

## TECHNICAL MANUAL

### UNIT MAINTENANCE MANUAL

FOR

CARRIER, PERSONNEL, FULL TRACKED, ARMORED M113A3  
2350-01-219-7577 (EIC AEY)

CARRIER, COMMAND POST, LIGHT TRACKED M577A3  
2350-01-369-6085 (EIC AE7)

CARRIER, SMOKE GENERATOR, FULL TRACKED M1059A3  
2350-01-369-6083 (EIC AFA)

CARRIER, MORTAR, 120-MM M121, SELF-PROPELLED M1064A3  
2350-01-369-6082 (EIC AE8)

CARRIER, STANDARDIZED INTEGRATED COMMAND POST SYSTEM  
(SICPS) M1068A3  
2350-01-369-6086 (EIC AFC)

CARRIER, MECHANIZED SMOKE OBSCURANT M58  
2350-01-418-6654 (EIC 5CG)

SUPERSEDURE NOTICE — This manual supersedes TM 9-2350-277-20 dated 24 July 1994, including all changes.

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

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## HEADQUARTERS, DEPARTMENT OF THE ARMY

2 January 2001



## WARNING SUMMARY

### WARNING SUMMARY

This section provides a summary of all critical safety information in this manual. It includes general WARNINGS not found in the Work Package (WP) procedures and hazardous materials WARNINGS.

Prior to starting any WP procedure, the WARNINGS included in the text for that WP must be reviewed and understood.

Also review the materials list in the INITIAL SETUP of the WP for hazardous materials used during maintenance of the equipment. Then refer to the detailed WARNINGS for hazardous materials listed separately in this WARNING SUMMARY under the heading HAZARDOUS MATERIALS WARNINGS.

### GENERAL WARNINGS NOT FOUND IN WP PROCEDURES

The following WARNINGS are general safety statements. They are not unique to any specific procedures. All personnel operating this equipment or working near this equipment must understand and continually observe the precautions in these WARNINGS.



**Unlocked ramp can open and move down slowly.**

**If ramp system is damaged, unlocked ramp can fall suddenly.**

**Personnel can be killed or injured.**

**Take care when you work near ramp.**

**Keep away from ramp that has come open during carrier operation.**



**Energized system and equipment can burn you. If MASTER POWER SWITCH is ON, electrical system and equipment will be energized. Make sure MASTER POWER SWITCH is OFF when you work on electrical systems or equipment.**

## WARNING SUMMARY (cont)

### WARNING



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one person familiar with the operation and hazards of the equipment is nearby. That person should also be competent in giving first aid. When an operator assists a technician, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. When working inside equipment with power off, take special care to ground every capacitor likely to hold a dangerous potential.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**KEEP** one hand away from the equipment to reduce the hazard of current flowing through life-sustaining organs of the body.

### WARNING



**Power cable connections** should not be attempted until grounding system and signal/data cabling have been completed.

**System ground** must be completed prior to making any power connections. Failure to do so may result in personal injury and/or damage to the equipment. Improper or loose connection between the surface wire grounding systems and ground lugs could cause a short in the system, which may cause personal injury.

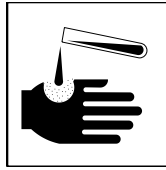


## WARNING SUMMARY (cont)

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### WARNING

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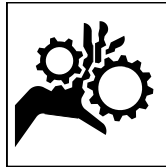
**Battery post and cables touched by metal objects can short circuit and burn you. Gas from batteries can explode and injure you. Battery acid can blind you or burn you.**

- **Do not wear jewelry when you work on electrical systems.**
- **Use caution when you work near battery or electrical system with tools or other metal objects.**
- **Do not get acid on your skin or in your eyes.**
- **Do not allow sparks near batteries.**

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### WARNING

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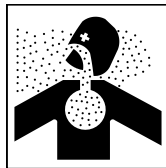


**Start up of equipment or moving parts could injure you or others. If other personnel are working on your carrier, be sure you know what they are doing. Place DO NOT OPERATE tags on MASTER SWITCH when needed to prevent startup.**

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### WARNING

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**Heater and engine exhaust can kill or poison you.**

**Close power plant access panel tight before you start engine.**

**Do not run heater or engine indoors without very good fresh air flow.**

**Keep power plant access cover closed when you run engine.**

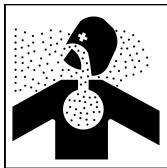
**Check for the smell of exhaust fumes. If you notice any fumes, open hatches and turn on vent fans.**

## WARNING SUMMARY (cont)

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### WARNING

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**Exhaust gases can make you ill or kill you. Signs of exhaust gas poison are dizziness, headache, loss of muscle control, sleepiness, coma, or death. If anyone shows signs of exhaust gas poisoning:**

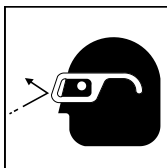
- (1) - Get all personnel out of carrier.
- (2) - Get medical help.
- (3) - Make sure personnel have lots of fresh air.
- (4) - Keep personnel warm.
- (5) - Do not let anyone do hard exercise.

**If anyone stops breathing, give artificial respiration.**

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### WARNING

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**Air pressure in excess of 30 psi (207 kpa) can injure personnel. Do not direct pressurized air at yourself or others. Always wear goggles.**

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### WARNING

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**If you work on a carrier that has been running, you could be burned. All tasks begin with a cooled down carrier. Allow carrier to cool, or use care if you work on a hot carrier.**

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### WARNING

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**Failure to set the parking brake and block the road wheels can allow the carrier to move and could result in injury or death. Always set the parking brake and block road wheels before working on the carrier.**

**WARNING SUMMARY (cont)**

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**WARNING**

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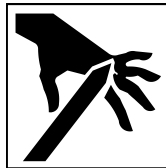


Unsafe use of chemical products can injure you. Read and follow warnings and instructions on labels of all chemical products. Follow all general shop safety procedures. See supervisor for further instructions on safety.

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**WARNING**

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Unsafe use of tools and equipment can injure you. Read and follow warnings and instructions on labels of all equipment. Follow all general shop safety procedures. See supervisor for further instructions on safety.

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**WARNING**

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Fire extinguishers can discharge and injure you. Insert antirecoil plugs, lock pins, and cotter pins before you work on or near fire extinguishers.

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**WARNING**

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Hanging loads could kill or injure you. Keep away from hanging loads and overhead equipment. Keep hands out of engine compartment while power unit is being removed or installed.

**WARNING SUMMARY (cont)**

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**WARNING**

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**Torsion springs or bars can fly out and injure you. Make sure spring tension is released before you start work.**

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**WARNING**

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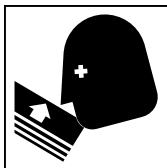


**If road wheel lifter slips while lowering road arm, it could injure you. Stand clear before you lower road arm.**

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**WARNING**

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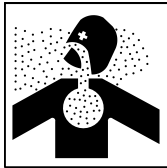


**Power plant door may spring open. Soldiers can be injured. When opening, stay out of door path.**

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**WARNING**

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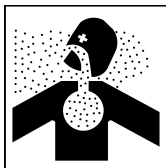
**NBC agents can kill you. Do not service air cleaner or vent system after NBC attack until carrier has been decontaminated.**

**WARNING SUMMARY (cont)****WARNING**

Starting engine right after a fire could restart the fire and kill or injure you. Do not turn MASTER SWITCH ON until cause of fire has been repaired or removed.

**WARNING**

Fire resistant hydraulic (FRH) fluid may contain Tricresyl Phosphate which, if taken internally, can produce paralysis. Hydraulic fluid may be absorbed through the skin. Wear long sleeves, gloves, goggles, and face shield. If FRH gets in eyes, wash them immediately and get medical aid immediately. If FRH gets on skin, thoroughly wash them with soap and water. Wash hands thoroughly prior to eating or smoking.

**WARNING**

Chemical agent resistant coating (CARC) paint contains isocyanate (HDI) which is highly irritating to skin and respiratory system. High concentrations of HDI can produce symptoms of itching and reddening of skin, a burning sensation in throat and nose, and watering of the eyes. In extreme concentrations, HDI can cause cough, shortness of breath, pain during respiration, increased sputum production, and chest tightness. The following precautions must be taken whenever using CARC paint:

- ALWAYS use air line respirators when using CARC paint unless air sampling shows exposure to be below standards. Use chemical cartridge respirator if air sampling is below standards.
- DO NOT let skin or eyes come in contact with CARC paint. Always wear protective equipment (gloves, ventilation mask, safety goggles, etc.)
- DO NOT use CARC paint without adequate ventilation.
- NEVER weld or cut CARC-coated materials.
- DO NOT grind or sand painted equipment without high-efficiency air purifying respirators in use.
- BE AWARE of CARC paint exposure symptoms; symptoms can occur a few days after initial exposure. Seek medical help immediately if symptoms are detected.

**WARNING SUMMARY (cont)**

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**WARNING**

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Mixing of CARC paint must be done in a well-ventilated mixing room or spraying area away from open flame with personnel wearing eye protection. Paint is flammable and can cause injury or death to personnel.

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**WARNING**

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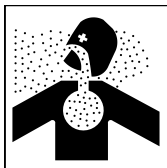


Protective equipment (gloves, goggles, ventilation mask) must be worn when using CARC paint. DO NOT leave any skin exposed. Contact with CARC paint can cause skin burns.

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**WARNING**

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High-efficiency air purifying respirators should be used when grinding or sanding CARC-coated equipment. Failure to do so may result in injury or death to personnel.

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**WARNING**

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Radiator is heavy and can cause back injury if handled improperly. Be sure to use a hoist and helper to remove radiator.

**WARNING SUMMARY (cont)**

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**WARNING**

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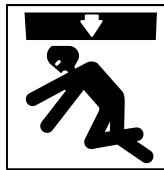


**Do not work under power plant. Power plant is heavy and may cause personnel and equipment damage if it falls. Lower power plant on wooden blocks before starting task.**

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**WARNING**

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**Damaged lifting slings can fail with load. Soldiers can be killed or injured. Inspect all slings before use. Do not use damaged slings.**

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**WARNING**

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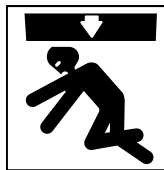


**When adjusting track, ensure there are 63 track shoes on the left side track, and 64 track shoes on the right side track. Improper number of track shoes may prevent track from being properly adjusted, creating a safety hazard.**

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**WARNING**

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**Ramp assembly is very heavy. Use extreme caution when lifting, blocking, and lowering assembly. Allowing assembly to fall could cause injury or death.**

## WARNING SUMMARY (cont)

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### WARNING

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Grille and access cover are very heavy. Use extreme caution when lifting, blocking, and lowering assembly. Allowing assembly to fall could cause death or injury.

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### WARNING

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Never perform stall check. Transmission can be damaged. Personnel may be injured.

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### WARNING

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Fuel can catch fire and burn you. Disconnect battery ground lead (WP 0337 00, (WP 0338 00, or WP 0339 00) before you work on fuel system. Wipe up spilled fuel.

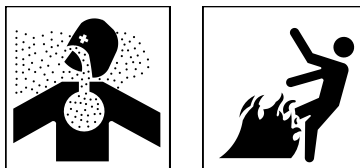
## HAZARDOUS MATERIALS WARNINGS

The following are detailed WARNINGS for hazardous materials used during maintenance of equipment. When these materials are used in a procedure, a general warning will be provided with a reference to the detailed information in this section. All personnel maintaining this equipment must be familiar with the safety precautions related to these materials.



## WARNING SUMMARY (cont)

### WARNING



Cleaning solvent is mildly toxic. Solvent evaporates and both the fumes and liquid are flammable. Continued contact with solvent can cause skin problems.

Ensure there is good air flow when using solvent, and work area is away from heat and flames.

Keep fire extinguisher nearby.

Do not breathe solvent fumes.

Avoid skin contact. Use gloves or a brush if necessary.

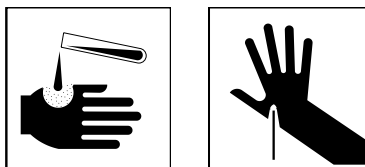
Wash hands after using solvent.

Wear eye protection if solvent could splash into eyes.

If solvent gets in eyes, flush with fresh water for at least 15 minutes and get medical assistance.

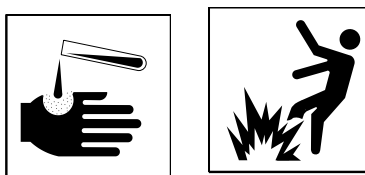
Do not use P-D-680 solvent, dry cleaning solvent, benzene (benzol), paint thinner, gasoline, or diesel fuel oil as solvent replacements. These materials are all more flammable, more toxic, and can damage materials that approved solvent does not.

### WARNING



Unsafe use of chemical products, tools, and equipment can injure you or soldiers near you. Read and follow WARNINGS and instructions on labels of all chemical products. Follow all general shop safety procedures. See unit commander for further instructions on safety.

### WARNING



Gas from batteries can explode and injure you. Do not allow sparks near batteries. Battery acid can burn or blind you. Do not get acid on your skin or eyes.

**WARNING SUMMARY (cont)**

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**WARNING**

---



**Battery posts and cables touched by metal objects can short circuit and burn you or injure you. Use caution when you work with tools or other metal objects. Do not wear jewelry when you work on electrical system.**

---

**WARNING**

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**Hot parts can burn you. Be sure that coupling, encoder, and slip ring assembly are cool before you start work.**

**WARNINGS IN WP PROCEDURES**

Read and understand WARNINGS in the WP procedures. Study these WARNINGS carefully. They can save your life and the lives of soldiers with whom you work.

**FIRST AID**

For first aid information, see FM 21-11.

CHANGE  
NO. 3

HEADQUARTERS DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 27 April 2004

TECHNICAL MANUAL

UNIT MAINTENANCE MANUAL

FOR

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2350-01-369-6085 (EIC AE7)

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2350-01-369-6083 (EIC AFA)

CARRIER, MORTAR, 120-MM M121, SELF-PROPELLED M1064A3  
2350-01-369-6082 (EIC AE8)

CARRIER, STANDARDIZED INTEGRATED COMMAND POST SYSTEM (SICPS) M1068A3  
2350-01-369-6086 (EIC AFC)

CARRIER, MECHANIZED SMOKE OBSCURANT M58  
2350-01-418-6654 (EIC 5CG)

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WP 0002 00  
Chapter 2 WP Index  
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Index 93 – Index 94  
Index 99 – Index 102

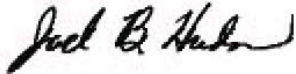
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WP 0006 00  
WP 0061 01  
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*Chief of Staff*

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*Administrative Assistant to the*  
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**UNIT MAINTENANCE MANUAL**  
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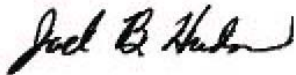
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WP 0136 00  
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Index  
Cover

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2350-01-369-6085 (EIC AE7)**

**CARRIER, ANTI-TANK (TOW), FULL TRACKED, ARMORED M901A3  
2350-01-369-7253 (EIC AFD)**

**CARRIER, FIRE SUPPORT PERSONNEL, FULL TRACKED, ARMORED M981A3  
2350-01-369-6079 (EIC AFB)**

**CARRIER, SMOKE GENERATOR, FULL TRACKED M1059A3  
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WP 0029 00  
WP 0045 00  
WP 0054 00  
WP 0086 00  
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WP 0116 02  
WP 0122 00  
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INSERT LATEST UPDATED PAGES/WORK PACKAGES. DESTROY SUPERSEDED DATA.

**LIST OF EFFECTIVE PAGES/WORK PACKAGES**

Note: Updates to all portions of this TM are indicated by a vertical bar in the outer margin of the page.

Dates of issue for original and updated pages/work packages are:

- Original 0 (2 January 2001)
- Change 1 (5 September 2003)
- Change 2 (2 October 2003)
- Change 3 (27 April 2004)

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 168 AND TOTAL NUMBER OF WORK PACKAGES IS 150 CONSISTING OF THE FOLLOWING:

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HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 2 January 2001

**TECHNICAL MANUAL**

**UNIT MAINTENANCE MANUAL**

**CARRIER, PERSONNEL, FULL TRACKED, ARMORED M113A3**  
NSN 2350-01-219-7577  
(EIC AEY)

**CARRIER, COMMAND POST, LIGHT TRACKED M577A3**  
NSN 2350-01-369-6085  
(EIC AE7)

**CARRIER, SMOKE GENERATOR, FULL TRACKED M1059A3**  
NSN 2350-01-369-6083  
(EIC AFA)

**CARRIER, MORTAR, 120-MM M121, SELF-PROPELLED M1064A3**  
NSN 2350-01-369-6082  
(EIC AE8)

**CARRIER, STANDARDIZED INTEGRATED COMMAND POST SYSTEM (SICPS) M1068A3**  
NSN 2350-01-369-6086  
(EIC AFC)

**CARRIER, MECHANIZED SMOKE OBSCURANT M58**  
NSN 2350-01-418-6654  
(EIC 5CG)

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REPLACE/REPAIR COMMANDER’S PLATFORM AND POST (M577A3 AND M1068A3 ONLY) .....	0564 00
DELETED.....	0565 00 ■
REPLACE/REPAIR COMMANDER’S SEAT (M1068A3 ONLY).....	0566 00
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REPLACE RIFLE BRACKETS .....	0573 00
REPLACE OIL CAN BRACKET .....	0574 00
REPLACE ANTENNA GUARDS .....	0575 00
REPLACE T150 TRACK SHOE STOWAGE BRACKET.....	0575 01
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REPLACE LEFT BULKHEAD RADIO STOWAGE RACKS (M577A3 AND M1068A3 ONLY).....	0577 00

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REPLACE RIGHT FORWARD TABLE (M577A3 ONLY).....	0581 00
REPLACE RIGHT REARWARD TABLE (M577A3 ONLY).....	0582 00
DELETED.....	0583 00
DELETED.....	0584 00
DELETED.....	0585 00
REPLACE/REPAIR RAMP VISION PORT AND SHIELD (M58 ONLY).....	0586 00
DELETED.....	0587 00
DELETED.....	0588 00
DELETED.....	0589 00
DELETED.....	0590 00
DELETED.....	0591 00
DELETED.....	0592 00
DELETED.....	0593 00
DELETED.....	0594 00
DELETED.....	0595 00
DELETED.....	0596 00
DELETED.....	0597 00
DELETED.....	0598 00
DELETED.....	0599 00
DELETED.....	0600 00
DELETED.....	0601 00
REPLACE ANTENNA SUPPORT (M58 ONLY).....	0602 00
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REPAIR CABLE REEL HOLDER ASSEMBLY (M1064A3 ONLY).....	0604 00
DELETED.....	0605 00
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REPLACE GRENADE STOWAGE BOX (M1064A3 ONLY).....	0610 00
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REPLACE PERSONNEL HEATER CONTROL BOX AND INTERCOM BOX BRACKET (M1068A3 ONLY).....	0617 00
REPLACE/REPAIR MAP BOARD (M1068A3 ONLY) .....	0618 00
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REPLACE RIGHT SIDE BASE EXTENSION SUPPORTS (M1068A3 ONLY).....	0624 00
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REPLACE REAR EXTERNAL STOWAGE FRAME (M1068A3 ONLY).....	0626 00
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DELETED.....	0650 00
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## HOW TO USE THIS MANUAL

### HOW TO USE THIS MANUAL

This manual tells you how to perform unit maintenance for the M113A3, M577A3, M1059A3, M1064A3, M58, and M1068A3 carriers.

Before starting a task or procedure, make sure you have read this HOW TO USE section and the General Maintenance Procedures Work Package.

### WHAT'S IN THE MANUAL — FRONT TO BACK

This TM is divided into chapters and front and rear matter. The chapters are further divided into Work Packages (WPs) for ease of use.

The WARNING SUMMARY section provides safety and first aid information. This section includes general warnings not found in the TM text and a list of the most important detailed warnings extracted from the WPs. All of these warnings cover hazards that could kill or injure personnel.

The TABLE OF CONTENTS lists the WPs in each chapter.

CHAPTER 1 covers General Information, Equipment Description and Data, Theory of Operation, and Repair Parts, Special Tools, TMDE, and Support Equipment. The Equipment Description WP gives a brief description of major parts and features of the vehicle. The Theory of Operation WP provides information that will help you understand how the vehicle components work.

CHAPTER 2 contains the troubleshooting WPs, which are used to find the cause of vehicle malfunctions.

CHAPTERS 3 through 30 includes the Preventive Maintenance Checks and Services (PMCS) and other maintenance WPs. These WPs contain all the maintenance procedures authorized at the unit level.

CHAPTER 31 provides supporting information for the TM. It includes the following WPs:

The REFERENCES WP lists references to be used by personnel in operating and maintaining the carrier. These references include technical manuals and other publications.

The MAINTENANCE ALLOCATION CHART (MAC) WP contains a listing for the hull.

The EXPENDABLE/DURABLE SUPPLIES AND MATERIALS WP lists expendable supplies and materials used to maintain or repair the carrier.

The COMMON TOOLS AND SUPPLEMENTS AND SPECIAL TOOLS/FIXTURES WP lists the common tools, supplements, and special tools used to maintain or repair the carrier.

The FABRICATED TOOLS WP lists fabricated tools used to maintain or repair the carrier.

The INDEX is an alphabetical listing of all the major controls, procedures, indicators, systems, and subsystems covered in this manual. Each entry is cross-referenced to the WP number and page number.

ELECTRICAL WIRING DIAGRAMS for each carrier are at the end of the manual

DA FORM 2028-2 is used to report errors and to recommend improvements for procedures in this manual. Three blank DA Forms 2028-2 are in the back of this manual. A sample is provided to show you how to fill out the DA Form 2028-2.

The back cover includes a METRIC CONVERSION CHART that can be used to convert U.S. customary measurements to their metric equivalents. Measurements in this manual are given in U.S. customary unit with metric units in parentheses.

### USING YOUR MANUAL ON THE JOB

The best way to learn about this manual is to practice using it. Knowing how to use this manual will save both time and energy.

### HOW TO USE THE WORK PACKAGES

#### How to find the WP you need

Pick a key word from the vehicle part or system to be used. Look in the INDEX for this key word or the name of the action you will perform. Turn to the WP and page indicated.

## HOW TO USE THIS MANUAL (cont)

The INDEX lists each WP under one or more headings. For example, the WP titled REPLACE TOWING PINTLE could be found under the two headings “Pintle”, and “Towing”.

### How to read the WP

Pay attention to all **warnings**, **cautions** and **notes**. These can appear in all types of procedures. They help you avoid harm to yourself, other personnel, and equipment. They also tell you things you should know about the procedure.

Before you start a procedure, get all the tools, supplies, and personnel you need to do the procedure. These items will be listed in the INITIAL SETUP of the WP.

Start with step 1 and do each step in the order given. Numbered primary steps tell you WHAT to do. Alpha substeps tell you HOW to do it.

### Maintenance Procedures WPs

Maintenance Procedures WPs keep the carrier in shape to operate. Maintenance Procedures are used to present maintenance instructions. Each maintenance procedure details steps which you need to perform. If the vehicle and parts need maintenance that is not included in any procedure in the manual, notify your supervisor.

Read the INITIAL SETUP section carefully before you start any procedure. Get the tools and supplies listed and the personnel needed. Be sure the equipment is in the condition required.

Read all of the WP before starting. Follow the steps in the order given.

FOLLOW-THROUGH STEPS tell you what to do after the maintenance task is done. The words END OF TASK will tell you when you have finished the procedure.

### Troubleshooting WPs

Troubleshooting WPs help you locate faulty parts. They direct you to the maintenance procedure to correct these faults. Chapter 2, Troubleshooting contains detailed information on how to perform troubleshooting procedures. Read HOW TO USE TROUBLESHOOTING WP 0005 00 before performing the troubleshooting procedures in the chapter.

### Preventive Maintenance Checks and Services (PMCS) WP

Preventive maintenance is required to keep your carrier in good running condition. The PMCS procedures for unit maintenance are performed on a periodic basis.

There are two types of PMCS for the vehicle, as follows:

The SEMI—ANNUAL PMCS must be done every 6 months or every 1,500 miles.

The ANNUAL PMCS must be done annually.

If anything seems wrong with the vehicle systems and you cannot fix it yourself, notify unit maintenance. Common things to watch for are loose bolts or damaged welds. Watch for worn insulation, loose clamps, and loose connectors when checking wiring harnesses.

## DEFINITION OF WP TERMS

### Warnings, Cautions, And Notes

Pay attention to all warnings and cautions within the WP. Ignoring a warning could cause death or injury to yourself or other personnel. Ignoring a caution could cause damage to equipment. Notes contain facts to make the procedure easier. Warnings, cautions, and notes always appear just above the step to which they apply.

#### WARNINGS

Call attention to things that could kill or injure personnel. Warnings are also listed in the Warning Summary section (page a).

#### CAUTIONS

Call attention to actions or materials that could damage equipment.

## HOW TO USE THIS MANUAL (cont)

### NOTES

Contain important facts to make the procedure easier.

### Helper

Helpers are needed in procedures that require more than one person. A helper may be needed to help lift objects or act as an outside observer.

If a helper is needed to perform a procedure, the INITIAL SETUP will list “Helper (H)” under the PERSONNEL REQUIRED heading.

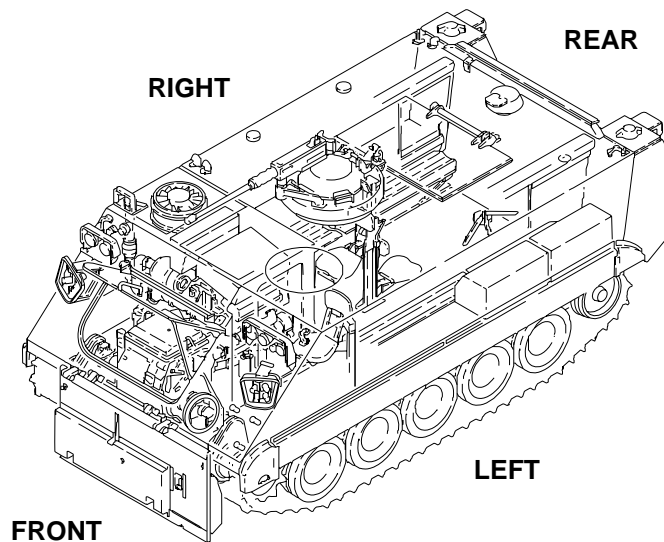
If a helper assists with a step or substep, the step or substep will include: “Have helper assist”.

If a helper performs the action alone, the step will start with “(H):”.

### Locational Terms

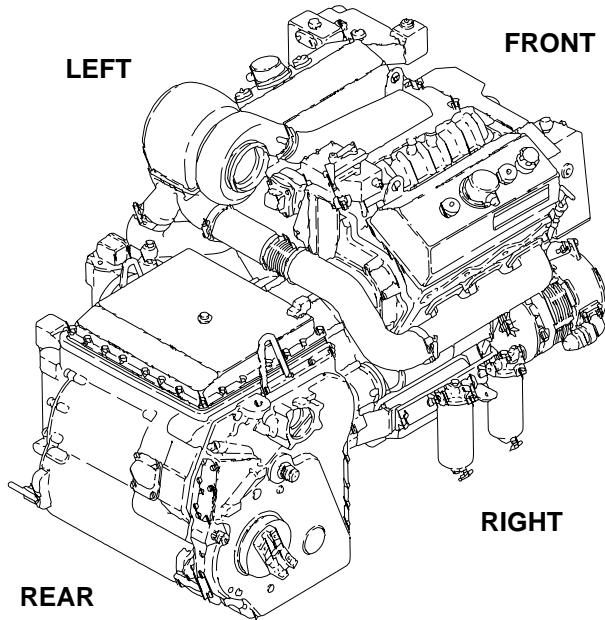
The terms “front”, “rear”, “left”, and “right” are used to indicate where items are located on the vehicle. The point of reference for these terms is different for *Carrier* items and *Power Unit* items. (Carrier items are items which are not on the power unit. Power unit items are items on the engine or transmission.)

If you are working with carrier items, use this point of reference. Think of the location as if you were sitting in the driver’s seat looking out the hatch.



## HOW TO USE THIS MANUAL (cont)

If you are working with power unit items, use this point of reference. Think of the location as if you were standing at the transmission end of the power unit and facing the flywheel. This rule applies whether the power unit is IN or OUT of the carrier.



### REFERENCES

References within a procedure refer to a different manual or to another procedure in the same manual. They are found in the INITIAL SETUP and in the FOLLOW-THROUGH steps. For example:

MASTER SWITCH OFF (see your -10)

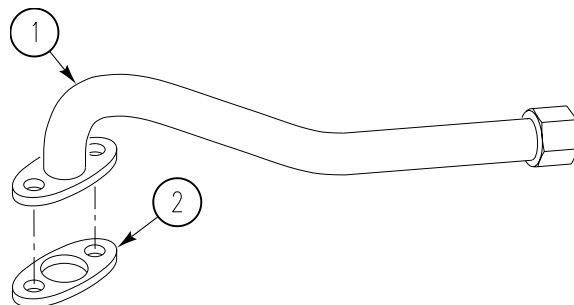
Battery ground lead disconnected (WP 0337 00, WP 0338 00, or WP 0339 00)

For all procedures, the following comments apply:

- Parts which are discarded when removed will be referred to as “new” in the procedure step when installed. Examples are: gaskets, lockwashers, some preformed packings, and some retaining rings.
- These and other new parts are listed under MATERIALS/PARTS in the INITIAL SETUP.

### GENERAL MAINTENANCE

Cleaning, inspecting, checking for leaks, and similar procedures which apply to most procedures are found under PMCS and GENERAL MAINTENANCE INSTRUCTIONS (WP 0155 00). Use these steps to clean and inspect any part being removed, repaired, or installed. Special cleaning will be covered in the procedure step. Below is a step that would require general cleaning.



5. Remove gasket (2) from upper tube flange (1). Discard gasket.



## HOW TO USE THIS MANUAL (cont)

After performing this step, you would clean the mating surface with cleaning compound and a wiping rag according to the general cleaning procedures. In other procedures, hoses or rubber hatch seals will need to be checked for leaks. Refer to PMCS and GENERAL MAINTENANCE INSTRUCTIONS (WP 0155 00) for general procedures.

### HOW TO USE THE REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) WITH THIS MANUAL

The RPSTL, TM 9-2350-277-24P, gives the National Stock Number (NSN) required to order parts used in the maintenance procedure. To use the RPSTL to identify and order a part, do the following:

1. In this manual, turn to the first page of the procedure to be performed.
2. Find Materials/Parts under INITIAL SETUP and read the part(s) that need replacement. If required, find the illustrated part in the procedure steps.
3. Go to the RPSTL and find the same illustrated part. That part will have an item number assigned to it. Look this item number up in the listing for that figure. Use the figure and item number index to find the NSN.
4. If you inspect an item and find that it is damaged, go to the RPSTL and find the SMR code for the item. If the SMR code does not authorize you to repair the item, reassemble it and send it to the authorized level of maintenance.
5. The usable on code in the RPSTL appears in the lower left corner of the Description column heading. Usable on codes are shown as 'UOC.... ...' in the Description column (justified left) on the first line following the item description/nomenclature. Uncoded items are applicable to all models. Identification of the usable on codes in the RPSTL are:

#### RPSTL Usable Codes

Code	Used on
APC	M113A3 Carrier, Personnel
AP5	M577A3 Carrier, Command Post
AP2	M1064A3 Carrier, 120mm Mortar
AP6	M1059A3 Carrier, Smoke Generator
AP3	M1068A3 Carrier, Standardized Integrated Command Post System (SICPS)
AP8	M58 Carrier, Mechanized Smoke Obscurant



CHAPTER 1

UNIT INTRODUCTORY INFORMATION WITH THEORY OF OPERATION

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**WORK PACKAGE INDEX**

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<u>Title</u>	<u>Sequence No.</u>
GENERAL INFORMATION.....	.0001 00
EQUIPMENT DESCRIPTION.....	.0002 00
THEORY OF OPERATION.....	.0003 00
REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.....	.0004 00



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**GENERAL INFORMATION**

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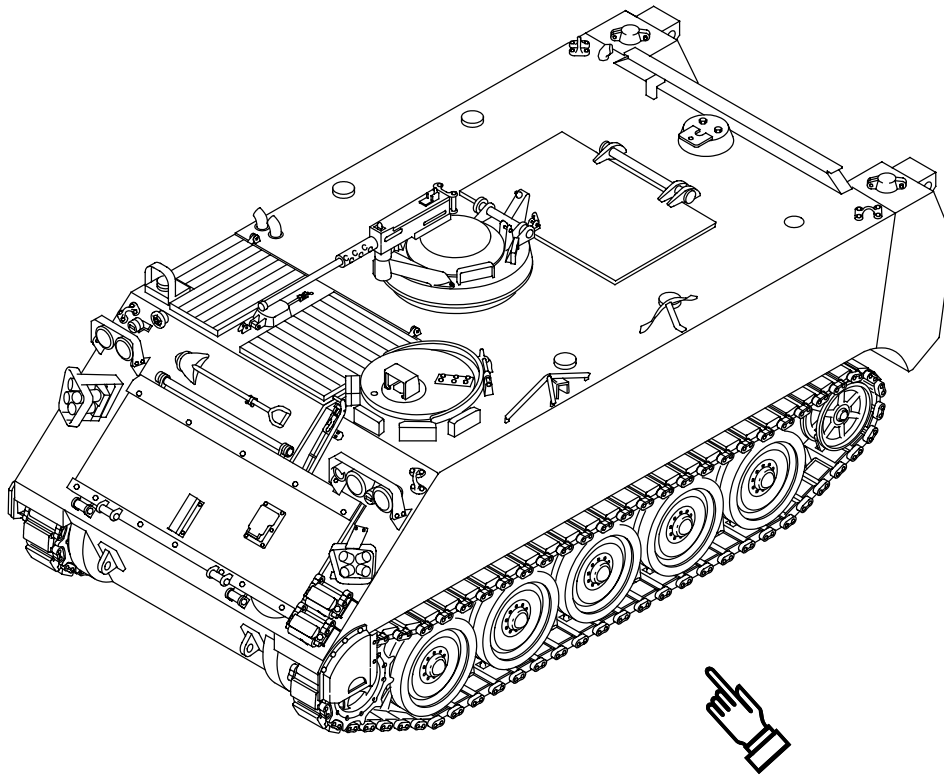
**0001 00****SCOPE**

**Type of Manual:** Unit Maintenance

**Equipment Model Number, Name, and Purpose:**

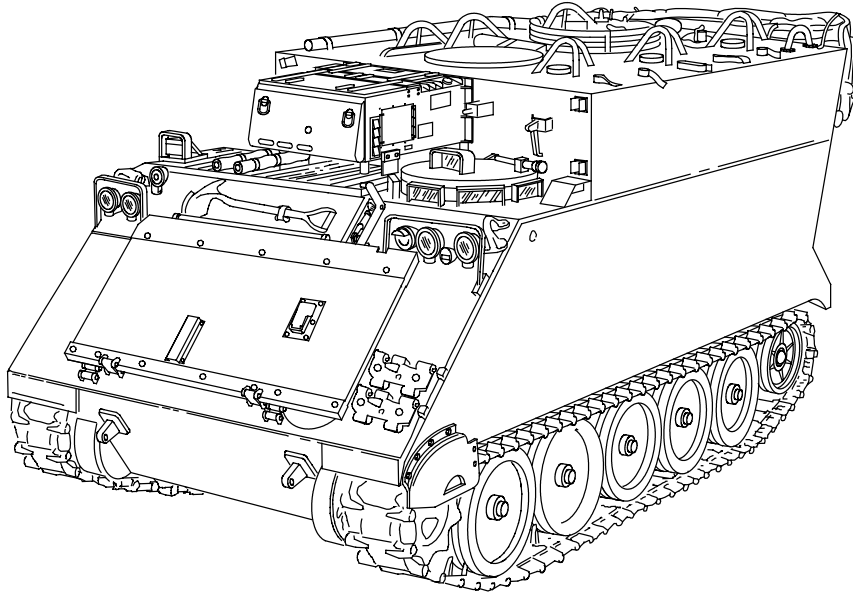
**M113A3** – Armored Full Tracked Personnel Carrier

Purpose: Transportation and positioning combat troops and supplies.



**M577A3** – Light Tracked Command Post Carrier

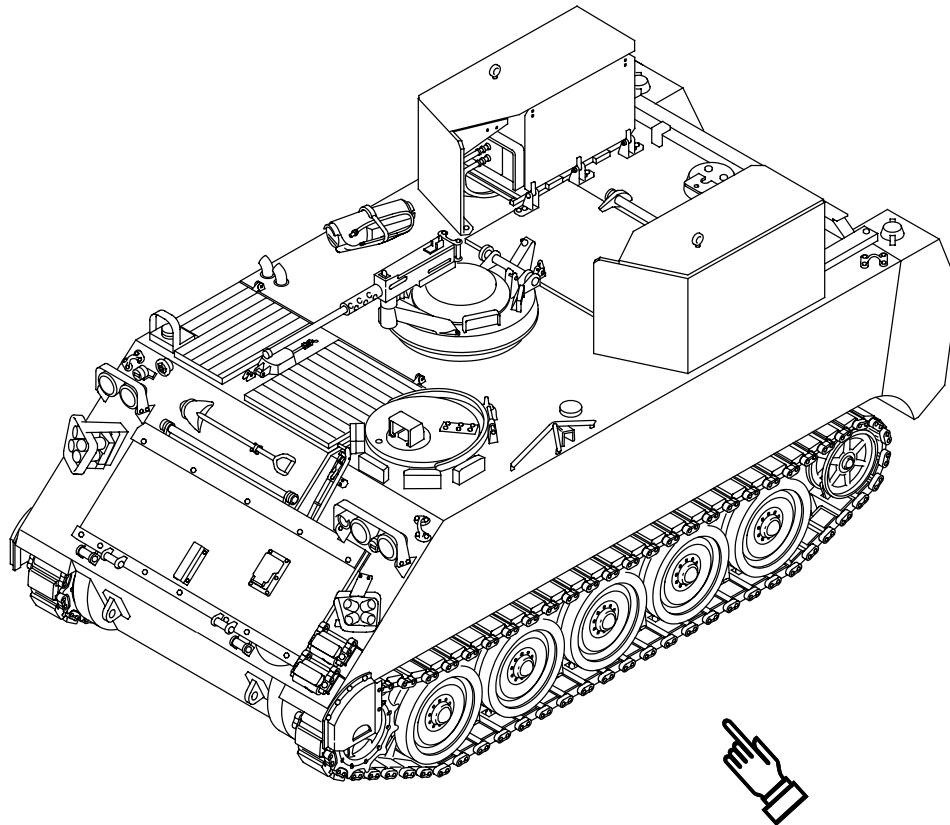
Purpose: Provides protection and mobility for field commanders in a tactical environment.



**M1059A3** – Full Tracked Smoke Generator Carrier

Purpose: Designed to generate a smoke screen in the battlefield environment.

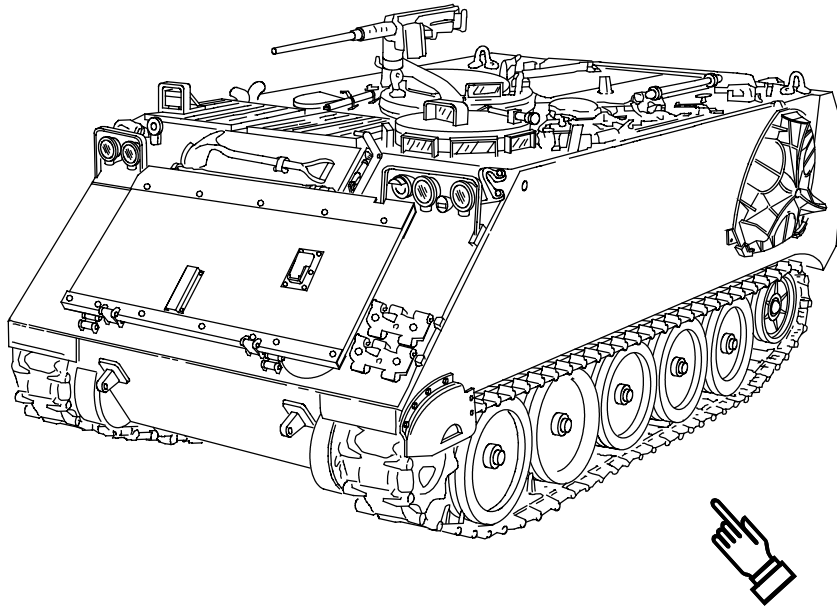
Other Applicable Manuals: See TM 3-1040-279-12&P for Operator's instructions, Unit maintenance, and repair parts for Smoke Generator Set M157A2.



**M1064A3** – Self-propelled 120-mm M121 Mortar Carrier

Purpose: Provides mobility for the 4.7-inch (120-mm) Mortar M121 or M120. The M121 can be fired from a turntable mounted in the carrier. The M120 can be fired from a portable mount off the carrier.

Other Applicable Manuals: See TM 9-1015-250-23 and TM 9-1015-250-23P for Unit and DS maintenance and repair parts for the 4.7-inch (120-mm) Mortar M121 or M120.



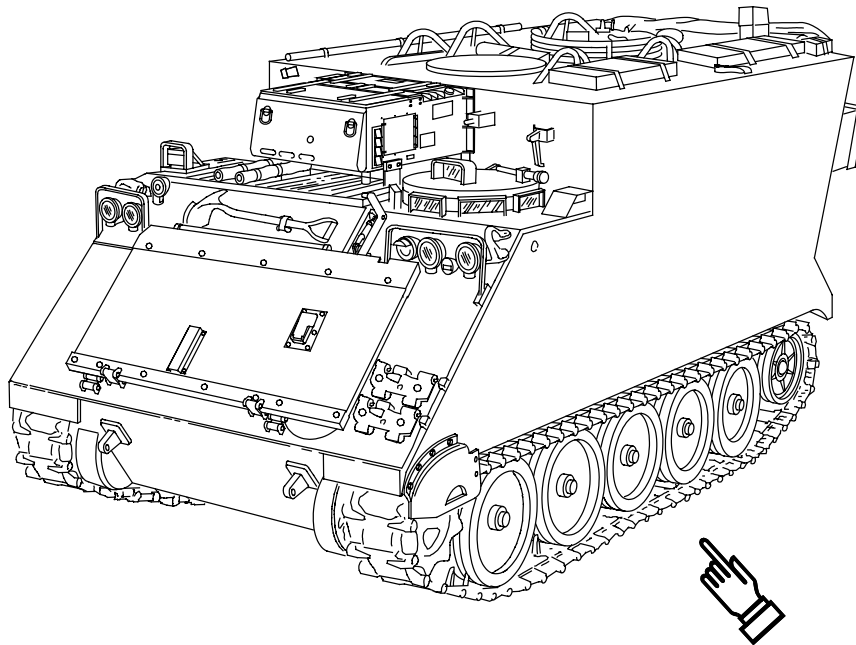


**M1068A3** – Standardized Integrated Command Post System (SICPS) Carrier

Purpose: Designed as a command post and field office to support the various configurations and installation layouts of the Army Tactical Command and Control System (ATCCS) and provide protection for field commanders in a tactical environment.

Other Applicable Manuals: See TM 11-7010-256-12&P for Operator's instructions, Unit maintenance, and repair parts for SICPS Equipment.

See TM 10-5410-229-13&P for Operator's instructions, Unit and DS maintenance, and repair parts for the Modular Command Post System (MCPS) tent and related parts.

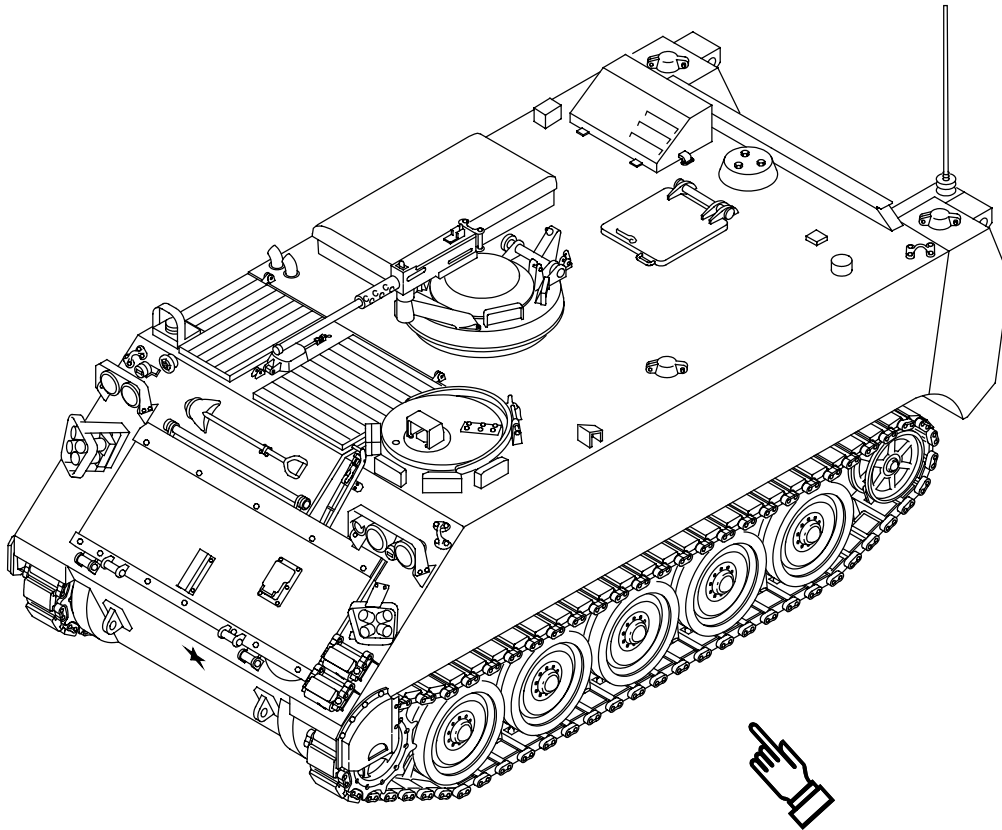


**M58** – Mechanized Smoke Obscurant Chassis

Purpose: Designed to provide large area smoke screens in support of various tactical situations. Smoke can be generated in a static position or on the move.

Other Applicable Manuals: See TM 3-1040-285-10 for Operator's instructions for the Mechanized Smoke Obscurant System Smoke Generator.

See TM 3-1040-285-20 for Unit maintenance for the Mechanized Smoke Obscurant System Smoke Generator.



**MAINTENANCE FORMS, RECORDS, AND REPORTS**

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pamphlet 738-750, The Army Maintenance Management System (TAMMS).

**REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your carrier needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Tell us why a procedure is hard to perform. Put your ideas on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, US Army Tank and Automotive Armaments Command, ATTN: AMSTA-AC-NML, Rock Island, IL 61299-7360. We will send you a reply.

**DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE**

See the following technical manuals for information on destruction of Army materiel:

- TM 750-244-2
- TM 750-244-5-1
- TM 750-244-6
- TM 750-244-7

**PREPARATION FOR STORAGE OR SHIPMENT**

For information about administrative storage or shipment, see the following documents:

**Preparation for Storage or Shipment**

Specification	Applicable Carriers
MIL-DTL-45360	M113A3, M1064A3, M1059A3, M58
MIL-C-46746E(AT)	M577A3 & M1068A3

**NOMENCLATURE CROSS-REFERENCE**

This listing includes nomenclature cross references used in this manual.

<b>Adapter</b>	Nipple, pipe, union
<b>Battery clamp</b>	Battery terminal adapter
<b>Battery clamp</b>	Terminal lug
<b>Bilge pump</b>	Rotary pump
<b>Breather</b>	Air filter intake
<b>Bulb</b>	Incandescent lamp
<b>Coolant gauge</b>	Temp indicator
<b>Detector</b>	Liquid transmitter
<b>Dipstick</b>	Liquid level gauge rod
<b>Drain plug</b>	Pipe plug
<b>Engine oil filter</b>	Fluid pressure filter
<b>Engine oil gauge</b>	Dial pressure gauge
<b>Exhaust collector</b>	Exhaust connection
<b>Fastener</b>	Toggle pin
<b>Fire bottle</b>	Compression gas cylinder
<b>Fluid level detector</b>	Liquid transmitter
<b>Fuel control cable</b>	Fuel control
<b>Fuel filter</b>	Fluid filter
<b>Fuel gauge</b>	Liquid quantity gauge
<b>Gear box</b>	Mechanical housing
<b>Grease fitting</b>	Lubrication fitting
<b>Hand brake</b>	Parking brake lever

## GENERAL INFORMATION — Continued

0001 00

<b>Hatch</b>	Hatch cover
<b>Hinge pin</b>	Headless straight pin
<b>Hinge pin</b>	Machine bolt
<b>Horn switch</b>	Push switch
<b>Hub</b>	Support
<b>Hydraulic power unit</b>	Ramp power unit
<b>Indicator light</b>	Indicator lamp
<b>Inlet grill</b>	Intake grill
<b>Jack</b>	Receptacle
<b>Jamnut</b>	Hexagonal nut
<b>Key washers</b>	Locking plates
<b>Link</b>	Plain rod bearing
<b>Locknut</b>	Self-locking nut
<b>Lockscrew</b>	Self-locking bolt
<b>Parking brake lever</b>	Manual control lever
<b>Plug</b>	Connector
<b>Propeller shaft</b>	Flexible drive shaft
<b>Quick disconnect</b>	Quick coupling half
<b>Road wheel</b>	Solid rubber wheel
<b>Rod</b>	Connecting link
<b>Screen</b>	Metal grill
<b>Screw</b>	Machine bolt
<b>Shim</b>	Spacer
<b>Shim pack</b>	Spacer assortment
<b>Splined shaft</b>	Output carrier
<b>Starter switch</b>	Interlock switch
<b>Stop light</b>	Taillight
<b>Stowage box</b>	Vehicular accessory box
<b>Tie strap</b>	Electric tiedown strap
<b>Switch</b>	Circuit breaker
<b>Throttle control cable</b>	Throttle control
<b>Towing pintle</b>	Pintle hook latch
<b>Turn signal assembly</b>	Vehicle directional light
<b>Universal joint</b>	Universal joint spider
<b>VSFD</b>	Variable speed fan drive
<b>VSFD</b>	Cooling system pump (Old Configuration)

**METRIC EQUIVALENTS**

Metric equivalents are used throughout this manual. Metric symbols and units are:

**Metric Equivalents**

<b>SYMBOL</b>	<b>UNIT</b>
C	Celsius
cc	cubic centimeter
cm	centimeter
j	joule
kg	kilogram
kg/min	kilogram per minute
km	kilometer
km/h	kilometer per hour
kPa	kilopascal
kw hr	kilowatt hour
l	liter
m	meter
mm	millimeter
N·m	Newton-meters

**SAFETY, CARE, AND HANDLING**

Read warnings in WARNING SUMMARY.

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**EQUIPMENT DESCRIPTION**

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**0002 00****CAPABILITIES AND FEATURES**

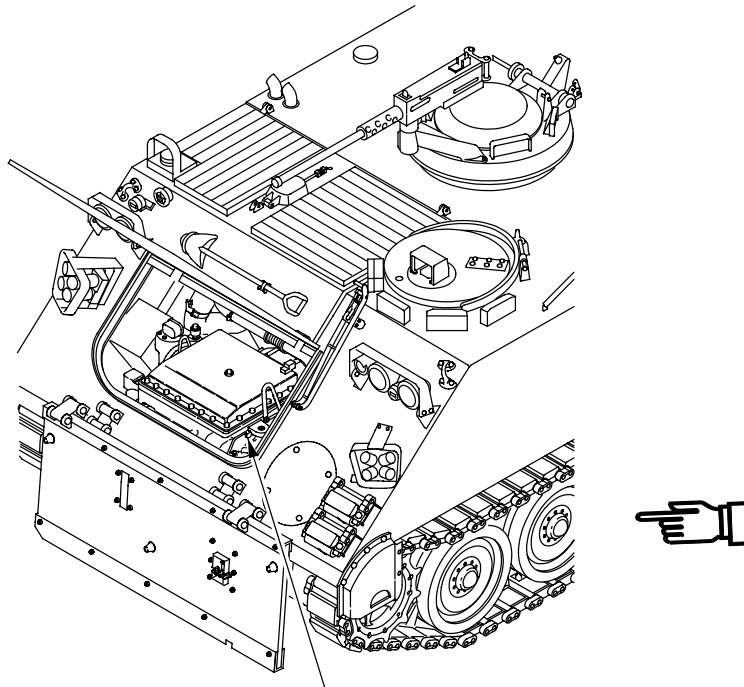
For equipment characteristics, capabilities, and features, see your -10.

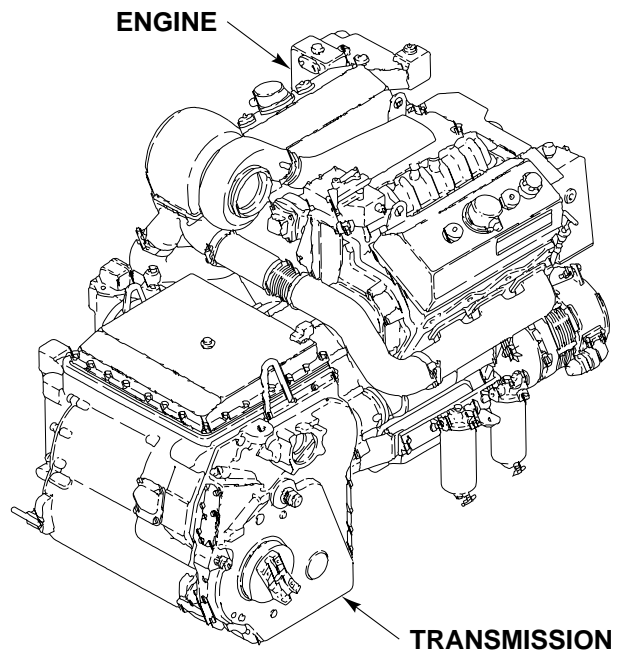
**LOCATION AND DESCRIPTIONS OF MAJOR COMPONENTS****ENGINE**

A six-cylinder, turbocharged diesel engine (6V53T) is located in the power plant compartment.

**TRANSMISSION**

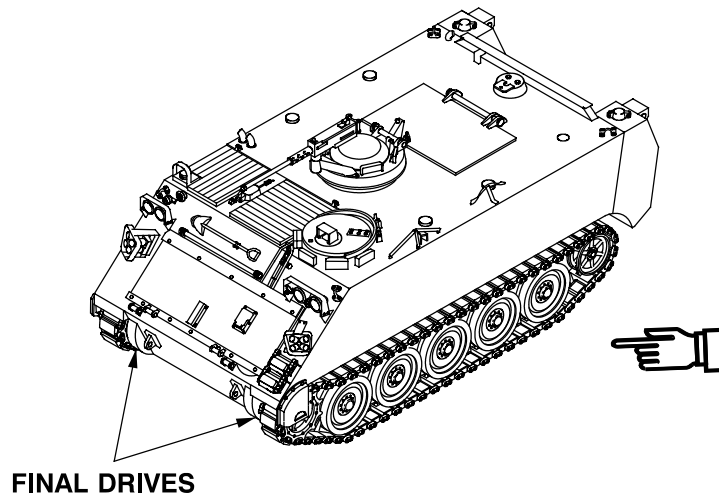
A hydrostatic transmission (X200-4 or 4A) connects to the engine and powers the final drives.

**POWER PLANT COMPARTMENT**



**FINAL DRIVES**

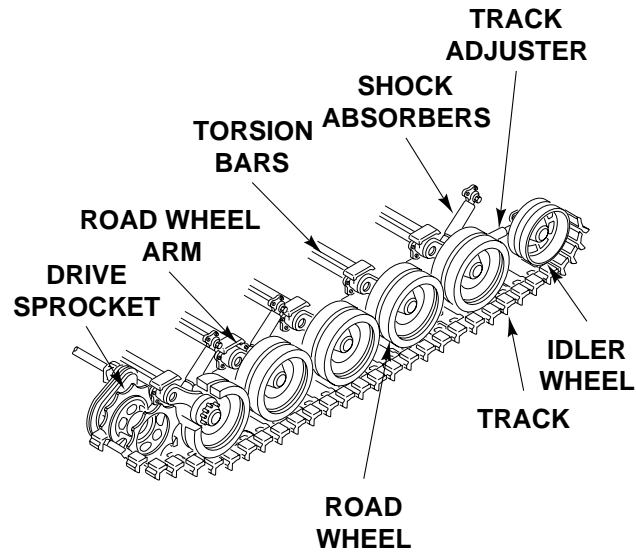
Final drives attach to the transmission by propeller shafts. They deliver power to drive sprockets at the front of the carrier.





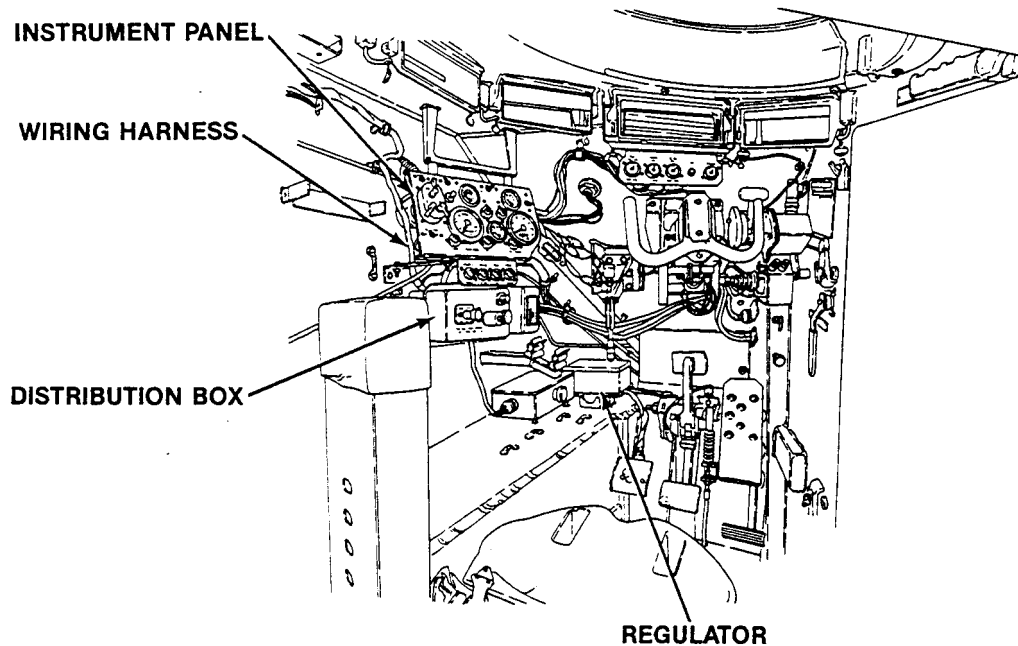
**TRACKS AND SUSPENSION**

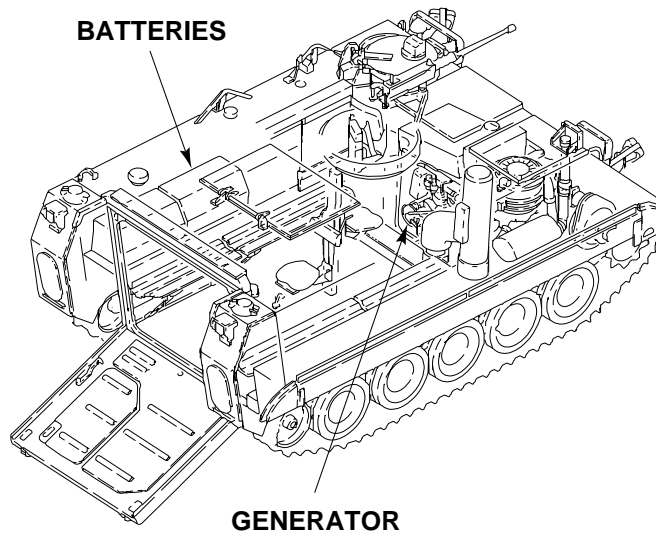
Drive sprockets at the front of the carrier drive the two tracks. Torsion bars and shock absorbers attach to road wheels and provide suspension.



**ELECTRICAL**

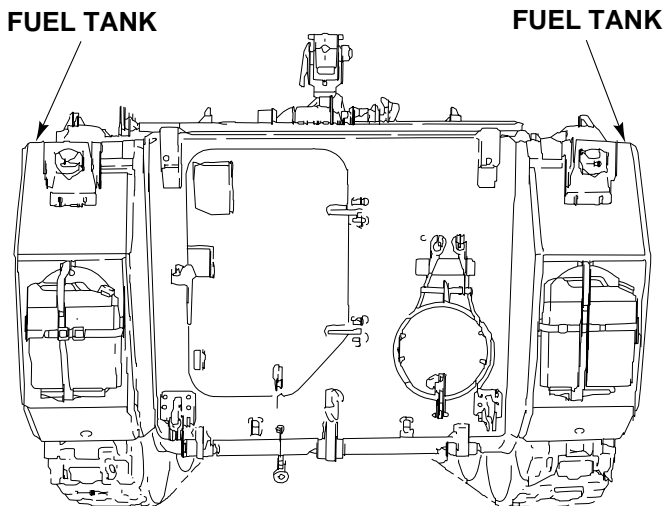
Four 12-volt batteries supply electricity through the distribution box to the carrier. On the M113A3 and M1059A3 carriers, the four batteries are located on the left sponson. On the M577A3 and M1068A3 carriers, the four batteries are located on the right sponson next to the personnel heater. On the M1064A3 carrier, two batteries are located in a drawer on the left sponson behind the driver and two batteries are located under the right personnel seat.

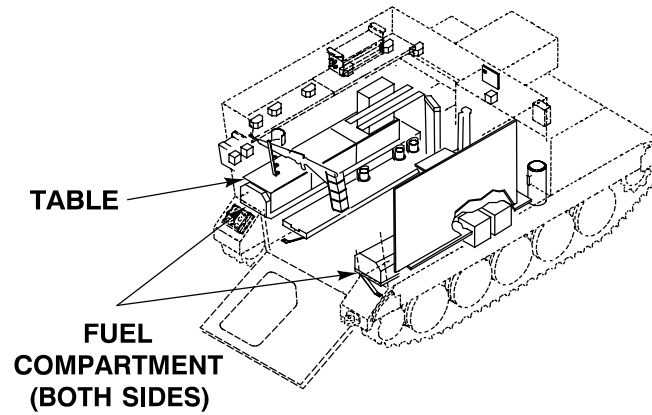




**FUEL SYSTEM**

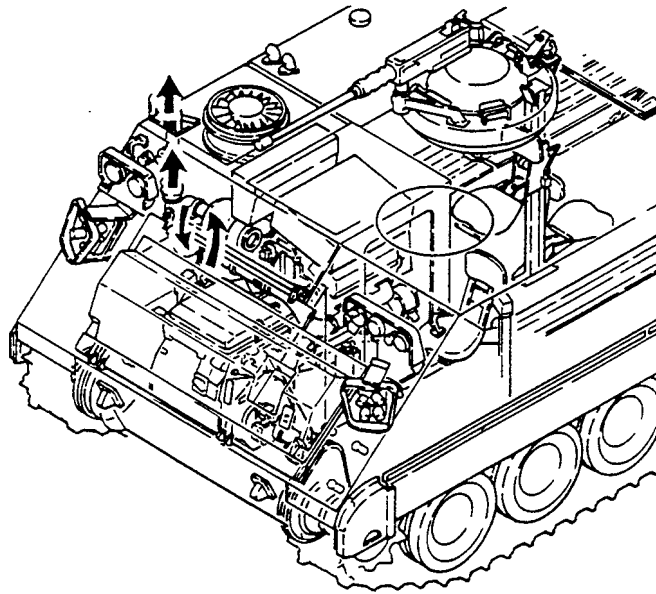
The M113A3, M1059A3, and M1064A3 carriers have two external fuel tanks located at the rear of the carrier on each side of the ramp. Total capacity is 95 gallons. The M577A3 and M1068A3 carriers have two internal fuel tanks located on the rear left and right sponsons under work tables. Total capacity is 120 gallons.





### EXHAUST SYSTEM

The exhaust system drives the turbocharger and carries exhaust gases through manifolds and the muffler.



**DIFFERENCES BETWEEN CARRIERS**

This manual covers six different carriers. The major differences can be determined from the chart below. Minor differences are described under SCOPE in each chapter or section.

**Table 1.**

DIFFERENCES BETWEEN CARRIERS						
Equipment	M113A3	M577A3	M1059A3	M1064A3	M1068A3	M58
<b>Fuel Tanks:</b>						
External	X	—	X	X	—	X
Internal	—	X	—	—	X	—
Commander's Cupola	X	—	X	X	—	X
Cargo Hatch	X	—	X	—	—	—
<b>Armament:</b>						
50 Caliber Machine Gun	X	—	X	X	—	X
120-mm Mortar	—	—	—	X	—	—
<b>Sighting Materiel:</b>						
Periscope, M17	X	X	X	X	X	X
Driver's Night Vision AN/VVS-2(V)1A	X	X	X	X	X	—
AN/VAS-5 DVE	—	—	—	—	—	X
Smoke Generator	—	—	X	—	—	X
ATCCS	—	—	—	—	X	—
Common Hardware	—	—	—	—	X	—
Fiber Optics	—	—	—	—	X	—
Tent/Covered Ext.	—	X	—	—	X	—
5.0 KW Auxiliary Power Unit*	—	X	—	—	X	—
4.2 KW Generator Set and Cover	—	X	—	—	X	—
Standard Personnel Heater	—	X	—	—	X	—
<b>Kits:</b>						
Personnel Heater	X	—	X	X	—	X
Engine Coolant Heater	X	X	X	X	X	X
Artillery Communication	—	X	—	—	X	—
Capstan and Anchors	—	—	X	—	—	—
Chemical Agent Auto Alarm	X	—	—	—	—	—

Table 1. (Continued)

DIFFERENCES BETWEEN CARRIERS						
Equipment	M113A3	M577A3	M1059A3	M1064A3	M1068A3	M58
Driver's Windshield	X	X	X	X	X	X
Litter	X	—	—	—	—	—
Machine Gun Armor Shield	X	—	—	X	—	—
NBC Mounting	X	X	—	X	X	X
Smoke Grenade Launcher	X	—	X	X	—	X

**NOTE**

The 5.0 kW APU can replace 4.2 kW generator set, using the Installation Instruction Order, IIO 9-2350-277-34-2. The IIO tells you how to modify and install the kit. The kit needs to be ordered along with the APU through your unit.

**EQUIPMENT DATA**

For equipment data, see your -10.



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**THEORY OF OPERATION**

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**0003 00****SCOPE**

This section describes how major systems and components of the carrier operate. An understanding of how each part functions in a system and how components relate to each other will help solve possible maintenance problems with the carrier.

**POWER PLANT**

The power plant consists of the diesel engine and transmission. The fuel, exhaust, cooling, starter, generator, and engine air systems are support systems for the power plant.

**DIESEL ENGINE**

The diesel engine is the primary source of power for the carrier. The engine converts air and diesel fuel into energy and delivers this power to the transmission.

**STARTER**

The engine is equipped with a heavy duty starter. The starter, with built-in solenoid, is used to crank the engine for starting.

**GENERATOR**

The generator is part of the carrier electrical system. It is driven directly by engine power. The generator charges the batteries in the carrier when the engine is running. A regulator mounted in the driver's compartment keeps the voltage at correct levels.

**OIL SYSTEM**

Oil system provides lubrication for the engine. Oil is cycled throughout the engine by a pump. The pump is located internally behind the front engine cover. An oil filter cleans the oil, and an oil cooler reduces oil temperature.

**FUEL SYSTEM**

Diesel fuel is stored in two fuel tanks located at the rear of the carrier. Fuel is drawn from fuel tanks by the fuel pump which pumps fuel through filters to the engine injectors. The injectors force fuel into combustion cylinders where it is mixed with air and changed into energy.

**TRANSMISSION**

The carrier uses hydromechanical transmission with hydrostatic steering. The transmission has its own oil system with filters and separately mounted oil cooler. This transmission oil system is separate from the engine oil system.

The transmission delivers power from the engine to the left and right final drives. The left and right final drives are driven by propeller shafts. The final drives deliver power to drive sprockets in the suspension system.

**EXHAUST SYSTEM**

Major exhaust system parts are the turbocharger, exhaust manifolds, muffler, and exhaust pipes.

The turbocharger is driven by exhaust gases from the engine. The turbocharger helps the engine develop more power and operate more efficiently. The exhaust manifolds carry the exhaust gases to the turbocharger from the engine. The muffler cuts down engine noise and allows exhaust to escape through the exhaust pipes to outside of the carrier.

**COOLING SYSTEM**

The cooling system cools the engine and transmission. It consists of a fan, fan drive, fan speed control assembly, radiator, coolant pump, auxiliary tank, transmission oil cooler, engine oil cooler, and thermostats. The cooling system contains

approximately 14.8 gallons of liquid coolant. The liquid coolant is cycled through the engine and transmission oil cooler by the coolant pump. This process keeps the engine and transmission temperature in a safe operation range.

As coolant flows through the engine, it absorbs heat from the engine and transmission. The heated coolant then flows to the radiator to remove coolant heat. The coolant fan pulls outside air in and through the radiator to remove heat. The fan is powered by the engine through a fan drive.

The radiator auxiliary tank acts as an overflow tank to keep the cooling system from overpressurizing. It also removes air from the engine coolant. There is a low coolant level transmitter to signal the operator if more coolant is needed.

## **ENGINE AIR SYSTEM**

The engine air system allows air to enter the engine. The air cleaner cleans air that enters the engine. Dust is drawn out through a scavenge outlet. Air is filtered through a reusable filter element before delivery to the engine. An air filter indicator shows when the element is clogged and needs cleaning or replacing. After being filtered, the air moves through the turbocharger and into the engine cylinders.

## **AUXILIARY AUTOMOTIVE SYSTEM**

The auxiliary automotive system includes driver controls, fuel cells, personnel heater, bilge pumps, crew ventilation system, and fire suppression system.

## **DRIVER CONTROLS**

The driver controls regulate the engine, transmission, and steering braking systems of the carrier.

The fuel shutoff control is used to stop the supply of fuel to the engine injectors. To start the engine, the driver must open the valve. The throttle linkages are used to control the engine speed. The gear selector allows the driver to choose the proper gear for the carrier. The steering system controls the direction of the carrier. The steering control consists of a steering wheel and linkage connected to the transmission.

The brake system allows the driver to stop a moving carrier and hold the carrier in position. The braking system consists of the service brake and the parking brake. The service brakes are hydraulic and applied by pedal. The parking brake mechanically locks the transmission brakes to prevent carrier movement. Also, the system has levers, rods, shafts, and linkages connecting to the brake shaft of the transmission.

## **PERSONNEL HEATER**

The personnel heater system provides heat inside the carrier. Major parts are the combination combustion chamber/heat exchanger, blowers, a fuel pump, and an electrical control and safety system. The heater operates using diesel fuel drawn from the fuel tanks. Fuel is delivered to the combustion chamber from the fuel pump. Outside air is drawn into the combustion chamber by one of the blowers. A blower draws air from the crew compartment into the combustion chamber. The air is warmed by heat by the combustion process and then returned to the crew compartment.

## **BILGE PUMPS**

Two electrically driven bilge pumps remove water and other liquids from the hull. Water enters the pumps through a screened inlet. The pumps force water out of the carrier through outlet tubes. The bilge pumps are controlled by a switch on the driver's instrument panel.

## **HYDRAULIC SYSTEM**

The ramp is raised or lowered by an hydraulic system which consists of a pump, a cylinder, a control valve, and an hydraulic tank. This system is controlled by a three position valve located near the driver. Moving the valve to either RAISE or LOWER position directs fluid to the appropriate port on the ramp cylinder.



## FIRE EXTINGUISHER SYSTEM

The fire extinguisher system consists of two CO<sub>2</sub> (Carbon Dioxide) cylinders, one fixed and one portable. Carbon Dioxide can put out fires quickly and effectively. The fixed cylinder only extinguishes fires in the power plant compartment. It is located behind the driver and is actuated manually by a handle/knob on the cylinder or by an external handle connected to the cylinder by a cable. The portable fire extinguisher is located in the crew compartment and is manually discharged.

## SUSPENSION SYSTEM

The suspension system supports the carrier and delivers engine power to the road. It allows the carrier to maneuver and be stable. Suspension system parts are the drive sprockets, tracks, idler wheels, track tension adjuster, road wheels, and support arms. Also, there are torsion bars and shock absorbers.

The drive sprockets drive the tracks. They are powered by left and right final drives from the transmission. The tracks consist of two flexible chains of track shoes. The tracks ride on the drive sprockets and are guided by idler wheels. The idler wheels can be adjusted to maintain correct track tension.

There are five pairs of road wheels per side. Track centerguides fit between each pair of road wheels. Road wheels and torsion bars are connected to support arms. The torsion bars act as springs to keep the road wheels on the ground and from hitting the bottom of the carrier.

## ELECTRICAL SYSTEM

The electrical system provides power for the carrier. The system operates on wet cell batteries and includes charging, regulating and monitoring equipment. The batteries provide a normal operating 24 volts with an amperage capability of 200 amps per hour.

The batteries supply the carrier with electricity when the engine is off. All electrical power is delivered through the distribution box. Electrical power flows from the batteries through the distribution box, cables, and wiring assemblies to the electrical equipment. The hull is a ground for the electrical system.

The generator recharges the batteries and supplies electricity while the engine is running. The generator has 200 amps per hour capability.

There are several electrical subsystems within the hull. Each subsystem contains at least one wiring assembly. Major electrical subsystems and assemblies are:

*Interior and Exterior Lights.* Exterior lights include standard headlights, infrared headlights, taillights/stoplights, and blackout lights. Interior lights include domelights and panel lights.

*Starting and Charging.* A generator with a regulator keeps the batteries charged to operating voltage. A starter with a built-in solenoid is used to crank the engine for starting.

*Ventilation and Heating.* All carriers have a manual open-close ventilator located at the rear of the crew compartment. The M577A3 and M1068A3 carriers also include an electric ventilation fan controlled by a switch on the master switch panel (M577A3 and M1068A3). The personnel heater is controlled by a heater control box which provides electric power for starting and operating the heater. The control box is connected to the carrier batteries so that the heater can be operated without turning the MASTER SWITCH ON.

*Bilge Pumps.* Two pumps, one in the front and one in the rear of the carrier, remove any water that may have entered the carrier. Both pumps are controlled by a switch on the driver's instrument panel.

## SPECIAL EQUIPMENT

For information on special purpose kits, refer to Chapter 22.

## WINTERIZATION EQUIPMENT

Personnel heaters are standard equipment on M577A3, M1068A3, and M58 carriers. Since maintenance of heater components is the same for both standard heaters and kit heaters, they are only covered in one place in this manual. See Chapter 22 for maintenance of heater components.



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**REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT**

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**0004 00**

**COMMON TOOLS AND EQUIPMENT**

For authorized common tools and equipment, refer to Modified Table of Organization and Equipment (MTOE) for your unit.

**SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT**

Special tools and support equipment are needed for unit maintenance. They are listed in Repair Parts and Special Tools List (RPSTL) TM 9-2350-277-24P. Common tools and supplements and special tools and fixtures are listed in WP 0926 00.

**REPAIR PARTS**

Repair parts are listed and illustrated in the Repair Parts and Special Tools List (RPSTL) TM 9-2350-277-24P, covering unit maintenance for this equipment.



CHAPTER 2

UNIT TROUBLESHOOTING PROCEDURES

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**INTRODUCTION TO HOW TO USE TROUBLESHOOTING**

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**0005 00****PURPOSE**

The purpose of unit troubleshooting is to diagnose problems which are reported to unit maintenance. You should not begin unit troubleshooting until **ALL** operator troubleshooting procedures have been performed. You will perform four actions in unit troubleshooting:

- (1) Before starting a troubleshooting task, verify that the reported problem is present.
- (2) After verifying the symptom, find the part that is causing problem.
- (3) Replace or adjust that part.
- (4) Check to make sure problem no longer exists, and that there are no other problems.

**DEFINITIONS AND DESCRIPTIONS OF TROUBLESHOOTING PARTS**

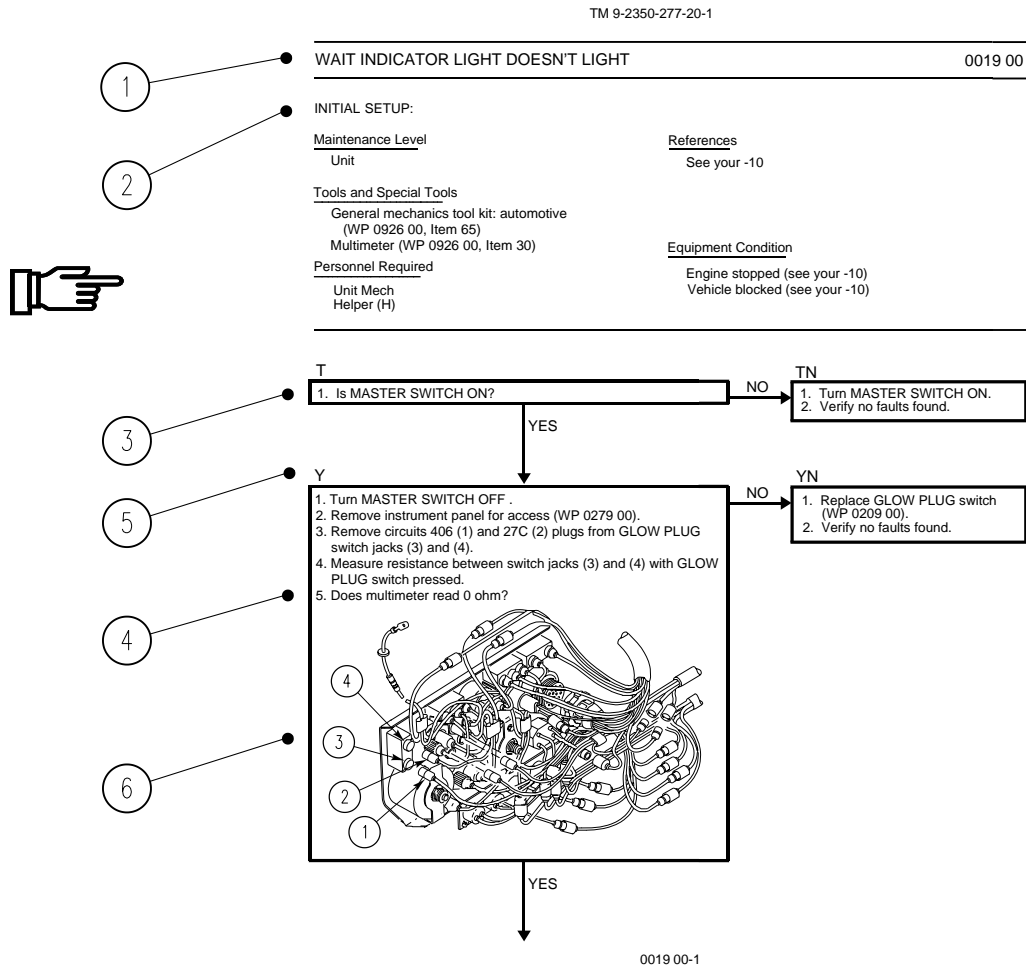
Troubleshooting tasks always have a beginning and an end. You will use task steps, test procedures, indexes, maintenance tasks, and other technical manuals to troubleshoot. Troubleshooting uses the following terms that are not used in other kinds of tasks:

- |                                   |  |
|-----------------------------------|--|
| <b>1. FAULT:</b>                  | The part that is not operating correctly and is causing the problem.   |
| <b>2. SYMPTOM:</b>                | The problem reported to unit maintenance.  |
| <b>3. STE/ICE:</b>                | Diagnostic and test equipment used to troubleshoot at unit maintenance level. It is used to make measurements and find faulty parts in the carrier system.   |
| <b>4. VERIFY NO FAULTS FOUND:</b> | After you have completed the corrective action, you must verify that no faults exist. If the fault condition still exists, then the fault is not fixed or there is another fault. If this happens, start at the beginning of the correct/appropriate troubleshooting procedure until you find and correct all faults. Always operate the system and/or carrier to make sure that you have corrected the reported problem. If troubleshooting does not identify a faulty part, the carrier is defective beyond the level of unit maintenance. |

**TROUBLESHOOTING BASICS**

**Troubleshooting Procedure**

A troubleshooting procedure serves as a starting point for your troubleshooting work. You will branch in and out of procedures as you work to find a fault. After correcting the fault, check that the problem has been corrected. The parts of a troubleshooting procedure are given below.



**Legend to Sample Above**

- 1 TITLE** This is the name of the procedure that best describes your symptom.
- 2 INITIAL SETUP** This tells you the tools, materials/parts, personnel, references, and equipment conditions needed to do the procedure.
- 3 TASK STEPS** Step-by-step instructions that isolate the fault.
- 4 QUESTION** This is last step in YES blocks. The answer to this question will direct you to the next block.
- 5 BLOCK ID CODE** These codes identify YES/NO blocks for ease of referencing. When filling out 2028s, list these codes, along with titles and page numbers.
- 6 ILLUSTRATIONS** These help you locate and identify parts.

**STE-ICE Test Procedure**

A STE/ICE test procedure will tell you how to use the STE/ICE test equipment. You may be directed to go to a STE/ICE test procedure when performing the troubleshooting procedures. The parts of a STE/ICE test procedure are given below.

TM 9-2350-277-20-1

① **STE/ICE TEST 67 BATTERY VOLTAGE** 0124 00

THIS WORK PACKAGE COVERS:  
Test (page 0124 00-1).

② **INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech

References

See your-10  
TM 9-4910-571-12&P

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
STE/ICE hooked up to DCA 6 (WP 0117 00)

③



④ 1. Select TEST 67.

2. Press and release TEST button.

CONDITIONS	VOLTS
Engine off/MASTER SWITCH OFF.	21 or more
Cranking engine fuel off.	17 or more
Charging 1100-1300 RPM/service lights on.	26 to 29.5

a. If display is erratic or shows 0 (v olts), go to: STE/ICE DCA Battery Voltage Diagnostic Troubleshooting (WP 0142 00).

b. If error message appears, see TM 9-4910-571-12&P.

3. Return to troubleshooting.

**Legend to Sample Above**

- 1 TITLE** Test number and procedure name.
- 2 INITIAL SETUP** This tells you the tools, materials/parts, personnel, references, and equipment conditions needed to do the procedure.
- 3 STE/ICE HOOK UP** Steps that tell you how to perform the HOOK UP/REMOVE STE/ICE test.
- 4 TASK STEPS** Steps that tell you how to set up and perform the test.

Before you begin, make sure you have all items in the INITIAL SETUP. Do all steps in the test procedure and then return to where you left off in troubleshooting task. Continue to follow troubleshooting task instructions to find and correct the fault.

**Locating the Correct Troubleshooting Procedure**

- (1) Carrier arrives at shop.
- (2) Read DA Form 2404.
- (3) Verify that the problem on DA Form 2404 exists.
- (4) Look up the carrier symptom in the Troubleshooting Fault Symptom Index (WP 0006 00) and go to that task.

**Doing the Troubleshooting Procedure**

- (1) Make sure you have all items in INITIAL SETUP.
- (2) Perform required action(s) in Equipment Conditions.
- (3) Complete the first block of task steps.
- (4) Refer to system schematics for system components, details, and configuration.
- (5) Answer question at the bottom of the first block.
- (6) Follow YES or NO arrows to next block.
- (7) Move from block to block. Answer questions and follow instructions. You may be directed to:
  - do further checks and tests on parts;
  - go to another manual and do tasks;
  - or go to another task in this manual.
- (8) After completing the actions called for on another page or manual, return to the point in the troubleshooting procedure where you left off.
- (9) Locate the fault in the carrier or part, and perform the corrective action.
- (10) Check to make sure the fault is corrected, and there are no new faults.
- (11) Button up by installing items listed in Equipment Conditions after finishing the troubleshooting task.

**TROUBLESHOOTING SAMPLE**

The following sample takes you through a typical troubleshooting procedure.

**Finding the Right Troubleshooting Procedure**

A carrier arrives at the shop. The DA Form 2404 shows that the engine cranks slowly. The best task match is ENGINE CRANKS SLOWLY (WP 0020 00).

