBFZZ	5305-00-782-9495	MS90725-111	96906	.. SCREW, CAP, HEXAGON H	EA	2
5-3	49	PBFZZ	5310-00-761-6882	MS51967-2	96906	.. NUT, PLAIN, HEXAGON	EA	16
5-3	50	PBFZZ	5310-00-582-5965	MS35338-44	96906	.. WASHER, LOCK	EA	16
5-3	51	PBFZZ	5305-00-988-7304	MS24667-30	96906	.. SCREW, CAP, SOCKET HE	EA	24
5-3	52	XDFZZ		20672	52793	.. GEAR RUNNING SEE FIGURE 5-4 FOR BREAKDOWN	EA	1
5-3	53	XDFZZ		107724-16	55820	.. MOUNT, FRONT	EA	1
5-3	54	XDFZZ		107724-1	55820	.. FRAME	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
GROUP 04 RUNNING GEAR ASSEMBLY								
5-4		XDFFF		20672	52793	GEAR RUNNING	EA	1
5-4		XDFFF		20842	52793	.LATCH ASSY, TOWBAR	EA	1
5-4	3	PBFZZ	5315-00-839-5822	MS24665-353	96906	..PIN, COTTER	EA	2
5-4	4	XDFZZ		21013	52793	..PIN, PIVOT.....	EA	1
5-4		XDFZZ		21012	52793	..LATCH, TOWBAR	EA	1
5-4	7	XDFZZ		21014	52793	..BUSHING	EA	1
5-4	8	XDFFF		6954-1	52793	.TOWBAR ASSY	EA	1
5-4	9	XDFZZ	5315-00-012-0123	MS24665-355	96905	..PIN, COTTER	EA	2
5-4	10	XDFZZ		C6954B	52573	..PIN, PIVOT.....	EA	1
5-4	11	PBFZZ	4730-00-050-4208	1610B	57733	.FITTING, LUBRICATION	EA	5
5-4	12	XDFZZ	5315-00-234-1664	MS24665-495	96906	.PIN, COTTER	EA	4
5-4	13	XDFZZ		6812B	52793	.PIN, CLEVIS.....	EA	4
5-4	14	XDFZZ	5340-00-870-8978	6809	52793	.CLEVIS, ROD END.....	EA	4
5-4	15	XDFZZ	5310-00-167-1309	AN316-12R	88044	.NUT, PLAIN, HEXAGON	EA	2
5-4	16	XDFZZ		6899-14	52793	.ROD, TIE.....	EA	2
5-4	17	XDFZZ		MS24665-500	96906	.PIN	EA	1
5-4	18	XDFZZ		6998	52793	.PIN, PIVOT	EA	1
5-4	19	XDFZZ		20195	52793	.CENTER STEERING ARM.....	EA	1
5-4	20	PBFZZ	2610-00-050-9840	08T11842000	80244	.TIRE, PNEUMATIC.....	EA	2
5-4	21	PBFZZ	2610-00-269-7354	MS35392-52	96906	.INNER TUBE, PNEUMATI.....	EA	2
5-4		PBFZZ	2530-00-893-0568	MS24328-1	96906	.HUB, BODY	EA	5
5-4	22	PBFZZ	5310-00-685-2246	MS35690-822	96906	..NUT, PLAIN, HEXAGON	EA	5
5-4	23	PBFZZ	5310-00-584-5272	AN935-816	88044	..WASHER, LOCK.....	EA	5
5-4	24	XDFZZ		30796	52793	..STUD, HUB.....	EA	2
5-4	25	XDFZZ		6394	52793	..CAP, HUB.....	EA	1
5-4	26	PBFZZ	5315-00-298-1480	AN380-4-7	88044	..PIN, COTTER	EA	1
5-4	27	XDFZZ	5310-00-176-8117	AN320-16	88044	..NUT, PLAIN, SLOTTED, H.....	EA	1
5-4	28	XDFZZ	5310-00-639-3876	5316	52793	..WASHER, KEY	EA	1
5-4	29	XDFZZ		15123	52793	..CONE, BEARING	EA	1
5-4	30	XDFZZ		15245	52793	..CUP, BEARING.....	EA	1
5-4	31	XDFZZ	5330-00-725-2188	13021	52793	..SEAL, PLAIN ENCAS.....	EA	1
5-4	32	XDFZZ		24720	52793	..CONE, BEARING.....	EA	1
5-4	33	XDFZZ		24780	52793	..CUP, BEARING.....	EA	1
5-4	34	XDFZZ		6404-AL	52793	..CANTILEVER MOUNTING HUB, LARGE	EA	1
5-4		XDFFF		6408-AL	52793	.SHELL ASSY	EA	2
5-4	35	XDFZZ		AN325-6	88044	..NUT.....	EA	8
5-4	36	XDFZZ		MS35338-46	96906	..WASHER, LOCK.....	EA	16
5-4	37	XDFZZ		60-6-7	52793	..BOLT, HEXAGON HEAD	EA	8
5-4	38	XDFZZ		6408-1AL	52793	..SHELL-HALF.....	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
5-4	39	XDFZZ		6408-2AL	52793	..SHELL-HALF	EA	1
5-4	40	XDFZZ		AN315-6	88044	..NUT.....	EA	2
5-4	41	XDFZZ		MS35338-46	96906	..WASHER, LOCK.....	EA	2
5-4	42	XDFZZ	5305-00-269-2810	MS90726-68	96906	..SCREW, CAP, HEXAGON H	EA	2
5-4	43	XDFZZ		6813	52793	..PIN, KING.....	EA	2
5-4		XDFZZ		20709	52793	..STEERING KNUCKLE	EA	2
5-4	44	PBFZZ	4730-00-050-4208	1610B	57733	..FITTING, LUBRICATION.....	EA	2
5-4	45	XDFZZ		20200	52793	..SPINDLE.....	EA	1
5-4	46	XDFZZ		6805	52793	..KNUCKLE.....	EA	1
5-4	47	XDFZZ		20720	52793	..AXLE, FRONT	EA	1
5-4	48	PBFZZ	2610-00-050-9840	08T11842000	80244	..TIRE, PNEUMATIC.....	EA	2
5-4	49	PBFZZ	2610-00-269-7354	MS35392-52	96906	..INNER TUBE, PNEUMATI.....	EA	2
5-4		PBFZZ	2530-00-893-0568	MS24328-1	96906	..HUB, BODY	EA	2
5-4	50	PBFZZ	5310-00-685-2246	MS35690-822	96906	..NUT, PLAIN, HEXAGON	EA	5
5-4	51	PBFZZ	5310-00-584-5272	AN935-816	88044	..WASHER, LOCK.....	EA	5
5-4	52	XDFZZ		30796	52793	..STUD, HUB.....	EA	5
5-4	53	XDFZZ		6394	52793	..CAP, HUB.....	EA	1
5-4	54	PBFZZ	5315-00-298-1480	AN380-4-7	88044	..PIN, COTTER	EA	1
5-4	55	XDFZZ	5310-00-176-8117	AN320-16	88044	..NUT, PLAIN, SLOTTED, H.....	EA	1
5-4	56	XDFZZ	5310-00-639-3876	5316	52793	..WASHER, KEY	EA	1
5-4	57	XDFZZ		15123	52793	..CONE, BEARING.....	EA	1
5-4	58	XDFZZ		15245	52793	..CUP, BEARING.....	EA	1
5-4	59	XDFZZ	5330-00-725-2188	13021	52793	..SEAL, PLAIN ENCAS.....	EA	1
5-4	60	XDFZZ		24720	52793	..CONE, BEARING.....	EA	1
5-4	61	XDFZZ		24780	52793	..CUP, BEARING.....	EA	1
5-4	62	XDFZZ		6404-AL	52793	..CANTILEVER MOUNTING HUB, LARGE	EA	1
5-4		XDFZZ		6408-AL	52793	..SHELL ASSY	EA	2
5-4	63	XDFZZ		AN325-6	88044	..NUT.....	EA	8
5-4	64	XDFZZ		MS35338-46	96906	..WASHER, LOCK.....	EA	16
5-4	65	XDFZZ		60-6-7	52793	..BOLT, HEXAGON HEAD	EA	8
5-4	66	XDFZZ		6408-1AL	52793	..SHELL-HALF	EA	1
5-4	67	XDFZZ		6408-2AL	52793	..SHELL-HALF	EA	1
5-4	68	XDFZZ		30447	52793	..DRUM, PARKING BRAKE.....	EA	2
5-4		XDFFF		20694	52793	..BRAKE ASSY	EA	1
5-4		XDFFF		302283	14892	..BRAKE, LH	EA	1
5-4		XDFFF		302284	14892	..BRAKE, RH.....	EA	1
5-4	72	XDFZZ		41545	14892	...SPRING, SHOE RETURN	EA	1
5-4	73	XDFZZ		48069	14892	...NUT, ANCHOR PIN.....	EA	4
5-4	74	XDFZZ		41665	14892	...WASHER, LOCK.....	EA	2
5-4	75	XDFZZ		39953	14892	...PIN, ANCHOR	EA	2

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
							<i>USABLE ON CODES</i>	
5-4	76	XDFZZ		39956	14892	...PLATE, ANCHOR PIN	EA	1
5-4	77	XDFZZ		41876	14892	...CAM, ANCHOR PIN	EA	2
5-4	78	XDFZZ		41485	14892	...SHOE & LINING ASSY	EA	1
5-4	79	XDFZZ		44489	14892	...SHOE & LINING ASSY	EA	1
5-4	80	XDFZZ		901626-K6	14892	...NUT, ECCENTRIC	EA	1
5-4	81	XDFZZ		901008	14892	...WASHER, LOCK	EA	1
5-4	82	XDFZZ		45771	14892	...ECCENTRIC, SHOE ADJUSTING	EA	1
5-4	83	XDFZZ		48646	14892	...LEVER ASSY, BRAKE ACTUATING	EA	1
5-4	84	XDFZZ		48647	14892	...STRUT, BRAKE ACTUATING LEVER, LH	EA	1
5-4	84	XDFZZ		48648	14892	...STRUT, BRAKE ACTUATING LEVER, RH	EA	1
5-4	85	XDFZZ		47313	14892	...PLATE ASSY, BACKING LH	EA	1
5-4	85	XDFZZ		47314	14892	...PLATE ASSY, BACKING RH	EA	1
5-4	86	XDFZZ		43886	14892	...PLATE, REINFORCEMENT	EA	1
5-4		XDFZZ		20712	52793	..STABILIZER ASSY	EA	2
5-4	87	XDFZZ		20712-5	52793	..LOCKNUT, 5/8-18NF	EA	2
5-4	88	XDFZZ		20712-3	52793	..WASHER 1-3/8X5/8 ID	EA	4
5-4	89	XDFZZ		20712-4	52793	..BOLT, MACHINE	EA	1
5-4	90	XDFZZ		20712-2	52793	..BUSHING, RUBBER	EA	2
5-4	91	XDFZZ		20715	52793	..U-BRACKET	EA	1
5-4	92	XDFZZ		20714	52793	..BAR, STABILIZER	EA	1
5-4	93	XDFZZ	5315-00-298-1499	MS24665-360	96906	..PIN, COTTER	EA	1
5-4	94	PBFZZ	4730-00-050-4208	1610B	57733	..FITTING, LUBRICATION	EA	1
5-4	95	XDFZZ		20716	52793	..PIN, TRUNNION	EA	1
5-4	96	XDFZZ		20717	52793	..PLATE ASSY	EA	2
5-4	97	XDFZZ		20723	52793	..AXLE, REAR	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
						<i>USABLE ON CODES</i>		
						GROUP 05 SPEED INCREASER ASSEMBLY		
5-5		XDFDD	4920-00-851-5522	47954-0	55820	SPEED INCREASER	EA	1
5-5	1	XDDZZ	4920-00-851-1442	47969-1	55820	.SHAFT, INPUT	EA	1
5-5	2	XDDZZ	5330-00-938-2035	451845J	76680	.SEAL, PLAIN ENCASED	EA	3
5-5	3	PBFZZ	5365-00-857-2068	A734	97484	.PLUG, MACHINE THREAD	EA	1
5-5	4	PBFZZ	5330-00-531-2068	NAS617-8	80205	.PACKING, PREFORMED	EA	3
5-5	5	PBFZZ	6680-00-857-2397	S53	97484	.INDICATOR, SIGHT, LIQ	EA	1
5-5	6	PBFZZ	1560-00-895-9360	A862	97484	.VENT, BREATHER	EA	1
5-5	7	PBFZZ	5340-00-932-5194	B7238	97484	.PLUG, MACHINE THR	EA	1
5-5	8	PBFZZ	5330-00-531-2071	NAS617-12	80205	.PACKING, PREFORMED	EA	1
5-5	9	PBFZZ	5305-00-253-5606	AN535-0-2	88044	.SCREW, DRIVE	EA	8
5-5	10	XDFZZ		47975-1	55820	.PLATE IDENTIFICATIO	EA	1
5-5	11	XDFZZ		44173-1	55820	.PLATE DATA	EA	1
5-5	12	PBFZZ	5310-00-275-2088	MS20365-624C	96906	.NUT, SELF-LOCKING, HE	EA	6
5-5	13	PBFZZ	5310-00-167-0837	AN960-616L	88044	.WASHER, FLAT	EA	6
5-5	14	XDFZZ		47972-1	55820	.SHIM INPUT HSG	EA	1
5-5	15	PBFZZ	5330-00-844-2447	MS29561-241	96906	.PACKING, PREFORME	EA	1
5-5	16	XDFZZ		47957-1	55820	.HOUSING ENGINE SUPO	EA	1
5-5	17	XDFZZ		RR256	80755	.RING RETAINING	EA	2
5-5	18	PBFZZ	5310-00-185-6464	MS19068-071	96906	.NUT, PLAIN, ROUND	EA	1
5-5	19	PBFZZ	5310-00-186-0966	MS19070-071	96906	.WASHER, KEY	EA	1
5-5	20	PBFZZ	5305-00-978-9394	MS16997-99	96906	.SCREW, CAP, SOCKET HE	EA	3
5-5	21	XDFZZ		47971-1	55820	.SHIM GENERATOR PAD	EA	1
5-5	22	PBFZZ	5306-00-225-8497	MS90725-32	96906	.BOLT, MACHINE	EA	10
5-5	23	PBFZZ	5310-00-835-2041	MS9276-11	96906	.WASHER, KEY	EA	10
5-5	24	XDFZZ		47964-1	55820	.CLAMP BRG INPUT SHA	EA	2
5-5	25	XDFZZ		35BD02	70413	.BEARING BALL	EA	1
5-5	26	PBFZZ	5305-00-269-3209	MS90725-58	96906	.SCREW, CAP, HEXAGON H	EA	1
5-5	27	PBFZZ	5310-00-104-5143	MS9726-12	96906	.WASHER, KEY	EA	1
5-5	28	XDFZZ		47966-1	55820	.CLAMP-BEVEL GEAR	EA	1
5-5	29	XDFZZ		47974-1	55820	.KEY, MACHINE	EA	1
5-5	30	XDFZZ		47963-1	55820	.SLINGER OIL	EA	1
5-5	31	XDFZZ		47965-1	55820	.CLAMP	EA	1
5-5	32	XDFZZ		35RN03K	70413	.BEARING ROLLER	EA	1
5-5	33	XDDZZ		47961-1	55820	.SPACER BRG INNER	EA	1
5-5	34	XDDZZ		47962-1	55820	.SPACER BRG OUTER	EA	1
5-5	35	XDFZZ		35BN02DUU	70413	.BEARING BALL-DUPLEX	EA	1
5-5	36	XDFZZ		47960-1	55820	.SHAFT GENERATOR DR	EA	1
5-5	37	PBFZZ	5315-00-012-4553	MS35756-17	96906	.KEY, WOODRUFF	EA	1
5-5	38	XDFZZ		47959-1	55820	.SHAFT MAIN	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
5-5	39	XDFZZ		35BC10D3	70413	.BEARING BALL.....	EA	1
5-5	40	XDFZZ		RR243	80756	.RING RETAINING.....	EA	1
5-5	41	PBFZZ	5330-00-726-1235	MS29561-261	96906	.PACKING, PREFORME.....	EA	1
5-5	42	XDFZZ		47956-1	55820	.GEAR SUPPORT GEN DR.....	EA	1
5-5	43	XDDDD		47958-0	55820	.GEAR ASSY.....	EA	1
5-5	44	XDDZZ		47958-1	55820	.GEAR SPIRAL BEVEL.....	EA	1
5-5	45	XDDZZ		47958-2	55820	.GEAR SPIRAL BEVEL.....	EA	1
5-5	46	XDFFF		47955-0	55820	.HOUSING ASSY MAIN.....	EA	1
5-5	47	XDFZZ		MS16555-41	96906	..PIN DOWEL.....	EA	1
5-5	48	XDFZZ		AN151443	88044	..STUD-STEPPED.....	EA	6
5-5	49	XDFZZ		AN158991	88044	..STUD-STEPPED.....	EA	8
5-5	50	XDFZZ		AN151317	88044	..STUD-STEPPED.....	EA	4
5-5	51	XDFZZ		47955-1	55820	..CASTING.....	EA	1

SECTION II

TM 55-4920-424-13&P

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION	U/M	QTY INC IN UNIT
							<i>USABLE ON CODES</i>	
						GROUP 06 FUEL FILTER ASSEMBLY		
5-6		XDFFF	2910-00-902-4468	46424-1	55820	FILTER ASSEMBLY, HYD	EA	1
5-6	1	XDFZZ		30053-3	81321	.CASE, FILTER ASSY	EA	1
5-6	2	PBFZZ	4330-00-732-6535	51399	81321	.FILTER ELEMENT, FLUI.....	EA	1
5-6	3	PBFZZ	5365-00-835-4911	32152	81321	.SPACER, RING	EA	1
5-6	4	PBFZZ	5330-00-256-0190	30323	81321	.PACKING, PREFORMED.....	EA	1
5-6	5	XDFZZ		30104	81321	.HEAD, FITER ASSY	EA	1
5-6	6	XDFZZ		30107	81321	.PLUG RELIEF VALVE.....	EA	2
5-6	7	PBFZZ	5330-00-804-5695	36978-6	81321	.PACKING, PREFORME.....	EA	2
5-6	8	XDFZZ		30106	81321	.GUIDE SPRING.....	EA	2
5-6	9	XDFZZ		30442	81321	.SPRING RELIEF VALVE.....	EA	2
5-6	10	XDFZZ		30105	81321	.PISTON RELIEF VALVE.....	EA	2

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5310-00-010-3496	5-3	24	5310-00-186-0966	5-5	19
5930-00-011-7872	5-2	84	4730-00-186-9959	5-3	42
5315-00-012-0123	5-4	9	4730-00-187-0486	5-1	18
5315-00-012-4553	5-5	37	5310-00-187-2400	5-1	109
5310-00-014-5850	5-3	38	4730-00-194-1121	5-1	21
2835-00-015-8630	5-1	61	9905-00-202-3639	5-3	6
5310-00-045-3296	5-2	91	9905-00-205-2795	5-3	5
5310-00-045-4007	5-2	47	5306-00-208-3636	5-1	41
5310-00-045-4007	5-2	62	5306-00-208-3636	5-1	86
4730-00-050-4208	5-4	11	5306-00-208-3636	5-1	127
4730-00-050-4208	5-4	44	5306-00-225-8497	5-5	22
4730-00-050-4208	5-4	94	4720-00-226-1024	5-1	57
2610-00-050-9840	5-4	20	4730-00-231-3028	5-1	44
2610-00-050-9840	5-4	48	5315-00-234-1664	5-4	12
5340-00-052-1492	5-3	25	4730-00-235-1503	5-1	23
5310-00-061-7325	5-1	30	5305-00-253-5606	5-5	9
5310-00-061-7325	5-1	34	5330-00-256-0190	5-6	4
5310-00-061-7325	5-1	46	5330-00-263-8030	5-1	19
5310-00-061-7325	5-1	59	5330-00-263-8031	5-1	24
5310-00-061-7326	5-1	96	5305-00-269-2810	5-4	42
5310-00-061-7326	5-1	113	5305-00-269-3209	5-5	26
5310-00-061-7326	5-2	7	5305-00-269-3216	5-3	21
5310-00-061-7326	5-2	31	2610-00-269-7354	5-4	21
5310-00-061-7326	5-2	35	2610-00-269-7354	5-4	49
5310-00-061-7326	5-2	38	5306-00-274-2119	5-1	115
5310-00-061-7326	5-2	42	5310-00-275-2088	5-5	12
5310-00-061-7326	5-2	50	5310-00-282-7817	5-1	43
5310-00-061-7326	5-2	54	5340-00-286-9441	5-1	94
5315-00-061-8534	5-3	12	5340-00-286-9441	5-1	101
5315-00-061-8572	5-3	13	5340-00-291-5328	5-1	95
5315-00-061-8572	5-3	16	1670-00-294-2954	5-3	1
5310-00-062-4954	5-1	76	5315-00-298-1480	5-4	26
5305-00-068-0523	5-3	37	5315-00-298-1480	5-4	54
2910-00-076-9157	5-1	25	5315-00-298-1499	5-4	93
5310-00-082-1404	5-2	13	6140-00-321-2281	5-1	8
5310-00-082-1404	5-2	48	5905-00-355-8575	5-2	11
5310-00-082-1404	5-2	63	5310-00-515-7449	5-1	11
5310-00-082-1404	5-2	72	5330-00-531-2068	5-5	4
5310-00-082-1404	5-2	80	5330-00-531-2071	5-5	8
5310-00-104-5143	5-5	27	5306-00-531-8979	5-1	5
5905-00-114-4978	5-2	10	5306-00-531-8979	5-1	16
5320-00-140-4965	5-1		5306-00-531-8979	5-1	131
5305-00-150-9220	5-1		6620-00-557-3023	5-2	75
5305-00-151-1380	5-1	119	5340-00-571-6044	5-1	99
5306-00-151-1409	5-1	37	6140-00-578-7525	5-1	7
5306-00-151-1424	5-1	48	5310-00-579-0848	5-1	108
5306-00-151-1426	5-1	49	6625-00-581-8317	5-2	34
5975-00-152-1071	5-2	98	5310-00-582-5965	5-3	8
5310-00-167-0662	5-1	103	5310-00-582-5965	5-3	50
5310-00-167-0818	5-1	97	5975-00-583-2960	5-2	96
5310-00-167-0818	5-1	104	5310-00-584-5272	5-3	47
5310-00-167-0818	5-1	114	5310-00-584-5272	5-4	23
5310-00-167-0820	5-1	69	5310-00-584-5272	5-4	51
5310-00-167-0820	5-3	18	4210-00-595-4085	5-1	2
5310-00-167-0821	5-1	4	5330-00-599-5989	5-1	70
5310-00-167-0821	5-1	15	5945-00-615-7493	5-2	57
5310-00-167-0821	5-1	28	5306-00-616-1224	5-1	54
5310-00-167-0821	5-1	40	5306-00-616-1224	5-1	81
5310-00-167-0821	5-1	53	5310-00-616-1916	5-1	27
5310-00-167-0821	5-1	65	5340-00-621-3297	5-1	100
5310-00-167-0821	5-1	74	5310-00-639-3876	5-4	28
5310-00-167-0821	5-1	82	5310-00-639-3876	5-4	56
5310-00-167-0821	5-1	85	5950-00-645-7193	5-2	53
5310-00-167-0821	5-1	107	5930-00-655-4241	5-2	83
5310-00-167-0821	5-1	126	5930-00-660-3955	5-2	85
5310-00-167-0821	5-1	130	5925-00-681-4952	5-2	86
5310-00-167-0823	5-1	77	5945-00-681-9716	5-2	24
5310-00-167-0831	5-1	118	5930-00-683-1625	5-2	88
5310-00-167-0833	5-1	92	5310-00-685-2246	5-4	22
5310-00-167-0835	5-1	31	5310-00-685-2246	5-4	50
5310-00-167-0835	5-1	36	5935-00-686-0447	5-1	6
5310-00-167-0835	5-1	47	5330-00-725-2188	5-4	31
5310-00-167-0835	5-1	60	5330-00-725-2188	5-4	59
5310-00-167-0837	5-5	13	5330-00-726-1235	5-5	41
5310-00-167-1309	5-4	15	5310-00-732-0558	5-3	2
4820-00-174-0339	5-3	34	5310-00-732-0559	5-3	26
5310-00-176-8117	5-4	27	4330-00-732-6535	5-6	2
5310-00-176-8117	5-4	55	5975-00-752-2703	5-2	97
5306-00-180-0202	5-1	78	5320-00-754-0822	5-2	
5310-00-185-6464	5-5	18	5310-00-761-6882	5-3	7