TM 9-2350-277-20-1

**MALFUNCTION/SYMPTOM INDEX WP 0006 00**

**ENGINE SYSTEM**

ENGINE OVERHEATS.....	WP 0014 00
ENGINE OVERCOOLS.....	WP 0015 00
ENGINE DOESN'T CRANK.....	WP 0016 00
ENGINE DOESN'T START (COLD WEATHER ONLY).....	WP 0017 00
WAIT INDICATOR FLASHES DURING START ATTEMPTS (PREGLOW OR AFTER GLOW).....	WP 0018 00
WAIT INDICATOR DOESN'T LIGHT.....	WP 0019 00
ENGINE CRANKS SLOWLY.....	WP 0020 00
ENGINE CRANKS BUT WILL NOT START.....	WP 0021 00
ENGINE CRANKS BUT WON'T START BELOW 40 FAHRENHEIT (AIR BOX HEATER IS USED).....	WP 0022 00
ENGINE CRANKS BUT WON'T START BELOW 40 FAHRENHEIT (GLOW PLUGS ARE USED).....	WP 0023 00
ENGINE RUNS ROUGH, STALLS OR DOESN'T PUT OUT FULL POWER.....	WP 0024 00
GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR.....	WP 0025 00
ENGINE OIL LOW PRESSURE INDICATOR COMES ON.....	WP 0026 00



This is the procedure you want.

TM 9-2350-277-20-1

**ENGINE CRANKS SLOWLY 0020 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your-10

Tools and Special Tools

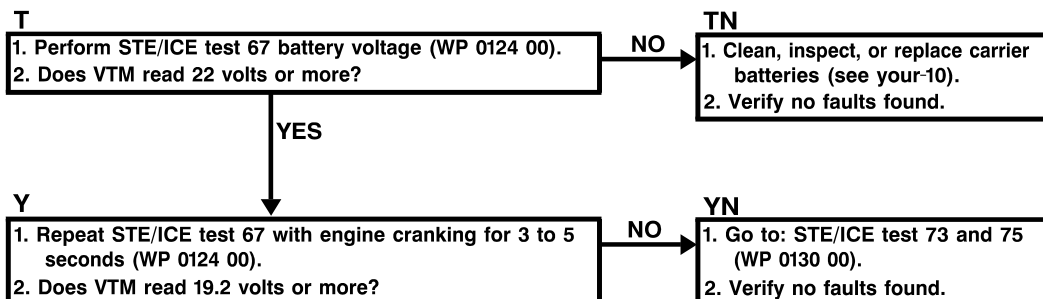
General mechanic stool kit: automotive (WP 0926 00, Item 65)  
STE/ICE-Rtest set (WP 0926 00, Item 61)

Equipment Condition

Engine stopped (see your-10)  
Vehicle blocked (see your-10)

Personnel Required

Unit Mech 63T10  
Helper (H)



Check the title to make sure you are troubleshooting the correct system for the problem. Read the INITIAL SETUP carefully and make sure you have all items listed. Some access steps in Equipment Conditions may not need to be performed depending on the fault location. You decide which are necessary for your particular problem.

TM 9-2350-277-20-1

ENGINE CRANKS SLOWLY

0020 00

INITIAL SETUP:

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanics tool kit: automotive  
(WP 0926 00, Item 65)  
STE/ICE-R test set (WP 0926 00, Item 61)

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)

Personnel Required

Unit Mech  
Helper (H)



This is the first block of the troubleshooting task. Step 1 has you performing a STE/ICE test. Go to the page shown. You will be using a STE/ICE test procedure for this step. Come back to this block when you complete the test.

1. Perform STE/ICE test 67 battery voltage (WP 0124 00).

NO



Here is the STE/ICE test procedure. It will give you more steps to find the fault. Before you begin, make sure you have all the items in the INITIAL SETUP. Do all the steps in the procedure. After you do the steps, go back to where you left off in the troubleshooting task.

TM 9-2350-277-20-1

STE/ICE TEST 67 BATTERY VOLTAGE 0124 00

THIS WORK PACKAGE COVERS:  
Test (page 0124 00-1).

INITIAL SETUP:

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

Personnel Required

Unit Mech



References

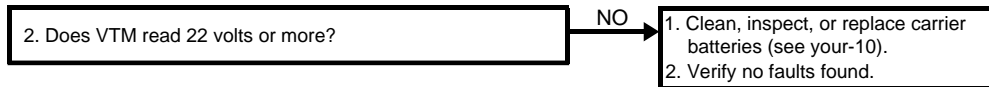
See your-10  
TM 9-4910-571-12&P

1. Select TEST 67.
2. Press and release TEST button.

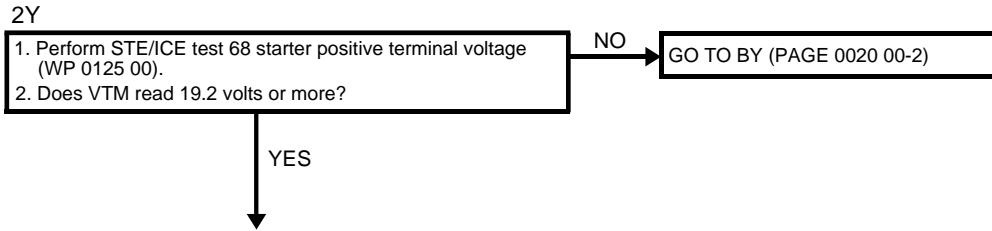
CONDITIONS	VOLTS
Engine off/MASTER SWITCH OFF.	21 or more
Cranking engine fuel off.	17 or more
Charging 1100-1300 RPM/service lights on.	26 to 29.5

- a. If display is erratic or shows 0 (v olts), go to: STE/ICE DCA Battery Voltage Diagnostic Troubleshooting (WP 0142 00).
  - b. If error message appears, see TM 9-4910-571-12&P.
3. Return to troubleshooting.

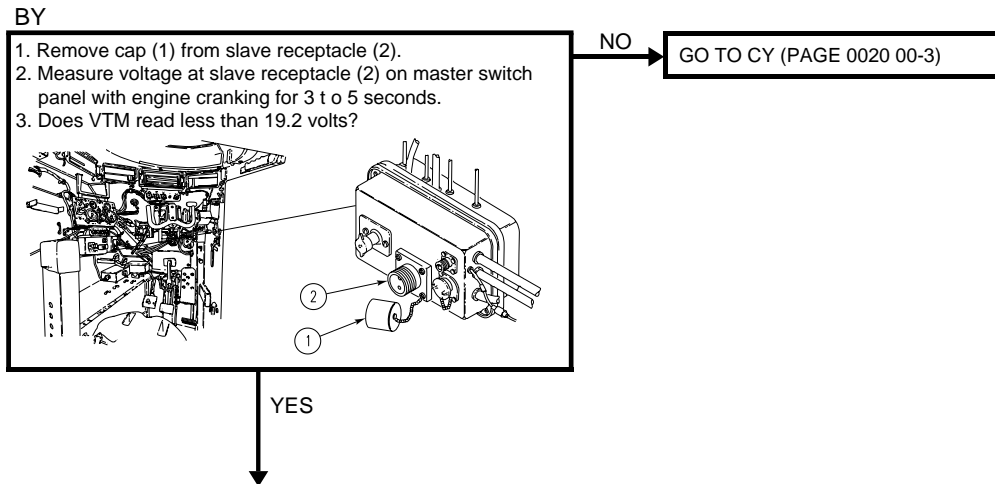
This is where you left off in the troubleshooting task. Answer the question in step 2. The answer to question depends on what you found when you did the STE/ICE test procedure. In this sample, let us say the test shows 22 volts. So the answer to the question, "Does test read 22 volts or more?" is YES. Follow the YES arrow to the next block.



The YES arrow takes you to this block. Do steps 1 and 2. In this sample, let us say the test show 17 volts. So the answer to the question, “Does VTM read 19.2 volts or more?” is NO. Follow the NO arrow to the reference indicated.

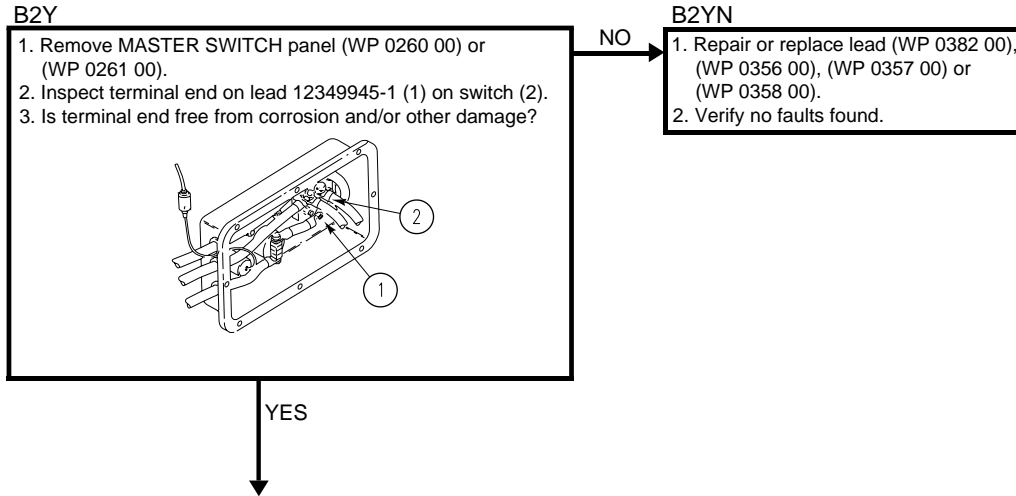


This is how the reference appears once you locate it. Do steps 1 thru 3. Let us say the VTM reads less than 19.2 volts. So the answer to the question, “Does VTM read less than 19.2 volts?” is YES. Follow the YES arrow to the next block.





The YES arrow takes you to this block. Do steps 1 thru 3. In this sample, let us say the terminal end is free from corrosion and/or other damage. So the answer to step 3 is YES. Follow the YES arrow to the next block.



The YES arrow takes you to this block. You have found the fault in the MASTER SWITCH. This block gives you the step to correct the fault. Do step 1. It tells you to go to another task in the manual. Go to the page shown and perform the task. Return to this block when you have completed the task.

**B3Y**

1. Replace MASTER SWITCH (WP 0262 00) or (WP 0273 00).
2. Verify no faults found.

Step 2 in this block is “Verify no faults found”. Check to make sure you have fixed the reported fault and there are no other problems. After no faults have been verified, return carrier to operation.

This section has given you information on how to use troubleshooting. By going through the troubleshooting sample, you have seen how parts of this chapter are used. This information will help you successfully troubleshoot at the unit maintenance level.



**MALFUNCTION/SYMPTOM INDEX WP**

**0006 00**

**ENGINE SYSTEM**

ENGINE OVERHEATS (OLD VSFD CONFIGURATION).....WP 0014 00

ENGINE OVERHEATS (NEW VSFD CONFIGURATION).....WP 0014 01

ENGINE OVERCOOLS.....WP 0015 00

ENGINE DOESN'T CRANK.....WP 0016 00

ENGINE DOESN'T START (COLD WEATHER ONLY).....WP 0017 00

WAIT INDICATOR FLASHES DURING START ATTEMPTS (PREGLOW  
OR AFTERGLOW).....WP 0018 00

WAIT INDICATOR DOESN'T LIGHT.....WP 0019 00

ENGINE CRANKS SLOWLY.....WP 0020 00

ENGINE CRANKS BUT WILL NOT START.....WP 0021 00

ENGINE CRANKS BUT WON'T START BELOW 40° FAHRENHEIT (AIR  
BOX HEATER IS USED).....WP 0022 00

ENGINE CRANKS BUT WON'T START BELOW 40° FAHRENHEIT  
(GLOW PLUGS ARE USED).....WP 0023 00

ENGINE RUNS ROUGH, STALLS OR DOESN'T PUT OUT FULL  
POWER.....WP 0024 00

GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/  
GENERATOR INDICATOR.....WP 0025 00

ENGINE OIL LOW PRESSURE INDICATOR COMES ON.....WP 0026 00

**ELECTRICAL SYSTEM**

NO EXTERIOR LIGHTS OPERATE.....WP 0029 00

BLACKOUT DRIVE LIGHT DOESN'T WORK.....WP 0030 00

SERVICE HEADLIGHTS DON'T WORK.....WP 0031 00

INFRARED HEADLIGHT(S) DON'T WORK.....WP 0032 00

SERVICE AND/OR BLACKOUT STOP LIGHTS MALFUNCTION.....WP 0033 00

BLACKOUT MARKER LIGHT DON'T WORK.....WP 0034 00

SERVICE TAIL LIGHT DOESN'T WORK.....WP 0035 00

TRAILER LIGHTS DON'T WORK.....WP 0036 00

HORN DOESN'T WORK.....WP 0037 00

INSTRUMENT PANEL AND/OR TRANSMISSION CONTROLLER  
ILLUMINATION LIGHTS MALFUNCTION.....WP 0038 00

DOMELIGHT(S) DON'T WORK.....WP 0039 00

DOMELIGHTS MALFUNCTION (M577A3 ONLY).....WP 0040 00

BLACKOUT DOMELIGHTS DO NOT WORK.....WP 0041 00

RIGHT REAR UTILITY OUTLET/ADMITTANCE BUZZER WORKS  
IMPROPERLY (M577A3 AND M1068A3 ONLY).....WP 0042 00

LEFT REAR UTILITY OUTLET/BLOWER DOES NOT WORK (M577A3  
AND M1068A3 ONLY).....WP 0043 00

RADIO(S) DON'T WORK.....WP 0044 00

SMOKE GRENADE LAUNCHER(S) MALFUNCTION (M113A3  
AND M1059A3 ONLY).....WP 0045 00

**INSTRUMENT & WARNING LIGHT PANEL INDICATORS**

MASTER SWITCH ON INDICATOR DOESN'T LIGHT.....WP 0048 00

FUEL LEVEL INDICATOR MALFUNCTIONS.....WP 0049 00

HIGH BEAM INDICATOR LIGHT DOESN'T WORK.....WP 0050 00

BATTERY/GENERATOR INDICATOR MALFUNCTIONS.....WP 0051 00

PARKING BRAKE INDICATOR MALFUNCTIONS.....WP 0052 00

**MALFUNCTION/SYMPTOM INDEX WP—Continued**

**0006 00**

COOLANT TEMPERATURE INDICATOR MALFUNCTIONS.....WP 0053 00  
 STEERING LOCKED INDICATOR MALFUNCTIONS.....WP 0054 00  
 ENGINE OIL LOW PRESSURE INDICATOR MALFUNCTIONS.....WP 0055 00  
 TRANSMISSION OIL LOW PRESSURE INDICATOR MALFUNCTIONS.....WP 0056 00  
 TRANSMISSION OIL HIGH TEMP INDICATOR MALFUNCTIONS.....WP 0057 00  
 ENGINE COOLANT LOW LEVEL INDICATOR MALFUNCTIONS.....WP 0058 00  
 TRANSMISSION FILTER CLOGGED INDICATOR MALFUNCTIONS.....WP 0059 00

**TRANSMISSION SYSTEM**

CARRIER MOVES WITH TRANSMISSION IN SL.....WP 0061 00  
 ■ CARRIER DOES NOT ATTAIN HIGH SPEED.....WP 0061 01  
 CARRIER DOES NOT MOVE IN ANY SHIFT LEVER POSITION.....WP 0062 00  
 CARRIER DRIFTS OR DOES NOT STEER.....WP 0063 00  
 SERVICE AND/OR PARKING BRAKE WON'T HOLD CARRIER.....WP 0064 00  
 TRANSMISSION WON'T UPSHIFT OR SHIFTS ERRATICALLY IN 1-4  
 POSITION.....WP 0065 00  
 TRANSMISSION DOES NOT DOWNSHIFT IN 1-4 POSITION.....WP 0066 00  
 TRANSMISSION DOES NOT HOLD 1ST POSITION.....WP 0067 00  
 TRANSMISSION DOES NOT HOLD 2ND POSITION.....WP 0068 00  
 TRANSMISSION DOES NOT HOLD 3RD POSITION.....WP 0069 00  
 TRANSMISSION DOES NOT REVERSE.....WP 0070 00  
 TRANSMISSION DOES NOT PIVOT STEER.....WP 0071 00  
 TRANSMISSION HIGH TEMP INDICATOR COMES ON.....WP 0072 00  
 TRANSMISSION LOW LUBE INDICATOR COMES ON.....WP 0073 00

**STEERING SYSTEM**

SOLENOID-ACTIVATED STEERING LOCK MALFUNCTIONS.....WP 0076 00  
 CABLE-ACTIVATED STEERING LOCK MALFUNCTIONS.....WP 0077 00

**BILGE PUMPS SYSTEM**

FRONT AND/OR REAR BILGE PUMP(S) AND/OR LIGHTS DON'T  
 WORK.....WP 0080 00

**RAMP HYDRAULIC SYSTEM**

RAMP WILL NOT LOWER.....WP 0082 00  
 RAMP OPERATION IS SLOW OR SLUGGISH.....WP 0083 00  
 RAMP WILL NOT RAISE OR FREE FALLS.....WP 0084 00

**PERSONNEL HEATER SYSTEM**

PERSONNEL HEATER MALFUNCTIONS.....WP 0086 00

**COOLANT HEATER SYSTEM**

COOLANT HEATER MALFUNCTIONS.....WP 0089 00

**ELECTRICAL EQUIPMENT (M1068A3 ONLY)**

POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT  
 INOPERATIVE (M1068A3 ONLY).....WP 0090 00

**MALFUNCTION/SYMPTOM INDEX WP—Continued**

**0006 00**

NO AC POWER FROM TENT INTERFACE PANEL A5 (M1068A3 ONLY) .....WP 0091 00  
 NO DC POWER FROM TENT INTERFACE PANEL A5 (M1068A3 ONLY) .....WP 0092 00  
 NO POWER FROM ROADSIDE AC POWER EXTENSION BOX A6  
 (M1068A3 ONLY).....WP 0093 00  
 NO POWER FROM CURBSIDE AC POWER EXTENSION BOX A7  
 (M1068A3 ONLY).....WP 0094 00  
 NO POWER FROM DC POWER EXTENSION BOX A9 (ALL EXCEPT  
 JACK J23) (M1068A3 ONLY).....WP 0095 00  
 NO POWER FROM DC POWER EXTENSION BOX A9, JACK J23 (JTIDS)  
 (M1068A3 ONLY).....WP 0096 00  
 NO DC POWER TO SINGLE POINT LAN GROUND BOX A15 (M1068A3  
 ONLY).....WP 0097 00  
 NO POWER FROM UPS POWER EXTENSION BOX A18 (M1068A3  
 ONLY).....WP 0098 00  
 NO POWER FROM CURBSIDE UPS POWER EXTENSION BOX A19  
 (M1068A3 ONLY).....WP 0099 00  
 NO AC/DC INPUT TO ATCCS UPS POWER BOX (M1068A3 ONLY).....WP 0100 00  
 IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE  
 INCORRECTLY (M1068A3 ONLY).....WP 0101 00  
 FLUORESCENT LIGHTS DO NOT OPERATE (M1068A3 ONLY).....WP 0102 00  
 VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER  
 APPLIED (M1068A3 ONLY).....WP 0103 00  
 VEHICLE WILL NOT ACCEPT EXTERNAL AC POWER (M1068A3  
 ONLY).....WP 0104 00  
 VEHICLE WILL NOT ACCEPT INVERTER AC POWER (M1068A3  
 ONLY).....WP 0105 00  
 NO POWER TO DC CIRCUITS (M1068A3 ONLY).....WP 0106 00  
 NO POWER TO AC CIRCUITS (M1068A3 ONLY).....WP 0107 00  
 NO DC OUTPUT FROM DC POWER SUPPLY (M1068A3 ONLY).....WP 0108 00  
 NO AC POWER FROM INVERTERS (M1068A3 ONLY).....WP 0109 00

**COMMUNICATION EQUIPMENT**

NO DATA OUTPUT FROM DATA PANEL A12 (M1068A3 ONLY).....WP 0110 00  
 NO LAN OUTPUT FROM DATA PANEL A12 (M1068A3 ONLY).....WP 0111 00  
 NO DATA OUTPUT FROM DATA PANEL A13 (M1068A3 ONLY).....WP 0112 00  
 NO LAN OUTPUT FROM DATA PANEL A13 (M1068A3 ONLY).....WP 0113 00  
 PHONE EXTENSION BOX A14 POST(S) INOPERATIVE (M1068A3  
 ONLY).....WP 0114 00

**GAUGES**

SPEEDOMETER MALFUNCTIONS.....WP 0115 00  
 TACHOMETER MALFUNCTIONS.....WP 0116 00

**DRIVER'S VISION ENHANCER**

DRIVER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK  
 (M58 ONLY).....WP 0116 01  
 COMMANDER'S VISION ENHANCER DISPLAY DOES NOT  
 WORK (M58 ONLY).....WP 0116 02

**STE/ICE TESTS**

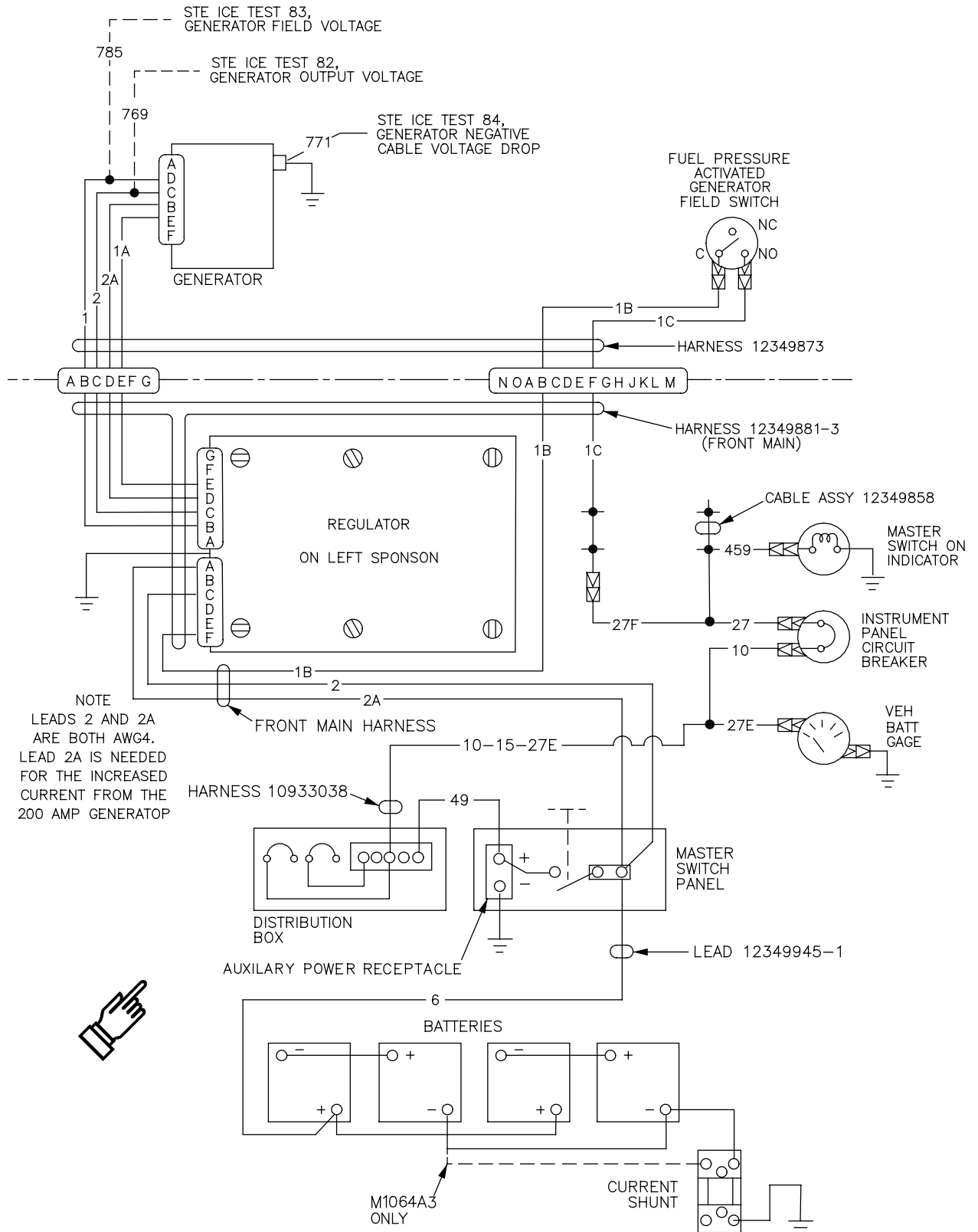
HOOK UP/REMOVE STE/ICE TEST SET TO DCA 6.....WP 0117 00  
 STE/ICE TEST 10 ENGINE RPM.....WP 0118 00  
 STE/ICE TEST 24 FUEL SUPPLY PRESSURE.....WP 0119 00  
 STE/ICE TEST 25 FUEL RETURN PRESSURE.....WP 0120 00  
 STE/ICE TEST 26 FUEL FILTER PRESSURE DROP.....WP 0121 00  
 STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE.....WP 0122 00  
 STE/ICE TEST 32 AIR BOX PRESSURE.....WP 0123 00  
 STE/ICE TEST 67 BATTERY VOLTAGE.....WP 0124 00  
 STE/ICE TEST 68 STARTER MOTOR VOLTAGE.....WP 0125 00  
 STE/ICE TEST 69 STARTER NEGATIVE CABLE VOLTAGE DROP.....WP 0126 00  
 STE/ICE TEST 70 STARTER SOLENOID VOLTAGE.....WP 0127 00  
 STE/ICE TEST 71 STARTER CURRENT (AVERAGE).....WP 0128 00  
 STE/ICE TEST 72 STARTER CURRENT (FIRST PEAK).....WP 0129 00  
 STE/ICE TEST 73 BATTERY RESISTANCE AND STE/ICE TEST 75  
   BATTERY RESISTANCE CHANGE (PACK).....WP 0130 00  
 STE/ICE TEST 74 STARTER CIRCUIT RESISTANCE.....WP 0131 00  
 STE/ICE TEST 80 BATTERY CURRENT.....WP 0132 00  
 STE/ICE TEST 82 GENERATOR OUTPUT VOLTAGE.....WP 0133 00  
 STE/ICE TEST 83 GENERATOR FIELD VOLTAGE.....WP 0134 00  
 STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP.....WP 0135 00

**STE/ICE DIAGNOSTIC TROUBLESHOOTING**

STE/ICE BLANK DISPLAY DIAGNOSTIC TROUBLESHOOTING.....WP 0138 00  
 STE/ICE CONFIDENCE TEST DIAGNOSTIC TROUBLESHOOTING.....WP 0139 00  
 STE/ICE TEST 10, 12, AND 13 DIAGNOSTIC TROUBLESHOOTING.....WP 0140 00  
 DCA BATTERY VOLTAGE DIAGNOSTIC TROUBLESHOOTING.....WP 0141 00  
 DCA CURRENT SHUNT DIAGNOSTIC TROUBLESHOOTING.....WP 0142 00  
 STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0143 00  
 STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0144 00  
 STE/ICE TEST 26 FUEL FILTER PRESSURE DROP DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0145 00  
 STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE  
   DIAGNOSTIC TROUBLESHOOTING.....WP 0146 00  
 STE/ICE TEST 32 AIR BOX PRESSURE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0147 00  
 STE/ICE TEST 68 STARTER MOTOR VOLTAGE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0148 00  
 STE/ICE TEST 69 STARTER NEGATIVE CABLE VOLTAGE DROP  
   DIAGNOSTIC TROUBLESHOOTING.....WP 0149 00  
 STE/ICE TEST 70 STARTER SOLENOID VOLTAGE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0150 00  
 STE/ICE TEST 82 GENERATOR OUTPUT VOLTAGE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0151 00  
 STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC  
   TROUBLESHOOTING.....WP 0152 00  
 STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP  
   DIAGNOSTIC TROUBLESHOOTING.....WP 0153 00

ENGINE CHARGING SYSTEM SCHEMATIC

0007 00

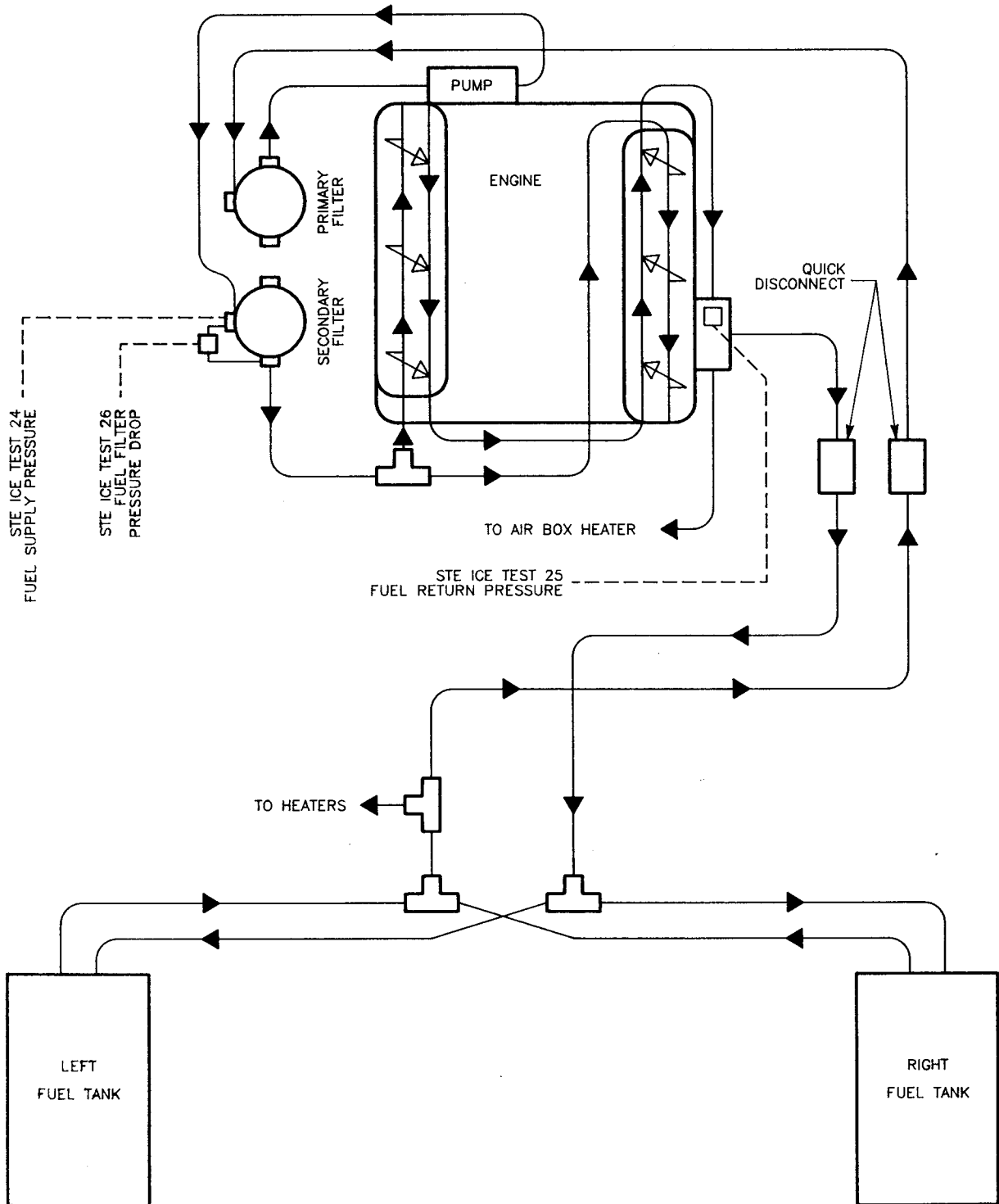






ENGINE FUEL SYSTEM SCHEMATIC (ALL EXCEPT M577A3 AND M1068A3)

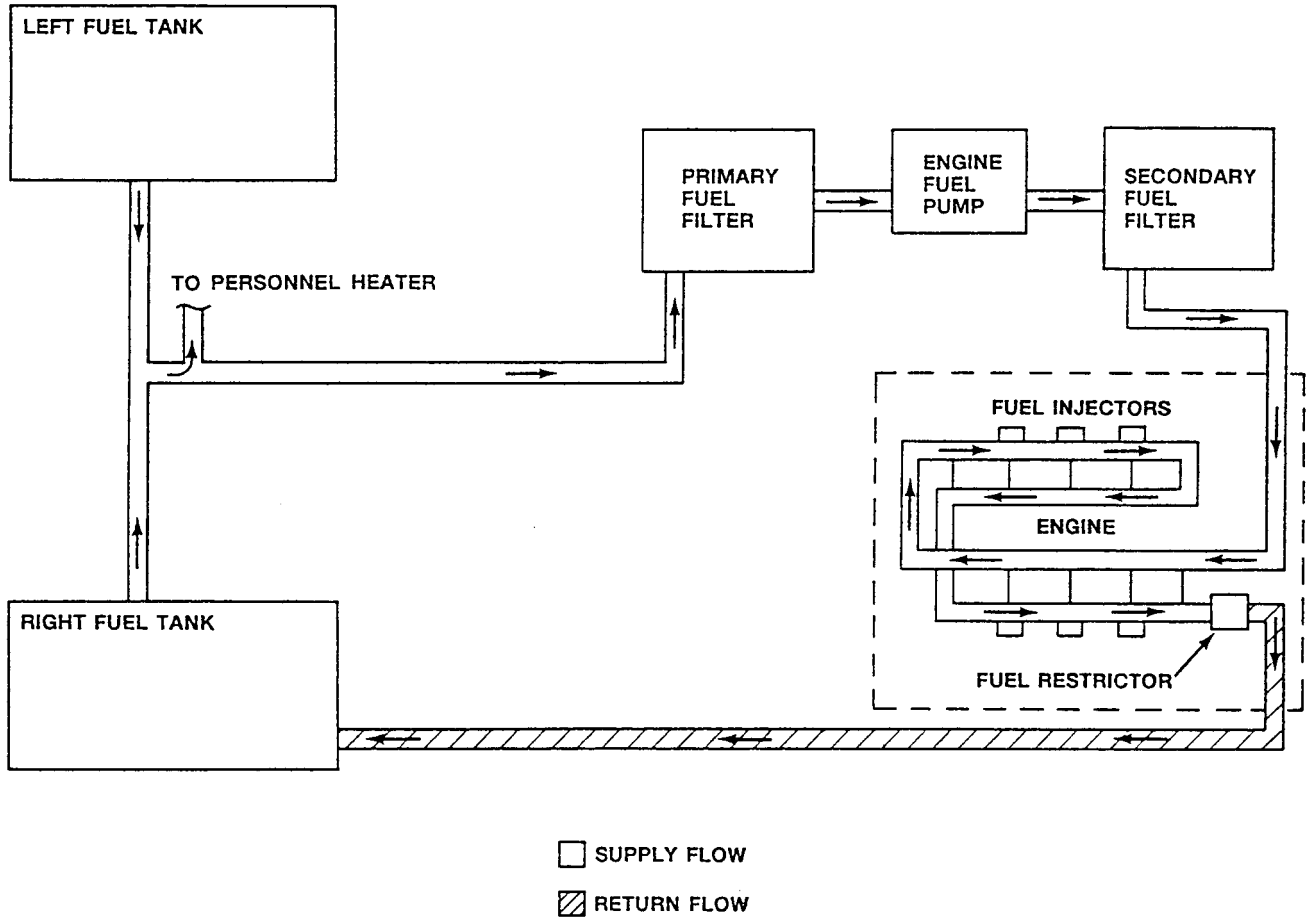
0009 00





ENGINE FUEL SYSTEM SCHEMATIC (M577A3 AND M1068A3 ONLY)

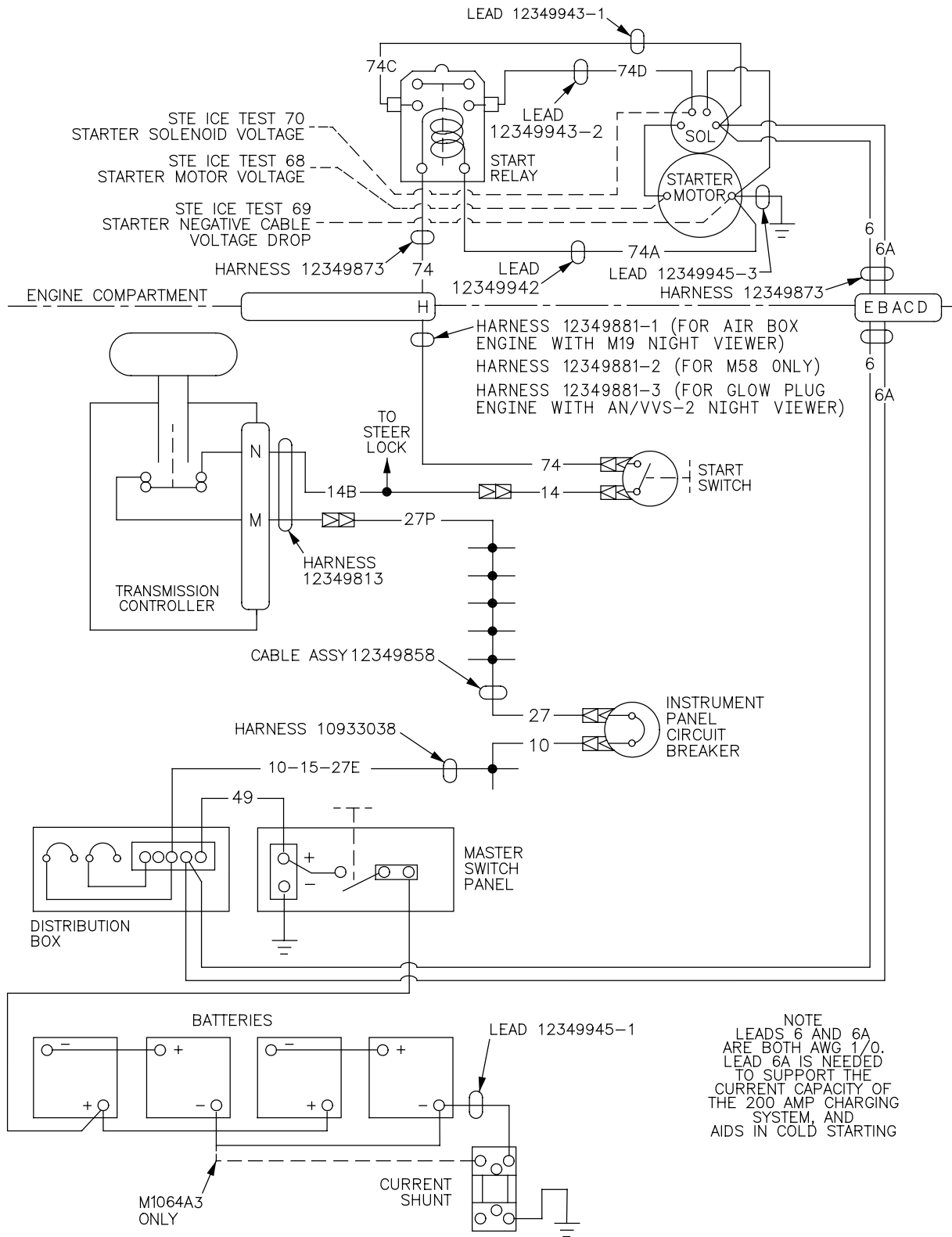
0010 00





ENGINE STARTER CIRCUIT SCHEMATIC

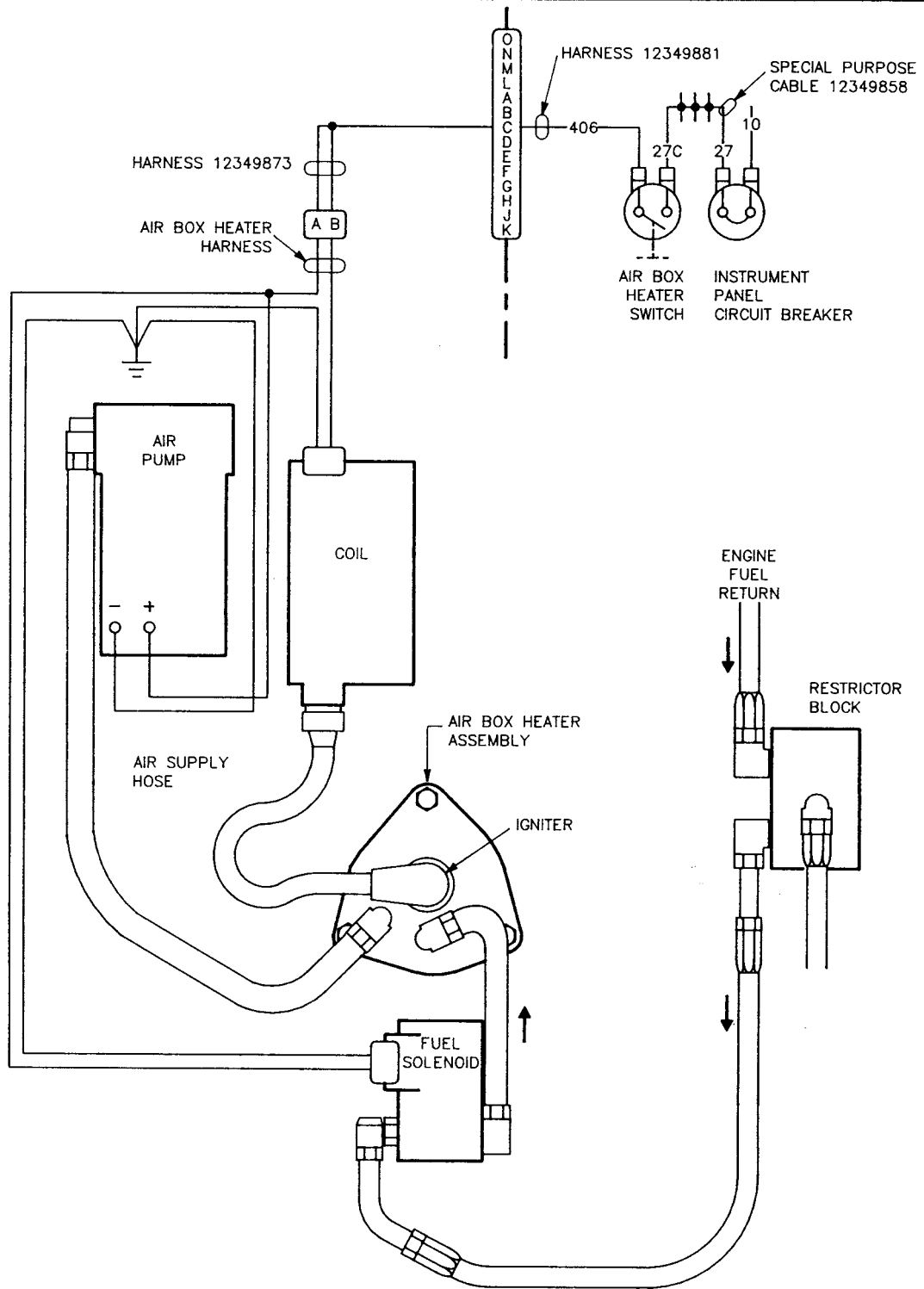
0011 00





ENGINE AIR BOX HEATER SCHEMATIC

0013 00







**ENGINE OVERHEATS (OLD VSFD CONFIGURATION)**

**0014 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

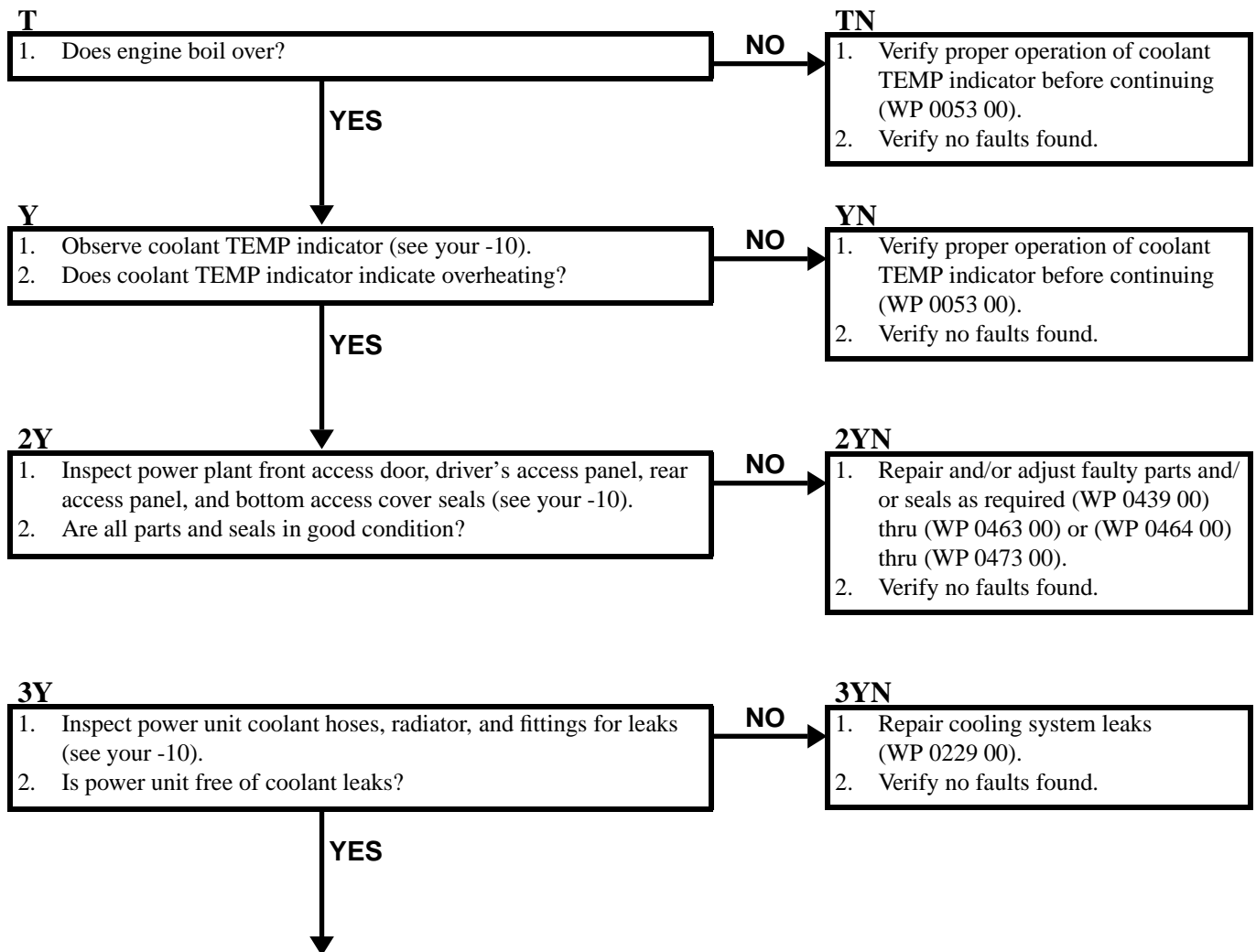
- General mechanic's tool kit: automotive (WP 0926 00, Item 65)
- Pipe bushing, 1/4 ext to 1/8 int (WP 0926 00, Item 11)
- Pipe plug, 1/8 inch (WP 0926 00, Item 33)
- Radiator test kit (WP 0926 00, Item 60)

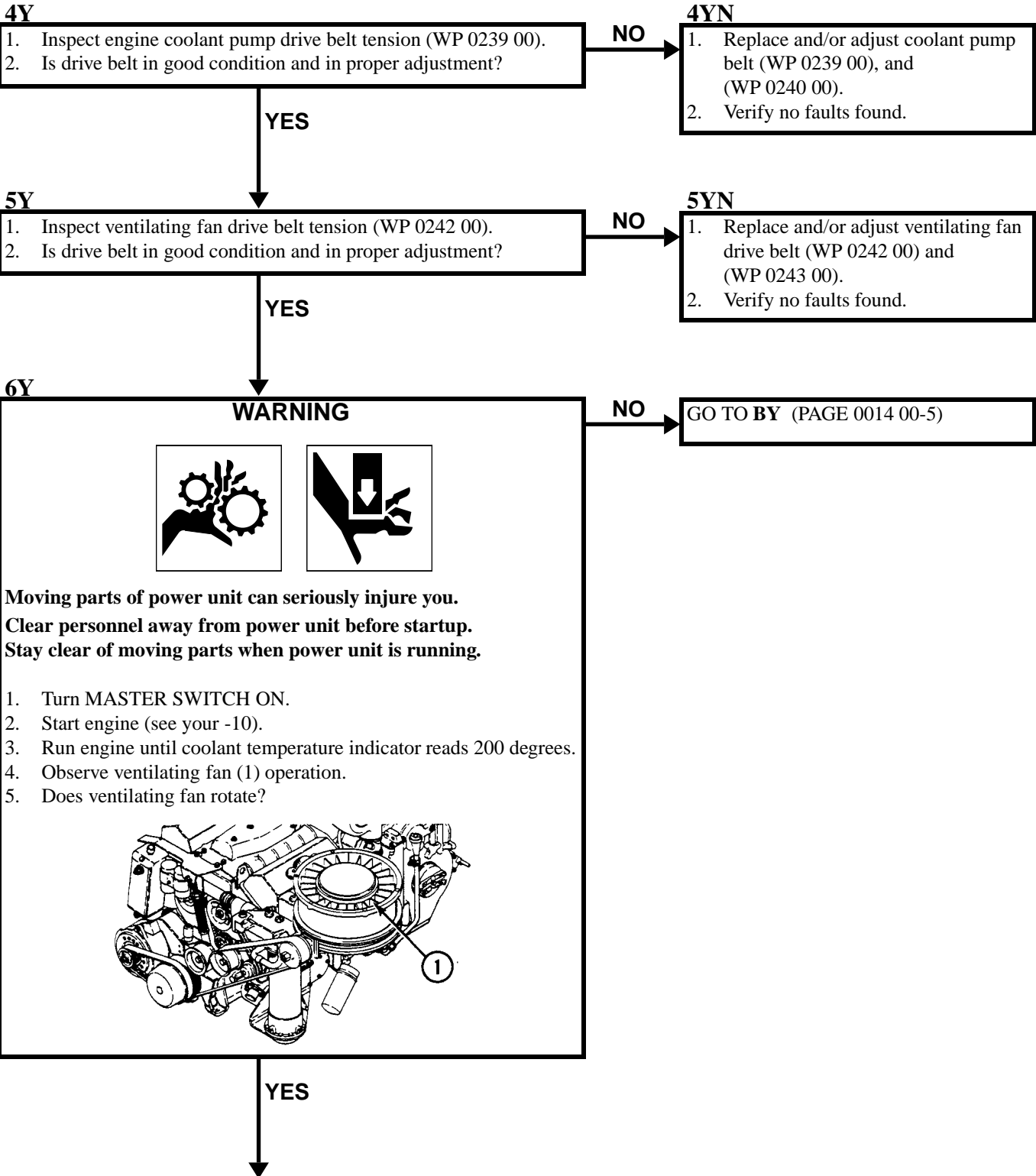
Equipment Condition

- Engine stopped (see your -10)
- Vehicle blocked (see your -10)
- Power plant access door open (see your -10)
- Trim vane lowered (see your -10)
- Driver's power plant access panels removed (WP 0441 00)
- Power plant rear access panels removed (WP 0439 00)

Personnel Required

- Unit Mech
- Helper (H)





**7Y**

1. Engage thermostatic fan speed switch (see your -10).
2. Observe ventilating fan speed.
3. Does speed stay the same?

NO

**7YN**

1. Replace thermostatic fan switch (WP 0231 00).
2. Verify no faults found.

YES

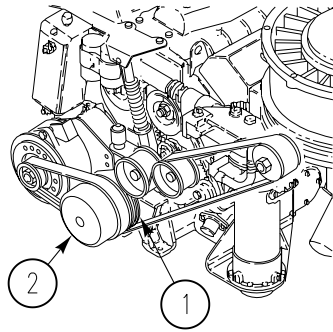
**8Y**

1. Observe rotation of ventilating fan (1) and generator drive pulleys (2) on drive unit.
2. Is fan pulley rotating as fast as the generator pulley?

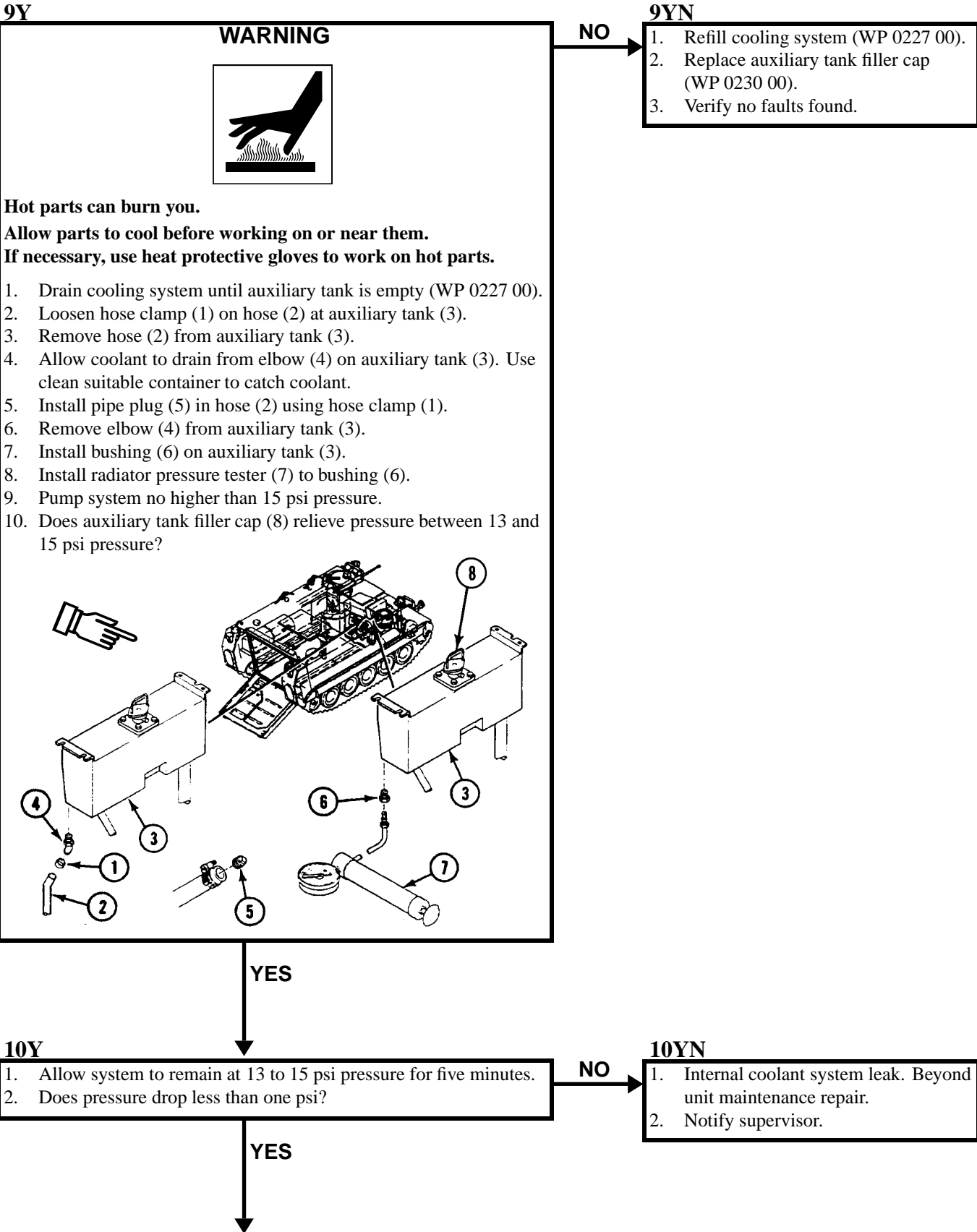
NO

**8YN**

1. Disengage thermostatic fan speed switch.
2. Replace variable speed fan drive (WP 0249 00).
3. Verify no faults found.



YES



**11Y**

1. Replace coolant pump (WP 0241 00).
2. Verify no faults found.

**BY**

1. Engage thermostatic fan speed switch (see your -10).
2. Does fan still fail to rotate?

NO

**BYN**

1. Replace thermostatic fan speed switch (WP 0231 00).
2. Verify no faults found.

YES

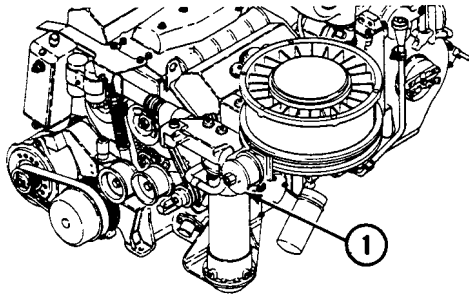
**B2Y**

1. Stop engine (see your -10).
2. Remove ventilating fan drive belt (WP 0243 00).
3. Manually rotate ventilating fan drive shaft pulley (1).
4. Does fan spin freely?

NO

**B2YN**

1. Faulty fan drive gearbox. Beyond unit maintenance repair.
2. Notify supervisor.



YES

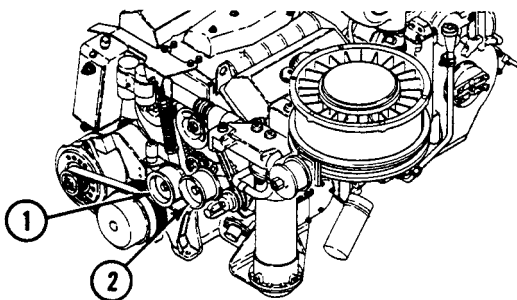
**B3Y**

1. Manually rotate adjustable (1) and nonadjustable (2) ventilating fan drive idler pulleys.
2. Do pulleys spin freely?

NO

**B3YN**

1. Replace adjustable and/or nonadjustable idler pulleys (WP 0240 00).
2. Verify no faults found.



YES

---

■ ENGINE OVERHEATS (OLD VSFD CONFIGURATION)—Continued

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0014 00

**B4Y**

1. Replace variable speed fan drive unit (WP 0249 00).
2. Verify no faults found.

**ENGINE OVERHEATS (NEW VSFD CONFIGURATION)**

0014 01

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit: Automotive (WP 0926 00, Item 65)

Pipe bushing, 1/4 ext to 1/8 int (WP 0926 00, Item 11)

Pipe plug, 1/8 inch (WP 0926 00, Item 33)

Radiator test kit (WP 0926 00, Item 60)

Personnel Required

Unit Mechanic

Helper (H)

References

See your -10

Equipment Conditions

Engine stopped (see your -10)

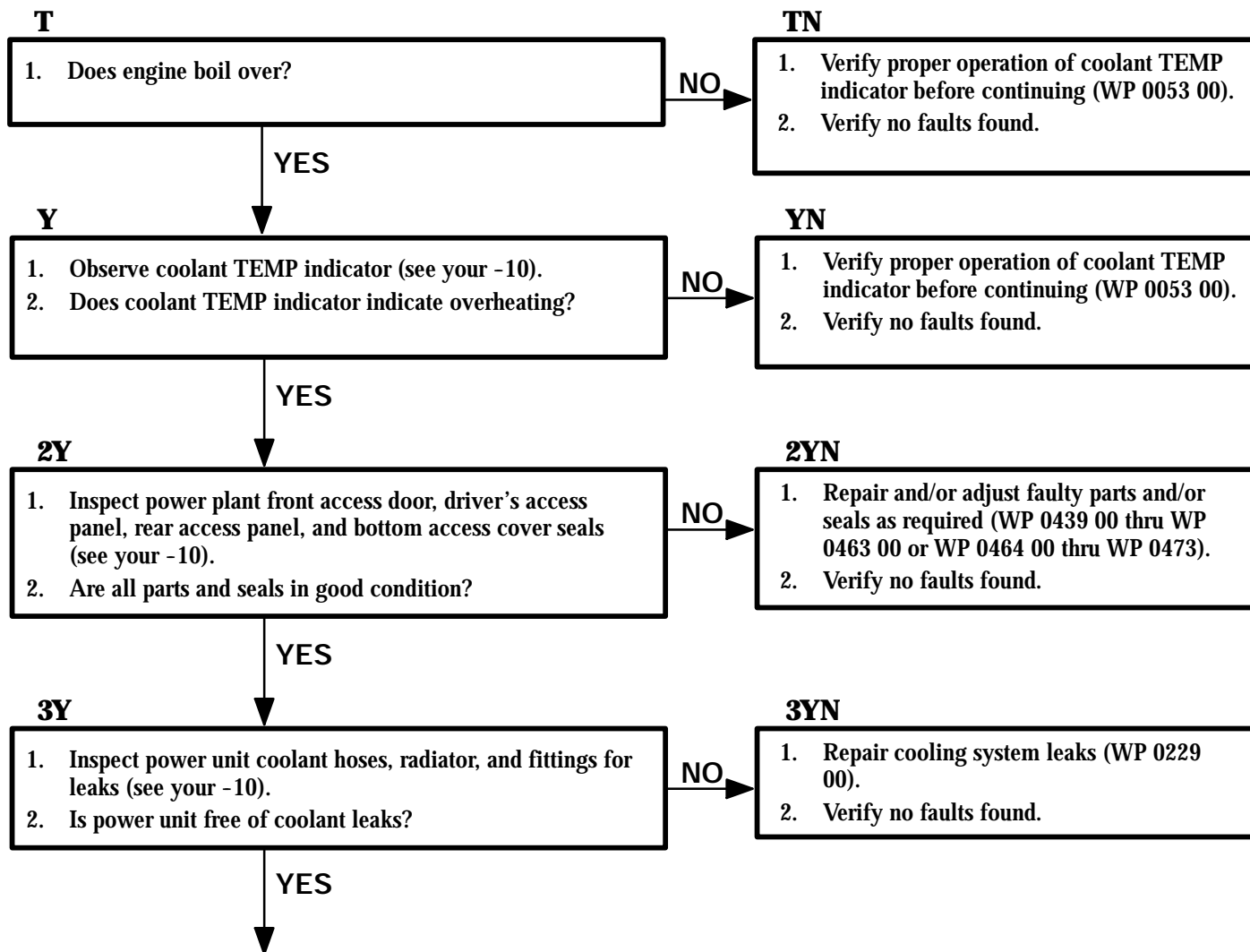
Vehicle blocked (see your -10)

Power plant access door open (see your -10)

Trim vane lowered (see your -10)

Driver's power plant access panels removed (WP 0441 00)

Power plant rear access panels removed (WP 0439 00)



**4Y**

1. Inspect engine coolant pump drive belt tension (WP 0239 00).
2. Is drive belt in good condition and in proper adjustment?

NO

**4YN**

1. Replace and/or adjust coolant pump belt (WP 0239 00 and WP 0240 00).
2. Verify no faults found.

YES

**5Y**

1. Inspect ventilating fan drive belt tension (WP 0242 00).
2. Is drive belt in good condition and in proper adjustment?

NO

**5YN**

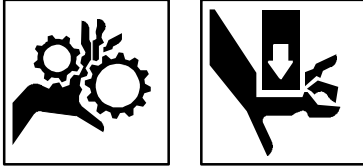
1. Replace and/or adjust ventilating fan drive belt (WP 0242 00 and WP 0243 00).
2. Verify no faults found.

YES



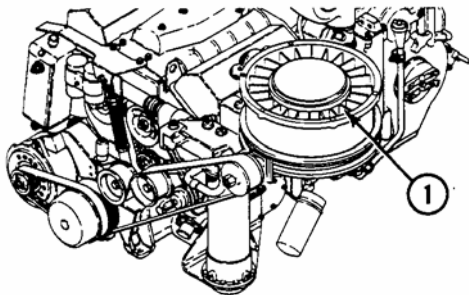
**6Y**

**WARNING**



**Moving parts of power unit can seriously injure you. Clear personnel away from power unit before startup. Stay clear of moving parts when power unit is running.**

1. Turn MASTER SWITCH ON.
2. Start engine (see your -10).
3. Run engine until coolant temperature indicator reads 200 degrees.
4. Observe ventilating fan (1) operation.
5. Does ventilating fan rotate?



NO →

**6YN**

1. Go to BY (WP 0014 01-7).

YES ↓

**7Y**

1. Engage variable speed fan drive manual override switch (see your -10).
2. Observe ventilating fan speed while helper (H) raises the engine rpm to a high idle (1500 rpm) and allows the engine to return back to idle.
3. Does speed stay the same?

NO

**7YN**

1. Replace variable speed fan drive manual override switch (WP 0231 01).
2. Verify no faults found.

YES

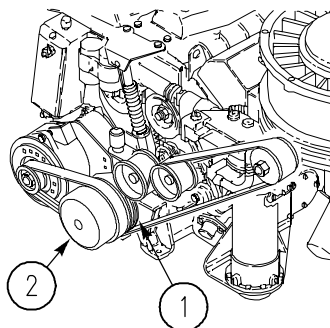
**8Y**

1. Observe rotation of ventilating fan (1) and generator drive pulleys (2) on drive unit.
2. Is fan pulley rotating as fast as the generator pulley?

NO

**8YN**

1. Disengage variable speed fan drive manual override switch.
2. Replace variable speed fan drive (WP 0249 01).
3. Verify no faults found.



YES

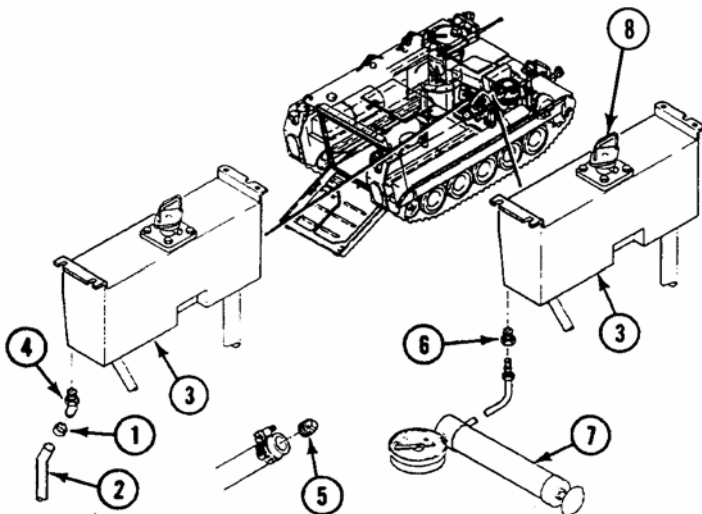
**9Y**

**WARNING**



**Hot parts can burn you. Allow parts to cool before working on or near them. If necessary, use heat protective gloves to work on hot parts.**

1. Drain cooling system until auxiliary tank is empty (WP 0227 00).
2. Loosen hose clamp (1) on hose (2) at auxiliary tank (3).
3. Remove hose (2) from auxiliary tank (3).
4. Allow coolant to drain from elbow (4) on auxiliary tank (3). Use clean suitable container to catch coolant.
5. Install pipe plug (5) in hose (2) using hose clamp (1).
6. Remove elbow (4) from auxiliary tank (3).
7. Install bushing (6) on auxiliary tank (3).
8. Install radiator pressure tester (7) to bushing (6).
9. Pump system no higher than 15 psi pressure.
10. Does auxiliary tank filler cap (8) relieve pressure between 13 and 15 psi pressure?



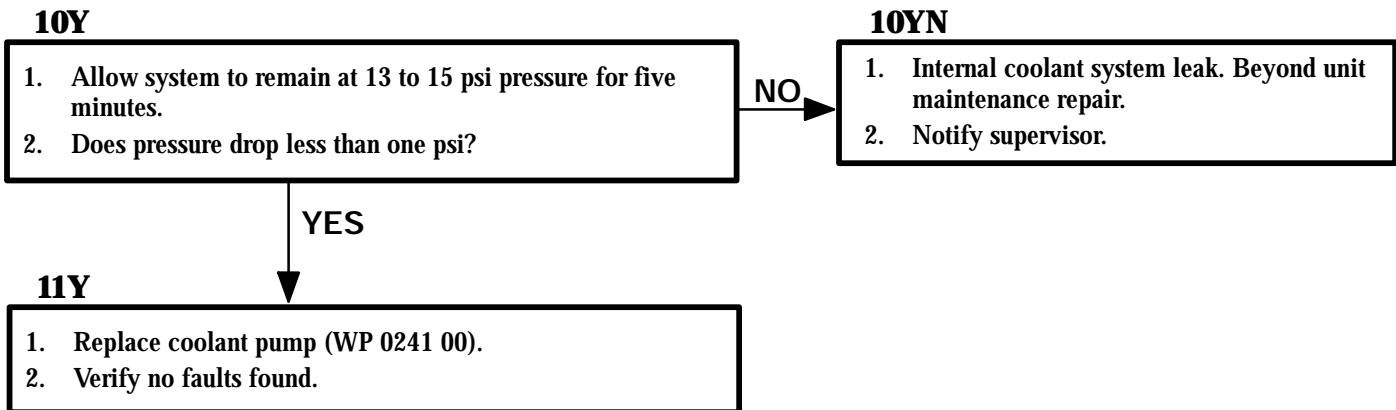
**NO** →

**9YN**

1. Refill cooling system (WP 0227 00).
2. Replace auxiliary tank filler cap (WP 0230 00).
3. Verify no faults found.

**YES**

↓



**BY**

1. Engage variable speed fan drive override switch (see your -10).
2. Does fan still fail to rotate?

NO

**BYN**

1. Replace VSFD controller (WP025001).
2. Verify no faults found.

YES

**B2Y**

1. Stop engine (see your -10).
2. Install jumper wire on wiring harness (P/N 12474786) terminals E3 and E4.
3. Start engine (see your -10).
4. Does fan rotate?

NO

**B2YN**

1. Go to CY (WP 0014 01-9).

YES

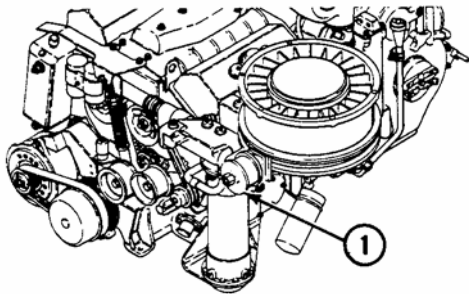
**B3Y**

1. Stop engine (see your -10).
2. Remove ventilating fan drive belt (WP 0243 00).
3. Manually rotate ventilating fan drive shaft pulley (1).
4. Does fan spin freely?

NO

**B3YN**

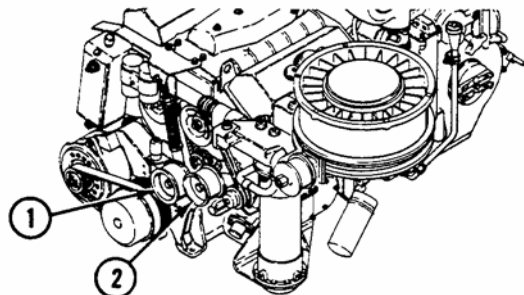
1. Faulty fan drive gearbox. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**B4Y**

1. Manually rotate adjustable (1) and nonadjustable (2) ventilating fan drive idler pulleys.
2. Do pulleys spin freely?



NO →

**B4YN**

1. Replace adjustable and/or nonadjustable idler pulleys (WP 0240 00).
2. Verify no faults found.

↓ YES

**B5Y**

1. Replace variable speed fan drive unit (WP 0249 01).
2. Verify no faults found.

**CY**

1. Stop your engine (see your -10).
2. Disconnect battery ground strap (WP 0337 00 or WP 0338 00).
3. See wiring diagram (WP 0014 01-10).
4. Check continuity of the following connections:
  - P1(A) to Battery ground 7
  - P1(B) to P4(A) and E3
  - P1(C) to P4(B)
  - P1(E) to Battery 6 and E4, P3, P2(S)
  - P2(D) to P5(A)
  - P2(E) to P5(B)
  - P2(G) to P6(A)
  - P2(H) to P6(B)
  - P2(R) to P3
5. Do all checks read zero?

NO →

**CYN**

1. Replace variable speed fan drive harness. (WP 0359 01).
2. Verify no faults found.

YES ↓

**C2Y**

1. Stop engine (see your -10).
2. Install jumper wire on wiring harness (P/N 12474786) engine running switch plug (P3) between sockets (2) and (3).
3. Start engine (see your -10).
4. Engage variable speed fan drive manual override switch (see your -10).
5. Does fan rotate?

NO →

**C2YN**

1. Replace variable speed fan drive (WP 0249 01).
2. Verify no faults found.

YES ↓

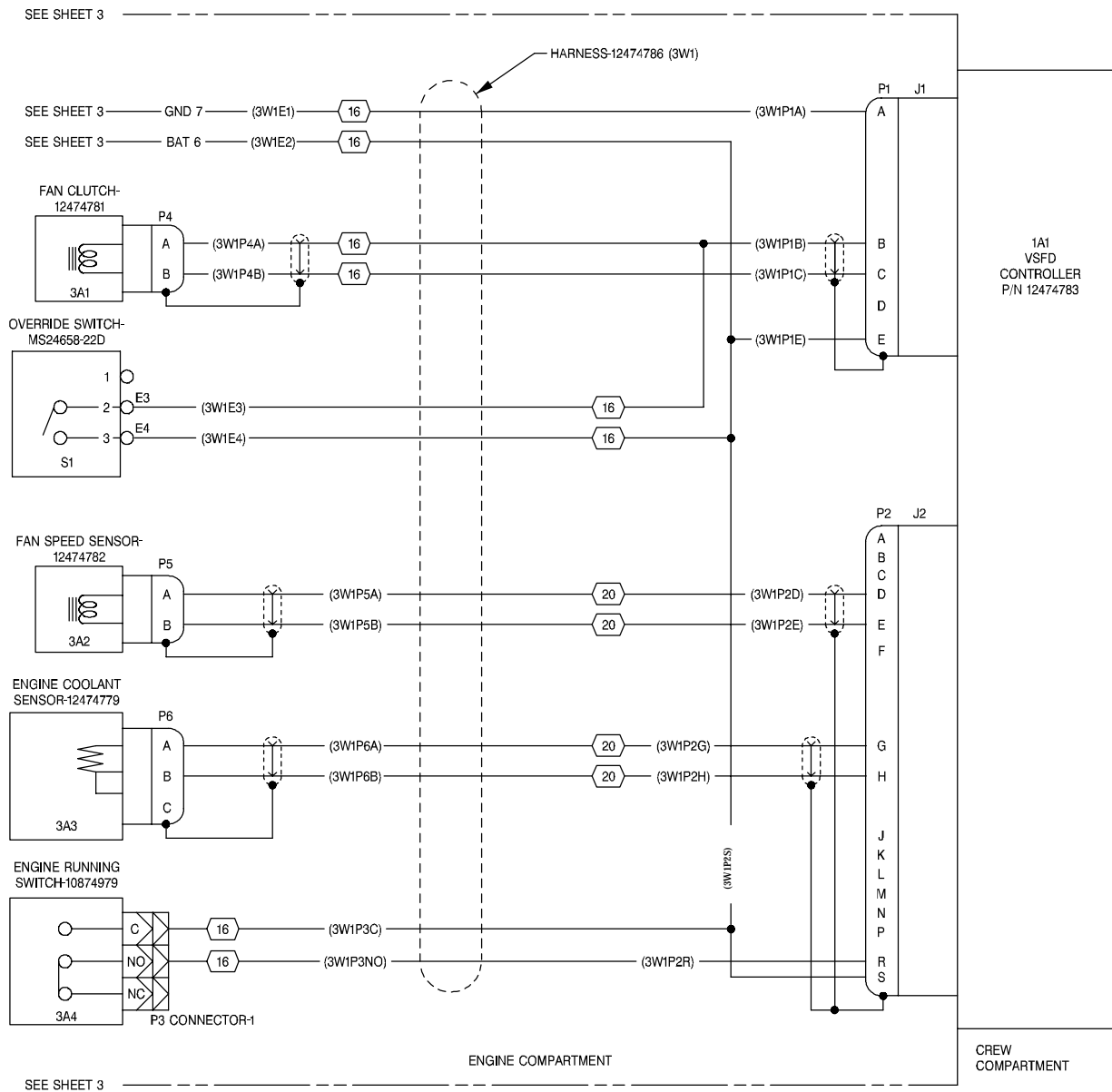
**C3Y**

1. Replace engine running switch (WP 0321 01).
2. Verify no faults found.

ENGINE OVERHEATS (NEW VSFD CONFIGURATION) - Continued

0014 01

WIRING DIAGRAM, 12408413



THIS SHEET ONLY-USE FOR MAGNETICALLY CONTROLLED VARIABLE SPEED FAN DRIVE



**ENGINE OVERCOOLS**

**0015 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

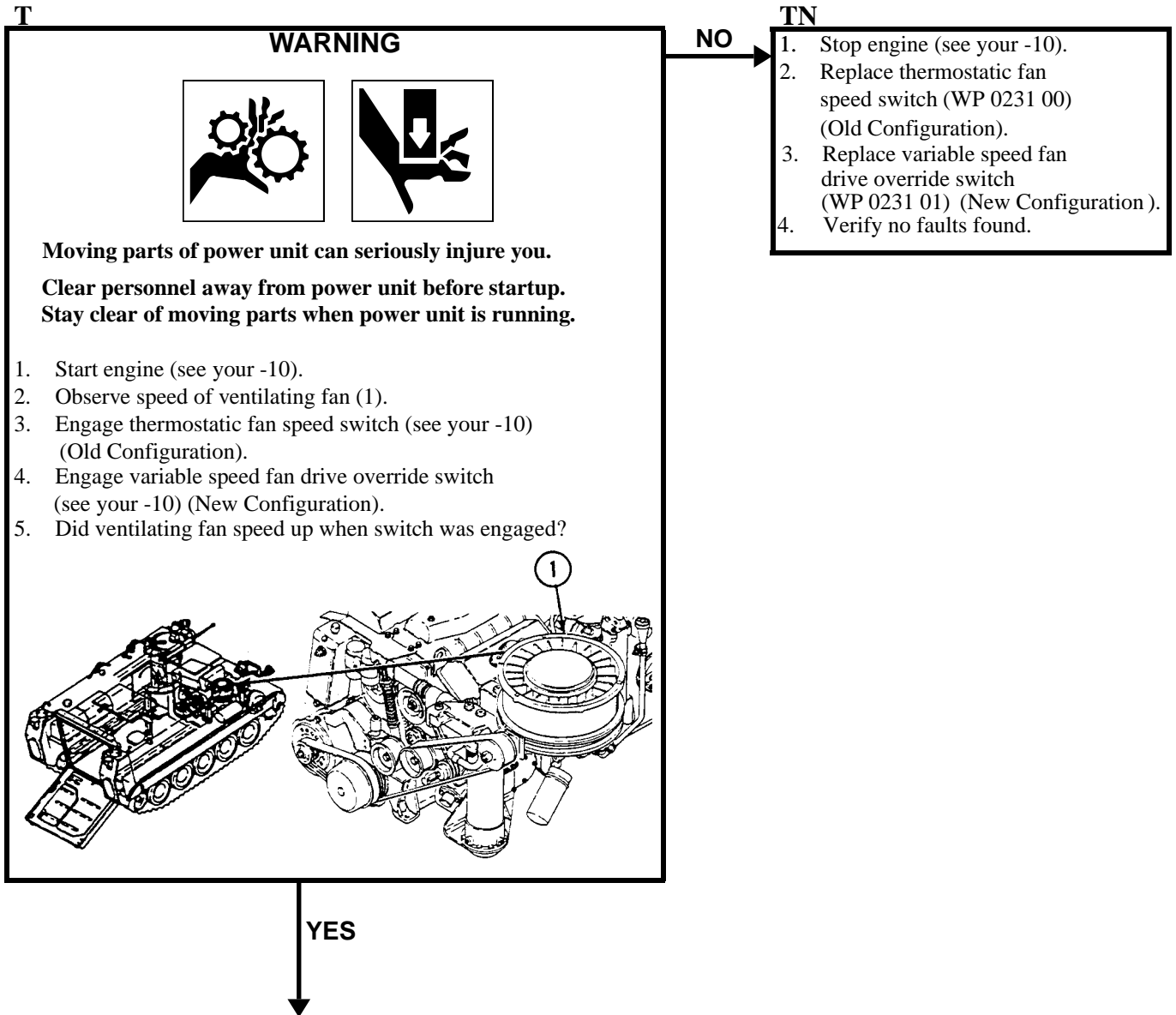
Unit Mechanic  
Helper (H)

References

See your -10

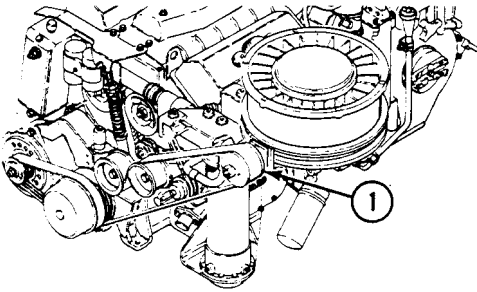
Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access panels open (see your -10)  
Power plant access rear panels removed (WP 0439 00)  
Driver's power plant access panel removed (WP 0441 00)  
Coolant TEMP indicator operation checked (WP 0053 00)



**Y**

1. Stop engine (see your -10).
2. Disengage thermostatic fan speed switch (see your -10) (Old Configuration).
3. Disengage variable speed fan drive override switch (see your -10) (New Configuration).
3. Manually rotate fan drive belt (1).
4. Do fan drive belt and all related pulleys rotate freely?



**NO**

**YN**

1. Replace variable speed fan drive unit (Old Configuration) (WP 0249 00), (New Configuration) (WP 0249 01).
2. Verify no faults found.

**YES**

**2Y**

1. Replace engine thermostat (WP 0237 00).
2. Verify no faults found.

**ENGINE DOES NOT CRANK**

**0016 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-751-12&P

Tools and Special Tools

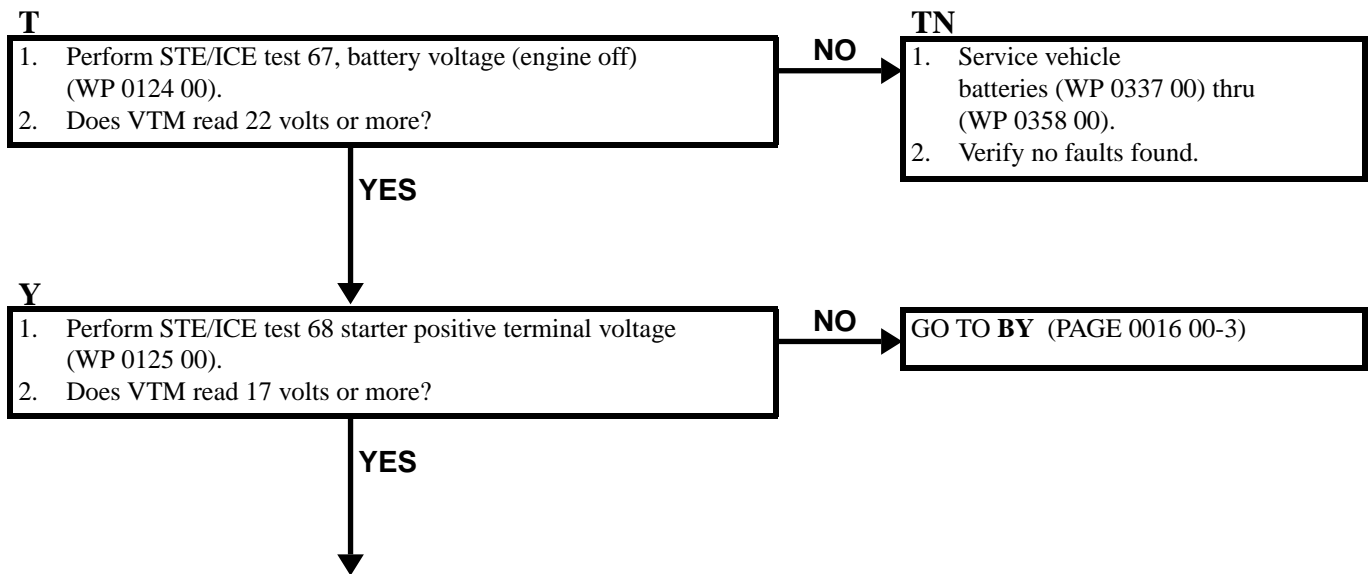
General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
STE/ICE test set (WP 0926 00, Item 61)  
Electrical tool kit (WP 0926 00, Item 64)  
Socket wrench set (WP 0926 00, Item 73)

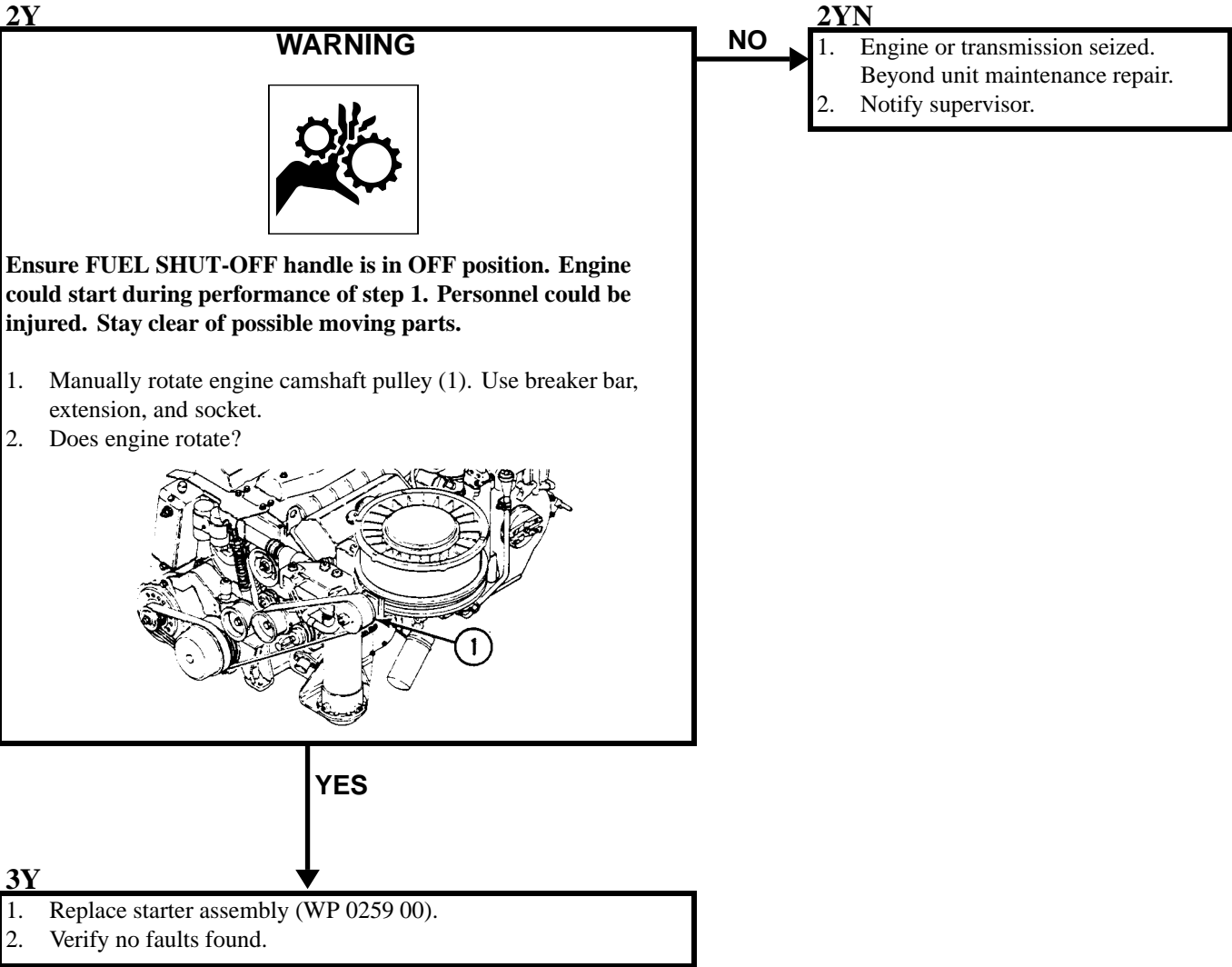
Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access panel open (see your -10)  
STE/ICE VTM hooked up to DCA 6 (WP 0117 00)  
Driver's power plant access panel removed  
(WP 0441 00)

Personnel Required

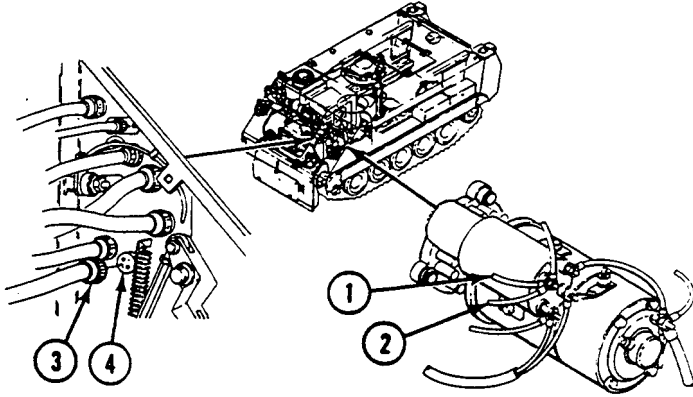
Unit Mech 63T10  
Helper (H)





**BY**

1. Inspect harness 12349873 circuit 6 (1) and 6A (2) terminal ends on starter for corrosion and/or damage.
2. Remove harness 12349873 circuit 6/6A plug (3) from harness 12349881 jack (4) at vehicle bulkhead.
3. Inspect condition of plug and jack pins.
4. Are all parts free from corrosion and damage?



NO

**BYN**

1. Clean and repair parts as required (WP 0382 00).
2. Verify no faults found.

YES

**B2Y**

1. Install harness 12349873 circuit 6/6A plug to harness 12349881 jack at vehicle bulkhead.
2. Perform STE/ICE test 70 starter solenoid voltage (WP 0127 00).
3. Does VTM read less than 17 volts?

NO

**B2YN**

1. Replace starter assembly (WP 0259 00).
2. Verify no faults found.

YES

**B3Y**

1. Turn MASTER SWITCH to ON.
2. Is STEERING LOCKED indicator ON?

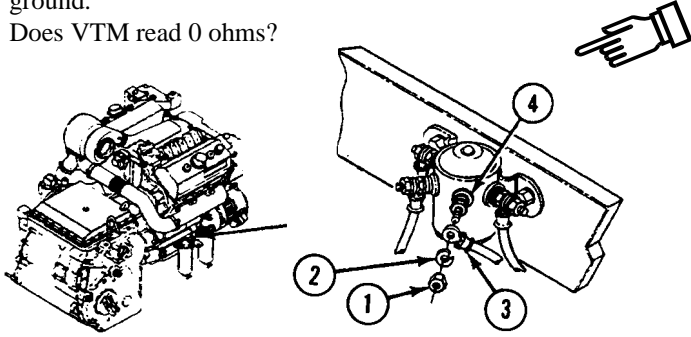
NO

GO TO CY (PAGE 0016 00-6)

YES

**B4Y**

1. Set up STE/ICE test 91 TM 9-4910-751-12&P.
2. Remove nut (1), lockwasher (2), and lead 12349942 circuit 74A (3) from starter relay (4).
3. Measure resistance between lead 12349942 circuit 74A (3) and ground.
4. Does VTM read 0 ohms?



NO

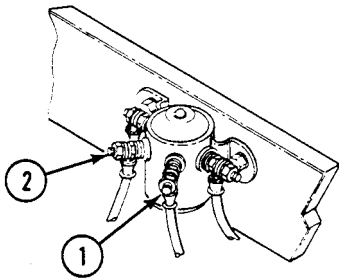
**B4YN**

1. Replace lead 12349942 circuit (WP 0258 00).
2. Verify no faults found.

YES

**B5Y**

1. Set up STE/ICE test 89 TM 9-4910-751-12&P.
2. Install lead 12349942 circuit 74A on starter relay.
3. Measure voltage between circuit 74 (1) and circuit 74A (2) posts on starter relay with START button pressed.
4. Does VTM read less than 22 volts?



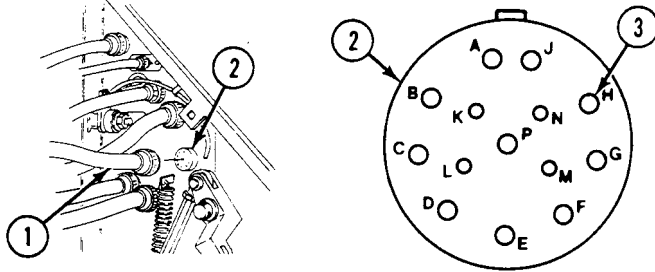
NO

GO TO **DY** (PAGE 0016 00-7)

YES

**B6Y**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at vehicle bulkhead.
2. Measure voltage between harness 12349881 jack (2) socket H (3) and ground with START button pressed.
3. Does VTM read less than 22 volts?



NO

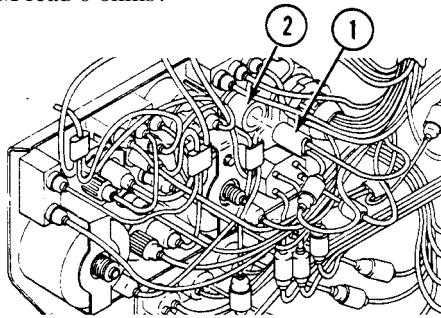
**B6YN**

1. Faulty harness 12349873 circuit 74. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**B7Y**

1. Set up STE/ICE test 91 Tm 9-4910-751-12&P.
2. Remove instrument panel for access (WP 0279 00).
3. Remove harness 12349881 plug (1) from start switch jack (2).
4. Measure resistance between start switch jack (2) pins with START button pressed.
5. Does VTM read 0 ohms?



NO

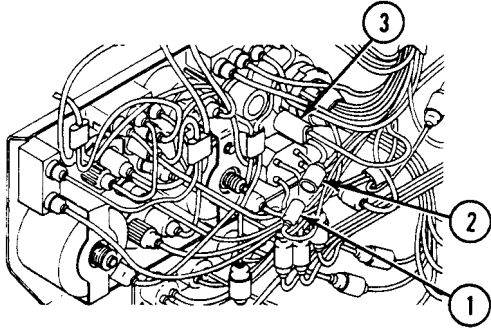
**B7YN**

1. Install harness 12349873 plug on harness 12349881 jack.
2. Replace engine start switch (WP 0284 00).
3. Verify no faults found.

YES

**B8Y**

1. Remove harness 12349813 circuit 14B plug (1) from harness 12349881 circuit 14 jack (2).
2. Measure resistance between harness 12349881 circuit 14 jack (2) and circuit 14 plug (3).
3. Does VTM read 0 ohms?



NO

**B8YN**

1. Install harness 12349873 plug on harness 12349881 jack.
2. Repair harness 12349881 circuit 14 (WP 0382 00).
3. Install instrument panel (WP 0279 00).
4. Verify no faults found.

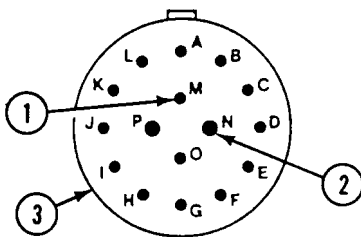
YES

**B9Y**

1. Install harness 12349813 plug on harness 12349881 circuit 14 jack.
2. Repair harness 12349881 circuit 74 (WP 0382 00).
3. Install instrument panel (WP 0279 00).
4. Verify no faults found.

**CY**

1. Turn MASTER SWITCH OFF.
2. Set up STE/ICE test 91 TM 9-4910-751-12&P.
3. Remove transmission controller (WP 0386 00) or (WP 0387 00).
4. Place transmission controller in SL position.
5. Measure resistance between pin M (1) and pin N (2) on controller jack (3).
6. Does VTM read 0 ohms?



NO

**CYN**

1. Replace transmission controller (WP 0386 00) or (WP 0387 00).
2. Verify no faults found.

YES

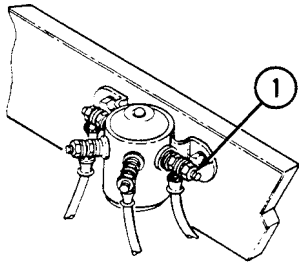


**C2Y**

1. Go to: STEERING LOCKED indicator malfunctions (WP 0054 00).

**DY**

1. Measure voltage between starter relay circuit 74C post (1) and ground.
2. Does VTM read 22 volts or more?



NO

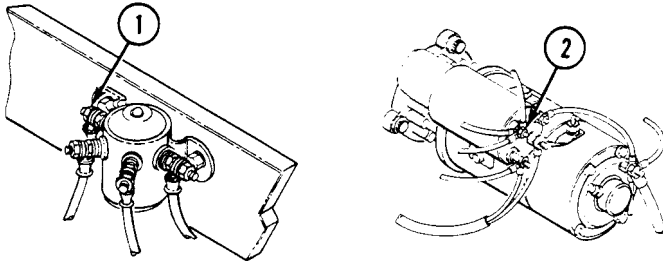
**DYN**

1. Replace lead 12349943-1 (WP 0258 00).
2. Verify no faults found.

YES

**D2Y**

1. Set up STE/ICE test 91 TM 9-4910-751-12&P.
2. Measure resistance between starter relay circuit 74D terminal (1) and starter solenoid circuit 74D terminal (2).
3. Does VTM read 0 ohms?



NO

**D2YN**

1. Replace lead 12349943-2 (WP 0258 00).
2. Verify no faults found.

YES

**D3Y**

1. Replace starter relay (WP 0258 00).
2. Verify no faults found.



**ENGINE DOES NOT START (COLD WEATHER ONLY)**

**0017 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

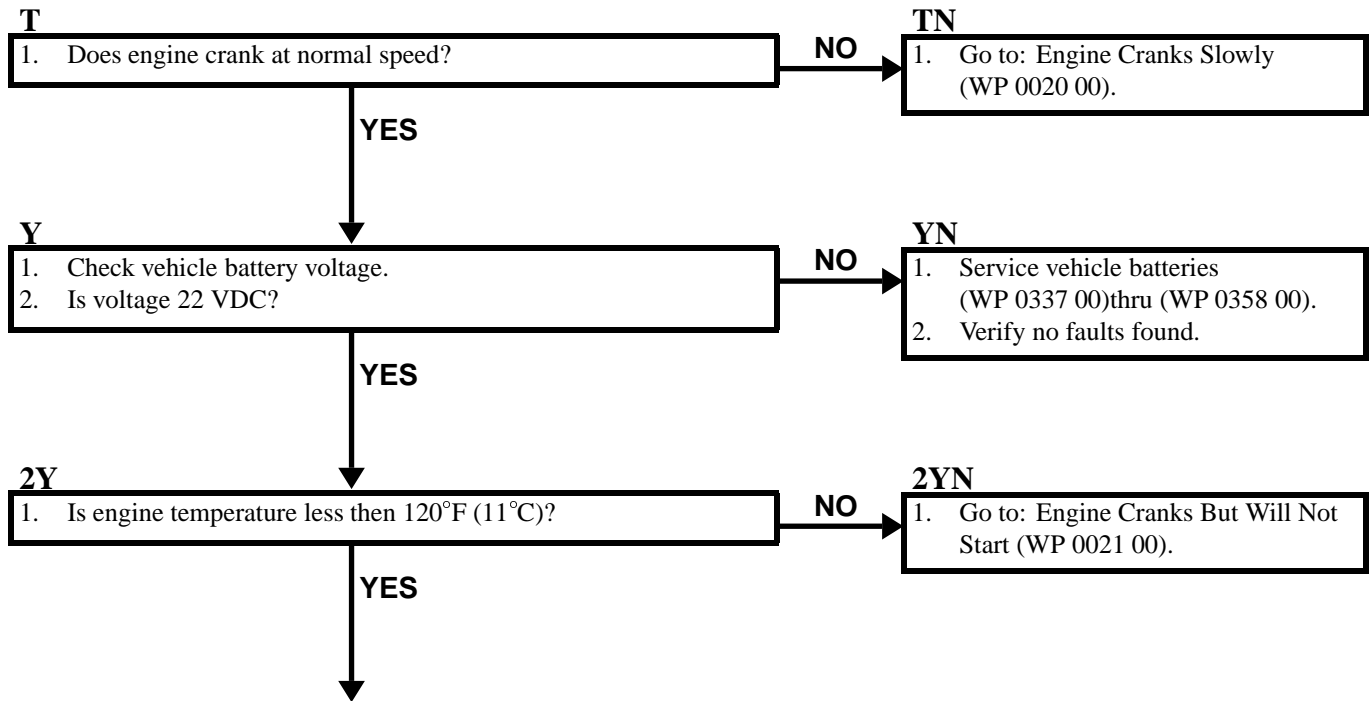
Equipment Condition

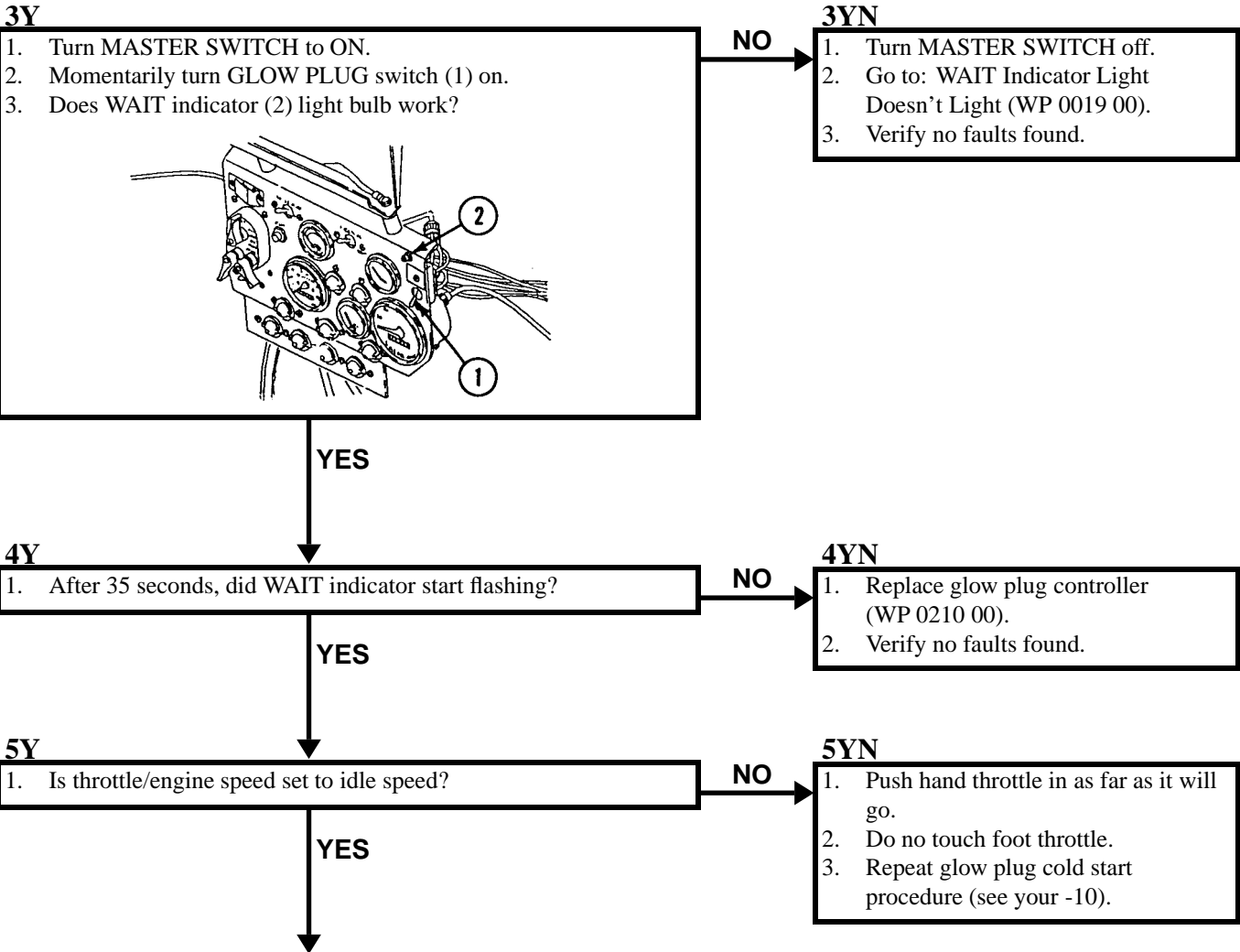
Engine stopped (see your -10)

Personnel Required

Unit Mech 63T10  
Helper (H)

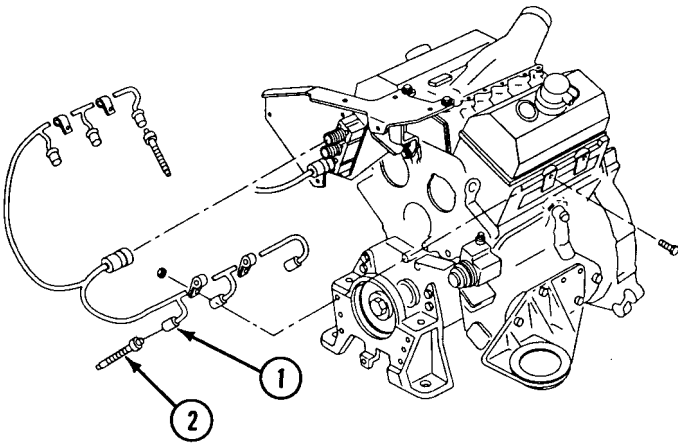
Vehicle blocked (see your -10)





**6Y**

1. Turn MASTER SWITCH OFF.
2. Disconnect glow plug harness lead (1) from glow plug (2).
3. Place multimeter red lead on glow plug and black lead on engine cylinder head.
4. Is resistance less than 3 to 10 ohms?



NO

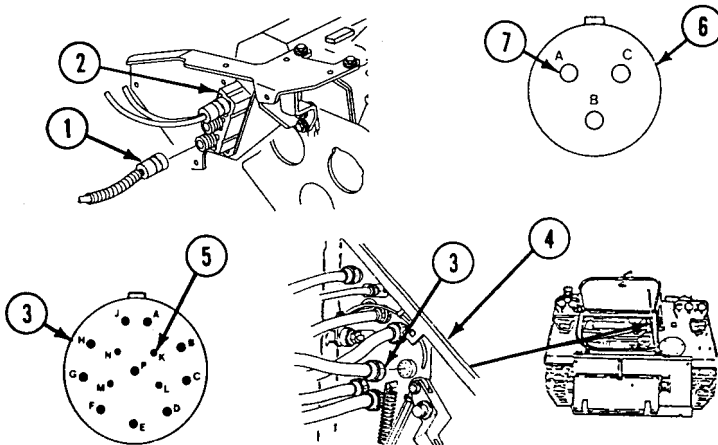
**6YN**

1. Replace glow plugs that are not within 3 to 10 ohms range (WP 0209 00).
2. Verify no faults found.

YES

**7Y**

1. Remove engine wiring harness 12349873-1 (1) from J2 connector on controller (2).
2. Remove engine wiring harness 12349873-1 (1) jack (3) from engine compartment bulkhead (4).
3. Check continuity between engine compartment jack (3) pin K (5) and controller plug (6) pin A (7).
4. Does multimeter read 0 ohm?



NO

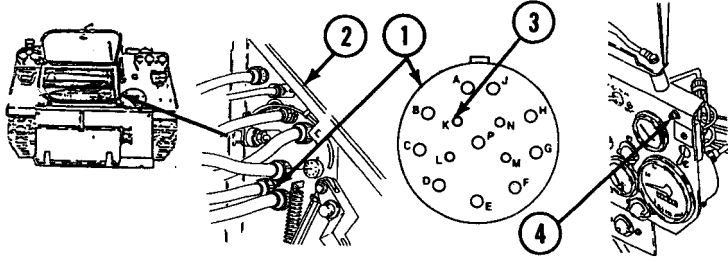
**7YN**

1. Replace engine harness 12349873-1 circuit 406A lead.
2. Verify no faults found.

YES

**8Y**

1. Remove front main wiring harness 12349881-2 plug (1) from engine compartment bulkhead (2).
2. Check continuity from plug pin K (3) to WAIT indicator (4) positive terminal.
3. Does multimeter read 0 ohm?



NO

**8YN**

1. Faulty main wiring harness 12349881-2. Beyond unit maintenance repair.
2. Notify your supervisor.

YES

**9Y**

1. Replace glow plug controller (WP 0210 00). If engine must be started, use your manual override procedure (see your -10).
2. Verify no faults found.

**WAIT INDICATOR FLASHES DURING START ATTEMPTS (PREGLOW OR AFTERGLOW)**

**0018 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
Battery ground leads disconnected (WP 0337 00),  
(WP 0338 00), or (WP 0339 00)

Personnel Required

Unit Mech 63T10  
Helper (H)

**T**

1. Turn MASTER SWITCH OFF.
2. Disconnect glow plug harness lead from each glow plug.
3. Place multimeter red lead on glow plug and black lead on engine cylinder head.
4. Is resistance less than 3 ohms to 10 ohms?

**YES**



**NO**

**TN**

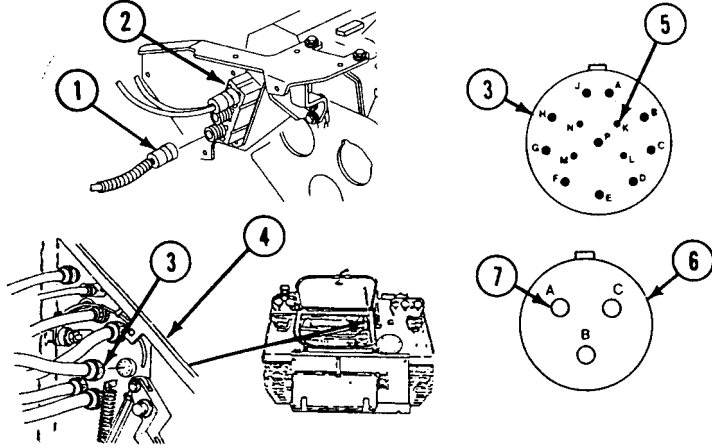
1. Replace glow plugs that are not within resistance range (WP 0209 00).
2. Verify no faults found.

**WAIT INDICATOR FLASHES DURING START ATTEMPTS (PREGLOW OR AFTERGLOW)—Continued**

0018 00

**Y**

1. Remove front main wiring harness 12349873-1 (1) from J2 connector on controller (2).
2. Remove engine wiring harness 12349873-1 jack (3) from engine compartment bulkhead (4).
3. Check continuity between engine compartment jack pin K (5) and controller plug (6) pin A (7).
4. Does multimeter read 0 ohm?



**YES**

**NO**

**YN**

1. Repair or replace engine wiring harness 12349873-1 circuit 406A lead (WP 0359 00).
2. Verify no faults found.

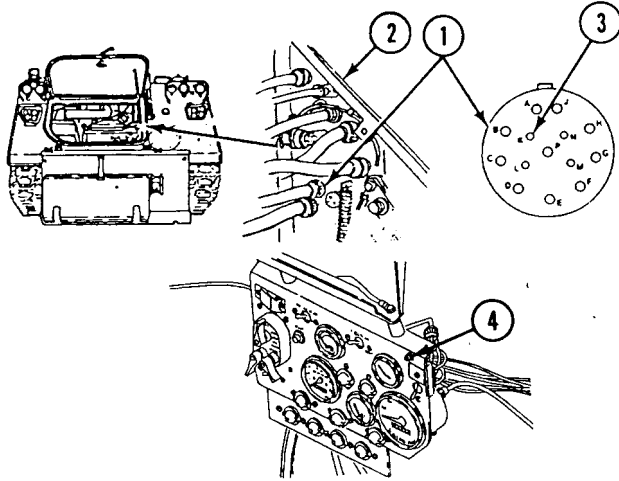


**WAIT INDICATOR FLASHES DURING START ATTEMPTS (PREGLOW OR AFTERGLOW)—Continued**

0018 00

**2Y**

1. Remove front main wiring harness 12349881-2 plug (1) from engine compartment bulkhead (2).
2. Check continuity from plug pin K (3) to WAIT indicator (4) positive terminal.
3. Does multimeter read 0 ohm?



**NO**

**2YN**

1. Faulty front main wiring harness 12349881-2. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**3Y**

1. Replace glow plug controller (WP 0210 00).
2. Verify no faults found.



**WAIT INDICATOR LIGHT DOESN'T LIGHT**

**0019 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Equipment Condition

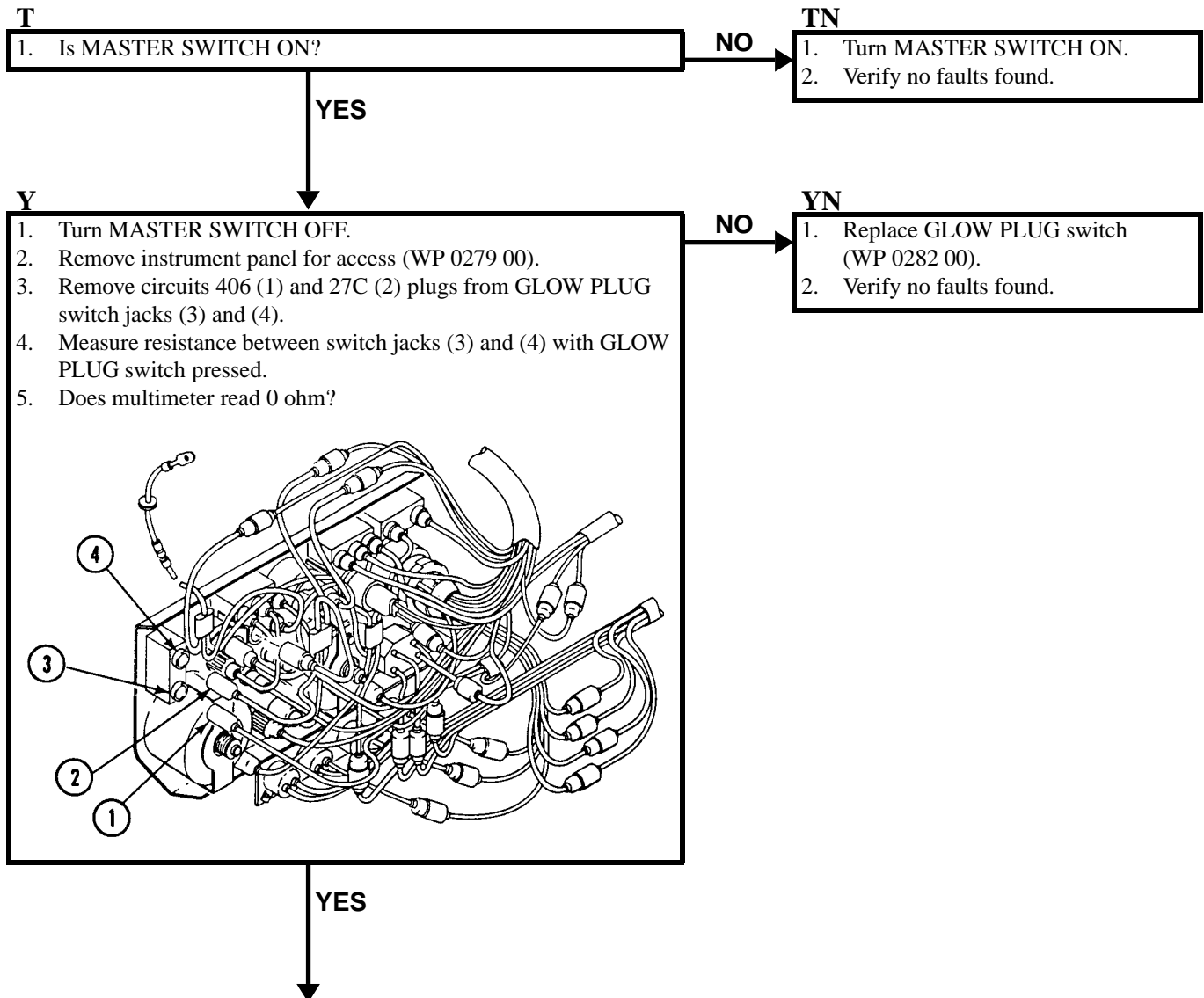
Engine stopped (see your -10)

Vehicle blocked (see your -10)

Personnel Required

Unit Mech 63T10

Helper (H)



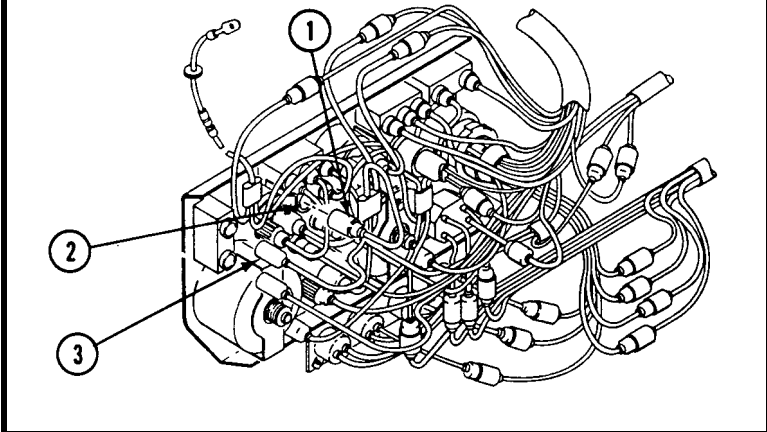
**2Y**

1. Remove circuit 27 plug (1) from instrument panel circuit breaker (2).
2. Measure resistance between cable assembly 12349858 circuit 27 (1) and 27C (3) plug pins.
3. Does multimeter read 0 ohm?

**NO**

**2YN**

1. Repair special purpose cable 12349858 circuit 27C/27 (WP 0382 00).
2. Verify no faults found.



**YES**

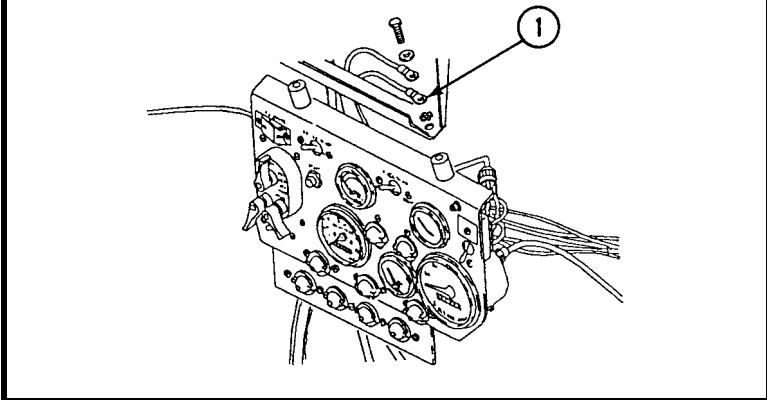
**3Y**

1. Check circuit 406B lead (1).
2. Is circuit 406B lead grounded to instrument panel mount?

**NO**

**3YN**

1. Ground circuit 406B lead to instrument panel mount and tighten screw.
2. Verify no faults found.



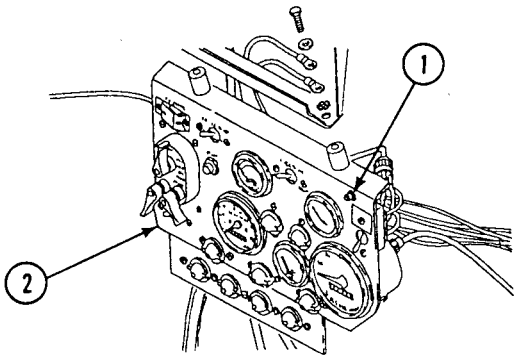
**YES**

WAIT INDICATOR LIGHT DOESN'T LIGHT—Continued

0019 00

**4Y**

1. Remove knurled nut from WAIT indicator (1) and instrument panel (2).
2. Remove WAIT indicator (1) from instrument panel (2).
3. Check resistance between WAIT indicator's terminals.
4. Does multimeter read approximately 240 ohms of resistance?



**NO**

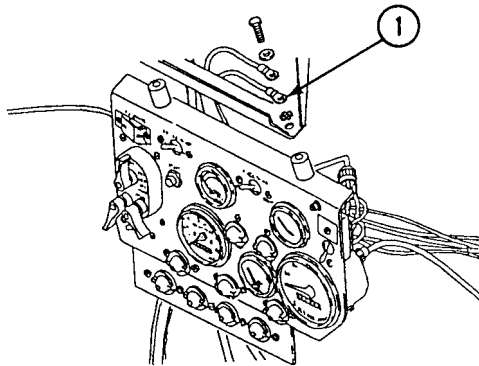
**4YN**

1. Faulty WAIT indicator on wiring harness 12349881-2. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**5Y**

1. Check circuit 406B lead (1) for continuity.
2. Does multimeter read 0 ohm?



**NO**

**5YN**

1. Faulty circuit 406B lead on wiring harness 12349881-2. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

WAIT INDICATOR LIGHT DOESN'T LIGHT—Continued

0019 00

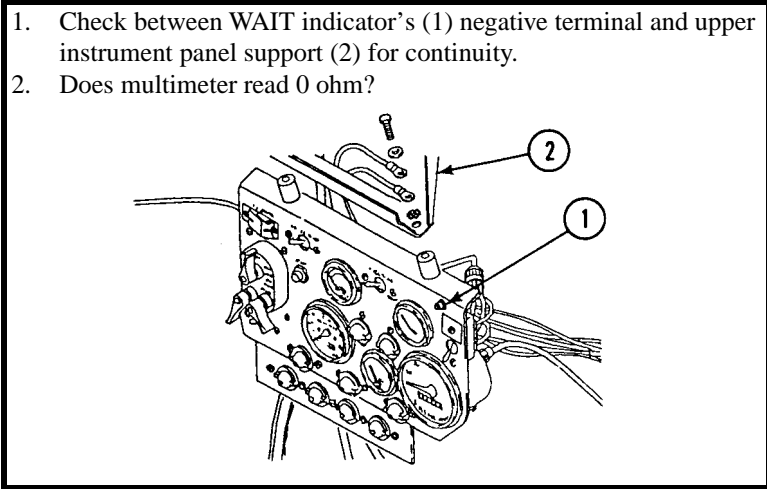
6Y

1. Check between WAIT indicator's (1) negative terminal and upper instrument panel support (2) for continuity.
2. Does multimeter read 0 ohm?

NO

6YN

1. Tighten screw securing instrument panel to support.
2. Verify no faults found



YES

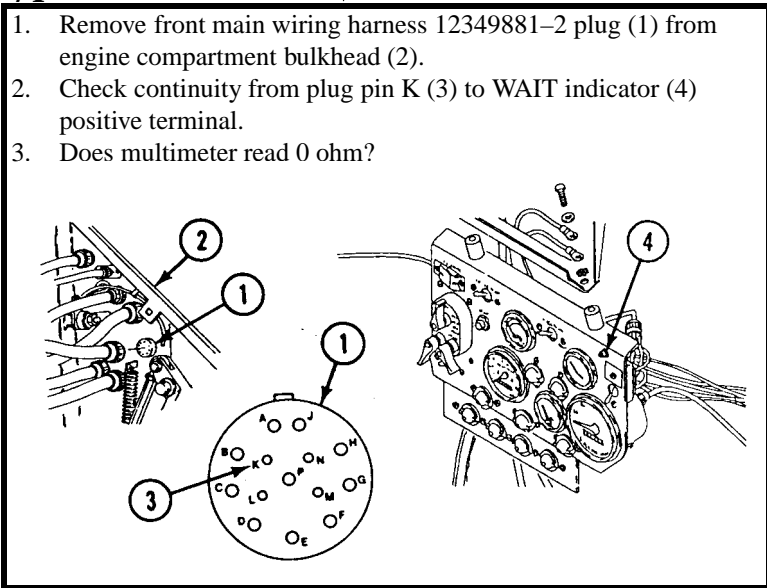
7Y

1. Remove front main wiring harness 12349881-2 plug (1) from engine compartment bulkhead (2).
2. Check continuity from plug pin K (3) to WAIT indicator (4) positive terminal.
3. Does multimeter read 0 ohm?

NO

7YN

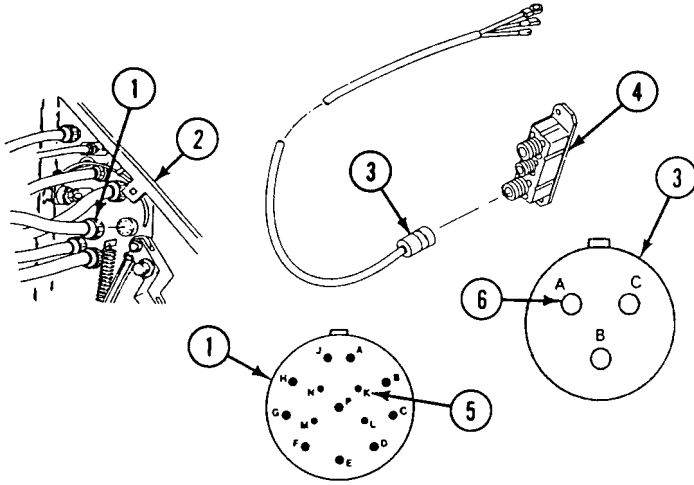
1. Faulty front main wiring harness 12349881-2. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**8Y**

1. Remove engine wiring harness 12349873-1 plug (1) from engine compartment bulkhead (2).
2. Disconnect plug (3) from glow plug controller (4).
3. Check continuity between engine wiring harness 12349873-1 plug (1) pin K (5) and plug (3) pin A (6).
4. Does multimeter read 0 ohms?



YES

**9Y**

1. Replace glow plug controller (WP 0210 00).
2. Verify no faults found.

NO

**8YN**

1. Replace engine wiring harness 12349873-1 circuit 406A lead.
2. Verify no faults found.





**ENGINE CRANKS SLOWLY**

**0020 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

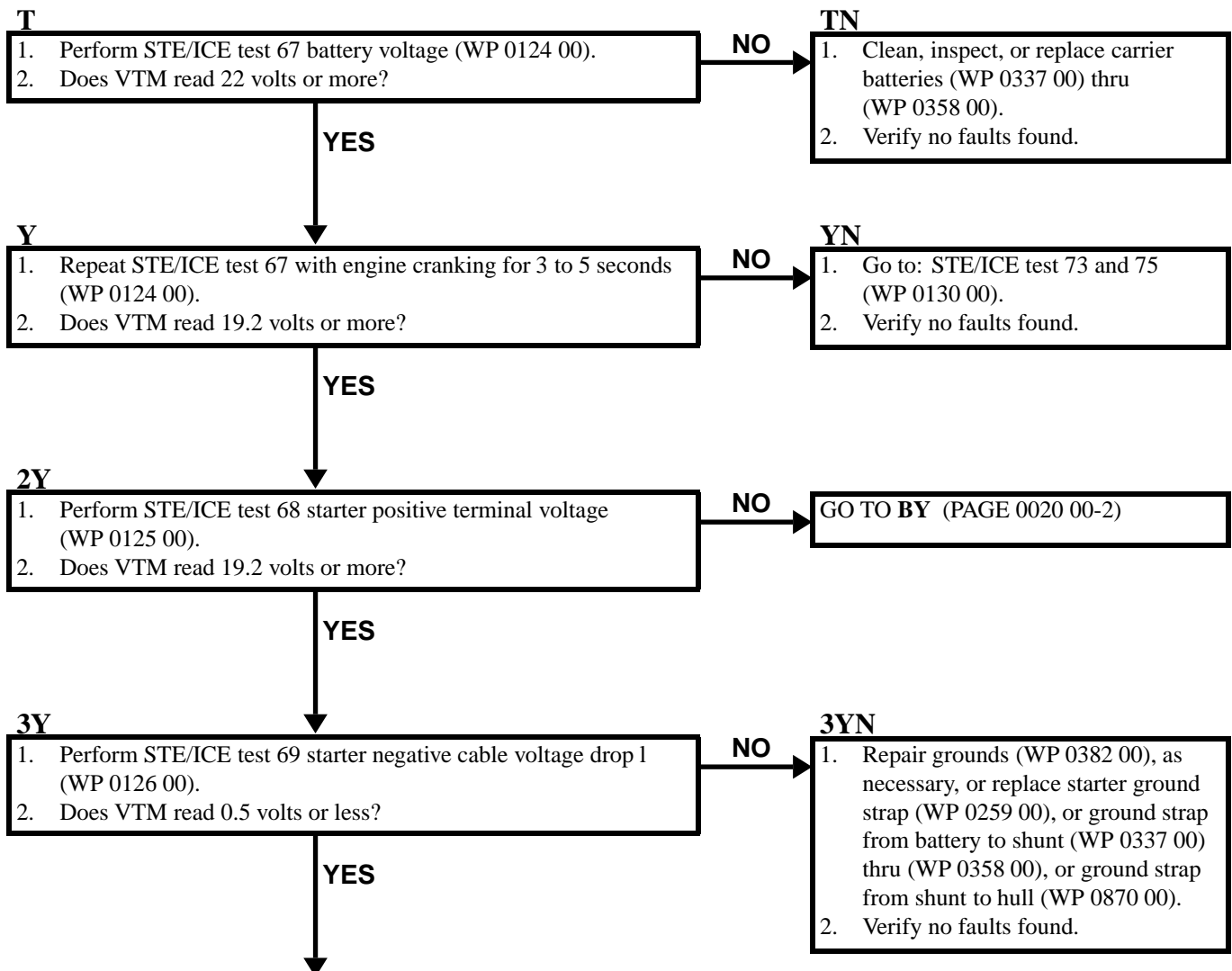
General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
STE/ICE-R test set (WP 0926 00, Item 61)

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)

Personnel Required

Unit Mech 63T10  
Helper (H)



ENGINE CRANKS SLOWLY—Continued

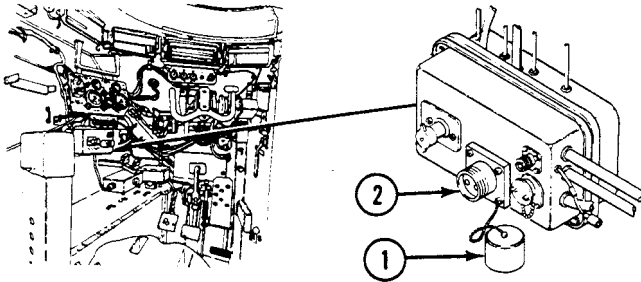
0020 00

**4Y**

1. Replace starter (WP 0259 00).
2. Verify no faults found.

**BY**

1. Remove cap (1) from slave receptacle (2).
2. Measure voltage at slave receptacle (2) on master switch panel with engine cranking for 3 to 5 seconds.
3. Does VTM read less than 19.2 volts?

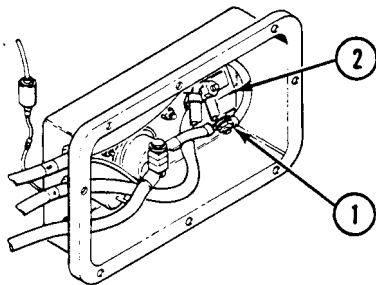


**NO** → GO TO CY (PAGE 0020 00-3)

**YES**

**B2Y**

1. Remove MASTER SWITCH panel (WP 0260 00) or (WP 0261 00).
2. Inspect terminal end on lead 12349945-1 (1) on switch (2).
3. Is terminal end free from corrosion and/or other damage?



**NO** → **B2YN**  
 1. Repair or replace lead (WP 0382 00), (WP 0356 00), (WP 0357 00) or (WP 0358 00).  
 2. Verify no faults found.

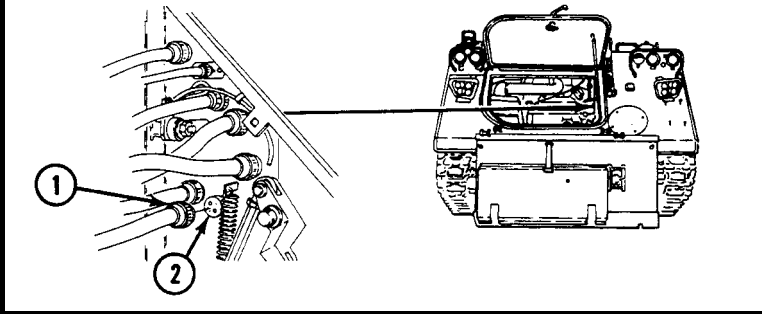
**YES**

**B3Y**

1. Replace MASTER SWITCH (WP 0261 00) or (WP 0262 00).
2. Verify no faults found.

**CY**

1. Remove harness 12349873 circuit 6/6A plug (2) from harness 12349881 circuit 6/6A jack (1) at vehicle bulkhead.
2. Inspect plug and jack for corrosion and/or other damage.
3. Are parts in good condition?



NO

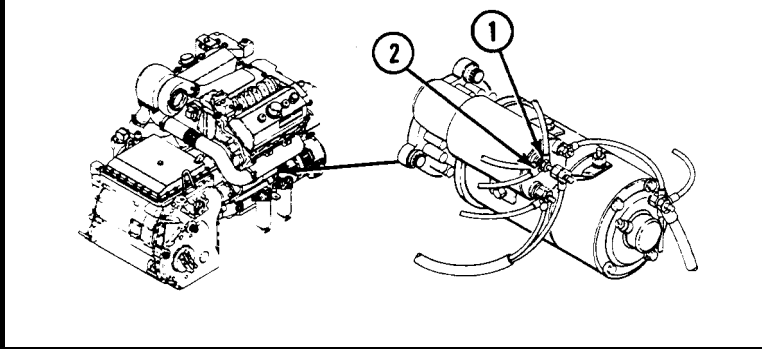
**CYN**

1. Faulty plug and/or jack. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**C2Y**

1. Install harness 12349873 circuit 6/6A plug (1) on harness 12349881 circuit 6/6A (2) jack at vehicle bulkhead.
2. Inspect harness 12349873 circuit 6 (1) and 6A (1) terminal ends on starter.
3. Are terminal ends and leads free from corrosion and/or other damage?



NO

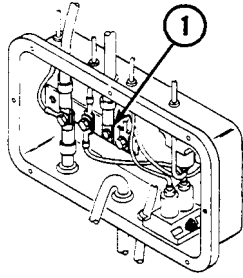
**C2YN**

1. Replace harness 12349873 (WP 0382 00).
2. Verify no faults found.

YES

**C3Y**

1. Remove MASTER SWITCH panel (WP 0260 00) or (WP 0261 00).
2. Inspect lead 12350256-1 (1) from MASTER SWITCH to distribution box.
3. Are lead and lead end free from corrosion and damage?



NO

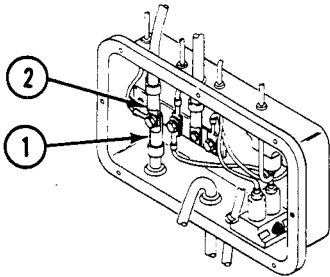
**C3YN**

1. Replace lead 12350256-1 (WP 0266 00) or (WP 0267 00).
2. Verify no faults found.

YES

**C4Y**

1. Inspect harness 12349881 circuit 6 (1) and 6A (2) leads on distribution box.
2. Are leads and lead terminal ends free of corrosion and damage?



NO

**C4YN**

1. Repair harness 12349881 circuit 6 and 6A (WP 0382 00).
2. Verify no faults found.

YES

**C5Y**

1. Install MASTER SWITCH panel (WP 0260 00) or (WP 0261 00).
2. Replace starter assembly (WP 0259 00).
3. Verify no faults found.

**ENGINE CRANKS BUT WILL NOT START**

**0021 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Driver's power plant access panels removed  
(see your -10)

Power plant rear access panels removed (see your -10)

Trim vane lowered (see your -10)

Power plant access door open (see your -10)

Materials/Parts

Suitable container

Personnel Required

Unit Mechanic

Helper (H)

**T**

1. Inspect condition and operation of fuel cut off cable assembly (WP 0220 00).
2. Is cable assembly in good condition and in proper adjustment?

**NO**

**TN**

1. Replace and/or adjust fuel cut off cable assembly (WP 0220 00).
2. Verify no faults found.

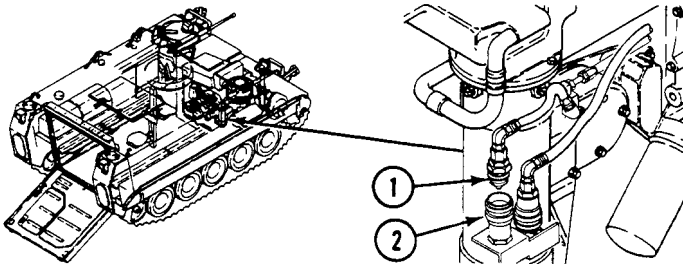
**YES**

**Y**

1. Disconnect engine fuel return line (1) from quick disconnect fitting (2).
2. Depress plunger on quick disconnect fitting (1). Catch fuel in suitable container.
3. Crank engine with plunger depressed. Have helper assist.
4. Does fuel flow out while cranking engine?

**NO**

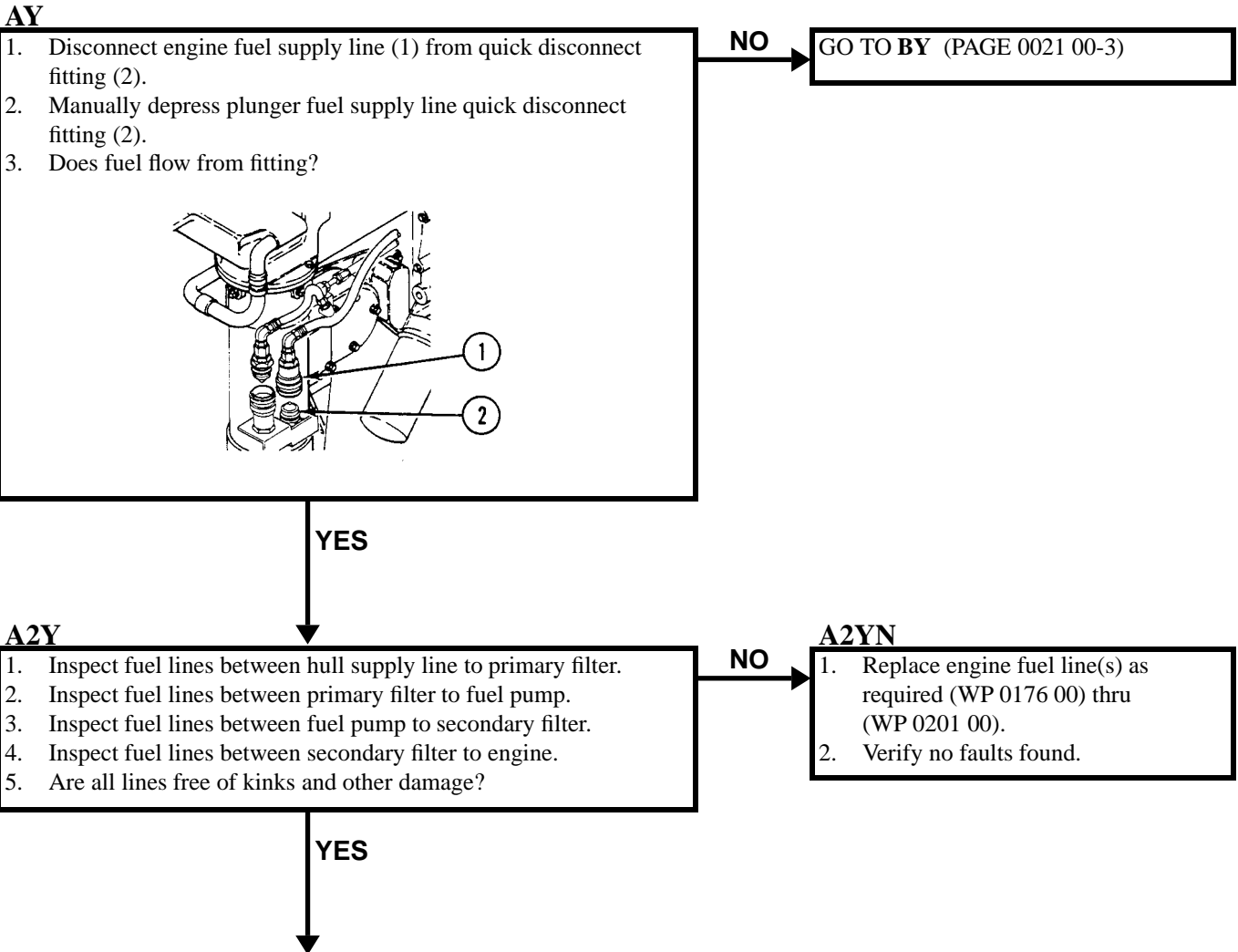
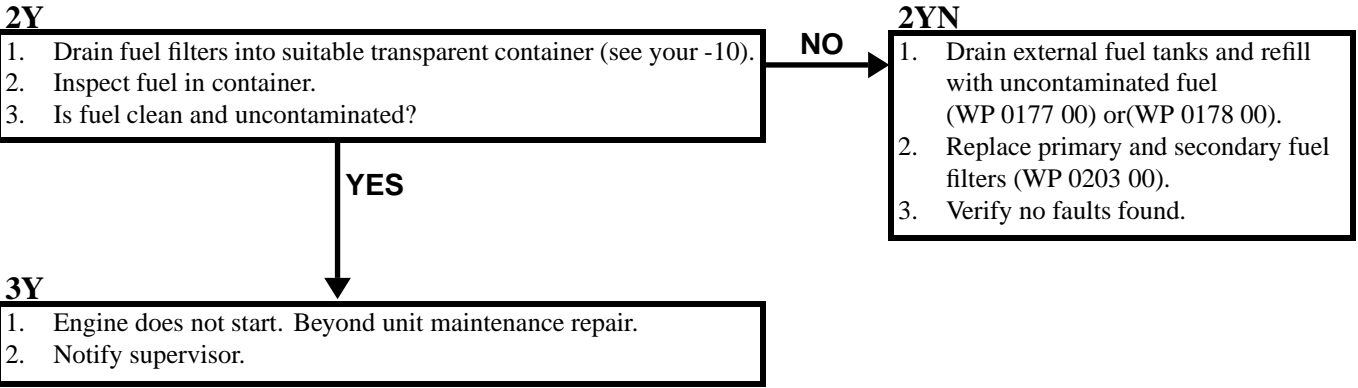
**GO TO AY (PAGE 0021 00-2)**



**YES**

ENGINE CRANKS BUT WILL NOT START—Continued

0021 00

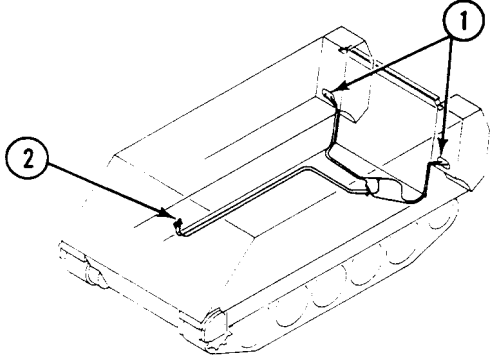


**A3Y**

1. Replace fuel pump (WP 0166 00).
2. Verify no faults found.

**BY**

1. Remove rear compartment floor plates (WP 0539 00) thru (WP 0545 00).
2. Inspect fuel lines between fuel tanks (1) and quick disconnect fittings (2).
3. Are all line and fittings free from leaks and damage?



NO

**BYN**

1. Repair/replace fuel line(s) as required (WP 0176 00) thru (WP 0201 00).
2. Verify no faults found.

YES

**B2Y**

1. Clear clogged fuel pick up tubes in external tanks (WP 0177 00) and (WP 0178 00).
2. Verify no faults found.





**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)**

**0022 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Fuel tanks half full or more (see your -10)

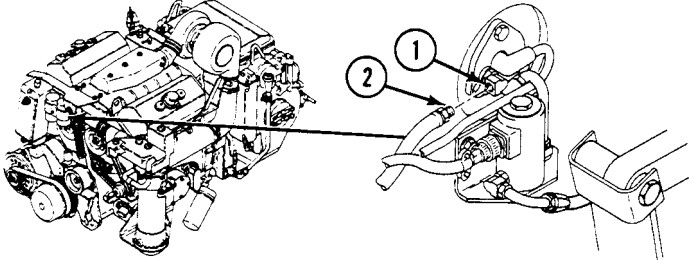
Personnel Required

Unit Mechanic

Helper (H)

**T**

1. Remove air pump to air box heater hose (2) from air box heater (1).
2. Turn MASTER SWITCH and AIR BOX HEATER to ON (see your -10).
3. Does air flow from end of hose?



**NO**

**GO TO AY (PAGE 0022 00-4)**

**YES**

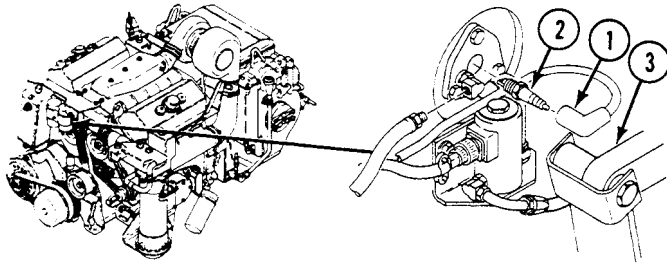


**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**Y**

1. Release air box heater switch.
2. Install air pump to air box heater hose onto air box heater.
3. Remove air box igniter high voltage wire (1) and igniter (2).
4. Install high voltage wire (1) on igniter (2).
5. Ground hex portion of igniter (2) on idler pulley pivot (3).
6. Depress air box heater switch.
7. Does igniter produce a spark?



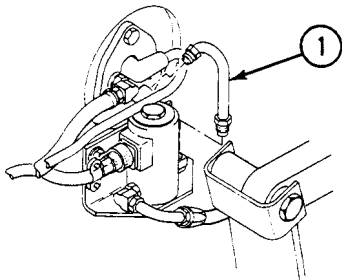
**NO**

**GO TO BY (PAGE 0022 00-5)**

**YES**

**2Y**

1. Release air box heater switch.
2. Install air box igniter.
3. Remove solenoid to air box heater tube assembly (1).
4. Depress air box heater switch with engine cranking for 5 seconds. Do not allow engine to start.
5. Does fuel fail to flow from solenoid with switch depressed?



**NO**

**2YN**

1. Air box heater is working properly.
2. Go to Engine cranks, but will not start (WP 0021 00).

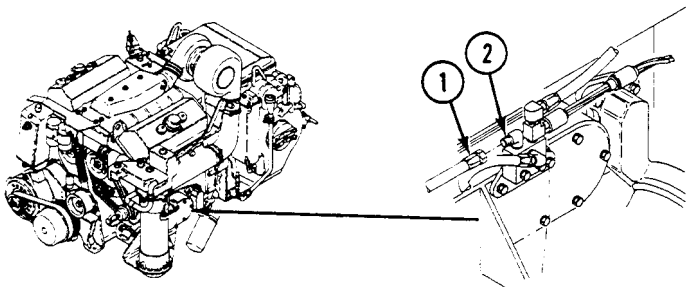
**YES**

**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**3Y**

1. Turn AIRBOX HEATER and MASTER SWITCH to OFF.
2. Remove fuel supply line to solenoid (1) at restrictor block (2).
3. Does fuel flow from restrictor block with engine cranking?



**NO**

**3YN**

1. Install fuel supply line to solenoid at restrictor block (WP 0206 00).
2. Go to engine cranks, but won't start (WP 0021 00).

**YES**

**4Y**

1. Inspect fuel supply line to solenoid.
2. Is line free from kinks or clogs?

**NO**

**4YN**

1. Replace air box fuel supply line (WP 0206 00).
2. Verify no faults found.

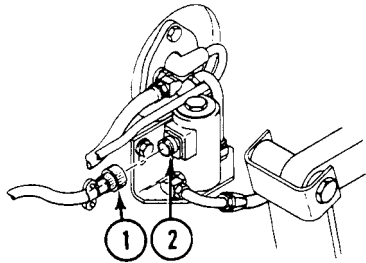
**YES**

**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**5Y**

1. Install fuel supply line to solenoid at restrictor block (WP 0206 00).
2. Remove air box heater harness plug (1) from solenoid (2).
3. Measure voltage between plug (1) pins with air box heater switch depressed.
4. Does multimeter read less than 17 volts?



**NO**

**5YN**

1. Replace air box heater fuel supply solenoid (WP 0205 00).
2. Verify no faults found.

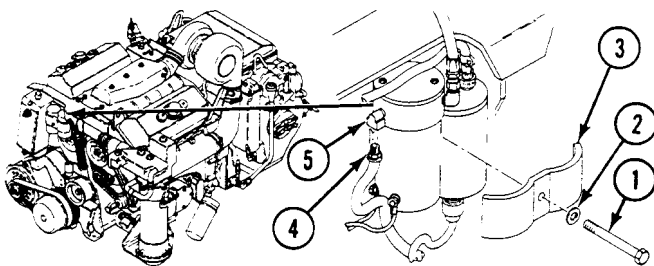
**YES**

**6Y**

1. GO TO **B4Y** (PAGE 0022 00-6).

**AY**

1. Turn AIRBOX HEATER and MASTER SWITCH to OFF.
2. Remove screw (1), washer (2), and bracket (3).
3. Remove air hose (4) from air pump elbow (5).
4. Is hose free from restriction and damage?



**NO**

**AYN**

1. Replace air pump to air box heater hose.
2. Verify no faults found.

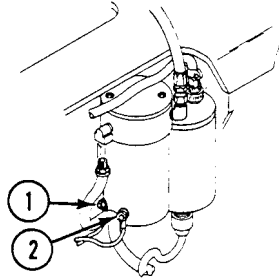
**YES**

**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**A2Y**

1. Turn MASTER SWITCH to ON.
2. Measure voltage between power lead terminals (1) on air pump (2) with air box switch depressed.
3. Does multimeter read less than 17 volts?



NO

**A2YN**

1. Turn MASTER SWITCH to OFF.
2. Replace air pump.
3. Verify no faults found.

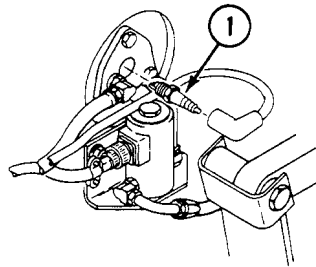
YES

**A3Y**

1. GO TO **B4Y** (PAGE 0022 00-6).

**BY**

1. Inspect igniter electrode (1).
2. Is igniter electrode free from debris and damage?



NO

**BYN**

1. Clean and/or replace air box heater igniter (WP 0207 00).
2. Verify no faults found.

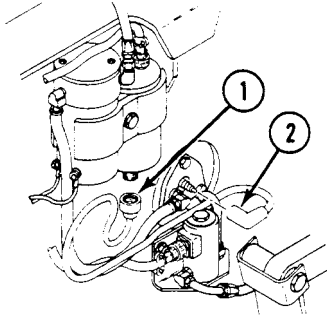
YES

**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**B2Y**

1. Install air box igniter (WP 0207 00).
2. Remove ignition wire (1).
3. Measure resistance between wire ends (1) and (2).
4. Is ignition wire in good condition and measure 0 ohms?



NO

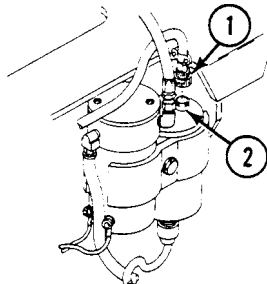
**B2YN**

1. Replace igniter wire (WP 0204 00).
2. Verify no faults found.

YES

**B3Y**

1. Install ignition wire on igniter (WP 0204 00).
2. Remove air box heater harness plug (1) from ignition coil (2).
3. Depress air box heater switch.
4. Measure voltage between air box heater harness plug (1) pins then release switch.
5. Does multimeter read less than 17 volts with switch depressed?



NO

**B3YN**

1. Replace ignition coil (WP 0208 00).
2. Verify no faults found.

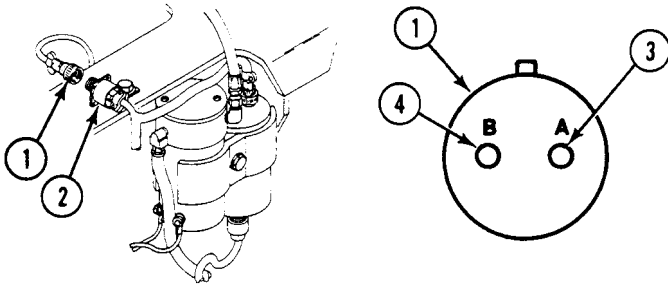
YES

**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**B4Y**

1. Install solenoid to air box heater fuel line, if removed.
2. Install hose on air pump elbow, if removed.
3. Install bracket, screw, and washer on air pump, if removed.
4. Install air box heater harness plug on ignition coil, if removed.
5. Remove harness 12349873 plug (1) from air box heater harness jack (2).
6. Turn MASTER SWITCH to ON.
7. Measure voltage between harness 12349873 plug (1) pin A (3) to ground and pin B (4) to ground with air box heater switch depressed.
8. Does multimeter read less than 17 volts either time?



NO

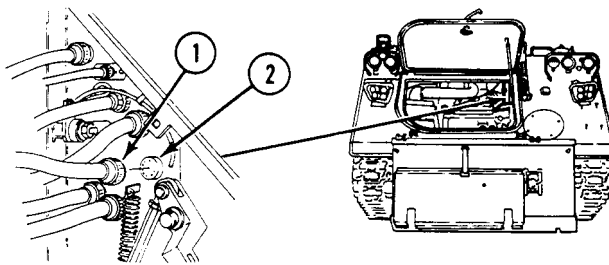
**B4YN**

1. Turn MASTER SWITCH to OFF.
2. Replace air box heater wiring harness (WP 0205 00).
3. Verify no faults found.

YES

**B5Y**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Measure voltage between harness 12349881 jack (2) pin C (3) and ground with air box heater switch depressed.
3. Does multimeter read less than 17 volts?



NO

**B5YN**

1. Turn MASTER SWITCH to OFF.
2. Replace harness 12349873 (WP 0359 00).
3. Verify no faults found.

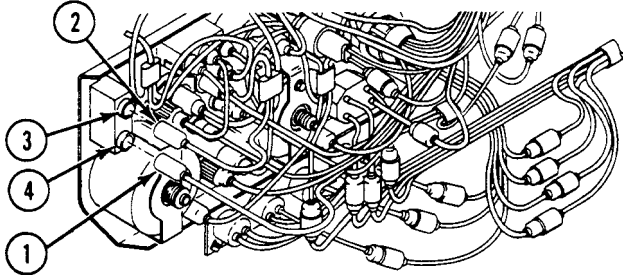
YES

**ENGINE CRANKS BUT WON'T START BELOW 40° (AIR BOX HEATER IS USED)—Continued**

0022 00

**B6Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access. See task: remove instrument panel mounts and ground leads (WP 0295 00).
3. Remove circuits 406 (1) and 27C (2) plugs from air box heater switch jacks (3) and (4).
4. Measure resistance between switch jacks (3) and (4) with air box heater switch depressed.
5. Does multimeter read 0 ohms?



NO

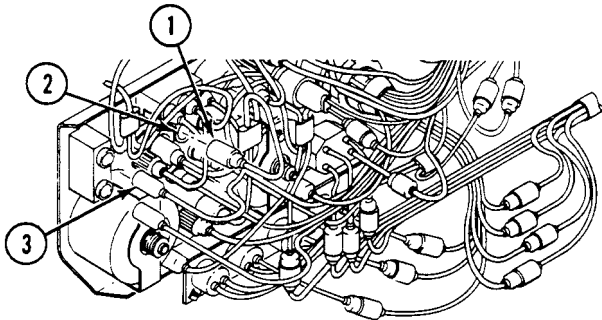
**B6YN**

1. Replace air box heater switch (WP 0282 00).
2. Verify no faults found.

YES

**B7Y**

1. Remove circuit 27 plug (1) from instrument panel circuit breaker (2).
2. Measure resistance between cable assembly 12349858 circuit 27 (1) and 27C (3) plug pins.
3. Does multimeter read 0 ohms?



NO

**B7YN**

1. Repair special purpose cable 12349858 circuit 27C/27 (WP 0382 00).
2. Verify no faults found.

YES

**B8Y**

1. Repair harness 12349881 circuit 406 (WP 0382 00).
2. Verify no faults found.



**ENGINE CRANKS BUT WON'T START BELOW 40°F (GLOW PLUGS ARE USED)**

**0023 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

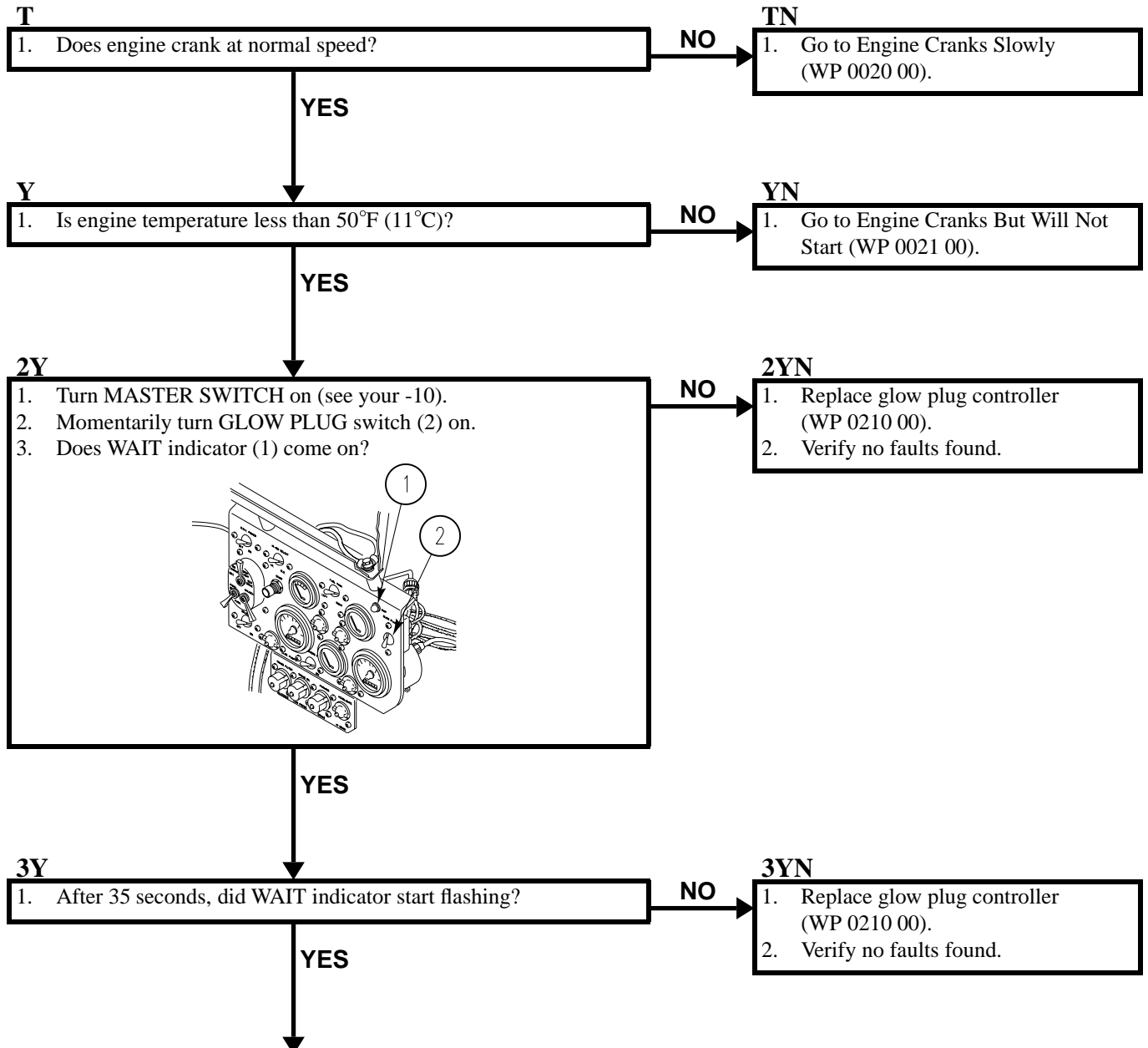
- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)

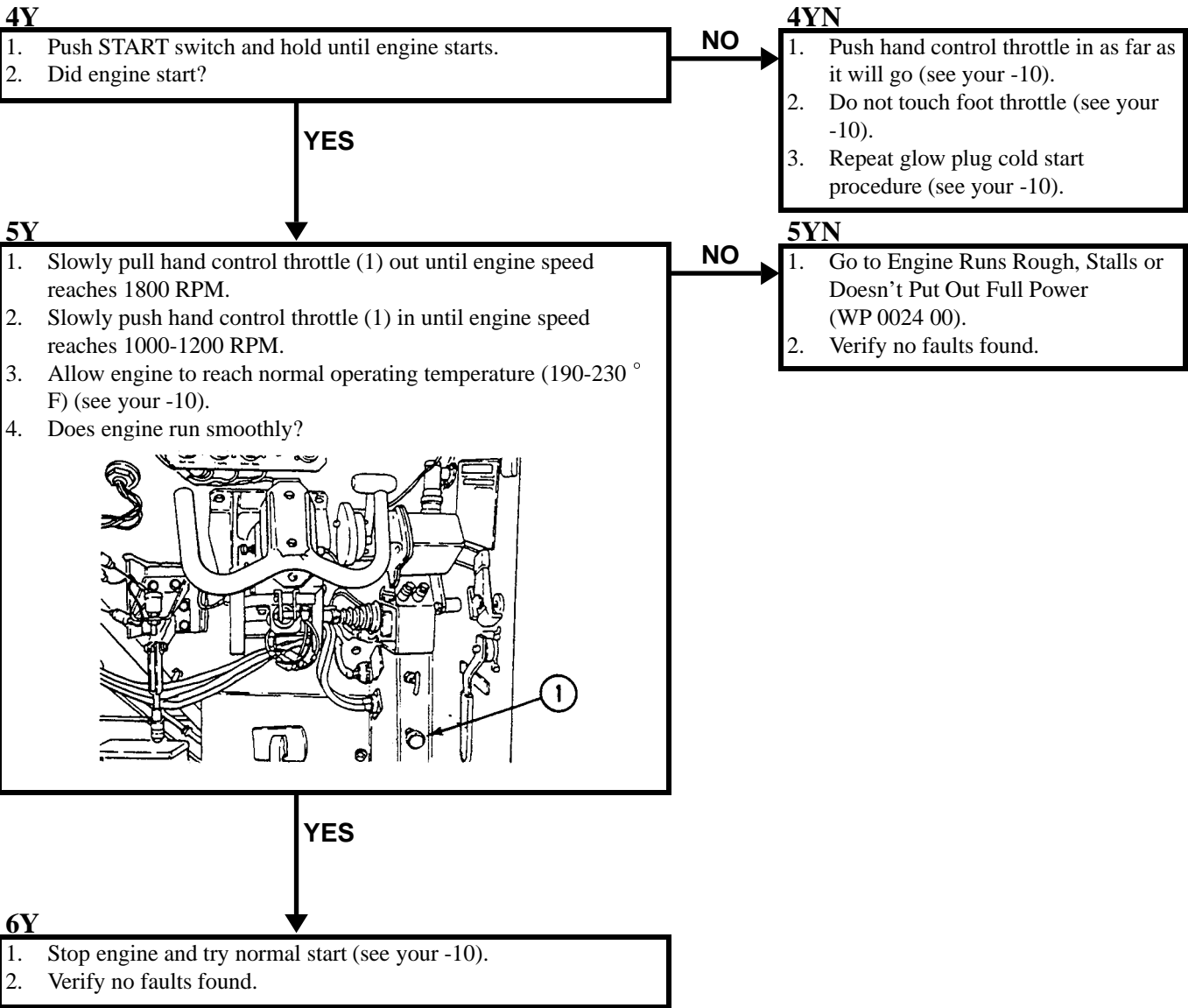
Personnel Required

Unit Mechanic



**ENGINE CRANKS BUT WON'T START BELOW 40° F (GLOW PLUGS ARE USED)—Continued**

0023 00



**ENGINE RUNS ROUGH, STALLS, OR DOESN'T PUT OUT FULL POWER**

**0024 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

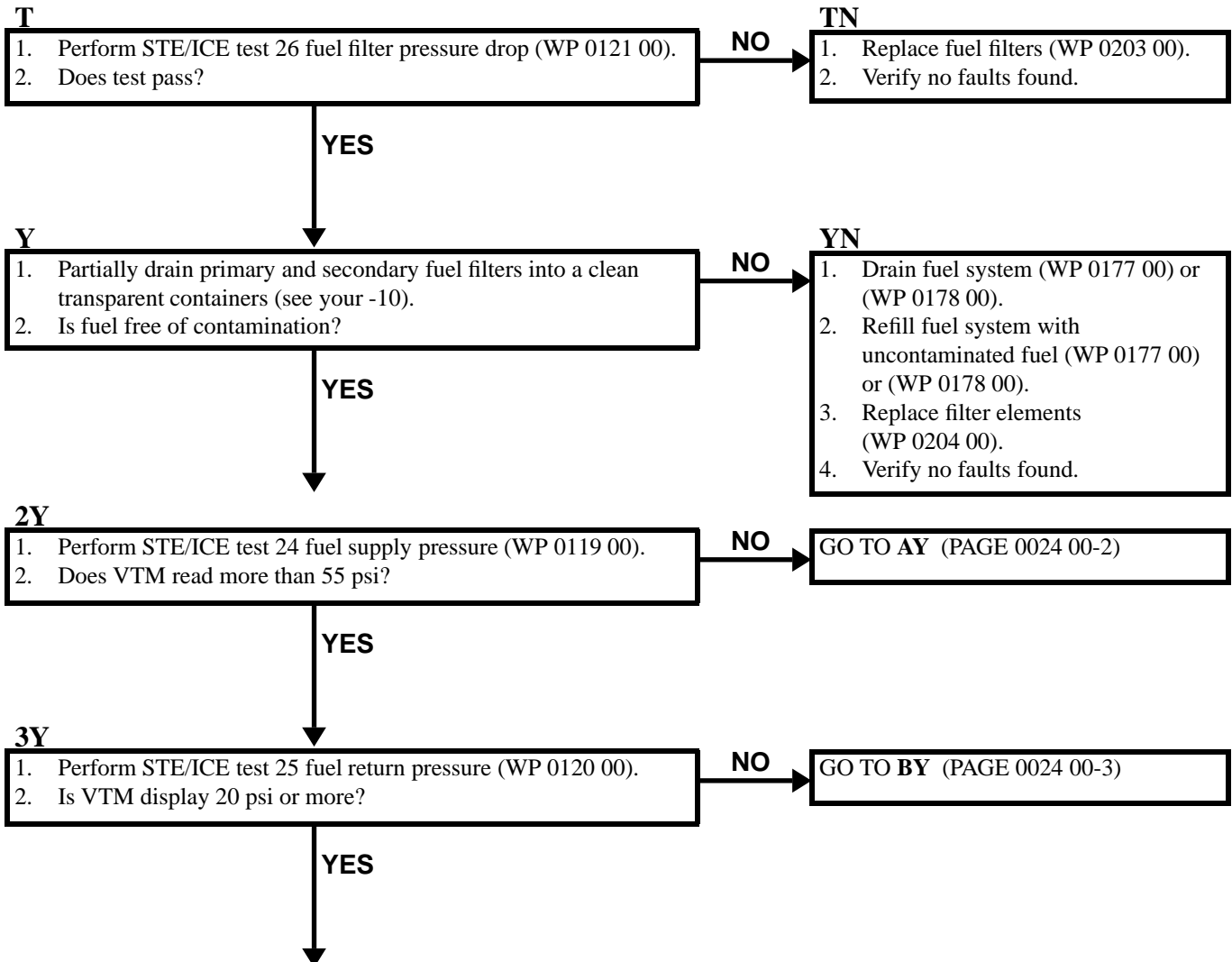
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Power plant rear access panels removed (see your -10)
- Rear floor plates removed (see Table of Contents)

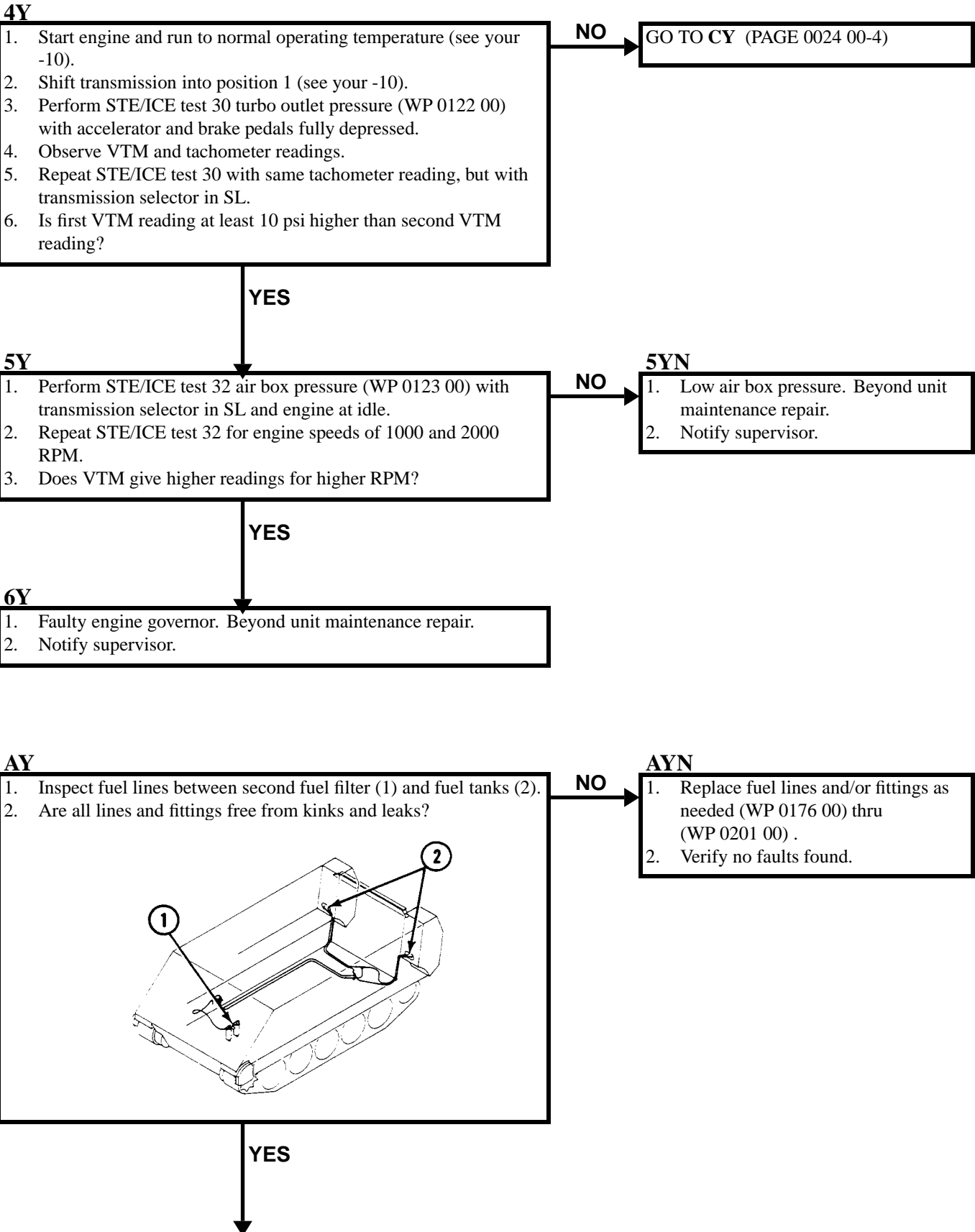
Materials/Parts

Suitable container

Personnel Required

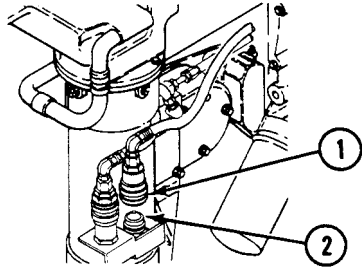
Unit Mechanic  
Helper (H)





**A2Y**

1. Disconnect engine fuel supply line (1) from quick disconnect fitting (2).
2. Manually depress plunger on fuel supply quick disconnect fitting (2).
3. Does fuel flow freely from fitting?