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5310-00-761-6882	5-3	49	1560-00-895-9360	5-5	6
5310-00-768-0318	5-3	43	6210-00-900-6744	5-2	82
5310-00-768-0313	5-3	46	2910-00-902-4468	5-1	33
6210-00-782-5606	5-2	87	2910-00-902-4468	5-6	
5305-00-782-9495	5-3	48	5961-00-905-7500	5-2	19
6115-00-789-1536	5-1	63	6110-00-912-3992	5-2	28
5330-00-804-5695	5-6	7	2925-00-912-3993	5-1	67
5310-00-809-8544	5-2	17	6210-00-926-6905	5-2	74
5310-00-809-8544	5-2	22	5945-00-927-2785	5-2	29
5310-00-809-8544	5-2	26	5340-00-932-5194	5-5	7
5310-00-809-8544	5-2	95	5330-00-934-8476	5-1	66
5310-00-811-3494	5-1	91	2910-00-936-8194	5-1	26
5315-00-811-3791	5-1	12	5330-00-938-2035	5-5	2
5315-00-815-1405	5-1	10	4730-00-949-7422	5-1	42
5310-00-820-6652	5-3	3	5310-00-950-1310	5-2	2
5310-00-820-6652	5-3	22	5310-00-950-1310	5-2	66
5310-00-820-6652	5-3	30	6685-00-963-7250	5-1	111
5310-00-823-8804	5-2	8	5305-00-978-9394	5-5	20
5310-00-823-8804	5-2	32	5310-00-982-4908	5-1	3
5310-00-823-8804	5-2	36	5310-00-982-4908	5-1	14
5310-00-823-8804	5-2	39	5310-00-982-4908	5-1	39
5310-00-823-8804	5-2	43	5310-00-982-4908	5-1	52
5310-00-823-8804	5-2	51	5310-00-982-4908	5-1	64
5310-00-823-8804	5-2	55	5310-00-982-4908	5-1	73
5310-00-823-8804	5-2	59	5310-00-982-4908	5-1	84
5310-00-823-8804	5-2	92	5310-00-982-4908	5-1	105
5310-00-835-2041	5-5	23	5310-00-982-4908	5-1	125
5365-00-835-4911	5-6	3	5310-00-982-4908	5-1	129
5315-00-839-5822	5-4	3	5310-00-982-4912	5-1	68
5315-00-842-3044	5-3	11	5305-00-983-6651	5-1	102
5315-00-842-3044	5-3	17	5305-00-983-6652	5-1	98
5315-00-842-3044	5-3	23	5305-00-983-6730	5-2	3
4920-00-842-5900	5-1	22	5305-00-983-6730	5-2	67
5330-00-844-2447	5-5	15	5305-00-983-7450	5-1	110
4920-00-849-3976	5-1	51	5305-00-984-4988	5-2	14
4920-00-849-3977	5-1	9	5305-00-984-4988	5-2	46
4920-00-850-4400	5-1	17	5305-00-984-4993	5-2	73
4920-00-850-4401	5-1	20	5305-00-984-4993	5-2	81
4920-00-851-1441	5-1	72	5305-00-984-6193	5-2	23
4920-00-851-1442	5-5	1	5305-00-984-6193	5-2	27
4920-00-851-5522	5-1	75	5305-00-984-6193	5-2	94
4920-00-851-5522	5-5		5305-00-984-6195	5-2	18
5365-00-857-2068	5-5	3	5305-00-984-6211	5-2	90
6680-00-857-2397	5-5	5	5305-00-988-1725	5-3	9
5310-00-857-4944	5-1	117	5305-00-988-7304	5-3	51
5340-00-870-8978	5-4	14	5305-00-989-7434	5-2	56
5310-00-880-7746	5-3	15	5935-00-990-6295	5-1	116
5310-00-889-2543	5-2	1	5305-00-993-1848	5-2	9
5310-00-889-2543	5-2	65	5305-00-993-1848	5-2	33
5310-00-889-2544	5-2	12	5305-00-993-1848	5-2	44
5310-00-889-2544	5-2	71	5305-00-993-1848	5-2	52
5310-00-889-2544	5-2	79	5305-00-993-1848	5-2	60
5310-00-889-2549	5-2	16	5305-00-993-1851	5-2	40
5310-00-889-2549	5-2	21	5305-00-995-3444	5-2	37
5310-00-889-2549	5-2	25	2990-00-073-3356	5-1	45
2530-00-893-0568	5-4		4910-01-098-2402	5-1	56
2530-00-893-0568	5-4				

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
AD64AH	07707	5-1		AN4-6A	88044	5-1	49
AM711CJ	74063	5-2	30	AN4044-1	88044	5-1	70
AN151317	88044	5-5	50	AN503-10-16	88044	5-1	
AN151443	88044	5-5	48	AN505-8-11	88044	5-1	93
AN158991	88044	5-5	49	AN515-4R10	88044	5-1	119
AN3-5A	88044	5-1	115	AN520-416-28	88044	5-1	32
AN315-6	88044	5-4	40	AN534-2	88044	5-2	15
AN3156-3	88044	5-1	8	AN535-0-2	88044	5-5	9
AN316-12R	88044	5-4	15	AN6-10A	88004	5-1	41
AN316-6	88044	5-1	108	AN6-10A	88044	5-1	86
AN320-16	88044	5-4	27	AN6-10A	80044	5-1	127
AN320-16	88044	5-4	55	AN6-6A	88044	5-1	54
AN325-6	88044	5-4	35	AN6-6A	88044	5-1	81
AN325-6	88044	5-4	63	AN6-7A	88044	5-1	5
AN380-4-7	88044	5-4	26	AN6-7A	88044	5-1	16
AN380-4-7	88044	5-4	54	AN6-7A	86044	5-1	131
AN4-10A	88044	5-1	43	AN6-21A	88044	5-1	78
AN4-27A	88044	5-1	37	AN815-6	88044	5-1	18

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
AN816-6	88044	5-1	21	MS21045-3	96906	5-2	42
AN817-20	88044	5-3	41	MS21045-3	96906	5-2	50
AN833-6	88044	5-1	44	MS21045-3	96906	5-2	54
AN919-12	88044	5-1	23	MS21045-4	96906	5-1	30
AN924-6	88044	5-1	43	MS21045-4	96906	5-1	34
AN929-6	88044	5-1	42	MS21045-4	96906	5-1	46
AN935-616	88044	5-1	106	MS21045-4	96906	5-1	59
AN935-816	88044	5-4	23	MS21045-5	96906	5-1	68
AN935-816	88044	5-4	51	MS21045-6	96906	5-1	3
AN960-10	88044	5-1	97	MS21045-6	96906	5-1	14
AN960-10	88044	5-1	104	MS21045-6	96906	5-1	39
AN960-10	88044	5-1	114	MS21045-6	96906	5-1	52
AN960-4L	88044	5-1	118	MS21045-6	96906	5-1	64
AN960-416L	88044	5-1	31	MS21045-6	96906	5-1	73
AN960-416L	88044	5-1	36	MS21045-6	96906	5-1	84
AN960-416L	88044	5-1	47	MS21045-6	96906	5-1	105
AN960-416L	88044	5-1	60	MS21045-6	96906	5-1	125
AN960-516	88044	5-1	69	MS21045-6	96906	5-1	129
AN960-516	88044	5-1	18	MS21045-8	96906	5-1	76
AN960-616	88044	5-1	4	MS21919H10	96906	5-1	100
AN960-616	88044	5-1	15	MS21919H12	96906	5-1	95
AN960-616	88044	5-1	28	MS21919H4	96906	5-1	94
AN960-616	88044	5-1	40	MS21919H4	96906	5-1	101
AN960-616	88044	5-1	53	MS21919H8	96906	5-1	99
AN960-616	88044	5-1	65	MS24328-1	96906	5-4	
AN960-616	88044	5-1	74	MS24328-1	96906	5-4	
AN960-616	88044	5-1	82	MS24498-1	96906	5-1	7
AN960-616	88044	5-1	85	MS24523-31	96906	5-2	88
AN960-616	88044	5-1	107	MS24524-23	96906	5-2	83
AN960-616	88044	5-5	126	MS24525-26	96906	5-2	85
AN960-616	88044	5-1	130	MS24568D1	96906	5-2	24
AN960-616L	88044	5-1	13	MS24621-42	96906	5-3	37
AN960-8L	88044	5-1	92	MS24665-151	96906	5-1	10
AN960-816	88044	5-1	77	MS24665-283	96906	5-3	11
AN960C416L	88044	5-1	11	MS24665-283	96906	5-3	17
AN960D616	88044	5-1	109	MS24665-283	96906	5-3	23
A700AW	74063	5-2	29	MS24665-353	96906	5-4	3
A734	97484	5-5	3	MS24665-355	96906	5-4	9
A862	97484	5-5	6	MS24665-360	96906	5-4	93
B138FH	74063	5-2	57	MS24665-495	96906	5-4	12
B7238	97484	5-5	7	MS24665-500	96906	5-4	17
C2	727141	5-3	12	MS24667-30	96906	5-3	51
C6954B	52573	5-4	10	MS25041-6-327	96906	5-2	74
C7	727141	5-3	24	MS25041-7-327	96906	5-2	82
K2123	31822	5-2	69	MS25041-8-327	96906	5-2	87
K2124	31822	5-2	78	MS25182-2	96906	5-1	6
K2125	31822	5-2	68	MS25244-10	96906	5-2	86
MIL-G-26611 TYPEGEU7A	81349	5-1	58	MS27183-4	96906	5-2	2
MIL-I-25623 TYPEMU-1	81349	5-2	75	MS27183-4	96906	5-2	66
MIL-I-9443 TYPE MU-1	81349	5-2	76	MS27183-42	96906	5-3	38
MS16555-41	96906	5-5	47	MS27183-6	96906	5-2	13
MS16997-99	96906	5-5	20	MS27183-6	96906	5-2	48
MS16998-27	96906	5-1	102	MS27183-6	96906	5-2	63
MS16998-29	96906	5-1	98	MS27183-6	96906	5-2	72
MS16998-76	96906	5-1	110	MS27183-6	96906	5-2	80
MS19068-071	96906	5-5	18	MS27183-7	96906	5-2	17
MS19068-071	96906	5-5	19	MS27183-7	96906	5-2	22
MS20341-6S	96906	5-2	61	MS27183-7	96906	5-2	26
MS20364-624C	96906	5-1	27	MS27183-7	96906	5-2	95
MS20365-624C	96906	5-5	12	MS27183-9	96906	5-2	8
MS20392-3C11	96906	5-1	12	MS27183-9	96906	5-2	32
M520392-4C41	96906	5-3	19	MS27183-9	96906	5-2	36
MS20470AD4-5	96906	5-2		MS27183-9	96906	5-2	39
MS20822-2D	96906	5-3	42	MS27183-9	96906	5-2	43
MS21044N04	96906	5-1	117	MS27183-9	96906	5-2	51
MS21044N08	96906	5-1	91	MS27183-9	96906	5-2	55
MS21045-04	96906	5-2	1	MS27183-9	96906	5-2	59
MS21045-04	96906	5-2	65	MS27183-9	96906	5-2	92
MS21045-06	96906	5-2	12	MS27212-1-5	96906	5-2	64
MS21045-06	96906	5-2	71	MS27407-5	96906	5-2	84
MS21045-06	96906	5-2	79	MS29512-06	96906	5-1	19
MS21045-08	96906	5-2	16	MS29512-08	96906	5-1	24
MS21045-08	96906	5-2	21	MS29561-241	96906	5-5	15
MS21045-08	96906	5-2	25	MS26561-261	96906	5-5	41
MS21045-3	96906	5-1	96	MS3105-20	96906	5-1	116
MS21045-3	96906	5-1	113	MS35206-218	96906	5-2	3
MS21045-3	96906	5-2	7	MS35206-218	96906	5-2	67
MS21045-3	96906	5-2	31	MS35206-228	96906	5-2	14
MS21045-3	96906	5-2	35	MS35206-228	96906	5-2	46
MS21045-3	96906	5-2	38	MS35206-233	96906	5-2	73

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER	FSCM	FIG. NO.	ITEM NO.		PART NUMBER	FSCM	FIG. NO.	ITEM NO.
MS35206-233	96906	5-2	81	105436-30	55820	5-2		99
MS35206-245	96906	5-2	23	105436-40	55820	5-2		100
MS35206-245	96906	5-2	27	105437-100	55820	5-2		
MS35206-245	96906	5-2	94	105438-0	55820	5-1		45
MS35206-247	96906	5-2	18	105439-100	55820	5-1		83
MS35206-264	96906	5-2	90	105439-100	55820	5-2		
MS35206-281	96906	5-3	9	105595-1	55820	5-2		101
MS35207-263	96906	5-2	56	105596-1	55820	5-2		93
MS35207-265	96906	5-2	9	105795-1	55820	5-2		49
MS35207-265	96906	5-2	33	105802-1	55820	5-2		6
MS35207-265	96906	5-2	44	107682-1	55820	5-2		
MS35207-265	96906	5-2	52	107724-0	55820	5-3		
MS35207-265	96906	5-2	60	107724-1	55820	5-3		54
MS35207-266	96906	5-2	37	107724-10	55820	5-3		35
MS35207-267	96906	5-2	40	107724-13	55820	5-3		27
MS35266-108	96906	5-1	29	107724-14	55820	5-3		33
MS35337-43	96906	5-1	103	107724-15	55820	5-3		14
MS35338-41	96906	5-2	47	107724-16	55820	5-3		53
MS35338-41	96906	5-2	62	107724-17	55820	5-3		10
MS35338-43	96906	5-2	91	107724-18	55820	5-3		39
MS35338-44	96906	5-3	8	107724-19	55820	5-3		45
MS35338-44	96906	5-3	50	107724-21	55820	5-3		44
MS35338-46	96906	5-3	3	107724-8	55820	5-3		40
MS35338-46	96906	5-3	22	114ES249-10	31435	5-2		41
MS35338-46	96906	5-3	30	13MC37-206-60	82647	5-2		45
MS35338-46	96906	5-4	36	13021	52793	5-4		31
MS35338-46	96906	5-4	41	13021	52793	5-4		59
MS35338-46	96906	5-4	64	144	59730	5-4		98
MS35338-48	96906	5-3	47	15123	52793	5-4		29
MS35387-1	96906	5-3	5	15123	52793	5-4		57
MS35387-2	96906	5-3	6	15245	52793	5-4		30
MS35392-52	96906	5-4	21	15245	52793	5-4		58
MS35392-52	96906	5-4	49	1610B	57733	5-4		11
MS35690-822	96906	5-4	22	1610B	57733	5-4		44
MS35690-822	96906	5-4	50	1610B	57733	5-4		94
MS35756-17	96906	5-5	37	1945	59730	5-2		97
MS35782-3	96906	5-3	34	20195	52793	5-4		19
MS51967-14	96906	5-3	43	20200	52793	5-4		45
MS51967-14	96906	5-3	46	20672	52793	5-3		52
MS51967-2	96906	5-3	7	20672	52793	5-4		
MS51967-2	96906	5-3	49	20694	52793	5-4		
MS51967-8	96906	5-3	2	20709	52793	5-4		
MS51968-5	96906	5-3	15	20712	52793	5-4		
MS51968-8	96906	5-3	26	20712-2	52793	5-4		90
MS9048-234	96906	5-3	31	20712-3	52793	5-4		88
MS90725-111	96906	5-3	48	20712-5	52793	5-4		87
MS90725-32	96906	5-5	22	20714	52793	5-4		92
MS90725-58	96906	5-5	26	20715	52793	5-4		91
MS90725-60	96906	5-3	4	20716	52793	5-4		95
MS90725-60	96906	5-3	29	20717	52793	5-4		96
MS90725-66	96906	5-3	21	20720	52793	5-4		47
MS90726-68	96906	5-4	42	20723	52793	5-4		97
MS9276-11	96906	5-5	23	20842	52793	5-4		
MS9276-12	96906	5-5	27	21012	52793	5-4		
NAS1375A28SB020	80205	5-1	57	21013	52793	5-4		4
NAS617-12	80205	5-5	8	21014	52793	5-4		7
NAS617-8	80205	5-5	4	21590-0	55820	5-1		9
ND2420	80900	5-3	36	23032-020	31435	5-1		67
ND2420	80900	5-3	36	24304-300	55820	5-1		51
PN67A	82121	5-2	89	24720	52793	5-4		32
QS600M116W	08484	5-1	55	24720	52793	5-4		60
RR243	80756	5-5	40	24780	52793	5-4		33
RR256	80756	5-5	17	24780	52793	5-4		61
RS108-090	86831	5-1	50	2559	59730	5-2		96
RS161-080	86831	5-1	120	29217-1	55820	5-1		111
RS161-100	86831	5-1	71	30053-3	81321	5-6		1
S53	97484	5-5	5	30104	81321	5-6		5
Y3	72741	5-3	13	30105	81321	5-6		10
Y3	72141	5-3	16	30106	81321	5-6		8
Y4	72741	5-3	25	30107	81321	5-6		6
0560A	44655	5-2	10	302283	14892	5-4		
08T11842000	80244	5-4	20	302284	14892	5-4		
08T11842000	80244	5-4	48	30323	81321	5-6		4
104652-0	55820	5-1	122	30442	81321	5-6		9
104653-0	55820	5-1	121	30447	52793	5-4		68
104654-0	55820	5-1	123	30796	52793	5-4		24
104654-1	55820	5-1	123	30796	52793	5-4		52
104654-2	55820	5-1	123	31110	52793	5-3		20
105436-10	55820	5-2	4	31220-002	31435	5-1		63
105436-20	55820	5-2	5	32152	81321	5-6		3

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

PART NUMBER	FSCM	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
35BC10D3	70413	5-5	39	47960-1	55820	5-5	36
35BD02	70413	5-5	25	47961-1	55820	5-5	33
35BN02DUU	70413	5-5	35	47962-1	55820	5-5	34
35RN03K	70413	5-5	32	47963-1	55820	5-5	30
368M	05277	5-2	19	47964-1	55820	5-5	24
36978-6	81321	5-6	7	47965-1	55820	5-5	31
37327-1	55820	5-1	35	47966-1	55820	5-5	28
38141-2	55820	5-2	20	47969-1	55820	5-5	1
39953	14892	5-4	75	47971-1	55820	5-5	21
39956	14892	5-4	76	47972-1	55820	5-5	14
4-033	50290	5-2	70	47974-1	55820	5-5	29
41485	14892	5-4	78	47975-1	55820	5-5	10
41545	14892	5-4	72	48B7796	88042	5-3	1
41665	14892	5-4	74	48069	14892	5-4	73
41876	14892	5-4	77	48616-1	55820	5-1	66
43886	14892	5-4	86	48646	14892	5-4	83
44163-2	55820	5-2	102	48647	14892	5-4	84
44173-1	55820	5-5	11	48648	14892	5-4	84
44489	14892	5-4	79	51065-014	31435	5-2	28
451845J	76680	5-5	2	51399	81321	5-6	2
45771	14892	5-4	82	5316	52793	5-4	28
45977-1	81861	5-1	79	5316	52793	5-4	56
45977-2	55820	5-1	89	5620653	70040	5-1	26
45977-3	55820	5-1	87	5656748	70040	5-1	25
45977-4	55820	5-1	90	60-6-7	52793	5-4	37
45977-5	55820	5-1	88	60-6-7	52793	5-4	65
45977-6	55820	5-1	56	6394	52793	5-4	25
46424-1	55820	5-1	33	6394	52793	5-4	53
46424-1	55820	5-6		6404-AL	52793	5-4	34
47313	14892	5-4	85	6404-AL	52793	5-4	62
47314	14892	5-4	85	6408-AL	52793	5-4	
47693-100	55820	5-1	133	6408-AL	52793	5-4	
47693-100	55820	5-3		6408-1AL	52793	5-4	38
47693-100	55820	5-1	124	6408-1AL	52793	5-4	66
47698-0	55820	5-1	72	6408-2AL	52793	5-4	39
47702-0	55820	5-1	13	6408-2AL	52793	5-4	67
47703-0	55820	5-1	38	6805	52793	5-4	46
47704-0	55820	5-1	17	6809	52793	5-4	14
47705-0	55820	5-1	20	6812B	52793	5-4	13
47706-1	55820	5-1	22	6813	52793	5-4	43
47708-0	55820	5-1	112	6899-14	52793	5-4	16
47709-0	55820	5-1	80	6954-1	52793	5-4	8
47710-1	55820	5-1	128	6998	52793	5-4	18
47703-2	55820	5-1	132	7004	10424	5-3	28
47954-0	55820	5-1	75	7005	52793	5-3	32
47954-0	55820	5-5		7923165	70040	5-1	61
47955-0	55820	5-5	46	8200-120	91812	5-2	34
47955-1	55820	5-5	51	870752	33525	5-1	2
47956-1	55820	5-5	42	880-6-1001	65092	5-2	53
47957-1	55820	5-5	16	891519	33525	5-1	1
47958-0	55820	5-5	43	9	44655	5-2	11
47958-1	55820	5-5	44	900615C1	55820	5-1	62
47958-2	55820	5-5	45	901008	14892	5-4	81
47959-1	55820	5-5	38	901626-K6	14892	5-4	80

NATIONAL STOCK NUMBER SUPPLEMENTAL INDEX

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-00-053-9366	5-1	29	6620-00-585-1503	5-1	56
5310-00-061-7324	5-2	58	5310-00-999-4031	5-2	61
5305-00-145-6796	5-1	32	5945-01-080-7228	5-2	30
5306-00-208-3636	5-1	42	4910-01-098-2402	5-1	56

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APPENDIX D
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. Scope. This appendix lists expendable supplies and materials you will need to operate and maintain the Mobile Check Stand. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic 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 material (e.g., "Use cleaning compound, item 5, App. D").

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

- O - Aviation Unit Maintenance
- F - Aviation Intermediate Maintenance

D - Depot

c. Column 3 - National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	0	6850-00-264-9038	CLEANING SOLVENT, P-D-680	GL
2	0	9150-00-190-0906	GREASE, MIL-G-10924	LB
3	0	9150-00-273-3490	OIL, LUBRICATING, MIL-L-7870	QT
4	0	9150-00-180-6266	OIL, LUBRICATING, MIL-L-23699	QT
5	F	9505-00-221-2650	LOCKWIRE, SAFETY .020 MS 20995C20	LB
	F	9505-00-293-4208	LOCKWIRE, SAFETY .032 MS 9226-04	LB
	F	9505-00-603-4121	LOCKWIRE, SAFETY .040 MS 9226-05	LB
6	F	9150-00-335-5512	LUBRIPLATE NO. 20 (ALTERNATE 130A)	QT
7	F	9150-00-782-2627	OIL, LUBRICATING, MIL-L-7808	QT
8	0	9150-00-273-2388	OIL, LUBRICATING, GRADE 1010, MIL-O-6081	QT
9	0	9130-00-256-8613 MIL-J-5624	FUEL, TURBINE ENGINE, GRADE JP-4	GL
	0	9130-00-273-2379 MIL-J-5624	FUEL, TURBINE ENGINE, GRADE JP-S	GL

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
10	0	9130-00-179-1127	GASOLINE, GRADE 115/145, MIL-G-5572	GL
11	0	8030-00-613-3131	COMPOUND, CHEMICAL FILM, MIL-G-5541	QT
12	0	8010-00-286-7758	FINISH PAINTING, TT-E-489 FED STD 595, COLOR NO. 13538	QT
13	0	8010-00-572-2053	LETTERING, BLACK, FED STS 595, COLOR NO. 17038	GL
14	0	8010-00-527-3199	LETTERING, BLACK, FED STD 595, COLOR NO. 11136	QT
15	0	9150-00-273-3490	LUBRICATION, BRAKE LINKAGE, MIL-L-7870	QT
16	0	9150-00-180-6266	PRIMER, MIL-P-7962	QT

APPENDIX E. T62T-40-1 AND T62T-2B
AUXILIARY POWER UNITS

SECTION I

INTRODUCTION AND DESCRIPTION

1-1. INTRODUCTION.

1-2. This technical manual Appendix provides all instructions necessary for the operation and maintenance of the Mobile Check/Adjustment Stand, identified by Part Number 45977-100. The Mobile Check and Adjustment/Generator Stand (figure E-1), hereafter referred to as the Mobile Check stand, is manufactured by the Solar Division of International Harvester Company, 2200 Pacific Highway, San Diego, California. The Mobile Check Stand depicted in this Appendix has been modified by Project OLR at Fort Lewis, Washington and is intended for use with the modern family of APUs as a Check and Adjustment Stand. All differences between the existing configuration and the original are the result of this effort. Direct any concerns to ATCOM, ATTN: AMSAT I-MEM, DSN: 693-1581.

1-3. PURPOSE.

1-4. The Mobile Check Stand provides the components and controls necessary to functionally test the Models T- 62T40-1 and T-62T-2B Auxiliary Power Units (APU) prior to installation in the Aircraft, or upon removal from the aircraft, or to Check and adjust the units after minor repair or overhaul.

1-5. ARRANGEMENT OF MANUAL.

1-6. The Appendix is divided into seven sections. Section I identifies the equipment and describes the components and their functions. Section II gives the procedures necessary to prepare the equipment for use. Section III describes the adjustments required and the connections necessary for operating the equipment, Section IV list the inspections and preventive maintenance procedures required to ensure efficient operation. Section V lists all replaceable parts, assemblies, sub-assemblies, and detail parts of the mobile check stand. Section VI describes the troubleshooting procedures and remedies. Section VII gives the instructions for removal, repair, and replacement of components.

1-7. DESCRIPTION.

1-8. The mobile check stand is an open-frame carrier, pivot plated on two pairs of wheels mounted with pneumatic tires. Mounting provisions for the models T-62T-40-1, and T-62T-2B auxiliary power units are incorporated together with the necessary electrical and fuel connections between the unit and the check stand components. The mobile check stand is equipped with a steering towbar and a mechanical hand brake system. It is weatherproofed to provide protection of critical components from the elements. The major assemblies mounted on the check stand are: the battery, control console, exhaust duct, and the fire extinguisher. See figure E-2 for Table of Leading Particulars.

1-9. ELECTRICAL SYSTEM.

1-10. The electrical system provides starting power for the APU, and the controls necessary for automatic operation. The instrument panel and relays, within the control console, are connected by cables to the battery, and dc starter-generator for operation of the APU.

1-11. BATTERY. (See figure E-1.)

1-12. A 24-volt, 34-ampere hour, nickel-cadmium battery, conforming to the requirements of MS24498-1, furnishes dc power for cranking the APU, and control power for the electrical controls. The battery is mounted on the right side of the trailer, confined in a shallow frame (retainer) and secured to the retainer with studs and clamps. The battery is shipped with electrolyte, and only a slight freshening charge prior to use is recommended. Bringing the battery up to full charge can be accomplished during APU checkout operation.

1-13. CONTROL CONSOLE. (See figure E-1.)