NO

**A2YN**

1. Unclog fuel pick up tubes in fuel tanks (WP 0179 00) or (WP 0180 00).
2. Verify no faults found.

YES

**A3Y**

1. Replace engine fuel pump (WP 0166 00).
2. Verify no faults found.

**BY**

1. Inspect fuel lines on engine between secondary fuel filter and engine cylinder heads.
2. Inspect fuel lines on engine between right engine cylinder head and left cylinder head.
3. Inspect fuel lines on engine between engine cylinder head and restrictor block.
4. Are any fuel lines kinked or leaking?

NO

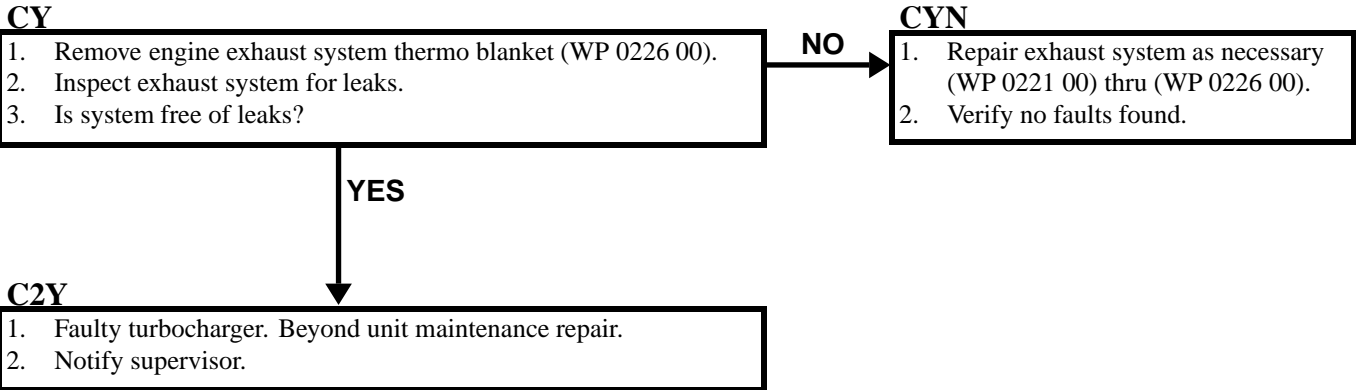
**BYN**

1. Internal engine fuel restriction. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**B2Y**

1. Replace fuel lines as necessary (WP 0176 00) thru (WP 0201 00).
2. Verify no faults found.



**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR**

**0025 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

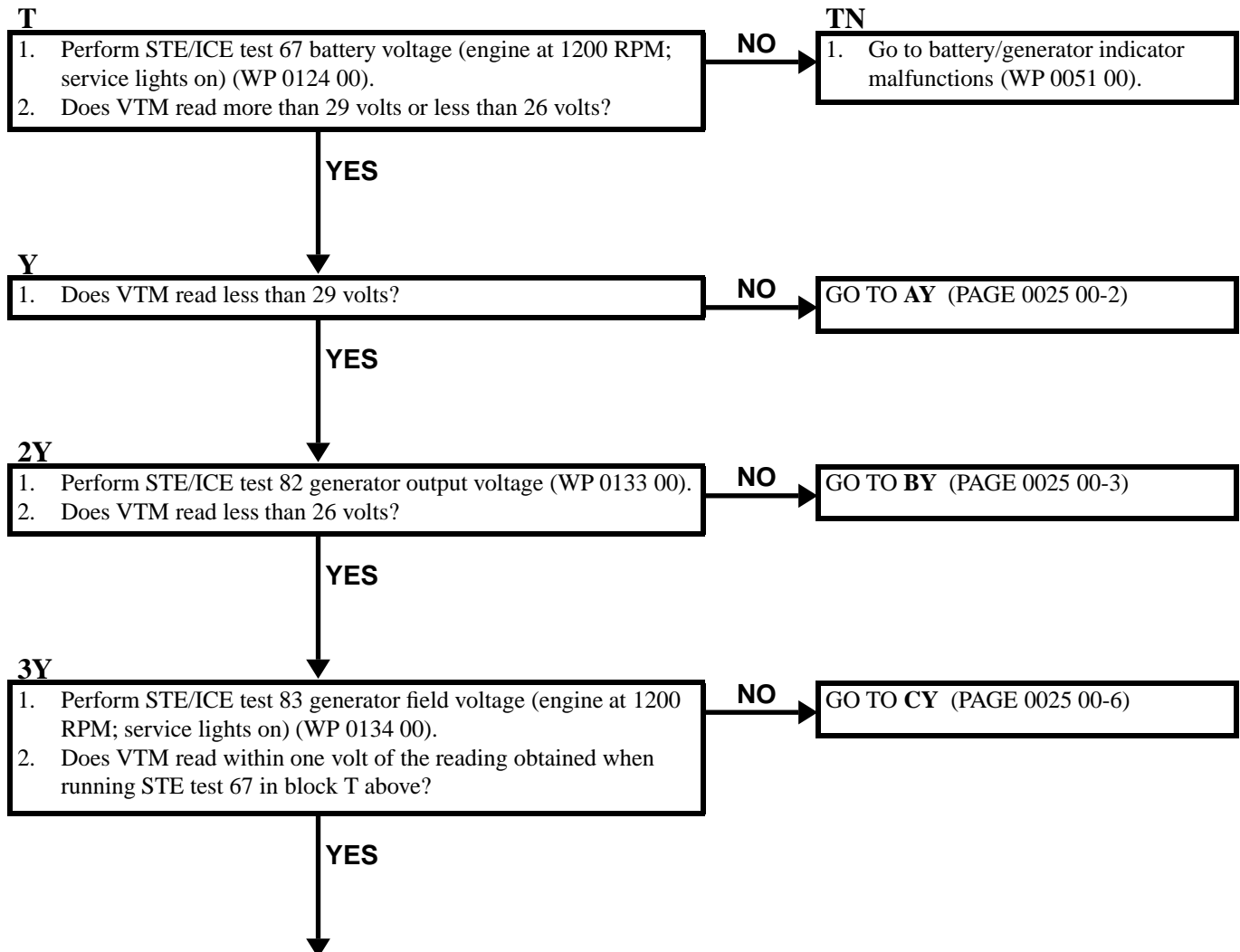
General Mechanic's Tool Kit (WP 0926 00, Item 65)  
STE/ICE Test Set (WP 0926 00, Item 61)  
Jumper Wire

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access door open (see your -10)  
Driver's power plant access panel removed (see your -10)

Personnel Required

Unit Mechanic  
Helper (H)

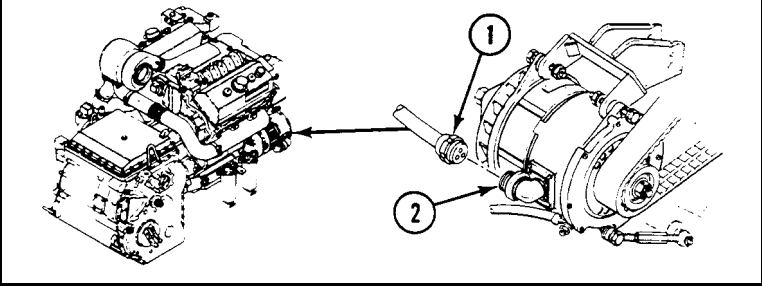


**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**4Y**

1. Disconnect battery ground strap/lead(s) (WP 0337 00), (WP 0338 00), or (WP 0339 00).
2. Remove harness 12349873 plug (1) from generator jack (2).
3. Inspect harness plug pins for corrosion or damage.
4. Is plug free from corrosion and damage?



**NO**

**4YN**

1. Replace harness. (See Table of Contents).
2. Verify no faults found.

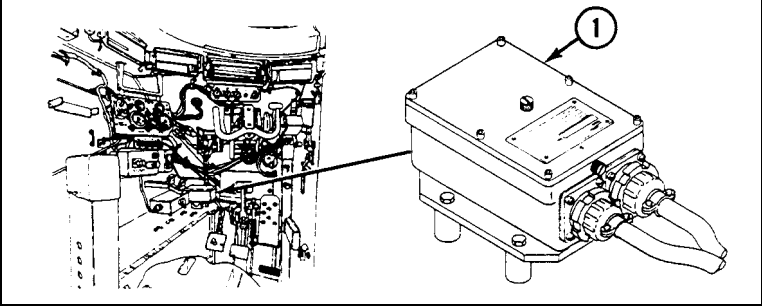
**YES**

**5Y**

1. Replace generator (WP 0255 00).
2. Verify no faults found.

**AY**

1. Measure resistance between regulator housing (1) and ground. Use VTM.
2. Does VTM read 0 ohms?



**NO**

**AYN**

1. Remove regulator (WP 0257 00) and clean ground contact (bolted surface).
2. Install regulator (WP 0257 00).
3. Verify no faults found.

**YES**

**A2Y**

1. Has regulator been adjusted?

**NO**

**A2YN**

1. Adjust voltage regulator (WP 0256 00).
2. Verify no faults found.

**YES**



**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**A3Y**

1. Has regulator been replaced?

NO

**A3YN**

- 1. Replace regulator (WP 0257 00).
- 2. Verify no faults found.

YES

**A4Y**

- 1. Replace generator (WP 0255 00).
- 2. Verify no faults found.

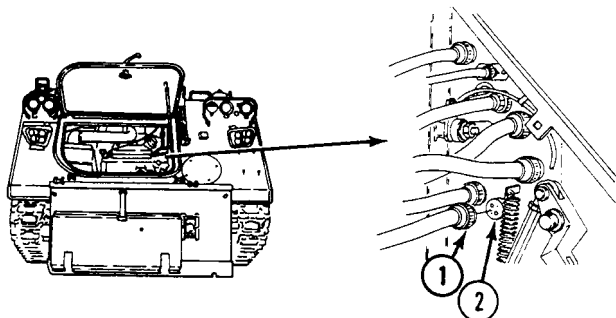
**BY**

- 1. Disconnect battery ground strap/lead(s) (WP 0337 00), (WP 0338 00), or (WP 0339 00).
- 2. Remove harness 12349873 plug (1) from harness 12349881 jack (2).
- 3. Inspect plugs and jacks for damage or corrosion.
- 4. Are plugs and jacks free from corrosion and damage?

NO

**BYN**

- 1. Replace harness 12349873.(See Table of Contents).
- 2. Verify no faults found.



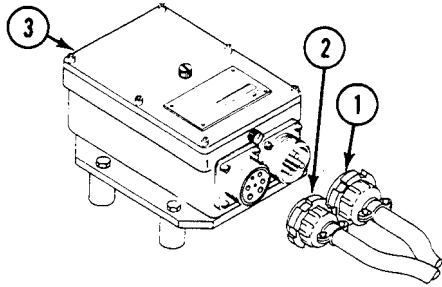
YES

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**B2Y**

1. Remove harness 12349881 plugs (1) and (2) from voltage regulator (3).
2. Inspect all plug and jack pins for corrosion or damage.
3. Are plugs and jacks free from corrosion and damage?



NO

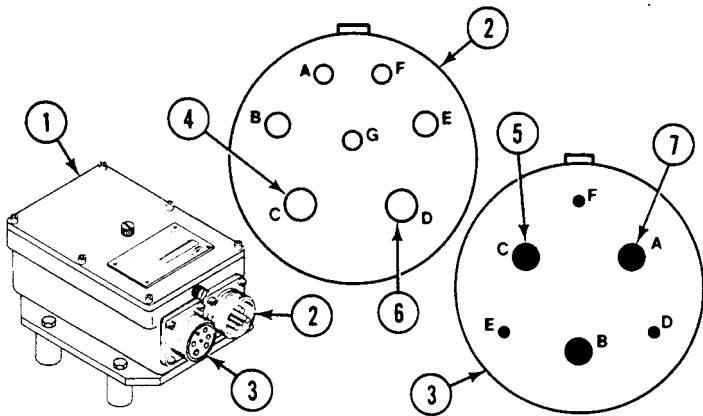
**B2YN**

1. Faulty harness 12349881 plug or jack. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**B3Y**

1. Measure resistance on regulator (1), between jacks (2) and (3); Measure between socket C (4) and pin C (5). Measure between socket D (6) and pin A (7).
2. Does VTM read 0 ohms?



NO

**B3YN**

1. Replace regulator (WP 0257 00).
2. Verify no faults found.

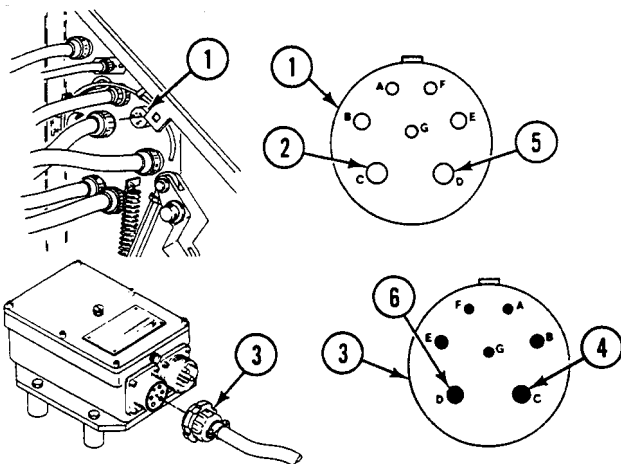
YES

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**B4Y**

1. Measure resistance between harness 12349881 bulkhead jack (1) socket C (2), and regulator plug (3) pin C (4).
2. Measure resistance between harness 12349881 bulkhead jack (1) socket D (5), and regulator plug (3) pin D (6).
3. Is reading 0 ohms for both measurements?



**NO**

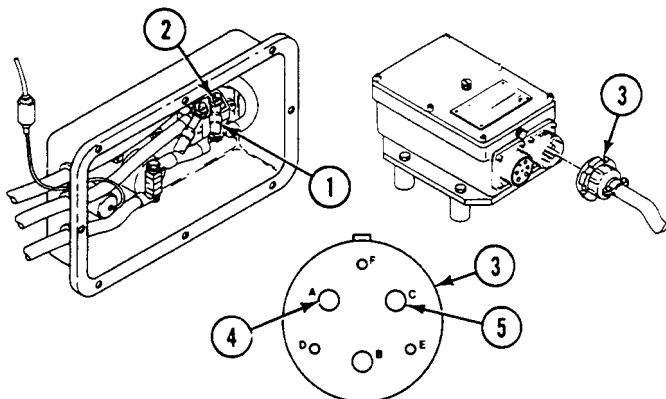
**B4YN**

1. Faulty harness 12349881 circuit 2/2A. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**B5Y**

1. Remove master switch panel (WP 0260 00, WP 0261 00).
2. Measure resistance between harness 12349881 circuit 2/2A (1) between master switch terminal (2) and regulator plug (3) sockets A (4) and C (5).
3. Does VTM read 0 ohms?



**NO**

**B5YN**

1. Faulty harness 12349881 circuit 2/2A. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**B6Y**

1. Replace circuit 6 lead (WP 0356 00), (WP 0357 00), or (WP 0358 00).
2. Verify no faults found.

**CY**

1. Has regulator been adjusted?

NO

YES

**CYN**

1. Adjust voltage regulator (WP 0256 00).
2. Verify no faults found.

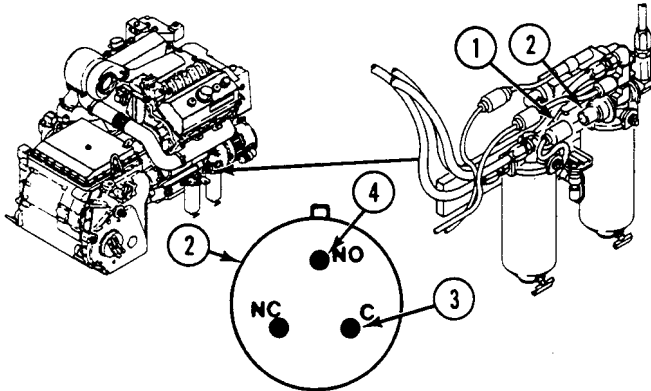
**C2Y**

1. Remove harness 12349873 plug (1) from generator field switch (2).
2. Start engine (see your -10).
3. Measure resistance across switch (2) pins (3) and (4) with engine idling. Use VTM.
4. Does VTM read 0 ohms?

NO

**C2YN**

1. Stop engine (see your -10).
2. Replace generator field switch (WP 0323 00).
3. Verify no faults found.



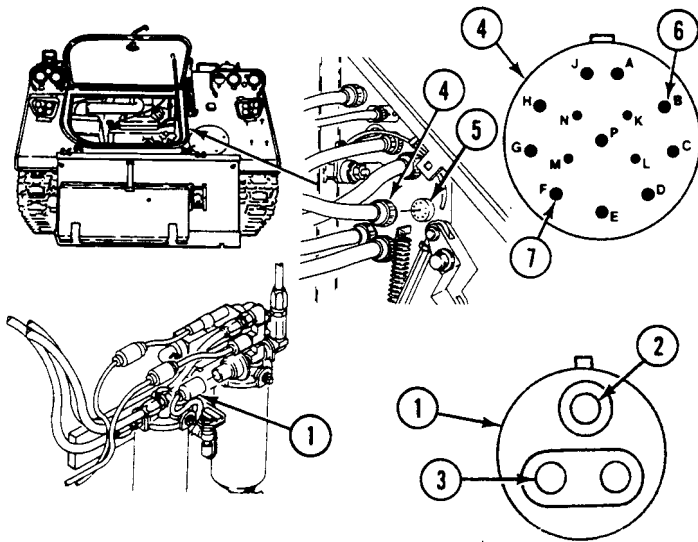
YES

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**C3Y**

1. Stop engine (see your -10).
2. Install jumper wire on harness 12349873 generator field switch plug (1) between sockets (2) and (3).
3. Remove harness 12349873 plug (4) from harness 12349881 jack (5).
4. Measure resistance between harness 12349873 plug (4) pins B (6) and F (7).
5. Does VTM read 0 ohms?



**NO**

**C3YN**

1. Replace harness 12349873.
2. Verify no faults found.

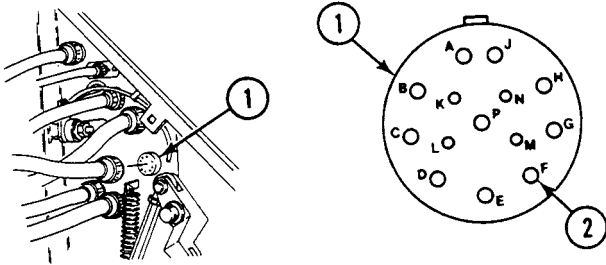
**YES**

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**C4Y**

1. Remove jumper wire and install harness 12349873 plug on field switch.
2. Perform STE/ICE test 67 (MASTER SWITCH ON, engine OFF) (WP 0124 00). Record reading.
3. Set up STE/ICE test 89 TM 9-4910-571-12&P .
4. Measure voltage between harness 12349881 jack (1) socket F (2) and ground with MASTER SWITCH ON.
5. Is VTM reading within one volt of VTM reading for STE test 67?



**YES**

**NO**

**C4YN**

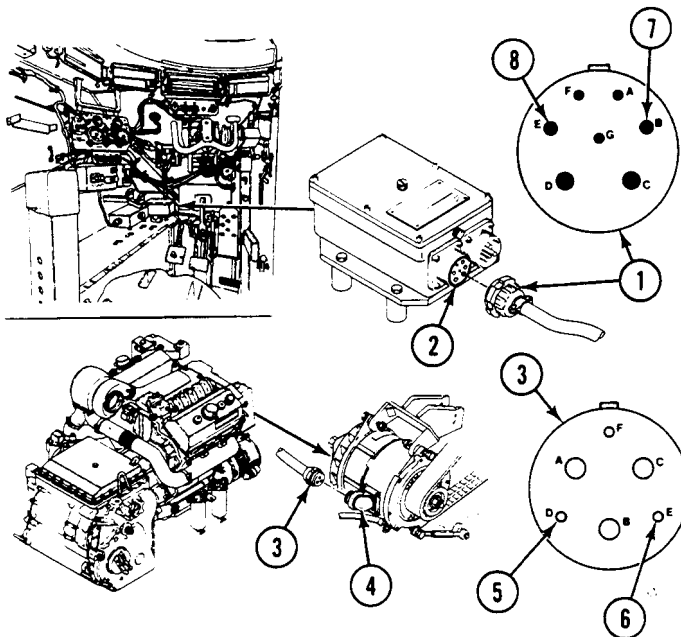
1. Faulty harness 12349881 circuit 1C. Beyond unit maintenance repair.
2. Notify supervisor.

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**C5Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349873 plug on harness 12349881 jack.
3. Remove harness 12349881 circuit 1/1A/2/2A plug (1) from regulator jack (2).
4. Remove harness 12349873 plug (3) from generator jack (4).
5. Install jumper wire between generator plug (3) sockets D (5) and E (6).
6. Measure resistance between harness 12349881 regulator plug (1) pins B (7) and E (8).
7. Does VTM read more than 0 ohms?



**NO**

**C5YN**

1. Remove jumper wire and install harness 12349873 plug on generator jack.
2. Replace regulator (WP 0257 00).
3. Verify no faults found.

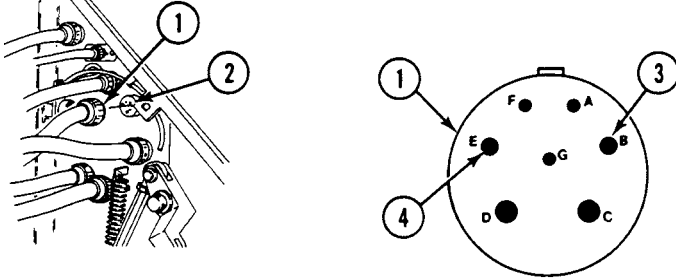
**YES**

**GENERATOR MALFUNCTIONS AS INDICATED BY BATTERY/GENERATOR INDICATOR—Continued**

0025 00

**C6Y**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at bulkhead.
2. Measure resistance between harness 12349873 plug (1) pins B (3) and E (4).
3. Does VTM read 0 ohms?



**NO**

**C6YN**

1. Remove jumper wire and install harness 12349873 plug on generator jack.
2. Faulty harness 12349873 circuit 1/1A. Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

**C7Y**

1. Remove jumper wire and install harness 12349873 plug on generator jack.
2. Faulty harness 12349881 circuit 1/1A. Beyond unit maintenance repair.
3. Notify supervisor.



**ENGINE OIL LOW PRESSURE INDICATOR COMES ON**

**0026 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Pressure Test Kit (WP 0926 00, Item 35)

Personnel Required

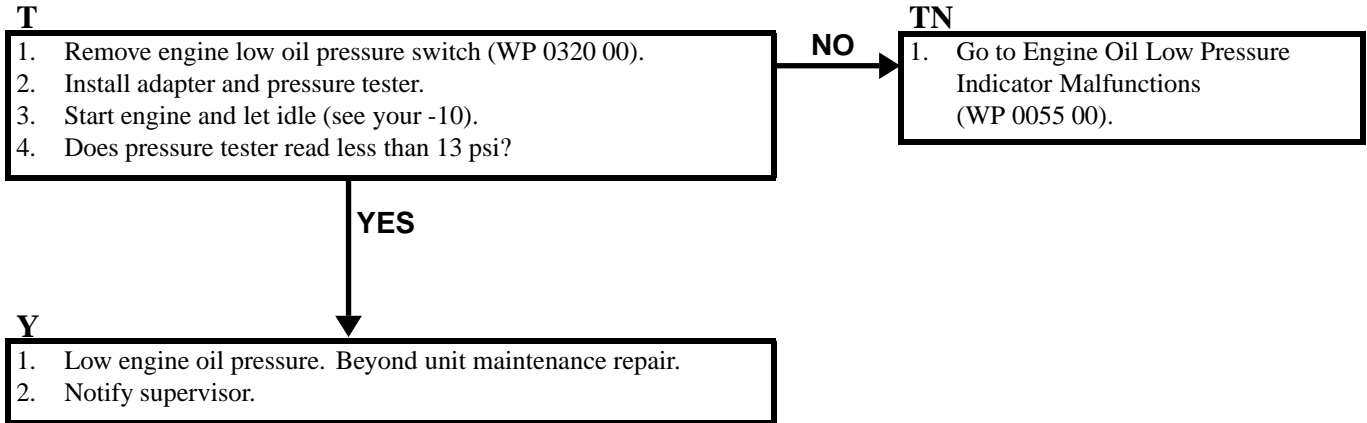
Unit Mechanic 63T10

References

See your -10

Equipment Condition

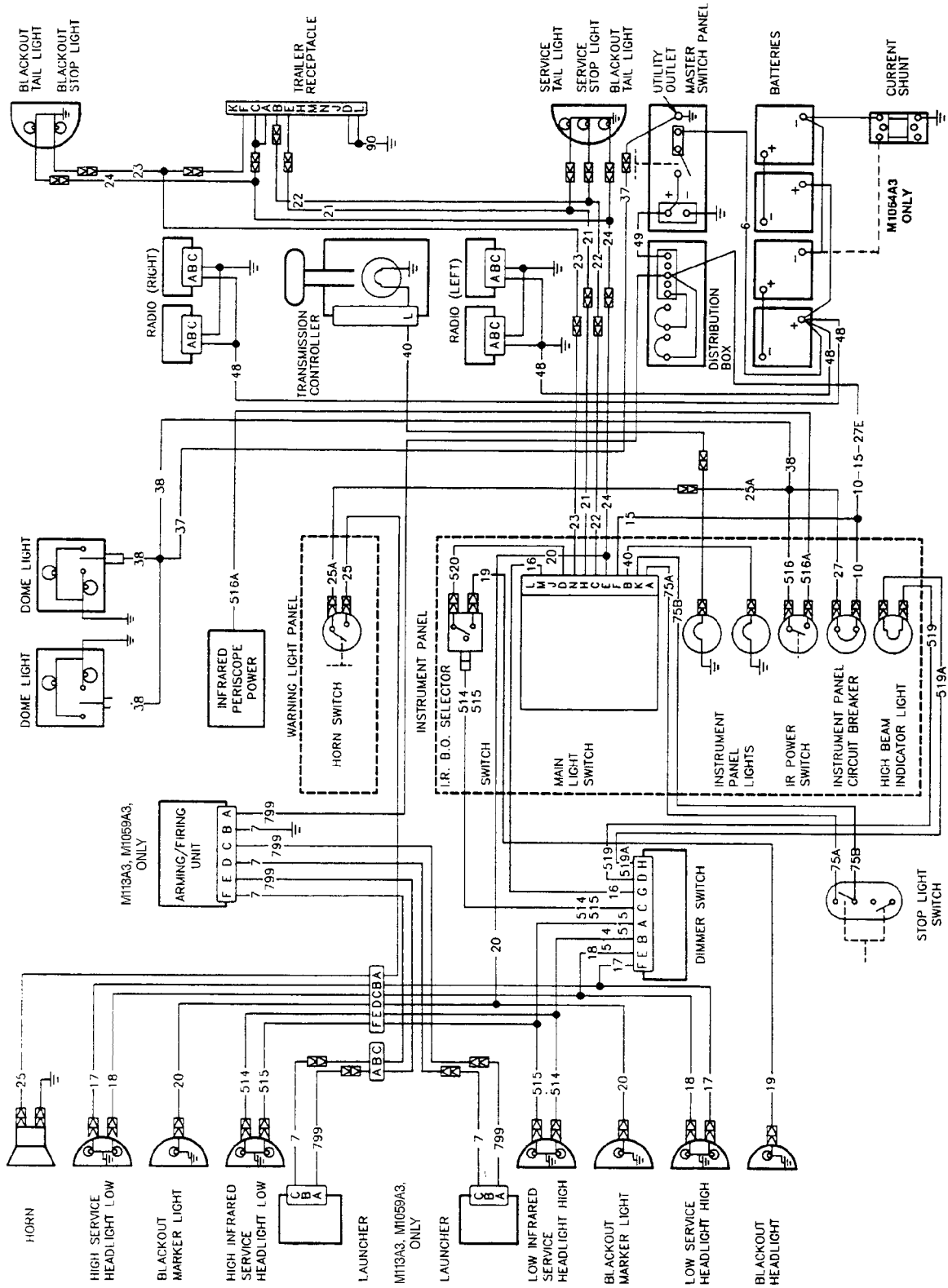
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Engine warm
- Transmission in SL
- Engine oil level checked (WP 0155 00)
- Engine idle speed checked (WP 0118 00)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)





ELECTRICAL SCHEMATIC

0027 00





**NO EXTERIOR LIGHTS OPERATE**

**0029 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)

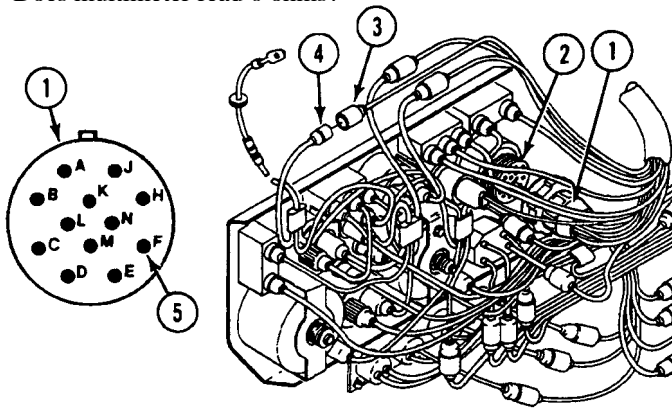
Carrier blocked (see your -10)

Personnel Required

Unit Mechanic 63T10

**T**

1. Remove instrument panel for access. See task: remove instrument panel mounts and ground lead (WP 0295 00).
2. Remove harness 12349881 plug (1) from lighting control switch (2).
3. Remove harness 12349881 circuit 15 plug (3) from harness 10933038 circuit 15 jack (4).
4. Measure resistance between harness 12349881 circuit 15 plug (3) and lighting control switch plug (1) pin F (5).
5. Does multimeter read 0 ohms?



**NO**

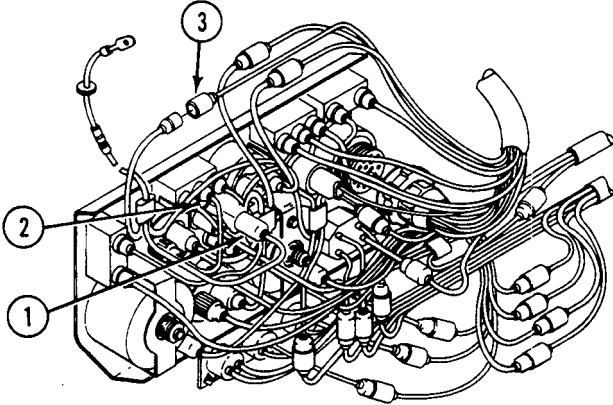
**TN**

1. Repair circuit 15 (WP 0382 00).
2. Verify no faults found.

**YES**

**Y**

1. Remove harness 10933038 circuit 10 plug (1) from instrument panel circuit breaker (2).
2. Measure resistance between harness 10933038 circuit 15 plug (3) and circuit 10 plug (1).
3. Does multimeter read 0 ohms?



**NO**

**YN**

1. Install harness 12349881 lighting control switch plug on switch.
2. Replace harness 10933038 (WP 0289 00).
3. Verify no faults found.

**YES**

**2Y**

1. Install harness 10933038 circuit 10 and 15 plugs.
2. Replace lighting control switch (WP 0282 00).
3. Verify no faults found.

**BLACKOUT DRIVE LIGHT DOESN'T WORK**

**0030 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

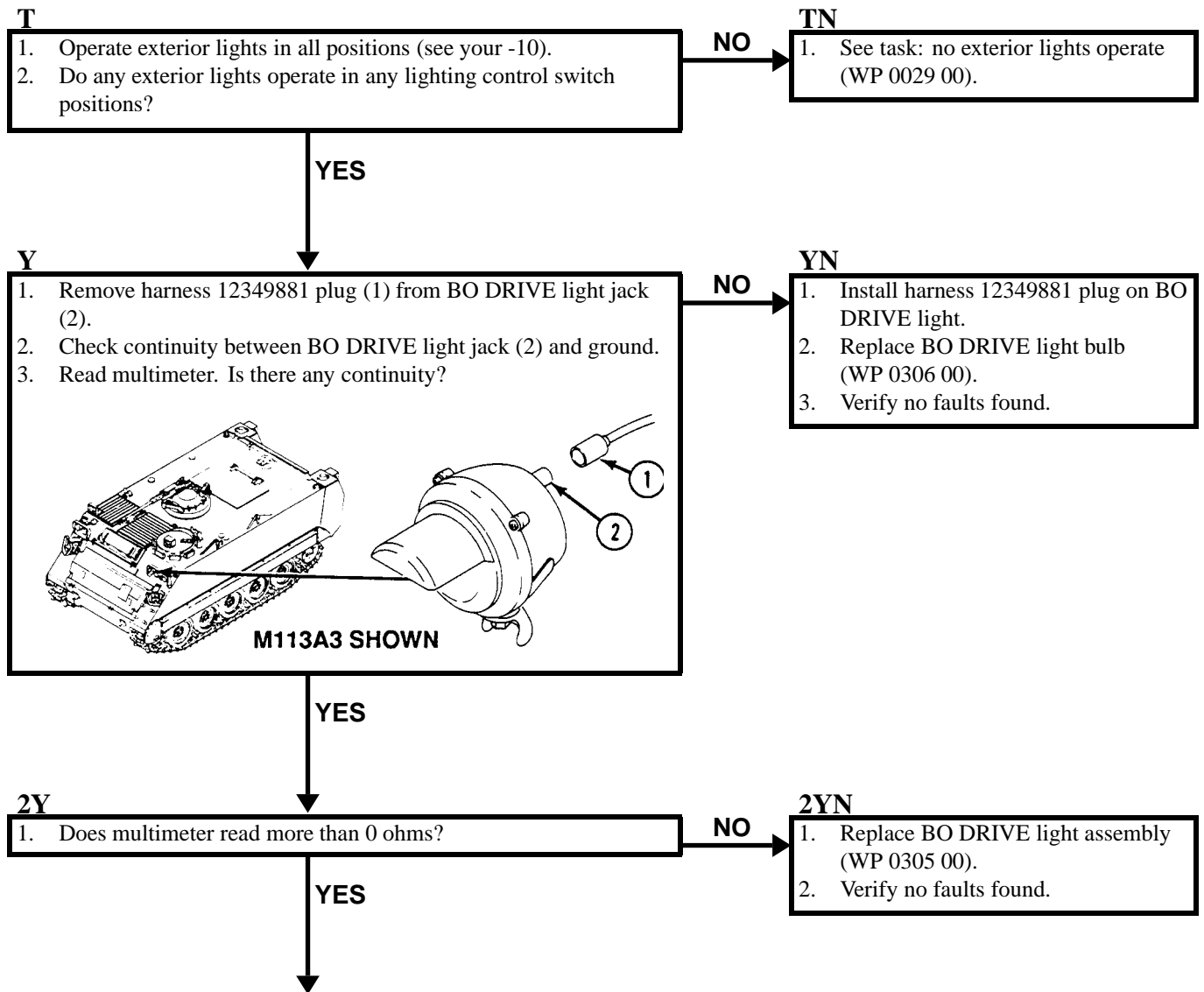
- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- IR/BO selector on BO

Personnel Required

- Unit Mechanic 63T10
- Helper (H)

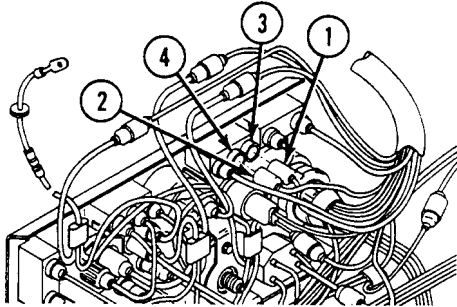


BLACKOUT DRIVE LIGHT DOESN'T WORK—Continued

0030 00

**3Y**

1. Install harness 12349881 plug on BO DRIVE light.
2. Remove instrument panel for access. See task: remove instrument panel mounts and ground lead (WP 0295 00).
3. Remove harness 12349881 circuit 19 (1) and 520 (2) from IR/BO selector jacks (3) and (4).
4. Measure resistance between IR/BO selector jack (3) and (4).
5. Does multimeter read 0 ohms?



NO

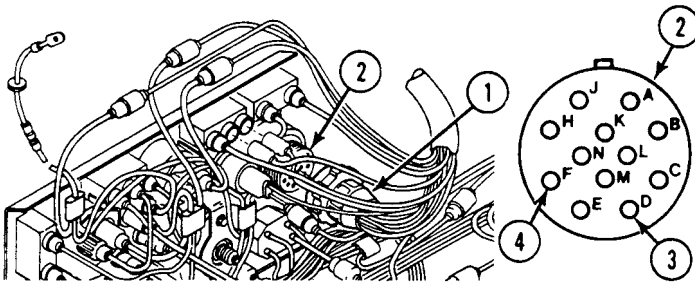
**3YN**

1. Install harness 12349881 plug on BO DRIVE light.
2. Replace IR/BO selector switch (WP 0282 00).
3. Verify no faults found.

YES

**4Y**

1. Remove harness 12349881 plug (1) from light control switch jack (2).
2. Turn switch to BO DRIVE.
3. Measure resistance between light control switch jack (2) pins D (3) and F (4).
4. Does multimeter read 0 ohms?



NO

**4YN**

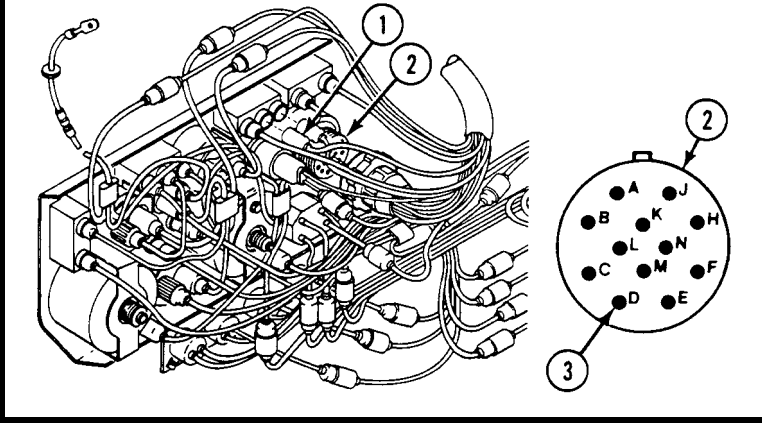
1. Install harness 12349881 plugs on IR/BO selector switch jacks.
2. Replace lighting control switch (WP 0282 00).
3. Verify no faults found.

YES



**5Y**

1. Measure resistance between harness 12349881 circuit 520 plug (1) and lighting control switch plug (2) pin D (3).
2. Does multimeter read 0 ohms?



NO

**5YN**

1. Install harness 12349881 circuit 19 plug on IR/BO selector switch jack.
2. Install harness 12349881 plug on light control switch jack.
3. Repair circuit 520 (WP 0382 00).
4. Verify no faults found.

YES

**6Y**

1. Install harness 12349881 circuit 520 plug on IR/BO selector switch jack.
2. Install harness 12349881 plug on light control switch jack.
3. Repair circuit 19.
4. Verify no faults found.

YES



**SERVICE HEADLIGHTS DON'T WORK**

**0031 00**

**INITIAL SETUP:**

Maintenance Level  
Unit

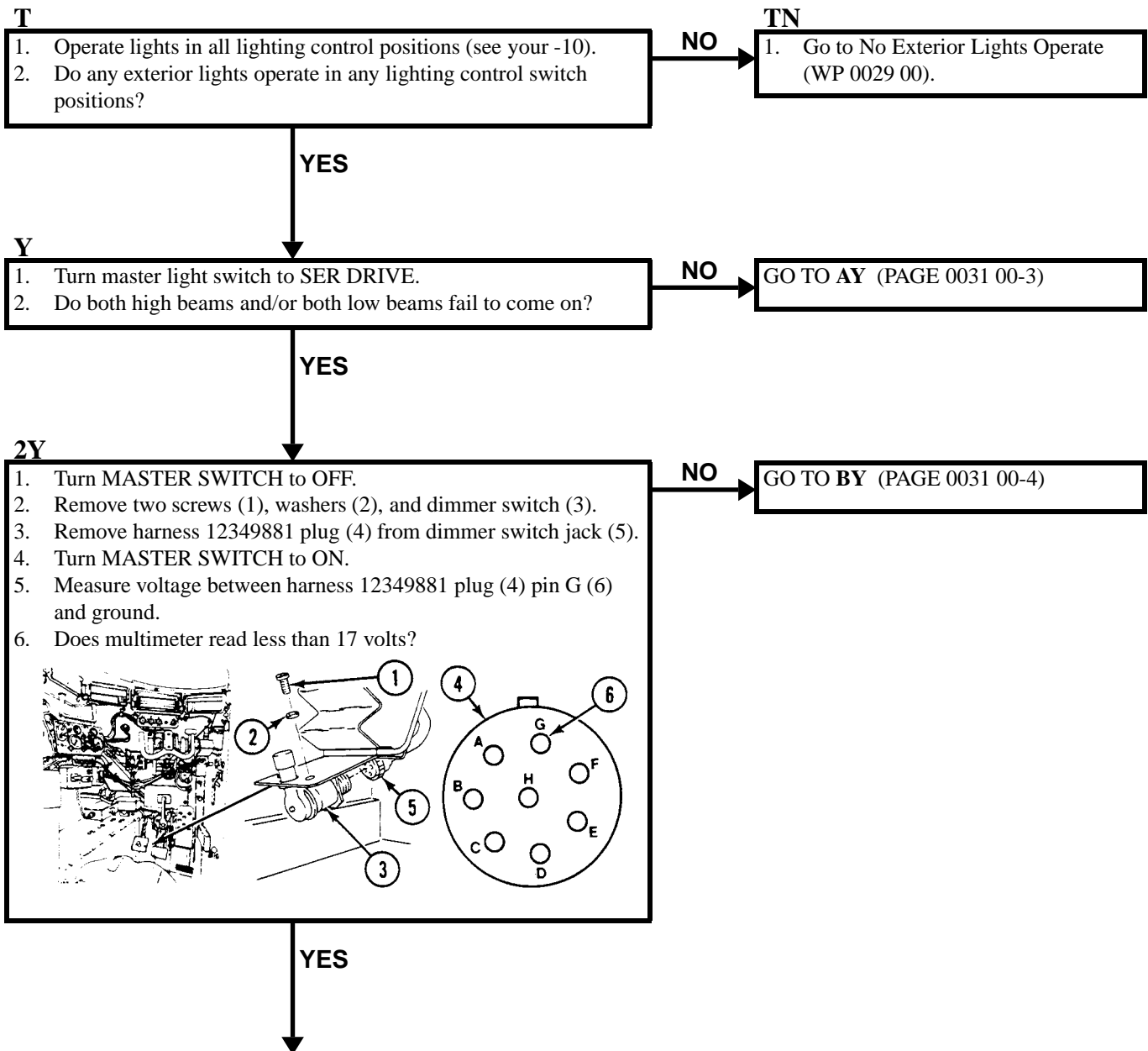
References  
See your -10

Tools and Special Tools  
General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

Equipment Condition

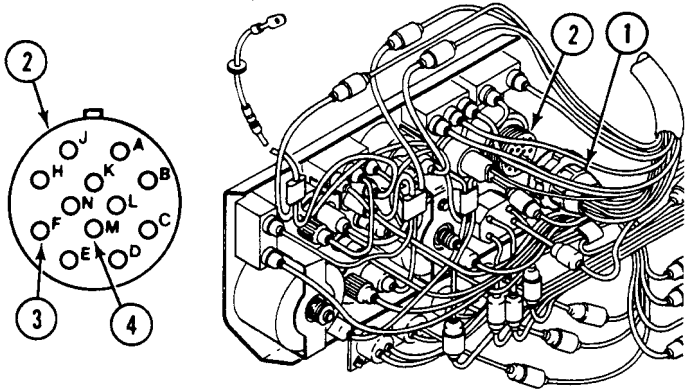
Personnel Required  
Unit Mechanic 63T10

Engine stopped (see your -10)  
Carrier blocked (see your -10)



**3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access. See task: remove instrument panel mounts and ground lead (WP 0295 00).
3. Remove harness 12349881 plug (1) from lighting control switch jack (2).
4. Measure resistance between lighting control switch jack (2) pins F (3) and M (4).
5. Does multimeter read 0 ohms?



NO

**3YN**

1. Install dimmer switch and harness 12349881 plug on dimmer switch jack.
2. Replace lighting control switch (WP 0283 00).
3. Verify no faults found.

YES

**4Y**

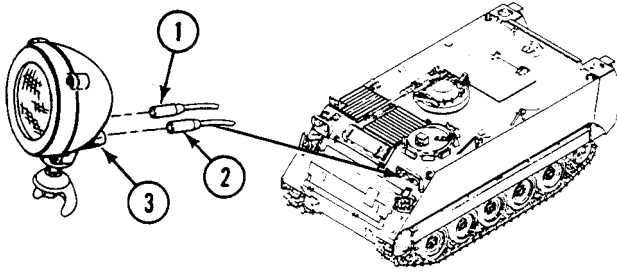
1. Faulty harness 12349881 circuit 16. Beyond unit maintenance repair.
2. Notify supervisor.

SERVICE HEADLIGHTS DON'T WORK—Continued

0031 00

**A1Y**

1. Remove circuit 17 (high beam) plug (1) or circuit 18 (low beam) plug (2) from failing service headlight jack (3).
2. Measure voltage between harness 12349881 circuit 17 plug (1) or circuit 18 plug (2) and ground.
3. Does multimeter read less than 17 volts?



**NO**

**A1YN**

1. Replace service headlight bulb (WP 0303 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Is failing headlight located on right side of carrier?

**NO**

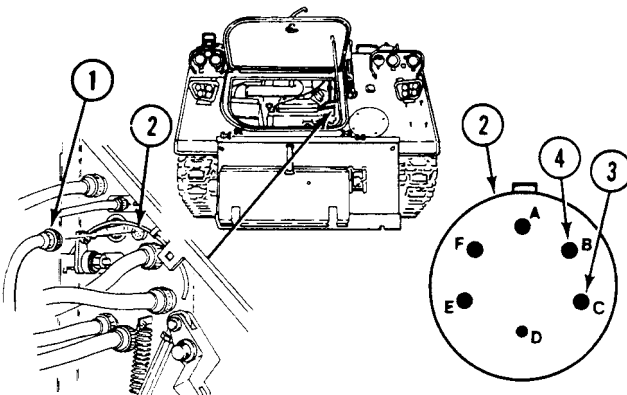
**A2YN**

1. Repair circuit 514 or 515 between left IR headlight and dimmer switch (WP 0382 00).
2. Verify no faults found.

**YES**

**A3Y**

1. Remove harness 8763491 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Measure voltage between harness 12349881 jack (2) pin C (low beam) (3) or pin B (high beam) (4) and ground.
3. Does multimeter read less than 17 volts?



**NO**

**A3YN**

1. Replace faulty harness 8763491 (WP 0373 00).
2. Verify no faults found.

**YES**

SERVICE HEADLIGHTS DON'T WORK—Continued

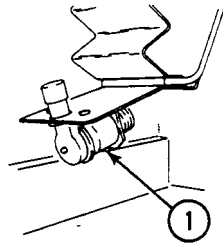
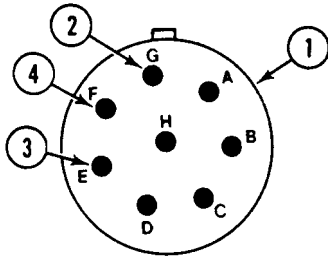
0031 00

**A4Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 8763491 circuit 17 (high beam) or 18 (low beam) on service headlight.
3. Faulty harness 12349881 circuit 17 or 18 between bulkhead and dimmer switch. Beyond unit maintenance repair.
4. Notify supervisor.

**BY**

1. Measure resistance between dimmer switch jack (1) pins G (2) and E (3) and between pins G (2) and F (4). Use multimeter. Multimeter should read 0 ohms once and infinity once.
2. Click dimmer switch and check continuity between dimmer switch jack (1) pins G (2) and E (3) and between pins G (2) and F (4). Multimeter should read infinity once and 0 ohms once.
3. Is dimmer switch working properly?



NO

**BYN**

1. Replace headlight high beam selector switch (WP 0333 00).
2. Verify no faults found.

YES

**B2Y**

1. Faulty harness 12349881 circuit 18 (low beam) or circuit 17 (high beam). Beyond unit maintenance repair.
2. Notify supervisor.

**INFRARED HEADLIGHT(S) DON'T WORK**

**0032 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

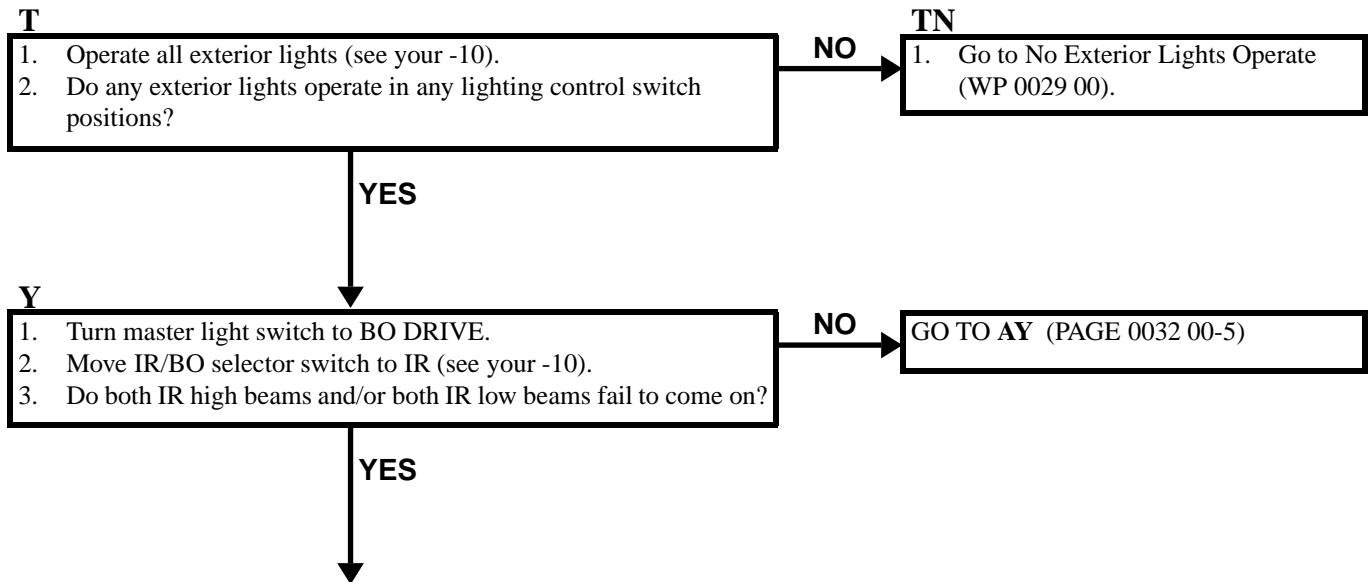
Engine stopped (see your -10)

Personnel Required

Unit Mechanic 63T10

Helper (H)

Carrier blocked (see your -10)

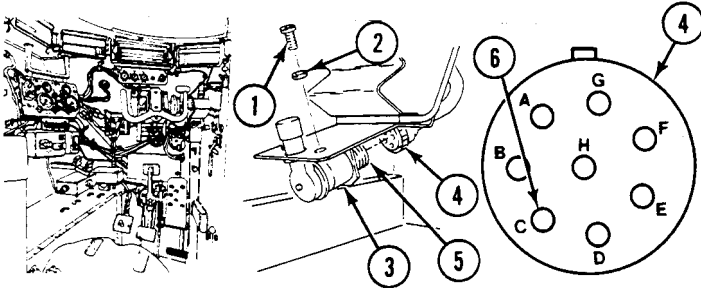


**2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove two screws (1), washers (2), and dimmer switch (3).
3. Remove harness 12349881 plug (4) from dimmer switch jack (5).
4. Turn MASTER SWITCH to ON.
5. Measure voltage between harness 12349881 plug (4) pin C (6) and ground.
6. Does multimeter read less than 17 volts?

NO

GO TO BY (PAGE 0032 00-6)



YES

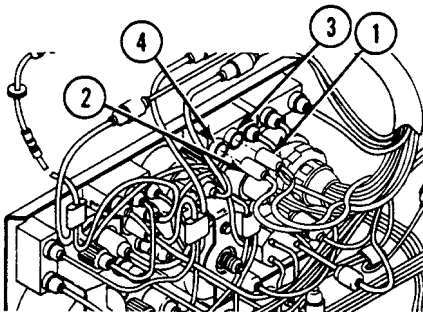
**3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access. See task: remove instrument panel mounts and ground lead (WP 0295 00).
3. Remove harness 12349881 514/515 (1) and 520 (2) from IR/BO selector switch jacks (3) and (4).
4. Measure resistance between IR/BO selector switch jacks (3) and (4).
5. Does multimeter read 0 ohms?

NO

**3YN**

1. Install dimmer switch and harness 12349881 plug on dimmer switch.
2. Replace IR/BO selector switch (WP 0282 00).
3. Verify no faults found.

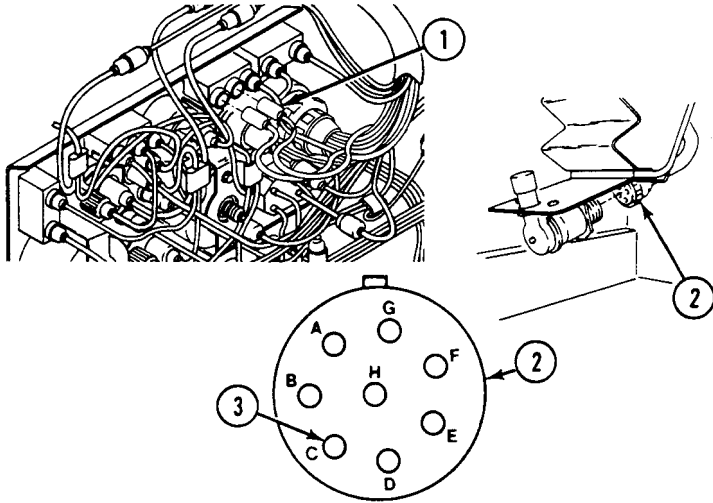


YES



**4Y**

1. Measure resistance between harness 12349881 circuit 514/515 selector switch plug (1) and dimmer switch plug (2) pin C (3).
2. Does multimeter read 0 ohms?



YES



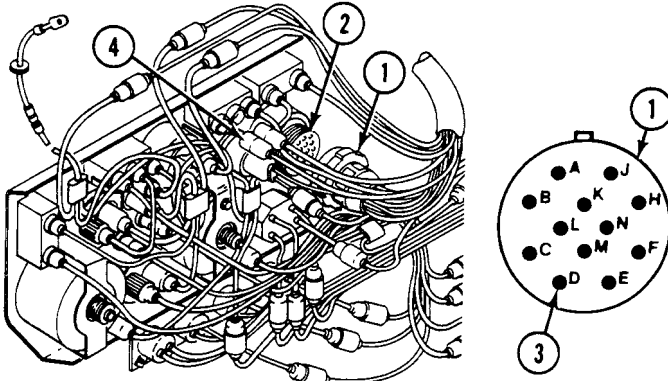
NO

**4YN**

1. Install dimmer switch and harness 12349881 plug on dimmer switch.
2. Repair circuit 514/515 (WP 0382 00).
3. Verify no faults found.

**5Y**

1. Install dimmer switch and wiring harness 12349881 plug on dimmer switch.
2. Install wiring harness 12349881 circuit 514/515 plug on IR/BO selector switch jack.
3. Remove harness 12349881 plug (1) from lighting control switch jack (2).
4. Measure resistance between wiring harness 12349881 lighting control switch plug (1) pin D (3) and IR/BO selector circuit 520 plug (4).
5. Does multimeter read 0 ohms?



**NO**

**5YN**

1. Faulty harness 12349881 circuit 520. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**6Y**

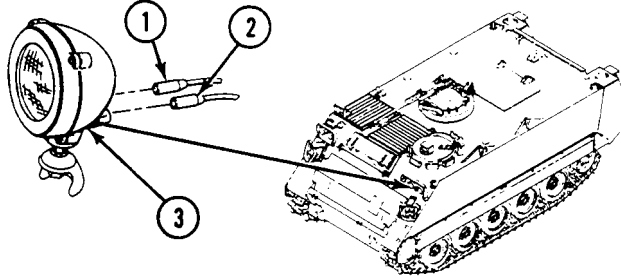
1. Install circuit 520 plug on IR/BO selector switch.
2. Replace lighting control switch (WP 0283 00).
3. Verify no faults found.

INFRARED HEADLIGHT(S) DON'T WORK—Continued

0032 00

**AY**

1. Remove circuit 514 (high beam) plug (1) or 515 (low beam) plug (2) from failing IR service headlight (3).
2. Measure voltage between harness 12349881 circuit 514 plug (1) or 515 plug (2) and ground.
3. Does multimeter read less than 17 volts?



**NO**

**AYN**

1. Replace IR service headlight bulb (WP 0303 00) or (WP 0304 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Is failing IR headlight located on right side of carrier?

**NO**

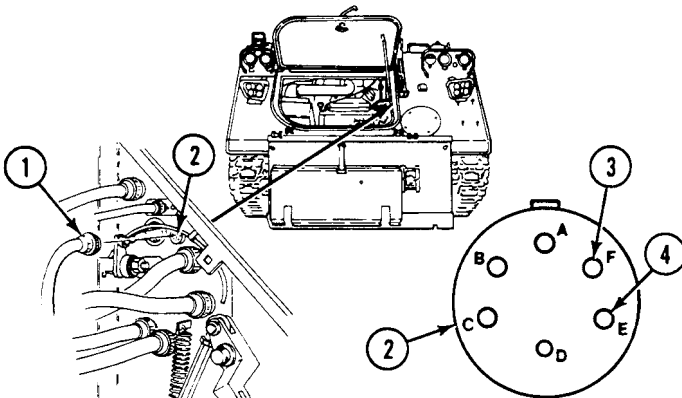
**A2YN**

1. Repair circuit 514 or 515 between left IR head light and dimmer switch (WP 0382 00).
2. Verify no faults found.

**YES**

**A3Y**

1. Remove harness 8763491 plug (1) from harness 12349881 jack (2) at bulk head.
2. Measure voltage between harness 12349881 jack (2) pin F (low beam) (3) or pin E (high beam) (4) and ground.
3. Does multimeter read less than 17 volts?



**NO**

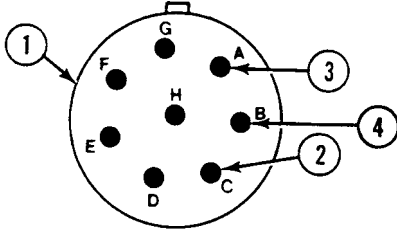
**A3YN**

1. Faulty harness 8763491. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**BY**

1. Install harness 8763491 circuit 514 or 515 plug on IR head light.
2. Measure resistance between dimmer switch jack (1) pins C (2) to A (3) and between pins C (2) to B (4). Multimeter should read 0 ohms once and infinity once.
3. Click dimmer switch and repeat above test. Multimeter should read infinity once and 0 ohms once.
4. Is dimmer switch working properly?



**NO**

**BYN**

1. Replace dimmer switch (WP 0333 00).
2. Verify no faults found.

**YES**

**B2Y**

1. Faulty harness 12349881 circuit 514 or 515. Beyond unit maintenance repair.
2. Notify supervisor.

**SERVICE AND/OR BLACKOUT STOP LIGHTS MALFUNCTION**

**0033 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

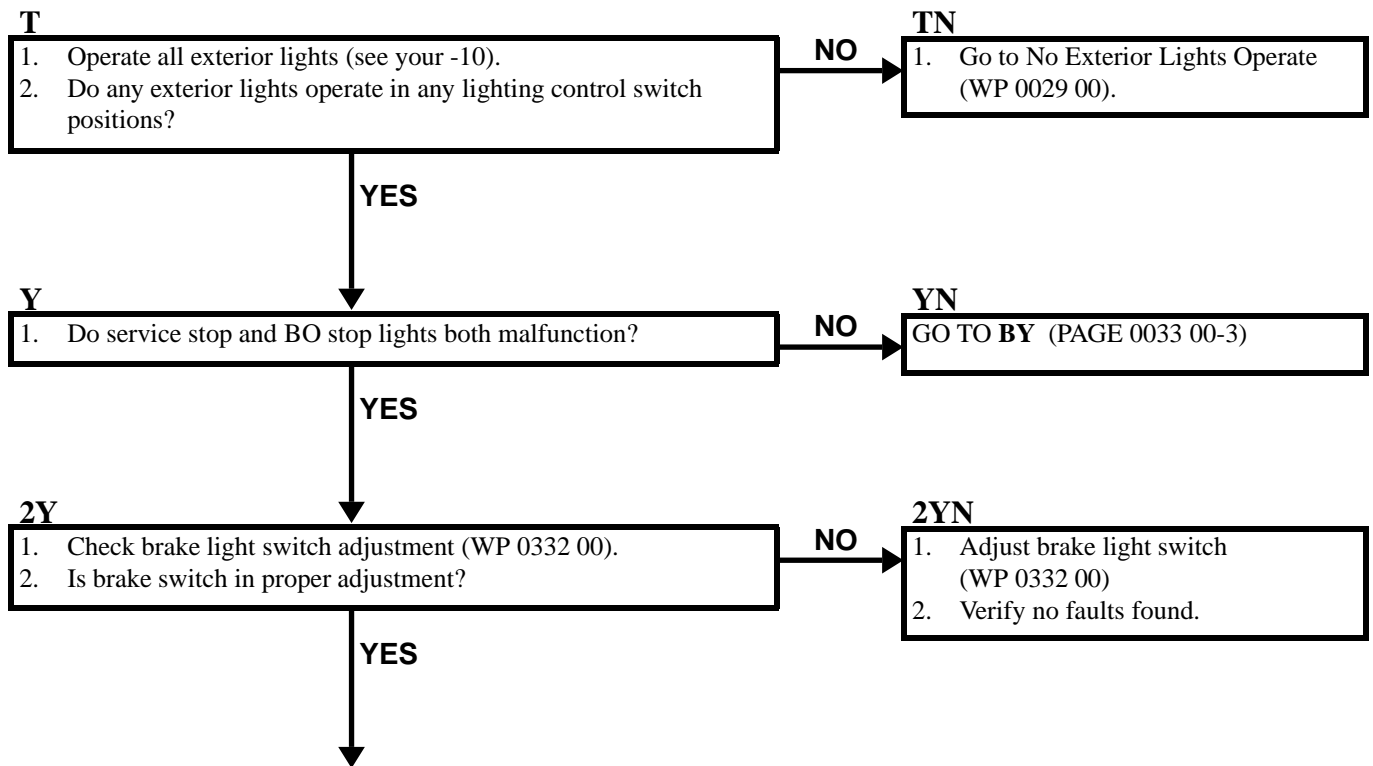
General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
Ramp lowered (see your -10)

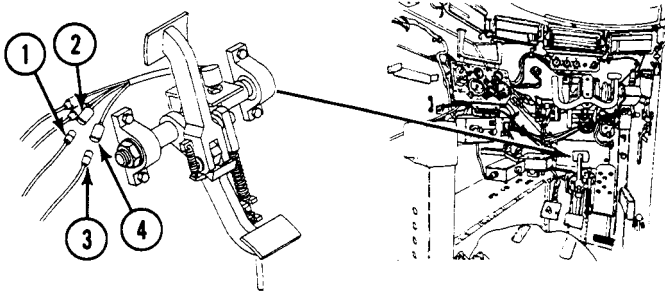
Personnel Required

Unit Mech 63T10  
Helper (H)



**3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove harness 12349881 circuit 75A plug (1) from switch jack (2).
3. Remove harness 12349881 circuit 75B plug (3) from switch jack (4).
4. Measure resistance between switch jacks (2) and (4) with switch depressed and with switch released.
5. Does multimeter read infinity with switch depressed and 0 ohm with switch released?



NO

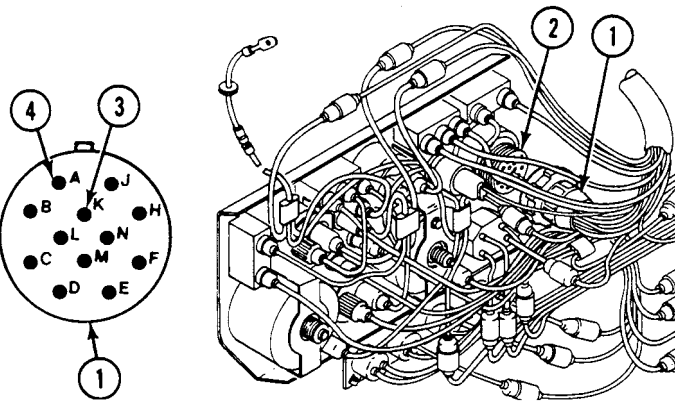
**3YN**

1. Replace brake light switch (WP 0332 00).
2. Verify no faults found.

YES

**4Y**

1. Install harness 12349881 circuit leads 75A and 75B on stop sensitive switch.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 plug (1) from lighting control switch jack (2).
4. Measure resistance between harness 12349881 plug (1) pins K (3) and A (4) with brake pedal depressed.
5. Does multimeter read less than 0 ohm?



NO

**4YN**

1. Faulty harness 12349881 circuit 75A and/or 75B. Beyond unit maintenance repair.
2. Notify supervisor.

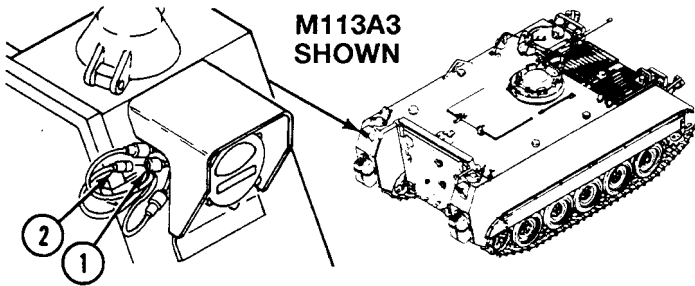
YES

**5Y**

1. Replace main light switch (WP 0283 00).
2. Verify no faults found.

**BY**

1. Remove harness 12268797 circuit 22 plug (1) from jack (2) on malfunctioning left tail light, or circuit 23 plug from jack on malfunctioning right tail light.
2. Turn main switch on lighting control to STOP or to BO.
3. Measure voltage between circuit 22 (left) plug (1) or circuit 23 (right) plug and ground with brake pedal depressed.
4. Does multimeter read less than 17 volts?



NO

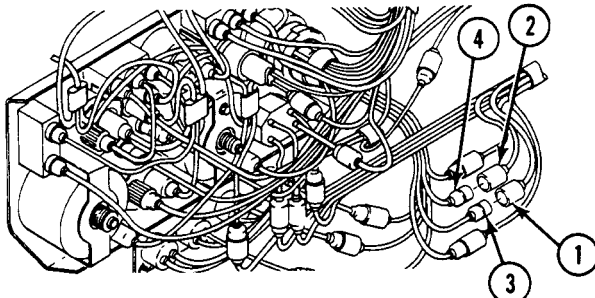
**BYN**

1. Install harness 12268797 jack on tail light.
2. Replace service stop or BO stop light bulb (WP 0301 00) or (WP 0302 00).
3. Verify no faults found.

YES

**B2Y**

1. Remove harness 12268797 circuit 22 plug (left) (1) or circuit 23 plug (right) (2) from harness 12349881 circuit 22 jack (3) or circuit 23 jack (4).
2. Measure voltage between harness 12349881 circuit 22 jack (2) or circuit 23 jack (3) and ground.
3. Does multimeter read less than 17 volts?



NO

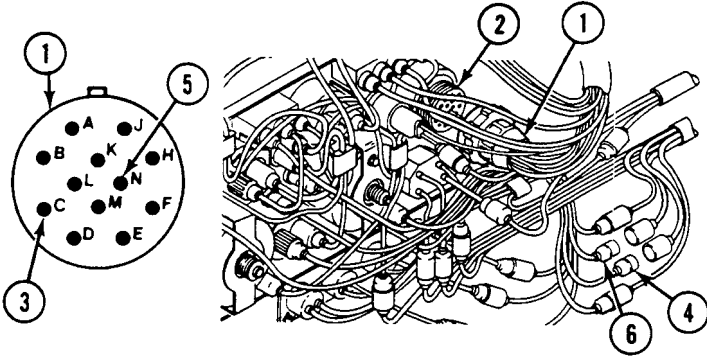
**B2YN**

1. Repair circuit 22 or 23 (WP 0382 00).
2. Verify no faults found.

YES

**B3Y**

1. Remove instrument panel for access (WP 0295 00).
2. Remove harness 12349881 plug (1) from lighting control switch (2).
3. Measure resistance between lighting control switch plug (1) pin C (3) to circuit 22 (service stop) jack (4) or pin N (5) to circuit 23 (BO stop) jack (6).
4. Does multimeter read 0 ohm?



NO

**B3YN**

1. Install harness 12268797 on tail light.
2. Faulty harness 12349881 circuit 22 or 23. Beyond unit maintenance repair.
3. Notify supervisor.

YES

**B4Y**

1. Install harness 12268797 plugs on harness 12349881 jack and tail light.
2. Replace main light switch (WP 0283 00).
3. Verify no faults found.



**BLACKOUT MARKER LIGHT(S) DON'T WORK**

**0034 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

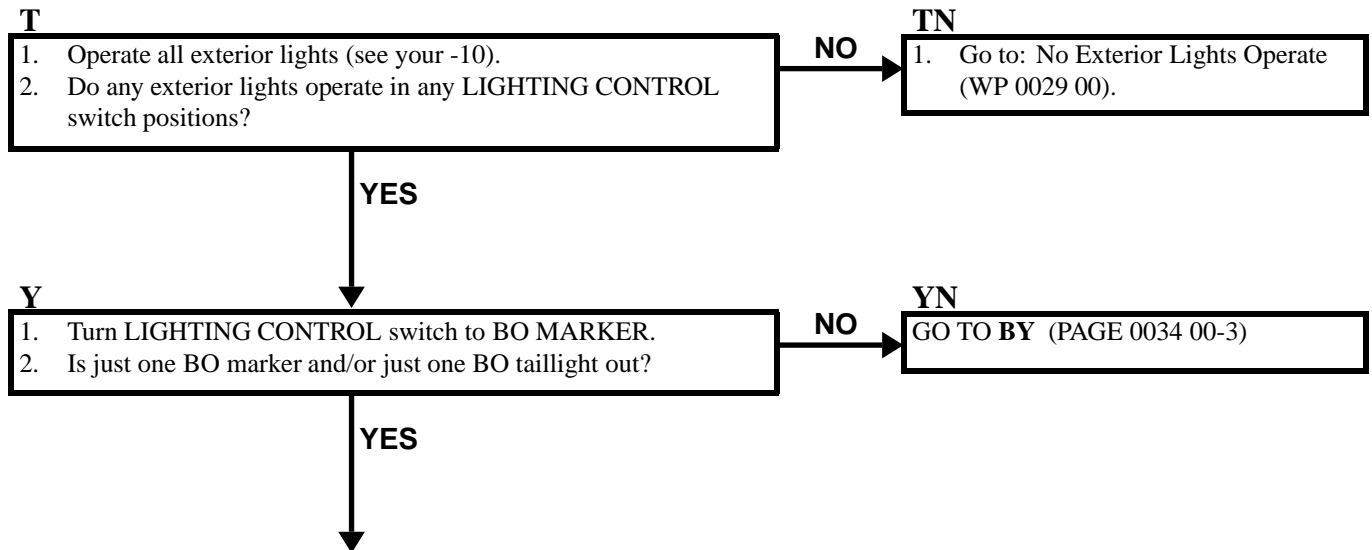
Equipment Condition

Engine stopped (see your -10)

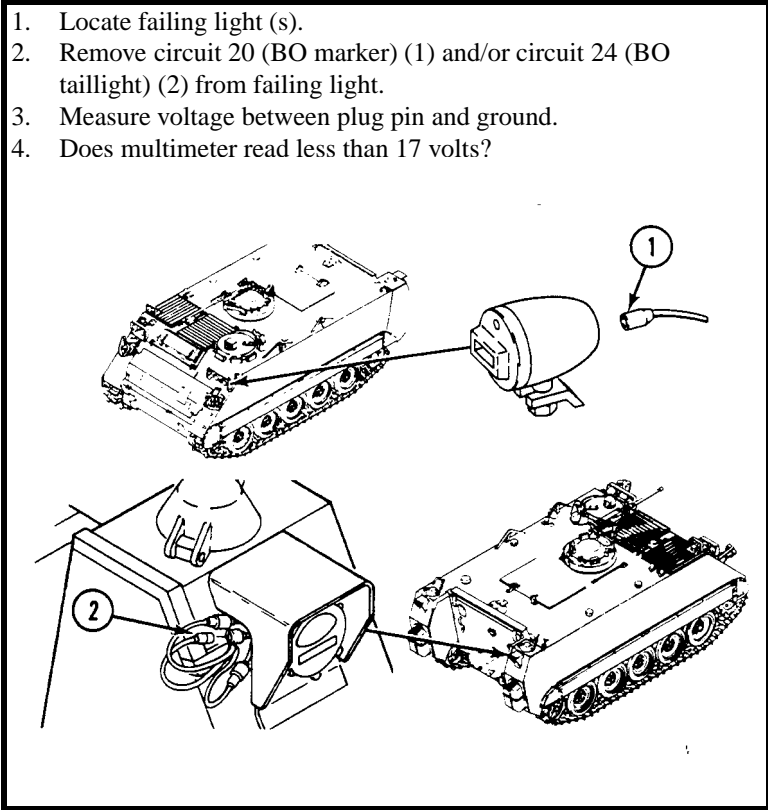
Personnel Required

Unit Mech 63T10  
Helper (H)

Vehicle blocked (see your -10)



- 2Y**
1. Locate failing light (s).
  2. Remove circuit 20 (BO marker) (1) and/or circuit 24 (BO taillight) (2) from failing light.
  3. Measure voltage between plug pin and ground.
  4. Does multimeter read less than 17 volts?
- 2YN**
1. Replace faulty light bulb: BO marker (WP 0308 00), left BO taillight (WP 0300 00), and right BO taillight (WP 0302 00).
  2. Verify no faults found.

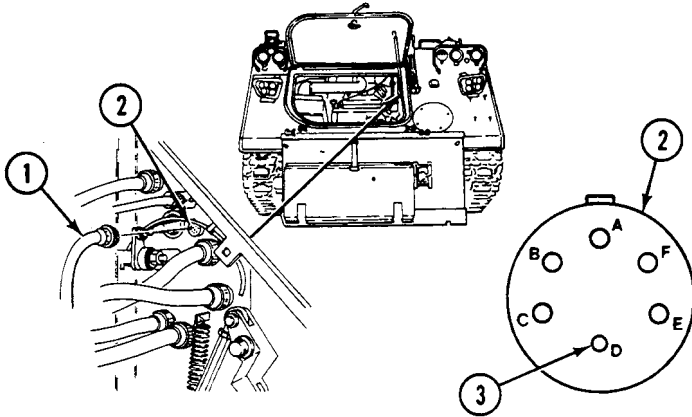


- YES**
- 3Y**
1. Is one front BO marker light not working?
- 3YN**
1. Repair harness 12268797 circuit 24 (WP 0382 00).
  2. Verify no faults found.

- YES**
- 4Y**
1. Is right BO marker light out?
- 4YN**
1. Repair harness 12349881 circuit 20 (WP 0382 00).
  2. Verify no faults found.

**5Y**

1. Remove harness 8763491 plug (1) from harness 12349881 jack (2) at vehicle bulkhead.
2. Measure voltage between harness 12349881 jack (2), pin D (3), and ground.
3. Does multimeter read less than 17 volts?



NO

**5YN**

1. Replace harness 8763491 (WP 0373 00).
2. Verify no faults found.

YES

**6Y**

1. Install harness 8763491 circuit 20 jack on right BO marker light.
2. Faulty harness 12349881 circuit 20. Beyond unit maintenance repair.
3. Notify supervisor.

**BY**

1. Are only both BO taillights out or only both BO markers out?

NO

**BYN**

GO TO CY (PAGE 0034 00-5)

YES

**B2Y**

1. Are both BO taillights out?

NO

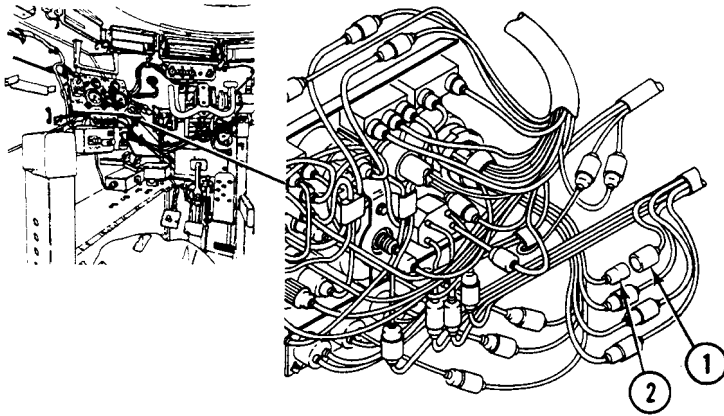
**B2YN**

1. Faulty harness 12349881 circuit 20. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**B3Y**

1. Remove harness 12268797 circuit 24 plug (1) from harness 12349881 circuit 24 jack (2).
2. Measure voltage between harness 12349881 jack pin (2) and ground.
3. Does multimeter read less than 17 volts?



NO

**B3YN**

1. Repair harness 12268797 circuit 24 (WP 0382 00).
2. Verify no faults found.

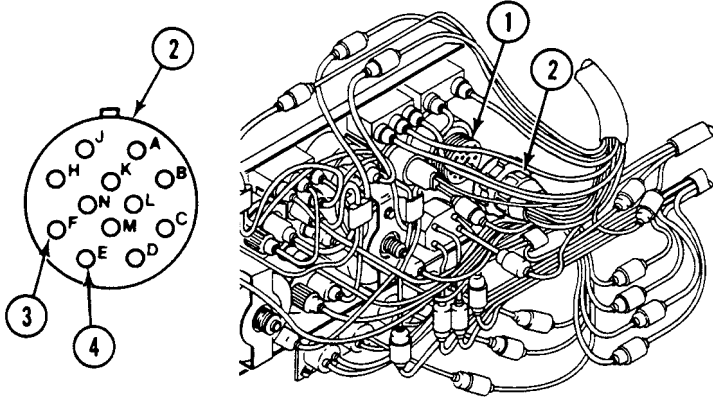
YES

**B4Y**

1. Faulty harness 12349881 circuit 24. Beyond unit maintenance repair.
2. Notify supervisor.

**CY**

1. Turn MASTER SWITCH OFF.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 plug (2) from LIGHTING CONTROL switch jack (1).
4. Measure resistance between LIGHTING CONTROL switch jack (2), pins F (3) and E (4).
5. Does multimeter read 0 ohms?



NO

**CYN**

1. Replace LIGHTING CONTROL switch (WP 0283 00).
2. Verify no faults found.

YES

**C2Y**

1. Faulty harness 12340991 circuit 20/24. Beyond unit maintenance repair.
2. Notify supervisor.



**SERVICE TAILLIGHT DOESN'T WORK**

**0035 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Equipment Condition

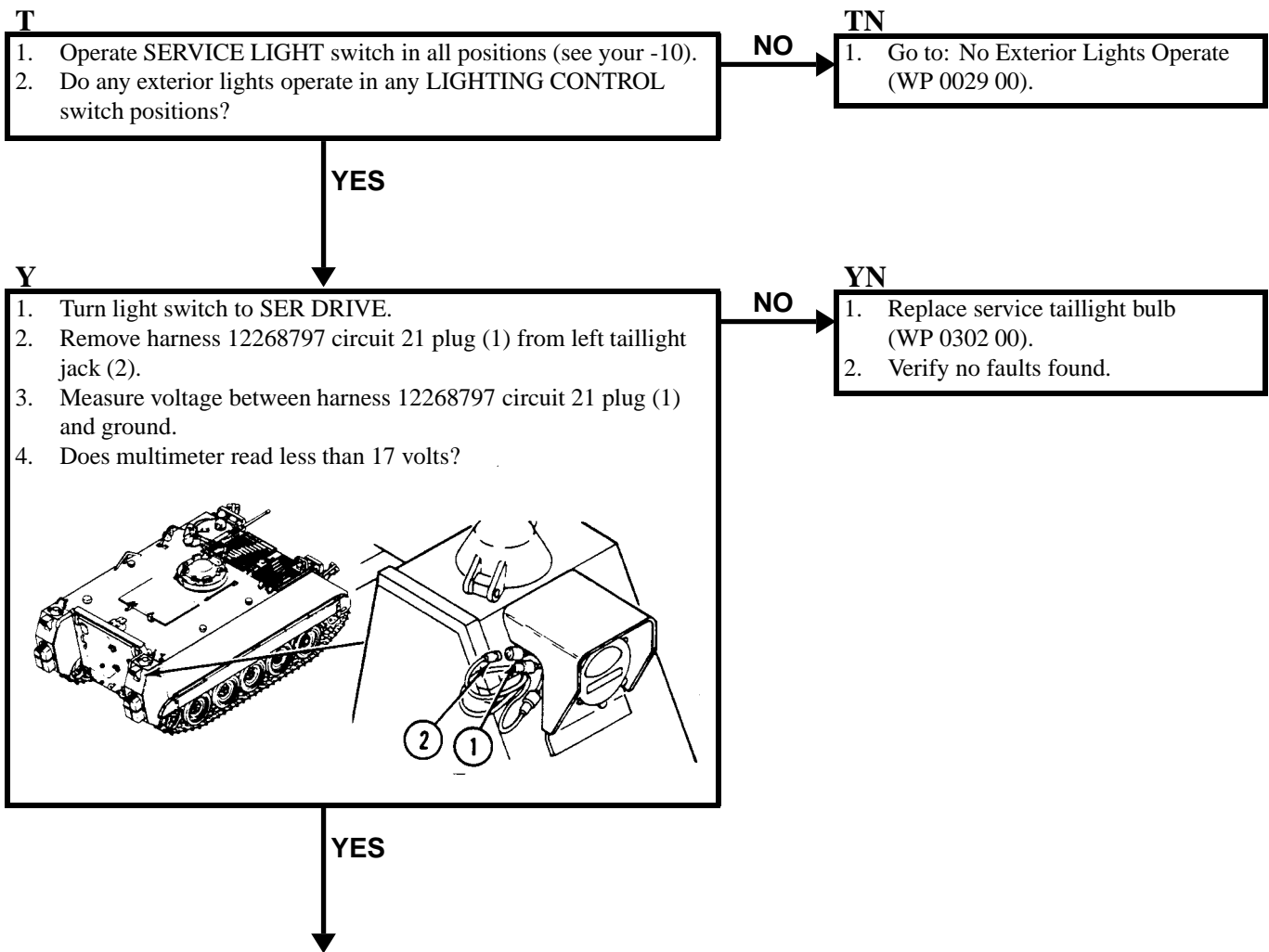
Engine stopped (see your -10)

Vehicle blocked (see your -10)

Personnel Required

Unit Mech 63T10

Helper (H)

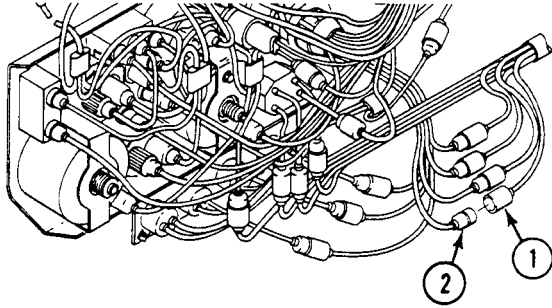


SERVICE TAILLIGHT DOESN'T WORK—Continued

0035 00

**2Y**

1. Remove harness 12268797 circuit 21 plug (1) from harness 12349881 circuit 21 jack (2) on panel.
2. Measure voltage between harness 12349881 jack (2) and ground.
3. Does multimeter read less than 17 volts?