1-14. The control console is located on the aft, left side of the trailer, and provides a weatherproof housing for the control system components and the instrument panel. The check stand control system simulates the aircraft controls. The console is bolted to two support channels which, in turn, are bolted to the top of the trailer frame. A door on the console provides easy access to the electrical control system components. The top of the console houses the instrument panel; a cover, hinged to the console structure, protects the instrument panel from the elements. Two engine control harness assemblies are connected to the control component. The control system components include a reverse current relay, engine crank relay, malfunction relay, ready-to-load relay, static voltage regulator, circuit breakers, monitor lights, switches, DC voltage meter, electronic sequencing unit, OC shunt/resistor, terminal strip, and wire assemblies necessary to automatically control, regulate, and protect the APU during operation. Space is also provided to install the Electronic Sequencing Unit (ESU) multi-purpose test set (P/N 161226-200).

NOTE

Some Mobile Check/Adjustment Stands have smaller control consoles with components mounted in different positions. Check the serial number on your unit to determine the type of console you have.

**Small Control Console
(Lower Mounted Components)**

S410314
S410315
S410324
S410340
S410352
S410356

**Large Control Console
(Top-Mounted Components)**

S410316
S410339
S410344
S410351
S410355
S410358
790001
790019

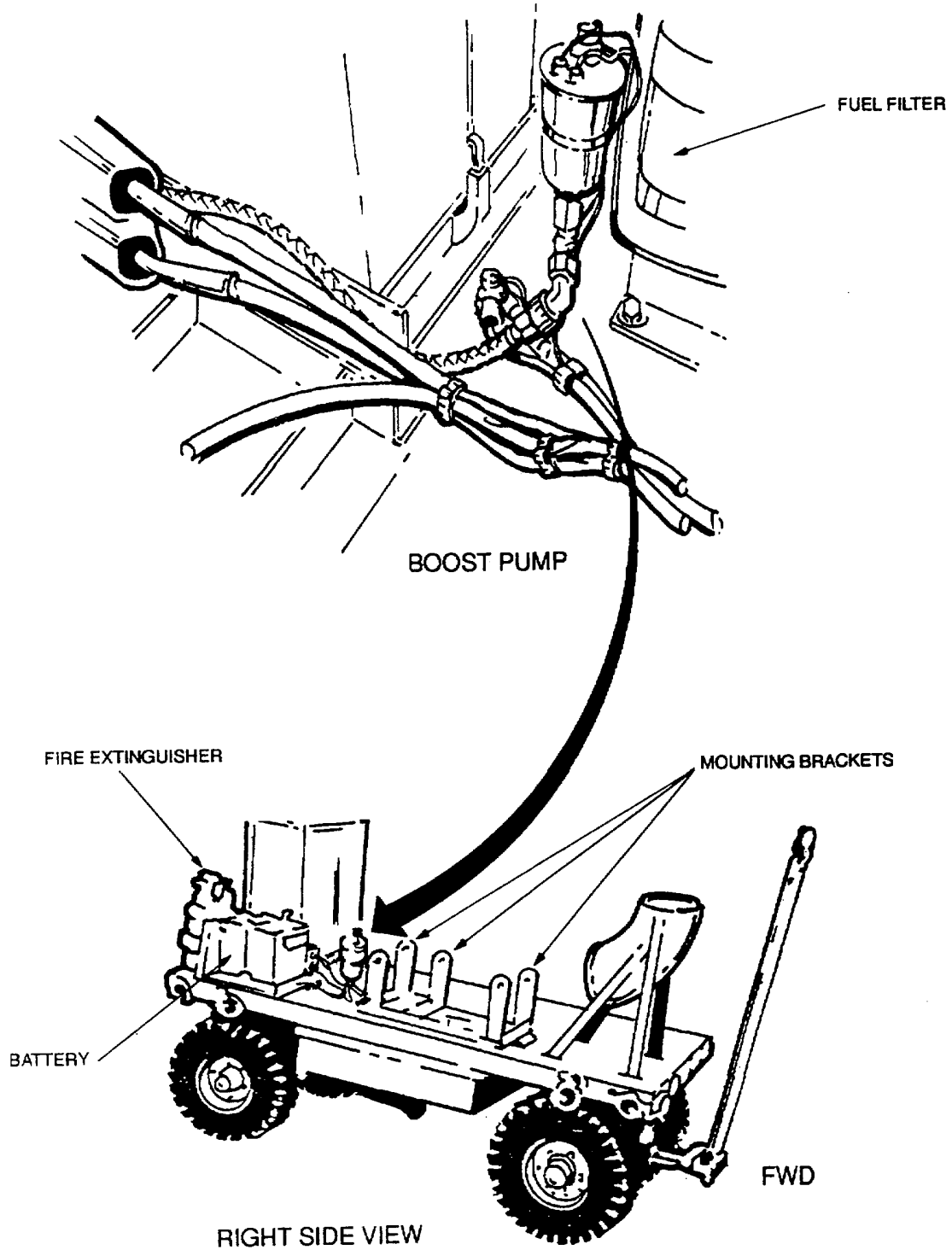


Figure E-1. Mobile Check/Adjustment Stand.

Length (towbar up).....	85.25 inches
Width.....	37.50 inches
Height (towbar up).....	61.70 inches
Cubic content	134 cubic feet
Ground clearance	9.70 inches
Weight	900 pounds
Tire size.....	6.00 x 9.6 ply
Tire pressure.....	40 to 45 psig
Wheels.....	Split-rim type
Brakes	Hand-operated, mechanical (rear wheels only)
Fuel	Jet fuel conforming to MIL-J-5624, Grade JP-4/JP-5
Fuel filter	Disposable element
Fuel tank	40 gallons
Battery	24-volt, 34-ampere hour, nickel-cadmium
Fire extinguisher	Dry chemical 2.5 pounds

Figure E-2. Table of Leading Particulars (Sheet 1 of 2)

Instrumentation:

Battery voltage.....	DC voltmeter
Start Fuel Exciter	Indicator Light
Main Fuel.....	Indicator Light
Fuel Pump Fault.	Indicator light
DC Generator on line	RDY-TO-LOAD Indicator light
DC Generator loaded.....	Indicator light

With APU test set installed:

Engine Speed	Tachometer
Exhaust Gas Temperature.....	Temp meter
Start BYPASS Valve	Indicator light
MAIN POWER.....	Indicator light
MALFunction, APU	Indicator light
READY TO LOAD.....	Indicator light
START COMMAND	Indicator light
MAX. AIR	N/A
ECONO AIR.	N/A
START FUEL.	Indicator light
MAIN FUEL.	Indicator light
MAX FUEL	Indicator light
OIL PRESSURE	Indicator light
BLEED VALVE OPEN	Indicator light
REMOTE.....	Indicator light

(For further explanation see TM 55-4920-431-13 Table 2-1)

Towing speeds (maximum)

Paved highways	20 mph
Graded gravel roads	10 mph
Rough surface	2 mph

Turning angle 45 degrees (maximum)

Figure E-2. Table of Leading Particulars (Sheet 2 of 2)

1-15. CONSOLE INSTRUMENT PANEL (Figure E-3)

1-16. Small Console, OPEN DOOR for ACCESS (View A), and LARGE CONSOLE, LIFT COVER for ACCESS (View B).

a. The Instrument panel has manually actuated switches to operate the APU and gages and lights to indicate conditions of the APU during operation.

b. The instrument panel also contains a battery volt meter, indicator lamps for start fuel, main fuel, boost pump, ready-to-load, and loaded; and switches for APU run/start, lites test/ESU reset and boost pump operation. The APU tester box allows space for the auxiliary box to be connected into the system.

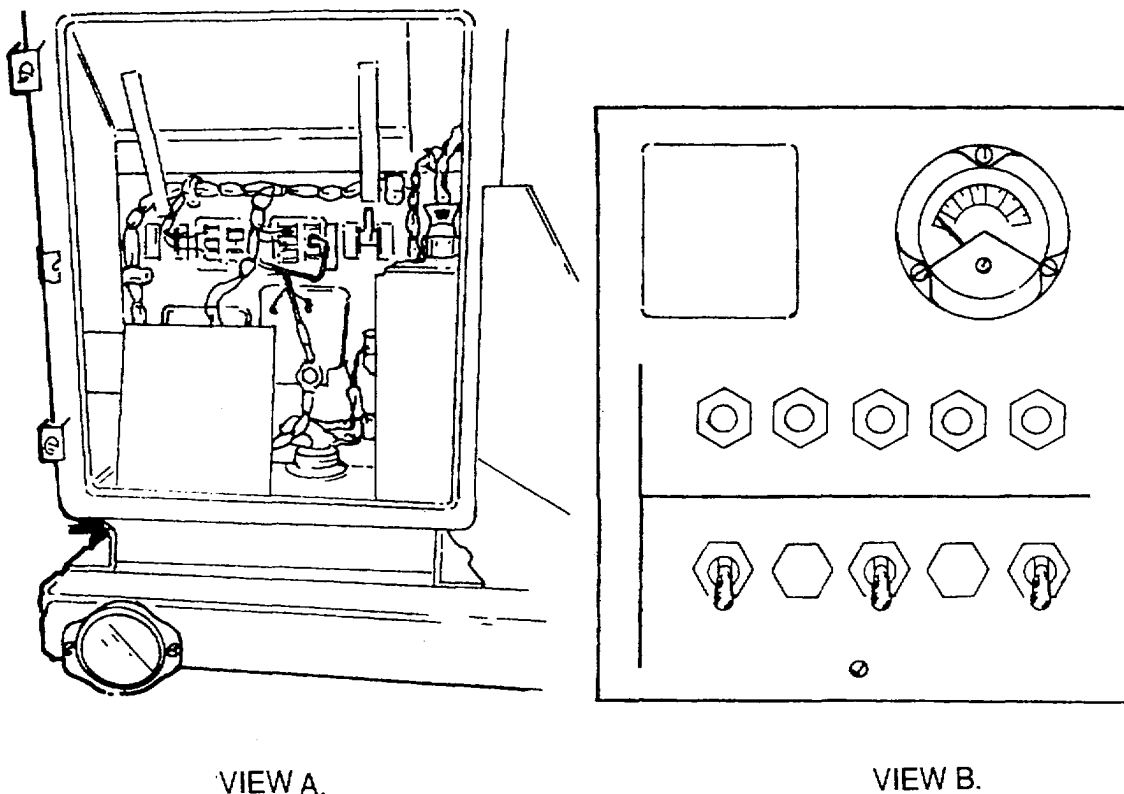


Figure E-3. Console Instrument Panel.

1-17. FUEL SYSTEM. (See figure E-4.)

1-18. The fuel system consists of a fuel tank, an electric motor-driven fuel boost pump, a disposable element type fuel filter, and connecting rigid and flexible plumbing. The filter and boost pump are mounted on a support bracket, which is bolted to the trailer just behind the control console. All components provide a complete and independent fuel system for the operation of the APU while on the trailer. A flexible hose connects the fuel system to the APU.

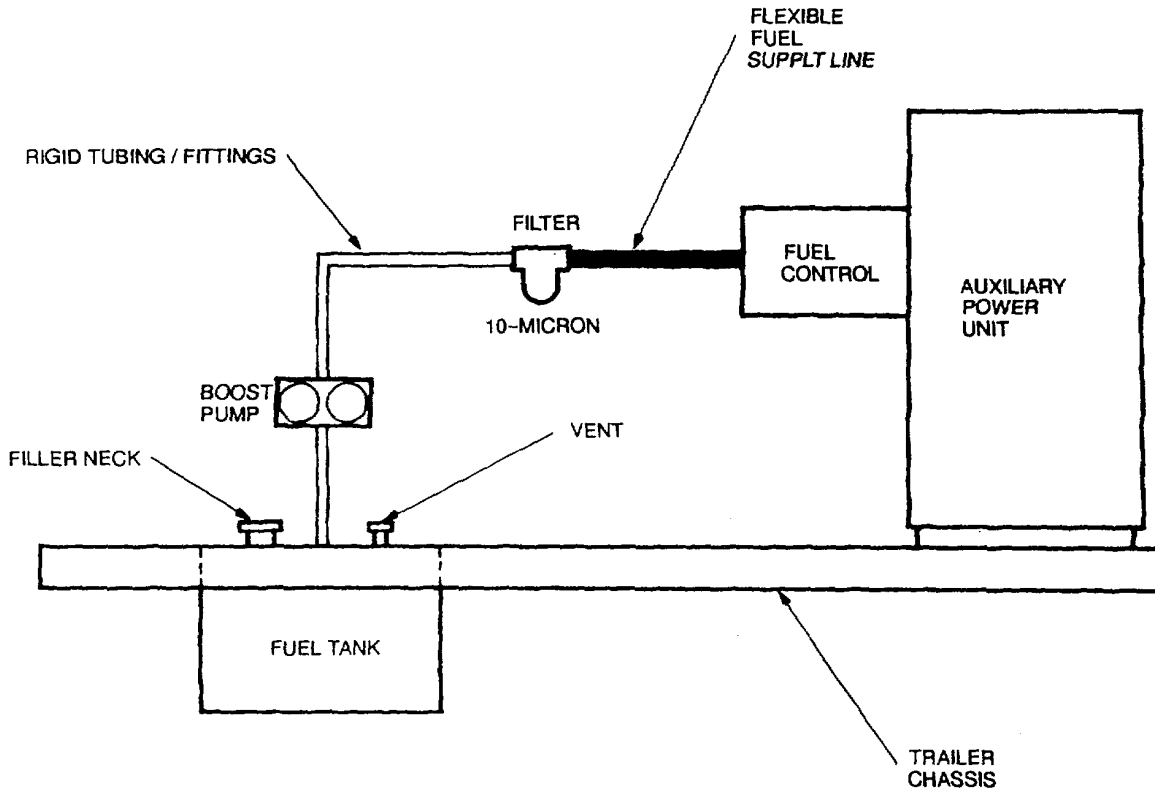


Figure E-4. Fuel System Schematic.

1-19. FUEL TANK. (See figure E-1.)

1-20. The fuel tank is a 40-gallon-capacity aluminum tank built into the trailer frame. The tank has a four-inch diameter filler neck, an overboard vent, and a drain fitting for draining condensation or for draining the tank prior to shipping or storage. A standpipe and fitting connects to the fuel boost pump through rigid tubing. The tank filler cap incorporates a dipstick fuel indicator.

1-21. BOOST PUMP. (See figure E-1.)

1-22. The fuel boost pump is an electric motor-driven pump mounted on the right side of the trailer. The boost pump draws fuel from the fuel tank and routes it through the fuel filter to the fuel control on the APU. A minimum of 5 psig fuel boost pressure is sufficient to ensure fuel flow to the fuel system of the APU.

1-23. FUEL FILTER. (See figure E-1.)

1-24. A replaceable element, low-pressure fuel filter is mounted on the right side of the trailer. A pressure relief valve within the filter head assembly is set to relieve at 10 to 12 psi differential pressure. The filter provides 10-micron filtration of the fuel before entry into the fuel system of the APU.

1-25. EXHAUST DUCT ASSEMBLY. (See figure E-1.)

1-26. The exhaust duct assembly is a welded assembly bolted to the frame at the forward end of the trailer. The exhaust duct assembly consists of two duct halves, six support angles, and four mounting plates. The exhaust duct assembly directs the APU exhaust and noise upward.

1-27 FIRE EXTINGUISHER. (See figure E-1.)

1-28. The portable, manually-operated, fire extinguisher is mounted in a support bracket at the aft, right end of the trailer, and secured in place by a clamp attached to the fire extinguisher support bracket. The fire extinguisher is a 2.5 pound dry chemical type extinguisher.

1-29. TRAILER ASSEMBLY. (See figure E-1.)

1-30. The trailer provides the base and mounting provisions for the check stand components and the APU. The chassis frame consists of aluminum sheets welded into a platform on which the APU support frame and control console are mounted. The chassis frame is supported on the rear axle by a pivot plate bolted to the chassis frame, and with drag links mounted in automotive-type rubber bushings. The chassis frame is supported on the front axle by a plate bolted to the chassis frame and secured to the axle with U-bolts. A towbar, pivoting on the front axle and controlling tie rods to the front wheels, provides steering for the trailer. The rear wheels are equipped with a mechanical parking brake system, connected by linkage to a brake handle on the left side of the trailer. The parking brake mechanical linkage is welded to the fuel tank. The four, split-rim wheels are mounted with pneumatic tires and tubes. Tiedown rings and reflectors are bolted on the side of the chassis frame.

SECTION II

PREPARATION FOR USE, STORAGE, OR SHIPMENT

2-1. UNPACKING AND DEPRESERVATION.

2-2. The check stand is preserved and packed for shipment and long-time storage. After uncrating, the fuel system must be depreserved, and various stand components prepared for use. Perform the following inspections and preparations on the check stand prior to immediate use.

- a. Inspect exhaust duct for foreign objects and damage.
- b. Remove all packing material from control console. Inspect console, doors, and instruments for damage.
- c. Inspect cables and harnesses for damage and for loose connections. Tighten all loose connections.
- d. Inspect reflectors and tiedown rings for damage and security.
- e. Inspect running gear, steering, towbar, and parking brake for operation.
- f. Inflate tires to 45 psig air pressure.

2-3. PREPARING THE BATTERY FOR USE.

2-4. The battery contains electrolyte when shipped, and must be given a freshening charge prior to use. Perform the freshening charge in accordance with instructions in TM-11-6140-203-14-1.

2-5. PREPARING THE FUEL SYSTEM FOR USE.

2-6. The fuel system must be depreserved prior to use, as follows:

- a. Place a suitable container under fuel tank drain fitting.
- b. Remove drain fitting, and drain residual preservative oil from tank, and reinstall drain plug.
- c. Flush tank with one gallon or more of clean fuel. Drain flushing fluid from tank, and reinstall drain plug.
- d. Remove fuel filter bowl, and pour out any residual preservative oil. Reinstall filter bowl using new O-ring.

e. Purge the fuel system, as follows:

- (1) Add clean fuel to fuel tank.
- (2) Uncap flexible fuel supply line. Place open end of flexible line in a suitable waste fuel container.
- (3) Connect battery.
- (4) Push in MAIN POWER circuit breakers (see figure E-3).
- (5) Move START-RUN-OFF switch to RUN.
- (6) Move BOOST PUMP switch to ON. Boost pump will operate and fuel will flow out of line into container.
- (7) Move BOOST PUMP switch to OFF when clean, bubble free fuel flows out of line.
- (8) Move START-RUN-OFF switch to OFF.
- (9) Pull MAIN POWER circuit breaker.
- (10) Disconnect battery.
- (11) Securely cap fuel supply line to maintain fuel system cleanliness.

2-7. PRESERVATION OF THE FUEL SYSTEM.

2-8. The fuel system must be preserved prior to storage or shipment, as follows:

- a. Place a suitable container under fuel tank drain fitting.
- b. Remove drain fitting and drain all fuel from fuel tank. Reinstall drain fitting.
- c. Put one to two gallons of lubricating oil (item 8 App D) into fuel tank.
- d. Remove fuel filter bowl, and pour fuel from bowl; reinstall bowl.
- e. Disconnect tank-to-pump fuel supply line at tank. Place open end of line in a one-gallon-capacity container filled with lubricating oil (item 8 App D).
- f. Uncap APU fuel supply line and place open end in a suitable waste fuel container.

- g. Connect battery.
- h. Push in MAIN POWER circuit breaker. (See figure E-3.)
- i. Move START-RUN-OFF switch to RUN.
- j. Move BOOST PUMP switch to ON. Boost pump will operate and preservative oil will flow through line.
- k. Move BOOST PUMP switch to OFF when preservative oil flows out of line.
- l. Move START-RUN-OFF switch to OFF.
- m. Pull MAIN POWER circuit breaker.
- n. Disconnect battery.
- o. Securely cap APU fuel supply line.
- p. Reconnect tank-to-pump fuel supply line to tank fitting.
- q. Remove fuel tank drain fitting and drain all preservative oil from tank. Reinstall drain fitting.
- r. Wipe any spilled oil from stand surface and from stand components.

2-9. PREPARATION FOR STORAGE.

2-10. The check stand must be prepared for storage, as follows:

- a. Perform fuel system preservation in accordance with instructions in paragraph 2-8.
- b. Disconnect power cable from battery.
- c. Remove battery from stand; forward battery to an applicable storage area.
- d. Remove fire extinguisher from stand; forward extinguisher to an applicable storage area.
- e. Cover all cable connectors, and secure cables and harnesses to convenient structures.
- f. Remove both started generators from stand; forward starter generators to an appropriate storage area.
- g. Cover all openings on stand equipment.

Note

If anticipated storage is longer than 90 days, mount check stand on blocks and do not set parking brakes.

- h. Set parking brakes.
- i. Cover check stand with an adequate cover if it is to be stored outdoors.

2-11. PREPARATION FOR SHIPMENT.

2-12. The mobile check stand may be transported by land, air, or sea provided adequate safeguards are used. Prepare the stand for shipment as follows:

a. Transporting the check stand by land:

- (1) Preserve fuel system in accordance with paragraph 2-8.
- (2) Cover all openings, secure two starter/generators to trailer and secure cover, secure all loose items, and adequately protect all parts subject to damage during transit.
- (3) Secure check stand to shipping carrier by fastening lines to tiedown rings along sides of trailer.
- (4) Use a canvas cover over check stand during inclement weather, and over dusty terrain.

b. Transporting the check stand by air:

- (1) Perform steps a.(1) through a.(3), preceding.
- (2) Remove battery. A battery will be installed at destination.

c. Transporting the check stand by sea:

- (1) Perform steps a.(1) through a.(3), preceding.
- (2) Remove battery. A battery will be installed at destination.
- (3) Crate check stand, using standard crating practices for sea transport.

3-1. GENERAL

3-2. The Mobile Check Stand is a control unit providing a mounting platform, electrical controls, and components necessary for operating the models T-62T-40-1 and T-62T-2B auxiliary power units. The check stand, independent of the APU, cannot be turned on or off. Its components function only as a part of the power unit. The starting and stopping procedures given in this section are for the purpose of operating and testing the auxiliary power unit.

3-3. MOUNTING THE APU ON THE CHECK STAND.

CAUTION

Place removed APU components in a safe place to prevent loss. These parts will be reinstalled on APU after removal of unit from check stand.

3-4. To mount the APU on the check stand.

a. Preparation.

- (1) Prepare stand, battery, and fuel system for use. Refer to Section II for preparation procedures.
- (2) Position check stand and set hand brake (pull brake handle up.)
- (3) Select the appropriate front mounting bracket (Refer to Fig. E-5) for your APU and position on mounting rail.

b. Mounting the APU.

Note

Before mounting the U/EH-60 APU with purge valve, disconnect the PCD air line, if installed, and start fuel supply line from the Purge Valve assembly. Otherwise this will prohibit exhaust end mounting.

(1) Using a suitable hoist assembly, or lifting device (refer to fig. E-6), APU over the test stand brackets. Lower APU until aft (exhaust) mounting holes are aligned and loosely install mounting bolts. Continue lowering APU until front support pins can be installed and secured with two bolts each.

- (2) Tighten ALL mounting bolts (Refer to Fig E-7).

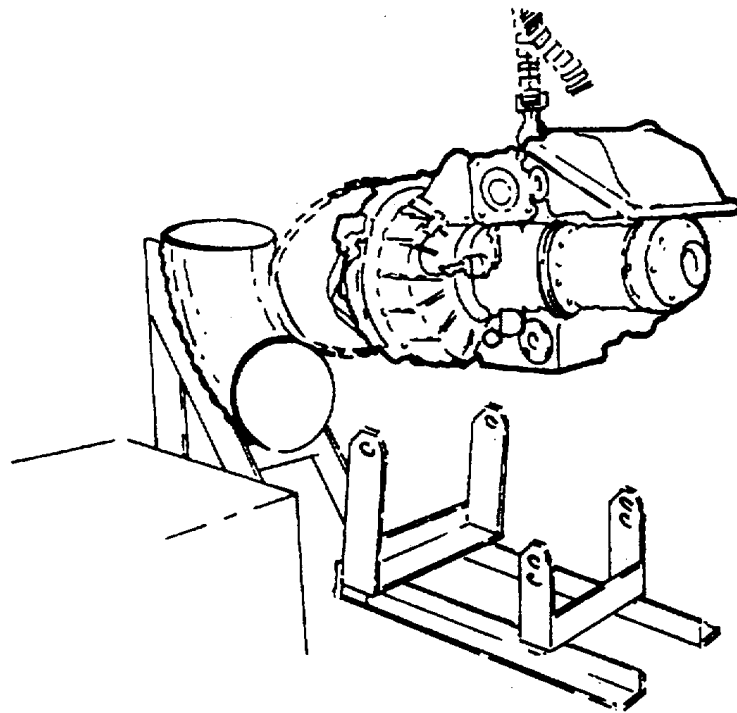


Figure E-6. Positioning APU.

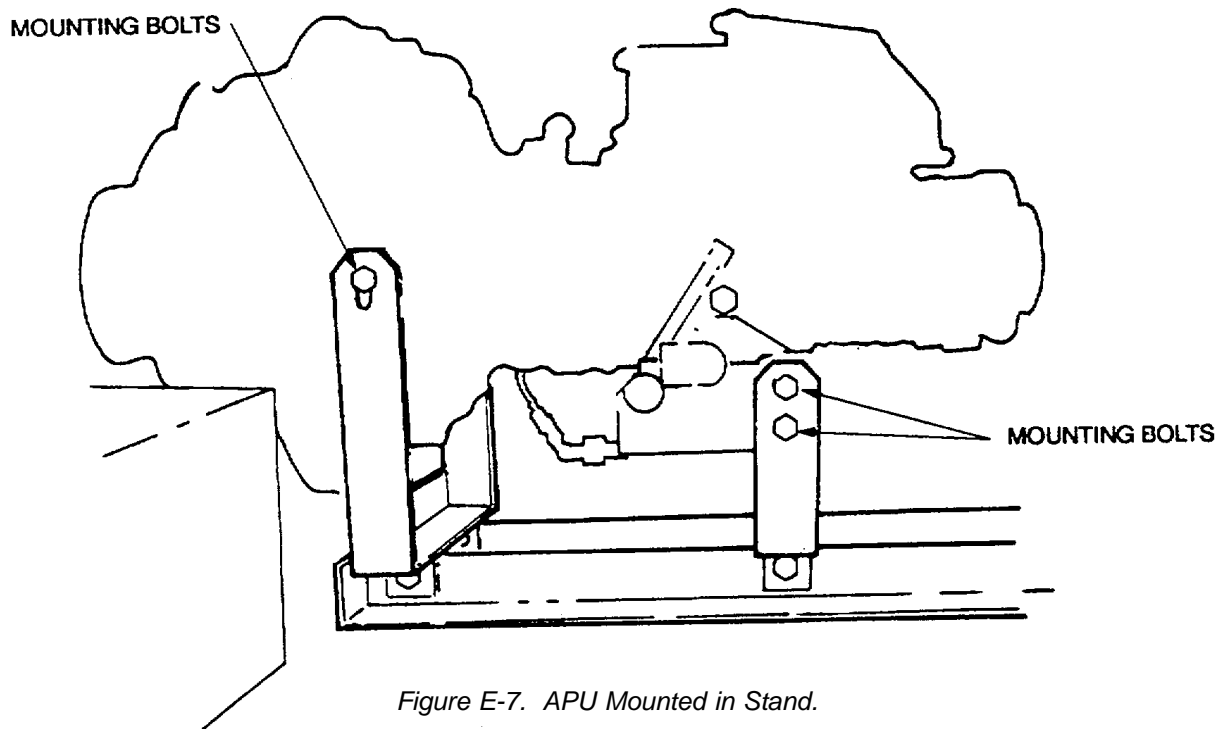


Figure E-7. APU Mounted in Stand.

c. Connecting the APU.

(1) Remove protective cap from fuel inlet filter fitting on APU, and connect flexible fuel supply line refer to (Fig. E-4) from check stand. Refer to Fig E-4.

NOTE**Reconnect PCD air supply line and fuel supply line (Refer to Fig E-8) to Purge Valve Assembly.**

(2) Connect check stand control harness (P301)(Fig E-8) to harness receptacle on APU. Tighten harness connector securely.

(3) Cap the large customer air tube with a unit made cap and coupling clamp P/N 12J16-150 (UH-60) (Fig. E-8.)

(4) (For U/EH-60 APU) Remove and plug the oil fitting attached to the accessory drive assembly next to the fuel control system.

(5) Remove fuel control covering (Fig. E-9) to allow mounting of the starter generator.

1. Starter/Generator (P\W 23032-020) is used on the U\EH-60 APU.
2. Starter/Generator (P\N 20064-001) is used on the CH-47D APU.
3. The aircraft installed generator may remain attached to the APU.

(6) Install the appropriate auxiliary starter/generator (Fig. E-10) for your APU. (For U/EH-60 APU) First install the starter/generator mounting bracket (Fig. E-9) to the accessory drive assembly with four nuts and washers, used to hold the hydraulic starter on. With clamp, install starter/generator (P/N 23032-020) and tighten clamp nut. (For CH-47D) First remove hydraulic starter and install electric starter/generator.

(7) Reinstall fuel control covering.

(8) Connect the four electrical leads from the control console to the starter/generator, observing proper markings match.

(9) Install drain lines to the fuel drain and compressor drain. Route lines into a suitable waste fuel container.

CAUTION

Do not transport mobile check stand over rough terrain with APU installed. Vibrations and Shock may damage vital APU parts.

3-5. PRELIMINARY CHECKS.

3-6. The following checks should be made prior to operating the auxiliary power unit.

- a. Check plumbing and electrical wiring connections for security of attachment.

CAUTION

Do not operate APU with air inlet screen removed. Ensure operating area is clean of loose items. The greatest hazard to a gas turbine engine is possible ingestion of foreign material into the engine compressor.

- b. Position stand to allow safe exit of exhaust gas.
- c. Check tires for sufficient air pressure (40 to 45 psig).
- d. Check fuel tank dipstick for sufficient quantity of fuel (1/4 tank minimum).

CAUTION

Jet thrust of APU may cause stand to move if parking brake is not applied (brake handle up).

- e. Ensure that parking brakes are applied (brake handle up).
- f. Check all gages on instrument panel for zero indication.
- g. Check that all switches on instrument panel are in the OFF position, and that circuit breakers are pulled.
- h. Check APU oil sump for full quantity of engine lubricating oil according to appropriate TM.
- i. Purge APU fuel system. Refer to paragraph 3-7 for purging procedure.

3-7. PURGING THE APU FUEL SYSTEM.

3-8. The following purging procedure is for the purpose of depreserving, or purging, the APU fuel system when a preserved or repaired engine is to be operated.

- a. Disconnect harness connector from APU ignition exciter input. Insulate connector to prevent accidental contact

NOTE

If desired, fuel lines may be disconnected from fuel solenoid valves rather than from fuel manifold and start fuel nozzle. Connect suitable drain lines to fuel solenoid valves, and place open ends of drain lines into a waste fuel container (one-quart minimum capacity).

- b. Disconnect APU fuel lines from fuel manifold and from start fuel nozzle.
- c. Connect suitable drain lines to disconnected lines, and place open ends of drain lines into a waste fuel container (one-quart minimum capacity).
- d. Connect Battery.
- e. Push in MAIN POWER circuit breaker. (See figure E-3).
- f. Move START RUN-OFF switch to RUN.
- g. Move LITES TEST/ESU RESET switch to ESU RESET three times. Move FUEL BOOST PUMP switch to ON, Let run approximately 30 seconds, and turn OFF.
- h. Move START-RUN-OFF switch from RUN to START, and motor APU until air-free fuel flows from the drain lines; then, move START-RUN-OFF switch to OFF.
- i. Pull MAIN POWER circuit breaker.
- j. Disconnect Battery.
- k. Disconnect drain lines, and connect APU fuel lines to fuel solenoid valve; or to fuel manifold and start fuel nozzle.
- l. Reconnect harness connector to APU ignition exciter.

3-9. ADJUSTMENT.

3-10. Adjustment procedures are contained in the engine manual for your type APU, refer to the appropriate Technical Manual.

3-11. OPERATION OF THE APU.

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel; wear ear muffs or earplugs which were fitted by a trained professional.

3-12. Starting APU without APU Tester Box (P/N 161226-200) installed.

- a. Place Instrument panel switches in the following positions:
 - (1) START-RUN-OFF switch to OFF.
 - (2) FUEL BOOST PUMP switch to OFF.

- b. Connect the Battery terminal, check Battery Voltmeter (on console) for 22 VDC minimum.
- c. Push in MAIN POWER and LOAD RELAY circuit breakers.
- d. Move START-RUN-OFF switch to RUN.
- e. Move LITES TEST/ESU RESET switch to LITES TEST and hold. Check that all lights illuminate by pressing on each indicator.
- f. Move LITES TEST/ESU RESET switch to ESU RESET three times. Move FUEL BOOST PUMP switch to ON. Let run approximately 30 seconds, and turn OFF. Check all fuel lines for leaks.

WARNING

Post fire watch.

CAUTION

If any abnormal condition is observed/heard during APU start or operation, move the START-RUN-OFF switch to OFF IMMEDIATELY.

CAUTION

If APU test stand is allowed to run out of fuel, the APU fuel control may be damaged.

Note

Before starting engine, refer to items (g) through (j) below and read in its entirety.

- g. Move START-RUN-OFF switch to START, hold for two seconds, then release.

Note

1. Start fuel Light ON at approximately 14% RPM (no Indicator).

2. Main fuel Light ON at approximately 70% RPM, Start Fuel Light OFF at approximately 30 seconds from sequence initiation, Rdy-to-Load light ON. (These parameters are approximates, refer to appropriate TM.)

- h. Observe that APU accelerates smoothly to operating speed.

WARNING

Exhaust duct and APU combustor section are hot during operation. Keep clear of combustibles. Avoid physical contact to preclude personal injury.

i. Battery charging is automatic. Indications are, LOADED light ON and an increase in voltage, above 24 VDC on the Battery voltmeter

CAUTION

If APU is to be restated or another start attempt tried, wait at least 30 seconds after APU has stopped before placing the START-RUN-OFF switch to START. This allows residual fuel to drain from APU, thereby preventing an overspeed or overtemp condition.

j. If APU fails to start or automatically shuts down, note ESU BITE indicators and refer to appropriate TM for troubleshooting procedures.

3-13. Starting APU with APU Tester Box installed (Fig E-11).

a. Ensure all switches on the instrument panel and APU Tester box are OFF or in the DOWN position.

b. Install the APU Tester box on the shelf in the Control Console and latch support arms.

(1) Connect APU Tester Harness 161229-200 as follows:

P2 APU Tester to J2 of APU Tester
P1 A/C Harness to P2 of Control Console
P2 ESU to J2 of ESU

(2) Connect APU Tester Harness 161228-200 as follows:

P1 APU Tester to J1 APU Tester
P1 ESU to J1 ESU

(3) Connect APU tester Harness 161227-200 as follows;

P5 APU Tester to J5 APU Tester
J1 Engine Harness to P1 of Control Console

c. Connect the Battery terminal, check Battery Voltmeter (on console) for 22 VDC minimum.

d. Push in MAIN POWER and LOAD RELAY circuit breakers, on instrument panel.

e. Move OFF-RUN-START switch on instrument panel to RUN.

f. Move the LITES TEST/ESU RESET switch on the instrument panel to LITES TEST and hold. Check that all lamps on instrument panel illuminate by pressing on each lamp.

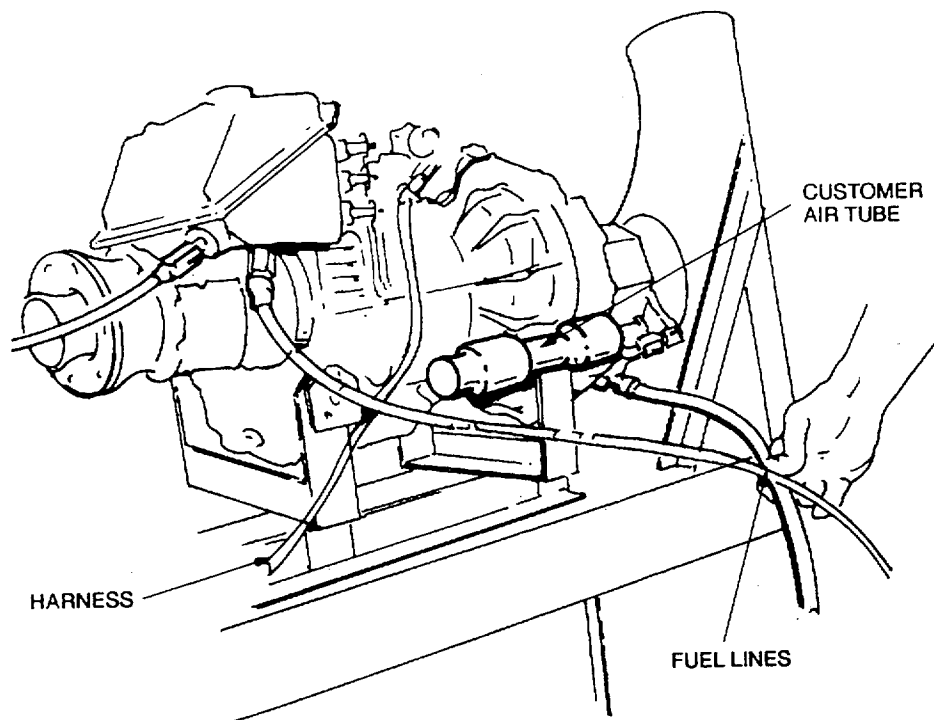


Figure E-8. Lines and Customer Air Tube Connections.

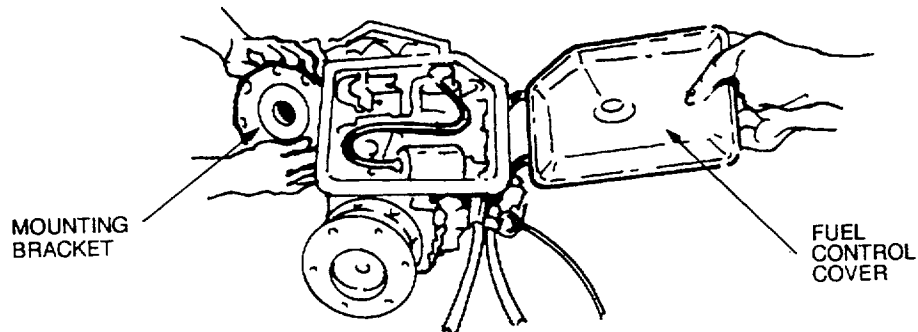


Figure E-9. Fuel Control Cover

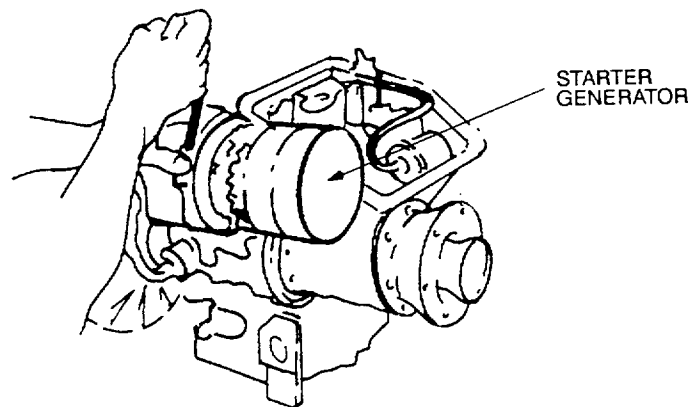


Figure E-10. Starter/Generator Mounting.

- g. Move the MASTER switch on APU Tester box to the UP position.
- h. Move the LOCAL/REMOTE switch on the APU Tester box to the UP (Remote) position.
- i. Move the FUEL BOOST PUMP switch on the instrument panel to ON. Let run approximately 30 seconds, then OFF. Check fuel system for leaks.

WARNING

Post fire watch.

- j. Move the RUN-START-STOP switch on APU Tester box to the UP (RUN-START) position.
 - (1) Battery volts drop, %RPM increases, at approximately 5% RPM both START FUEL lights ON and EGT starts to increase.
 - (2) At (+,-) 14% RPM, both MAIN FUEL lights ON.
 - (3) At (+,-) 70% RPM, START FUEL light OFF.
 - (4) At approximately 90% + 1.5 seconds, MAX FUEL light ON.
 - (5) At (+,-) 102% RPM, both READY TO LOAD lights ON.

CAUTION

If any abnormal condition is observed/heard during APU operation, place the OFF-RUN-START switch on instrument panel to OFF IMMEDIATELY. Do not turn off master switch until engine speed RPM is zero.

CAUTION

If APU is to be restarted or another start attempt tried, wait at least 30 seconds after APU has stopped before placing START/RUN-STOP switch to START/RUN. This allows residual fuel to drain from APU, thereby preventing an overspeed or overtemp condition.

CAUTION

If APU Test stand is allowed to run out of fuel the APU fuel control may be damaged.

- k. Refer to TM 55-4920-431-13, figure and table 2-1 for specific controls and indications of the APU Tester box. Also refer to the appropriate TM for adjustment and trouble shooting procedures for your APU.

3-14. APU Testing. After APU has automatically accelerated to rated speed, it is protected by three automatic safety devices; a speed switch, a high exhaust temperature device, and a low oil pressure switch. Refer to appropriate TM for all adjustment procedures.

3-15. APU STOPPING.

- a. Move START-RUN-OFF switch on instrument panel to OFF, (Reset APU Tester box switches to Down position if installed)
- b. Pull MAIN POWER and LOAD RELAY circuit breakers on instrument panel.
- c. Disconnect battery.

WARNING

Exhaust duct and APU combustor section are hot during operation. Keep clear of combustibles. Avoid physical contact to preclude personal injury. Do not remove APU until it has sufficiently cooled.

3-16. APU REMOVAL.

- a. Disconnect all APU tester cables at the control console.
- b. Disconnect tester cables at the ESU and reconnect ESU cables.
- c. Disconnect drain lines and fuel supply lines and install protective caps/plugs.
- d. Disconnect starter\generator electrical leads.
- e. Remove fuel control covering.
- f. Remove clamp and auxiliary starter/generator.
- g. Remove starter\generator mounting bracket by removing the nuts and washer.
- h. Reinstall fuel control covering.
- i. Remove oil sump line plug and reinstall fitting.
- j. Remove check valve from the APU customer air outlet. Remove blank off disk check valve. Reinstall check valve on air outlet.
- k. Disconnect check stand control harness (P301) from harness receptacle on APU.
- l. Connect a suitable hoist assembly, or equivalent for the removal of APU.
- m. Remove all mounting bolts.
- n. Remove APU from stand.

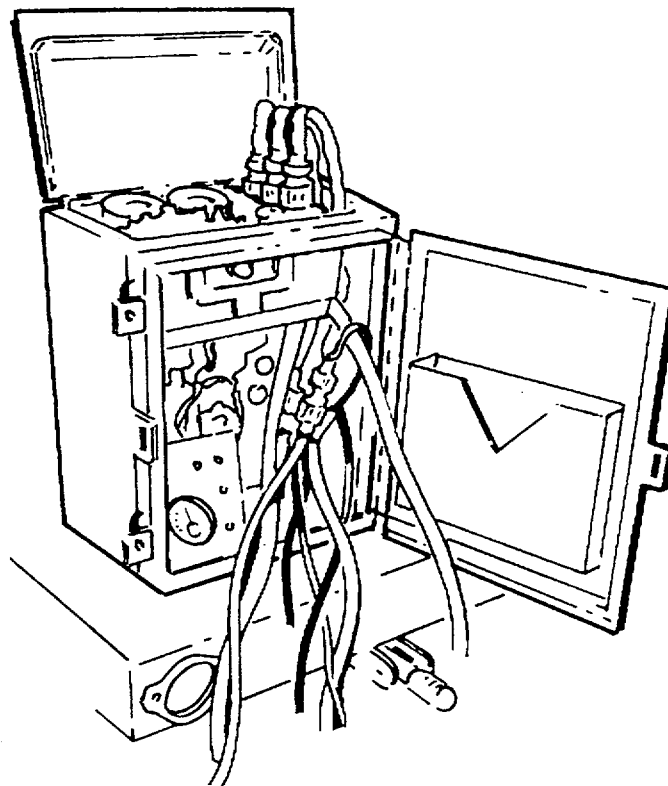


Figure E-11. Tester Box Installed, Harness Connected.

SECTION IV

MAINTENANCE INSTRUCTIONS

4-1. GENERAL.

4-2. Maintenance of the mobile check stand consists of periodic lubrication, specified in figure E-12 and E-13, and of performing the inspection checks described in figure E-14. Common repair procedures are not given; such repairs should be made in accordance with standard practices. When an item is unique or sufficiently complex so as to require special instructions and precautions, the repair procedures are given in Section VII.

4-3. CLEANING

4-4. Clean metal parts with cleaning solvent (item 1 App D). Wipe clean with a clean dry cloth. Parts may be sprayed or immersed in the solvent, whichever is convenient. Apply service-approved corrosion-preventive compounds on all steel parts after cleaning. Clean all electrical parts with a softbristle brush or a lint-free cloth. Remove all traces of corrosion or other deposits that may interrupt electrical continuity.

4-5. PERIODIC LUBRICATION.

4-6. Perform periodic lubrication of the check stand in the manner and at the intervals prescribed in figure E-12.

Figure & Index No.	Item	Interval	Method	Lubricant
1. Fig. E-13	Lube Fittings	180 Days	Grease Gun	Item 2, App D
2. Fig. E-13	Wheel Bearings	180 Days	Hand Pack	Item 2, App D
3. Fig. E-13	Moving Parts	180 Days	Oil Can	Item 3, App D

Figure E-12. Table of Periodic Lubrication

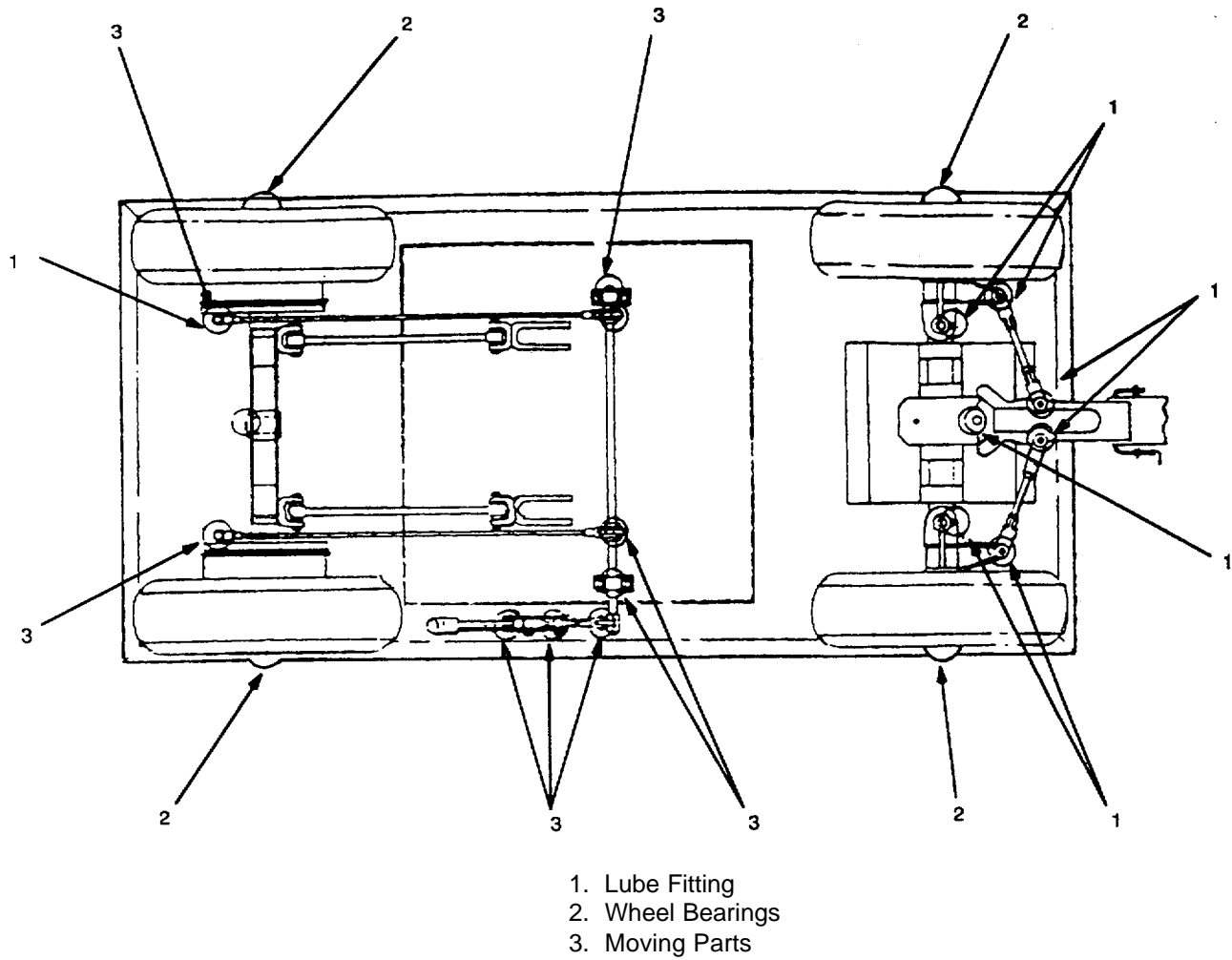


Figure E-13. Mobile Check Stand, Lubrication Diagram.

4-7. INSPECTION AND MAINTENANCE INTERVAL.

4-8. Perform periodic inspection and maintenance of the items listed in figure E-14 at the intervals indicated. During periods of frequent use or of operation in severe climatic or environmental conditions, the inspection and maintenance schedule should be altered accordingly.

Item	Interval	Method	Inspection and Maintenance
Battery	30 Days	Visual and Operational	<ul style="list-style-type: none"> a. Inspect vent openings for restrictions. b. Check level of electrolyte. c. Check connections for Security of attachment d. Check caps and case for leaks and cracks. e. Clean corroded areas.
<p>NOTE Refer to TM-11-6140-203-14-1 when performing further battery maintenance.</p>			
Fire Extinguisher	30 Days	Visual and Operational	<ul style="list-style-type: none"> a. Check clamp and support bracket for security of attachment b. Check all moving parts for corrosion and damage. c. Inspect horn for cracks and chips. d. Weigh, recharge if required, and perform all inspections and maintenance prescribed by the manufacturer

Figure E-14. Table of Periodic Inspection and Maintenance (Sheet 1 of 6)

Item	Interval	Method	Inspection and Maintenance
Tires	30 Days	Visual	<ul style="list-style-type: none"> a. Check for cuts, cracks, excessive or abnormal wear on any surface. b. Check for proper air pressure (40 to 45 psig).
Control Console and Instrument Panel	60 Days	Visual	<ul style="list-style-type: none"> a. Check connectors for dirt and corrosion. b. Check harnesses and cable for security of attachment and chafing. c. Check all external relay connections for security (power off). d. Check ground connections for security. e. Check all Insulation for chafing and wear. f. Check mounting bolts and lugs for security of attachment. g. Check circuit breakers for operation. h. Check warning lights for detective lamps. i. Check sheaf support arm insulation for chafing and wear.

Figure E-14. Table of Periodic Inspection and Maintenance (Sheet 2 of 6)

Item	Interval	Method	Inspection and Maintenance
Harnesses, Cables, Wire Assemblies, and Terminal Blocks	60 Days	Visual and Operational	<ul style="list-style-type: none"> a. Check continuity of all harnesses, cables, and wire assemblies. b. Check all connectors for bent pins. c. Check wire insulation for chafing and wear. d. Check that terminal assemblies are secure and properly mounted.
Brakes and brakes Linkage Assembly	90 Days	Visual and Operational	<ul style="list-style-type: none"> a. Test that parking brakes hold check stand when applied. b. Check locking and unlocking action of brake lever. c. Check all attaching parts for security of attachment, stripped threads, and corrosion. d. Check brake lining adjustment.