NO

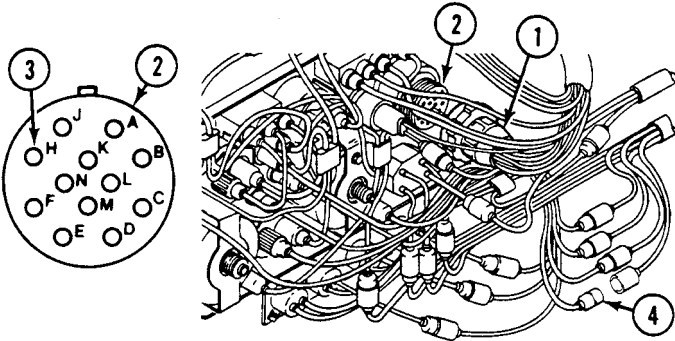
**2YN**

1. Repair harness 12268797 circuit 21 (WP 0382 00).
2. Verify no faults found.

YES

**3Y**

1. Turn MASTER SWITCH OFF.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 plug (1) from LIGHTING CONTROL switch jack (2)
4. Measure resistance between LIGHTING CONTROL switch jack (1), pin H (2), and circuit 21 jack (4).
5. Does multimeter read 0 ohms?



NO

**3YN**

1. Install harness 1268797 circuit 21 plug on left taillight jack.
2. Faulty harness 12349881 circuit 21. Beyond unit maintenance repair.
3. Notify supervisor.

YES

**4Y**

1. Install harness 1268797 circuit 21 plug on left taillight jack.
2. Replace main light switch (WP 0283 00).
3. Verify no faults found.



**TRAILER LIGHTS DON'T WORK**

**0036 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
Trailer TM

Tools and Special Tools

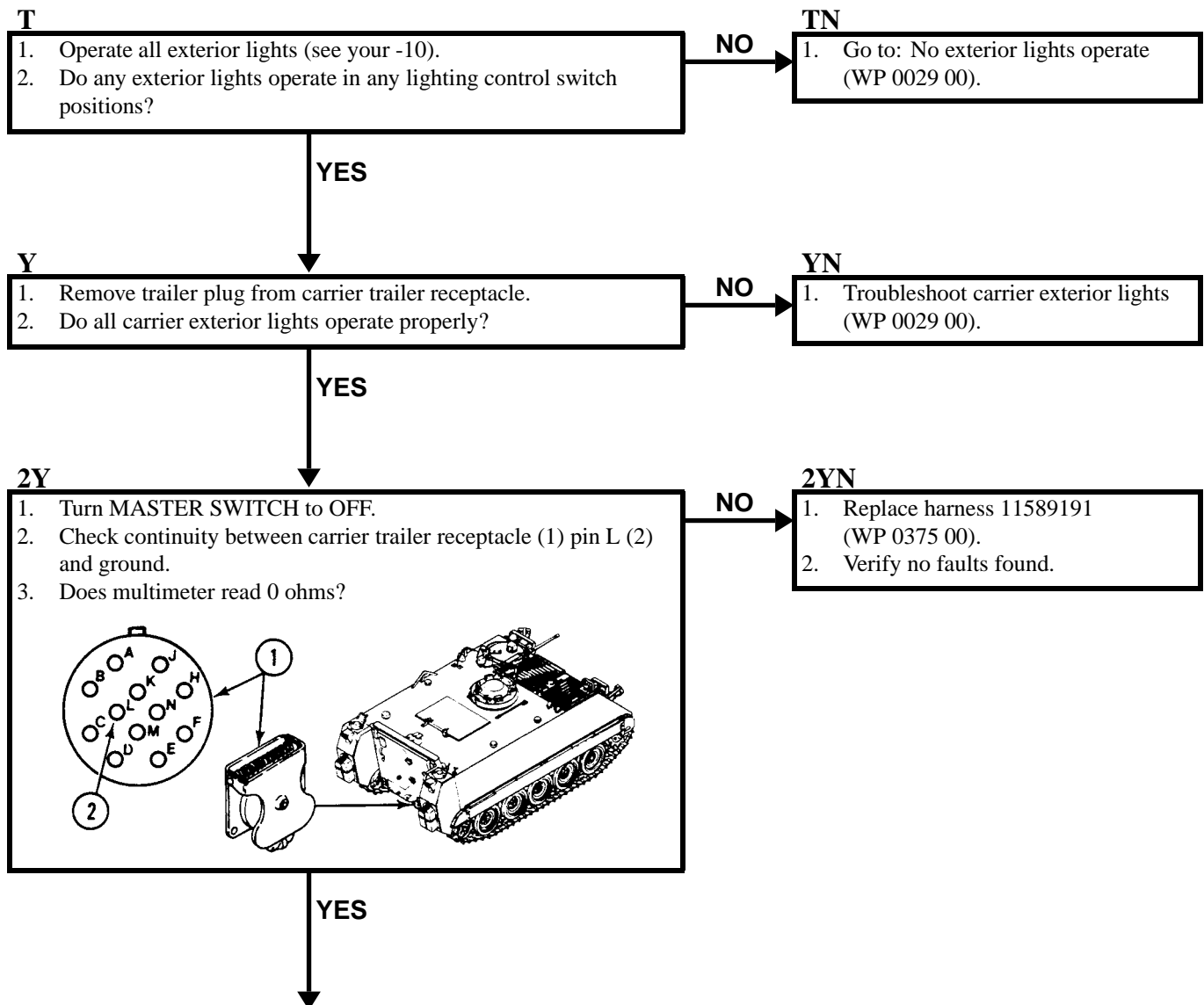
General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

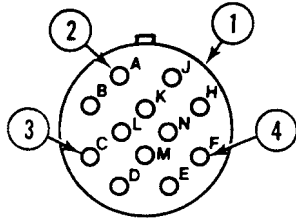
Personnel Required

Unit Mechanic 63T10  
Helper (H)



**3Y**

1. Turn MASTER SWITCH to ON.
2. Turn lighting control switch to BO marker.
3. Measure voltage between trailer receptacle (1) pins A (2), C (3), and F (4) to ground while depressing brake pedal.
4. Does multimeter read 17 volts or more for all readings?



NO

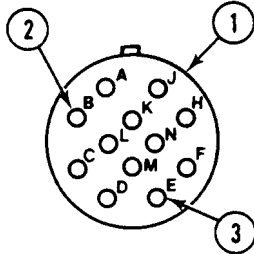
**3YN**

1. Replace harness 11589191 (WP 0375 00).
2. Verify no faults found.

YES

**4Y**

1. Turn lighting control switch to SER DRIVE.
2. Measure voltage between trailer receptacle (1) pins B (2) and E (3) to ground while depressing brake pedal.
3. Does multimeter read 17 volts or more?



NO

**4YN**

1. Replace harness 11589191 (WP 0375 00).
2. Verify no faults found.

YES

**5Y**

1. Faulty trailer harness(es) and/or lights. Beyond unit maintenance repair.
2. Troubleshoot trailer lights. See Trailer TM.

**HORN DOES NOT WORK**

**0037 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Jumper wire

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

Trim vane removed (see your -10)

Personnel Required

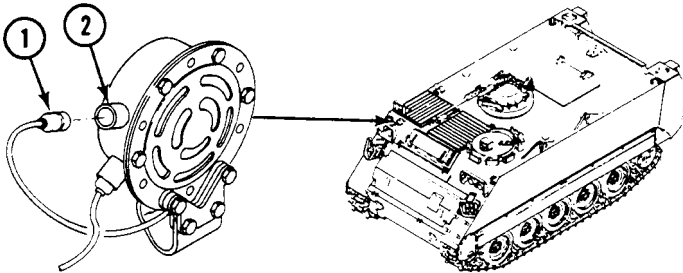
Unit Mech 63T10

Helper (H)

Power plant access panels removed (see your -10)

**T**

1. Remove lead 10863474 plug (1) from horn jack (2).
2. Measure resistance between lead 10863474 plug (1) and ground.
3. Does multimeter read 0 ohms?



**NO**

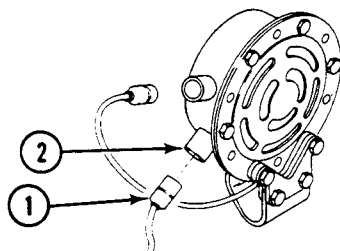
**TN**

1. Replace lead 10863474 and/or connector (WP 0382 00).
2. Verify no faults found.

**YES**

**Y**

1. Remove harness 8763491 circuit 25 plug (1) from horn jack (2).
2. Move MASTER POWER switch to ON.
3. Measure voltage between harness 8763491 circuit 25 plug (1) and ground with horn button depressed.
4. Does multimeter read less than 17 volts?



**NO**

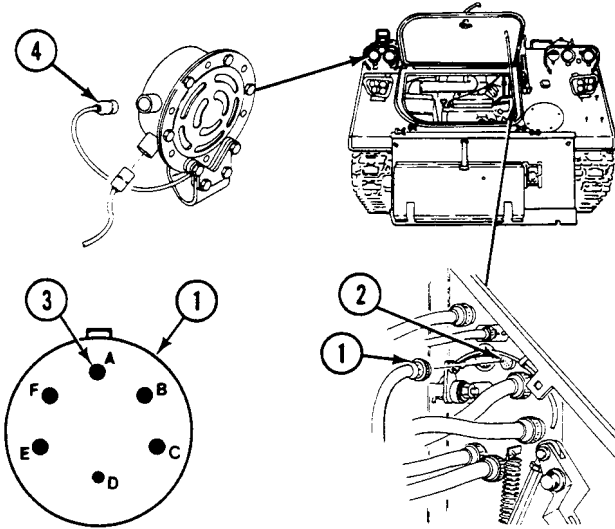
**YN**

1. Replace horn (WP 0336 00).
2. Verify no faults found.

**YES**

**2Y**

1. Release horn button.
2. (H) Move MASTER POWER switch to OFF.
3. Remove harness 8763491 plug (1) from harness 12349881 jack (2) at fire wall.
4. Measure resistance between harness 8763491 plug (1), pin A (3) to lead 25 (4).
5. Does multimeter read 0 ohms?



NO

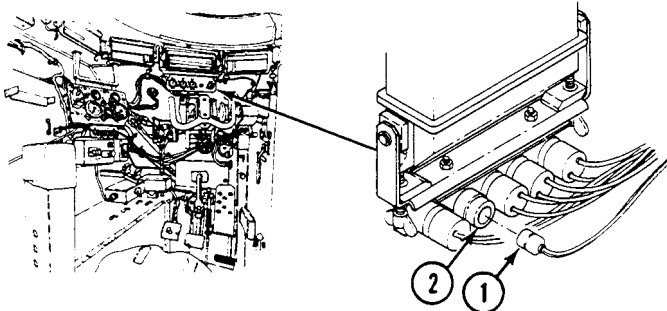
**2YN**

1. Replace wiring harness 8763491 circuit 25 (WP 0373 00).
2. Verify no faults found.

YES

**3Y**

1. Remove circuit 25/25A plug (1) from horn switch jack (2).
2. Measure resistance between horn switch jack pins (2) with horn switch depressed.
3. Does multimeter read 0 ohms?



NO

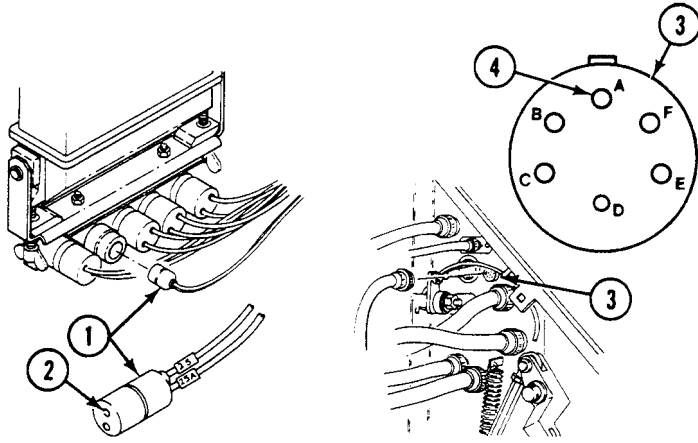
**3YN**

1. Install harness 8763491 plug to harness 12349881 jack at fire wall.
2. Install lead 10863474 plug to horn jack.
3. Install harness 8763491 circuit 25 plug onto horn jack.
4. Replace horn switch (WP 0293 00).
5. Verify no faults found.

YES

**4Y**

1. Install jumper wire between horn switch plug (1), circuit 25 pin (2) and ground.
2. Measure resistance between harness 12349881 jack (3), pin A (4) and ground.
3. Does multimeter read 0 ohms?



**NO**

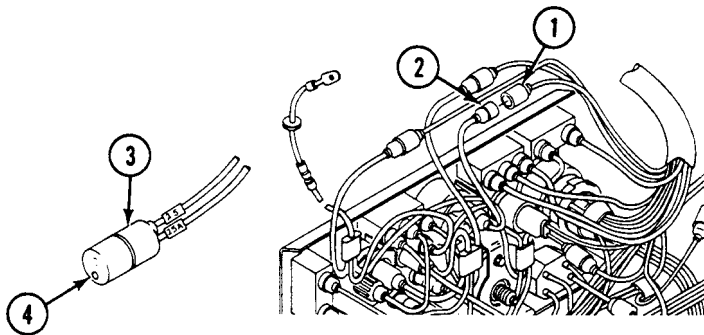
**4YN**

1. Remove jumper wire from horn switch plug.
2. Faulty harness 12349881 circuit 25A. Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

**5Y**

1. Remove jumper wire from horn switch plug.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 circuit 25A plug (1) from cable assembly 12349858 circuit 25A jack (2).
4. Install jumper wire between 12349858 jack, circuit 25A pin (2) and ground.
5. Measure resistance between horn switch plug (3), circuit 25A pin (4) and ground.
6. Does multimeter read 0 ohms?



**NO**

**5YN**

1. Remove jumper wire from harness 12349858 circuit 25A.
2. Faulty harness 12349881 circuit 25A. Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

**6Y**

1. Remove jumper wire from harness 123498558 circuit 25A plug.
2. Install circuits 25 and 25A on horn switch.
3. Install harness 8761491 plug on harness 12349881 jack on fire wall.
4. Repair harness 12349858 circuit 25A (WP 0382 00).
5. Verify no faults found.

**INSTRUMENT PANEL AND/OR TRANS CONTROLLER ILLUMINATION LIGHTS MALFUNCTION**

**0038 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

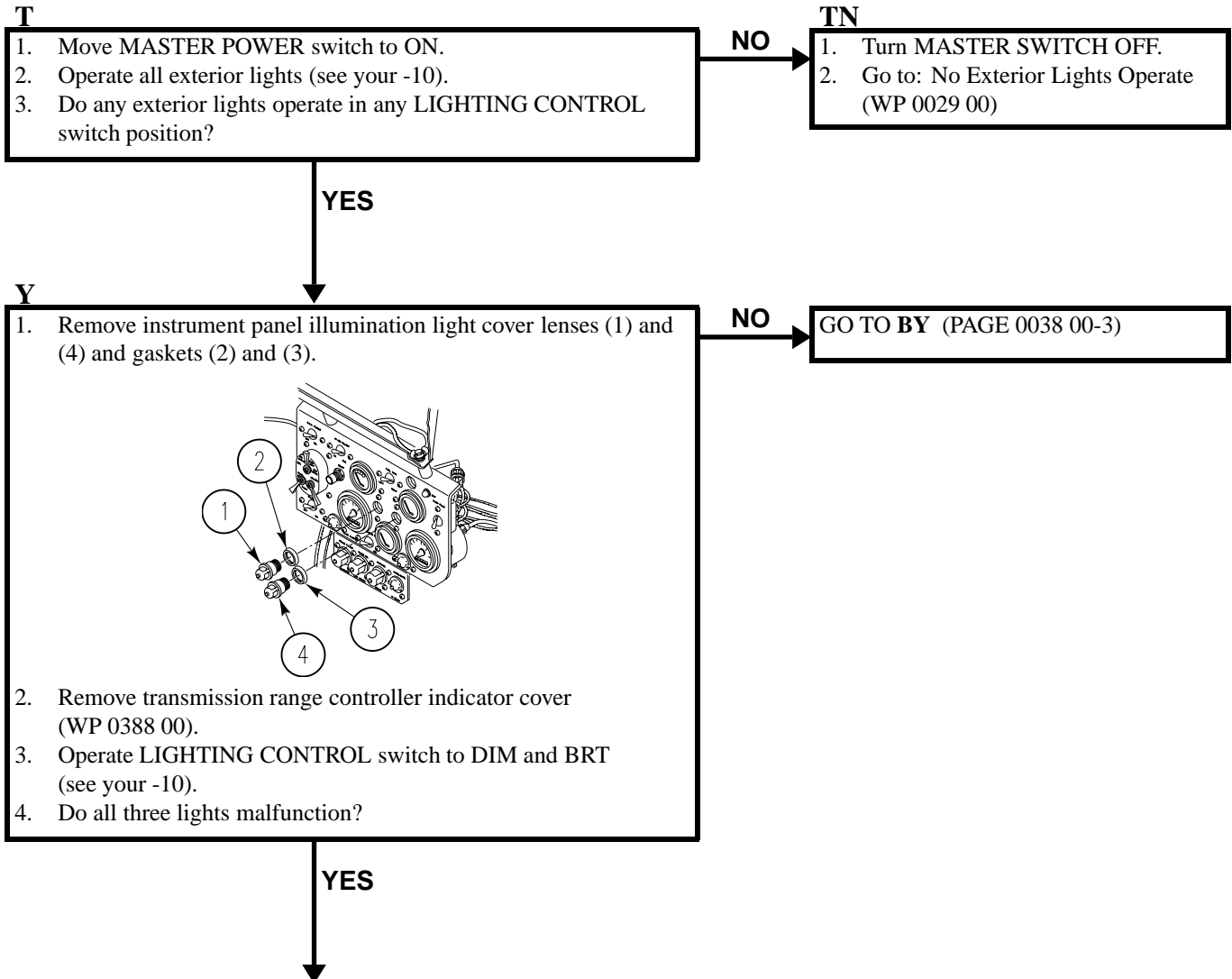
Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

Personnel Required

Unit Mech 63T10

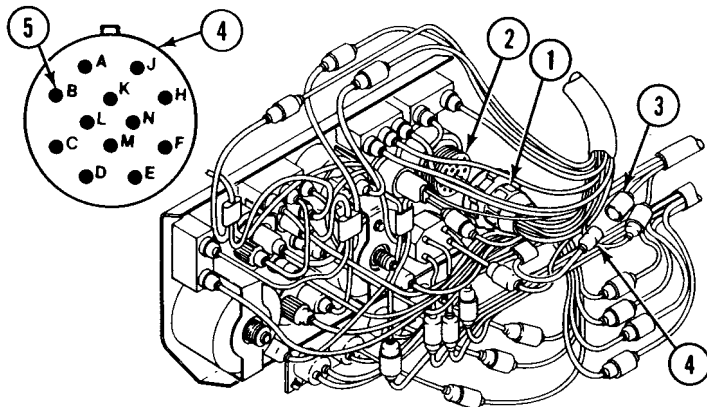
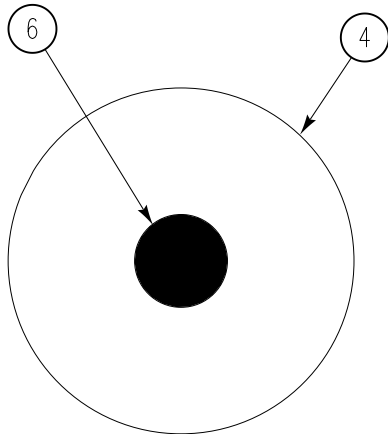


**INSTRUMENT PANEL AND/OR TRANS CONTROLLER ILLUMINATION LIGHTS  
MALFUNCTION—Continued**

0038 00

**2Y**

1. Move MASTER POWER switch to OFF.
2. Install instrument panel illumination light and controller indicator cover lenses and gaskets.
3. Remove instrument panel for access (WP 0295 00).
4. Remove harness 12349881 plug (1) from LIGHTING CONTROL switch jack (2).
5. Remove harness 12349813 circuit 40 plug (3) from harness 12349881 circuit 40 jack (4).
6. Measure resistance between harness 12349881 LIGHTING CONTROL switch plug (1), pin B (5), and circuit 40 jack (4) pin (6).
7. Does multimeter read 0 ohms?



**NO**

**2YN**

1. Faulty harness 12349881, circuit 40. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**3Y**

1. Replace main light switch (WP 0283 00).
2. Verify no faults found.



**INSTRUMENT PANEL AND/OR TRANS CONTROLLER ILLUMINATION LIGHTS  
MALFUNCTION—Continued**

0038 00

**BY**

1. Remove malfunctioning bulb(s) from instrument panel illumination light(s) and/or TRANS CONTROLLER indicator.
2. Check continuity between bulb center contact and bulb base.
3. Does multimeter read less than infinity?

NO

**BYN**

1. Replace light bulb(s), as required (WP 0388 00).
2. Verify no faults found.

YES

**B2Y**

1. Does either instrument panel illumination light malfunction?

NO

**B2YN**

1. Replace harness 12349813 (WP 0374 00).
2. Verify no faults found.

YES

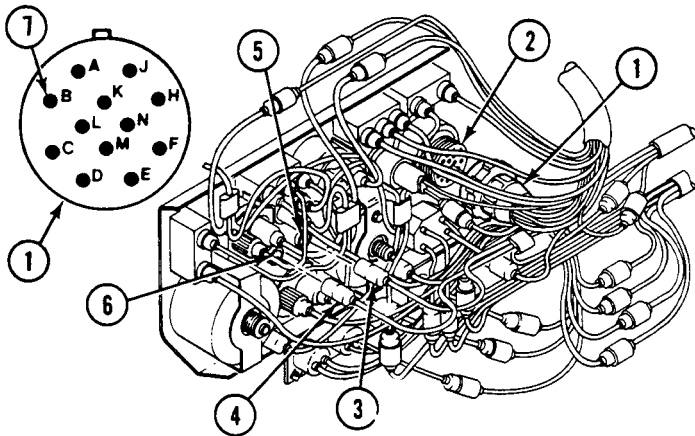
**B3Y**

1. Remove instrument panel for access (WP 0295 00).
2. Remove harness 12349881 plug (1) from LIGHTING CONTROL switch jack (2).
3. Remove harness 12349881 circuit 40 plug (3) or (4) from failing instrument panel light (5) or (6).
4. Measure resistance between harness 12349881 LIGHTING CONTROL switch plug (1), pin B (7), and failing circuit 40 light plug (3) or (4).
5. Does multimeter read 0 ohms?

NO

**B3YN**

1. Install bulbs.
2. Faulty harness 12349881, circuit 40. Beyond unit maintenance repair.
3. Notify supervisor.



YES

---

**INSTRUMENT PANEL AND/OR TRANS CONTROLLER ILLUMINATION LIGHTS  
MALFUNCTION—Continued**

---

0038 00

**B4Y**

1. Install harness 12349881 plug on LIGHTING CONTROL switch jack.
2. Replace instrument panel light assembly (WP 0287 00).
3. Verify no faults found.

**DOME LIGHT(S) DO NOT WORK**

**0039 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your-10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)

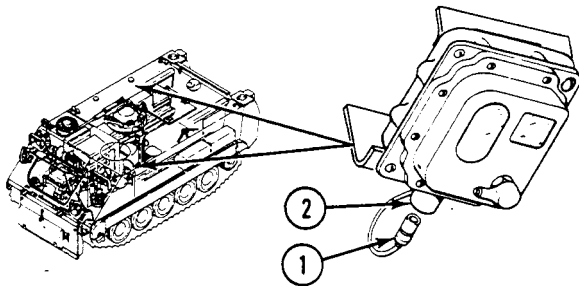
Personnel Required

Unit Mech 63T10  
Helper (H)

Vehicle blocked (see your -10)

**T**

1. Remove harness 12268797 plug (1) from jack (2) on faulty dome light.
2. Turn MASTER SWITCH ON.
3. Measure voltage between harness 12268797 plug (1) and ground.
4. Does multimeter read 17 volts or more?



**NO**

**GO TO BY (PAGE 0039 00-3)**

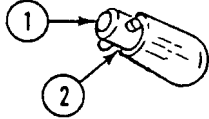
**YES**

**DOMELIGHT(S) DO NOT WORK—Continued**

**0039 00**

**Y**

1. Turn MASTER SWITCH OFF.
2. Install harness 12268797 plug on dome light.
3. Remove dome light bulbs from dome light assembly (WP 0309 00) or (WP 0311 00).
4. Check continuity between light bulb center contact (1) and bulb base (1).
5. Is there continuity?



**NO**

**YN**

1. Repair dome light assembly (WP 0310 00) or (WP 0312 00).
2. Verify no faults found.

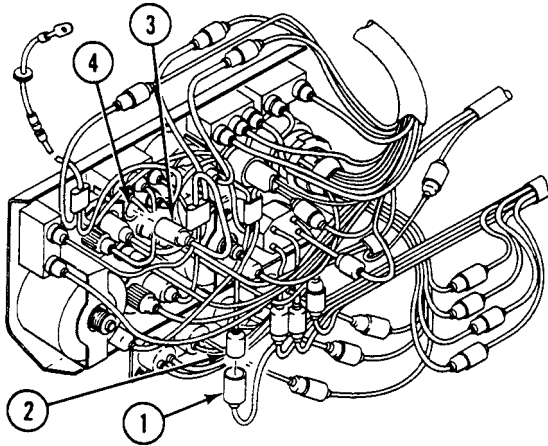
**YES**

**2Y**

1. Replace dome light bulbs (WP 0310 00) or (WP 0312 00).
2. Verify no faults found.

**BY**

1. Turn MASTER SWITCH OFF.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12268797 circuit 38 plug (1) from harness 12349858 circuit 38 jack (2).
4. Remove harness 12349858 circuit 27 plug (3) from instrument panel circuit breaker jack (4).
5. Measure resistance between harness 12349858 circuit 38 jack (2) and circuit 27 plug (3).



6. Does multimeter read 0 ohms?

NO

**BYN**

1. Install harness 2268797 plug on dome light jack.
2. Repair harness 12349858 circuit 38 (WP 0382 00).
3. Verify no faults found.

YES

**B2Y**

1. Repair harness 12268797 circuit 38 (WP 0382 00).
2. Verify no faults found.



**DOME LIGHT MALFUNCTION (M577A3 ONLY)**

**0040 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your-10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)  
Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)

Personnel Required

Unit Mech 63T10  
Helper (H)

**T**

1. Turn MASTER SWITCH to ON (see your -10).
2. Turn BLACKOUT BYPASS switch to ON.
3. Do white dome lights come on?

**NO**

**GO TO BY (PAGE 0040 00-4)**

**YES**

**Y**

1. Turn BLACKOUT BYPASS switch to OFF.
2. Operate rear dome light switch.
3. Operate front dome light switch.
4. Do blackout lights malfunction?

**NO**

**GO TO CY (PAGE 0040 00-4)**

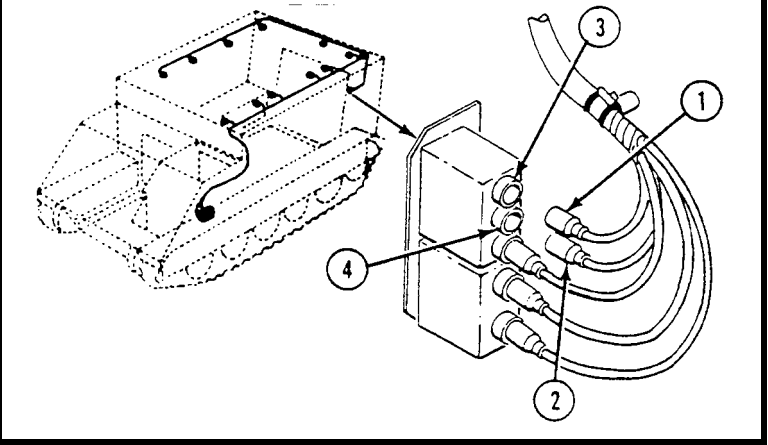
**YES**

**2Y**

1. Remove circuit 38E (1) and 38A (2) plugs form rear dome light switch jacks (3)(4).
2. Install a jumper wire between circuit 38E (1) and 38A (2) plugs.
3. Operate front dome light switch.
4. Do blackout dome lights malfunction?

**NO**

GO TO **DY** (PAGE 0040 00-5)



**YES**

**3Y**

1. Remove jumper from circuit 38E and 38A plugs.
2. Measure voltage at circuit 38E plug.
3. Does multimeter read 17 volts or more?

**NO**

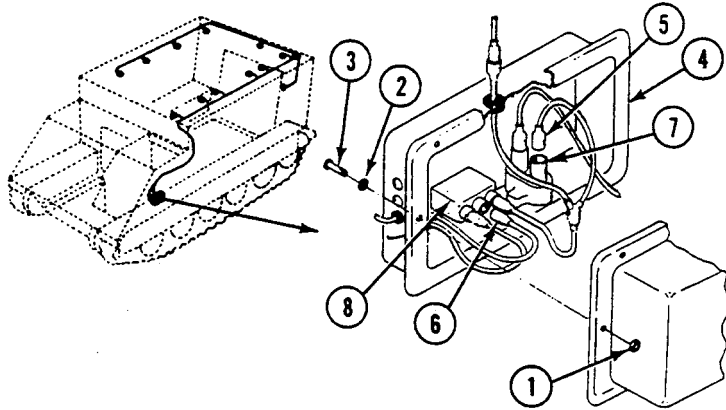
- 3YN**
1. Turn MASTER SWITCH to OFF.
  2. Repair rear main harness circuit 38E (WP 0382 00).
  3. Verify no faults found.

**YES**



**4Y**

1. Turn MASTER SWITCH to OFF.
2. Install circuit 38E and 38A plugs on rear dome light.
3. Remove eight nuts (1), washers (2), and screws (3) from master switch panel (4). Pull panel away from distribution box.
4. Remove circuits 10 (5) and 38A (6) plugs from circuit breaker (7) and front dome light switch (8).
5. Install a jumper wire between circuit 10 and 38A plugs.
6. Turn MASTER SWITCH to ON.
7. Operate rear dome light switch.
8. Do blackout dome lights still malfunction?



NO

GO TO EY (PAGE 0040 00-5)

YES

**5Y**

1. Remove jumper wire from circuits 10 and 38A plugs.
2. Measure voltage at circuit 10 plug.
3. Does multimeter read 17 volts or more?

NO

**5YN**

1. Turn MASTER SWITCH to OFF.
2. Repair/replace wiring harness 10917788 (WP 0382 00).
3. Verify no faults found.

YES

**6Y**

1. Turn MASTER SWITCH to OFF.
2. Repair wiring harness circuit 38A (WP 0382 00).
3. Verify no faults found.

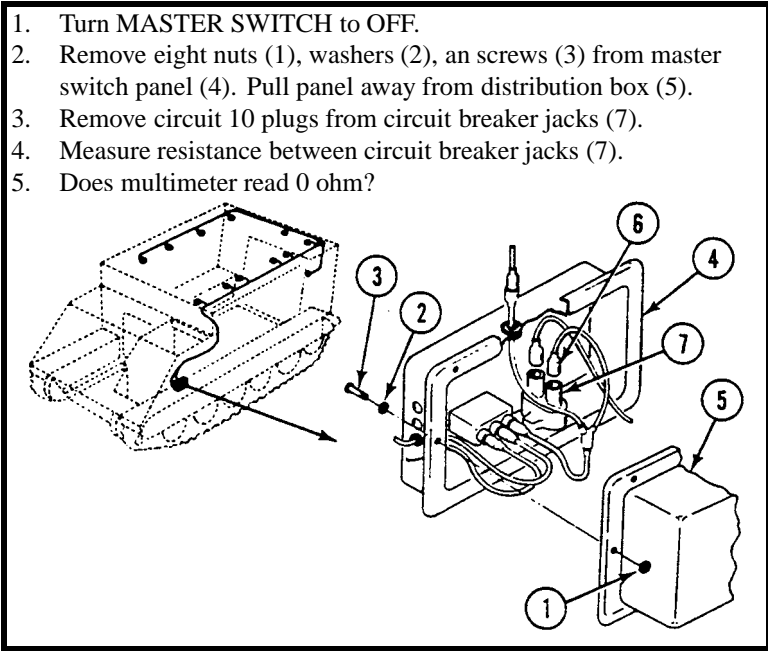
**BY**

1. Turn MASTER SWITCH to OFF.
2. Remove eight nuts (1), washers (2), and screws (3) from master switch panel (4). Pull panel away from distribution box (5).
3. Remove circuit 10 plugs from circuit breaker jacks (7).
4. Measure resistance between circuit breaker jacks (7).
5. Does multimeter read 0 ohm?

NO

**BYN**

1. Replace circuit breaker (WP 0316 00).
2. Verify no faults found.



YES

**B2Y**

1. Repair circuit 10 lead assembly from the circuit breaker to the front dome light switch (WP 0382 00).
2. Verify no faults found.

**CY**

1. Has the ramp door switch been adjusted?

NO

**CYN**

1. Adjust ramp door switch (WP 0335 00).
2. Verify no faults found.

YES

**C2Y**

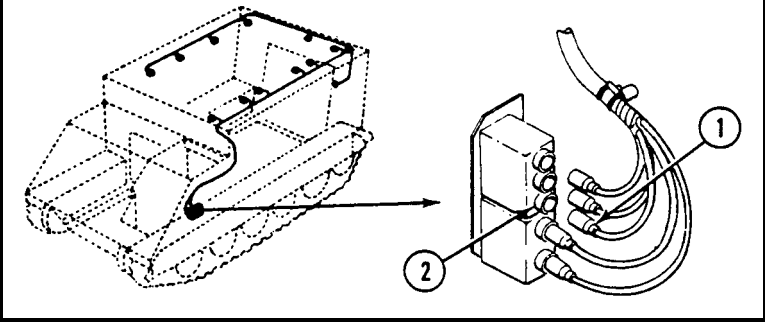
1. Replace ramp door switch (WP 0335 00).
2. Verify no faults found.

**DOMELIGHT MALFUNCTION (M577A3 ONLY)—Continued**

0040 00

**DY**

1. Turn blackout dome lights on using front dome light switch.
2. Remove circuit 38 plug (1) from rear dome light switch jack (2).
3. Measure voltage between circuit 38 plug (1) and ground.
4. Does multimeter read 17 volts or more?



**NO**

**DYN**

1. Turn MASTER SWITCH to OFF.
2. Repair rear main harness circuit 38 (WP 0382 00).
3. Verify no faults found.

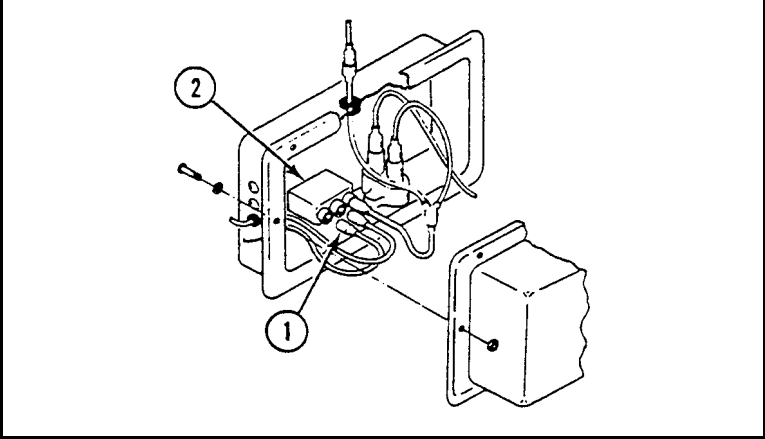
**YES**

**D2Y**

1. Turn MASTER SWITCH to OFF.
2. Replace rear dome light switch (WP 0315 00).
3. Verify no faults found.

**EY**

1. Turn dome lights on using rear dome light switch.
2. Remove circuit 38 plug (1) from front dome light switch jack.
3. Measure voltage between circuit 38 plug (1) and ground.
4. Does multimeter read 17 volts or more?



**NO**

**EYN**

1. Turn MASTER SWITCH to OFF.
2. Repair wiring harness circuit 38 (WP 0382 00).
3. Install master switch panel on distribution box (WP 0261 00).
4. Verify no faults found.

**YES**

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**DOMELIGHT MALFUNCTION (M577A3 ONLY)—Continued**

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**0040 00****E2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove jumper wire from circuit 10 and 38 plugs.
3. Replace front dome light switch (WP 0314 00).
4. Verify no faults found.

**BLACKOUT DOME LIGHTS DO NOT WORK (M1068A3 ONLY)**

**0041 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

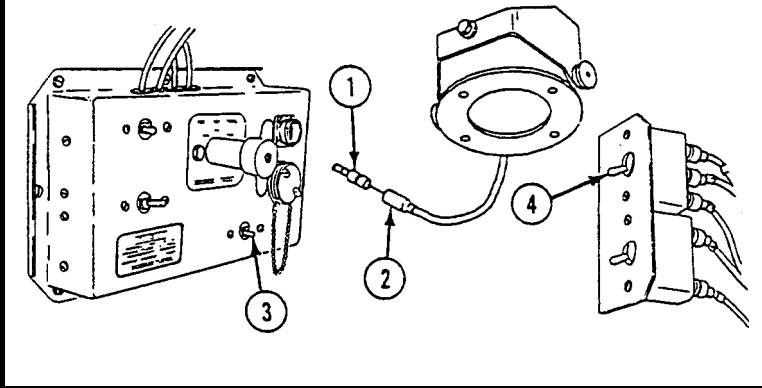
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Ramp lowered or ramp door open (see your -10)

Personnel Required

Unit Mechanic

**T**

1. Disconnect W28 plug P2 (1) from dome light lead (2).
2. Turn MASTER SWITCH to ON.
3. Turn on front dome light switch (3) (master switch panel in driver's compartment); or rear dome light switch (4) (switch panel next to ramp).
4. Measure voltage between plug P2 (1) and ground.
5. Does multimeter read 17 volts or more?



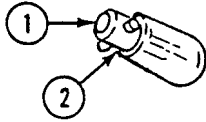
**NO**

**GO TO AY (PAGE 0041 00-2)**

**YES**

**Y**

1. Turn MASTER SWITCH to OFF.
2. Remove light bulbs from dome light (WP 0312 00).
3. Check continuity between light bulb center contact (1) and bulb base (2).
4. Is there continuity?



**NO**

**YN**

1. Replace dome light bulbs (WP 0312 00).
2. Verify no faults found.

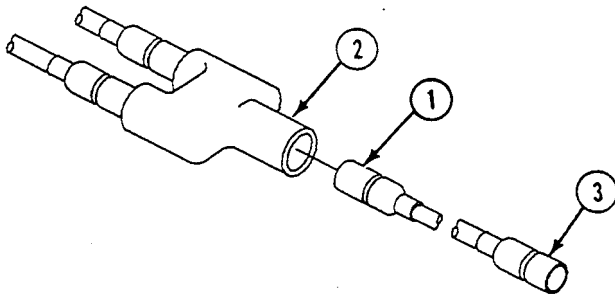
**YES**

**2Y**

1. Repair dome light assembly (WP 0312 00).
2. Verify no faults found.

**AY**

1. Turn MASTER SWITCH to OFF.
2. Remove cable W28 plug P1 (1) from adapter plug (2).
3. Measure resistance between cable W28 plugs P1 (1) and P2 (3).
4. Does multimeter read zero ohms?



**NO**

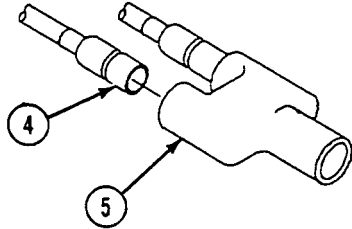
**AYN**

1. Replace cable W28 (WP 0849 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Remove lead 38B (1) from adapter plug P3 (5).
2. Turn MASTER SWITCH to ON.
3. Measure voltage between lead 38B (4) and ground.
4. Does multimeter read 17 volts or more?



NO

**A2YN**

1. Go to Dome Lights Malfunction (M577A3 Only) (WP 0040 00).

YES

**A3Y**

1. Replace adapter (WP 0849 00).
2. Verify no faults found.





**RIGHT REAR UTILITY OUTLET/ADMITTANCE BUZZER WORKS IMPROPERLY (M577A3 AND M1068A3 ONLY)**

**0042 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

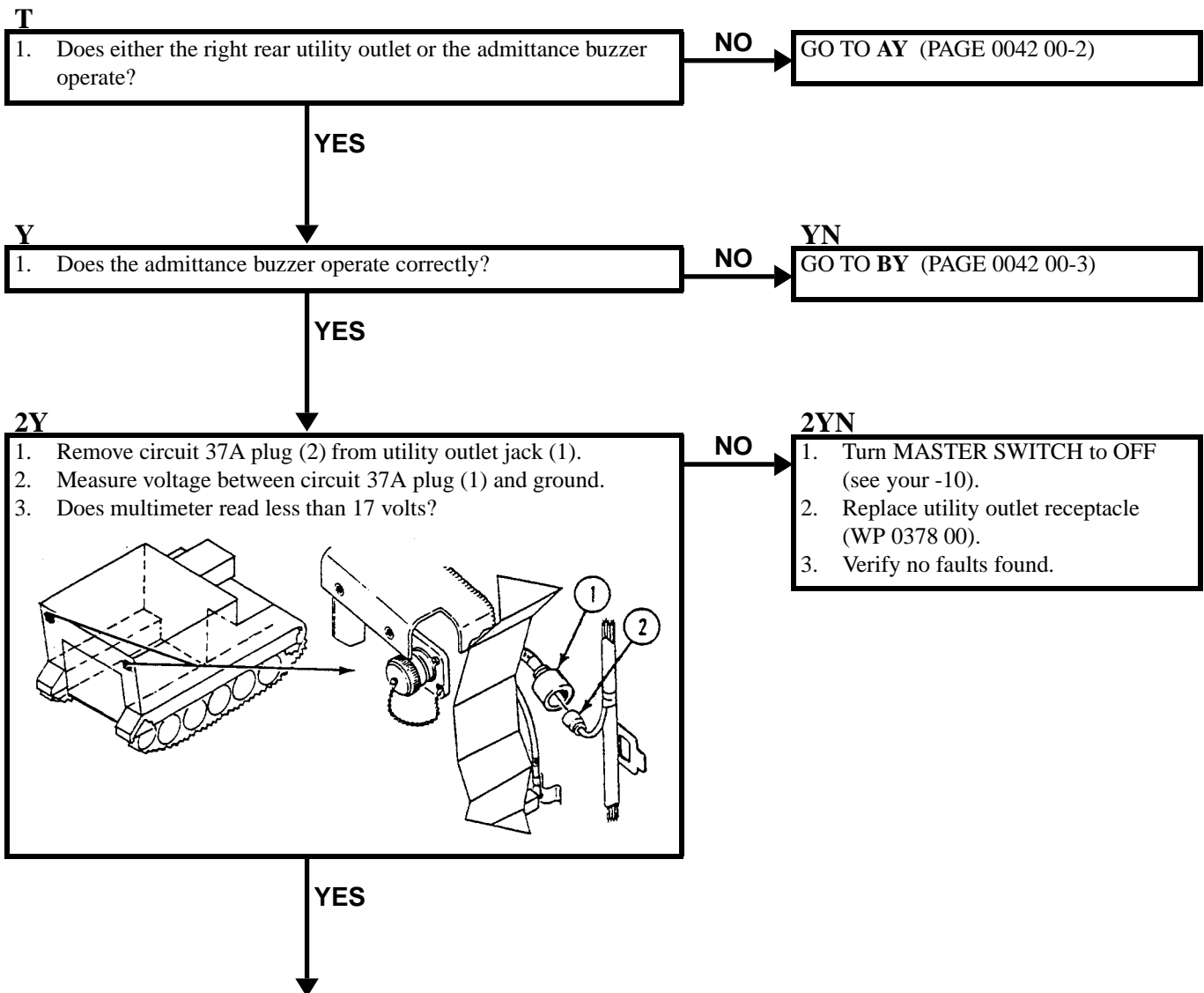
- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Digital Multimeter (WP 0926 00, Item 30)
- Jumper Wire

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- MASTER SWITCH turned to ON (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)



**RIGHT REAR UTILITY OUTLET/ADMITTANCE BUZZER WORKS IMPROPERLY (M577A3 AND M1068A3 ONLY)—Continued**

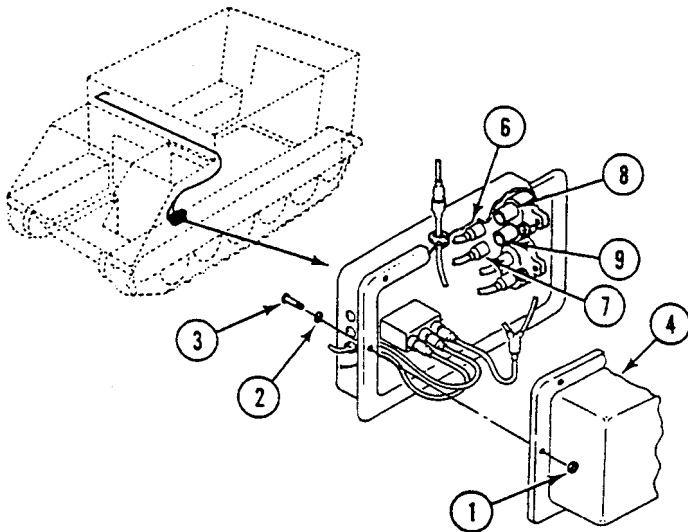
0042 00

**3Y**

1. Turn MASTER SWITCH to OFF.
2. Faulty rear main wiring harness. Beyond unit maintenance repair.
3. Notify supervisor.

**AY**

1. Remove eight nuts (1), washers (2), and screws (3) from master switch panel (4). Pull panel away from distribution box (5).
2. Remove circuit 10 and 37A plugs (6) and (7) from circuit breaker jacks (8) and (9).
3. Measure resistance between circuit breaker jacks (8) and (9).
4. Does multimeter read 0 ohms?



NO

**AYN**

1. Replace circuit breaker (WP 0280 00).
2. Verify no faults found.

YES

**A2Y**

1. Turn MASTER SWITCH to ON.
2. Measure voltage at circuit 10 plug.
3. Does multimeter read less than 17 volts?

NO

**A2YN**

1. Turn MASTER SWITCH to OFF.
2. Faulty rear main wiring harness circuit 37A. Beyond unit maintenance repair.
3. Notify supervisor.

YES

**RIGHT REAR UTILITY OUTLET/ADMITTANCE BUZZER WORKS IMPROPERLY (M577A3 AND M1068A3 ONLY)—Continued**

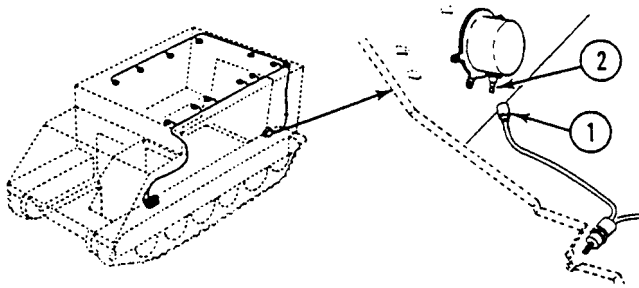
0042 00

**A3Y**

1. Turn MASTER SWITCH to OFF.
2. Replace circuit 10 in master switch panel from the bus bar to the circuit breaker (WP 0382 00).
3. Verify no faults found.

**BY**

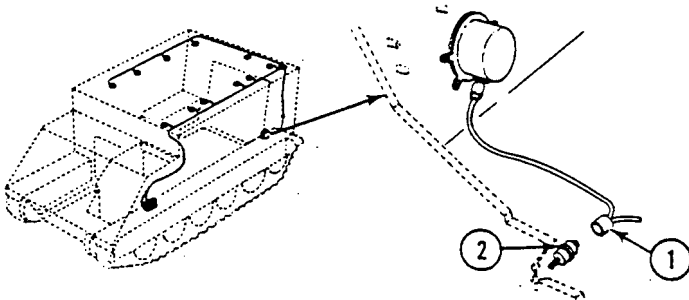
1. Remove circuit 509 plug (1) from admittance buzzer jack (2).
2. (H): Depress admittance buzzer switch.
3. Measure voltage between circuit 509 plug (1) and ground.
4. Does multimeter read less than 17 volts?



YES

**B2Y**

1. Remove rear main harness circuit 509 plug (1) from admittance buzzer switch (2).
2. Install a jumper wire between admittance buzzer circuit 509 plug (1) and ground.
3. Measure voltage across two pin contacts of circuit 509 plug (1) from admittance buzzer switch.
4. Does multimeter read less than 17 volts?



YES

**BYN**

1. Turn MASTER SWITCH to OFF.
2. Replace admittance buzzer (WP 0334 00).
3. Verify no faults found.

**B2YN**

1. Turn MASTER SWITCH to OFF.
2. Replace admittance buzzer switch (WP 0334 00).
3. Verify no faults found.

---

**RIGHT REAR UTILITY OUTLET/ADMITTANCE BUZZER WORKS IMPROPERLY (M577A3  
AND M1068A3 ONLY)—Continued**

---

0042 00

**B3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove jumper wire.
3. Faulty rear main wiring harness circuit 509. Beyond unit maintenance repair.
4. Notify supervisor.

**LEFT REAR UTILITY OUTLET/BLOWER DOES NOT WORK (M577A3 AND M1068A3 ONLY)**

**0043 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Digital Multimeter (WP 0926 00, Item 30)
- Jumper wire

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- MASTER SWITCH turned to ON (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Does either the blower or the left rear utility outlet work?

**NO**

**GO TO BY (PAGE 0043 00-3)**

**YES**

**Y**

1. Does the blower operate normally?

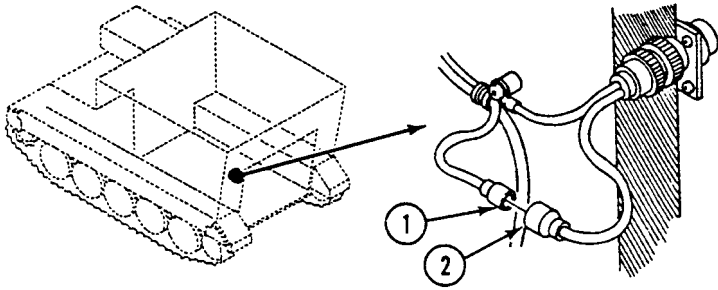
**NO**

**GO TO CY (PAGE 0043 00-4)**

**YES**

**2Y**

1. Remove rear main harness circuit 37B plug (1) from left rear utility outlet jack (2).
2. Measure voltage between circuit 37B plug (1) and ground.
3. Does multimeter read less than 17 volts?



**NO**

**2YN**

1. Turn MASTER SWITCH to OFF.
2. Replace utility outlet receptacle (WP 0378 00).
3. Verify no faults found.

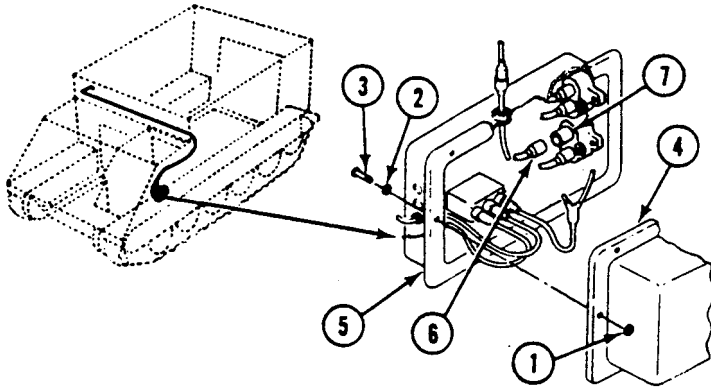
**YES**

**LEFT REAR UTILITY OUTLET/BLOWER DOES NOT WORK (M577A3 AND M1068A3 ONLY)—Continued**

0043 00

**3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove eight nuts (1), washers (2), and screws (3) from master switch panel (4) and distribution box (5). Pull panel away from distribution box.
3. Remove circuit 37B plug (6) from circuit breaker jack (7).
4. Turn MASTER SWITCH to ON.
5. Measure voltage between circuit breaker jack (7) and ground.
6. Does multimeter read less than 17 volts?



**NO**

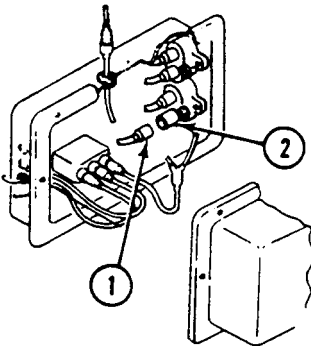
**3YN**

1. Turn MASTER SWITCH to OFF.
2. Faulty rear main wiring harness circuit 37B. Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

**4Y**

1. Remove circuit 10 plug (1) from circuit breaker jack (2).
2. Measure voltage between circuit 10 plug (1) and ground.
3. Does multimeter read less than 17 volts?



**NO**

**4YN**

1. Turn MASTER SWITCH to OFF.
2. Replace circuit breaker (WP 0280 00).
3. Verify no faults found.

**YES**

**LEFT REAR UTILITY OUTLET/BLOWER DOES NOT WORK (M577A3 AND M1068A3 ONLY)—Continued**

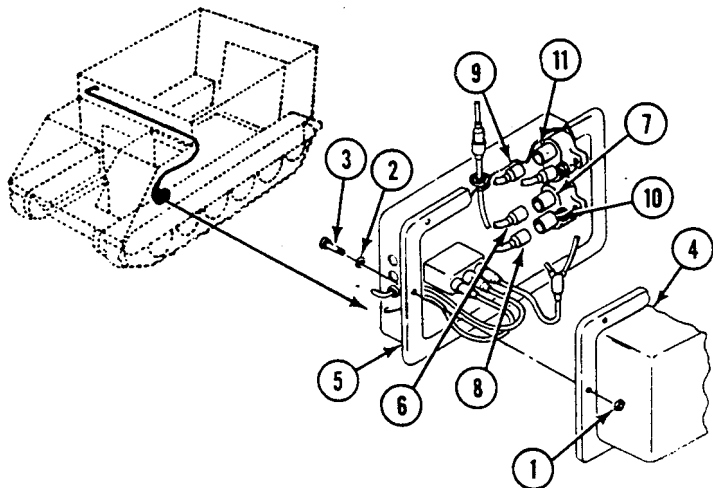
0043 00

**5Y**

1. Turn MASTER SWITCH to OFF.
2. Faulty circuit 10 lead from bus bar to circuit breaker. Beyond unit maintenance repair.
3. Install master switch panel on distribution box (WP 0261 00).
4. Notify supervisor.

**BY**

1. Turn MASTER SWITCH to OFF.
2. Remove eight nuts (1), washers (2), and screws (3) from master switch panel (4) and distribution box (5). Pull panel away from distribution box.
3. Remove circuit 37B plug (6) from circuit breaker jack (7) and two circuit 10 plugs (8) and (9) from circuit breaker jacks (10) and (11).
4. Measure resistance between circuit breaker contacts.
5. Does multimeter read 0 ohms?



NO

**BYN**

1. Replace circuit breaker (WP 0280 00).
2. Verify no faults found.

YES

**B2Y**

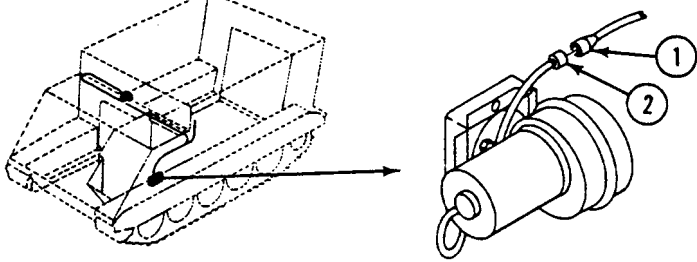
1. Faulty circuit 10 from bus bar to circuit breaker. Beyond unit maintenance repair.
2. Install master switch panel on distribution box (WP 0261 00).
3. Notify supervisor.

**LEFT REAR UTILITY OUTLET/BLOWER DOES NOT WORK (M577A3 AND M1068A3 ONLY)—Continued**

0043 00

**CY**

1. Turn BLOWER SWITCH to OFF.
2. Remove circuit 59 plug (1) from blower motor jack (2).
3. Turn BLOWER SWITCH to ON.
4. Measure voltage between circuit 59 plug (1) and ground.
5. Does multimeter read less than 17 volts?



**NO**

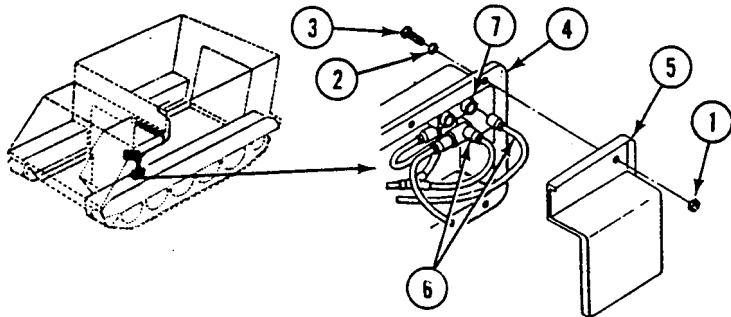
**CYN**

1. Replace blower motor (WP 0383 00).
2. Verify no faults found.

**YES**

**C2Y**

1. Turn MASTER SWITCH to OFF.
2. Install a jumper wire between circuit 59 plug at blower motor and ground.
3. Remove eight nuts (1), washers (2), and screws (3) from master switch panel (4) and distribution box (5). Pull panel away from distribution box.
4. Remove circuit 59 plugs (6) from blower switch (7).
5. Check for continuity between circuit 59 plugs (6).
6. Does multimeter read 0 ohms?



**NO**

**C2YN**

1. Replace blower switch (WP 0278 00).
2. Install master switch panel on distribution box.
3. Verify no faults found.

**YES**



---

**LEFT REAR UTILITY OUTLET/BLOWER DOES NOT WORK (M577A3 AND M1068A3 ONLY)—Continued**

---

0043 00

**C3Y**

1. Faulty wiring harness circuit 59 from circuit breaker to blower switch. Beyond unit maintenance repair.
2. Install master switch panel on distribution box (WP 0261 00).
3. Notify supervisor.



**RADIO(S) DON'T WORK**

**0044 00**

**INITIAL SETUP:**

Maintenance Level  
Unit

References  
See your -10

Tools and Special Tools  
General Mechanic's Tool Kit (WP 0926 00, Item 65)

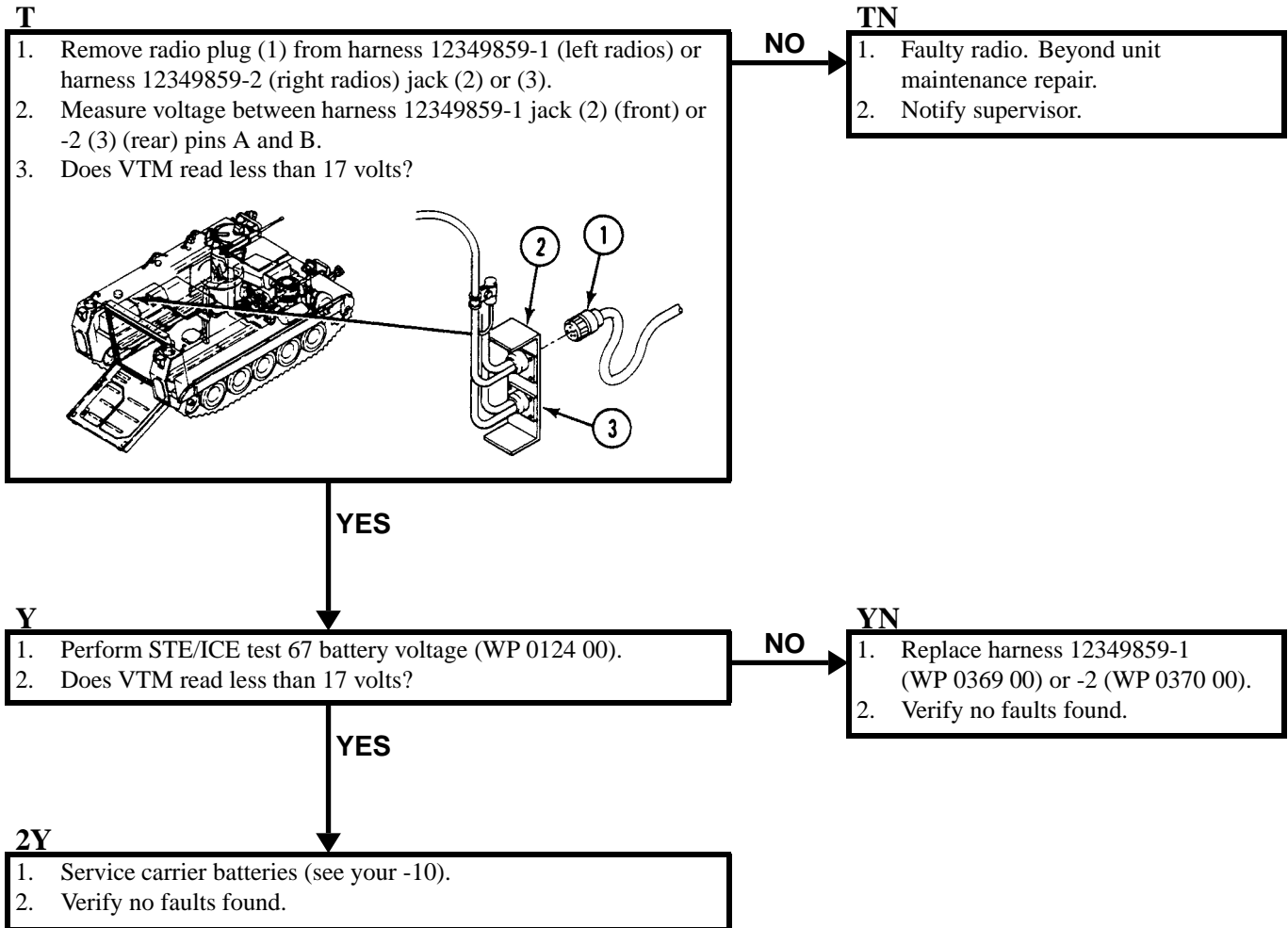
Equipment Condition

Personnel Required  
Unit Mechanic 63T10  
Helper (H)

Engine stopped (see your -10)  
Carrier blocked (see your -10)

**NOTE**

Location varies by model.





**SMOKE GRENADE LAUNCHER(S) MALFUNCTION (M113A3 AND M1059A3 ONLY)**

**0045 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Jumper wire

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Harness 12313235 removed from launcher arming/firing unit (WP 0366 00)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Does either launcher operate properly?

**NO**

**GO TO BY (PAGE 0045 00-3)**

**YES**

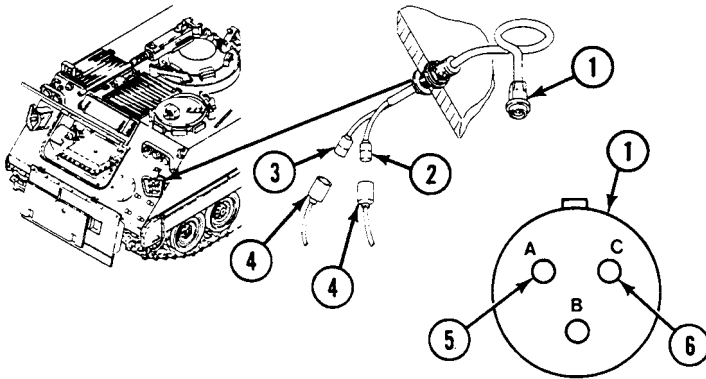
**Y**

1. Remove harness 12313237 launcher plug (1) from failing right launcher.
2. Remove harness 12313237 circuit 7 (2) and 799 plugs (3) from harness 12313236 (right launcher) or harness 12313235 (left launcher) jacks (4).
3. Measure resistance between harness 12313237 launcher plug (1) pin A (5) and plug 7 (3) circuit.
4. Measure resistance between harness 12313237 launcher plug (1) pin C (6) and circuit 7 plug (2).
5. Does multimeter read 0 ohms for both measurements?

**NO**

**YN**

1. Replace harness 12313237 for left or right grenade launcher (WP 0366 00).
2. Verify no faults found.



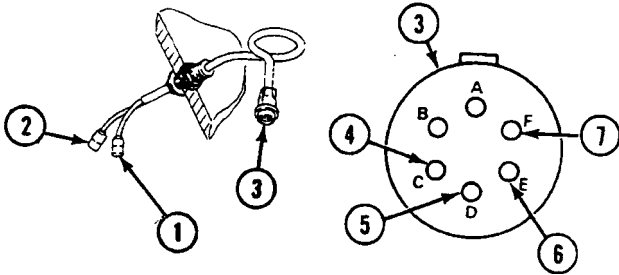
**YES**

**SMOKE GRENADE LAUNCHER(S) MALFUNCTION (M113A3 AND M1059A3 ONLY)—Continued**

0045 00

**2Y**

1. Install jumper wire between harness 12313236 (right launcher) or harness 12313235 (left launcher) and circuit 7 (1) or 799 jacks (2).
2. Remove smoke grenade wiring harness from arming/firing unit.
3. Measure resistance between harness 12313235 arming/firing unit plug (3) pins C (4) and D (5) (left launcher check) or pins E (6) and F (7) (right launcher check).
4. Does multimeter read more than 0 ohms for both measurements?



**NO**

**2YN**

1. Smoke grenade wiring harness is OK. Faulty launcher or arming/firing unit. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**3Y**

1. Is failing launcher on right side of carrier?

**NO**

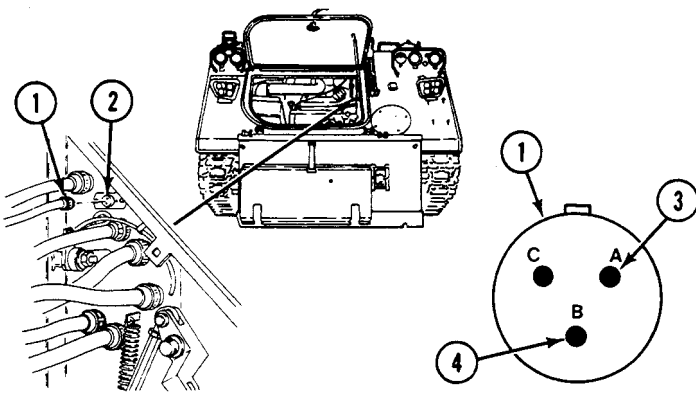
**3YN**

1. Smoke grenade wiring harness is OK. Faulty launcher or arming/firing unit. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**4Y**

1. Remove harness 12313236 plug (1) from harness 12313235 jack (2) at vehicle bulkhead.
2. Measure resistance between harness 12313236 plug (1) pins A (3) and B (4).
3. Does multimeter read continuity?



**NO**

**4YN**

1. Replace harness 12313236 (WP 0366 00).
2. Verify no faults found.

**YES**

**SMOKE GRENADE LAUNCHER(S) MALFUNCTION (M113A3 AND M1059A3 ONLY)—Continued**

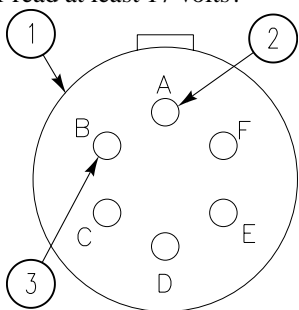
0045 00

**5Y**

- 1. Carrier wiring is OK. Faulty launcher or arming/firing unit. Beyond unit maintenance repair.
- 2. Notify supervisor.

**BY**

- 1. Turn MASTER SWITCH to ON.
- 2. Measure voltage between harness 12313235 firing/arming unit plug (1) pin A (2) and B (3).
- 3. Does multimeter read at least 17 volts?



**NO**

**BYN**

- 1. Replace harness 12313235 (WP 0366 00).
- 2. Verify no faults found.

**YES**

**B2Y**

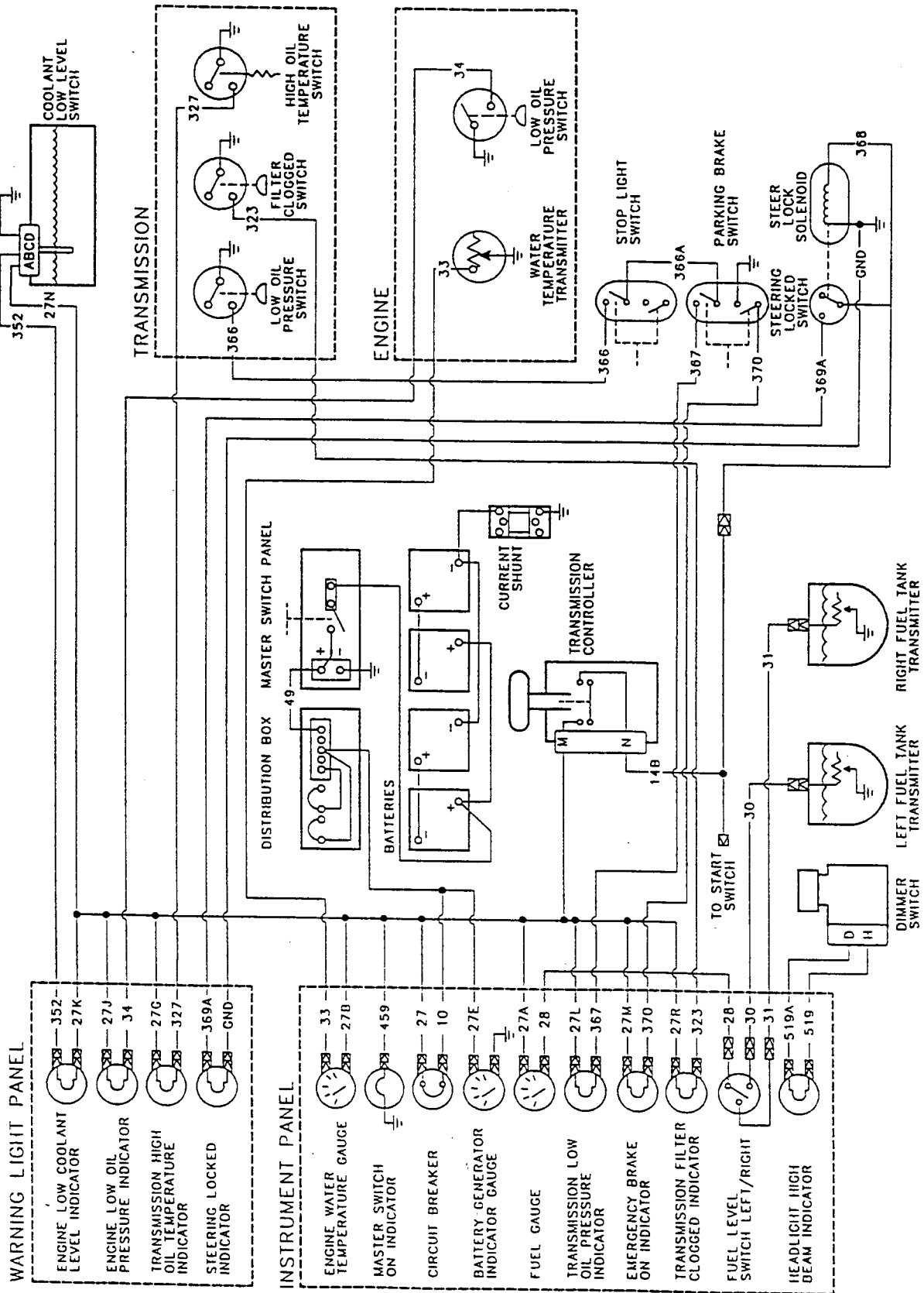
- 1. Faulty arming/firing unit. Beyond unit maintenance repair.
- 2. Notify supervisor.





INDICATORS SCHEMATIC

0046 00





**MASTER SWITCH ON INDICATOR DOESN'T LIGHT**

**0048 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

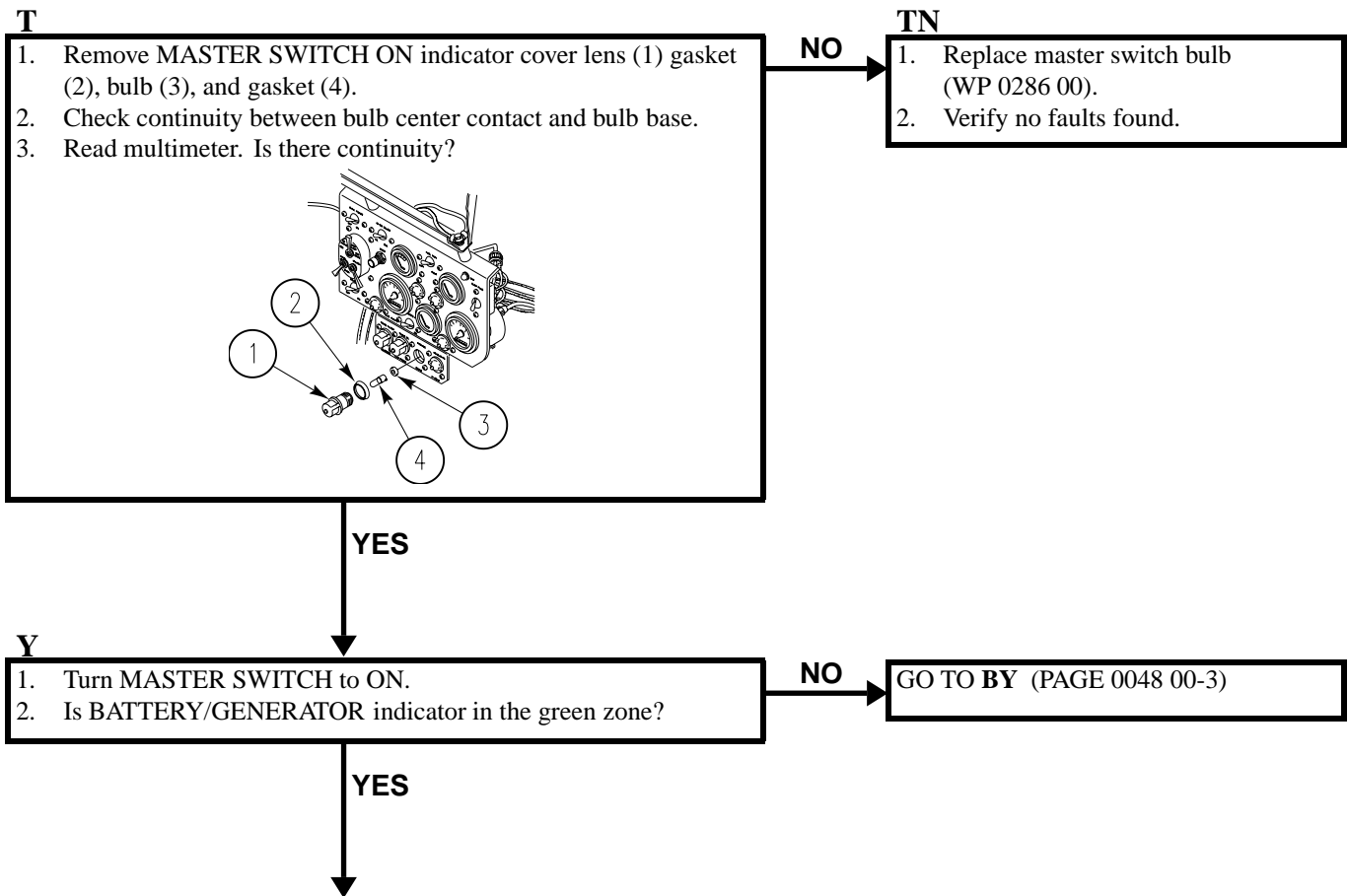
- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)

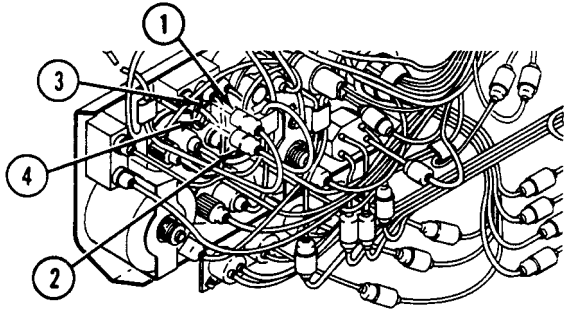
Personnel Required

- Unit Mechanic 63T10
- Helper (H)



**2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access (WP 0296 00).
3. Remove harness 10933038 circuit 10 plug (1) and cable assembly 12349858 circuit 27 plug (2) from instrument panel circuit breaker jacks (3) and (4).
4. Measure resistance between circuit breaker jacks (3) and (4).
5. Does multimeter read 0 ohms?



NO

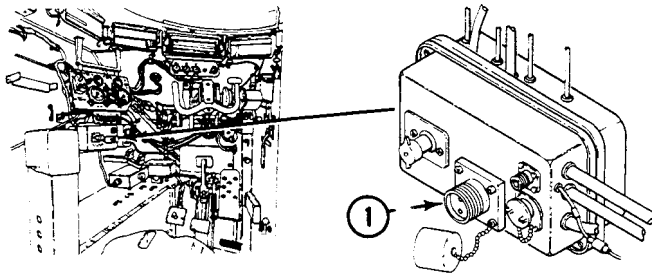
**2YN**

1. Replace instrument panel circuit breaker (WP 0280 00).
2. Verify no faults found.

YES

**3Y**

1. Measure resistance between harness 10933038 circuit 10 plug pin and master switch panel power receptacle positive jack pin (1).
2. Does multimeter read 0 ohms?



NO

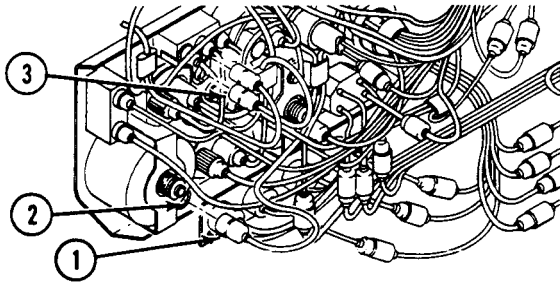
**3YN**

1. Replace harness 10933038 (WP 0266 00).
2. Verify no faults found.

YES

**4Y**

1. Remove cable assembly 12349858 circuit 459 plug (1) from MASTER SWITCH indicator jack (2)
2. Measure resistance between cable assembly circuit 27 plug (3) and circuit 459 plug (1).
3. Does multimeter read 0 ohms?



**NO**

**4YN**

1. Repair/replace cable 12349858 (WP 0382 00), (WP 0289 00).
2. Verify no faults found.

**YES**

**5Y**

1. Replace indicator light assembly (WP 0286 00).
2. Verify no faults found.

**BY**

1. Turn MASTER SWITCH to OFF.
2. Inspect carrier batteries (see your —10).
3. Are batteries in proper maintenance and well charged?

**NO**

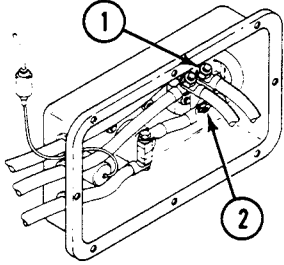
**BYN**

1. Service carrier batteries (see your -10).
2. Verify no faults found.

**YES**

**B2Y**

1. Remove master switch panel (WP 0260 00) or (WP 0261 00).
2. Turn MASTER SWITCH to ON.
3. Measure resistance between master switch terminals (1) and (2).
4. Does multimeter read 0 ohms?



NO

**B2YN**

1. Replace master switch (WP 0262 00).
2. Verify no faults found.

YES

**B3Y**

1. Replace harness 10933038 (WP 0266 00).
2. Verify no faults found.

**FUEL LEVEL INDICATOR MALFUNCTIONS**

**0049 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Jumper Wire

Equipment Condition

Personnel Required

Unit Mechanic

Helper (H)

Engine stopped (see your -10)

Carrier blocked (see your -10)

**T**

1. Does indicator malfunction with FUEL TANK indicator switch on LEFT and on RIGHT?

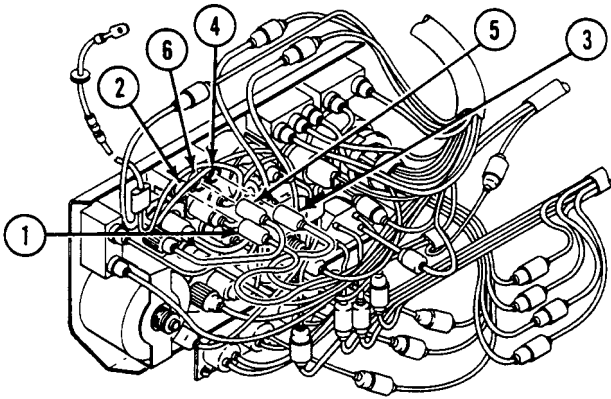
**NO**

**GO TO BY (PAGE 0049 00-3)**

**YES**

**Y**

1. Remove instrument panel for access (WP 0295 00).
2. Remove circuit 30 plug (1) from FUEL TANK switch jack (2).
3. Remove circuit 31 plug (3) from FUEL TANK switch jack (4).
4. Remove circuit 28 plug (5) from FUEL TANK switch jack (6).
5. Turn FUEL TANK switch to LEFT and measure resistance between FUEL TANK switch jack (6) and FUEL TANK switch jack (2).
6. Turn FUEL TANK switch to RIGHT and measure resistance between FUEL TANK switch jack (6) and FUEL TANK switch jack (4).
7. Did multimeter read 0 ohms both times?



**NO**

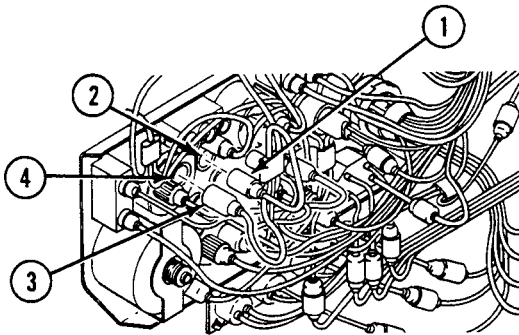
**YN**

1. Replace FUEL TANK select switch (WP 0277 00) or (WP 0282 00).
2. Verify no faults found.

**YES**

**2Y**

1. Remove circuit 27 plug (1) from instrument panel circuit breaker jack (2).
2. Remove circuit 27A plug (3) from fuel level indicator jack (4).
3. Check continuity between circuit 27 plug (1) and circuit 27A plug (3).
4. Does multimeter read 0 ohms?



**NO**

**2YN**

1. Install circuit 30 and 31 leads on FUEL TANK switch.
2. Replace cable assembly 12349858 circuit 27A (WP 0290 00).
3. Verify no faults found.

**YES**

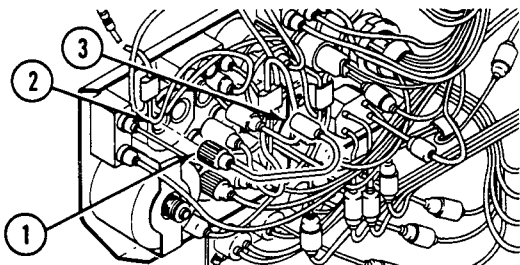


FUEL LEVEL INDICATOR MALFUNCTIONS—Continued

0049 00

**3Y**

1. Install circuit 30 and 31 plugs on FUEL TANK switch.
2. Remove circuit 28 plug (1) from FUEL LEVEL indicator jack (2).
3. Check continuity between circuit 28 plugs (1) and (3).
4. Does multimeter read 0 ohms?