Figure E-14. Table of Periodic Inspection and Maintenance (Sheet 3 of 6)

Item	Interval	Method	Inspection and Maintenance
Fuel Filer and Fuel Lines	90 Days	Visual	<ul style="list-style-type: none"> a. Clean filter case. b. Check that seal is flexible and free of cracks. c. Install new element and new O-rings. d. Check all lines and fittings for stripped threads, and for security of attachment
Fuel Tank	90 Days	Visual	<ul style="list-style-type: none"> a. Inspect fuel tank for leaks. b. Check drain fittings for damage and security of attachment c. Check filter cap and dip-stick for damage and for loose fit on the filler neck d. Check dipstick for readability of measurement and for security of attachment to the filler cap.

Figure E-14. Table of Periodic Inspection and Maintenance (Sheet 4 of 6)

Item	Interval	Method	Inspection and Maintenance
Grounding Wires and Post	90 Days	Visual	<ul style="list-style-type: none"> a. Check wires for fraying. b. Check attaching nuts and post for stripped threads. c. Check wire terminals, nuts, and washers for corrosion, and for security of attachment.
Lubrication	90 Days	Visual	<ul style="list-style-type: none"> a. Check that a lubrication fittings are installed and undamaged. See figure E-13 for location of lubrication fittings.
Exhaust Duct Assembly	180 Days	Visual	<ul style="list-style-type: none"> a. Inspect all welds for cracks.
Frame	180 Days	Visual	<ul style="list-style-type: none"> a. Examine all structural components of the trailer, such as angles, beams, supports, and welded sections for cracks, weakness, and failures. b. Check all components for security of attachment. c. Check all attaching parts for stripped threads and corrosion. d. Check reflectors for broken glass. e. Check all stowage equipment for security of attachment.

Figure E-14. Table of Periodic Inspection and Maintenance (Sheet 5 of 6)

Item	Interval	Method	Inspection and Maintenance	Operational
Running Gear	180 Days	Visual and Operational	<ul style="list-style-type: none"> a. Check wheels for alignment and proper training. b. Check wheel rims for cracks and dents, and attaching hardware for stripped threads. c. Remove wheel hub assemblies and check bearings for damage, flat spots, corrosion, and freedom of movement. d. Check bearing race for scoring, nicks, and looseness. e. Check grease seals and retainers for wear and damage. f. Check brake shoes and lining for damage and wear. g. Check brake drums for scoring and wear. h. Check all attaching hardware for cracks and stripped threads. i. Check steering mechanism for freedom of movement. j. Check tie rods for looseness and play. 	Operational

Figure E-14. Table of Periodic Inspection and Maintenance (Sheet 6 of 6)

4-9. APPLICABLE SPECIFICATIONS.

4-10. Refer to figure E-15 for a table listing the Government Specifications applying to the maintenance and restoration of the check stand to service use.

Use/item	Specification	Remarks
Compound, Chemical Film	MIL-G-5541	Apply to exposed unpainted trailer parts.
Greasing, Wheel Bearings, and General Lubrication	MIL-G-0924	Apply to wheel bearings and lubrication fittings.
Lettering, Black	FED STD 595, Color No. 17038	Stenciled
Lettering, Red	FED STD 595, Color No. 11136	Stenciled
Lubrication, Brake Linkage	MIL-7870	Apply with oil can on moving parts.
Primer, Trailer Assembly	MIL-P-23377E	One coat.
Finish Painting, Trailer	MIL-C-461680(ME) Color No. 34031	Two coats
Striping, Black	FED STD 595, Color No. 17038	Stenciled.
Welding, Trailer Assembly	MIL-W-8604	Noncritical welding.

Figure E-15. Table of Applicable Specifications

SECTION V

ILLUSTRATED PARTS BREAKDOWN

5-1. GENERAL.

5-2. This section contains an Illustrated Parts Breakdown (IPB) of the mobile check stand. Each illustration is accompanied by a list containing the manufacturers part number, nomenclature, and quantity per assembly.

5-3. Items that are purchased by Solar and used without alteration are identified by the vendor's part number. The vendor's name and address is indicated by a five digit number, following the part nomenclature. The codes for the listed vendors are in accordance with the Federal Supply Code for Manufacturers, Cataloging Handbook H4-1.

5-4. This Illustrated Parts Breakdown provides supply information for all replaceable parts of the mobile check stand. The exploded views of assemblies and component parts reflect engineering drawing breakdown and are not necessarily suitable for use as guides to procedures for service or maintenance. However, procedures described in other sections of this manual reference applicable illustrations in this section for identification and location of parts.

Code	Vendor	Code	Vendor
G88042	Army Air Force drawings under custodianship of the Air Force	14892	Brake and Steering Division of The Bendix Corp. South Bend, Indiana
05277	Westinghouse Electric Corp. semi-conductor Dept. Youngwood, Pennsylvania	22573	Saginaw Products Corp. Gardena, California
08484	Breeze Corporations Inc. Union, New Jersey	25497	Metermaster Los Angeles, California
10424	Magesco Inc. Alhambra, California	33525	Walter Kidde and Co. Inc, Belleville, New Jersey
14704	Crydom Laboratories, Inc. Garden Grove, California	44655	Ohmite Manufacturing Co Skokie, Illinois

52793	Saginaw Products Corp. Saginaw, Michigan	82121	Electro Switch Corp. Weymouth, Massachusetts
57733	Stewart-Warner Corp. Chicago, Illinois	82647	Metals and Control Inc., Control Products Attleboro Massachusetts
59730	Thomas and Betts Co. Elizabeth, New Jersey	85735	Monadnock Paper Mills Inc. Bennington, New Hampshire
65092	Weston Instrument Inc. Weston-Newark Newark, New Jersey	86831	Roylyn Inc. Glendale, California
70040	AC Spark Plug Corp. of General Motors Corp. Flint, Michigan	91812	Janco Corp. Burbank, California
72741	Dorman Products Co., Inc. Cincinnati, Ohio	97424	General Electric Co. Aerospace Electrical Equipment Dept. Lynn, Massachusetts
74063	Harman Electric Mfg. Co, Mansfield, Ohio	97484	Technical Development Co. Glenolden, Pennsylvania
76680	National Seal Division of Federal-Mogul-Bower Bearings Inc. Redwood City California	98003	Nielsen Hardware Corp. Hartford, Connecticut
81321	Purolator Products Inc. Rahway, New Jersey	98376	Zero Mfg. Co. West Division Burbank, California

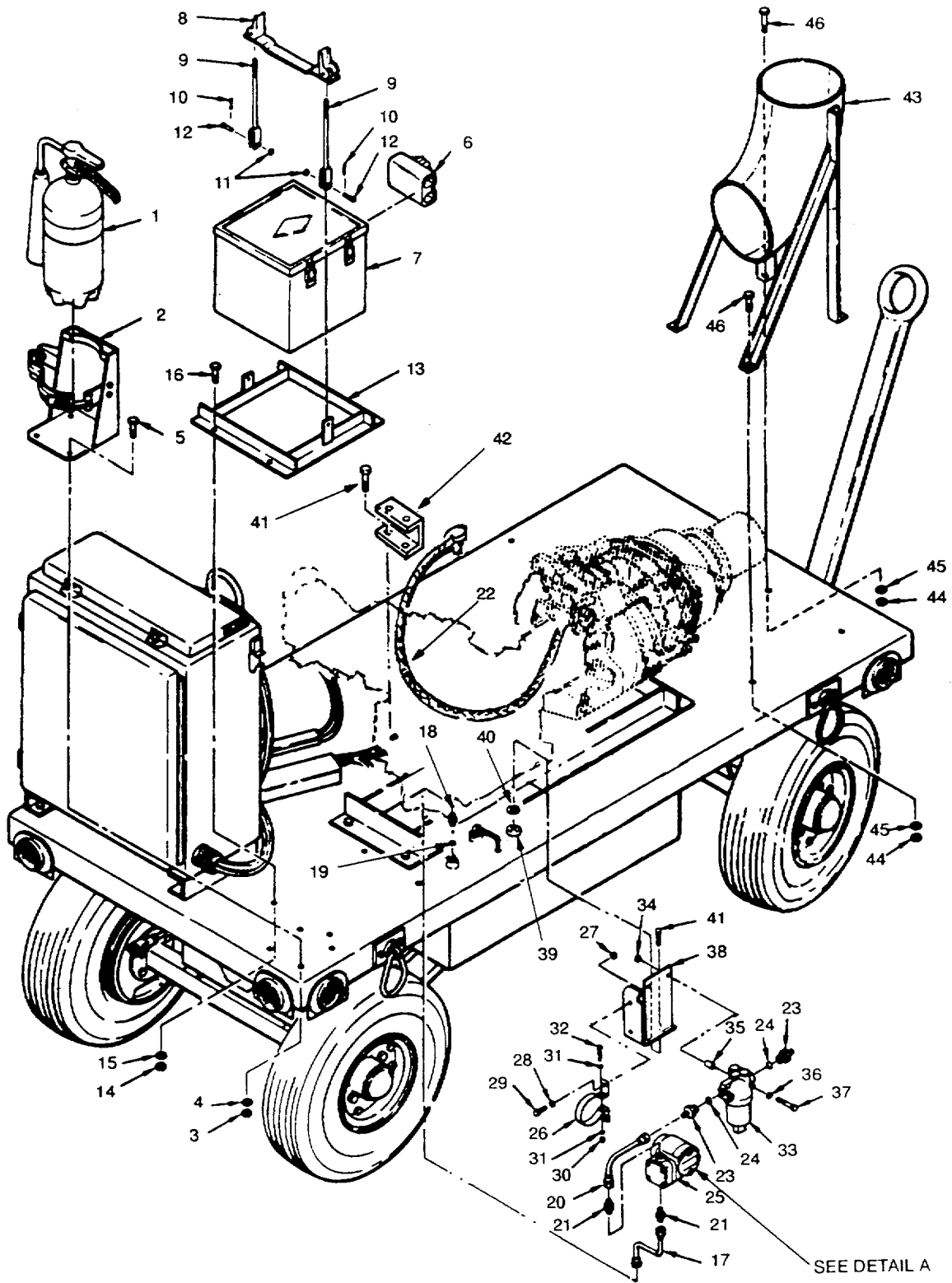
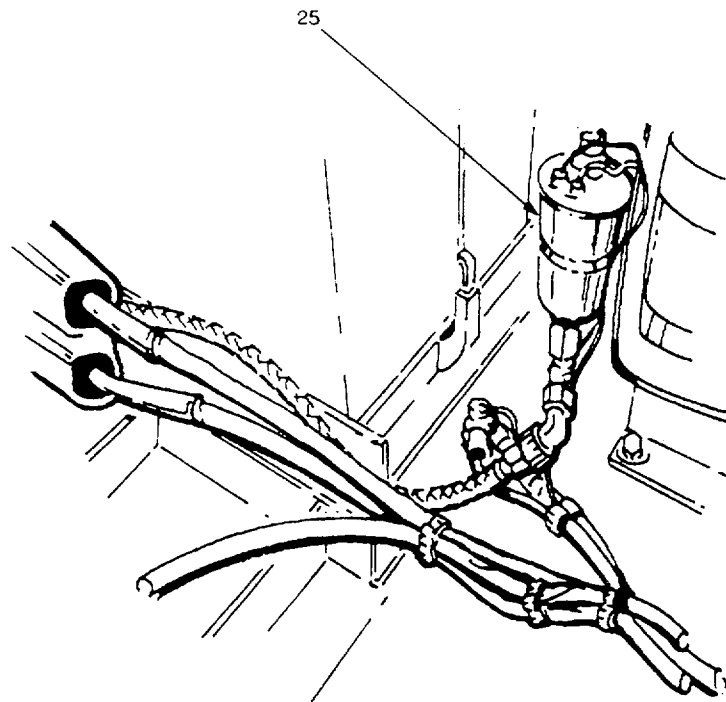


Figure E-5. Mobile Check and Adjustment Stand (Sheet 1 of 3).



DETAIL A

NOTE

Some modified units have newly configured boost pump

Figure E-5. Mobile Check and Adjustment Stand (Sheet 2 of 3).

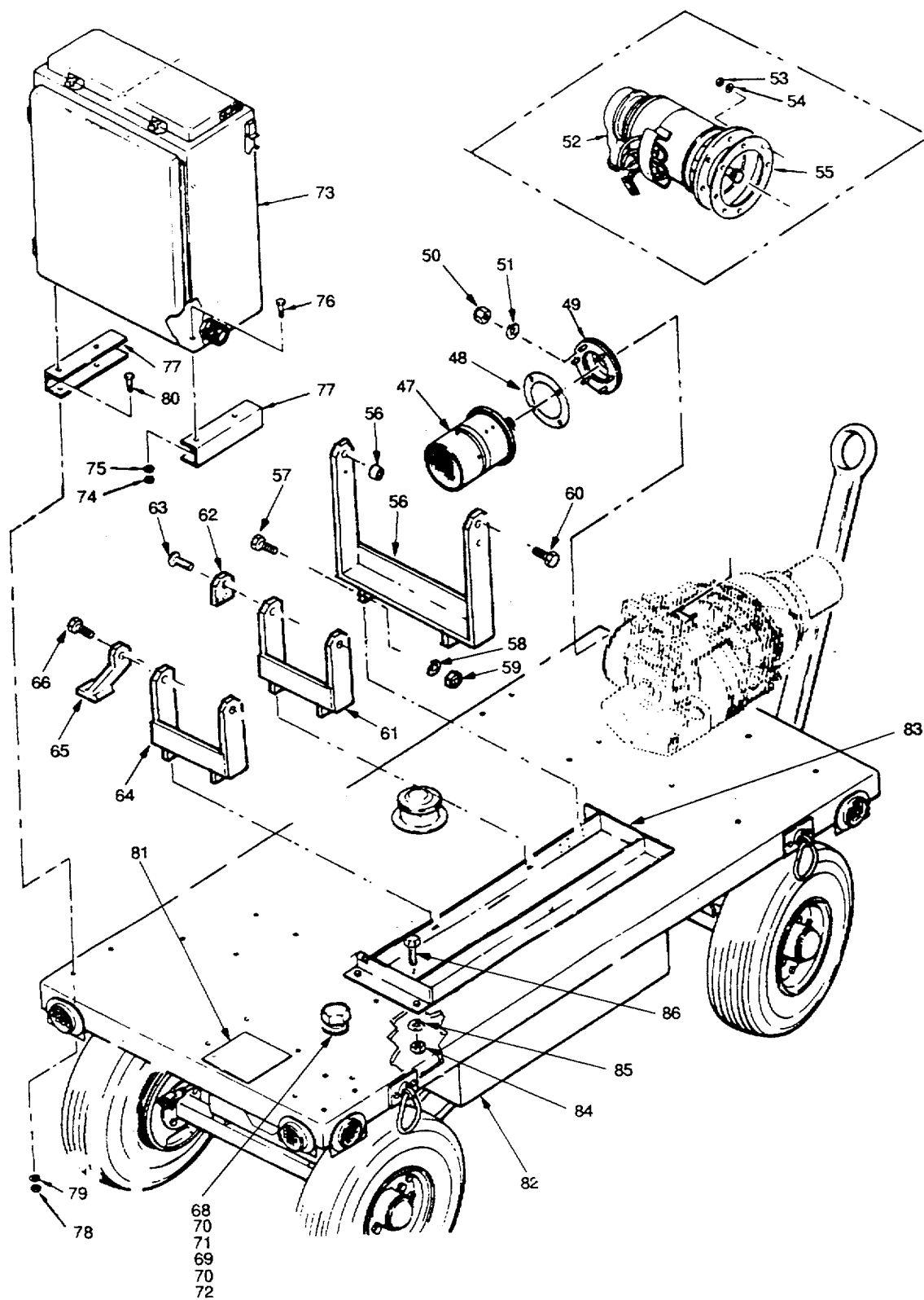


Figure E-5. Mobile Check and Adjustment Stand (Sheet 3 of 3).

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
E-5	45977-100		• STAND, Mobile check and adjustment	1
-1	891519		• EXTINGUISHER, Fire (33525)	1
-2	870752		• BRACKET, Clamp-type (33525) (ATTACHING PARTS)	1
-3	MS21045-6		• LOCKNUT	4
-4	AN960-616		• WASHER	4
-5	AN6-7A		• BOLT	4
			---*---	
-6	MS25182-2		• RECEPTACLE	1
-7	MS24498-1		• BATTERY (Government Furnished)	1
-8	AN3156-3		• CLAMP	2
-9	21590-0		• STUD (ATTACHING PARTS)	2
-10	MS24665-151		• PIN	2
-11	AN960C416L		• WASHER	2
-12	MS20392-3C11		• PIN 2	
			---*---	
-13	47702-0		• RETAINER, Battery (ATTACHING PARTS)	1
-14	MS21045-6		• LOCKNUT	4
-15	AN960-616		• WASHER	4
-16	AN6-7A		• BOLT	4
			---*---	
-17			• LINE ASSEMBLY	1
-18	AN815-6		• UNION	1
-19	MS29512-06		• O-RING	1
-20	47705-0		• LINE ASSEMBLY	1
-21	AN816-6		• NIPPLE	2
-22			• HOSE ASSEMBLY	1
-23	AN919-12		• REDUCER	2
-24	M329512-08		• O-RING	2
-25	5656748		• PUMP, Fuel, electric (70040) (ATTACHING PARTS)	1
-26	5620653		• BRACKET (70040)	1
-27	MS20364-624C		• LOCKNUT	2
-28	AN960-616		• WASHER	2
-29	MS35266-108		• SCREW	2
-30	MS21045-4		• LOCKNUT	1
-31	AN960-416L		• WASHER	2
-32	AN520-416-28		• SCREW	1
			---*---	
-33	46424-1		• FILTER ASSEMBLY, Fuel (See figure E-17 for detail breakdown) (ATTACHING PARTS)	1

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
-34	MS21045	•	LOCKNUT	2
-35	37327-1	•	SPACER	2
-36	AN960-416L	•	WASHER	2
-37	AN4-27A	•	BOLT	2
			---*---	
-38	47703-0	•	BRACKET, Fuel pump and filter (ATTACHING PARTS)	1
-39	MS21045-6	•	LOCKNUT	4
-40	AN960-616	•	WASHER	4
-41	AN6-10A	•	BOLT	4
-42	See E-23	•	BRACKET, EXTENSION, FUEL PUMP AND FILTER	1
			---*---	
-43	105438-0	•	DUCT ASSEMBLY, EXHAUST	1
-44	MS21045-4	•	LOCKNUT	4
-45	AN960-416	•	WASHER	4
-46	AN4-10A	•	BOLT	4
			---*---	
-47	23032-022	•	STARTER-GENERATOR, DC (T-62T-40-1)	1
	23032-501	•	MOUNTING KIT CONSISTING OF 48 AND 49	1
-48	4222 EX-594-Z	••	CLAMP, STARTER-GENERATOR	1
-49	23032-2201	••	BRACKET, STARTER-GENERATOR (ATTACHING PARTS)	1
-50	MS21045-5	•	LOCKNUT	4
-51	AN960-516	•	WASHER	4
			---*---	
-52	23064-001	•	STARTER-GENERATOR (T-62T-2B] (ATTACHING PARTS)	
-53	MS21045-6	•	LOCKNUT	8
-54	AN960-616	•	WASHER	8
-55	48616-1	•	GASKET	1
			---*---	
-56	See E-24	•	BRACKET, REAR ENGINE MOUNT (ATTACHING PARTS)	1
-57	AN6-10A	•	BOLT	4

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
-58	AN960-616		• WASHER	4
-59	MS21045-G		• LOCKNUT	4
-60	AN6-5A		• BOLT	2
-61	See E-22		• BRACKET, FRONT ENGINE MOUNT (T-62T-40-1)	1
-62	See E-24		• ADAPTER FRONT ENGINE MOUNT	2
-63	AN6-5A		• BOLT	4
-64	See E-21		• BRACKET, FRONT ENGINE MOUNT T-62T-2B	1
-65	160086-1		• ADAPTER, FRONT ENGINE MOUNT T-62T-2B	1
-66	NAS625H6		• BOLT	2
-67			--- * ---	
68	MS21045-6		• LOCKNUT	1
-69	AN935-616		• LOCKWASHER	2
-70	AN910-616		• WASHER	3
-71	AN316-6		• NUT	1
-72	MS16998-75		• CAPSCREW (GROUND STUD)	1
-73	105439-0		• CONSOLE ASSEMBLY CONTROL (SEE FIGURE E-16 FOR DETAIL BREAKDOWN) (ATTACHING PARTS)	1
74	MS21045-6		• LOCKNUT	4
-75	AN960-616		• WASHER	4
-76	AN6-10A		• BOLT	4
-77	47710-1		• CHANNEL	2
-78	MS21045-6		• LOCKNUT	4
-79	AN960-616		• WASHER	4
-80	AN6-7A		• BOLT	4
			--- * ---	
-81	47903-2		• PLATE, IDENTIFICATION	1
-82	47693-100		• TRAILER, MOBILE CHECK AND ADJUSTMENT STAND	1
-83	47696-0(M0D)		• FRAME ASSEMBLY, ENGINE SUPPORT (ATTACHING PARTS)	1
-84	MS21045-6		• LOCKNUT	4
-85	AN960-616		• WASHER	4
-86	AN6-10A		• BOLT	4

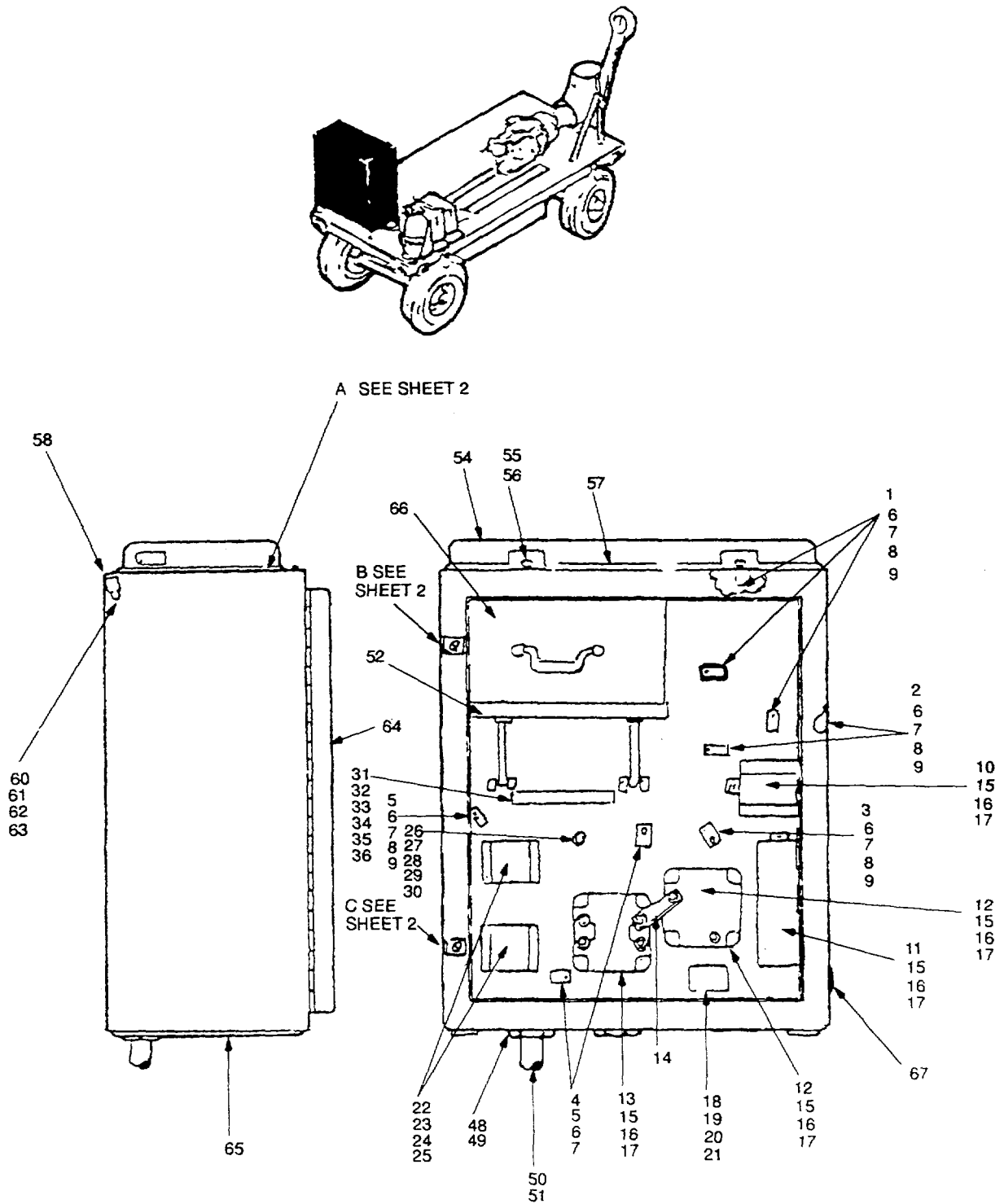
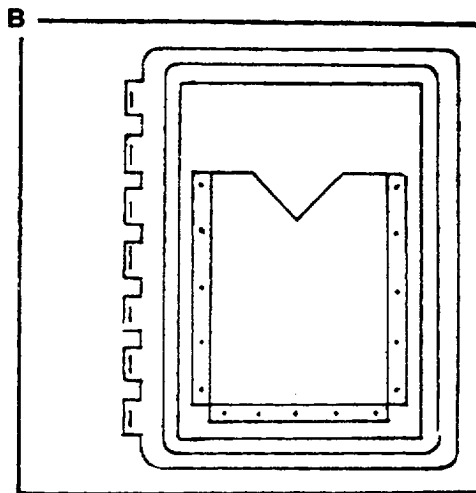
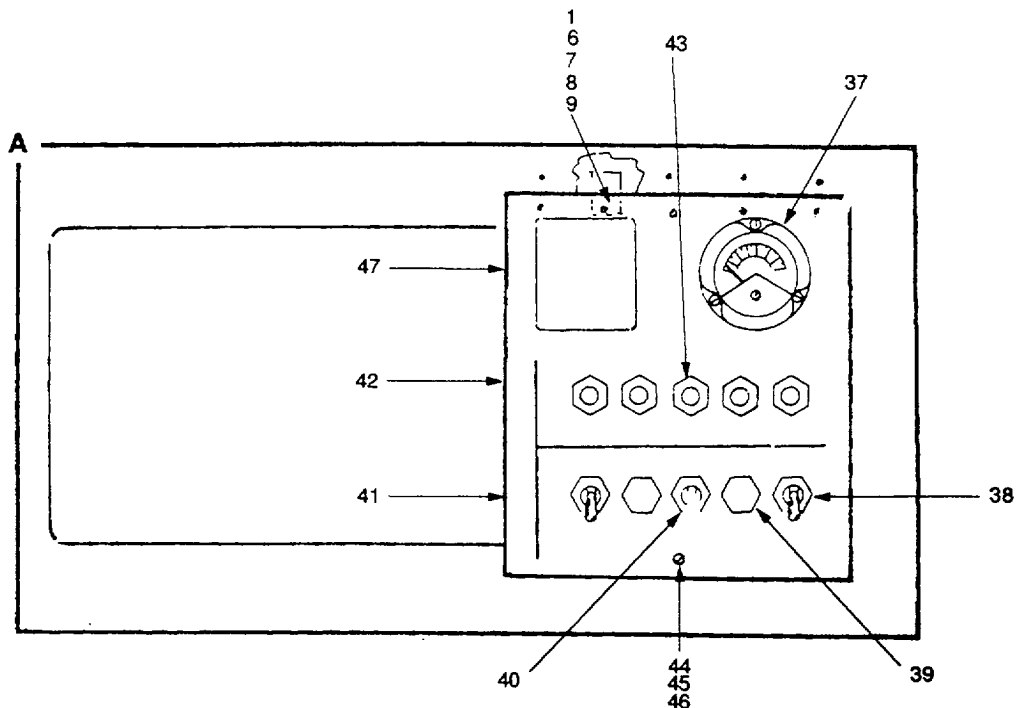
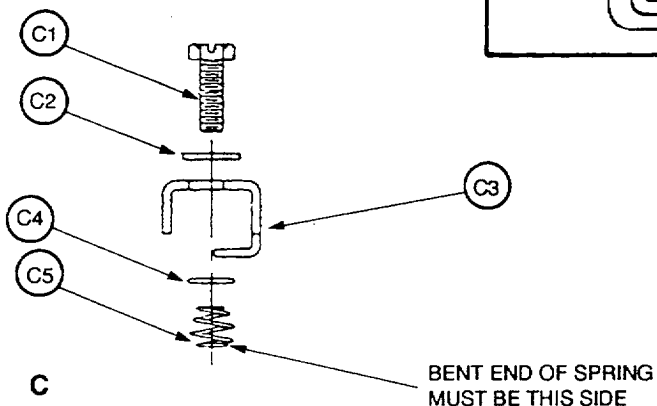


Figure E-16. Control Console Assembly (Sheet 1 of 2).



LEGEND	
ITEM	DESCRIPTION
C1	SCREW, CLAMP
C2	WASHER
C3	CLAMP
C4	WASHER
C5	SPRING, CLAMP



PART NO.	MATERIAL
91307-400	304 S.S.

Figure E-16. Control Console Assembly (Sheet 2 of 2).

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
E-16	105439-0		• CONSOLE ASSEMBLY, Control (See figure E-5 for next assembly)	Ref
-1	MS21919WDG6		• CLAMP, CABLE	3
-2	MS21919WDG8		• CLAMP, CABLE	2
•3	MS21919WDG11		• CLAMP, CABLE	1
-4	MS21919WDG8		• CLAMP, CABLE	2
-5	MS21919WDG4		• CLAMP, CABLE	1
			(ATTACHING PARTS)	
-6	MS51985-65		• SCREW, MACHINE	9
-7	AN960-C10L		• WASHER, FLAT	18
-8	MS20341-10C		• NUT, HEX	9
-9	79NM-62		• NUT, SELFLOCKING	9
			-- * --	
-10	51065-014		• REGULATOR, DC STATIC VOLTAGE	1
-11	163200-100-H		• SEQUENCE UNIT, ELECTRONIC	1
-12	A700AW		• CUTOUT, REVERSE CURRENT	1
-13	AM711CJ		• RELAY, STARTER DROPOUT	1
-14	107682-7		• BAR, BUSS (MANUFACTURE)	1
			(ATTACHING PARTS)	
-15	MS27039C1-07		• SCREW, MACHINE	16
-16	AN960-C10L		• WASHER, FLAT	16
-17	79NM 02		• NUT, CELL BLOCKING	16
			-- * --	
-18	8200-120		• SHUNT, DC AMPMETER	1
			(ATTACHING PARTS)	
-19	MS27039-0814		• SCREW, MACHINE	2
-20	AW960-8L		• WASHER, FLAT	2
-21	MS21044N08		• NUT, SELFLOCKING	2
			-- * --	
-22	MS24568-D1		• RELAY	2
			(ATTACHING PARTS)	
-23	MS27039CI-07		• SCREW, MACHINE	8
-24	AN960-C10L		• WASHER, FLAT	8
-25	79NM-02		• NUT, SELFLOCKING	8
-26	AN515C6R32		• SCREW, MACHINE (GROUND STUD)	1
-27	AN960-C10L		• WASHER, FLAT	2
-28	MS35338-41		• WASHER, LOCK	1
-29	MS20341-10C		• NUT, HEX	1
-30	79NM-62		• NUT, SELFLOCKING	1
			-- * --	
-31	MS27212-1-5		• STRIP, TERMINAL (12 POSTS)	1
-32	AN960-C6L		• WASHER, FLAT	12
-33	79NM-62		• NUT, SELFLOCKING	12
			(ATTACHING PARTS)	
-34	MS35206-218		• SCREW, MACHINE	2
-35	MS27183-4		• WASHER, FLAT	2
-36	MS21045-04		• NUT, SELFLOCKING	2
			-- * --	
-37	83-14907		• METER, VOLTS DC (FURNISHED WITH ATTACHING HARDWARE)	1

FIGURE & INDEX NUMBER	PART NUMBER	1	2	3	4	5	6	7	DESCRIPTION	UNITS PER ASSY
E-16										
-38	MS35058-22	•							SWITCH (S3)	1
-39	MS25244-10	•							CIRCUIT BREAKER	2
-40	MS24523-277	•							SWITCH (S2)	1
-41	MS27407-510	•							SWITCH (S1)	1
-42	MS25041-7-327	•							LIGHT	4
-43	MS25041-6-327	•							LIGHT	1
-44	MS35206-228	•							SCREW, MACHINE	1
-45	AN960-61	•							WASHER, FLAT	1
-46	MS21044N06	•							NUT, LOCK	1
-47	See E-26	•							PLATE, INSTRUMENT	1
-48	1945	•							NIPPLE, INSULATED, CHASE	2
-49	144	•							LOCKNUT	2
-50	See E-19	•							HARNESS ASSEMBLY, ENGINE CONTROL (LOCAL MANUFACTURE)	1
-51	See E-19	•							HARNESS ASSEMBLY, STARTER/GENERATOR (LOCAL MANUFACTURE)	1
-52	See E-25	•							SHELF ASSEMBLY, APU TESTER BOX (LOCAL MANUFACTURE)	1
-53	See E-25	•							SUPPORT ASSEMBLY (LOCAL MANUFACTURE)	2
-54	105437-20	•							COVER ASSEMBLY	1
-55	99785-2	•							CROSS PIN, STUD	2
56	W98293-2-200	•							STUD	2
-57	ZSP5-510	•							GASKET	1
-58	MS35822-1D	•							HINGE	1
-59	47697-6	•							HOOK	2
-60	HC265SS	•							CATCH (ATTACHING PARTS)	2
-61	MS35206-228	•							SCREW MACHINE	4
-62	AN960-6L	•							WASHER, FLAT	8
63	MS21044N06	•							NUT, SELFLOCKING	4
									-- * --	
-64	44163-2	•							PLATE, IDENTIFICATION	1
-65	10537-10	•							ENCLOSURE ASSEMBLY	1
-66	161226-200	•							APU TESTER BOX (WHEN INSTALLED, UNIT SUPPLIED)	1
-67	SS50890	•							PLUG, BUTTON	1
-68	91307-400	•							BRACKET ASSEMBLY, CLOSURE	2
-69		••							BOLT	2
-70		••							WASHER, FLAT	4
-71		••							SPRING, COMPRESSION	2
-72		•							CLAMP	1
-73	14251-002	•							GASKET	(BULK)

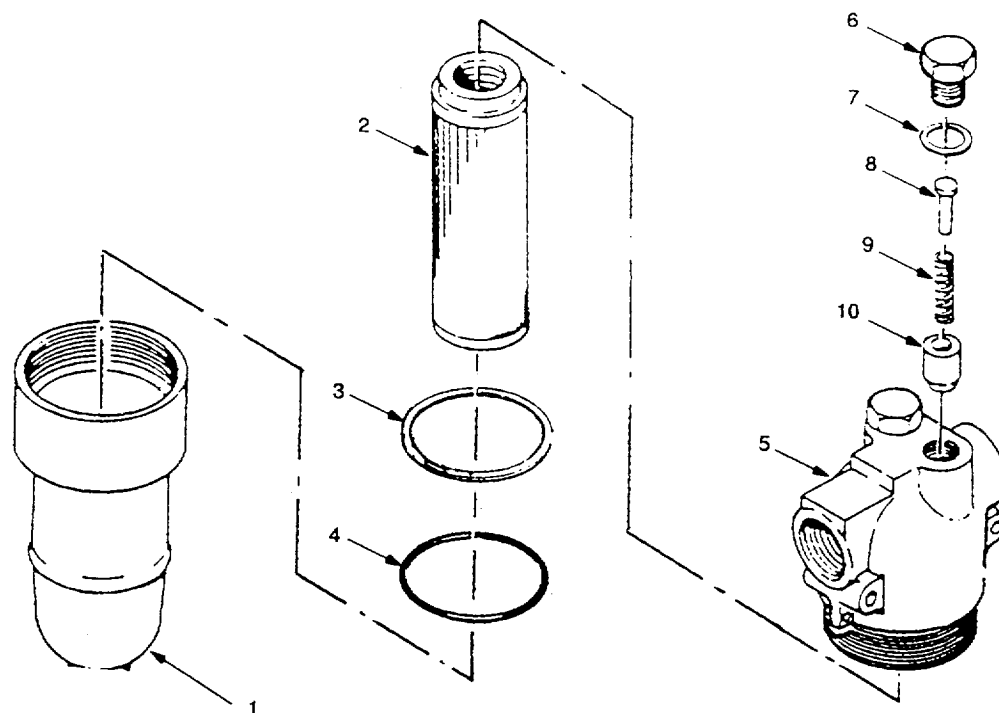


Figure E-17. Fuel Filter Assembly

FIGURE & INDEX NUMBER	PART NUMBER	1 2 3 4 5 6 7	DESCRIPTION	UNITS PER ASSY
E-17	46424-1		FILTER ASSEMBLY, Fuel (See figure E-5 for next higher assembly)	Ref
-1	NO NUMBER		• CASE (Part of filter assembly, Type PR306)(81321)	1
-2	51399		• ELEMENT, Fuel filter (81321)	1
-3	32152		• RING, Backup (81321)	1
-4	30323		• O-Ring (81321)	1
-5	NO NUMBER		• HEAD (Part of filter assembly, Type PR306)(81321)	1
-6	30107		• PLUG, Relief valve (81321)	2
-7	36978-6		• GASKET (81321)	2
-8	30106		• GUIDE, Spring (81321)	2
-9	30442		• SPRING, Relief valve (81321)	2
-10	30105		• PISTON, Relief valve (81321)	2

SECTION VI

TROUBLESHOOTING

6-1. GENERAL

6-2. System troubles listed in figure E-18 may be the result of the probable cause indicated, Many of the troubles listed are based on practical experience; however, the causes listed are not the only faults that can cause the specified trouble, Unique situations will require special approaches. Repair instructions recommended in the REMEDY column are referenced in the applicable paragraph in Section VII. Figure E-18 lists troubleshooting data in the following manner:

a. Trouble. Various troubles that may be encountered during check stand operation.

b. Probable Cause. The probable cause of a particular trouble are listed in the order in which they are most likely to occur under standard operating conditions.

c. Remedy. Remedies are similarly arranged, but in order of complexity, starting with the simplest remedy. Refer to the wiring diagram and electrical schematic enclosed in back of this manual when performing electrical checks.

Trouble	Probable Cause	Remedy
1. Fuel not reaching APU	a. Fuel supply low.	Check fuel level, and add fuel if necessary.
	b. Loose connections, crimps, or restrictions in fuel lines.	Tighten loose connections. Clear restrictions, and replace all damaged lines
	c. Restricted fuel intake tube, or tank breather vent dogged.	Remove restrictions.
	d. Defective fuel boost pump.	Check fuel boost pump for proper operation.
	e. Fuel filter clogged.	Replace filter element. Refer to paragraph 7-8, for replacement procedure.
	f. Entrapped air in the fuel System.	Purge the fuel system. Refer to paragraph 2-6 or 3-8, whichever purging procedure is applicable.

Figure E-18. Table of Troubleshooting Procedures (Sheet 1 of 2)

Trouble	Probable Cause	Remedy
2. Control Console.		Malfunctions of the APU fully discussed in this Appendix. When APU troubles occur, follow the trouble shooting instructions outlined in appropriate TM to isolate the cause. Troubles traced to the control console must be located by a continuity check to find the defective component. Refer to paragraphs 6-3 through 6-6 for control system malfunction information. Refer to drawings in this Appendix for continuity checks.

Figure E-18. Table of Troubleshooting Procedures (Sheet 2 of 2)

6-3. TROUBLESHOOTING ELECTRICAL CONTROLS.

6-4. Malfunctions in the APU controls should be traced only after it has been established that the battery is in good condition and that all electrical connections are correctly and tightly connected. It is recommended that APU electrical components be checked for proper operation before troubleshooting the check stand control components.

6-5. Before performing any troubleshooting procedures, always verify that the power supply components to the APU controls are functioning properly, furnishing 24-volt dc power to the control circuits, and are charging the battery. The following components comprise the power supply to the APU.

- Battery
- Circuit breaker CB1
- Circuit breaker CB2
- Reverse current cutout
- Starter dropout relay
- DC starter-generator
- DC voltage regulator VRI

6-6. If fuel supply problems are encountered, check switch S3, K3 and then check the boost pump for proper operation.

SECTION VII

REPAIR AND REPLACEMENT INSTRUCTIONS

7-1. GENERAL.

7-2. The following maintenance data includes removal, inspection, disassembly, re-assembly, and installation of the mobile check stand components. When maintenance and inspection checks or troubleshooting remedies require the repair of a component the following repair instructions apply.

- a. Remove all electrical connections when accessible and feasible. Tag all parts to facilitate reinstallation.
- b. Cap all lines, and seal all openings to prevent entry of dirt, chips, or other foreign material.
- c. Replace all gaskets and O-rings. Lubricate gaskets, O-rings, flanges and oil seals with oil (item 4, App D).
- d. All parts safetied with lockwire or cotter pins prior to removal or disassembly shall be re-safetied in the same manner upon re-assembly or installation with new wire or new cotter pins.

7-3. Removal of Fuel Boost Pump. (See figure E-5.)

- a. Disconnect electrical harness from fuel pump (25).
- b. Disconnect fuel lines (17, 20) from pump. Cover open ends of fuel lines.
- c. Remove nipples (21) from pump. Cover open ports on pump.
- d. Remove nuts (27) washers (28) and screws (29) securing pump to support bracket (38). Remove pump from bracket.

7-4. Installation of Fuel Boost Pump. Installation of fuel boost pump is the reverse of removal. Refer to E-19 when connecting electrical harness to fuel boost pump.

7-5. FUEL FILTER.

7-6. Removal of Fuel Filter. (See figure E-5.)

- a. Disconnect fuel line (20) and hose assembly (22) from fuel filter (33). Cap open end of fuel line and hose.
- b. Remove reducers (23) and O rings (24). Cover open ports on filter.
- c. Remove nuts (34) spacers (35) washers (36) and bolts (37) securing filter to support bracket (38). Remove filter from bracket.

7-7. Disassembly of Fuel Filter. (See figure E-17.)

- a. Remove filter case (1) from filter head (5).
- b. Remove filter element (2). Inspect element; discard if dirty, clogged, or damaged.
- c. Remove backup ring (3) and O-ring (4) from filter case. Discard O ring
- d. If inspection of filter relief valves is necessary, remove plug (6), gasket (7) spring guide (8) spring (9) and piston (10) of each relief valve from filter head. Discard gasket (7).

7-8. Assembly and Installation of Fuel Filter (See figures E-5 and E-7.)

- a. See figure E-17. Assembly of the fuel filter is the reverse of disassembly. Use new gasket (7) new O-ring (4) and new filter element (2). Tighten filter case to 20 to 30 pound-feet torque.
- b. See figure E-5. Installation of the fuel filter is the reverse of removal. Use new O-rings (24), reinstall reducers (23).

7-9. DC STARTER-GENERATOR.

7-10. Removal of DC Starter-Generator. (See figure E-5.)

- a. Disconnect electrical cables from starter-generator (47 or 52).
- b. Loosen attaching nuts (53) or clamp (48) securing starter-generator to engine.
- c. Support starter-generator fore and at; then remove attaching nuts (53) and washers (54) or clamp (48).
- d. Carefully slide starter-generator away until starter-generator drive shaft spline is clear of drive shaft in engine.

- 7-11. Installation of DC Starter-Generator. (See figure E-5.)
- a. Installation of starter-generator (47 or 52) is the reverse of removal.
 - b. Apply a light film of lubrication (item 4, App D) to both sides of new gasket (55), and to flange on engine,
 - c. Tighten clamp (48) or attaching nuts (53) evenly in a crisscross pattern.
 - d. Reconnect electrical cables to dc starter-generator. Refer to figure E-19 for electrical connections.

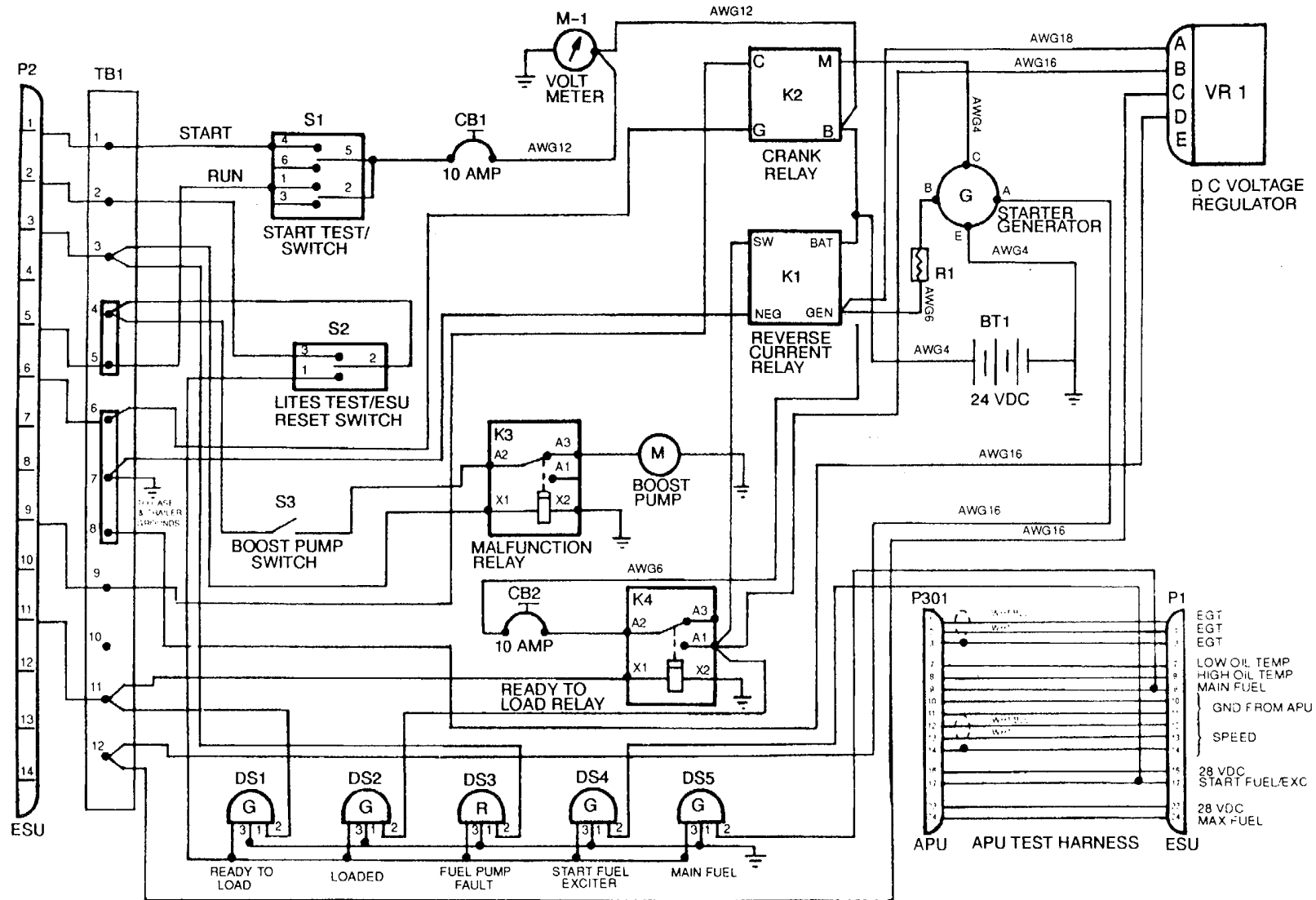
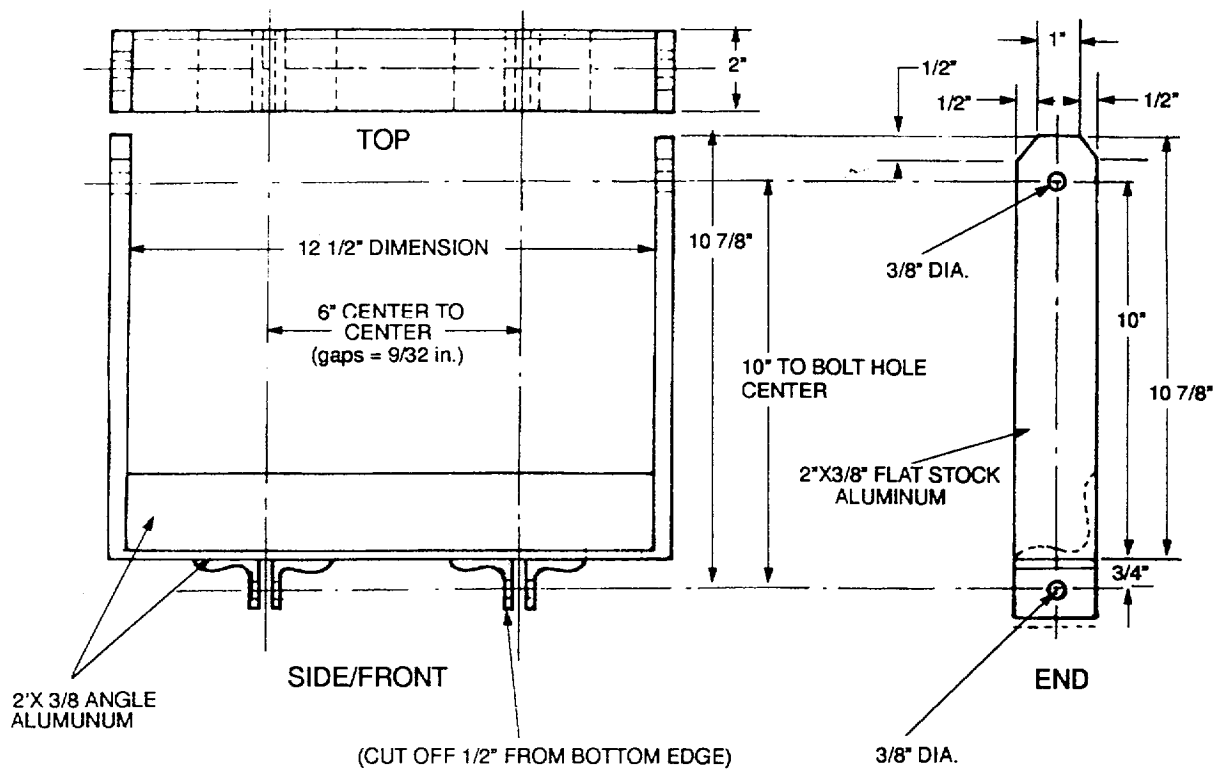


Figure E-19. Wiring Diagram, Mobile Check Stand (Sheet 1 of 2)

<u>QTY</u>	<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	P1	M83723/87R1624N	Connector Plug, Elec.
1	Back Shell	M85049/52-1-16N	Clamp, Cable, Elec.
1	P2	M83723/95R1415N	Connector Plug, Elec.
1	Back Shell	M85049/52-1-14N	Clamp, Cable, Elec.
1	P301	M83723/95R1624N	Connector Plug, Elec.
1	Back Shell 90° Wire	M85049/51-1-16W	Adapter Cable Clamp
16'	AWG 4	M22759/1-4-9	
6'	AWG 6	M22759/1-6-9	
6'	AWG 10	M22759/34-10-9	
8'	AWG 12	M22759/34-12-9	
25'	AWG 16	M22759/34-16-9	
300'	AWG 20	M22759/34-20-9	
21'	Shielded Pair	M27500-20SD2T23	