NO

**3YN**

1. Replace lead 12268805 (WP 0281 00).
2. Verify no faults found.

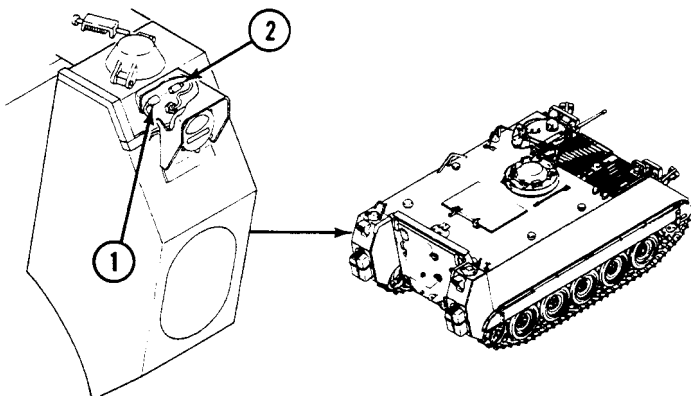
YES

**4Y**

1. Install circuit 28 plug on FUEL TANK switch jack.
2. Replace FUEL LEVEL indicator (WP 0285 00).
3. Verify no faults found.

**BY**

1. Remove harness 12268797 circuit 30 (left tank) plug (1) or circuit 31 (right tank) plug from failing fuel tank jack (2).
2. Turn FUEL TANK switch to failing side.
3. Does indicator read full scale?



NO

**BYN**

1. Do steps Step 2 and Step 3 for all carriers except M577A3 and M1068A3. Do steps Step 4 and Step 5 for M577A3 and M1068A3.
2. Replace harness 12268797 circuit 30 or 31 (WP 0290 00).
3. Verify no faults found.
4. Faulty circuit 29 or 30. Beyond unit maintenance repair.
5. Notify supervisor.

YES

**B2Y**

1. Install jumper wire between harness 12268797 circuit 30 or 31 and ground.
2. Does fuel indicator read empty?

NO

GO TO CY (PAGE 0049 00-5)

YES

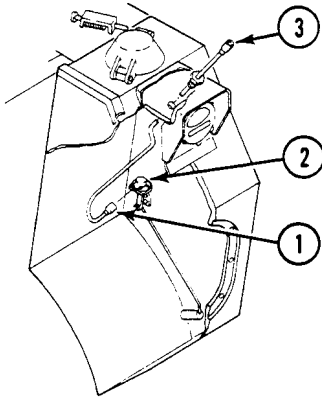
**B3Y**

1. Access failing fuel level transmitter (WP 0190 00).
2. Remove lead 12268804 -1 (or -2) plug (1) from failing transmitter jack (2).
3. Check continuity between plugs (1) and (3).
4. Does multimeter read 0 ohms?

NO

**B3YN**

1. Replace FUEL QUANTITY transmitter lead, 12268804 -1 (WP 0190 00) or 12268804-2 (for M577A3/M1068A3) (WP 0191 00).
2. Verify no faults found.



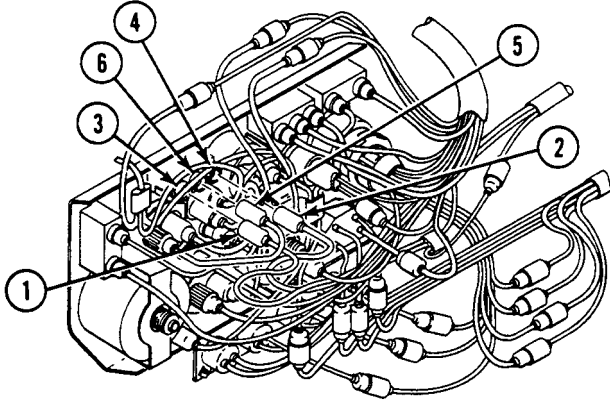
YES

**B4Y**

1. Replace FUEL QUANTITY transmitter (WP 0190 00) or (for M577A3/M1068A3) (WP 0191 00).
2. Verify no faults found.

**CY**

1. Remove instrument panel for access (WP 0295 00).
2. Remove harness 12268797 circuit 30 plug (1) (left tank) or circuit 31 plug (2) (right tank) from FUEL TANK switch jack (3) or jack (4).
3. Remove circuit 28 plug (5) from FUEL TANK switch jack (6).
4. Check continuity between exposed jack pins on FUEL TANK switch (3).
5. Does multimeter read 0 ohms?



**NO**

**CYN**

1. Install harness circuit 30 or 31 on fuel tank transmitter.
2. Replace FUEL TANK switch (WP 0277 00 or WP 0282 00).
3. Verify no faults found.

**YES**

**C2Y**

1. Do Step 2 and Step 3 for all carriers except M577A3 and M1068A3. Do Step 4 and Step 5 for M577A3 and M1068A3.
2. Replace harness 12268797 circuit 30 or 31 (WP 0290 00).
3. Verify no faults found.
4. Faulty harness circuit 29 or 30. Beyond unit maintenance repair.
5. Notify supervisor.



**HIGH BEAM INDICATOR LIGHT DOESN'T WORK**

**0050 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

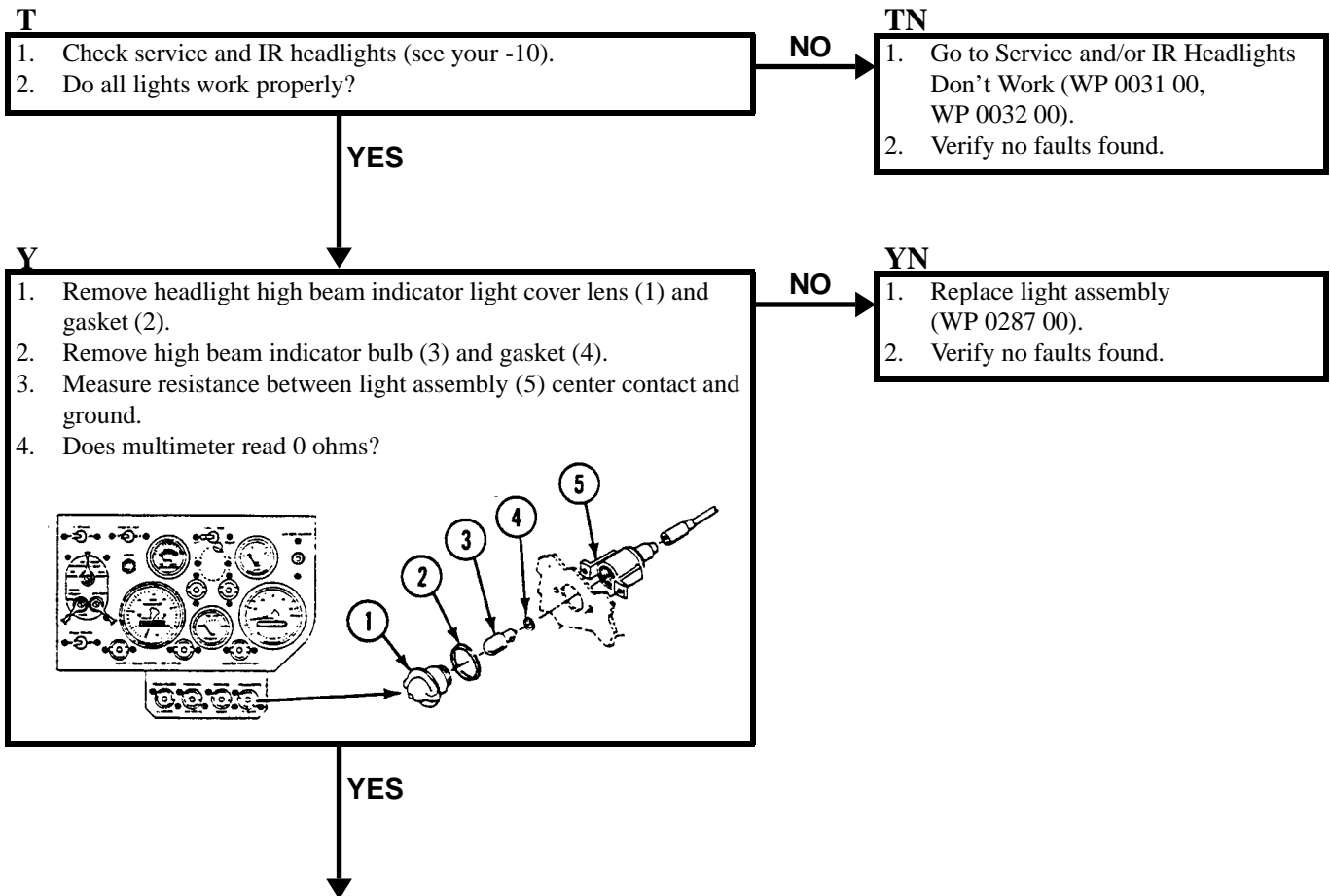
- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Jumper Wire

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)

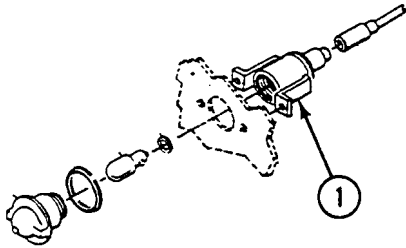
Personnel Required

- Unit Mechanic
- Helper (H)



**2Y**

1. Check continuity between light assembly (1) bulb base contact and ground.
2. Is there continuity?



**NO**

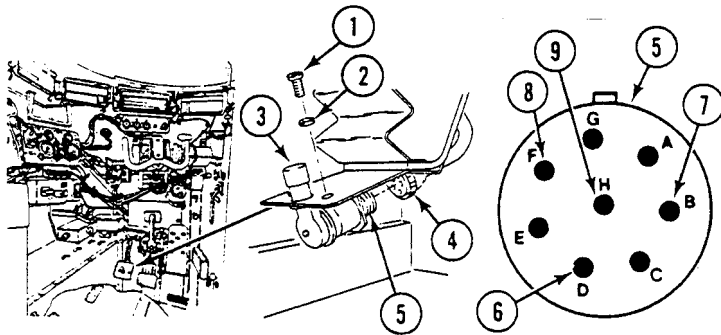
**2YN**

1. Replace headlight high beam indicator bulb (WP 0287 00).
2. Verify no faults found.

**YES**

**3Y**

1. Remove two screws (1), washers (2), and dimmer switch (3).
2. Remove harness 12349881 plug (4) from dimmer switch jack (5).
3. Measure resistance between dimmer switch jack (5) pins D (6) and B (7) and between pins F (8) and H (9).
4. Did multimeter read 0 ohms for both measurements?



**NO**

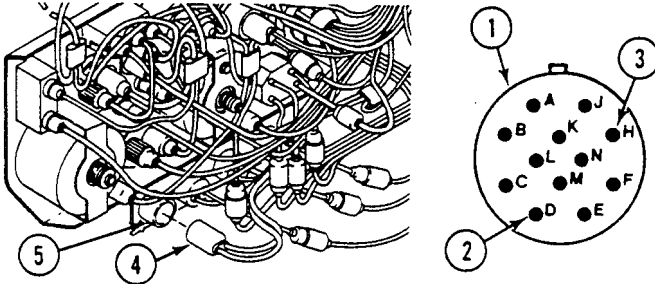
**3YN**

1. Replace dimmer switch (WP 0333 00).
2. Verify no faults found.

**YES**

**4Y**

1. Install jumper wire between harness 12349881 dimmer switch plug (1) pins D (2) and H (3).
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 circuit 519/519A plug (4) from high beam indicator light jack (5).
4. Measure resistance between harness 12349881 circuit 519/519A plug (4) pins.
5. Does multimeter read 0 ohms?



**NO**

**4YN**

1. Faulty harness 12349881 circuits 519 and 519A. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**5Y**

1. Install dimmer switch and plug (WP 0333 00).
2. Replace high beam indicator light assembly (WP 0287 00).
3. Verify no faults found.





**BATTERY/GENERATOR INDICATOR MALFUNCTIONS**

**0051 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)

Equipment Condition

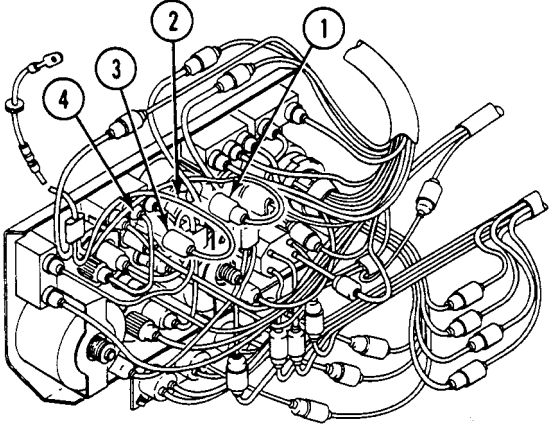
- Engine stopped (see your -10)
- Carrier blocked (see your -10)

Personnel Required

Unit Mechanic

**T**

1. Remove instrument panel for access (WP 0295 00).
2. Remove circuit 27E plug (1) from battery generator indicator jack (2).
3. Remove circuit 10 plug (3) from instrument panel circuit breaker jack (4).
4. Check continuity between circuit 27E plug (1) and circuit 10 plug (3).
5. Read multimeter. Is there continuity?



**NO**

**TN**

1. Replace harness 10933038 (WP 0289 00).
2. Verify no faults found.

**YES**

**Y**

1. Replace BATTERY/GENERATOR indicator (WP 0285 00).
2. Verify no faults found.



**PARKING BRAKE INDICATOR MALFUNCTIONS**

**0052 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Jumper Wire

Equipment Condition

Personnel Required

Unit Mechanic

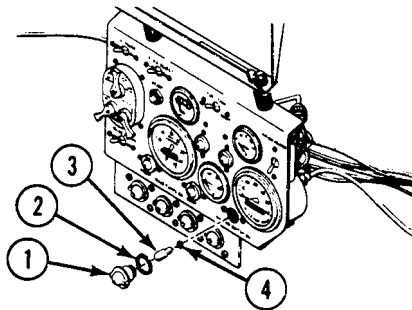
Helper (H)

Engine stopped (see your -10)

Carrier blocked (see your -10)

**T**

1. Remove PARKING BRAKE indicator cover lens (1), gasket (2), bulb (3), and gasket (4).
2. Check continuity between bulb center contact and bulb base.
3. Read multimeter. Is there continuity?



**YES**

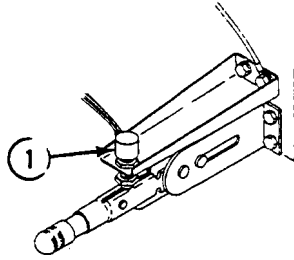
**NO**

**TN**

1. Replace indicator bulb (WP 0286 00).
2. Verify no faults found.

**Y**

1. Install PARKING BRAKE indicator cover lens, bulb and gaskets.
2. Release parking brake (see your -10).
3. Manually depress hand brake indicator switch (1).
4. Observe parking brake indicator.
5. Release hand brake indicator switch (1).
6. Did indicator fail to light with switch depressed, or fail to go off with switch released?



**NO**

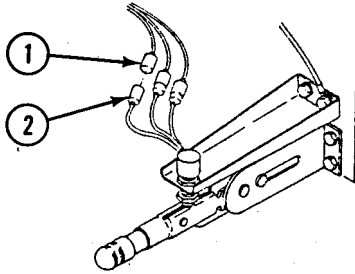
**YN**

1. Adjust parking brake indicator switch (WP 0331 00).
2. Verify no faults found.

**YES**

**2Y**

1. Remove harness 12349881 circuit 370 plug (1) from parking brake light switch jack (2).
2. Check continuity between parking brake light switch jack (2) and ground with parking brake switch depressed.
3. Read multimeter. Is there continuity?



**NO**

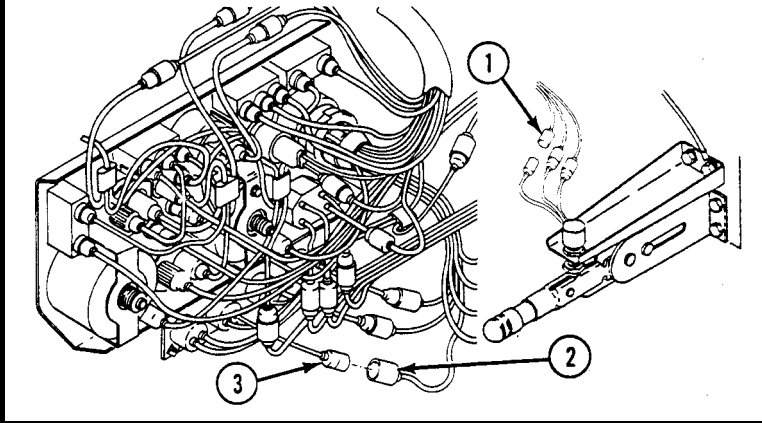
**2YN**

1. Replace parking brake switch (WP 0331 00).
2. Verify no faults found.

**YES**

**3Y**

1. Install jumper wire between parking brake light switch harness 12349881 circuit 370 plug (1) and ground.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 circuit 370 (2) from cable assembly 12349858 circuit 370 (3).
4. Check continuity between harness 12349881 circuit 370 (2) and ground.
5. Read multimeter. Is there continuity?



**YES**



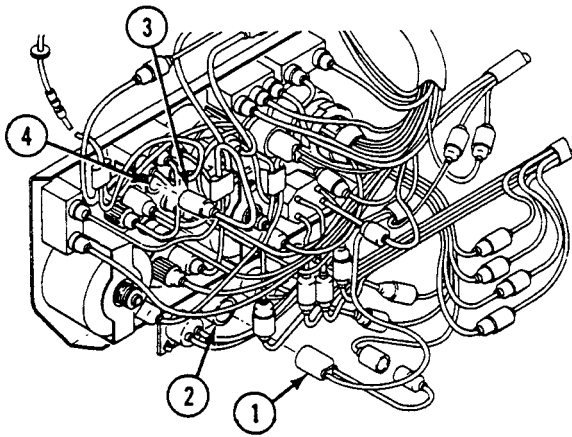
**NO**

**3YN**

1. Faulty harness 12349881 circuit 370. Beyond unit maintenance repair.
2. Notify supervisor.

**4Y**

1. Remove jumper wire from harness 12349881 circuit 370.
2. Install harness 12349881 on brake light switch.
3. Remove cable assembly 12349858 circuit 27M plug (1) from parking brake indicator jack (2).
4. Remove cable assembly 12349858 circuit 27 plug (3) from instrument panel circuit breaker jack (4).
5. Check continuity between cable assembly 12349858 circuit 27 plug (3) and circuit 27M plug (1). Use multimeter.
6. Check continuity between cable assembly 12349858 circuit 27 (3) and circuit 370 plugs.
7. Read multimeter. Is there continuity both times?



**NO**

**4YN**

1. Replace cable assembly 12349858 (WP 0290 00).
2. Verify no faults found.

**YES**

**5Y**

1. Replace indicator light assembly 8729063 (WP 0286 00).
2. Verify no faults found.

**COOLANT TEMP INDICATOR MALFUNCTIONS**

**0053 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Jumper Wire
- Multimeter (WP 0926 00, Item 30)
- STE/ICE Test Set (WP 0926 00, Item 61)

Personnel Required

Unit Mechanic

References

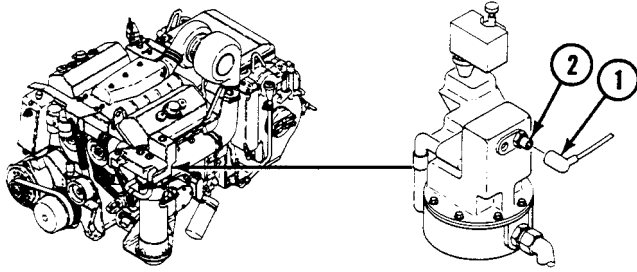
See your -10

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Driver's power plant access panel removed (WP 0441 00)
- Power plant rear access panel removed (WP 0439 00)

**T**

1. Remove harness 12349873 circuit 33 plug (1) from water temperature transmitter jack (2).
2. Turn MASTER SWITCH to ON (see your -10).
3. Is TEMP indicator needle in full left (cold) position?



**NO**

**GO TO AY (PAGE 0053 00-2)**

**YES**

**Y**

1. Turn MASTER SWITCH to OFF.
2. Install jumper wire between harness 12349873 circuit 33 plug and ground.
3. Observe TEMP indicator needle.
4. Turn MASTER SWITCH to ON for two seconds.
5. Did TEMP indicator needle move to full right (hot) position?

**NO**

**GO TO BY (PAGE 0053 00-3)**

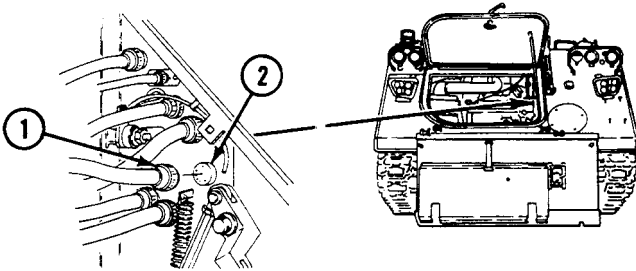
**YES**

**2Y**

1. Remove jumper wire.
2. Replace water temperature transmitter (WP 0321 00).
3. Verify no faults found.

**AY**

1. Turn MASTER SWITCH to OFF.
2. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
3. Turn MASTER SWITCH to ON.
4. Is TEMP indicator still not in full left (cold) position?



NO

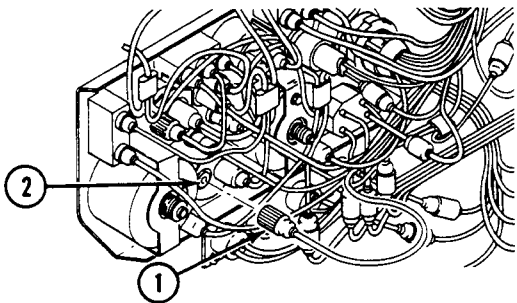
**AYN**

1. Replace harness 12349873 circuit 33 (WP 0359 00).
2. Verify no faults found.

YES

**A2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access (WP 0295 00).
3. Remove harness 12349881 circuit 33 plug (1) from TEMP indicator jack (2).
4. Measure resistance between harness 12349881 circuit 33 plug (1) and ground.
5. Is reading 0 ohms?



NO

**A2YN**

1. Faulty harness 12349881 circuit 33. Beyond unit maintenance repair.
2. Notify supervisor.

YES

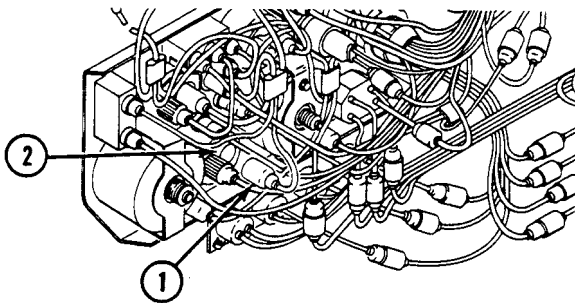


**A3Y**

1. Install harness 12349881 plug on harness 12349881 jack at carrier bulkhead.
2. Install harness 12349873 circuit 33 plug on TEMP transmitter jack.
3. Replace TEMP indicator (WP 0285 00).
4. Verify no faults found.

**BY**

1. Remove special purpose cable 12349858 circuit 27B plug (1) from coolant temperature gauge (2).
2. Turn MASTER SWITCH to ON.
3. Measure voltage between harness 12349858 circuit 27B plug (1) pin and ground.
4. Does multimeter read at least 17 volts?



YES



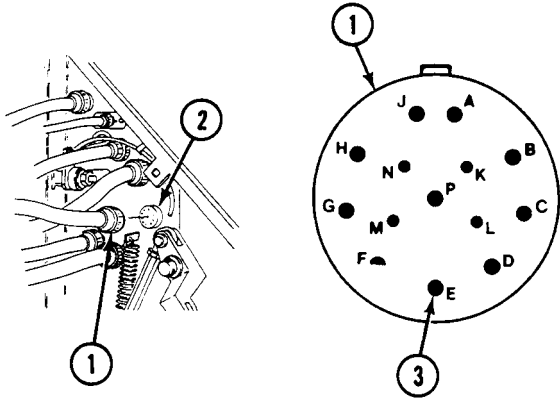
NO

**BYN**

1. Repair/replace faulty special purpose cable 12349858 circuit 27B (WP 0290 00).
2. Verify no faults found.

**B2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
3. Check continuity between harness 12349873 plug (1) pin E (3) and ground.
4. Is there continuity?



NO

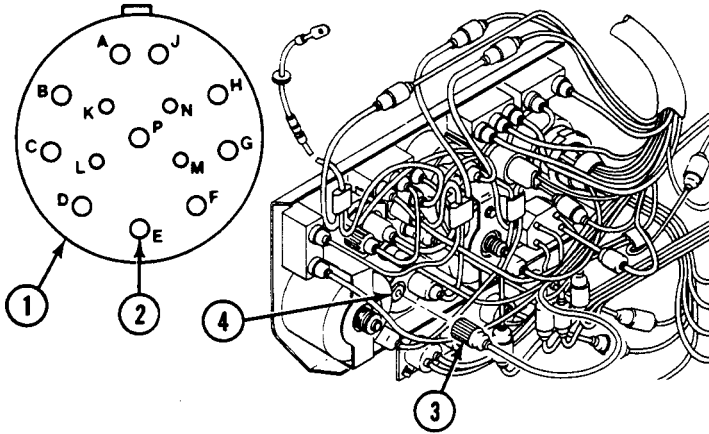
**B2YN**

1. Repair harness 12349873 circuit 33 (WP 0382 00).
2. Verify no faults found.

YES

**B3Y**

1. Remove jumper wire.
2. Install harness 12349873 circuit 33 plug on water temperature transmitter.
3. Install jumper wire between harness 12349881 jack (1) pin E (2) and ground.
4. Remove harness 12349881 circuit 33 plug (3) from TEMP indicator jack (4).
5. Check continuity between harness 12349881 circuit 33 (3) and ground.
6. Is there continuity?



NO

**B3YN**

1. Remove jumper wire.
2. Repair harness 12349881 circuit 33 (WP 0382 00).
3. Verify no faults found.

YES

**B4Y**

1. Remove jumper wire.
2. Install harness 12349873 plug onto harness 12345881 jack at carrier bulkhead.
3. Replace TEMP indicator (WP 0285 00).
4. Verify no faults found.



**STEERING LOCKED INDICATOR MALFUNCTIONS**

**0054 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)

Equipment Condition

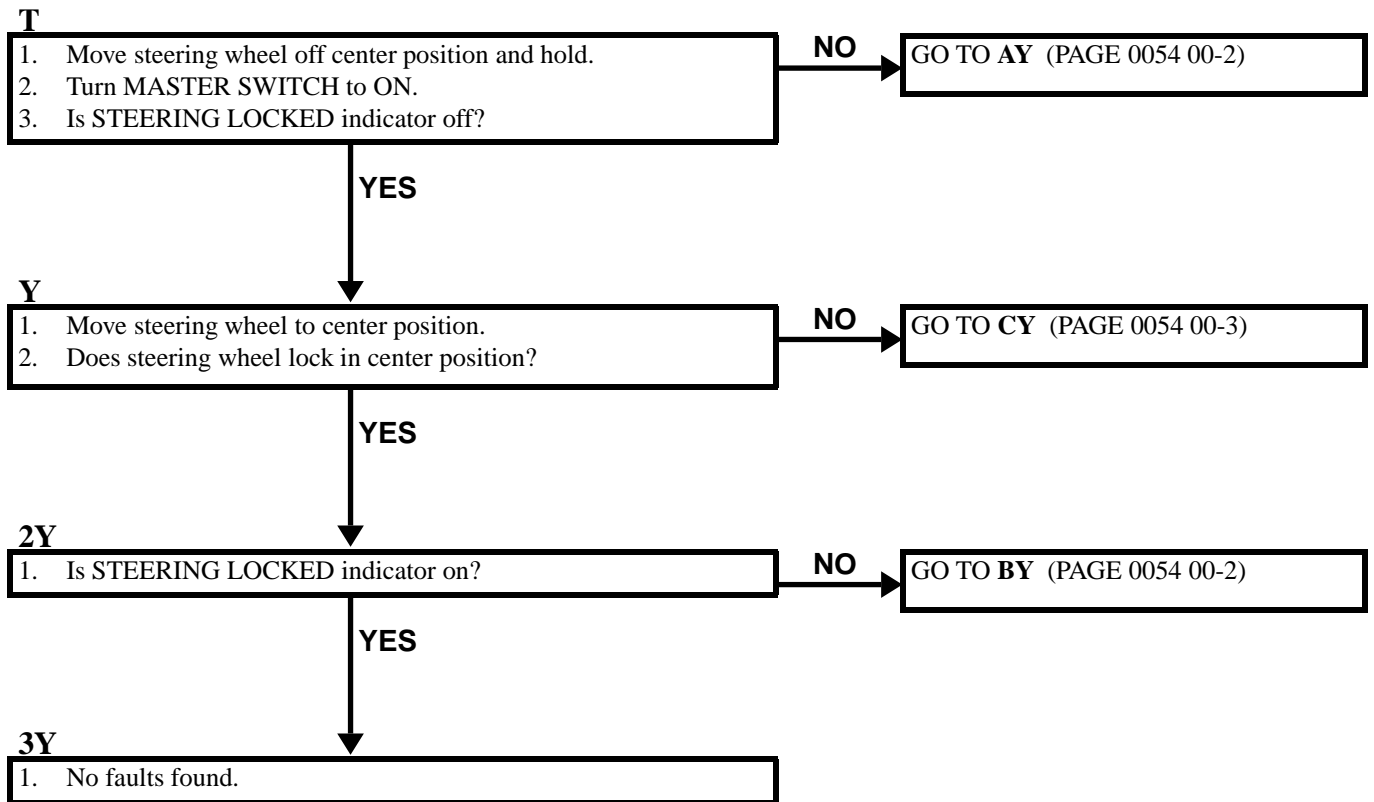
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**NOTE**

**Some vehicles are equipped with a solenoid-activated steering lock and some with a cable-activated lock. Unless noted otherwise, the steps in this procedure apply to both configurations.**



STEERING LOCKED INDICATOR MALFUNCTIONS—Continued

0054 00

**AY**

1. Check adjustment of steering locked indicator switch. See WP 0428 00 for solenoid-activated lock. See WP 0429 00 for cable-activated lock.
2. Is switch properly adjusted?

**NO** → **AYN**

1. Adjust steering locked switch. See WP 0428 00 for solenoid-activated lock. See WP 0429 00 for cable-activated lock.
2. Verify no faults found.

**YES** ↓

**A2Y**

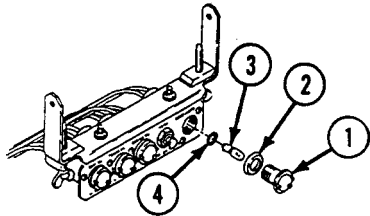
1. Replace steering lock switch (WP 0330 00).
2. Verify no faults found.

**BY**

1. Remove STEERING LOCKED indicator light cover lens (1), gasket (2), bulb (3), and gasket (4).
2. Check continuity between bulb center contact and base.
3. Does multimeter indicate continuity?

**NO** → **BYN**

1. Replace STEERING LOCKED indicator bulb (WP 0294 00).
2. Verify no faults found.

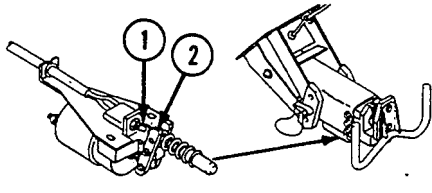


**YES** ↓

**B2Y**

1. Install STEERING LOCKED indicator cover lens, bulb, and gaskets.
2. Inspect distance between steering locked switch (1) and steering locked lever (2).
3. Is steering locked switch touching steering locked lever?

**NO** → GO TO CY (PAGE 0054 00-3)



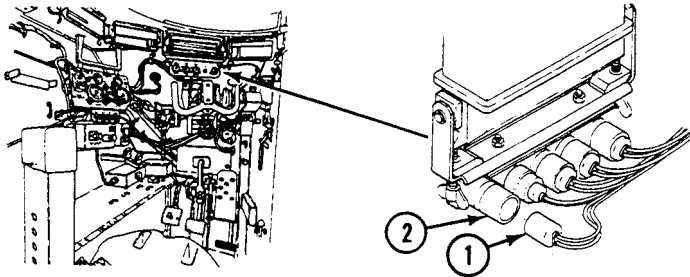
**YES** ↓

**B3Y**

1. Adjust steering locked switch. See WP 0428 00 for solenoid-activated lock. See WP 0429 00 for cable-activated lock.
2. Verify no faults found.

**CY**

1. Remove harness 12354722 (for solenoid-activated lock) or 12369685 (for cable-activated lock) plug (1) from STEERING LOCKED indicator assembly jack (2) on back side of warning light panel.
2. Measure voltage between plug (1) pins.
3. Does multimeter read less than 17 volts?



YES



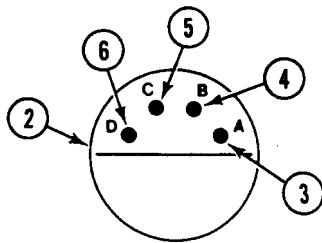
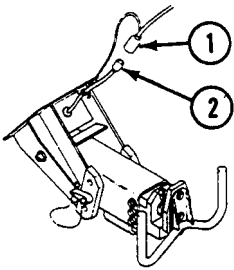
NO

**CYN**

1. Replace STEERING LOCKED warning light assembly (WP 0294 00).
2. Verify no faults found.

**C2Y**

1. Turn MASTER SWITCH to OFF.
2. For solenoid-activated lock, remove harness 12354722 plug (1) from harness 12349911 jack (2). For cable-activated lock, remove harness 12369685 plug (1) from harness 1236984 jack (2).
3. H: For solenoid-activated lock, push and hold solenoid plunger while measuring resistance.
4. For solenoid-activated lock, measure resistance between harness 12349911 jack (2) pins A (3) to B (4) and pins C (5) to D (6). For cable-activated lock, measure resistance between harness 12369684 jack (2) pins A (3) to B (4).
5. Did multimeter read more than 0 ohms either time?



**NO**

**C2YN**

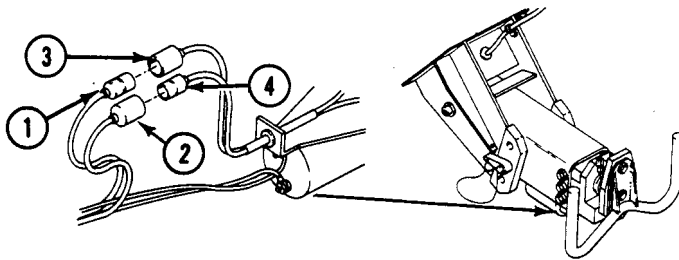
1. Replace harness 12354722 (for solenoid-activated lock) or 12369685 (for cable- activated lock) circuit 369A and/or ground circuit (WP 0374 00).
2. Verify no faults found.

**YES**



**C3Y**

1. Install harness 12369685 (for cable-activated lock) plug on STEERING LOCKED indicator jack.
2. For solenoid-activated lock, remove harness 12349911 lead 369A plug (1) and lead 369 plug (2) from steering locked switch jacks (3) and (4). For cable-activated lock, remove harness 12369684 lead 368 plug (1) and lead 369A plug (2) from steering locked switch jacks (3) and (4).
3. H: For solenoid-activated lock, push and hold solenoid plunger while measuring resistance.
4. Measure resistance between steering locked switch jacks (3) and (4).
5. Does multimeter read 0 ohms?



YES

**C4Y**

1. Replace harness 12349911 (for solenoid-activated lock) circuit 369, 369A, 368, 368A, or harness 12369684 (for cable-activated lock) circuit 369A and 368, and/or ground (WP 0367 00).
2. Verify no faults found.

NO

**C3YN**

1. Replace steering locked switch (WP 0330 00).
2. Verify no faults found.



**ENGINE OIL LOW PRESSURE INDICATOR MALFUNCTIONS**

**0055 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Jumper Wire

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

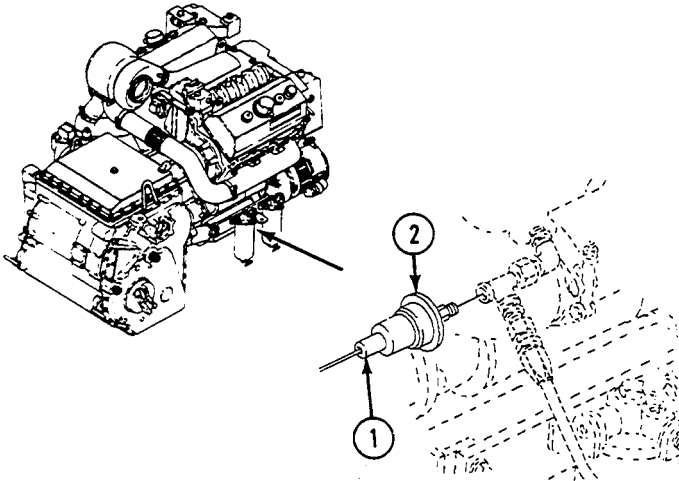
Personnel Required

Unit Mechanic

Front power plant access door open (see your -10)

**T**

1. Remove harness 12349873 circuit 34 plug (1) from engine oil low pressure transmitter (2).
2. Turn MASTER SWITCH to ON (see your -10).
3. Is ENGINE OIL LOW PRESSURE indicator off?



**NO**

**GO TO AY (PAGE 0055 00-2)**

**YES**

**Y**

1. Install jumper wire between harness 12349873 circuit 34 plug pin and ground.
2. Is ENGINE OIL LOW PRESSURE indicator on?

**NO**

**GO TO BY (PAGE 0055 00-3)**

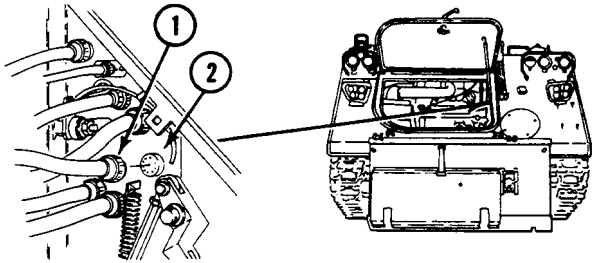
**YES**

**2Y**

1. Replace the engine oil low pressure transmitter (WP 0320 00).
2. Verify no faults found.

**AY**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Is ENGINE OIL LOW PRESSURE indicator still on?



NO

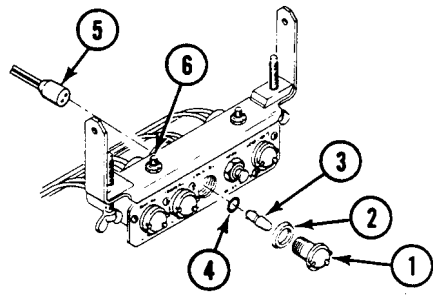
**AYN**

1. Replace harness 12349873 circuit 34 (WP 0382 00).
2. Verify no faults found.

YES

**A2Y**

1. Remove ENGINE OIL LOW PRESSURE indicator cover lens (1) gasket (2), bulb (3), and gasket (4).
2. Remove harness 12349881 circuit 27J/34 plug (5) from ENGINE OIL LOW PRESSURE indicator jack (6).
3. Measure resistance between indicator jack (6) pins and ground one at a time.
4. Did multimeter read 0 ohms for either measurement?



NO

**A2YN**

1. Faulty harness 12349881 circuit 34. Beyond unit maintenance repair.
2. Notify supervisor

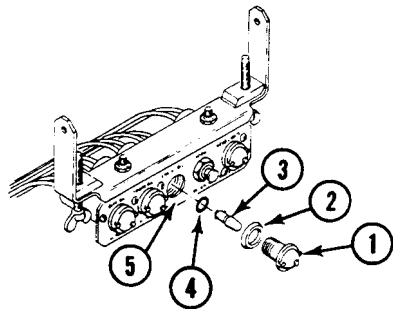
YES

**A3Y**

1. Replace ENGINE OIL LOW PRESSURE indicator light assembly (WP 0320 00).
2. Verify no faults found.

**BY**

1. Remove ENGINE OIL LOW PRESSURE indicator cover lens (1), gasket (2), bulb (3), and gasket (4) from indicator assembly (5).
2. Measure voltage between indicator assembly (5) center contact and ground.
3. Does multimeter read less than 17 volts?

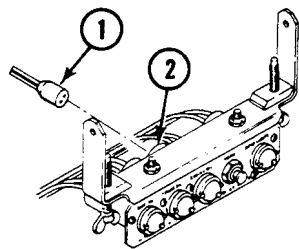


NO → GO TO CY (PAGE 0055 00-5)

YES

**B2Y**

1. Remove harness 12349881 circuit 27J/34 plug (1) from ENGINE OIL LOW PRESSURE indicator assembly jack (2).
2. Measure voltage between circuit 27J plug pin and ground.
3. Does multimeter read less than 17 volts?

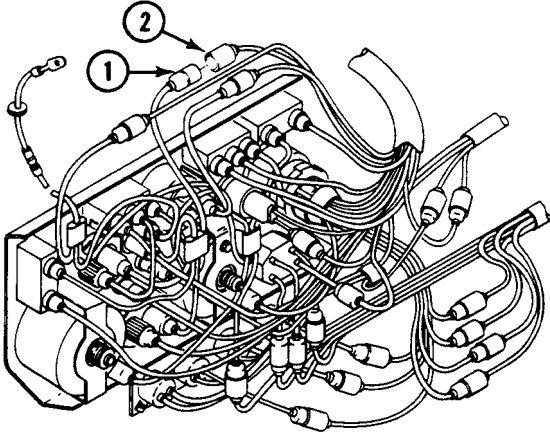


NO → **B2YN**  
 1. Replace ENGINE OIL LOW PRESSURE indicator assembly (WP 0320 00).  
 2. Verify no faults found.

YES

**B3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access. See task: remove instrument panel mounts and ground lead (WP 0295 00).
3. Remove harness 12349881 circuit 27F plug (1) from cable assembly 12349858 circuit 27F jack (2).
4. Measure resistance between harness 12349881 circuit 27J plug and circuit 27F plug (1).
5. Does multimeter read 0 ohms?



NO

**B3YN**

1. Faulty harness 12349881 circuit 27F/27J. Beyond unit maintenance repair.
2. Notify supervisor

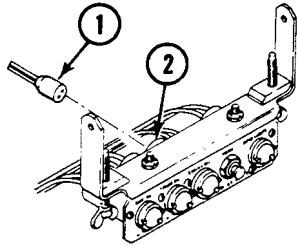
YES

**B4Y**

1. Repair special purpose cable 12349858 circuit 27F (WP 0382 00).
2. Verify no faults found.

**CY**

1. Remove harness 12349881 circuit 27J/34 plug (1) from ENGINE OIL LOW PRESSURE indicator assembly jack (2).
2. Measure resistance between circuit 34 plug pin and ground.
3. Does multimeter read more than 0 ohms?



**NO**

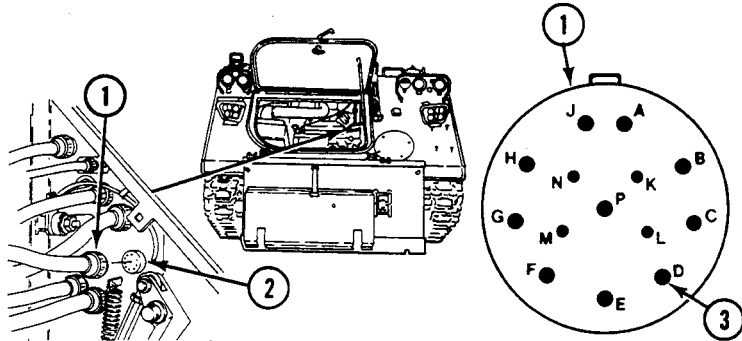
**CYN**

1. Install harness 12349881 plug on ENGINE OIL LOW PRESSURE indicator jack.
2. Remove jumper wire.
3. Replace engine oil low pressure switch (WP 0320 00).
4. Verify no faults found.

**YES**

**C2Y**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Measure resistance between harness 12349873 plug (1) pin D (3) and ground.
3. Does multimeter read 0 ohms?



**NO**

**C2YN**

1. Remove jumper wire.
2. Install harness 12349881 plug on ENGINE OIL LOW PRESSURE indicator assembly jack.
3. Install indicator cover lens and bulb.
4. Replace harness 12349873 circuit 34 (WP 0382 00).
5. Verify no faults found.

**YES**

**C3Y**

1. Remove jumper wire.
2. Install harness 12349873 onto ENGINE OIL LOW PRESSURE switch.
3. Faulty harness 12349881 circuit 34. Beyond unit maintenance repair.
4. Notify supervisor.



**TRANSMISSION OIL LOW PRESSURE INDICATOR MALFUNCTIONS**

**0056 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Jumper Wire
- Multimeter (WP 0926 00, Item 30)

Equipment Condition

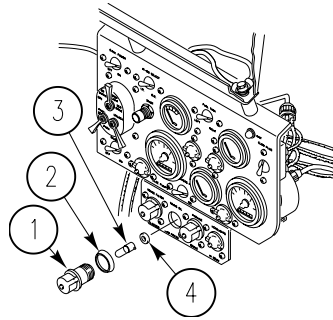
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Parking brake off (see your -10)
- Service brake off (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Remove TRANS OIL LOW PRESS indicator lens (1), gasket (2), bulb (3), and gasket (4).
2. Check continuity between bulb base and bulb center contact.
3. Is there continuity?



**YES**



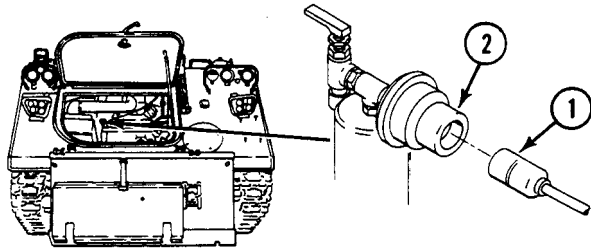
**NO**

**TN**

1. Replace TRANS OIL LOW PRESS bulb (WP 0287 00).
2. Verify no faults found.

**Y**

1. Install TRANS OIL LOW PRESS bulb and cover lens.
2. Remove harness 12349810 circuit 366 plug (1) from TRANS OIL LOW PRESS switch assembly jack (2).
3. Turn MASTER SWITCH to ON (see your -10).
4. Is TRANS OIL LOW PRESS indicator off?



**NO** → GO TO AY (PAGE 0056 00-2)

**YES**

**2Y**

1. Install jumper wire between harness 12349810 circuit 366 plug and ground.
2. Is TRANS OIL LOW PRESS indicator on?

**NO** → GO TO BY (PAGE 0056 00-6)

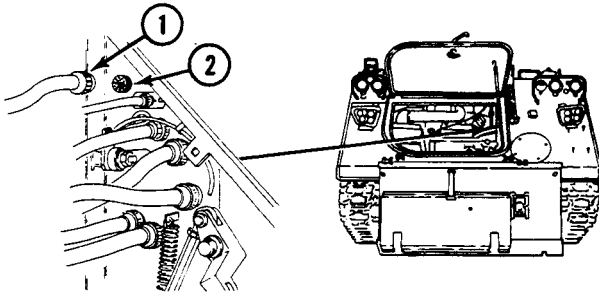
**YES**

**3Y**

1. Replace TRANS OIL LOW PRESS switch (WP 0400 00).
2. Verify no faults found.

**AY**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Is TRANS OIL LOW PRESS indicator still on?

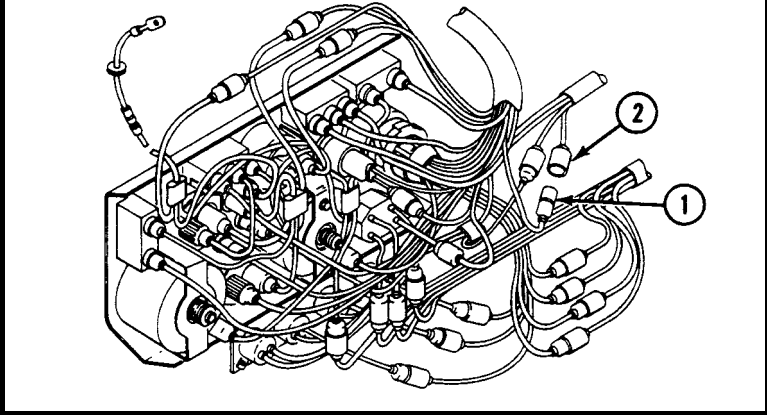


**NO** → **AYN**  
 1. Replace harness 12349810 (WP 0361 00).  
 2. Verify no faults found.

**YES**

**A2Y**

1. Remove harness 12349813 circuit 366 plug (1) from harness 12349881 circuit 366 jack (2) behind instrument panel.
2. Is TRANS OIL LOW PRESS indicator still on?



NO

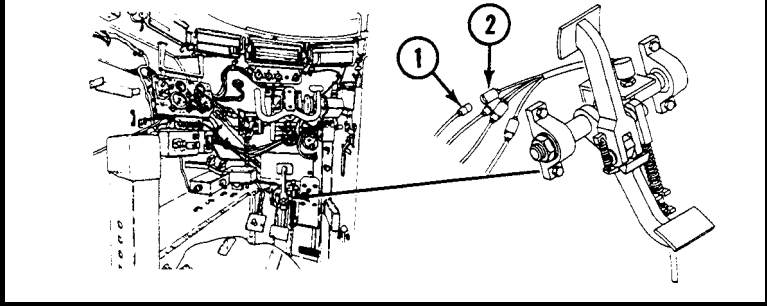
**A2YN**

1. Replace harness 12349813 (WP 0360 00).
2. Verify no faults found.

YES

**A3Y**

1. Install harness 12349810 plug on harness 12349813 at carrier bulkhead.
2. Install harness 12349810 circuit 366 on trans oil low press switch.
3. Remove harness 12349881 circuit 366 plug (1) from stop light switch jack (2).
4. Is TRANS OIL LOW PRESS indicator still on?



NO

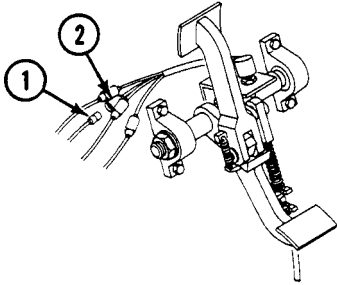
**A3YN**

1. Shorted harness 12349881 circuit 366. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**A4Y**

1. Install harness 12349813 circuit 366 plug onto harness 12349881 circuit 366 jack.
2. Remove harness 12349881 circuit 366A plug (1) from stop light switch jack (2).
3. Is TRANS OIL LOW PRESS indicator still on?



NO

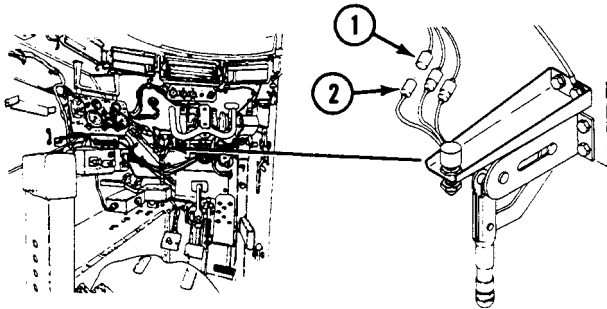
**A4YN**

1. Replace brake light switch (WP 0332 00).
2. Verify no faults found.

YES

**A5Y**

1. Install harness 12349881 circuit 366 plug on stop light switch circuit 366 jack.
2. Remove harness 12345881 circuit 366A plug (1) from parking brake switch 366A jack (2).
3. Is TRANS OIL LOW PRESS indicator still on?



NO

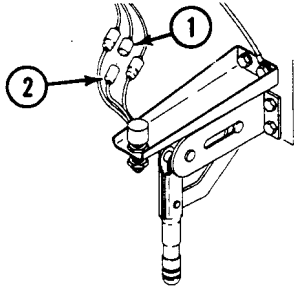
**A5YN**

1. Faulty harness 12349881 circuit 366A. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**A6Y**

1. Install harness 12349881 circuit 366A on stop light switch 366A jack.
2. Remove harness 12349881 circuit 367 plug (1) from parking brake switch jack (2).
3. Is TRANS OIL LOW PRESS indicator still on?



**NO**

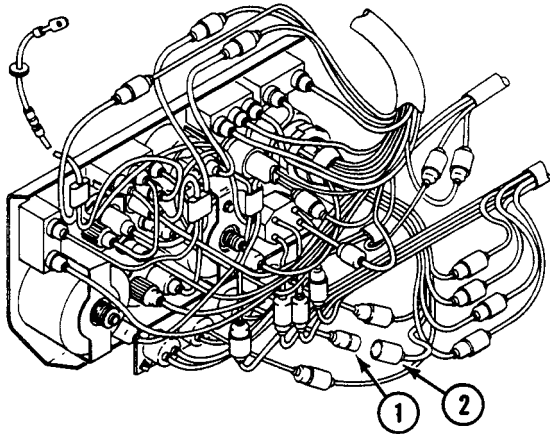
**A6YN**

1. Replace parking brake switch (WP 0331 00).
2. Verify no faults found.

**YES**

**A7Y**

1. Install harness 12349881 circuit 366A on stop light switch circuit 366 jack.
2. Remove harness 12349881 circuit 367 plug (1) from cable assembly 12349858 circuit 367 jack (2).
3. Is TRANS OIL LOW PRESS indicator still on?



**NO**

**A7YN**

1. Faulty harness 12349881 circuit 367. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**A8Y**

1. Install harness 12349881 circuit 367 plug on parking brake switch circuit 366 jack.
2. Replace TRANS OIL LOW PRESS indicator assembly (WP 0287 00).
3. Verify no faults found.

**BY**

1. Remove TRANS OIL LOW PRESS lens, gasket, bulb, and gasket from indicator assembly.
2. Measure voltage between center contact on indicator assembly and ground.
3. Does multimeter read 17 volts or more?

NO

GO TO CY (PAGE 0056 00-9)

YES

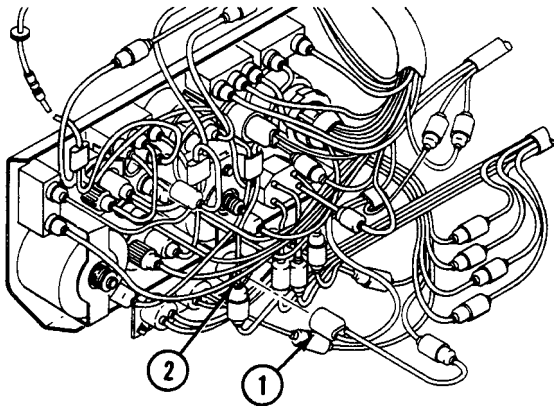
**B2Y**

1. Remove cable assembly 12349858 circuit 367/27L plug (1) from TRANS OIL LOW PRESS indicator assembly (2).
2. Check continuity between cable assembly 12349858 circuit 367/27L plug (1) circuit 367 pin and ground.
3. Is there continuity?

NO

**B2YN**

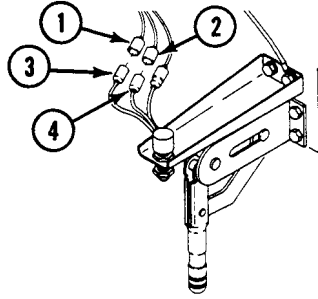
1. Remove jumper wire and install harness 12349881 circuit 366 plug on trans oil low press switch.
2. Replace TRANS OIL LOW PRESS indicator assembly (WP 0287 00).
3. Verify no faults found.



YES

**B3Y**

1. Remove harness 12349881 circuits 367 plug (1) and 366A (2) plug from parking brake switch jacks (3) and (4).
2. Check continuity between parking brake switch jacks (3) and (4).
3. Is there continuity?



NO

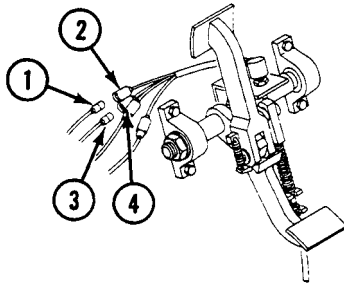
**B3YN**

1. Install harness 12349881 circuit 367/27L plug on TRANS OIL LOW PRESS indicator.
2. Remove jumper wire and install harness 12349881 circuit 366 plug on trans oil low press switch.
3. Replace parking brake switch (WP 0331 00).
4. Verify no faults found.

YES

**B4Y**

1. Remove harness 12349881 circuit 366A (1) and circuit 366 (2) from stop light switch circuit jack 366A (3) and jack 366 (4).
2. Check continuity between switch circuit jack 366A (3) and jack 366 (4).
3. Is there continuity?



NO

**B4YN**

1. Remove jumper and install harness 12349810 circuit 366 plug.
2. Install harness 12349881 circuit 367/27L, 366A and 367 plugs.
3. Replace stop light switch (WP 0331 00).
4. Verify no faults found.

YES

**B5Y**

1. Check continuity between harness 12349881 circuit 366 plug pin at stop light switch and ground.
2. Is there continuity?

NO

GO TO **DY** (PAGE 0056 00-10)

YES

**B6Y**

1. Remove jumper wire and install harness 12349881 circuit 366 plug on trans oil low pressure switch.
2. Check continuity between harness 12349881 circuit 366A plug at brake switch and circuit 366A plug at parking brake light switch.
3. Is there continuity?

NO

**B6YN**

1. Faulty harness 12349881 circuit 366A. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**B7Y**

1. Check continuity between harness 12349881 circuit 367 plugs.
2. Is there continuity?

NO

**B7YN**

1. Install harness 12349881 circuit 366 plugs.
2. Faulty harness 12349881 circuit 367. Beyond unit maintenance repair.
3. Notify supervisor.

YES

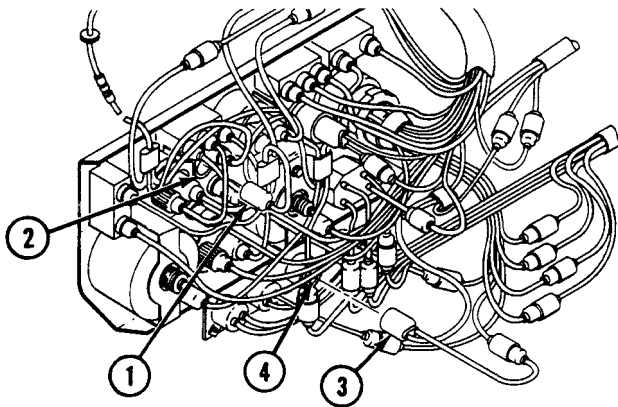
**B8Y**

1. Install harness 12349881 circuit 367 plugs on switch and cable assembly 12345898.
2. Replace TRANS OIL LOW PRESS indicator assembly (WP 0287 00).
3. Verify no faults found.



**CY**

1. Remove jumper wire and install harness 12349810 on trans oil low press switch.
2. Remove instrument panel for access (WP 0295 00).
3. Remove cable assembly 12349858 circuit 27 plug (1) from circuit breaker (2).
4. Remove harness 12349858 circuit 367/27L plug (3) from TRANS OIL LOW PRESS indicator jack (4).
5. Check continuity between harness 12349858 circuit 27 plug (1) and circuit 367/27L plug (3) circuit 27L pin.
6. Is there continuity?



**NO**

**CYN**

1. Install gasket, bulb, gasket, cover lens on TRANS OIL LOW PRESS indicator assembly.
2. Replace special purpose cable 12349858 circuit 27L (WP 0290 00).
3. Verify no faults found.

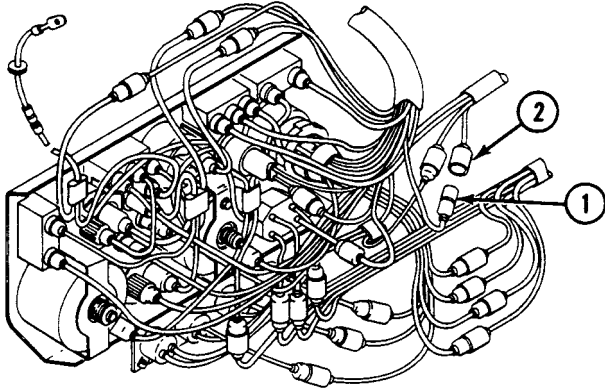
**YES**

**C2Y**

1. Install special purpose cable 12349858 on circuit breaker.
2. Replace TRANS OIL LOW PRESS indicator (WP 0287 00).
3. Verify no faults found.

**DY**

1. Install harness 12349881 circuit 366A plugs on brake switches and 367/27L plug on indicator assembly.
2. Remove harness 12349813 circuit 366 plug (1) from harness 12349881 circuit 366 jack (2) behind instrument panel.
3. Check continuity between harness 12349813 circuit 366 plug (1) and ground.
4. Is there continuity?



NO

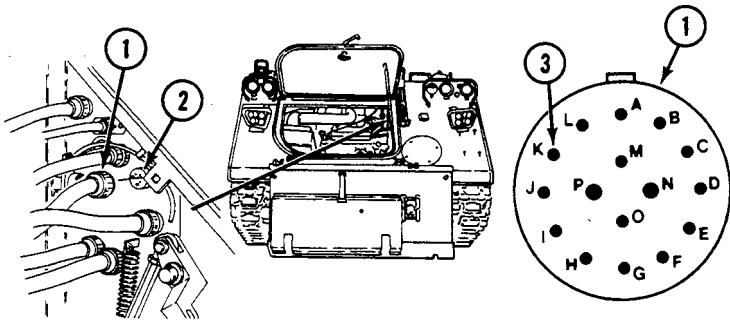
**DYN**

1. Remove jumper wire and install harness 12349810 on switch.
2. Faulty harness 12349881 circuit 366. Beyond unit maintenance repair.
3. Notify supervisor.

YES

**D2Y**

1. Install harness 12349881 circuit 366 plug on stop light switch circuit 366 jack.
2. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
3. Check continuity between harness 12349810 plug (1) pin K (3) and ground.
4. Is there continuity?



NO

**D2YN**

1. Install harness 12349813 circuit 366 plug on harness 12349881 circuit 366 jack behind instrument panel.
2. Replace harness 12349810 circuit 366 (WP 0361 00).
3. Verify no faults found.

YES

**D3Y**

1. Remove jumper wire and install harness 12349810 circuit 366 plug on trans oil low press switch.
2. Replace harness 12349813 circuit 366 (WP 0360 00).
3. Verify no faults found.



**TRANS OIL HI TEMP INDICATOR MALFUNCTIONS**

**0057 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Jumper Wire

Equipment Condition

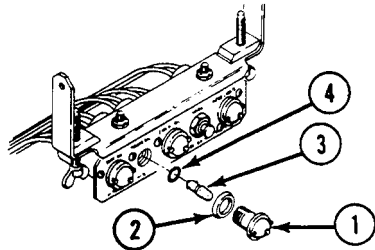
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Engine and transmission cooled down
- All power plant access panels off (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Remove TRANS OIL HI TEMP indicator cover lens (1), gasket (2), bulb (3), and gasket (4).
2. Check continuity between bulb center contact and bulb base.
3. Does multimeter indicate continuity?



**YES**

**TN**

1. Replace TRANS OIL HI TEMP indicator bulb (WP 0294 00).
2. Verify no faults found.

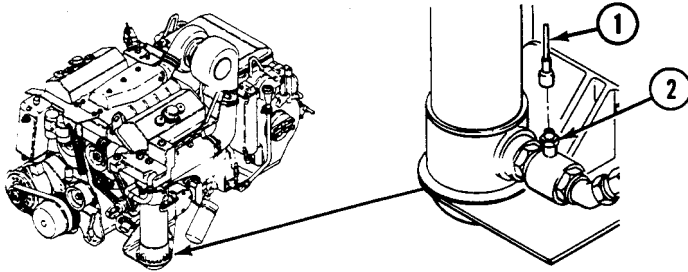
**NO**

**Y**

1. Install TRANS OIL HI TEMP indicator cover lens bulb and gaskets.
2. Remove harness 12349873 circuit 327 plug (1) from trans oil hi temp switch (2).
3. Turn MASTER SWITCH to ON.
4. Is TRANS OIL HI TEMP indicator off?

**NO**

GO TO **AY** (PAGE 0057 00-3)



**YES**

**2Y**

1. Install jumper wire between harness 12349873 circuit 327 plug and ground.
2. Is TRANS OIL HI TEMP indicator on?

**NO**

GO TO **BY** (PAGE 0057 00-4)

**YES**

**3Y**

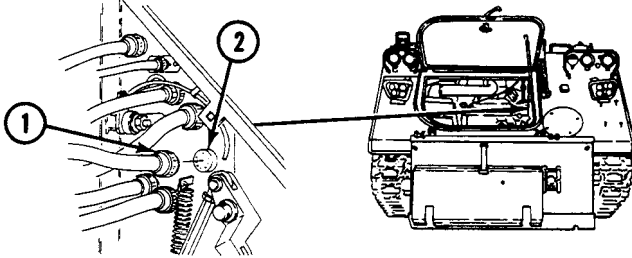
1. Remove jumper wire.
2. Replace trans oil hi temp switch (WP 0322 00).
3. Verify no faults found.

TRANS OIL HI TEMP INDICATOR MALFUNCTIONS—Continued

0057 00

**A1Y**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Is TRANS OIL HI TEMP indicator still on?



**NO**

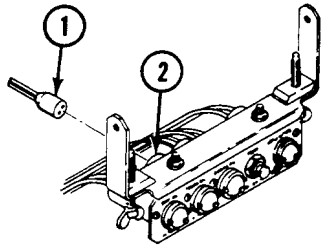
**A1YN**

1. Replace harness 12349873 (WP 0359 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove harness 12349881 circuit 327/27G plug (1) from TRANS OIL HI TEMP indicator (2).
3. Measure resistance between harness 12349881 circuit 327/27G plug (1) circuit 327 pin and ground.
4. Does multimeter read 0 ohms?



**NO**

**A2YN**

1. Replace TRANS OIL HI TEMP indicator assembly (WP 0294 00).
2. Verify no faults found.

**YES**

**A3Y**

1. Shorted harness 12349881 circuit 327. Beyond unit maintenance repair.
2. Notify supervisor.

**BY**

1. Remove TRANS OIL HI TEMP indicator cover lens, gasket, bulb, and gasket.
2. Measure voltage between assembly center contact and ground.
3. Does multimeter read less than 17 volts?

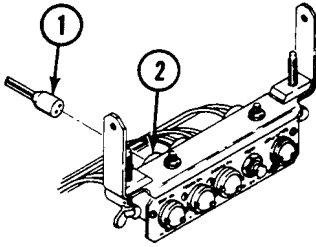
**NO** → GO TO CY (PAGE 0057 00-5)

**YES**

**B2Y**

1. Remove jumper wire and install harness 12349873 circuit 327 plug on trans oil hi temp switch.
2. Remove harness 12349881 circuit 327/27G plug (1) from TRANS OIL HI TEMP indicator (2).
3. Measure voltage between harness 12349881 circuit 327/27G plug (1) circuit 327 pin and ground.
4. Does multimeter read less than 17 volts?

**NO** → **B2YN**  
 1. Replace TRANS OIL HI TEMP indicator assembly (WP 0294 00).  
 2. Verify no faults found.

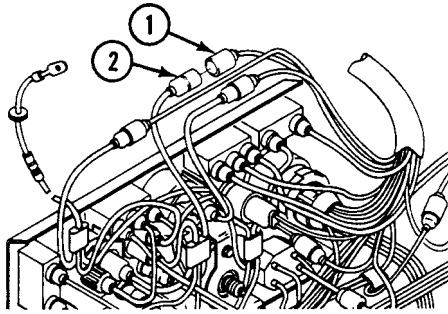


**YES**



**B3Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access. See task: replace instrument panel mounts and ground lead (WP 0295 00).
3. Remove harness 12349881 circuit 27F plug (1) from cable assembly 12349858 circuit 27F jack (2).
4. Measure resistance between harness 12349881 circuit 27F plug (1) and circuit 27G pin on circuit 327/27G plug.
5. Does multimeter read 0 ohms?



NO

**B3YN**

1. Faulty harness 12349881 circuit 27G/27F. Beyond unit maintenance repair.
2. Notify supervisor.

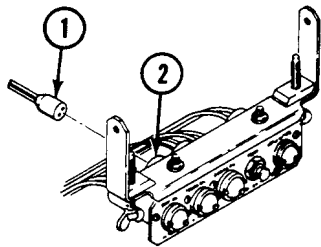
YES

**B4Y**

1. Install harness 12349881 circuit 327/27G plug on TRANS OIL HI TEMP indicator jack.
2. Repair special purpose cable 12349858 circuit 27F (WP 0382 00).
3. Verify no faults found.

**CY**

1. Turn MASTER SWITCH to OFF.
2. Remove harness 12349881 circuit 327/27G plug (1) from TRANS OIL HI TEMP indicator (2).
3. Measure resistance between harness 12349881 circuit 327/27G plug (1) circuit 327 pin and ground.
4. Does multimeter read more than 0 ohms?



NO

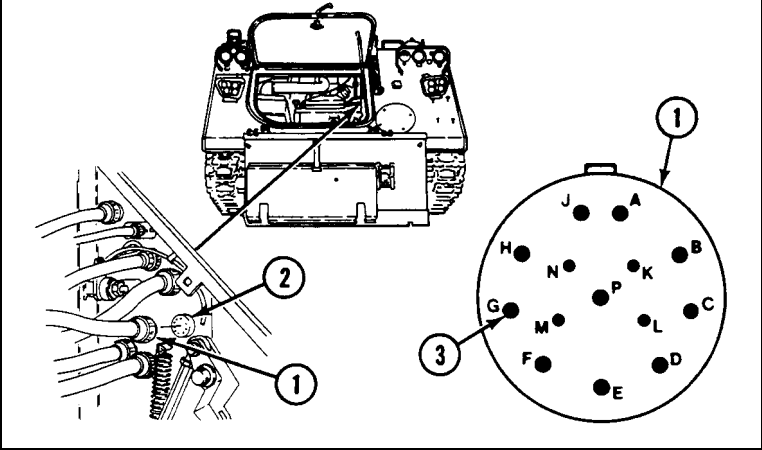
**CYN**

1. Remove jumper cable and install harness 12349873 plug on trans hi oil temp switch.
2. Replace TRANS OIL HI TEMP indicator assembly (WP 0294 00).
3. Verify no faults found.

YES

**C2Y**

1. Install TRANS OIL HI TEMP indicator cover lens, gasket, bulb, and gasket.
2. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
3. Measure resistance between harness 12349873 plug (1) pin G (3) and ground.
4. Does multimeter read more than 0 ohms?



**NO** →

**C2YN**

1. Remove jumper wire and install harness 12349873 circuit 327 plug on trans oil hi temp switch.
2. Faulty harness 12349881 circuit 327. Beyond unit maintenance repair.
3. Notify supervisor.

**YES** ↓

**C3Y**

1. Install harness 12349881 circuit 327/27G plug on trans oil hi temp indicator.
2. Repair harness 12349873 circuit 327 (WP 0382 00).
3. Verify no faults found.

**ENGINE COOLANT LOW LEVEL INDICATOR MALFUNCTIONS**

**0058 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Jumper Wire

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Trim vane lowered (see your -10)

Power plant access door open (see your -10)

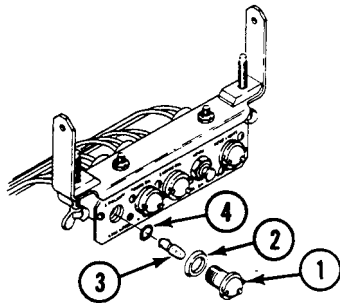
Personnel Required

Unit Mechanic

Helper (H)

**T**

1. Remove ENGINE COOLANT LOW LEVEL indicator cover (1), gasket (2), and bulb (3), and gasket (4).
2. Check continuity between bulb center contact and bulb base.
3. Does multimeter indicate continuity?



**YES**



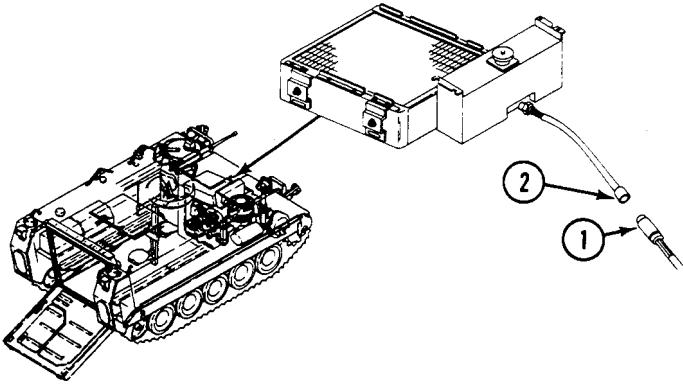
**NO**

**TN**

1. Replace ENGINE COOLANT LOW LEVEL indicator bulb (WP 0294 00).
2. Verify no faults found.

**Y**

1. Install ENGINE COOLANT LOW LEVEL indicator cover, bulb and gaskets.
2. Remove harness 12349873 plug (1) from coolant level detector jack (2).
3. Turn MASTER SWITCH to ON.
4. Is ENGINE COOLANT LOW LEVEL indicator off?



**NO** → GO TO **AY** (PAGE 0058 00-3)

**YES**

**2Y**

1. Install jumper wire between harness 12349873 plug pin B and ground.
2. Is ENGINE COOLANT LOW LEVEL indicator on?

**NO** → GO TO **BY** (PAGE 0058 00-4)

**YES**

**3Y**

1. Remove jumper wire.
2. Measure voltage between harness 12349873 plug pin A and ground.
3. Does multimeter read 17 volts or more?

**NO** → GO TO **CY** (PAGE 0058 00-5)

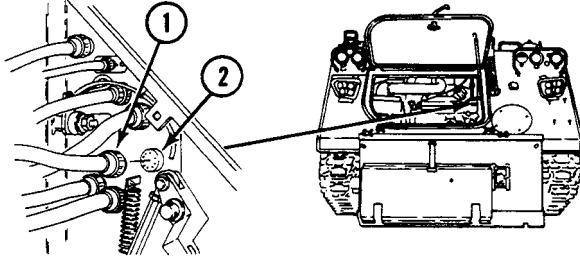
**YES**

**4Y**

1. Replace auxiliary tank fluid level detector (WP 0329 00).
2. Verify no faults found.

**AY**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Is ENGINE COOLANT LOW LEVEL indicator still on?



**NO**

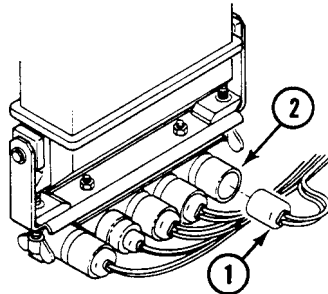
**AYN**

1. Shorted harness 12349873. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**A2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove harness 12349881 circuit 352/27K (1) from backside of ENGINE COOLANT LOW LEVEL indicator jack (2).
3. Measure resistance between harness 12349881 plug circuit 352 pin and ground.
4. Does multimeter read infinity?



**NO**

**A2YN**

1. Install harness 12349873 plug on coolant level detector.
2. Shorted harness 12349881 circuit 352. Beyond unit maintenance repair.
3. Notify supervisor.

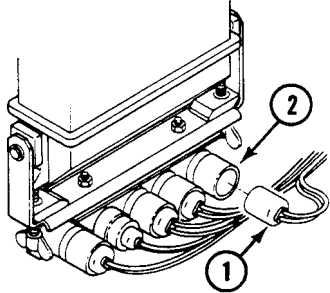
**YES**

**A3Y**

1. Replace ENGINE COOLANT LOW LEVEL indicator assembly (WP 0294 00).
2. Verify no faults found.

**BY**

1. Remove harness 12349881 circuit 352/27K (1) from ENGINE COOLANT LOW LEVEL indicator (2).
2. Measure voltage between harness 12349881 plug (1) circuit 27K pin and ground.
3. Does multimeter read less than 17 volts?



NO

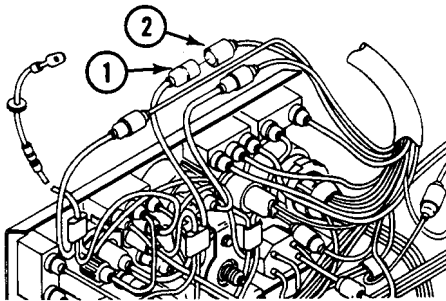
**BYN**

1. Remove jumper wire and install harness 12349873 plug on coolant level detector.
2. Replace ENGINE COOLANT LOW LEVEL indicator assembly (WP 0294 00).
3. Verify no faults found.

YES

**B2Y**

1. Turn MASTER SWITCH to OFF.
2. Remove instrument panel for access. See task: replace instrument panel mounts and ground lead (WP 0295 00).
3. Remove harness 12349881 circuit 27F plug (1) from cable assembly 12349858 circuit 27F jack (2).
4. Measure resistance between harness 12349881 circuit 27K plug and circuit 27F plug (1).
5. Does multimeter read 0 ohms?



NO

**B2YN**

1. Faulty harness 12349881 circuit 27K. Beyond unit maintenance repair.
2. Notify supervisor.

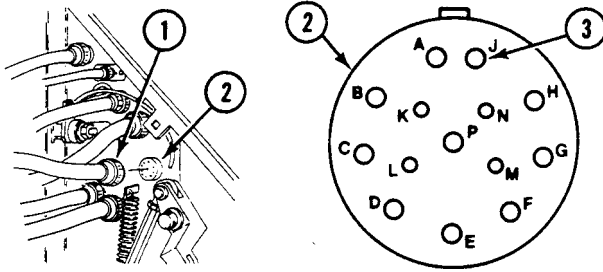
YES

**B3Y**

1. Install harness 12349881 circuit 352/27K plug on ENGINE COOLANT LOW LEVEL indicator.
2. Replace cable assembly 12349858 circuit 27F (WP 0290 00).
3. Verify no faults found.

**CY**

1. Remove harness 12349873 plug (1) from harness 12349881 jack (2) at carrier bulkhead.
2. Measure voltage between harness 12349881 jack (2) pin J (3) and ground.
3. Does multimeter read less than 17 volts?



NO

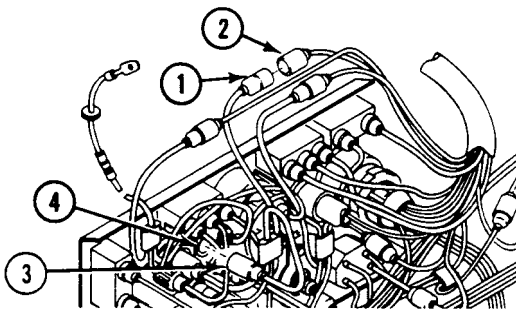
**CYN**

1. Replace harness 12349873 circuit 27N (WP 0359 00).
2. Verify no faults found.

YES

**C2Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349873 plug on coolant level detector.
3. Remove instrument panel for access. See task: replace instrument panel mounts and ground lead (WP 0295 00).
4. Remove harness 12349881 circuit 27F plug (1) from cable assembly 12349858 circuit 27F jack (2).
5. Remove cable assembly 12349858 circuit 27 plug (3) from instrument panel circuit breaker (4).
6. Measure resistance between cable assembly 12349858 circuit 27 plug (3) and circuit 27F plug (1).
7. Does multimeter read 0 ohms?



NO

**C2YN**

1. Install harness 12349873 plug on harness 12349881 jack on carrier bulkhead.
2. Replace cable assembly 12349858 circuit 27/27F (WP 0290 00).
3. Verify no faults found.

YES

**C3Y**

1. Faulty harness 12349881 circuit 27N. Beyond unit maintenance repair.
2. Notify supervisor.



**TRANS FILTER CLOGGED INDICATOR MALFUNCTIONS**

**0059 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Jumper Wire

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

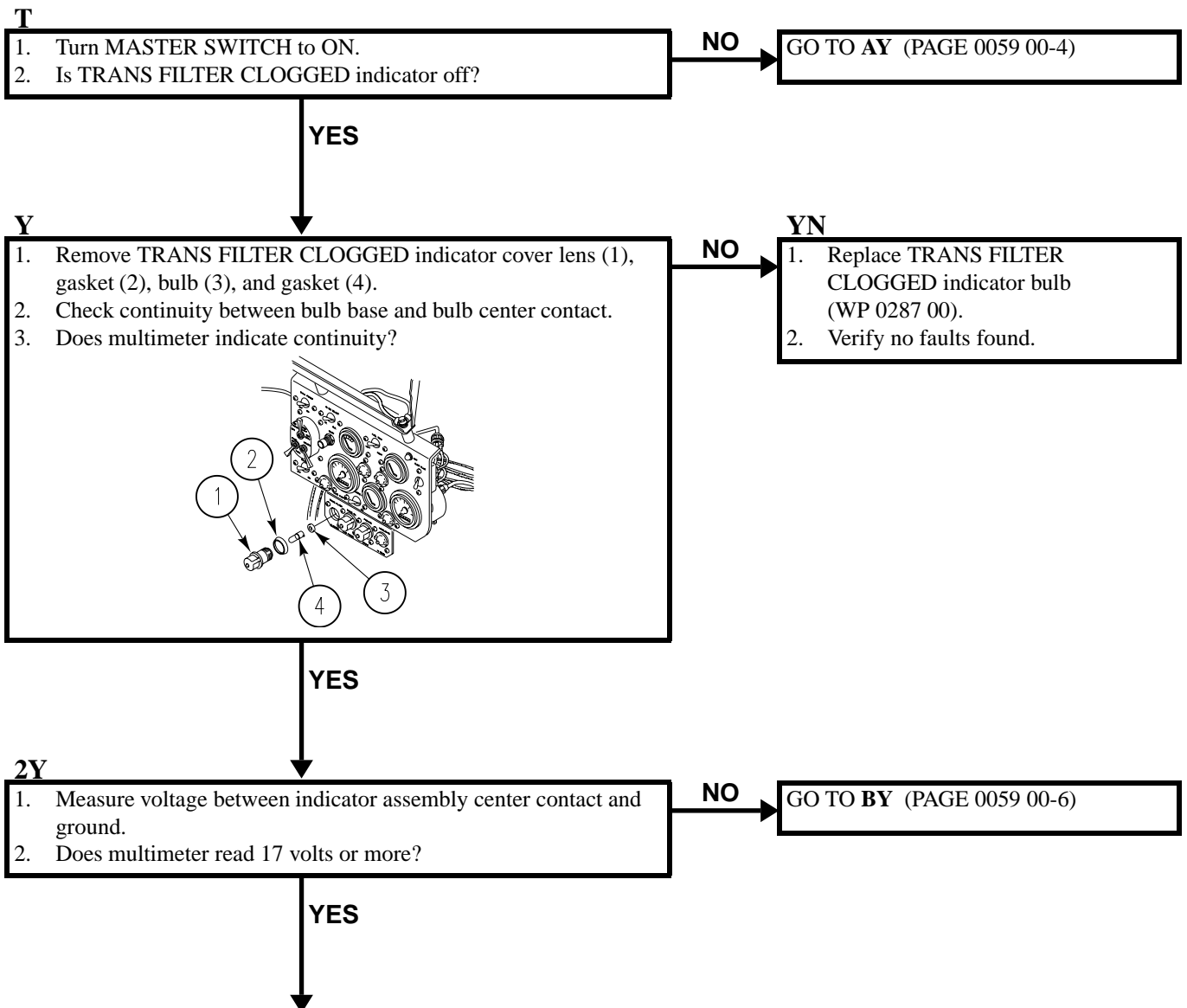
Trim vane lowered (see your -10)

Power plant access door open (see your -10)

Personnel Required

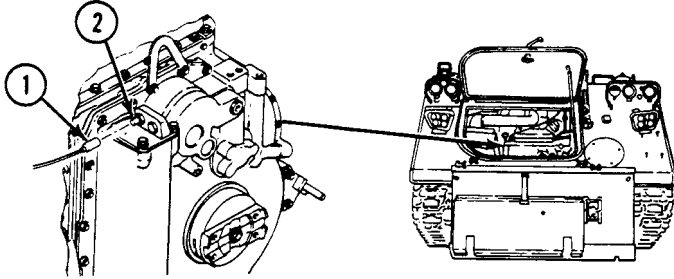
Unit Mechanic

Helper (H)



**3Y**

1. Install TRANS FILTER CLOGGED indicator cover lens, bulb and gaskets.
2. Remove harness 12349810 plug (1) from pressure differential switch (2).
3. Install jumper wire between harness 12349810 plug (1) pin B and ground.
4. Is TRANS FILTER CLOGGED indicator off?



**NO**

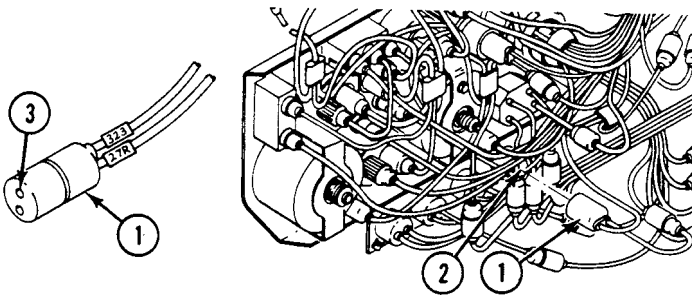
**3YN**

1. Turn MASTER SWITCH to OFF.
2. Replace differential pressure switch (WP 0401 00).
3. Verify no faults found.

**YES**

**4Y**

1. Turn MASTER SWITCH to OFF.
2. Remove cable assembly 12349858 circuit 323/27R plug (1) from TRANS FILTER CLOGGED indicator jack (2).
3. Measure resistance between harness 12349858 circuit 323 pin (3) and ground.
4. Does multimeter read more than 0 ohms?



**NO**

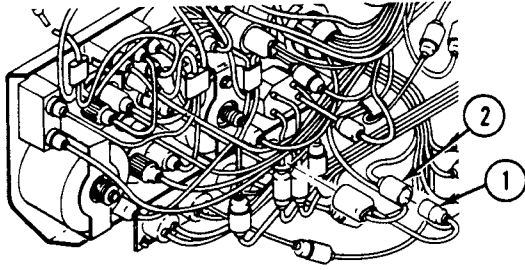
**4YN**

1. Remove jumper wire and install harness 12349810 plug on pressure differential switch jack.
2. Replace TRANS FILTER CLOGGED indicator assembly (WP 0287 00).
3. Verify no faults found.

**YES**

**5Y**

1. Remove harness 12349813 circuit 323 plug (1) from cable assembly 12349858 circuit 323 jack (2).
2. Measure resistance between harness 12349813 circuit 323 plug pin (1) and ground.
3. Does multimeter read more than 0 ohms?



NO

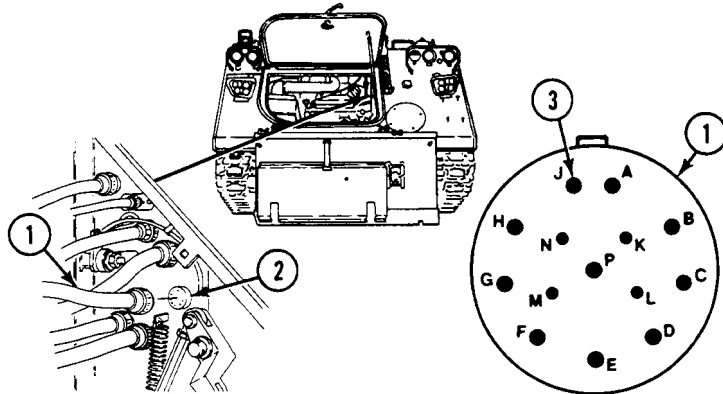
**5YN**

1. Remove jumper wire and install harness 12349813 plug on pressure differential switch jack.
2. Replace cable assembly 12349858 circuit 323 (WP 0290 00).
3. Verify no faults found.

YES

**6Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure resistance between harness 12349810 plug (1) pin J (3) and ground.
3. Does multimeter read 0 ohms?



NO

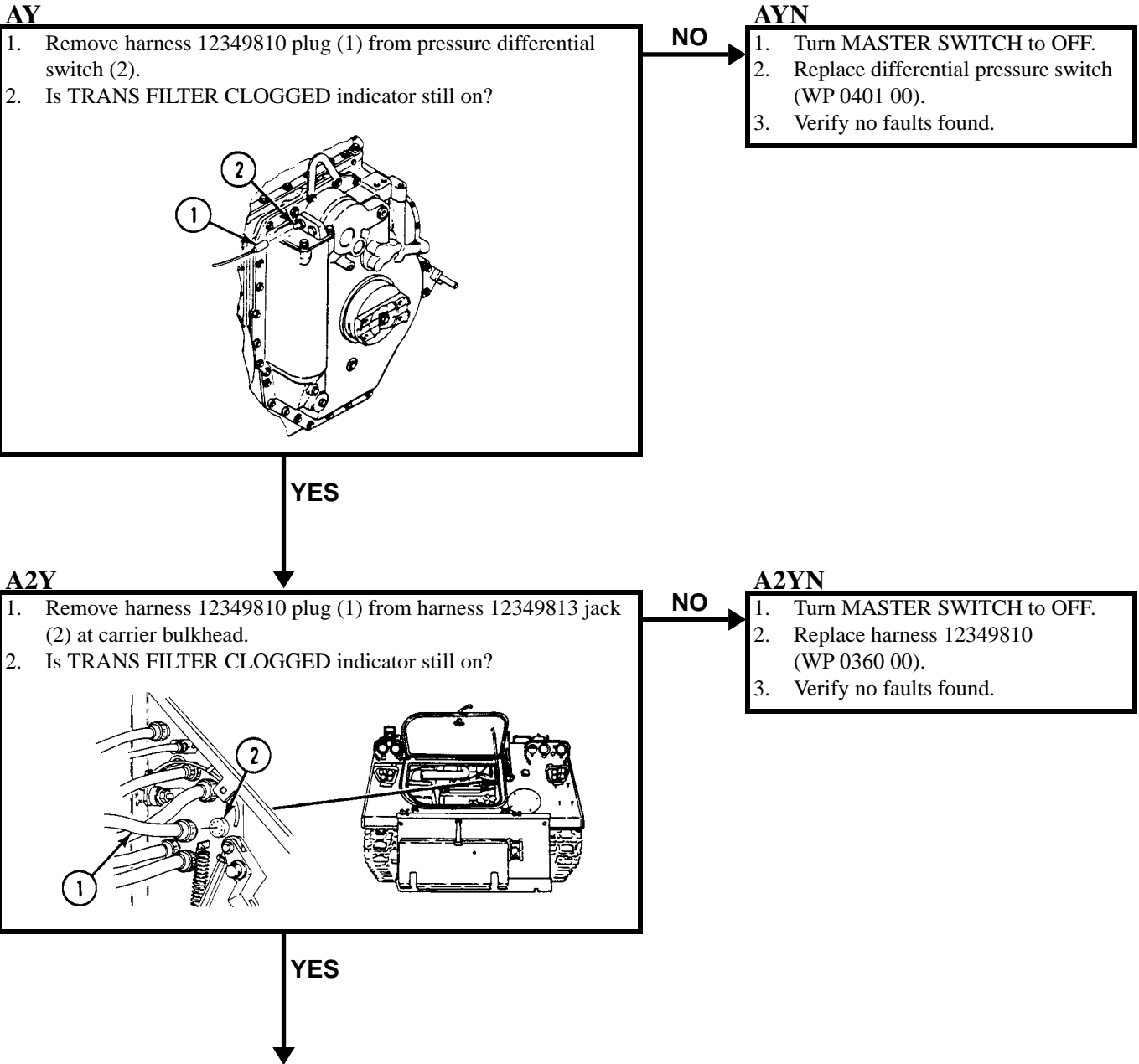
**6YN**

1. Install harness 12349813 circuit 323/27R plug on TRANS FILTER CLOGGED indicator jack.
2. Install harness 12349813 circuit 323 plug on cable assembly 12349858 circuit 323 jack.
3. Remove jumper wire and replace harness 12349810 circuit 323 (WP 0360 00).
4. Verify no faults found.

YES

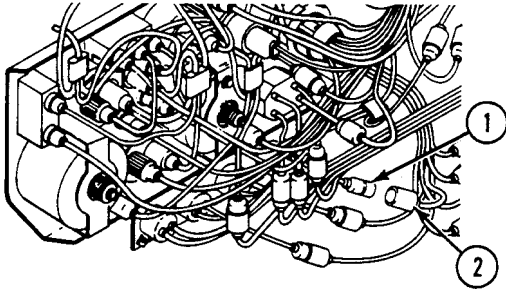
**7Y**

1. Remove jumper wire and install harness 12349810 plug on pressure differential switch.
2. Replace harness 12349813 circuit 323 (WP 0361 00).
3. Verify no faults found.



**A3Y**

1. Install harness 12349810 circuit 323 plug on pressure differential switch.
2. Remove harness 12349813 circuit 323 plug (1) from cable assembly 12349858 circuit 323 jack (2) behind indicator assembly.
3. Is TRANS FILTER CLOGGED indicator still on?



**NO**

**A3YN**

1. Turn MASTER SWITCH to OFF.
2. Replace harness 12349813 (WP 0361 00).
3. Verify no faults found.

**YES**

**A4Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
3. Install harness 12349813 circuit 323 plug on cable assembly 12349858 circuit 323 jack behind instrument panel.
4. Replace TRANS FILTER CLOGGED indicator assembly (WP 0287 00).
5. Verify no faults found.

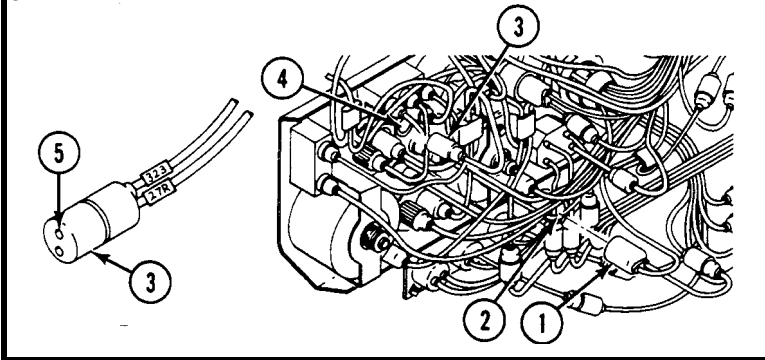
**BY**

1. Remove instrument panel for access. See task: replace instrument panel mounts and ground lead (WP 0295 00).
2. Remove plug (1) from TRANS FILTER CLOGGED indicator jack (2).
3. Remove circuit 27 plug (3) from circuit breaker jack (4).
4. Measure resistance between filter clogged indicator plug (1) circuit 27R (5) pin and circuit breaker plug (3) circuit 27 plug pin (3).
5. Does multimeter read 0 ohms?

NO

**BYN**

1. Replace cable assembly 12349858 circuit 27R (WP 0290 00).
2. Verify no faults found.



YES

**B2Y**

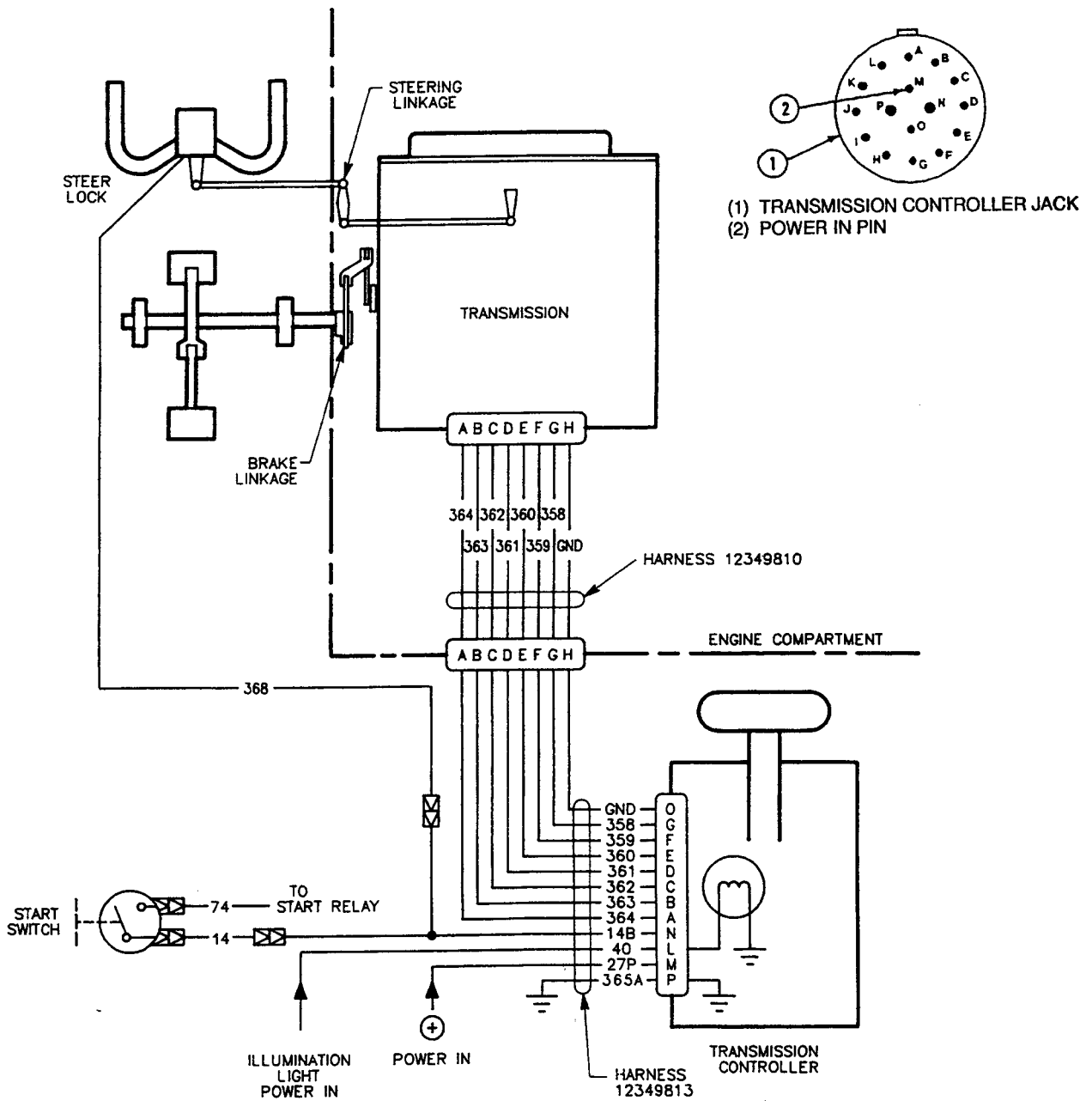
1. Replace TRANS FILTER CLOGGED indicator assembly (WP 0287 00).
2. Verify no faults found.

TRANSMISSION SYSTEM SCHEMATIC

0060 00

TRANSMISSION CONTROLLER SWITCH  
PIN TO PIN CONTINUITY CHECK

RANGES> PINS	SL	R	PV	1-4	1-3	1-2	
A	Off	Off	Off	On	On	On	On
B	On	On	On	Off	Off	Off	Off
C	Off	On	Off	On	On	On	On
D	On	Off	On	Off	Off	Off	Off
E	On	On	On	Off	On	On	On
F	Off	Off	Off	Off	On	Off	Off
G	Off	Off	Off	Off	On	On	Off
N	On	Off	Off	Off	Off	Off	Off







**CARRIER MOVES WITH TRANSMISSION IN SL**

**0061 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

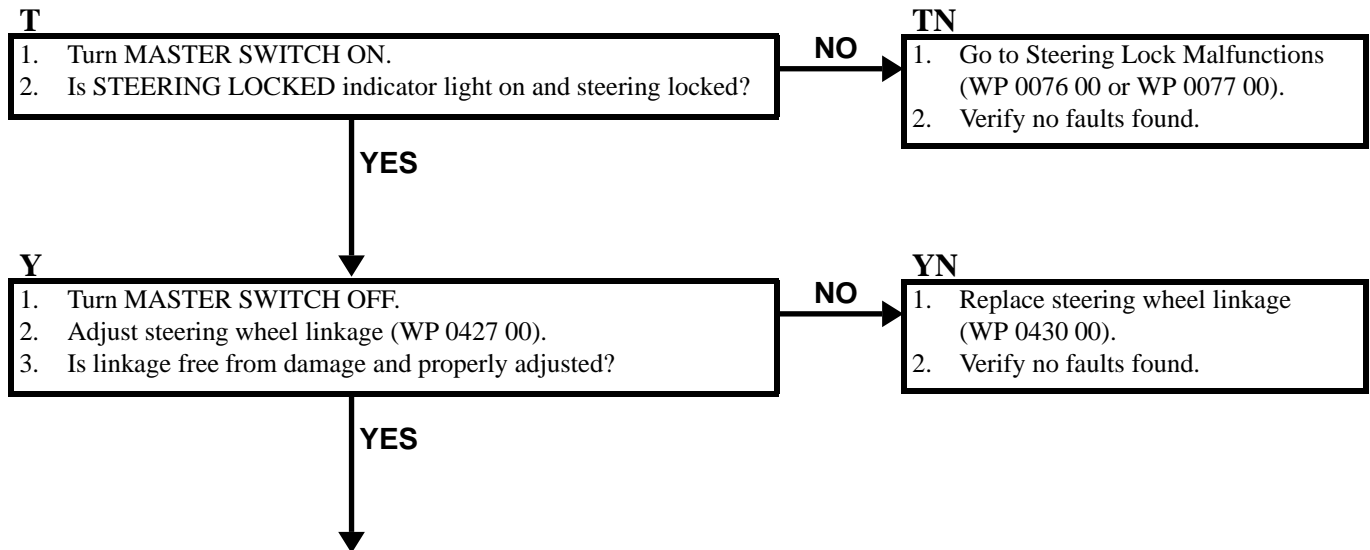
- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in SL position
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)



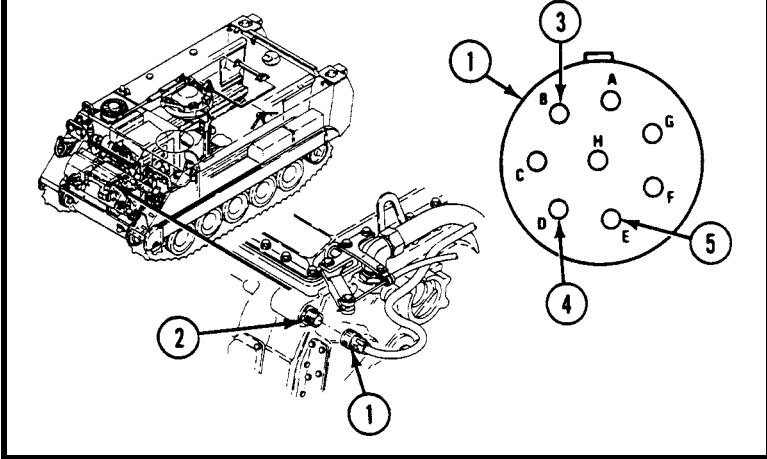
**2Y**

1. Remove harness 12349810 plug (1) from transmission jack (2).
2. Turn MASTER SWITCH ON.
3. Measure voltage between each socket on harness 12349810 plug (1) and ground. Multimeter should read 18 volts or more at sockets B (3), D (4), and E (5), and 0 volts for all remaining socket checks.
4. Does multimeter read less than 18 volts for sockets B, D, and E, and does not read 0 volts for all other sockets?

NO

**2YN**

1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.



YES

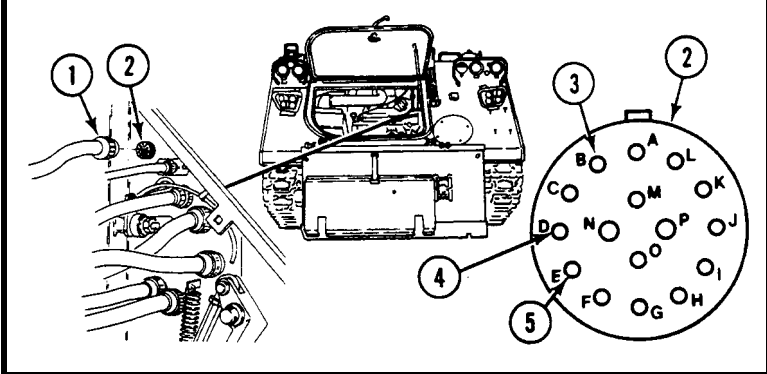
**3Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure voltage between each socket on harness 12349813 jack (2) and ground. Multimeter should read 18 volts or more for sockets B (3), D (4), and E (5), and 0 volts for the remaining socket checks.
3. Does multimeter read less than 18 volts for sockets B, D, and E, and does not read 0 volts for all other sockets?

NO

**3YN**

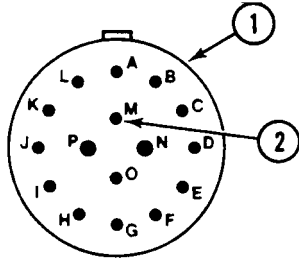
1. Faulty transmission control wiring harness 12349810. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**4Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349810 plug on transmission jack.
3. Remove transmission controller (WP 0386 00 or WP 0387 00).
4. Measure resistance between transmission controller jack (1) pin M (2) and pins A thru G.
5. Does multimeter read more than 0 ohms for pins B, D, and E, and less than infinity for all remaining pins?



**NO**

**4YN**

1. Install transmission controller (WP 0386 00 or WP 0387 00).
2. Faulty transmission wiring harness 12349813. Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

**5Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller (WP 0386 00 or WP 0387 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found.



**CARRIER DOES NOT ATTAIN HIGH SPEED**

**0061 01**

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mechanic

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Pressure Gage Kit (WP 0926, Item 35)

References

See your -10

Materials/Parts

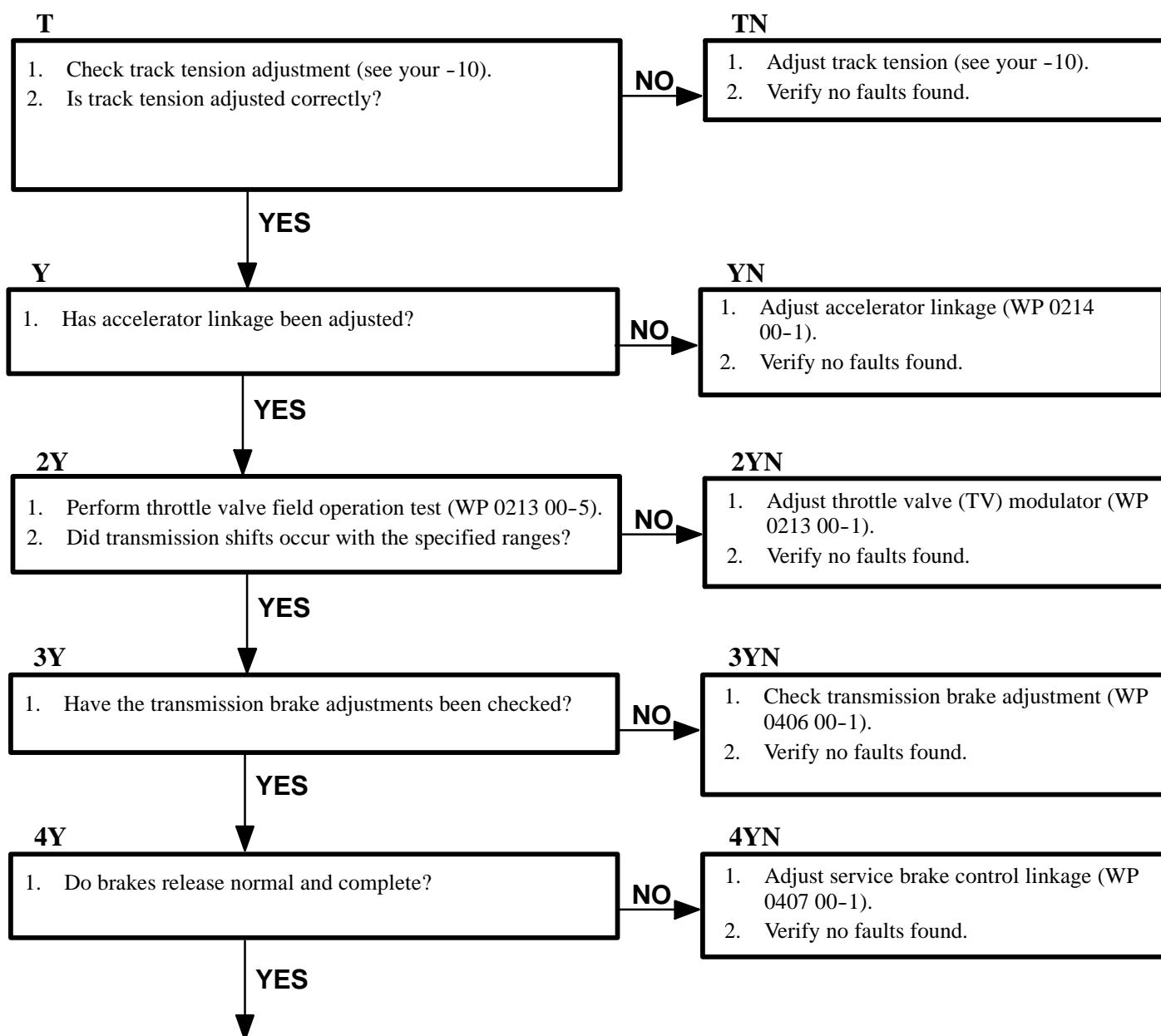
Rag, wiping (WP 0928 00, Item 65)

Equipment Conditions

Engine stopped (see your -10)

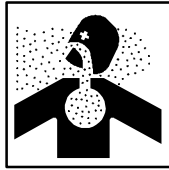
Carrier blocked (see your -10)

Trim vane lowered (see your -10)



5Y

**WARNING**

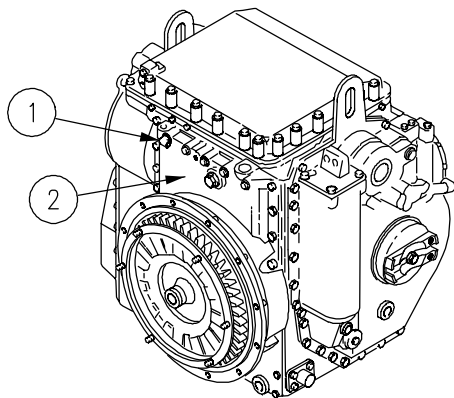


Perform test outdoors or in a well-ventilated area to avoid illness or death caused by inhalation of carbon monoxide from the engine exhaust.

**WARNING**

Use extreme care when making pressure checks with vehicle in motion. Watch for pivot steer.

1. If carrier is blocked, unblock carrier (see your -10).
2. Remove 9/16 in. hex plug from the LOCKUP (LU) pressure pressure port (1) in the transmission input housing (2).
3. Install pressure gage and adapters in the LOCKUP (LU) pressure test port (1) in the transmission input housing (2).
4. Check LOCKUP pressure while operating vehicle on level, flat terrain with engine at 2500 rpm and shift lever at 1-4 position. Lockup pressure must be 140-160 psi (965-1103 kPa).
5. Is LOCKUP pressure within the specified limits?

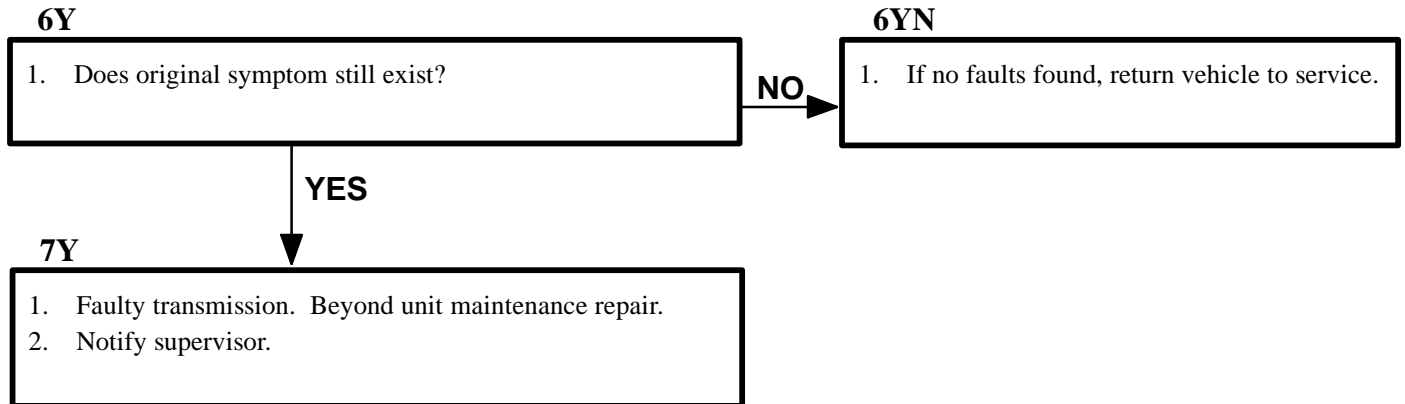


YES

5YN

1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.

NO



END OF TASK





**CARRIER DOES NOT MOVE IN ANY SHIFT LEVER POSITION**

**0062 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

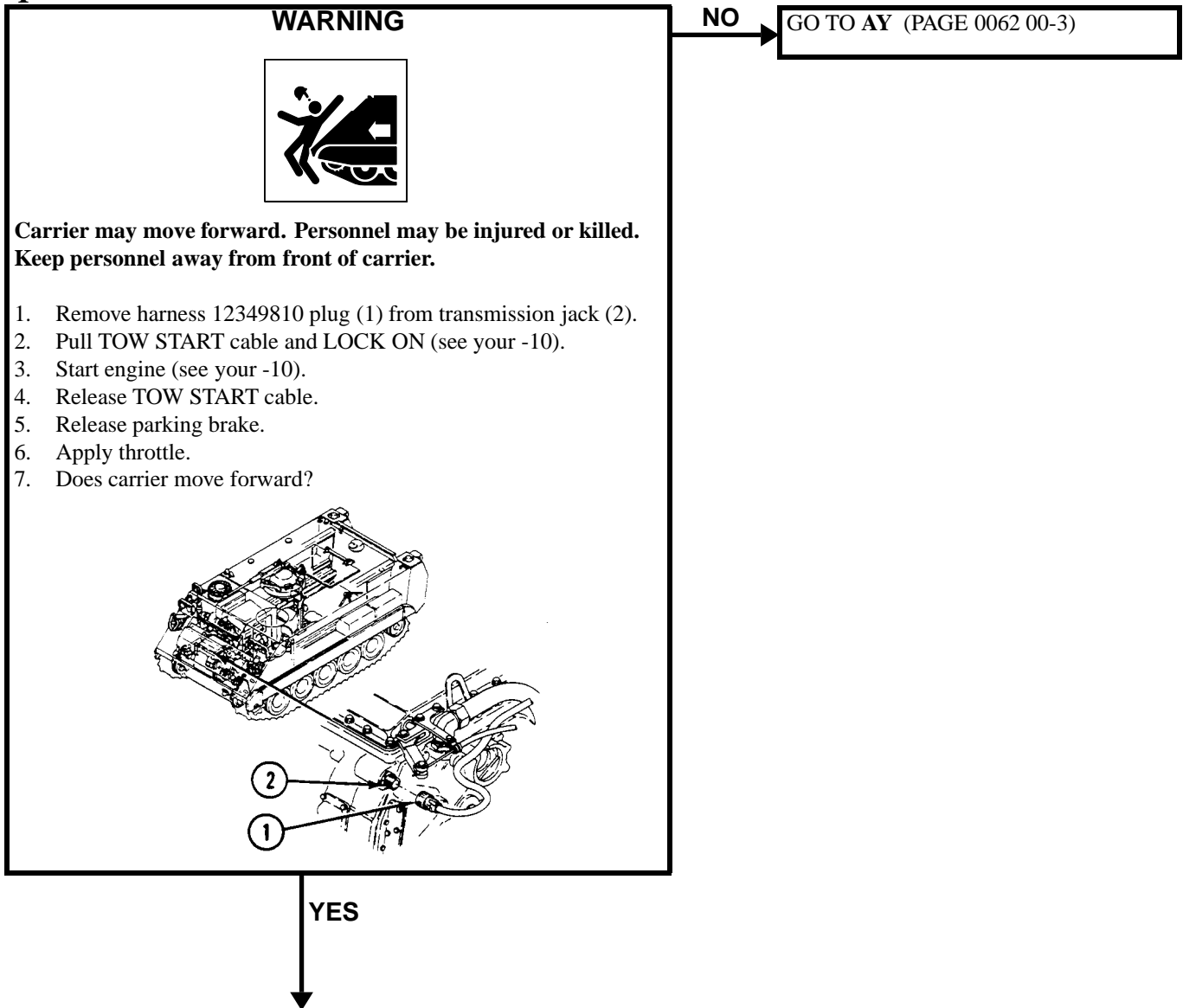
Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Transmission oil level normal

Personnel Required

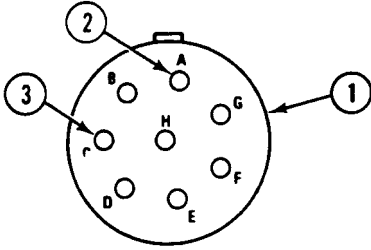
Unit Mechanic

T



**Y**

1. Stop engine (see your -10).
2. Place transmission controller in 1-4 position.
3. Turn MASTER SWITCH ON.
4. Measure voltage between each socket on harness 12349810 plug (1) and ground.
5. Does multimeter read less than 18 volts at sockets A (2) or C (3), or more than 0 volts at any remaining sockets?



**NO**

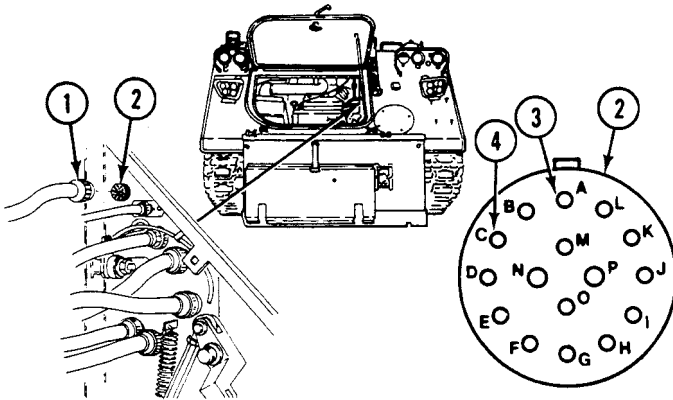
**YN**

1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Turn MASTER SWITCH OFF.
2. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
3. Turn MASTER SWITCH ON.
4. Measure voltage between each socket on harness 12349813 jack (2) and ground.
5. Does multimeter read less than 18 volts at sockets A (3) or C (4), or more than 0 volts at any remaining sockets?



**NO**

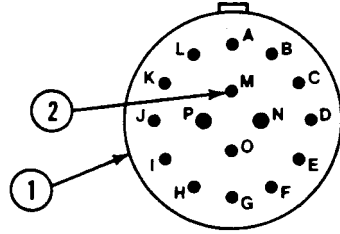
**2YN**

1. Faulty transmission control wiring harness 12349810. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**3Y**

1. Turn MASTER SWITCH OFF.
2. Remove transmission controller (WP 0386 00 or WP 0387 00).
3. Measure resistance between transmission controller jack (1) pin M (2) and pins A thru G.
4. Does multimeter read more than 0 ohms for pins A and C, and less than infinity for all remaining pins?



NO

**3YN**

1. Install transmission controller (WP 0386 00 or WP 0387 00).
2. Faulty transmission wiring harness 12349813. Beyond unit maintenance repair.
3. Notify supervisor.

YES

**4Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller switch (WP 0389 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found.

**AY**

1. Stop engine (see your -10).
2. Check brake linkage and brake adjustment (WP 0406 00 and WP 0407 00).
3. Is brake linkage free from damage and brakes properly adjusted?

NO

**AYN**

1. Repair linkage and/or adjust brakes (WP 0410 00 or WP 0394 00).
2. Verify no faults found.

YES

**A2Y**

1. Disconnect track (see your -10).
2. Disconnect propeller shaft (WP 0405 00).
3. Does final drive/sprocket turn?

NO

**A2YN**

1. Replace faulty final drive (WP 0403 00).
2. Verify no faults found.

YES

**A3Y**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Faulty transmission. Beyond unit maintenance repair.</li><li>2. Notify supervisor.</li></ol> |
|---|

**CARRIER DRIFTS OR DOES NOT STEER**

**0063 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

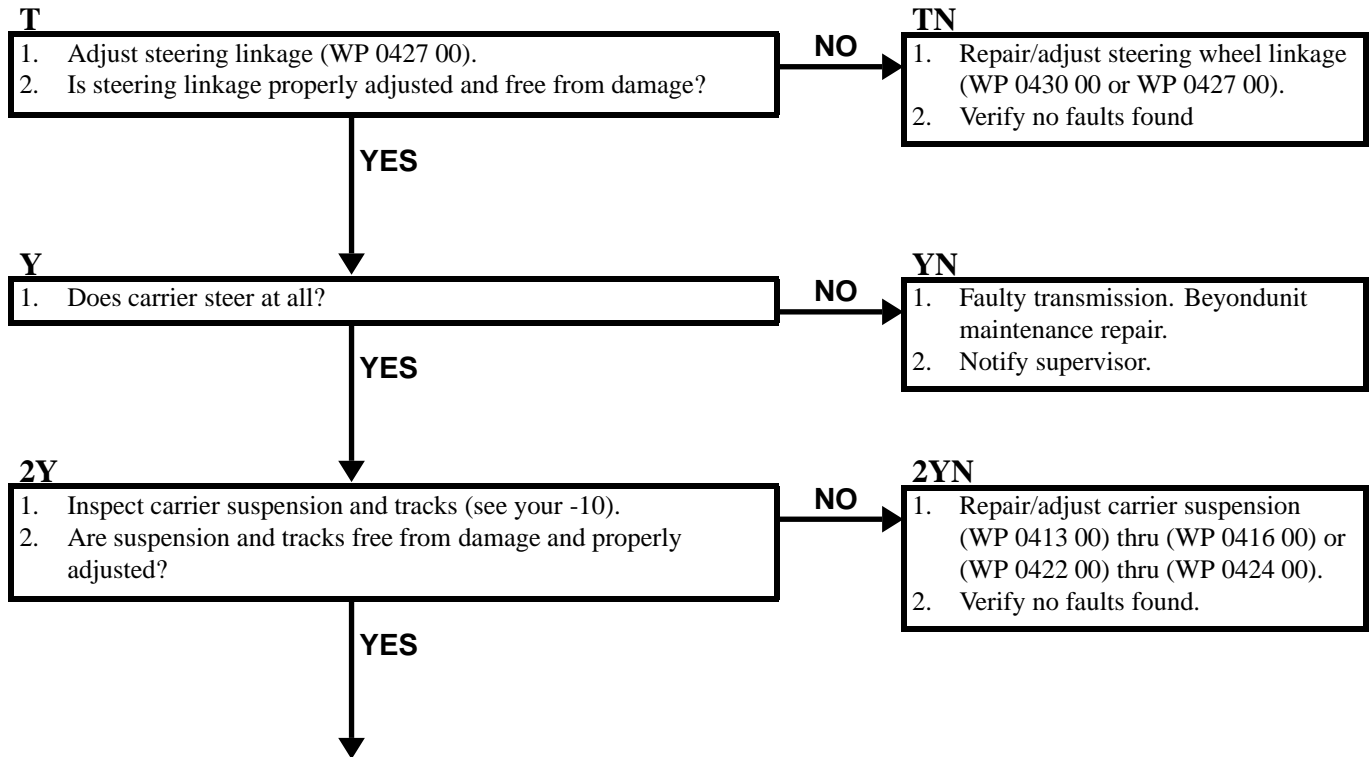
Trim vane lowered (see your -10)

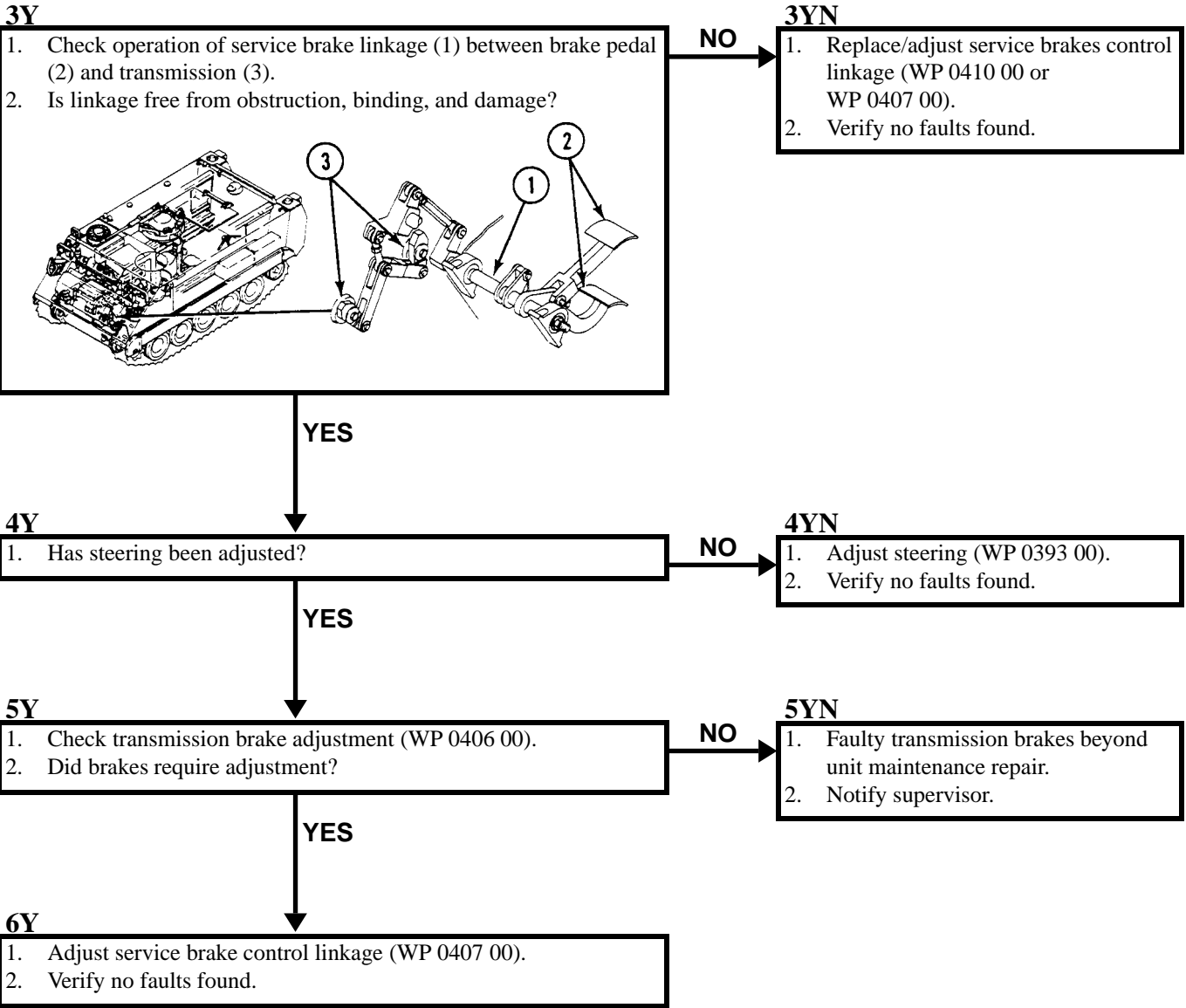
Power plant access door open (see your -10)

Personnel Required

Unit Mechanic

Helper (H)





**SERVICE AND/OR PARKING BRAKE WON'T HOLD CARRIER**

**0064 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your -10)

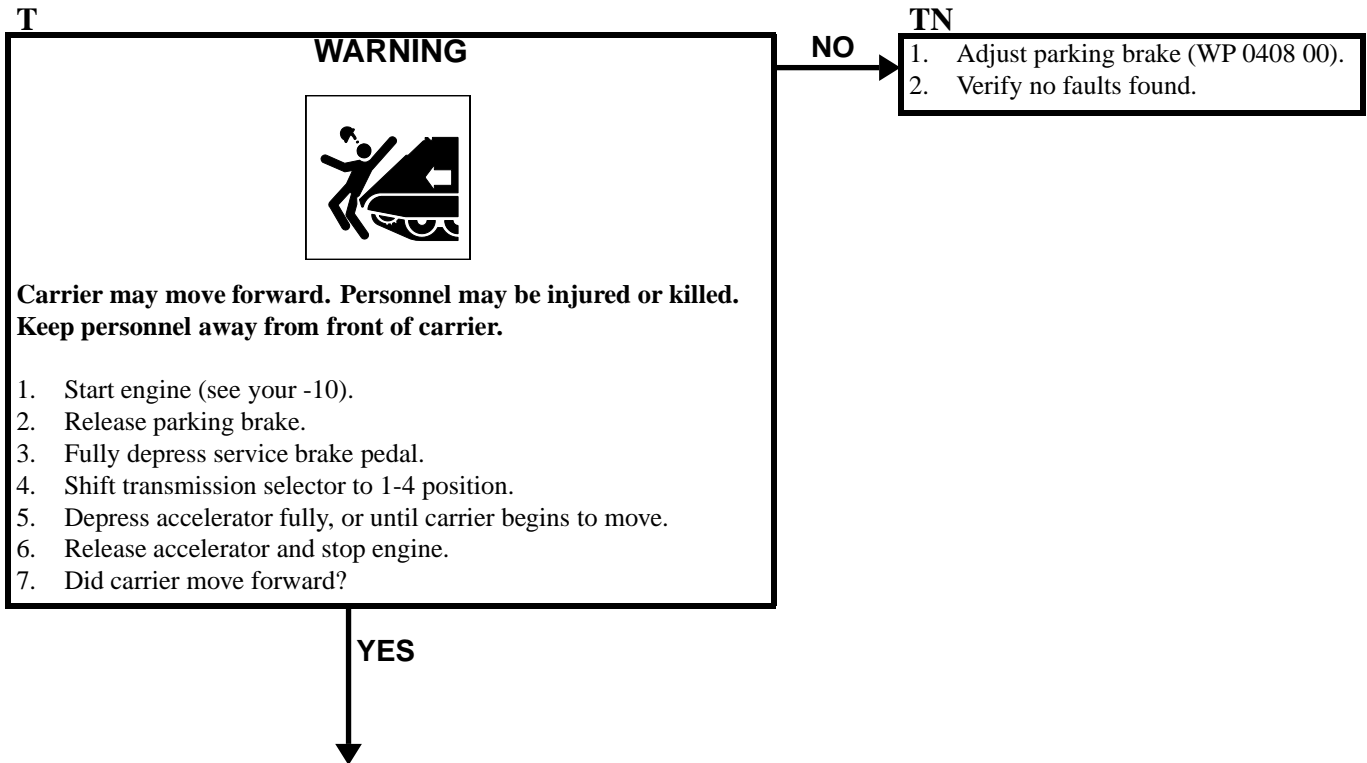
Carrier blocked (see your -10)

Trim vane lowered (see your -10)

Power plant access door open (see your -10)

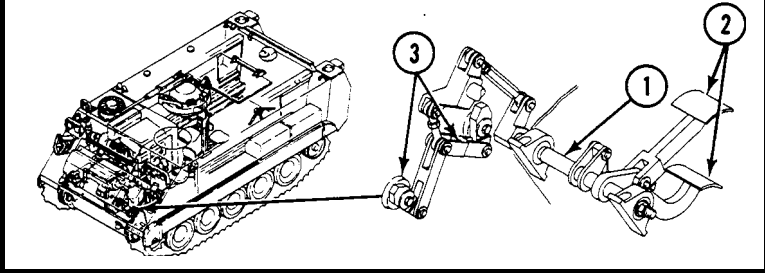
Personnel Required

Unit Mechanic



**Y**

1. Check operation of service brake linkage (1) between brake pedal (2) and transmission (3).
2. Is linkage free from obstruction, binding, and damage?



**NO**

**YN**

1. Replace/adjust service brakes control linkage (WP 0410 00 or WP 0407 00).
2. Verify no faults found.

**YES**

**2Y**

1. Check transmission brake adjustment (WP 0406 00).
2. Did brakes require adjustment?

**NO**

**2YN**

1. Faulty transmission brakes beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**3Y**

1. Check service brake control linkage adjustment (WP 0407 00).
2. Is service brake linkage properly adjusted?

**NO**

**3YN**

1. Adjust service brake control linkage (WP 0407 00).
2. Verify no faults found.

**YES**

**4Y**

1. Verify no faults found.



**TRANSMISSION WON'T UPSHIFT OR SHIFTS ERRATICALLY IN 1-4 POSITION**

**0065 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

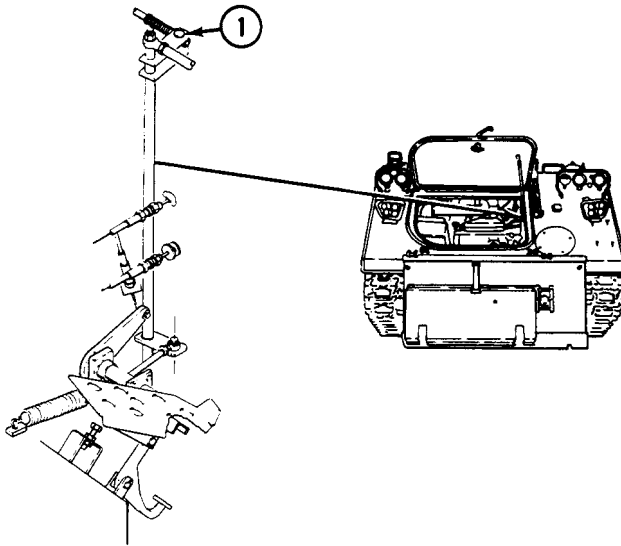
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access door open (see your -10)  
Power plant rear upper access panel removed (see your -10)  
Transmission in SL

Personnel Required

Unit Mechanic

**T**

1. Measure distance between center of throttle linkage pin (1) and bulkhead.
2. Is center of pin between 1-1/16 and 1-1/8 inches (27 and 28.5 mm) from bulkhead?



**NO**

**TN**

1. Adjust accelerator linkage (WP 0214 00).
2. Verify no faults found.

**YES**

**TRANSMISSION WON'T UPSHIFT OR SHIFTS ERRATICALLY IN 1-4 POSITION—Continued**

0065 00

**Y**

1. Adjust throttle valve modulator (WP 0213 00).
2. Can throttle valve modulator be adjusted?

**NO**

**YN**

1. Replace throttle valve modulator and lever (WP 0218 00).
2. Verify no faults found.

**YES**

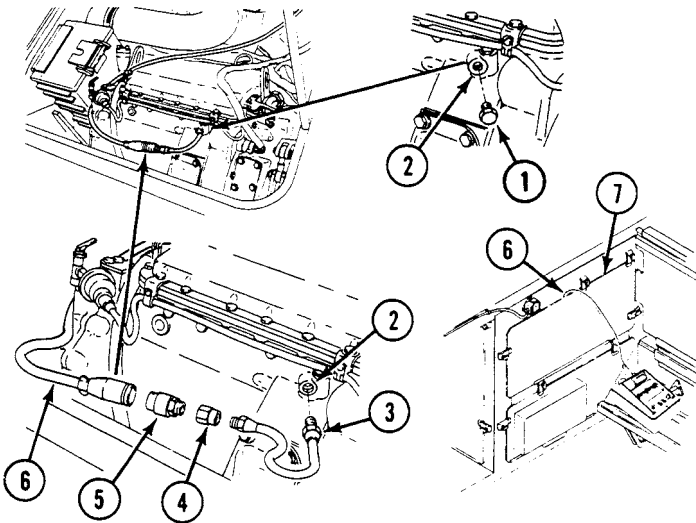
**2Y**

1. Remove plug (1) from GOVERNOR TWO (G2) pressure port (2).
2. Install STE/ICE 11669236 hose (3) into (G2) pressure port (2).
3. Install STE/ICE 444012 adapter (4) onto 11669236 hose (3).
4. Install STE/ICE 12258876 pressure transducer (5) onto 444012 adapter (4).
5. Hook up STE/ICE W4 cable (6) to transducer (5).
6. Route STE/ICE W4 cable (6) around left side of transmission, over engine, and thru power plant rear access opening (7) as shown.
7. Install rear upper access panel (see your -10) allowing W4 cable slack to reach VTM.
8. Close front power plant access door (see your -10).
9. Raise and secure trim vane (see your -10).
10. Hook up VTM to DCA 6.
11. Hook up STE/ICE W4 cable (6) to VTM jack J2TK.
12. Perform STE/ICE test 50 TM 9-4910-571-12&P with carrier traveling over flat, level terrain at 30 MPH and transmission selector in 1-4 position.
13. Does VTM read between 92 and 107 psi?

**NO**

**2YN**

1. Replace governor assembly (WP 0397 00).
2. Verify no faults found.



**YES**

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**TRANSMISSION WON'T UPSHIFT OR SHIFTS ERRATICALLY IN 1-4  
POSITION—Continued**

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0065 00

**3Y**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. G2 pressure is OK.</li><li>2. Faulty transmission. Beyond unit maintenance repair.</li><li>3. Notify supervisor.</li></ol> |
|---|



**TRANSMISSION DOES NOT DOWNSHIFT IN 1-4 POSITION**

**0066 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Pressure Gage Kit (WP 0926 00, Item 35)

Personnel Required

Unit Mechanic

References

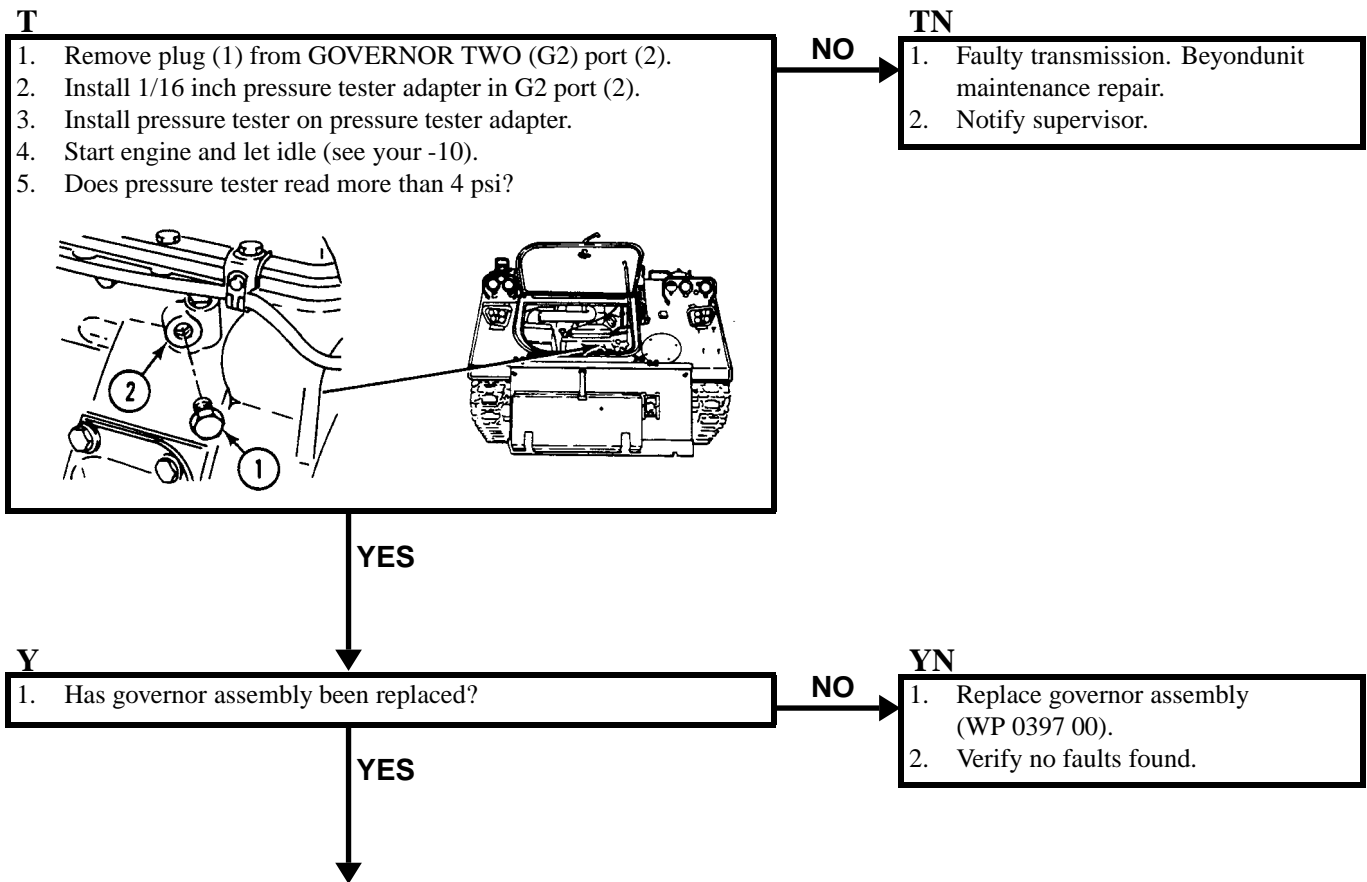
See your -10

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Driver's power plant access panel removed (see your -10)
- Power plant rear access panel removed (see your -10)
- Transmission in SL

**NOTE**

**Pressure tester must read 4 psi. Any other reading indicates a fault.**



**2Y**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Faulty transmission. Beyond unit maintenance repair.</li><li>2. Notify supervisor.</li></ol> |
|---|

**TRANSMISSION DOES NOT HOLD 1ST POSITION**

**0067 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

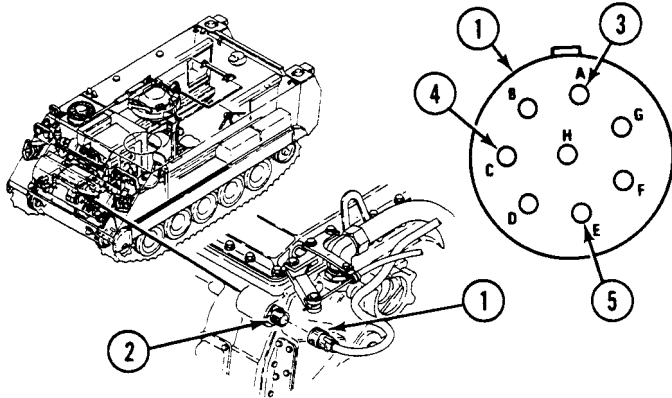
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in 1 position
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Remove harness 12349810 plug (1) from transmission jack (2).
2. Turn MASTER SWITCH to ON. See your -10.
3. Measure voltage between each socket on harness 12349810 plug (1) and ground. Multimeter should read 18 volts or more at sockets A (3), C (4), E (5), and 0 volts for all remaining socket checks.
4. Does multimeter read less than 18 volts at sockets A (3), C (4), and E (5), or more than 0 volts at all remaining sockets?



**NO**

**TN**

1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.

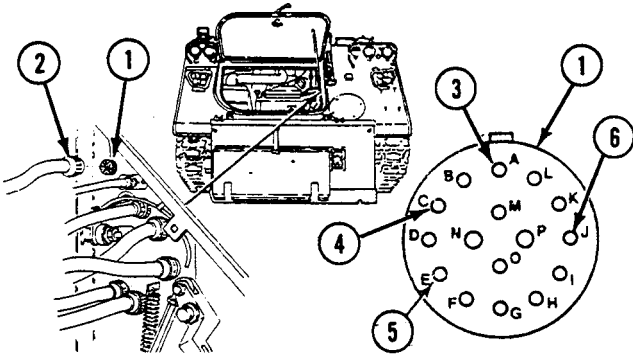
**YES**

TRANSMISSION DOES NOT HOLD 1ST POSITION—Continued

0067 00

**Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure voltage between each socket on harness 12349813 jack (2) and ground. Multimeter should read 18 volts or more for sockets A (3), C (4), E (5), J (6), and 0 volts for the remaining socket checks.
3. Does multimeter read less than 18 volts at sockets A (3), C (4), E (5), and J (6), or more than 0 volts at all remaining sockets?



**NO**

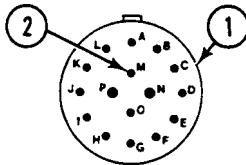
**YN**

1. Faulty harness 12349810 (transmission control wiring harness). Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Turn MASTER SWITCH to OFF. See your -10.
2. Install harness 12349810 plug on transmission jack.
3. Remove transmission controller (WP 0386 00) or (WP 0387 00).
4. Measure resistance between transmission controller jack (1) pin M (2) and pins A thru G. Multimeter should read 0 ohms for pins A, C, and E, and infinity for all remaining pin checks.
5. Does multimeter read more than 0 ohms for pins A, C, and E, or less than infinity for all remaining pins?



**NO**

**2YN**

1. Install transmission controller (WP 0386 00) or (WP 0387 00).
2. Faulty harness 12349813 (transmission wiring harness). Beyond unit maintenance repair.
3. Notify supervisor.

**YES**



**3Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller switch (WP 0389 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found .



**TRANSMISSION DOES NOT HOLD 2ND POSITION**

**0068 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

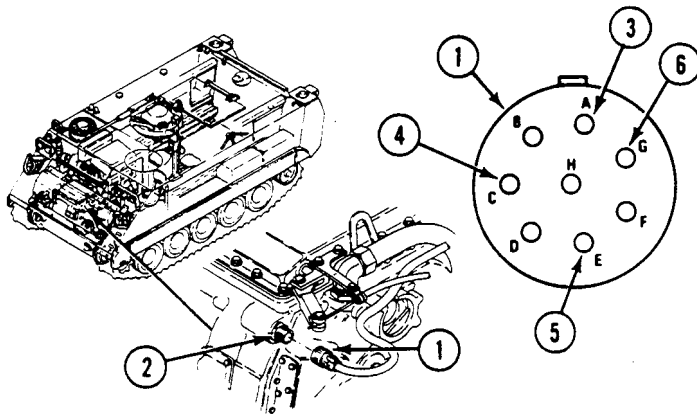
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in 1-2 position
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Remove harness 12349810 plug (1) from transmission jack (2).
2. Turn MASTER SWITCH to ON.
3. Measure voltage between each socket on harness 12349810 plug (1) and ground. Multimeter should read 18 volts or more at socket A (3), C (4), E (5), and G (6), and read 0 volts for all remaining sockets.
4. Does multimeter read less than 18 volts at sockets A (3), C (4), E (5), and G (6), or more than 0 volts at all remaining sockets?



**YES**

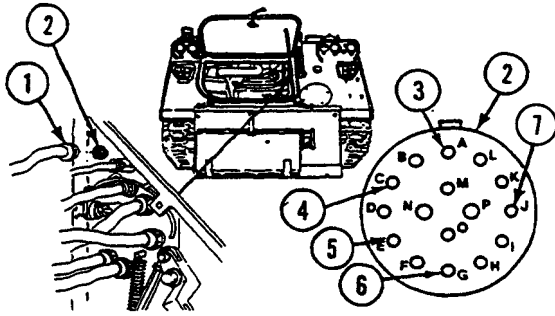
**NO**

**TN**

1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.

**Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure voltage between each socket on harness 12349813 jack (2) and ground. Multimeter should read 18 volts or more for socket A (3), C (4), E (5), G (6), and J (7), and 0 volts for the remaining socket checks.



3. Does multimeter read less than 18 volts at sockets A, C, E, G, and J, or more than 0 volts for all remaining sockets?

**NO**

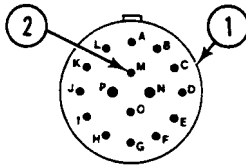
**YN**

1. Faulty harness 12349810 (transmission control wiring harness). Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Turn MASTER SWITCH to OFF. See your -10.
2. Install harness 12349810 plug on transmission jack.
3. Remove transmission controller (WP 0386 00) or (WP 0387 00).
4. Measure resistance between transmission controller jack (1) pin M (2), and pins A thru G. Multimeter should read 0 ohms for pins A, C, E and G, and infinity for all other pins.
5. Does multimeter read more than 0 ohms for pins A, C, E, and G, or less than infinity for all remaining pins?



**NO**

**2YN**

1. Install transmission controller (WP 0386 00) or (WP 0387 00).
2. Faulty harness 12349813 (transmission wiring harness). Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

**3Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller switch (WP 0389 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found .



**TRANSMISSION DOES NOT HOLD 3RD POSITION**

**0069 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

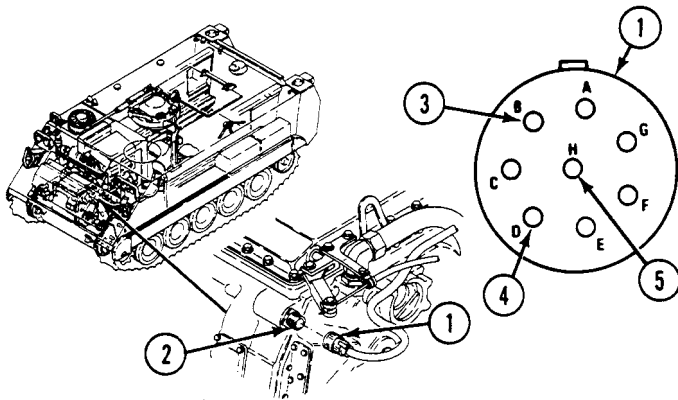
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in 1-3 position
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

Unit Mechanic

**T**

1. Remove harness 12349810 plug (1) from transmission jack (2).
2. Turn MASTER SWITCH to ON.
3. Measure voltage between each socket on harness 12349810 plug (1) and ground. Multimeter should read 0 volts at socket B (3), D (4), and H (5), and at least 18 volts for all remaining socket checks.
4. Does multimeter read more than 0 volts at sockets B (3), D (4), and H (5), or less than 18 volts at all remaining sockets?



**YES**

**NO**

**TN**

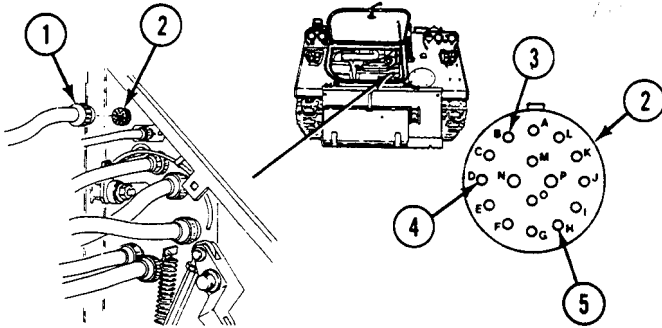
1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.

TRANSMISSION DOES NOT HOLD 3RD POSITION—Continued

0069 00

**Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure voltage between each socket on harness 12349813 jack (2) and ground. Multimeter should read 0 volts for sockets B (3), D (4), and H (5), and at least 18 volts for the remaining socket checks.
3. Does multimeter read more than 0 volts at sockets B (3), D (4), and H (5), or less than 18 volts at all remaining socket checks?



**NO**

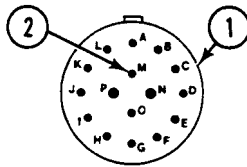
**YN**

1. Faulty harness 12349810 (transmission control wiring harness). Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349810 plug on transmission jack.
3. Remove transmission controller (WP 0386 00 or WP 0387 00).
4. Measure resistance between transmission controller jack (1) pin M (2), and pins A thru G. Multimeter should read infinity for pins B and D, and read 0 ohms for pins A, C, E, F, and G.
5. Does multimeter read less than infinity for pins B and D, or more than 0 ohms for pins A, C, E, and G?



**NO**

**2YN**

1. Install transmission controller (WP 0386 00 or WP 0387 00).
2. Faulty harness 12349813 (transmission wiring harness). Beyond unit maintenance repair.
3. Notify supervisor.

**YES**



**3Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller switch (WP 0389 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found.



**TRANSMISSION DOES NOT REVERSE**

**0070 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

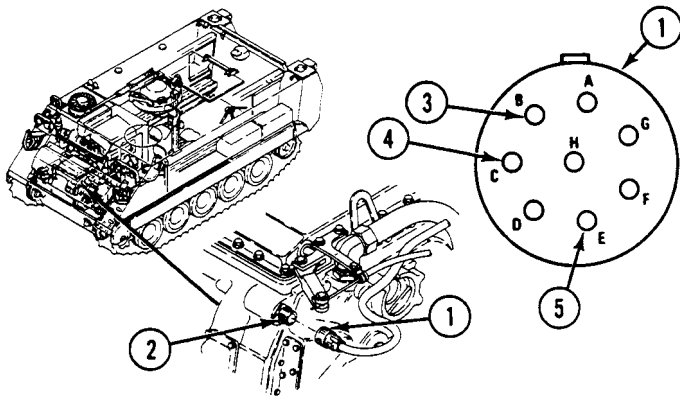
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in R position
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Remove harness 12349810 plug (1) from transmission jack (2).
2. Turn MASTER SWITCH to ON.
3. Measure voltage between each socket on harness 12349810 plug (1) and ground. Multimeter should read 18 volts or more at socket B (3), C (4), and E (5), and 0 volts for all remaining socket checks.
4. Does multimeter read less than 18 volts at sockets B (3), C (4), and E (5), or more than 0 volts at all remaining sockets?



**YES**

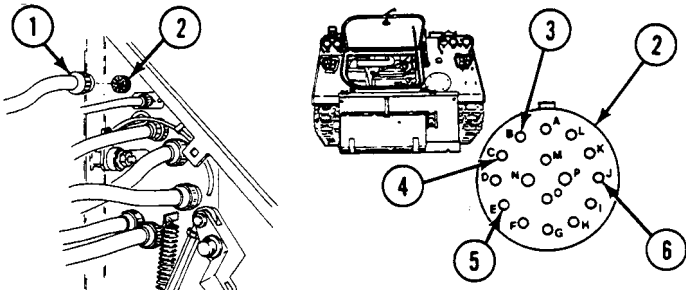
**NO**

**TN**

1. Faulty transmission, Beyond unit maintenance repair.
2. Notify supervisor.

**Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure voltage between each socket on harness 12349813 jack (2) and ground. Multimeter should read 18 volts or more for socket B (3), C (4), E (5), and J (6), and 0 volts for the remaining socket checks.
3. Does multimeter read less than 18 volts at sockets B (3), C (4), E (5), and J (6), or more than 0 volts at all remaining sockets?



**NO**

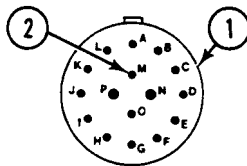
**YN**

1. Faulty harness 12349810 (transmission control wiring harness). Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349810 plug on transmission jack.
3. Remove transmission controller (WP 0386 00 or WP 0387 00).
4. Measure resistance between transmission controller jack (1) pin M (2) and pins A through G. Multimeter should read 0 ohms for pins B, C, and E, and read infinity for all remaining pins.
5. Does multimeter read more than 0 ohms for pins B, C, and E, or less than infinity for all remaining pins?



**NO**

**2YN**

1. Install transmission controller (WP 0386 00 or WP 0387 00).
2. Faulty harness 12349813 (transmission wiring harness). Beyond unit maintenance repair.
3. Notify supervisor.

**YES**

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**TRANSMISSION DOES NOT REVERSE—Continued**

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**0070 00****3Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller switch (WP 0389 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found.



**TRANSMISSION DOES NOT PIVOT STEER**

**0071 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Equipment Condition

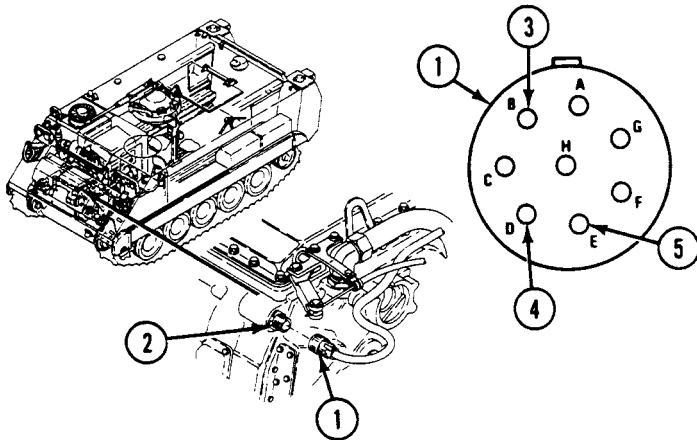
- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in PV position
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

Personnel Required

- Unit Mechanic
- Helper (H)

**T**

1. Remove harness 12349810 plug (1) from transmission jack (2).
2. Turn MASTER SWITCH to ON (see your -10).
3. Measure voltage between each socket on harness 12349810 plug (1) and ground. Multimeter should read 18 volts or more at sockets B (3), D (4), and E (5), and 0 volts for all remaining socket checks.
4. Does multimeter indicate an incorrect reading?



**YES**

**NO**

**TN**

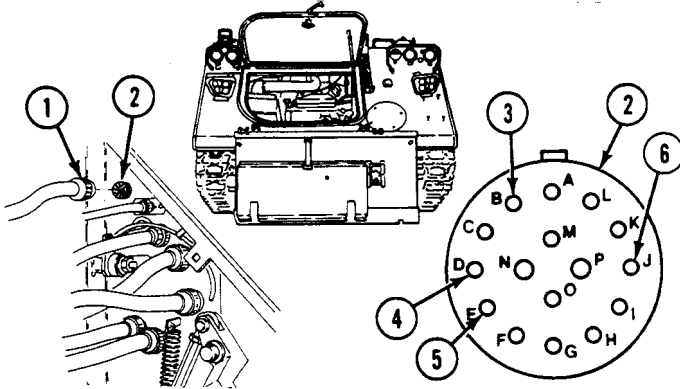
1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.

TRANSMISSION DOES NOT PIVOT STEER—Continued

0071 00

**Y**

1. Remove harness 12349810 plug (1) from harness 12349813 jack (2) at carrier bulkhead.
2. Measure voltage between each socket on harness 12349813 jack (2) and ground. Multimeter should read 18 volts or more for socket B (3), D (4), E (5), and J (6), and 0 volts for all remaining socket checks.
3. Does multimeter indicate an incorrect reading?



**NO**

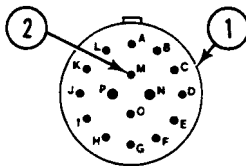
**YN**

1. Faulty harness 12349810 (transmission control wiring harness). Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Turn MASTER SWITCH to OFF.
2. Install harness 12349810 plug on transmission jack.
3. Remove transmission controller (WP 0386 00 or WP 0387 00).
4. Measure resistance between transmission controller jack (1) pin M (2) and pins A thru G. Multimeter should read 0 ohms for pins B, D, and E, and infinity for all remaining pin checks.
5. Does multimeter indicate an incorrect reading?



**NO**

**2YN**

1. Install transmission controller (WP 0386 00 or WP 0387 00).
2. Faulty harness 12349813 (transmission wiring harness). Beyond unit maintenance repair.
3. Notify supervisor.

**YES**



---

**TRANSMISSION DOES NOT PIVOT STEER—Continued**

---

**0071 00****3Y**

1. Install harness 12349810 plug on harness 12349813 jack at carrier bulkhead.
2. Replace faulty transmission controller switch (WP 0389 00).
3. Perform pin to pin check (WP 0060 00).
4. Verify no faults found.



**TRANSMISSION HIGH TEMP INDICATOR COMES ON**

**0072 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Pressure Gauge Kit (WP 0926 00, Item 35)

Personnel Required

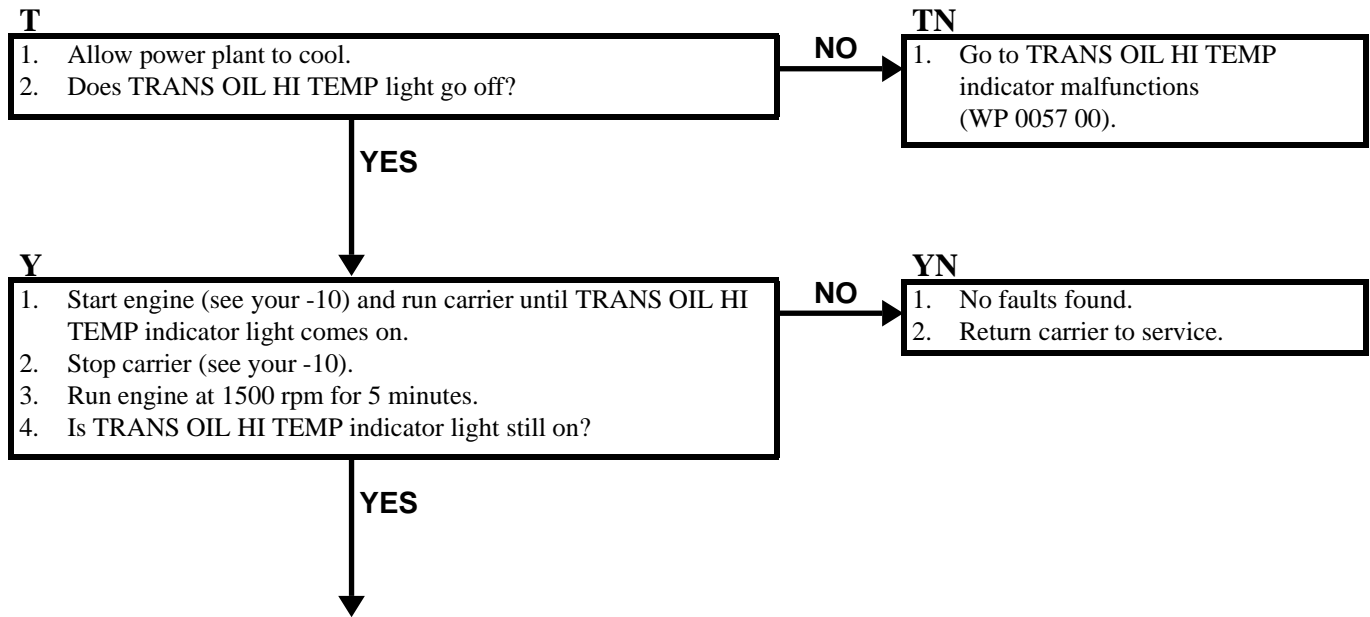
Unit Mechanic

References

- See your -10
- See your PMCS

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Transmission in SL
- Transmission oil level checked (see your PMCS)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Driver's power plant access panel removed (see your -10)
- Power plant rear access panel removed (see your -10)

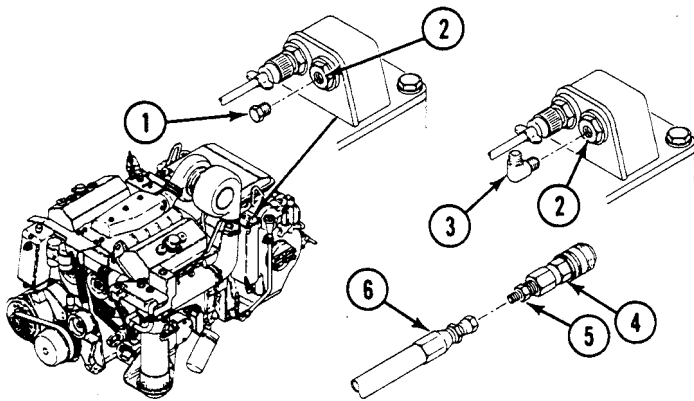


2Y

1. Stop engine (see your -10).
2. Remove plug (1) from MAIN port (2) on top of filter housing.
3. Install 4730-231-5632 elbow (3) into MAIN port (2).
4. Remove quick disconnect (4) and adapter (5) from test hose (6).
5. Install test hose (6) onto elbow (3).
6. Start engine (see your -10).
7. With engine at 600 rpm, measure MAIN pressure with transmission in R, and then in 1-4 position. Use 400 psi gauge. Pressure should be 280-325 psi in R. Pressure should be 190-210 psi in 1-4 position.
8. Does pressure tester indicate an incorrect reading?

NO

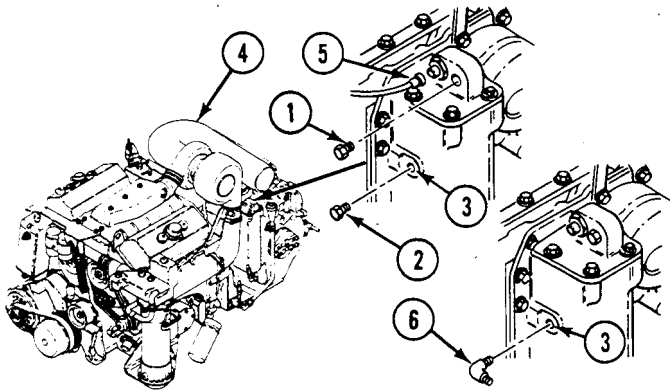
GO TO BY (PAGE 0072 00-4)



YES

**3Y**

1. Stop engine (see your -10).
2. Remove pressure tester, elbow, and install MAIN port plug (1).
3. Remove plug (2) from FILTER IN port (3).
4. Remove turbo air inlet duct (4) and trans filter clogged switch plug (5).
5. Install 4730-766-9000 elbow (6) into FILTER IN port (3).
6. Install pressure tester into elbow (6).
7. Install turbo air inlet duct (4).
8. Start engine (see your -10).
9. With engine at 600 rpm, measure FILTER IN pressure with transmission in R, and then in 1-4 position. Pressure should be 280-325 psi in R. Pressure should be 190-210 psi in 1-4 position.
10. Is FILTER IN pressure 35 psi or more greater than MAIN pressure?