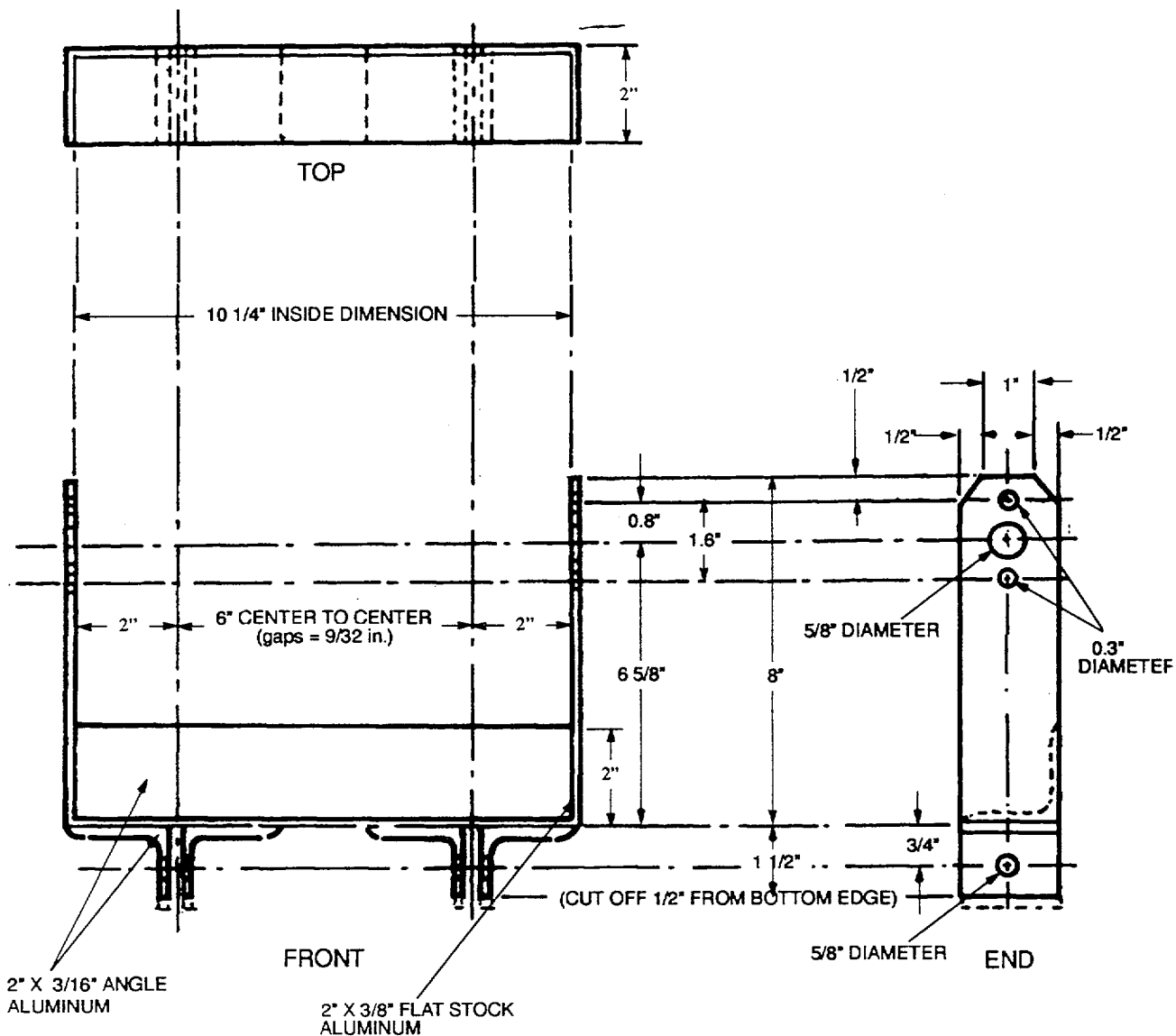
Figure E-19. Wiring Diagram, Mobile Check Stand (Sheet 2 of 2)



NOTE:
 STEEL OF EQUAL STRENGTH AND DIMENSION MAY BE SUBSTITUTED

NOTE:
 AFT MOUNTING BRACKET (-2B,-40-1)

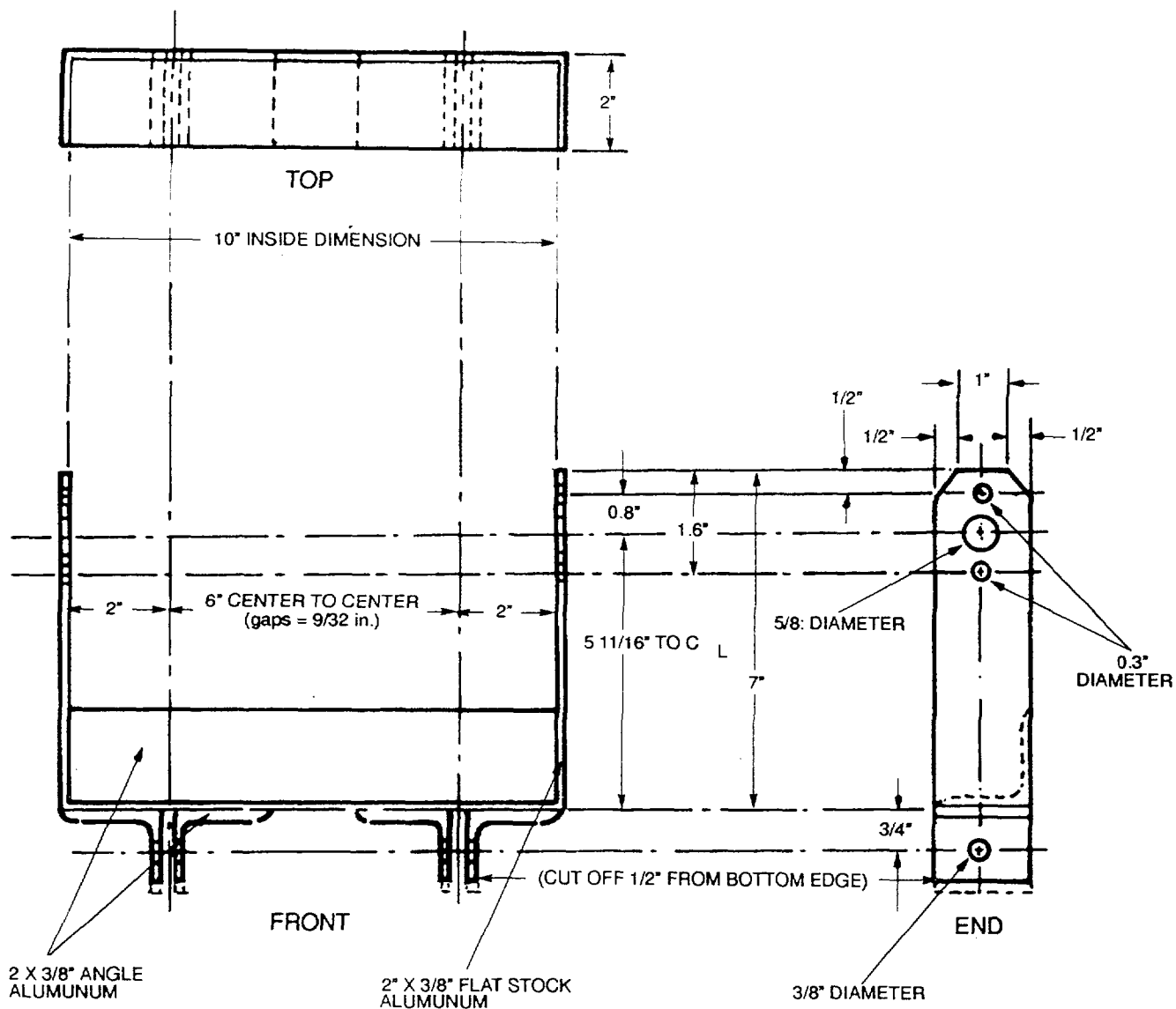
Figure E-20. Engine Bracket, Mobile Check Stand.



NOTE:
STEEL OF EQUAL STRENGTH AND DIMENSION MAY BE SUBSTITUTED

NOTE:
FRONT, T-62-2B

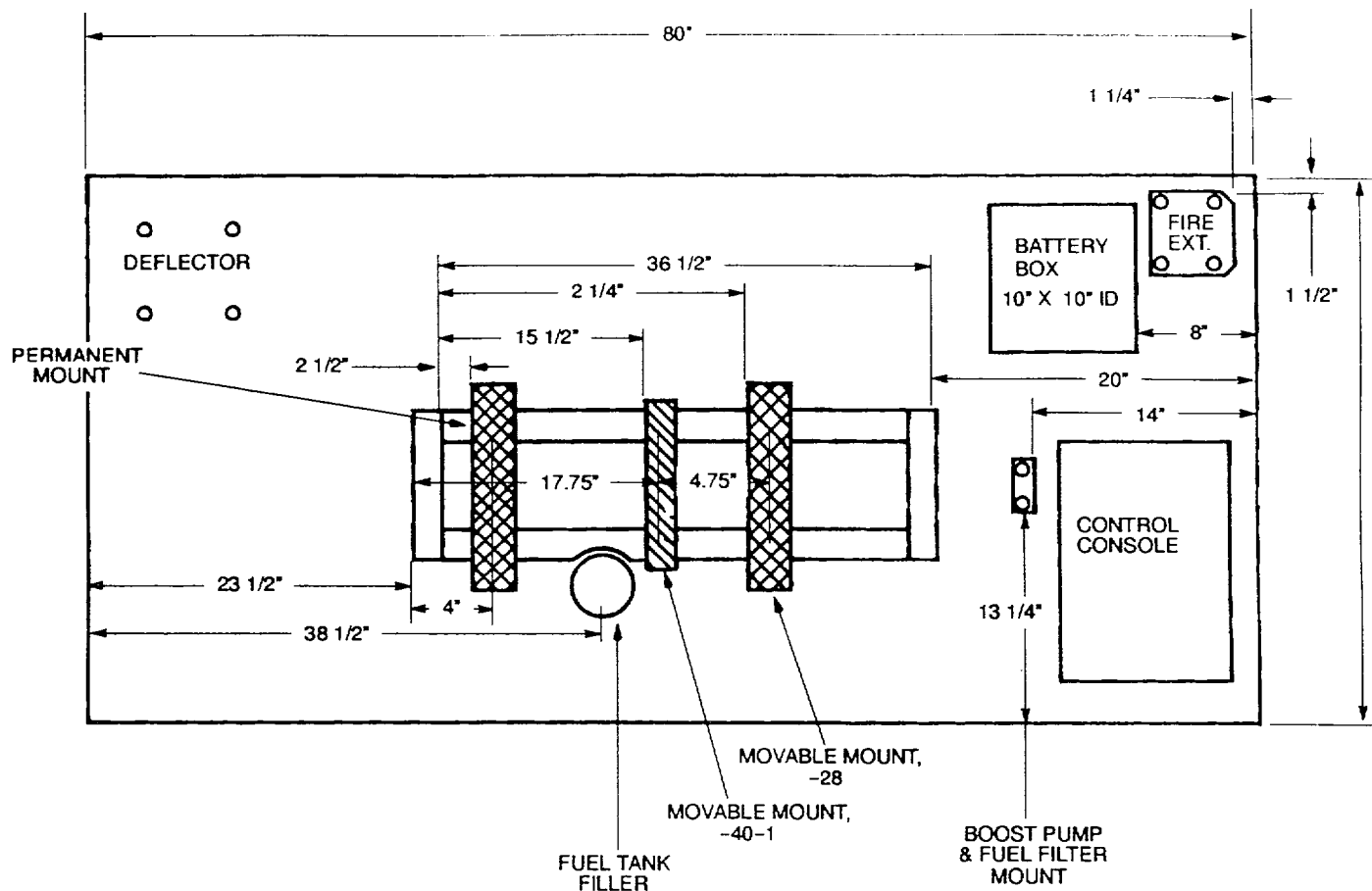
Figure E-21. Engine Bracket, Mobile Check Stand.



NOTE:
 STEEL OF EQUAL STRENGTH AND DIMENSION MAY BE SUBSTITUTED

NOTE:
 FRONT MOUNTING BRACKET (T-62T-40-1)

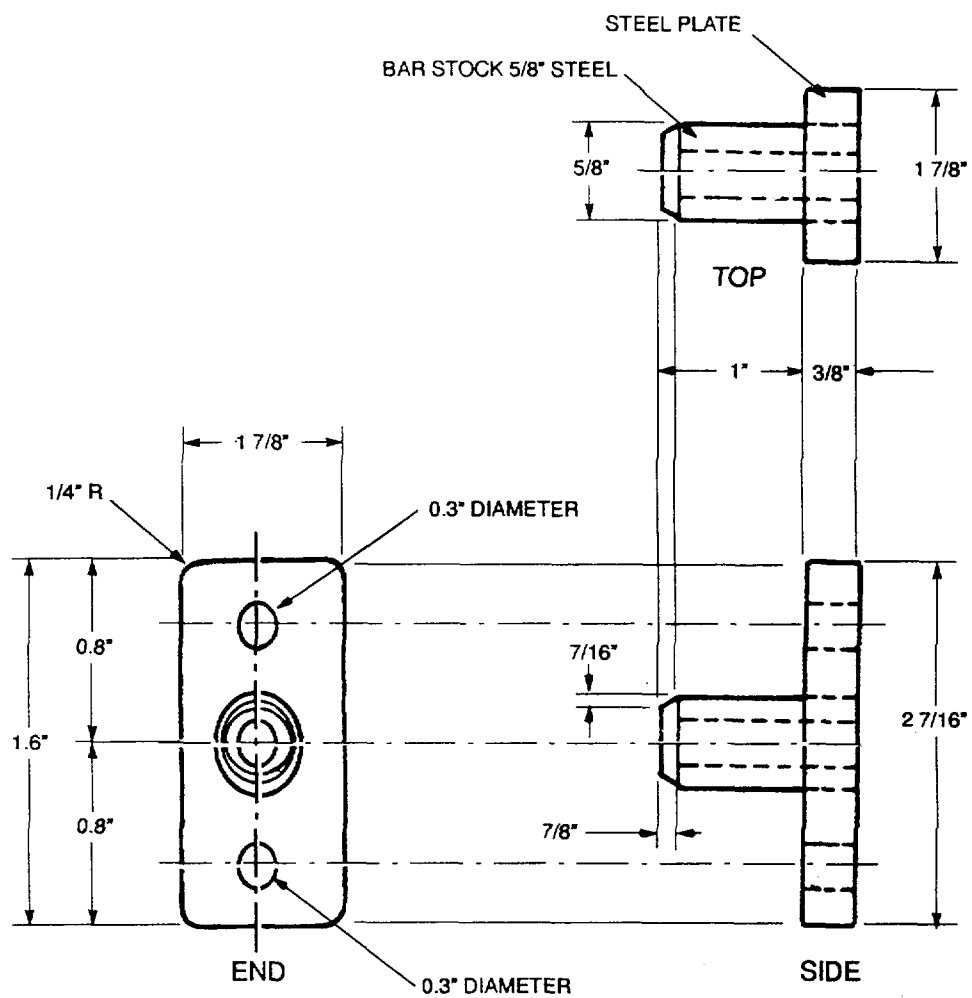
Figure E-22. Engine Bracket, Mobile Check Stand.



NOTE:
USE ORIGINAL APU MOUNTING RAIL (Remove cross pieces) MOUNT IN ORIGINAL POSITION

NOTE:
BOOST PUMP MOUNT EXTENSION IS MADE FROM 4" X 1 5/8" X 1/4" ALUMUNUM CHANNEL OR EQUIVELENT DRILL 3/8" HOLES

Figure E-23. Engine Mounts, Rail Check Stand.



NOTE:
FWD MOUNT USED ON T-62T-2B LH (MAKE 2)

Figure E-24. FWD Mount Trunnions, Mobile Check Stand.

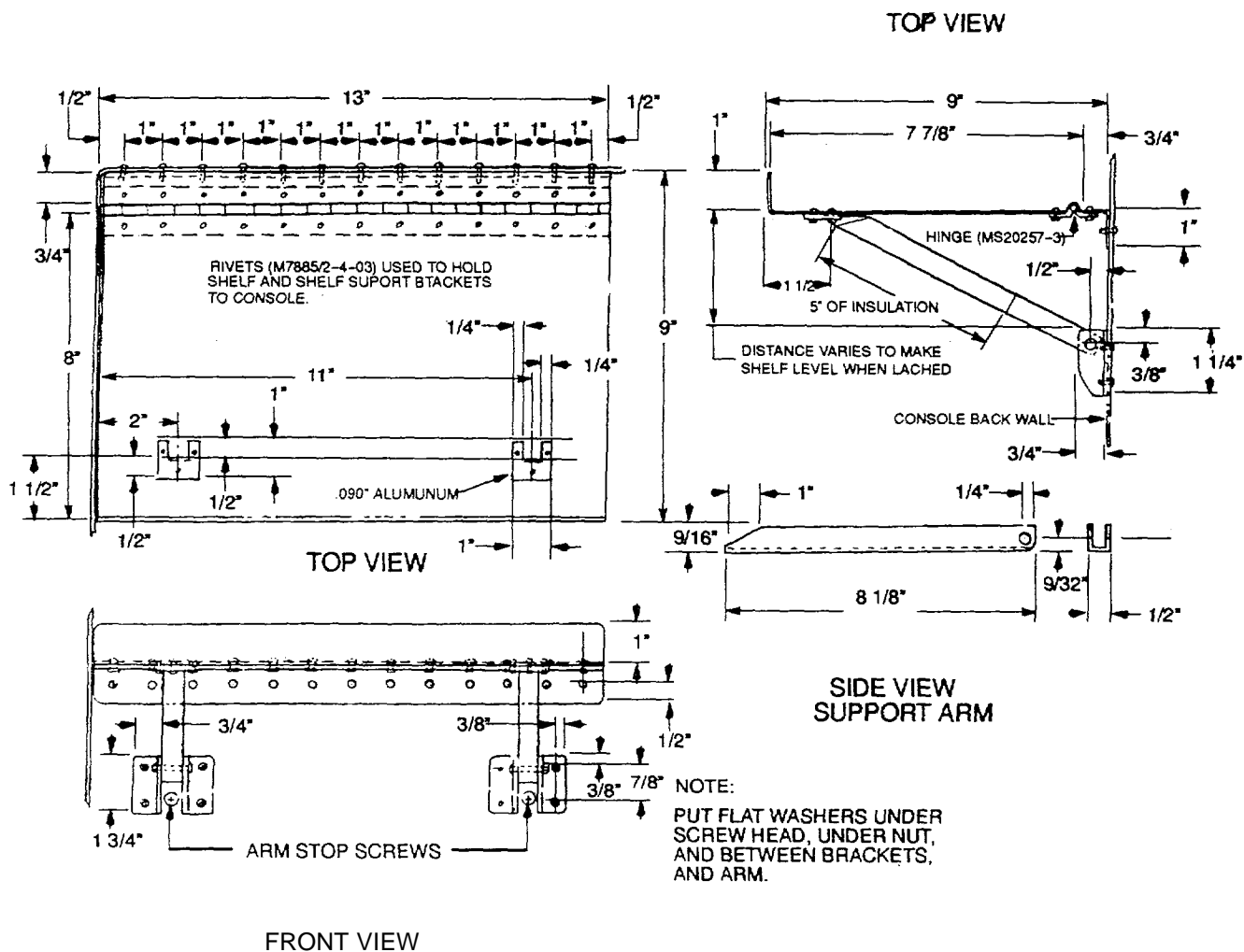
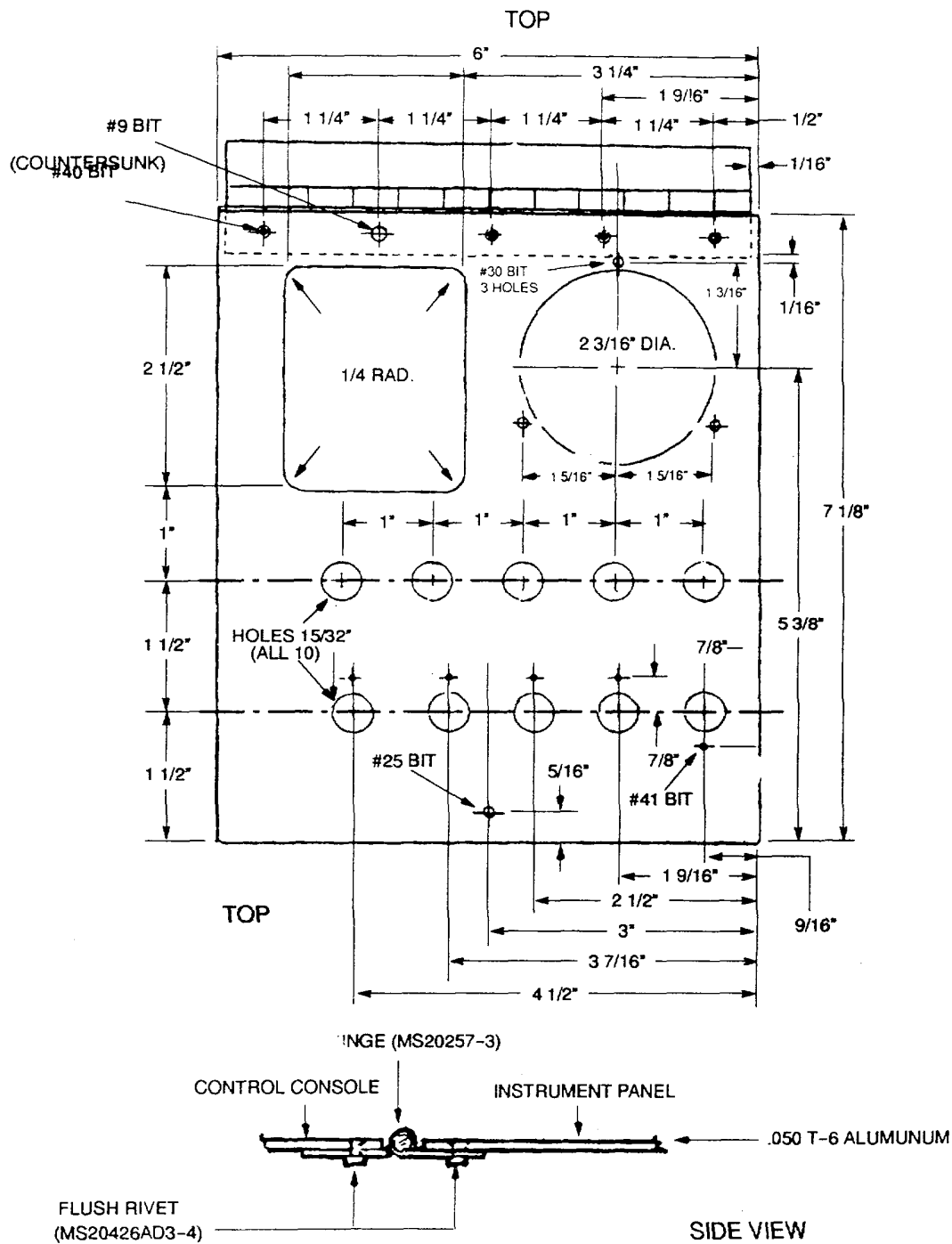


Figure E-25. Support Shelf, Control Console.

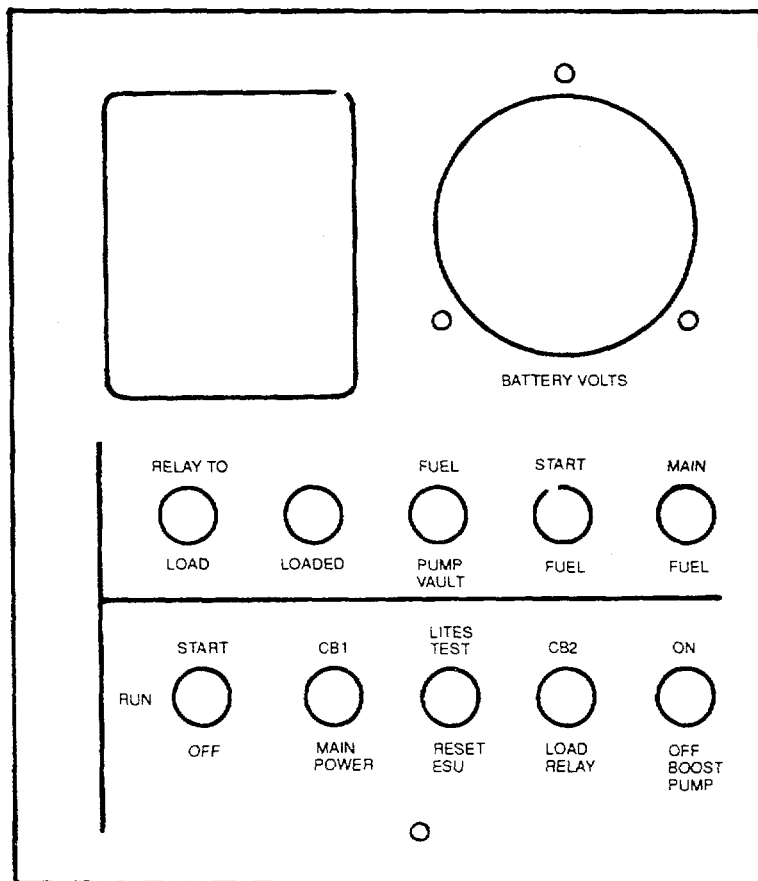


Depiction ONLY, NOT to scale

NOTE:
LINE SQUARE HOLE WITH PLASTIC GROMMET MS266-IN. SECURE WITH SUPER GLUE.

Figure E-26. Instrument Panel, Control Console (Sheet 1 of 2).

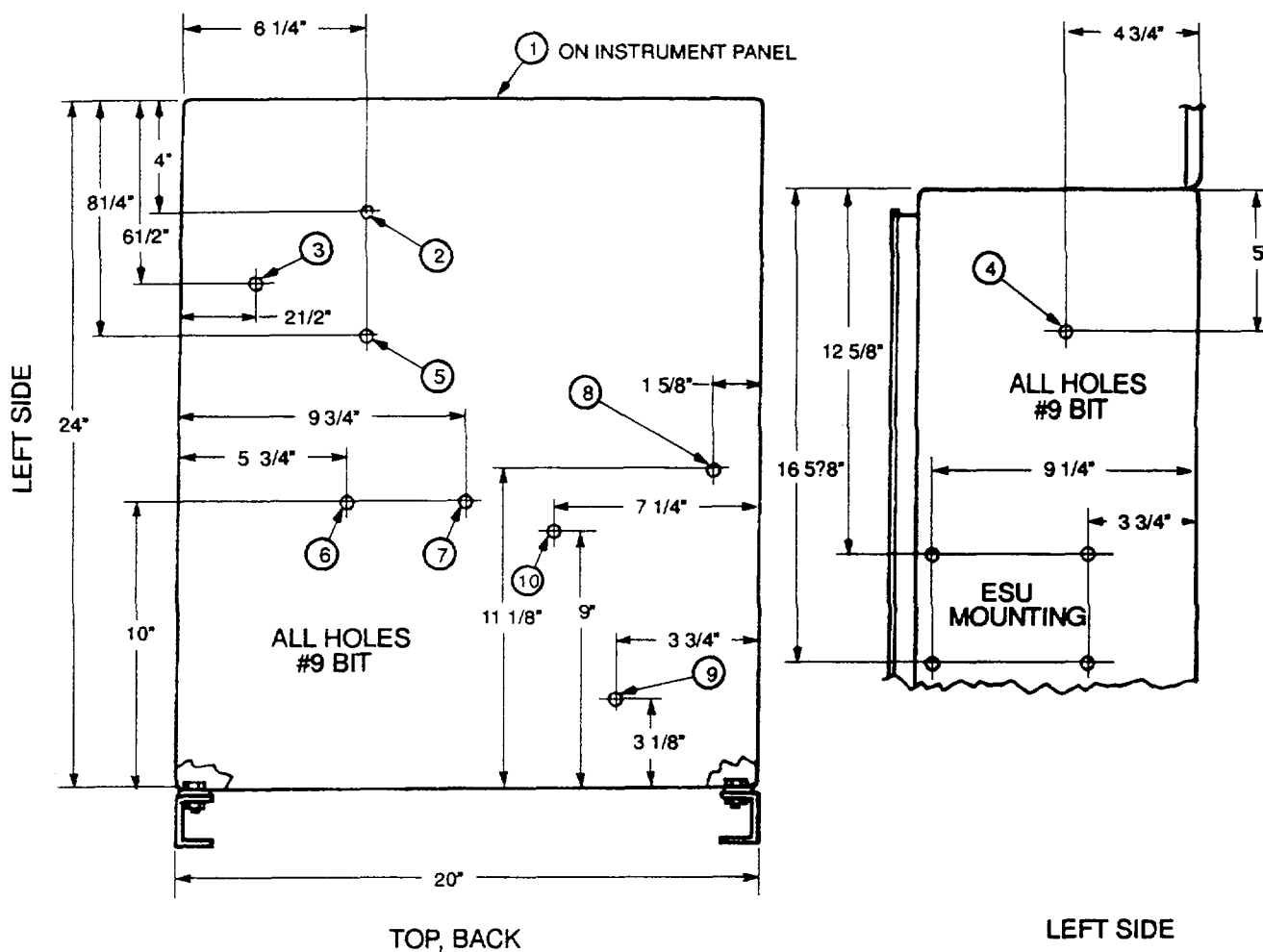
TOP



NOTE:

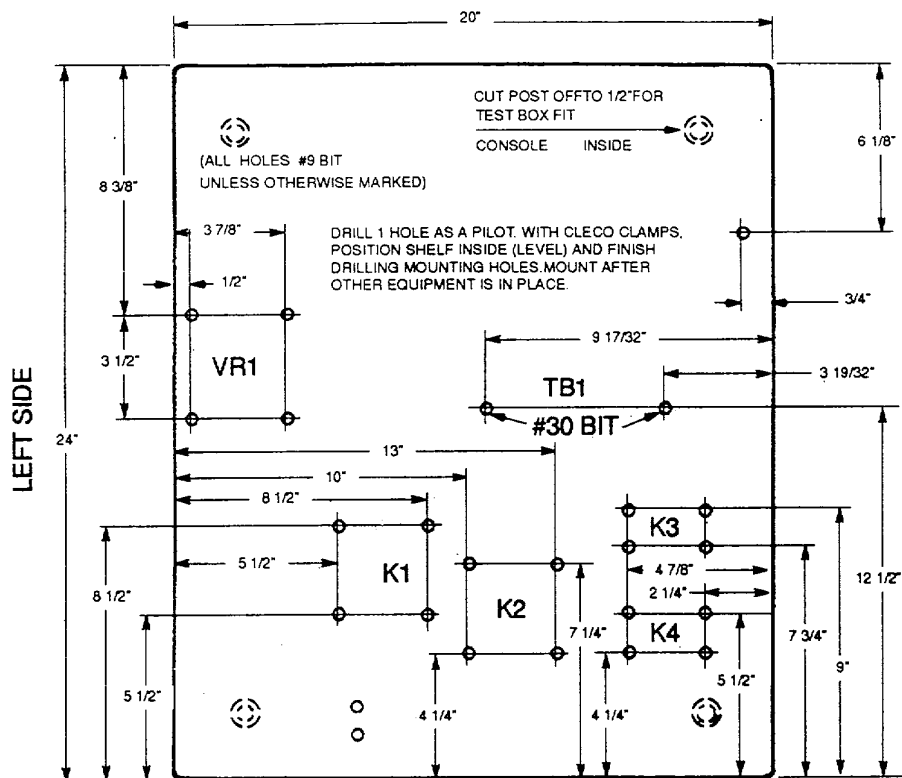
PRIME AND PAINT BLACK (Top Only). LETTERING AND LINES ARE WHITE.

Figure E-26. Instrument Panel, Control Console (Sheet 2 of 2).

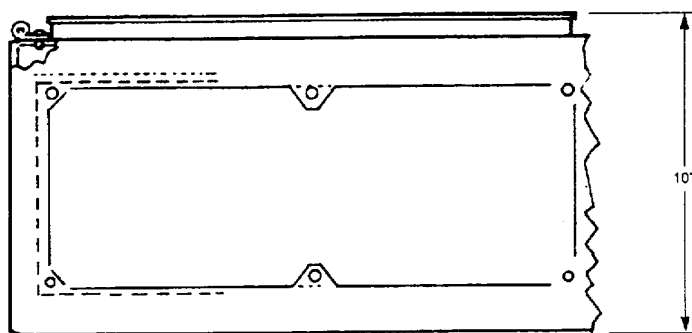


STUD NO.	CLAMP NO. TO USE
1,2,3	MS 21919WDG6
4,5,7,9	MS 21919WDG8
6	MS21919WDG11
8	MS21919WDG4
10	GROUND STUD, BURNISH SURFACE TREAT WITH ALODINE 600.

Figure E-27. Equipment Mounting, Control Console (Sheet 1 of 2).



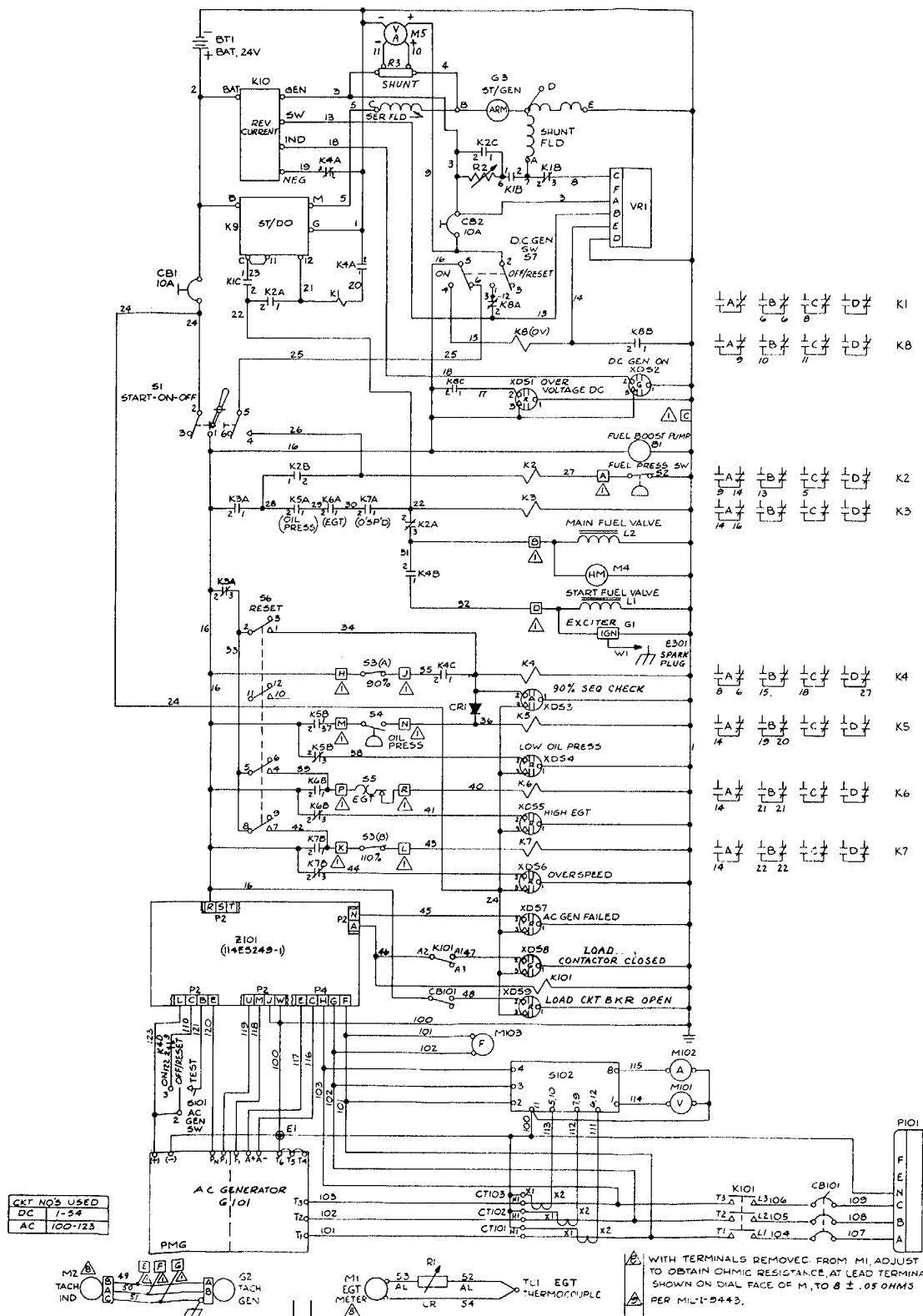
(K2 POSITION MAY VARY DO TO SIZE OF BUSS BAR)



BACK

NOTE:
 DASHED LINES ARE WHERE INSTRUMENT PANEL FITS. CUT PANEL TO FIT, CUT LINES ARE A STOPPER PLATE, FOR THE INSTRUMENT PANEL

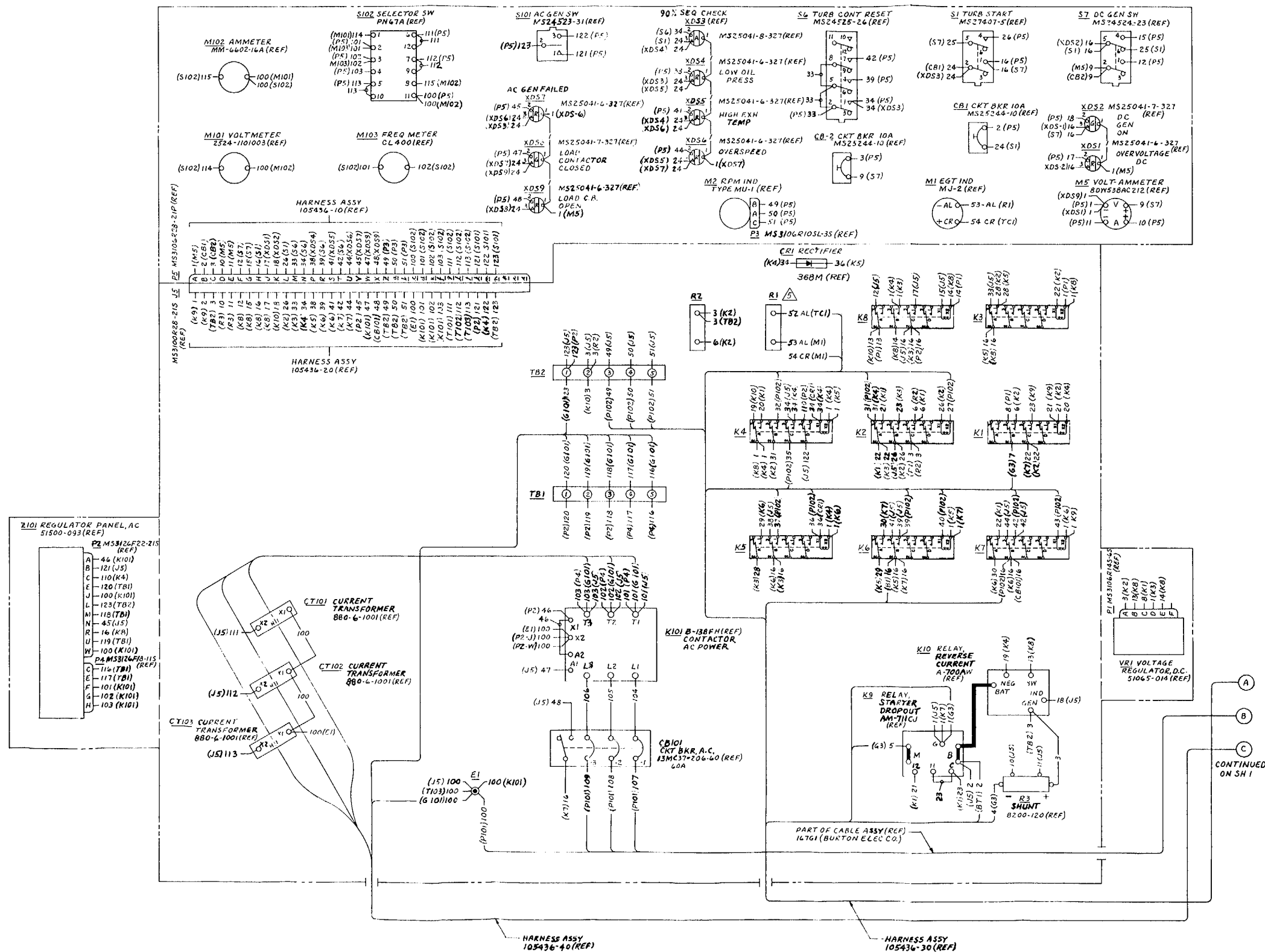
Figure E-27. Equipment Mounting, Control Console (Sheet 2 of 2).



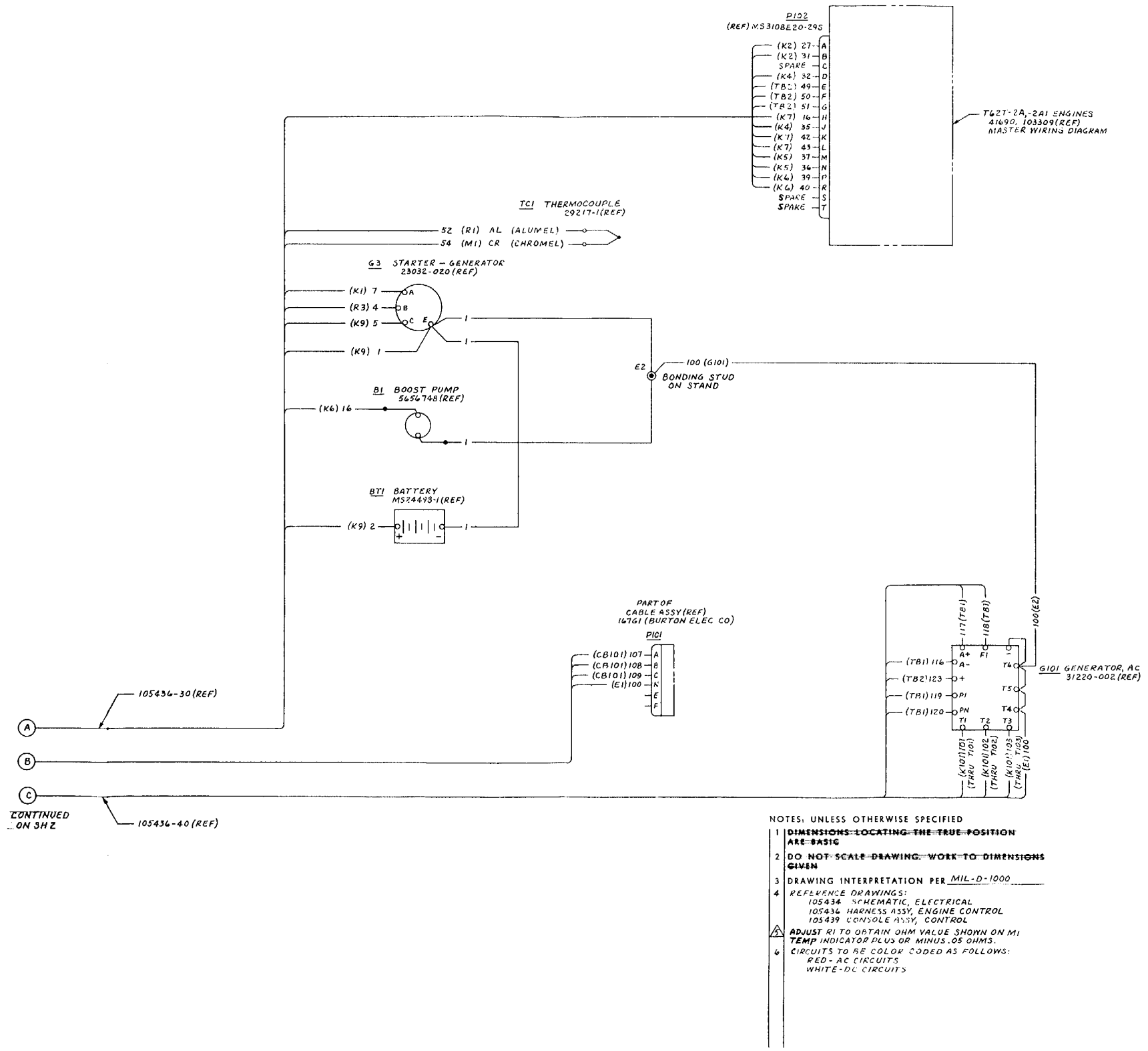
ITEM	PART NUMBER	DESCRIPTION	SUPPLIER
CONTROL CONSOLE COMPONENTS 105439			
CB1	M525244-10	CIRCUIT BREAKER, 10A	Klixon
CB2	M525244-10	CIRCUIT BREAKER, 10A	
CB101	15MC37-204-60	CIRCUIT BREAKER, 60A, 5P, SPST AUX	
CR1	348M	RECTIFIER	WESTINGHOUSE
CT101	880-6-1001	CURRENT TRANSFORMER	WESTON
CT102	880-6-1001	CURRENT TRANSFORMER	WESTON
CT108	880-6-1001	CURRENT TRANSFORMER	WESTON
K1	M524568D1	RELAY, 4PDT, 10A	HARTMAN
K2			
K3			
K4			
K5			
K6			
K7			
K8	M524568D1	RELAY, 4PDT, 10A	
K9	AM-711CJ	CONTACTOR, STARTER-DRIVE OUT AT 50A	
K10	A-700AW	CUTOUT, REV CURRENT	HARTMAN
K101	B-15B5H	CONTACTOR, 3PST, NO, 60A	HARTMAN
M1	TYPE M J-2	INDICATOR, TEMP	GE
M2	MU-1	INDICATOR, TACH	
M5	B0W55BAC212	VOLT-AMMETER, DC, 0-30V, 0-120A	
M101	2524-1101003	VOLTMETER, AC	
M102	MM-6602-16A	AMMETER, AC	
M103	CL-400	FREQ METER	METERMASTER
R1	AN5534-2	RESISTOR, THERMOCOUPLE	OHMITE
R2	0500 A	RESISTOR, ADJ/OHM 50WATT	
R3	8200-120	SHUNT, DC AMMETER, 120A	
S1	MS27407-5	SWITCH, TOGGLE, OFF-ON/NO	JANCO
S6	MS24525-24	SWITCH, TOGGLE, RESET	
S7	MS24524-23	SWITCH, TOGGLE, ON-OFF/RESET	
S101	MS24523-31	SWITCH, TOGGLE, ON-OFF/RESET/TEST	
S102	PN67A	SWITCH, SELECTOR	ELECTRO SW CORP
XDS1	MS25041-6-327	LIGHT, INDICATING, RED	
XDS2	MS25041-7-327	LIGHT, INDICATING, GREEN	
XDS3	MS25041-8-327	LIGHT, INDICATING, YELLOW	
XDS4	MS25041-6-327	LIGHT, INDICATING, RED	
XDS5			
XDS6			
XDS7	MS25041-6-327	LIGHT, INDICATING, RED	
XDS8	MS25041-7-327	LIGHT, INDICATING, GREEN	
XDS9	MS25041-6-327	LIGHT, INDICATING, RED	
VRI	S1065-014	REGULATOR, VOLTAGE, DC	LSI
Z101	S1500-093	REGULATOR, PROT. PANEL, AC (BOEING 14E5249-1)	LSI
COMPONENTS ON CHECK & ADJUSTMENT STAND 45977-100			
B1	5656748	BOOST PUMP	AC SPARK PLUG
BT1	MS24498-1	BATTERY, NI-CAD, 24V	
G2	GEU-7/A	TACH GENERATOR	
G3	23092-020	STARTER-GENERATOR	
G101	31220-002	GENERATOR, AC	
TC1	29217-1	THERMOCOUPLE	SOLAR
COMPONENTS ON EXISTING T62T-2A-2AI ENGINES			
E301	26519-1	SPARK PLUG	SOLAR
G1	102744-1	IGNITION EXCITER	
L1	37695-0	FUEL VALVE, START	
L2	37696-0	FUEL VALVE, MAIN	
S2	37697-0	SWITCH, FUEL PRESS	
S3	31208-3	SWITCH, SPEED	
S4	26516-1	SWITCH, OIL PRESS	
S5	26521-1	SWITCH, EXH. GAS TEMP	
M4	101501-1	HOURMETER	
W1	102743-2	CABLE ASSY, IGNITION	

- NOTES: UNLESS OTHERWISE SPECIFIED
1. DIMENSIONS LOCATING THE TRUE POSITION ARE BASIC.
 2. DO NOT SCALE DRAWING. WORK TO DIMENSIONS GIVEN.
 3. DRAWING INTERPRETATION PER: THIS DESIGNATION RELATES TO PLUG P102 SEE DRAWINGS 26725 SHEET 2 AND 103308 FOR SCHEMATIC OF T62T-2A-2AI CONTROL SYSTEMS.
 4. SEE DRAWINGS 41630 AND 103309 FOR WIRING DIAGRAM MASTER OF T62T-2A-2AI ENGINES.
 5. REFERENCE DRAWINGS: 45977-100 CHECK & ADJ/GEN STAND; MOBILE-DUAL PURPOSE. 105455 MASTER WIRING DIAGRAM 105439 CONSOLE ASSY; CONTROL 105436 HARNESS ASSY; CONTROL ENGINE 105437 CONSOLE, AC SV OF 105596 PANEL, INSTRUMENT-CONSOLE PER MIL-25623 PER MIL-G-26811 GOVT FURNISHED EQUIPMENT

FO-1. Wiring Diagram, Mobile Check Stand Part No. 45977-100 (Sheet 1 of 2).



FO-1. Wiring Diagram, Mobile Check Stand Part No. 45977-100 (Sheet 2 of 2)



FO-2. Schematic Diagram, Mobile Check Stand Part No. 45977-100.

By Order of the Secretary of the Army:

Official:

E. C. MEYER
General, United States Army
Chief of Staff

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

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 Key West, FL 33040

DATE SENT
 10 Jun 79

PUBLICATION NUMBER
 TM 9-1430-550-34-1

PUBLICATION DATE
 7 Sep 72 .

PUBLICATION TITLE Unit of Radar Set
 AN/MPQ-50 Tested at the HFC

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA. GRAPH	FIGURE NO	TABLE NO
9-19		9-5	
21-2	step 1C	21-2	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

"B" Ready Relay K11 is shown with two #9 contacts. That contact which is wired to pin 8 of relay K16 should be changed to contact #10.

Reads: Multimeter B indicates 600 K ohms to 9000 K ohms.

Change to read: Multimeter B indicates 600 K ohms minimum.

Reason: Circuit being checked could measure infinity. Multimeter can read above 9000 K ohms and still be correct.

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SAMPLE

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TM 55-4920-424-13&P

PUBLICATION DATE
7 Oct 1980

PUBLICATION TITLE T62T-2A and T62T-2A1
AUXILIARY POWER UNITS

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TEAR ALONG PERFORATED LINE

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 dekagram = 10 grams = .35 ounce
 1 hectogram = 10 dekagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11375			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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