**NO**

GO TO **CY** (PAGE 0072 00-4)

**YES**

**4Y**

1. Is TRANS FILTER CLOGGED indicator ON?

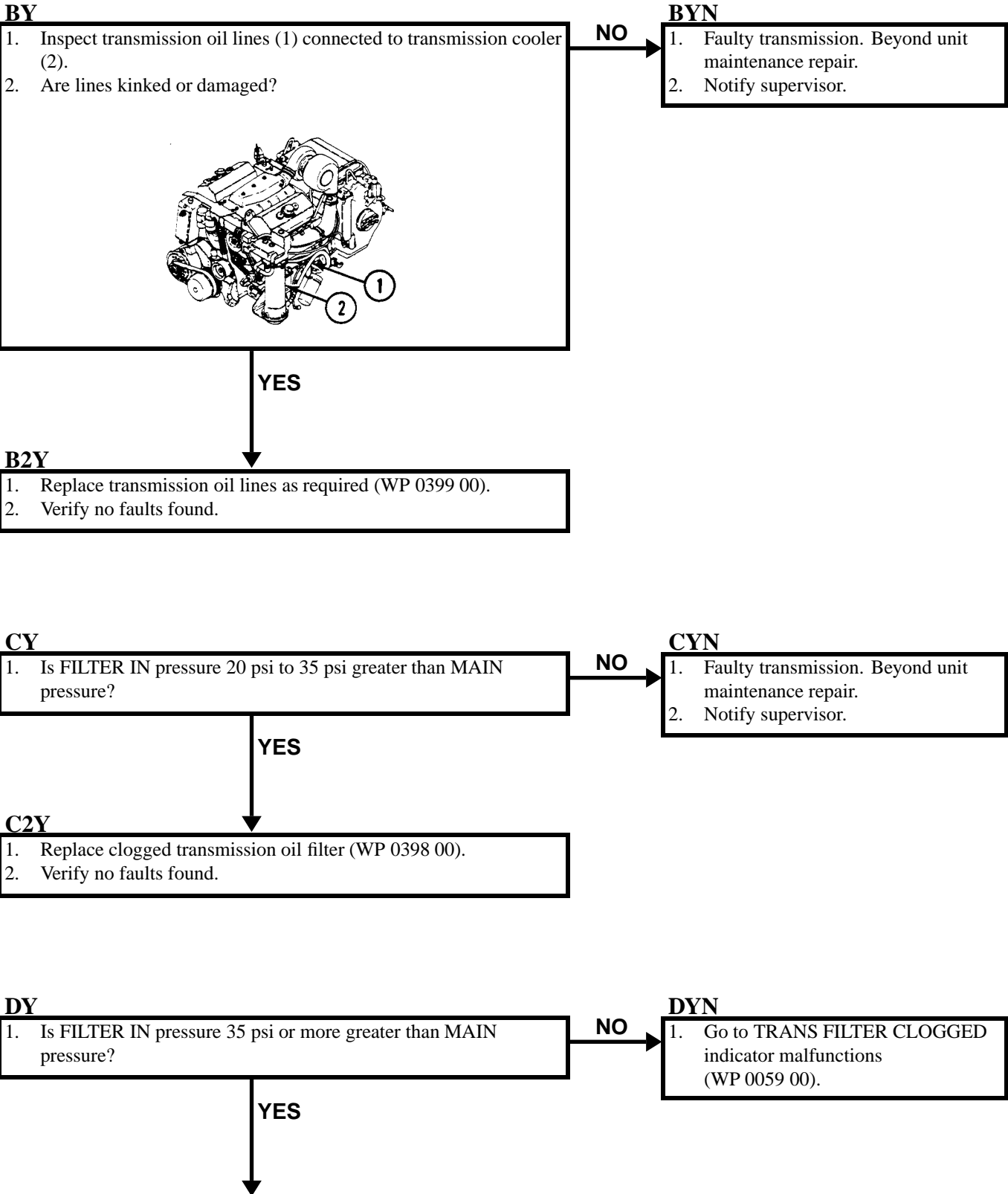
**NO**

GO TO **DY** (PAGE 0072 00-4)

**YES**

**5Y**

1. Stop engine (see your -10).
2. Replace transmission oil filter element (WP 0398 00).
3. Verify no faults found.



**D2Y**

1. Faulty transmission. Beyond unit maintenance repair.
2. Notify supervisor.





**TRANSMISSION LOW LUBE INDICATOR COMES ON**

**0073 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- Fitting Kit (WP 0926 00, Item 21)
- Pressure Gauge Kit (WP 0926 00, Item 35)
- General Mechanic's Tool Kit (WP 0926 00, Item 65)

Personnel Required

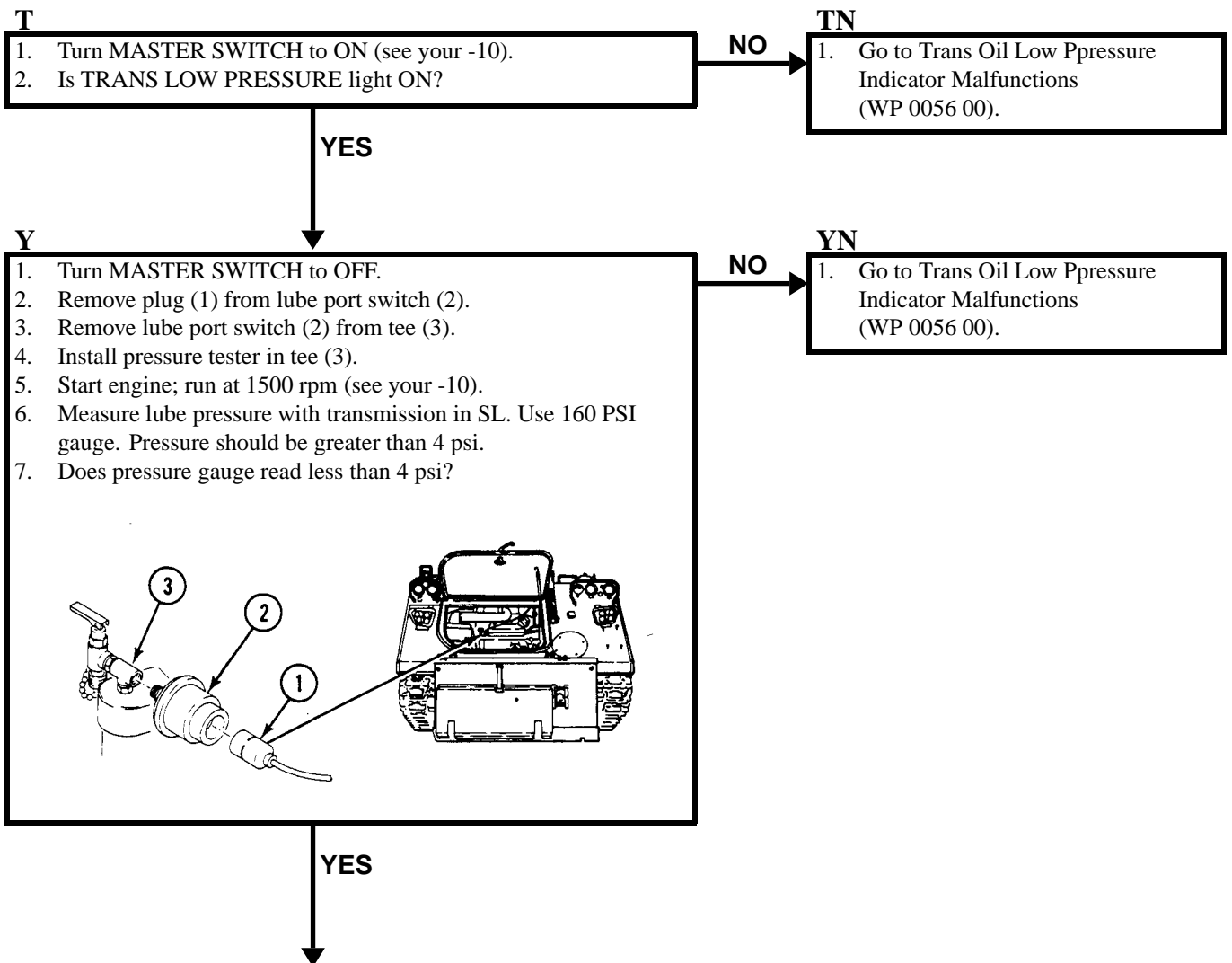
Unit Mechanic

References

- See your -10
- See your PMCS

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Parking brake off (see your -10)
- Transmission in SL
- Transmission oil level checked (see your PMCS)
- Power plant warm
- Idle speed set at 600 rpm
- Trim vane down (see your -10)
- Power engine access door open (see your -10)
- Driver access panel removed (see your -10)
- Rear access panel removed (see your -10)



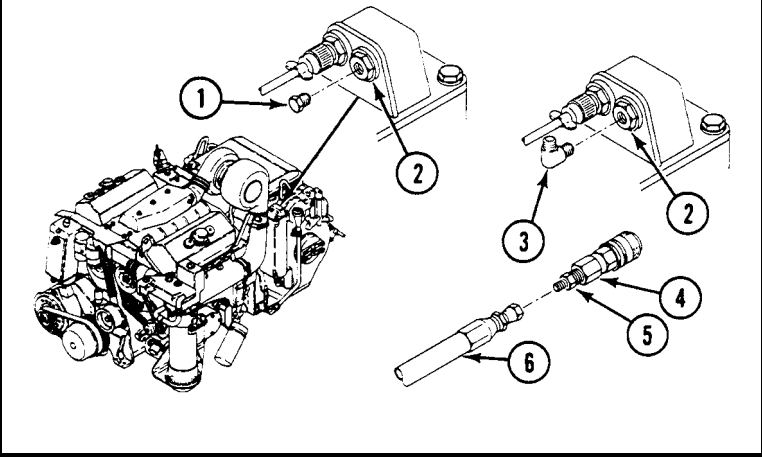
**2Y**

1. Stop engine (see your -10).
2. Remove pressure tester and install switch.
3. Remove plug (1) from MAIN port (2).
4. Install 4730-231-5632 elbow (3) into MAIN port (2).
5. Remove quick disconnect (4) and adapter (5) from test hose (6).
6. Install test hose (6) on elbow (3).
7. Start engine (see your -10).
8. With engine at 600 rpm, measure MAIN pressure with transmission in R and then in 1-4 position. Use 400 PSI gauge. Pressure should be 280-325 psi in R. Pressure should be 190-210 psi in 1-4 position.
9. Does pressure gauge reading differ from step 8, above?

**NO**

**2YN**

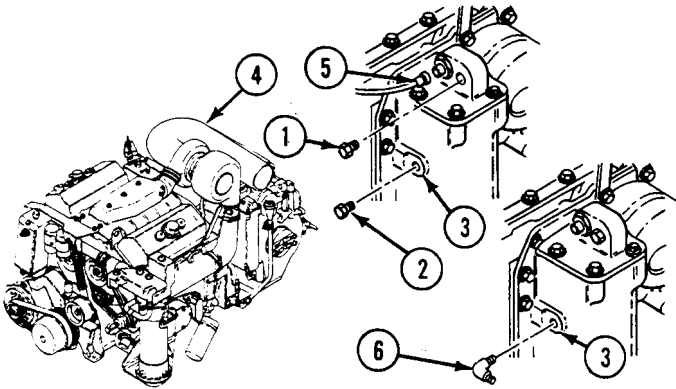
1. Transmission low lube pressure. Beyond unit maintenance repair.
2. Notify supervisor.



**YES**

**3Y**

1. Stop engine (see your -10).
2. Remove pressure tester and install MAIN port plug (1).
3. Remove plug (2) from FILTER IN port (3).
4. Remove turbo air inlet duct (4) and trans filter clogged switch plug (5).
5. Install 4730-766-9000 elbow (6) into FILTER IN port (3).
6. Install pressure tester onto elbow (6). Use 400 PSI gauge.
7. Install turbo air inlet duct (4).
8. Start engine (see your -10).
9. With engine at 600 rpm, measure FILTER IN pressure with transmission in R and then in 1-4 position. FILTER IN pressure should be within 35 psi of MAIN pressure.
10. Is FILTER IN pressure, at 35 psi or more, greater than MAIN pressure?



**NO**

GO TO AY (PAGE 0073 00-4)

**YES**

**4Y**

1. Is trans filter clogged indicator ON?

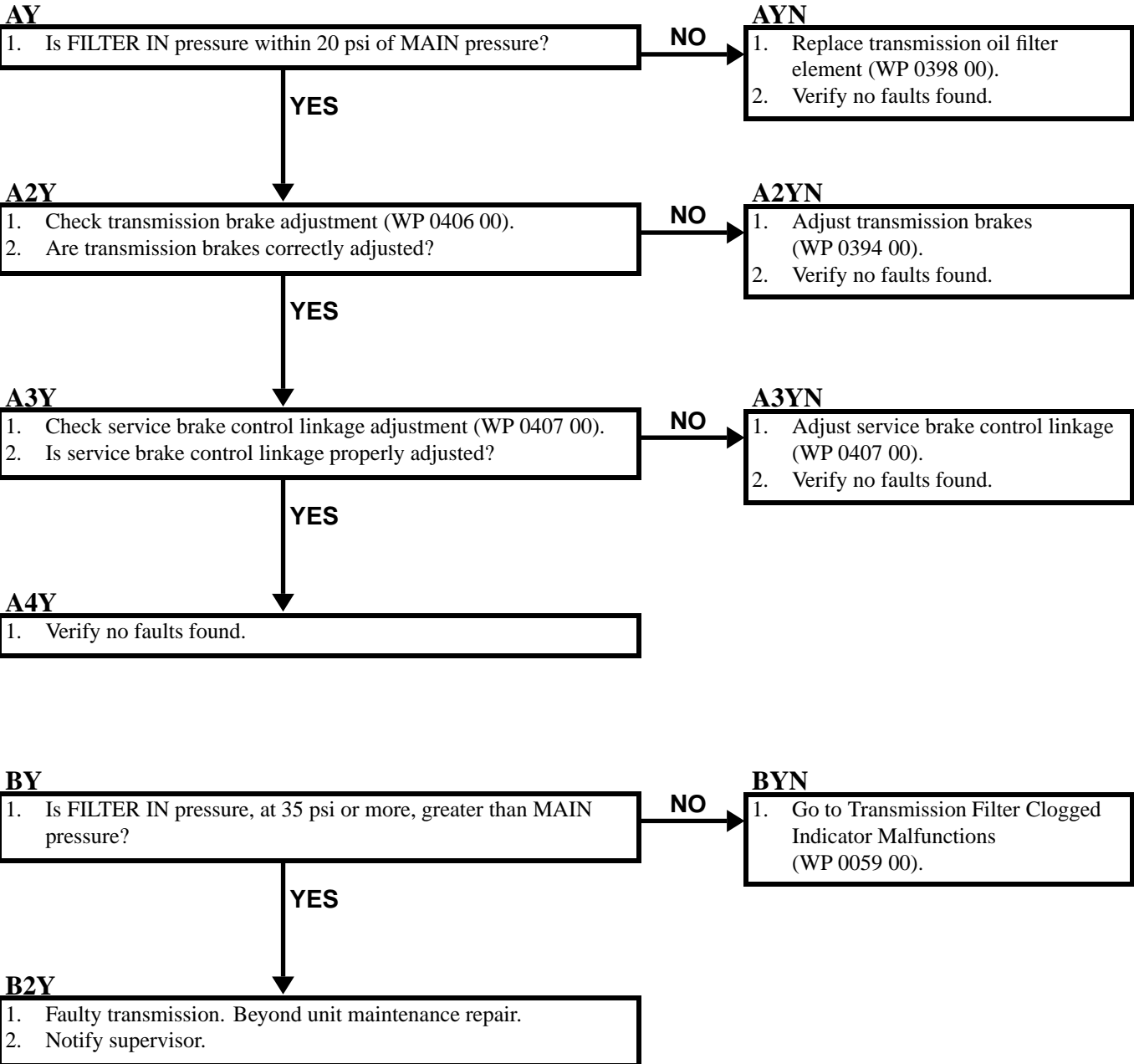
**NO**

GO TO BY (PAGE 0073 00-4)

**YES**

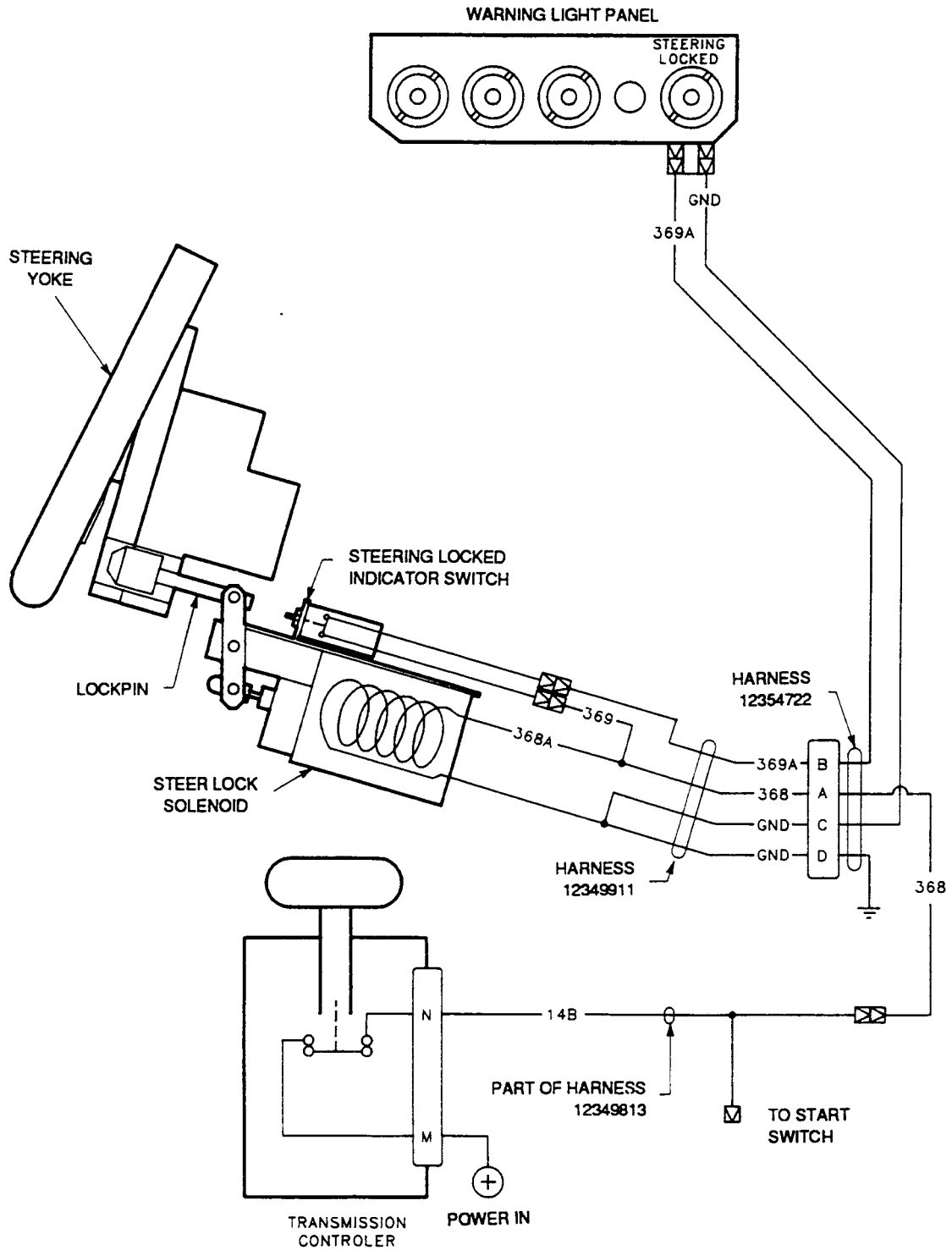
**5Y**

1. Stop engine (see your -10).
2. Replace transmission oil filter element (WP 0398 00).
3. Verify no faults found.



STEERING LOCK SCHEMATIC (SOLENOID-ACTIVATED LOCK)

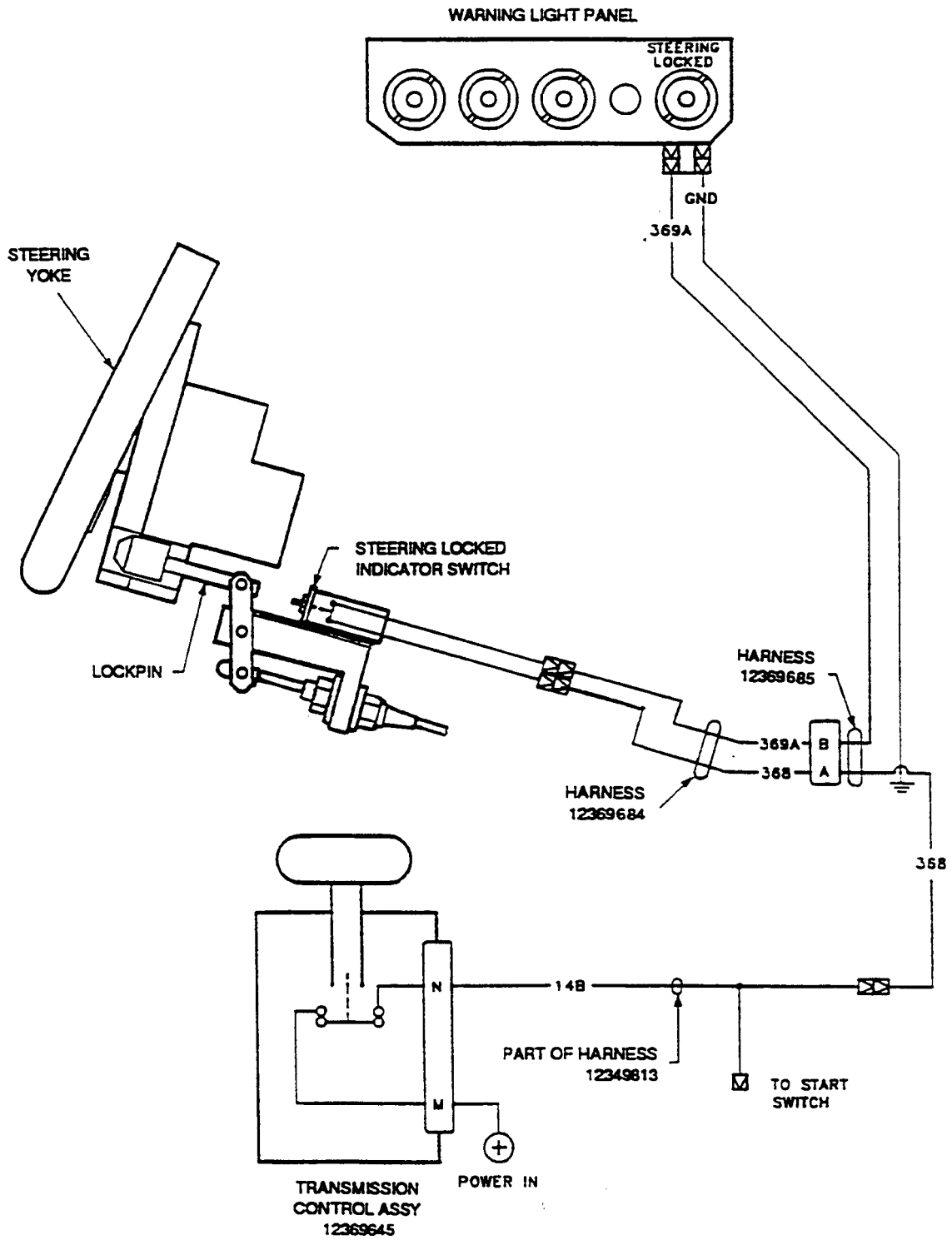
0074 00





STEERING LOCK SCHEMATIC (CABLE-ACTIVATED LOCK)

0075 00







**SOLENOID-ACTIVATED STEERING LOCK MALFUNCTIONS**

**0076 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Multimeter (WP 0926 00, Item 30)

Equipment Condition

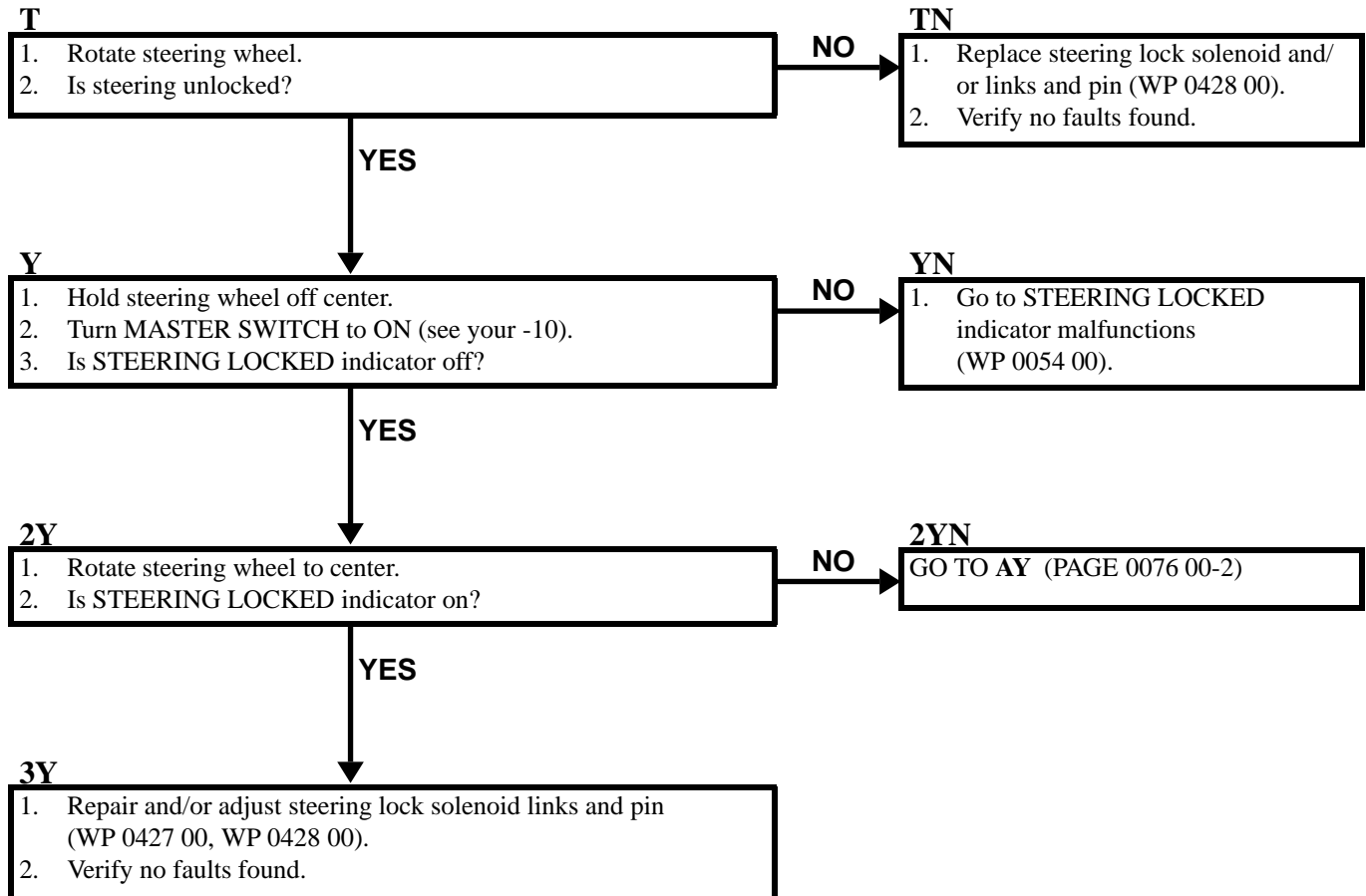
Engine stopped (see your -10)

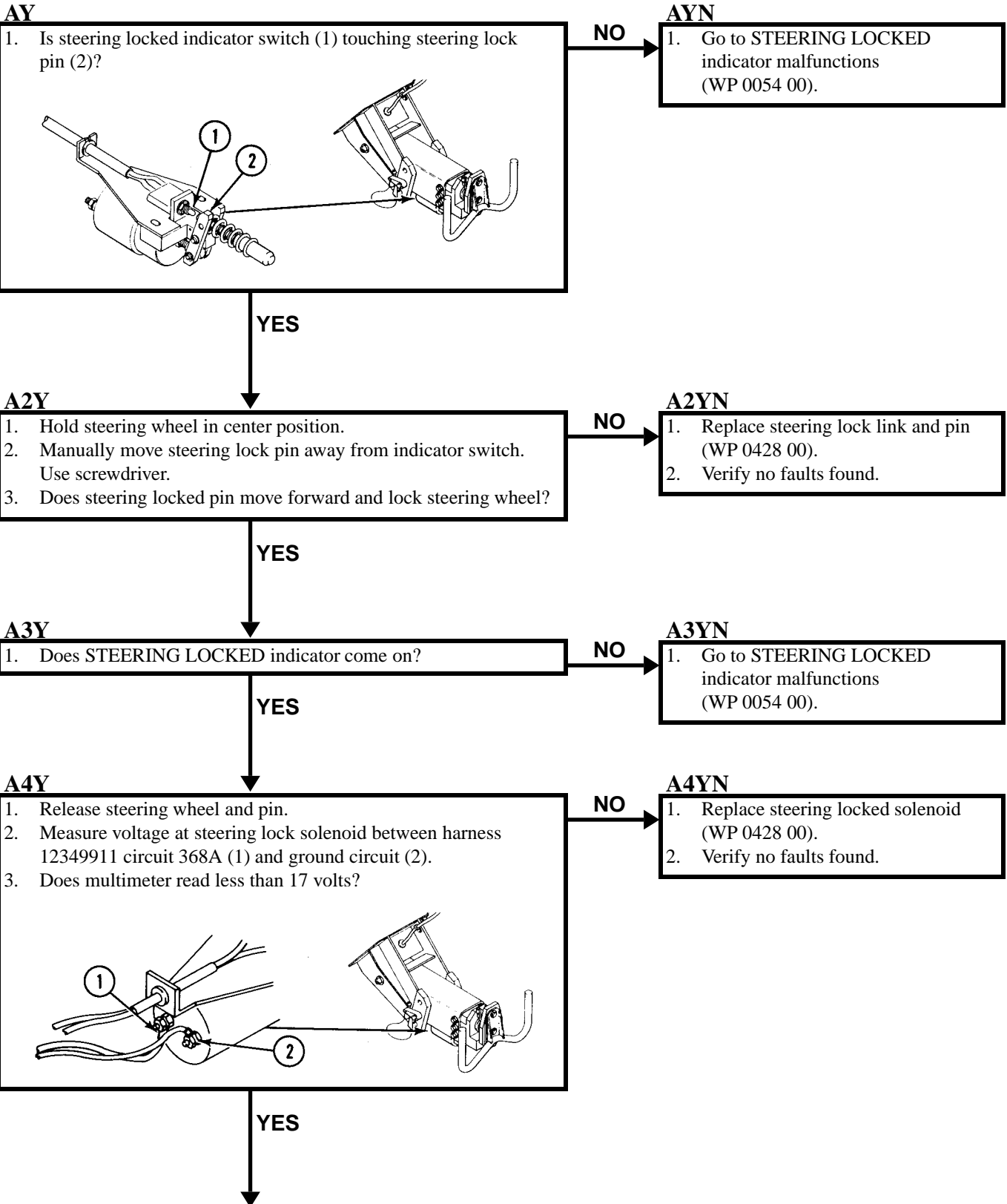
Carrier blocked (see your -10)

Transmission controller in SL

Personnel Required

Unit Mechanic





**A5Y**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Repair harness 12345911 (WP 0367 00).</li><li>2. Verify no faults found.</li></ol> |
|---|



**CABLE-ACTIVATED STEERING LOCK MALFUNCTIONS**

**0077 00**

**INITIAL SETUP:**

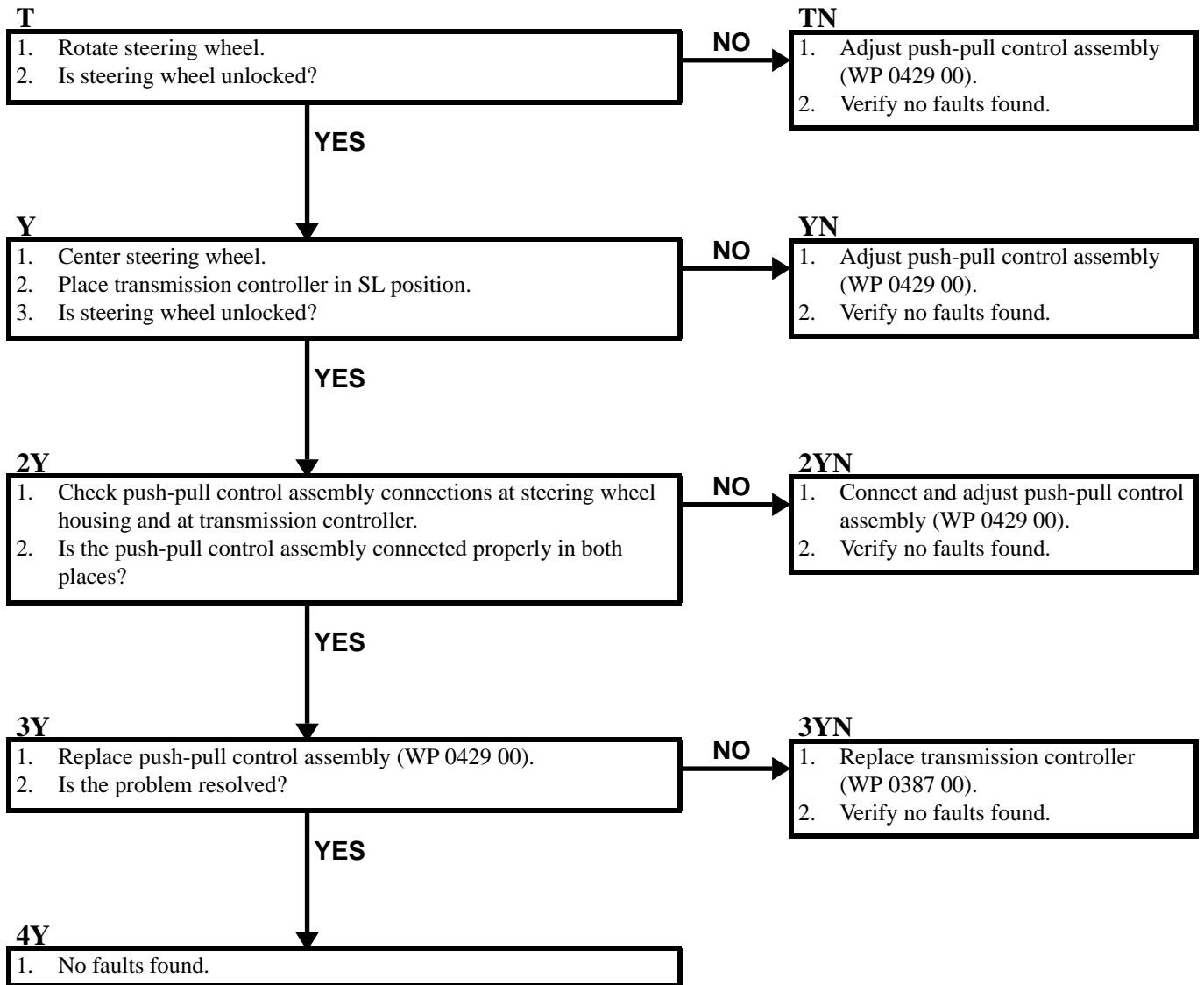
Maintenance Level  
Unit

References  
See your -10

Tools and Special Tools  
General Mechanic's Tool Kit (WP 0926 00, Item 65)

Equipment Condition  
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Transmission controller in any position except SL

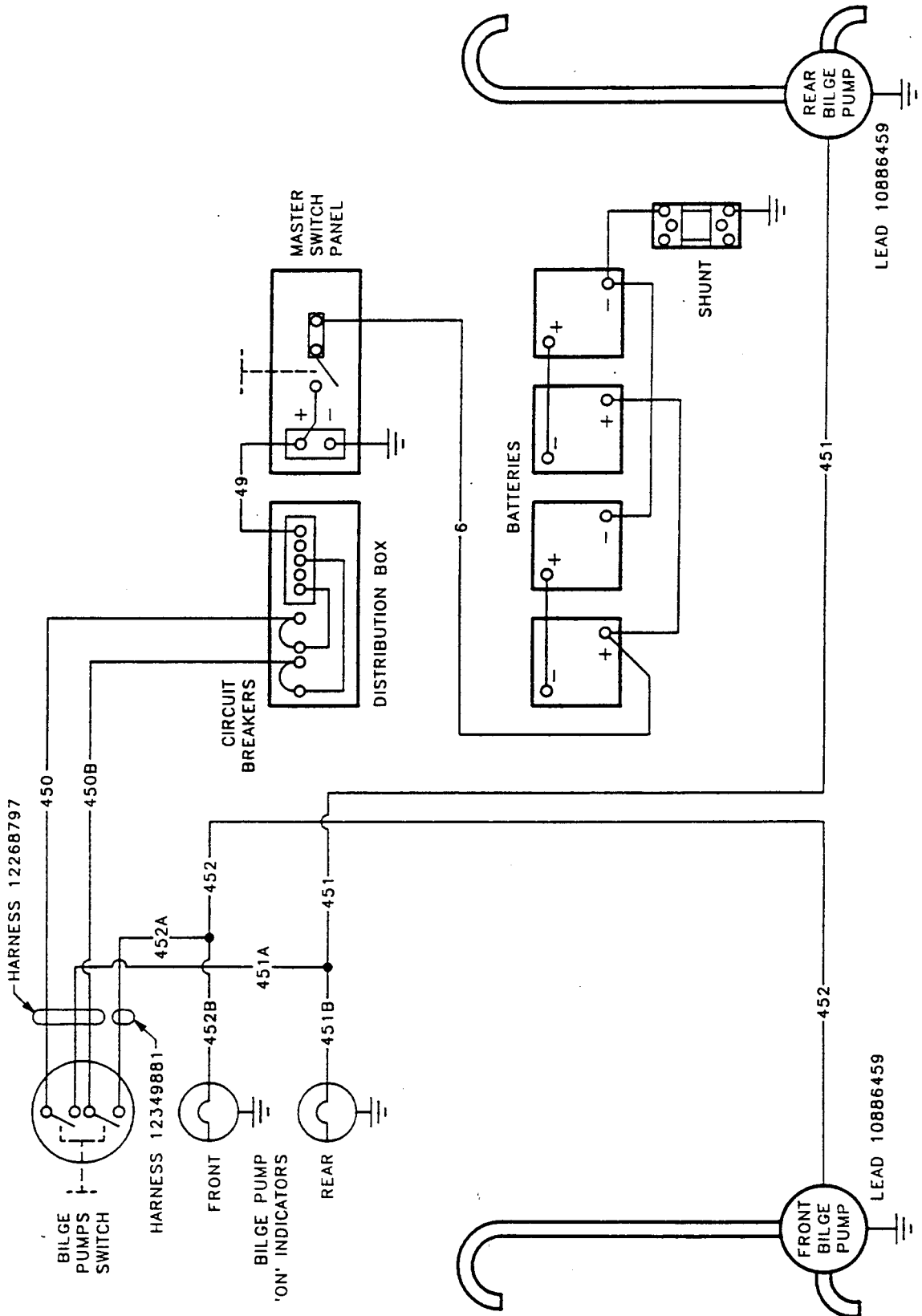
Personnel Required  
Unit Mechanic





BILGE PUMP SCHEMATIC

0078 00







**FRONT AND/OR REAR BILGE PUMP(S) AND/OR LIGHTS DON'T WORK**

**0080 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)

Personnel Required

Unit Mechanic

References

See your -10

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- MASTER SWITCH OFF (see your -10)
- Driver's engine access panel removed (front bilge pump) (WP 0441 00)
- Ramp lowered (rear bilge pump) (see your -10)
- Rear floor plate removed (rear bilge pump) (WP 0539 00)
- Fog oil tank removed (rear bilge pump-M1059A3 only) (WP 0753 00)

**T**

1. Turn BILGE PUMP switch to ON (see your -10).
2. Do both bilge pump lights come on?

**NO**

**GO TO BY (PAGE 0080 00-2)**

**YES**

**Y**

1. Does either bilge pump (front or rear) fail to start?

**NO**

**GO TO CY (PAGE 0080 00-5)**

**YES**

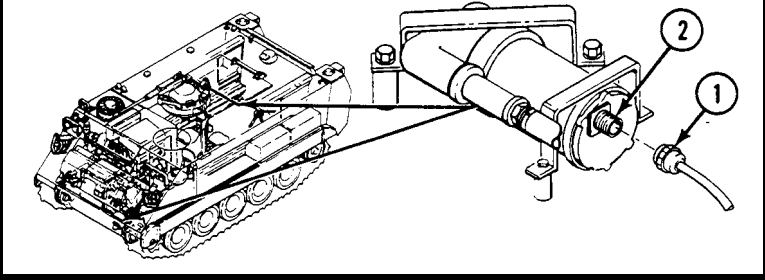
**2Y**

1. Locate bilge pump that is not operating.
2. Remove circuit 451 (rear pump), or circuit 452 (front pump), plug (1) from pump jack (2).
3. Measure voltage between plug 451 or 452 and ground.
4. Does multimeter read 17 or more volts?

**NO**

**2YN**

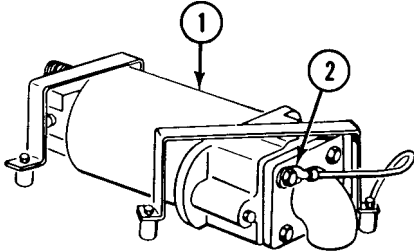
1. Repair harness 12349881 (front bilge pump), WP 0382 00); or repair harness 12268797 (rear bilge pump), WP 0382 00).
2. Verify no faults found.



**YES**

**3Y**

1. Turn MASTER SWITCH to OFF.
2. Check continuity between bilge pump body (1) and ground lead (2).
3. Is there continuity?



NO

**3YN**

1. Replace ground lead 10886459 to bilge pump (WP 0632 00), front; (WP 0635 00), rear.
2. Verify no faults found.

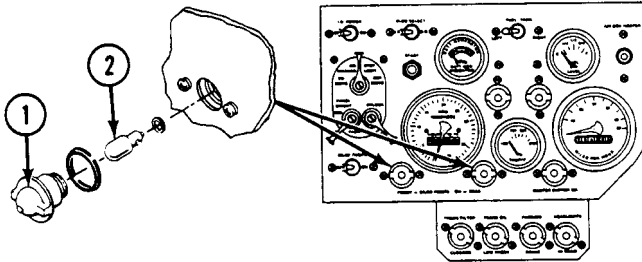
YES

**4Y**

1. Replace bilge pump (WP 0632 00), front; (WP 0635 00), rear.
2. Verify no faults found.

**BY**

1. Remove BILGE PUMP ON indicator lens (1) and bulb (2).
2. Check continuity between bulb center contact and bulb base.
3. Is there any continuity?



NO

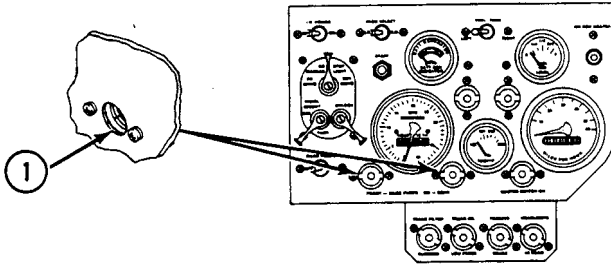
**BYN**

1. Replace BILGE PUMP ON indicator light bulb (WP 0286 00).
2. Verify no faults found.

YES

**B2Y**

1. Measure voltage between bulb socket center contact (1) and ground.
2. Does multimeter read less than 17 volts?



NO

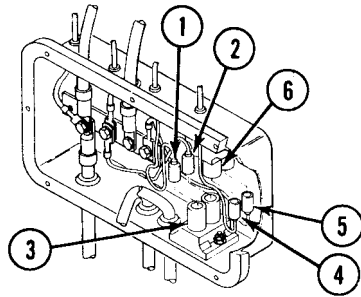
**B2YN**

1. Replace BILGE PUMP ON light assembly (WP 0286 00).
2. Verify no faults found.

YES

**B3Y**

1. Turn MASTER SWITCH to OFF.
2. Install plug 451 B or 452 B on indicator light assembly.
3. Remove master switch panel from distribution box (WP 0260 00 or WP 0261 00).
4. Remove plug 450 B (1) and plug 450 C (2) from front bilge pump circuit breaker (3); or remove plug 450 (4) and plug 450 A (5) from rear bilge pump circuit breaker (6).
5. Check continuity across circuit breaker jacks.
6. Is there continuity?



NO

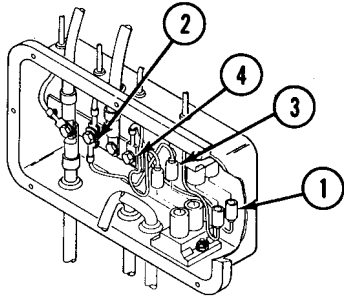
**B3YN**

1. Replace bilge pump circuit breaker (WP 0275 00).
2. Verify no faults found.

YES

**B4Y**

1. Check continuity between plug 450 A (1) to 450 A lead end at bus bar (2) for rear pump; or plug 450 C (3) to 450 C lead end at bus bar (4) for front pump.
2. Is there continuity?



NO

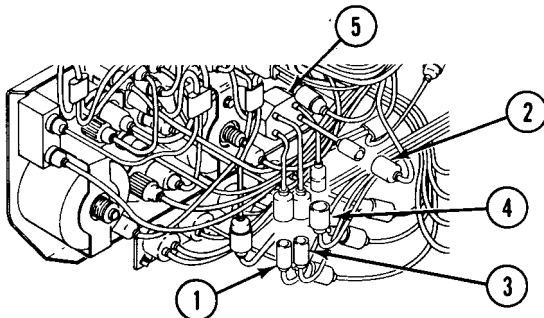
**B4YN**

1. Replace lead 10861710 (front), (WP 0270 00), or replace lead 10861711 (rear), (WP 0270 00).
2. Install bilge pump leads.
3. Verify no faults found.

YES

**B5Y**

1. Remove instrument panel for access (WP 0295 00).
2. Remove plug 450 B (1) and plug 452 B (2) (front) or plug 450 (3) and 451 A (4) (rear) from bilge pump switch (5).
3. Check continuity between bilge pump switch jacks with BILGE PUMPS switch on.
4. Is there continuity?



NO

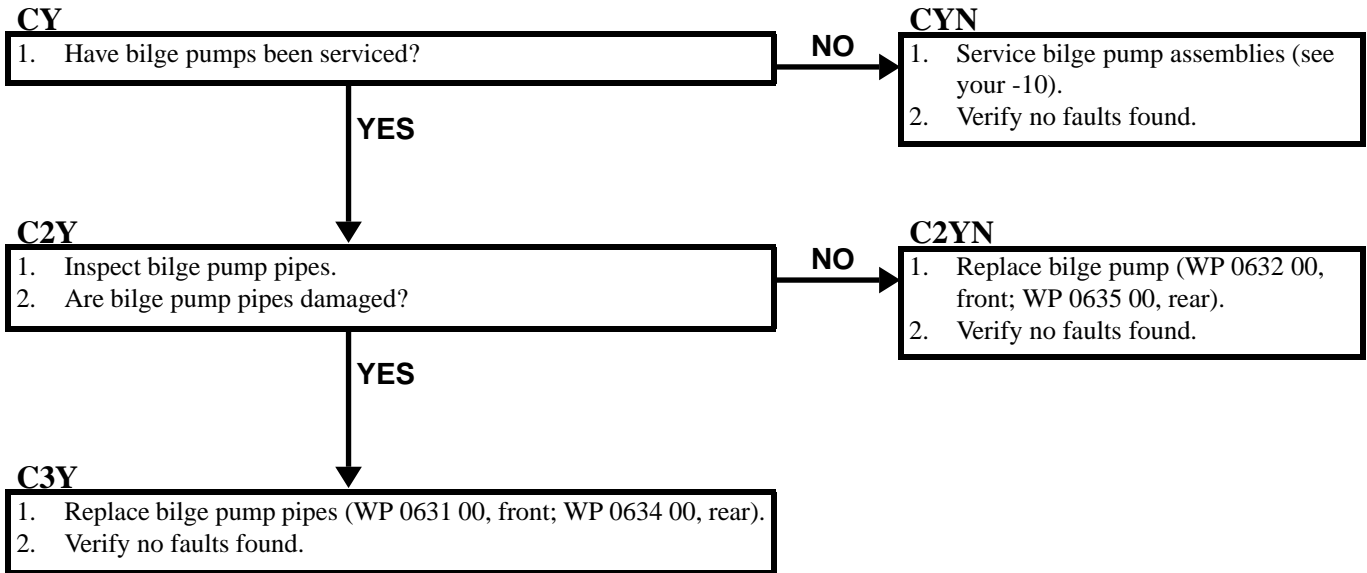
**B5YN**

1. Install master switch panel (WP 0260 00).
2. Replace bilge pump switch (WP 0281 00).
3. Verify no faults found.

YES

**B6Y**

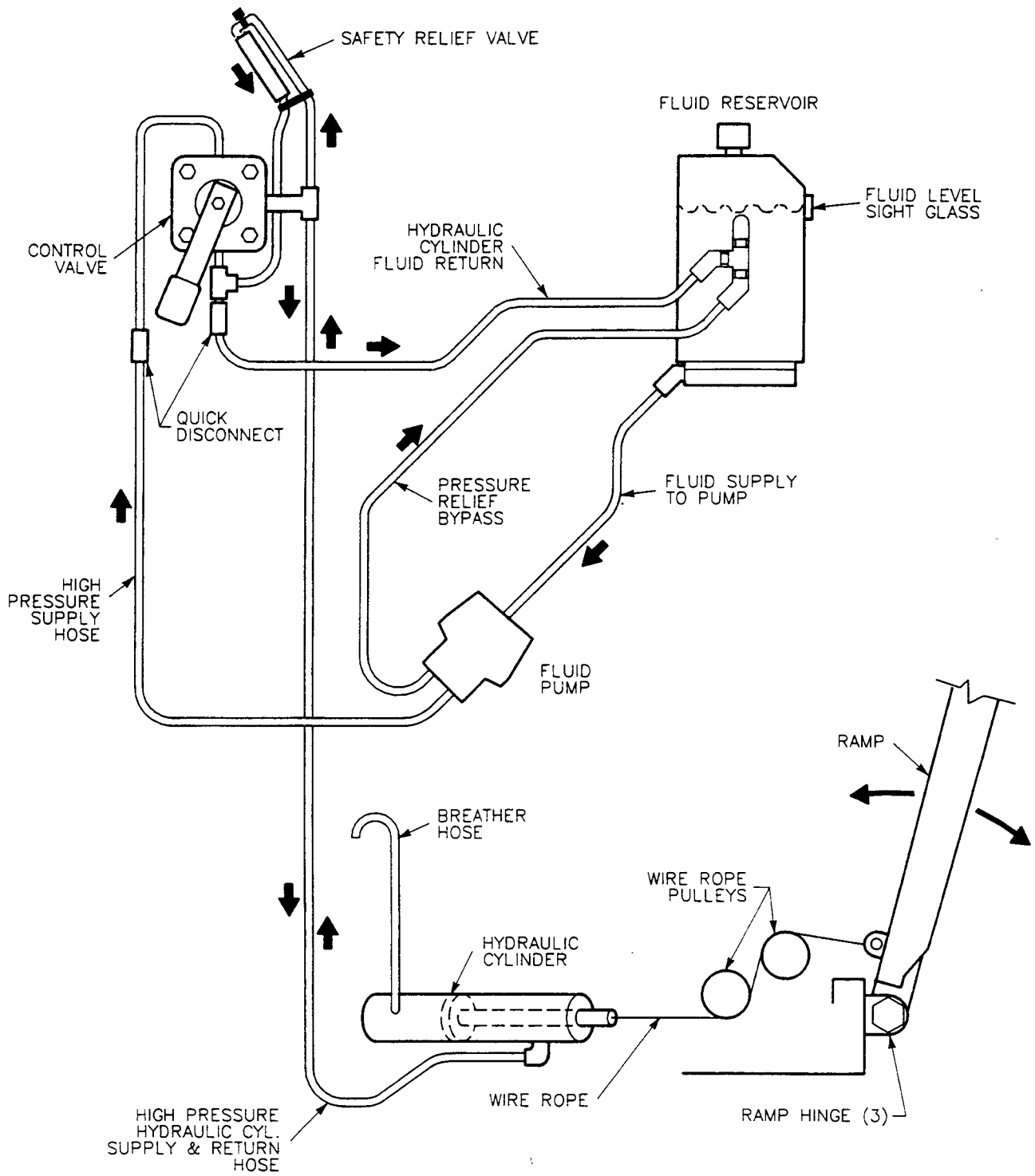
1. Repair harness 12268797 circuit 450 or 450B (WP 0382 00).
2. Verify no faults found.





RAMP SCHEMATIC

0081 00







**RAMP WILL NOT LOWER**

**0082 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your 10)

Carrier blocked (see your -10)

Rear floor plates removed (WP 0539 00)

Driver's power plant access panel removed (WP 0441 00)

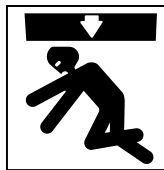
Power plant rear access panels removed (WP 0439 00)

Personnel Required

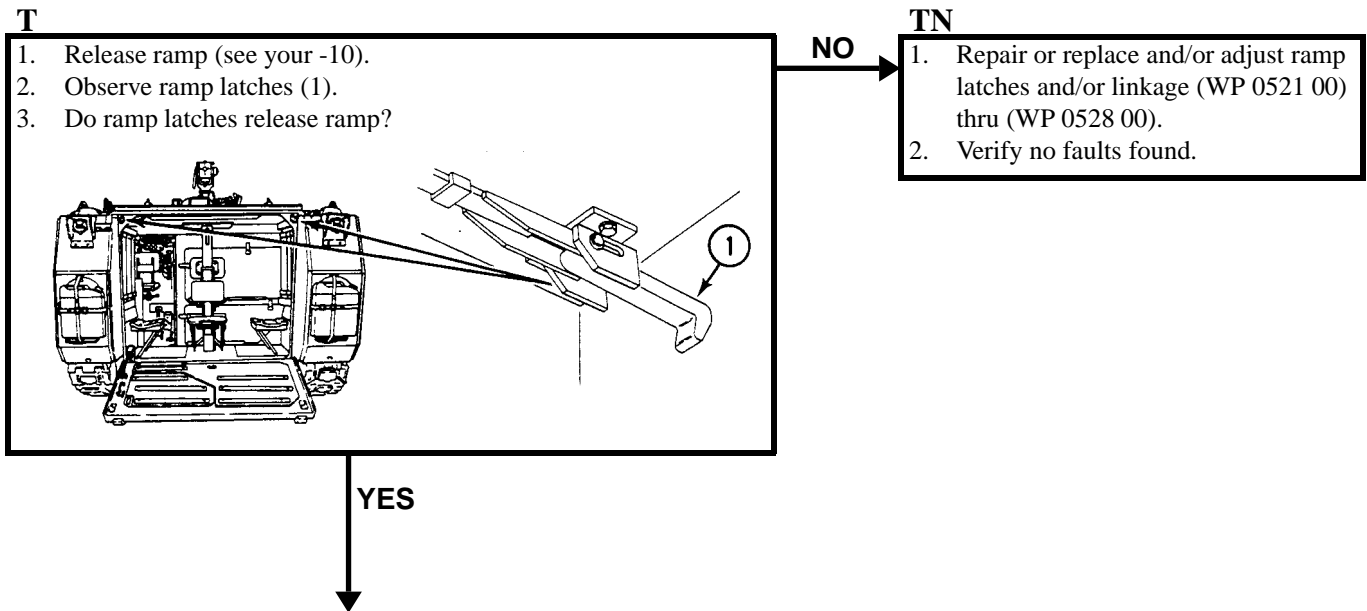
Unit Mechanic

Helper (H)

**WARNING**



**Lowering ramp could injure personnel. Make sure no one is in ramp zone before you lower ramp. If tactical situation permits, sound horn before dropping ramp.**



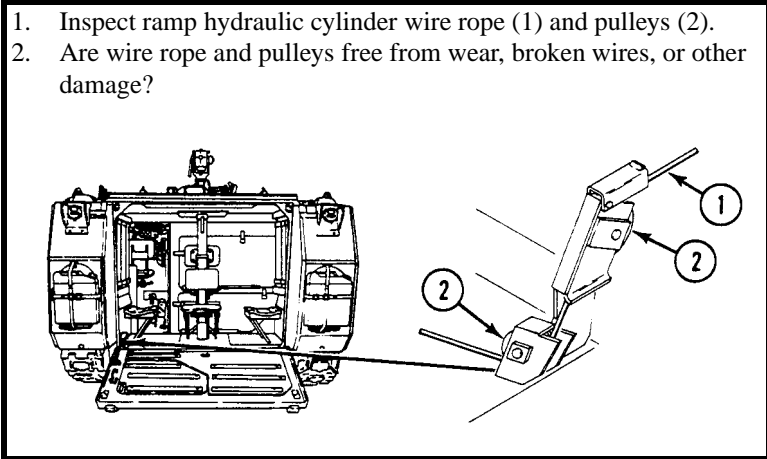
**Y**

1. Inspect ramp hydraulic cylinder wire rope (1) and pulleys (2).
2. Are wire rope and pulleys free from wear, broken wires, or other damage?

**NO**

**YN**

1. Replace wire rope and/or pulleys (WP 0657 00 or WP 0658 00).
2. Verify no faults found.



**YES**

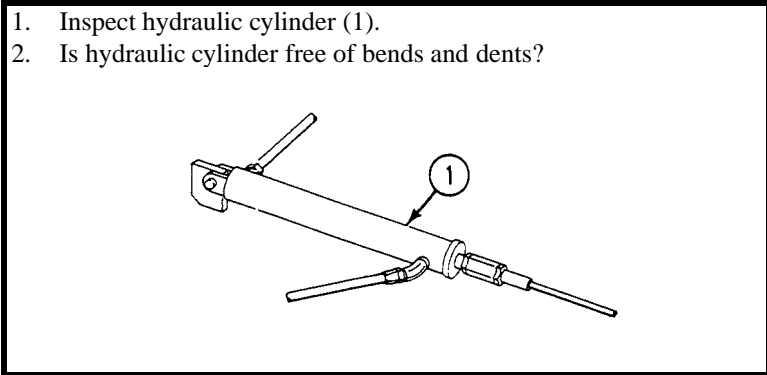
**2Y**

1. Inspect hydraulic cylinder (1).
2. Is hydraulic cylinder free of bends and dents?

**NO**

**2YN**

1. Replace hydraulic cylinder (WP 0656 00).
2. Verify no faults found.



**YES**

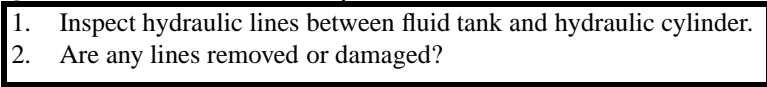
**3Y**

1. Inspect hydraulic lines between fluid tank and hydraulic cylinder.
2. Are any lines removed or damaged?

**NO**

**3YN**

1. Replace control valve (WP 0659 00 or WP 0661 00).
2. Verify no faults found.



**YES**

**4Y**

1. Repair/replace lines as necessary. (See Table of Contents).
2. Verify no faults found.

**RAMP OPERATION IS SLOW OR SLUGGISH**

**0083 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your -10)

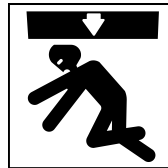
Carrier blocked (see your -10)

Personnel Required

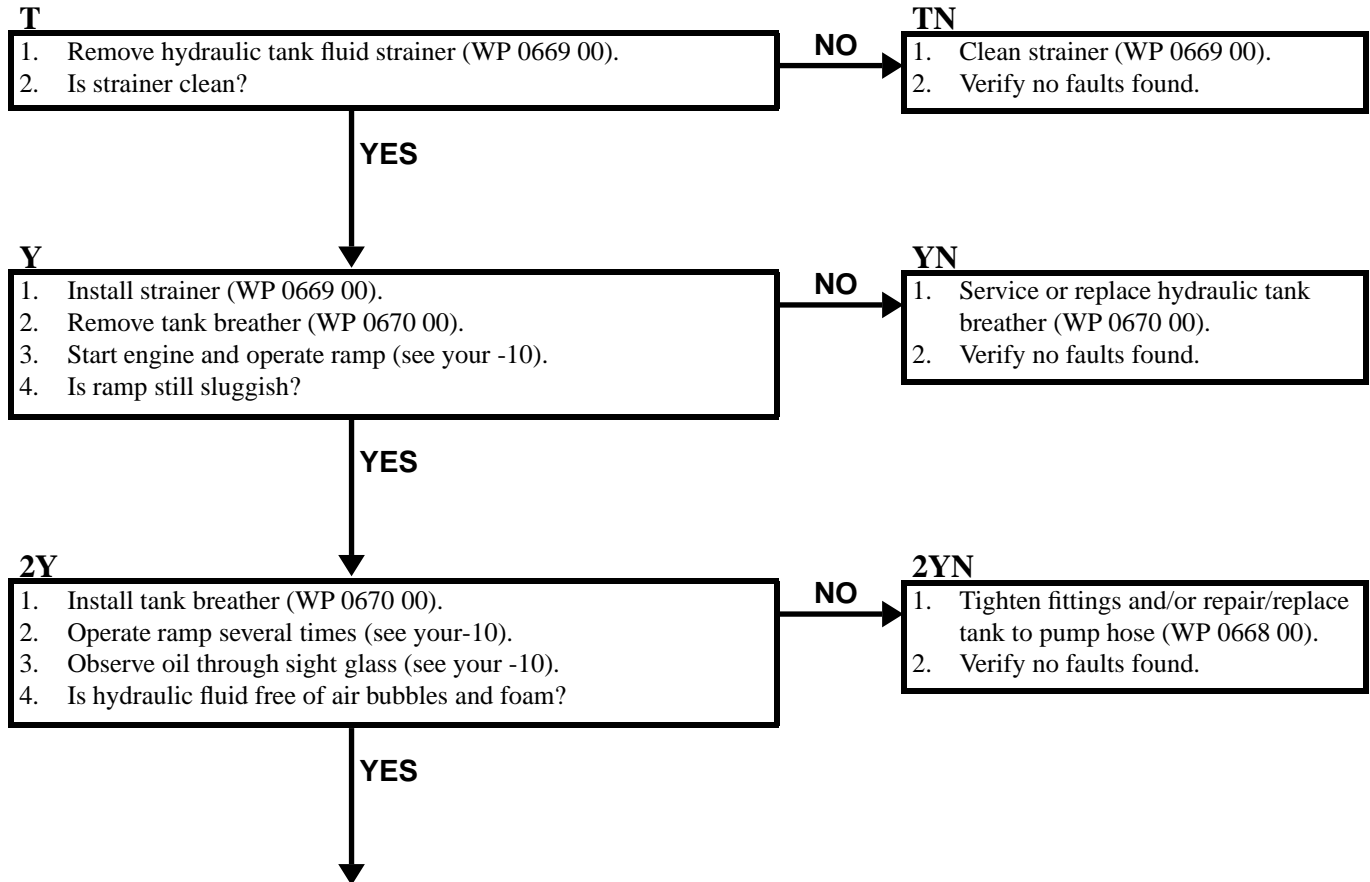
Unit Mechanic

Power plant rear access panel removed (WP 0439 00)

**WARNING**



**Lowering ramp could injure personnel. Make sure no one is in ramp zone before you lower ramp. If tactical situation permits, sound horn before dropping ramp.**



**3Y**

- |   |
|---|
| 1. Go to: Ramp Will Not Raise or Free Falls (WP 0084 00). |
|---|

**RAMP WILL NOT RAISE OR FREE FALLS**

**0084 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Personnel Required

Unit Mechanic

References

See your -10

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Ramp lowered (see your -10)

Trim vane lowered (see your -10)

Power plant access door opened (see your -10)

Driver's power plant access panel removed  
(WP 0441 00)

Power plant rear access panels removed (WP 0439 00)

Rear floor plates removed (WP 0539 00) thru  
(WP 0545 00)

**WARNING**



**Lowering ramp could injure personnel. Make sure no one is in ramp zone before you lower ramp. If tactical situation permits, sound horn before dropping ramp.**

**T**

1. Check ramp hydraulic fluid level in sight-glass (See your -10).
2. Is fluid level correct?

**NO**

**GO TO AY (PAGE 0084 00-3)**

**YES**

RAMP WILL NOT RAISE OR FREE FALLS—Continued

0084 00

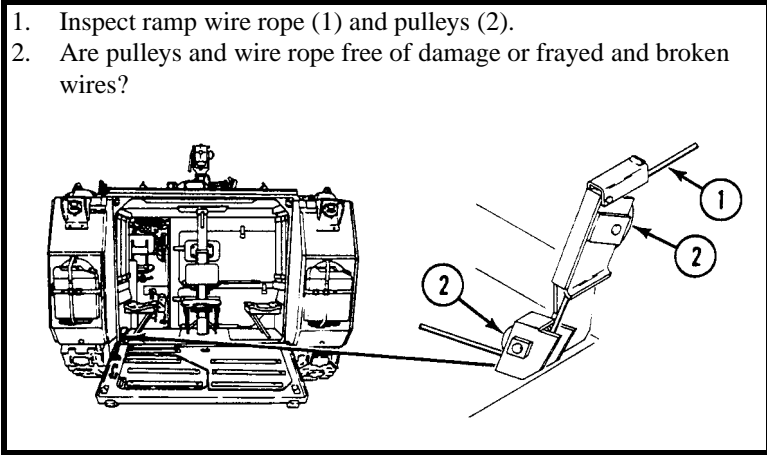
**Y**

1. Inspect ramp wire rope (1) and pulleys (2).
2. Are pulleys and wire rope free of damage or frayed and broken wires?

**NO**

**YN**

1. Replace wire rope and/or pulleys (WP 0657 00) or (WP 0658 00).



**YES**

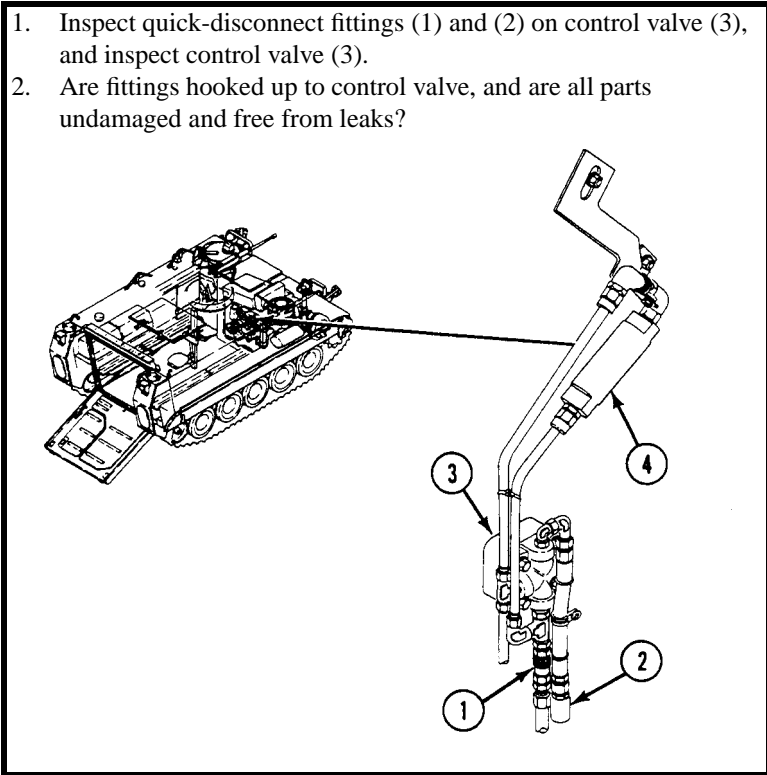
**2Y**

1. Inspect quick-disconnect fittings (1) and (2) on control valve (3), and inspect control valve (3).
2. Are fittings hooked up to control valve, and are all parts undamaged and free from leaks?

**NO**

**2YN**

1. Repair and/or replace parts as needed (WP 0659 00) thru (WP 0668 00).
2. Verify no faults found.



**YES**

**3Y**

1. Has safety relief valve been replaced?

NO

**3YN**

1. Replace safety relief valve (WP 0662 00).  
2. Verify no faults found.

YES

**4Y**

1. Has hydraulic pump been replaced?

NO

**4YN**

1. Replace hydraulic pump (WP 0655 00).  
2. Verify no faults found.

YES

**5Y**

1. Replace hydraulic cylinder (WP 0656 00).  
2. Verify no faults found.

**AY**

1. Check all ramp hydraulic lines for damaged or loose fittings.  
2. Are all lines free of leaks?

NO

**AYN**

1. Tighten any loose fittings and/or replace any damaged fluid lines (WP 0659 00) thru (WP 0668 00).  
2. Verify no faults found.

YES

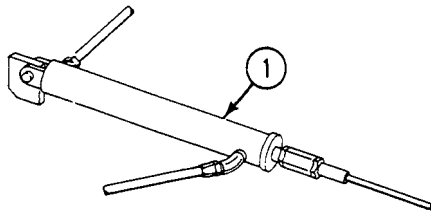
**A2Y**

1. Inspect ramp hydraulic cylinder (1) for leaks.  
2. Is hydraulic cylinder free of leaks?

NO

**A2YN**

1. Replace hydraulic cylinder (WP 0656 00).  
2. Verify no faults found.



YES

**A3Y**

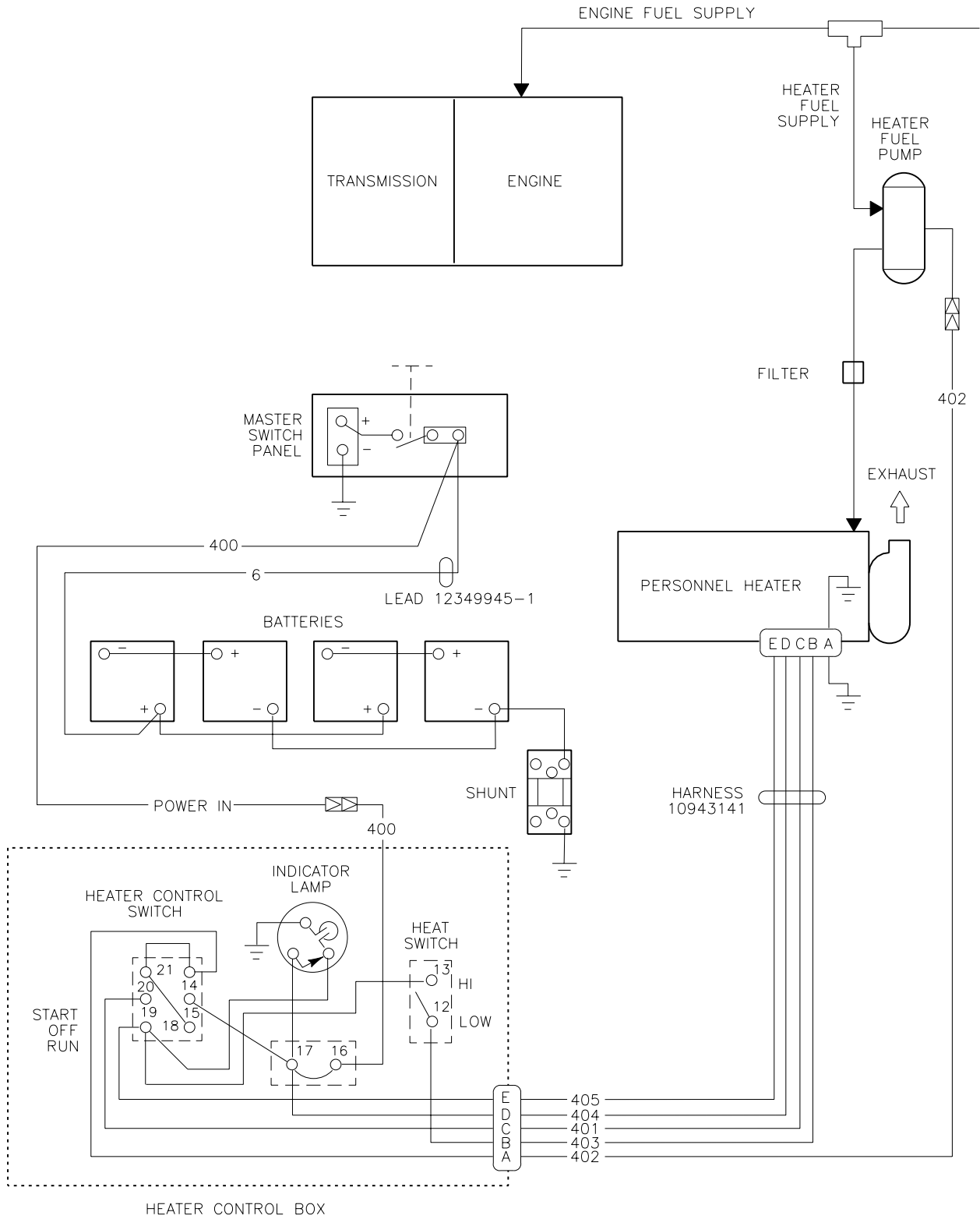
1. Refill hydraulic tank (WP 0155 00).  
2. Verify no faults found.





PERSONNEL HEATER SCHEMATIC

0085 00





**PERSONNEL HEATER MALFUNCTIONS**

**0086 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Multimeter (WP 0926 00, Item 30)
- Electrical Connector Pliers (WP 0926 00, Item 31)

Personnel Required

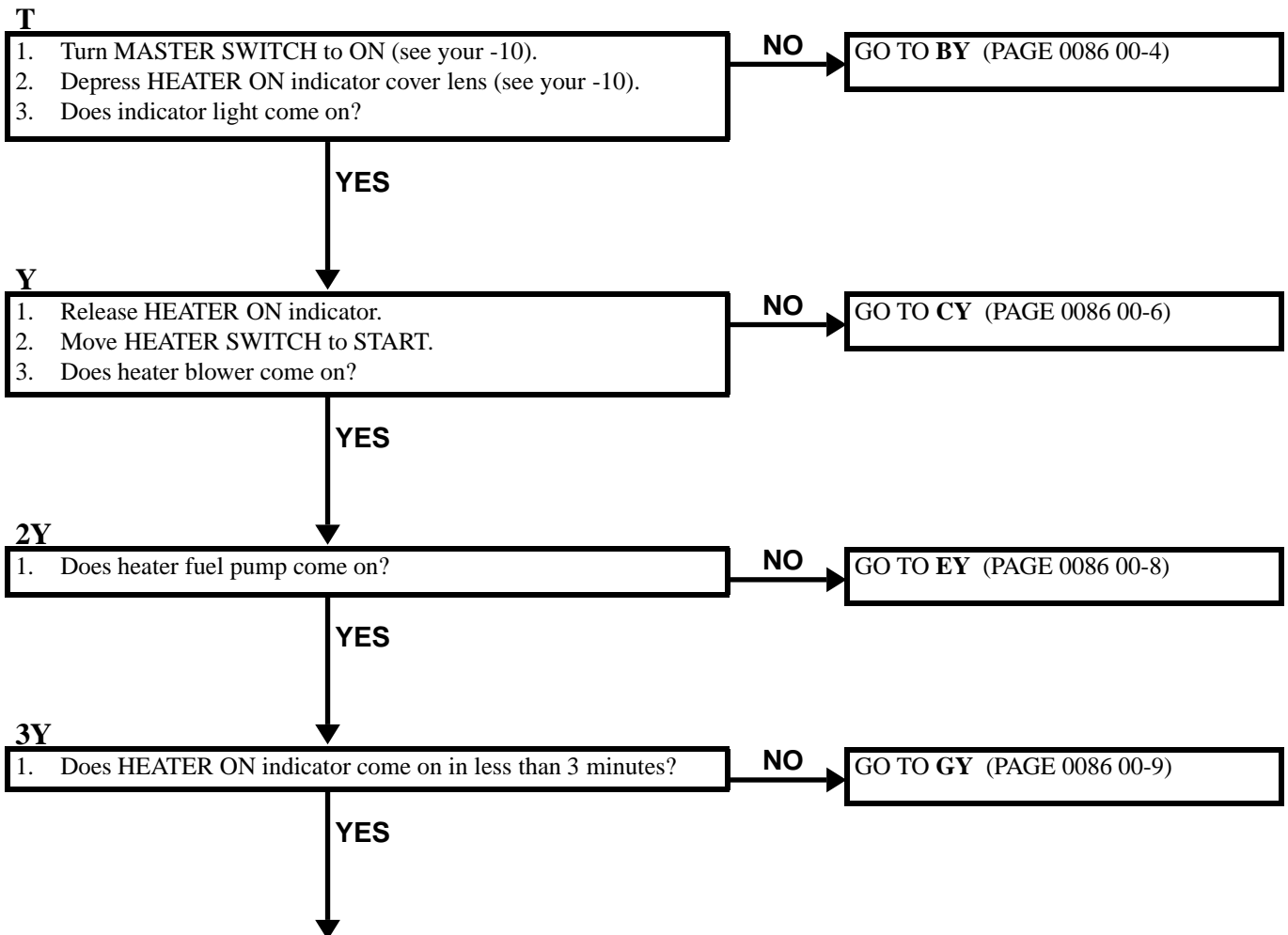
Unit Mechanic

References

- See your -10
- TM 9-2540-205-24&P

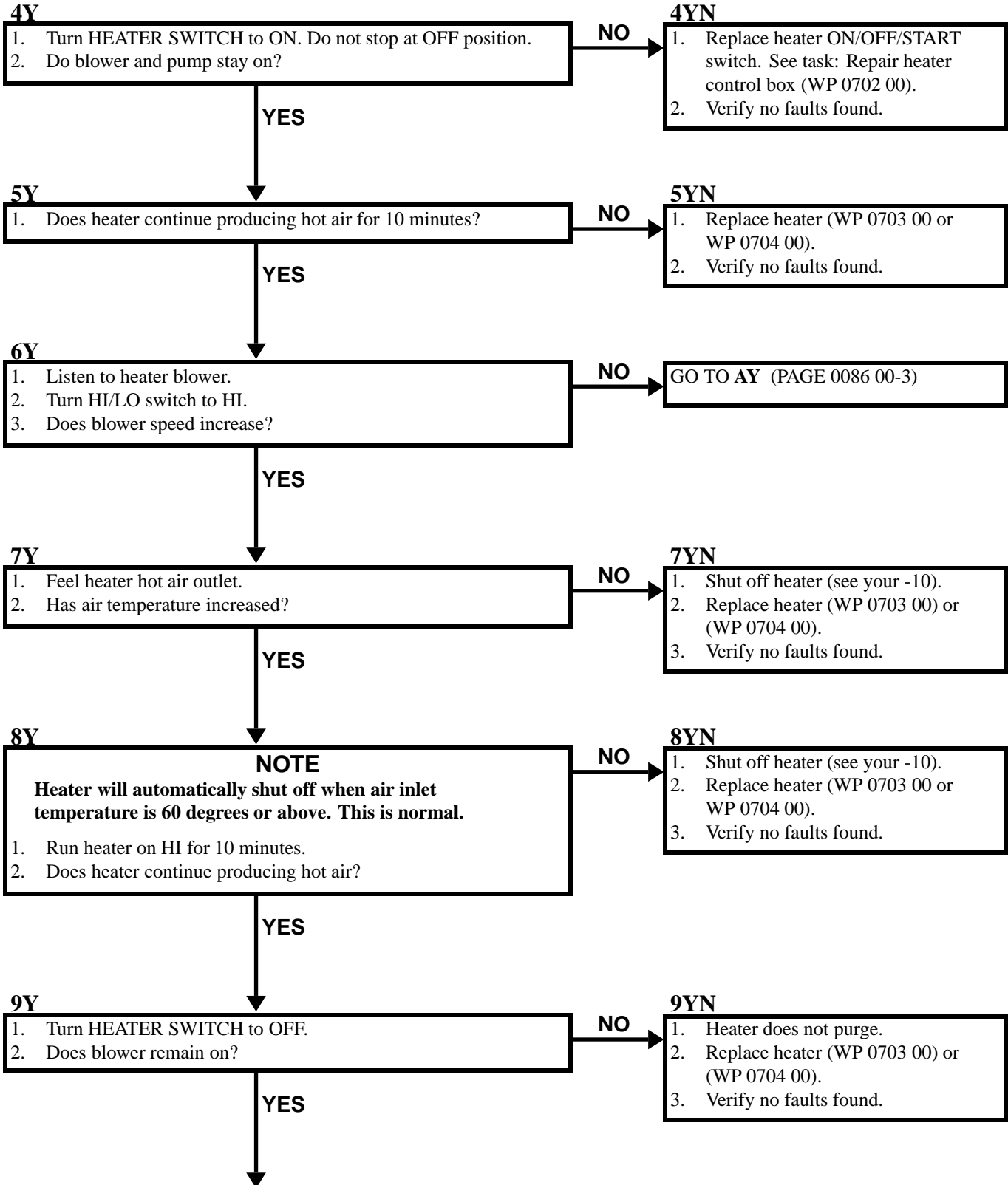
Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Ramp lowered (see your -10)
- Drivers power plant access panel removed (see your -10)
- Power plant rear access panel removed (see your -10)
- Heater on LOW (see your -10)
- Rear floor plates removed (WP 0539 00) thru (WP 0545 00)



PERSONNEL HEATER MALFUNCTIONS—Continued

0086 00



PERSONNEL HEATER MALFUNCTIONS—Continued

0086 00

**10Y**

1. Listen to heater until blower shuts off.
2. Does blower shut off in less than 5 minutes?

NO

**10YN**

1. Replace heater (WP 0703 00 or WP 0704 00).
2. Verify no faults found.

YES

**11Y**

1. Heater is operating properly.
2. No faults found.

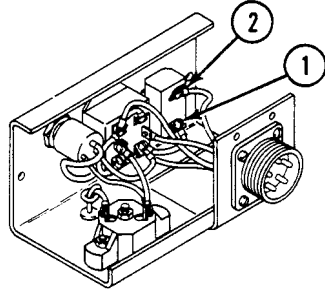
**AY**

1. Remove heater control box (WP 0701 00).
2. Check continuity on HI/LO switch between terminals 12 (1) and 13 (2).
3. Does multimeter read 0 ohms?

NO

**AYN**

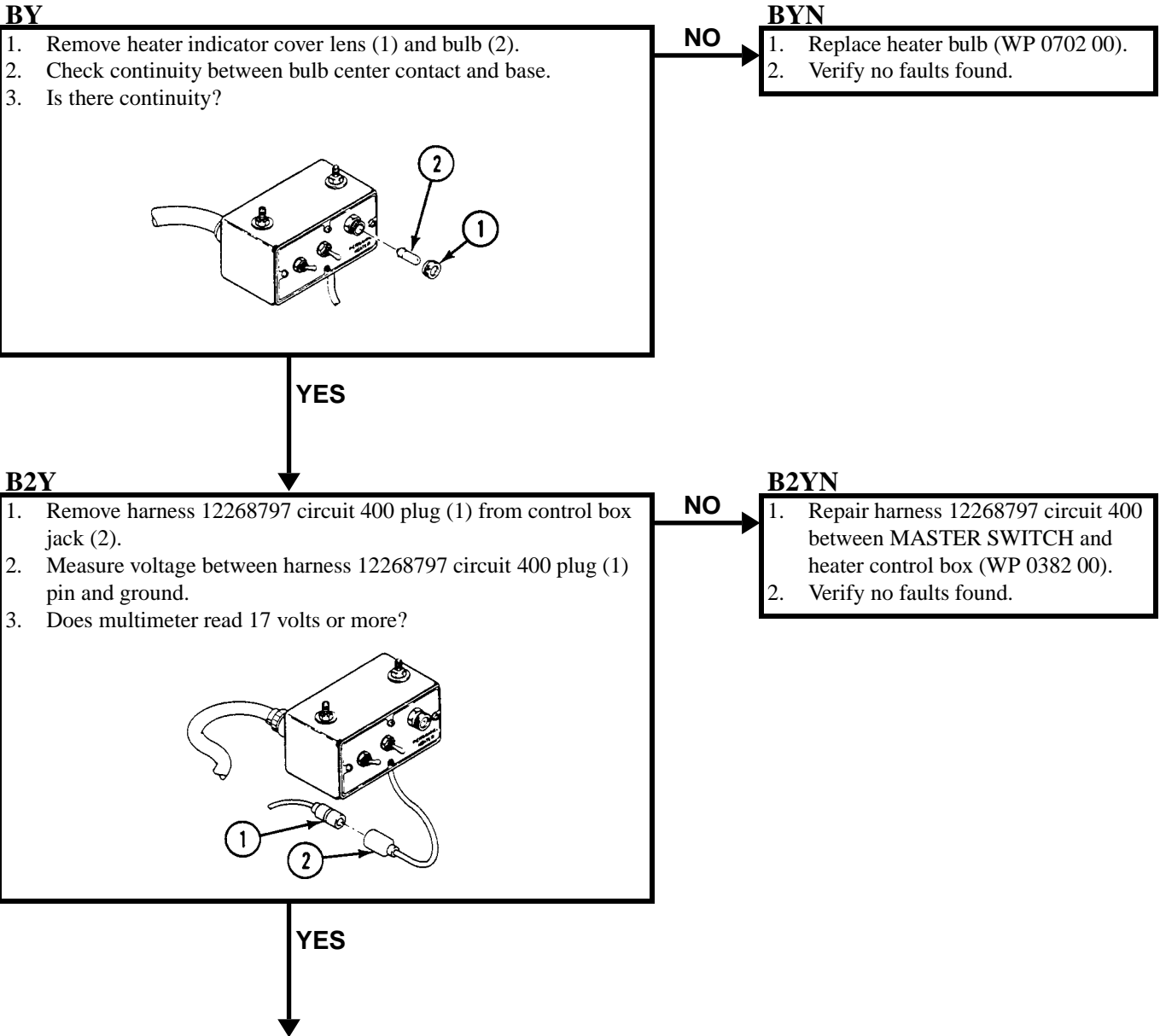
1. Replace heater HI/LO switch (WP 0702 00).
2. Verify no faults found.



YES

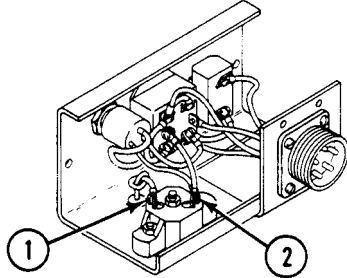
**A2Y**

1. Repair lead between heater switch and jack or heater switch and ON/OFF/START switch (WP 0382 00).
2. Verify no faults found.



**B3Y**

1. Remove heater control box (WP 0701 00).
2. Check continuity between circuit breaker terminals 16 (1) and 17 (2).
3. Does multimeter read 0 ohms?



NO

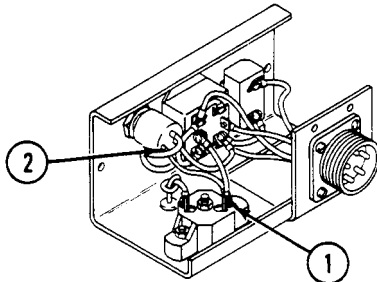
**B3YN**

1. Replace heater circuit breaker (WP 0702 00).
2. Verify no faults found.

YES

**B4Y**

1. Check continuity between lead ends, from circuit breaker terminal 17 (1) to indicator light terminal 3 (2).
2. Does multimeter read 0 ohms?



NO

**B4YN**

1. Repair/replace faulty lead (WP 0382 00 or WP 0702 00).
2. Verify no faults found.

YES

**B5Y**

1. Replace indicator light assembly (WP 0702 00).
2. Verify no faults found.

PERSONNEL HEATER MALFUNCTIONS—Continued

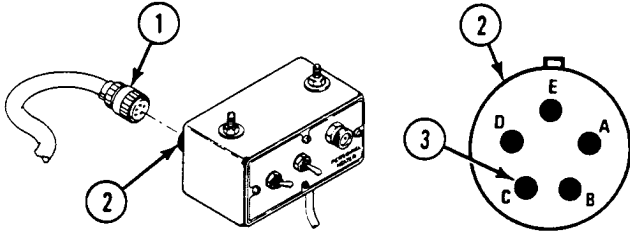
0086 00

**CY**

1. Remove harness 10942956 plug (1) from heater control box jack (2).
2. Measure voltage between heater control box jack (2), pin C (3), and ground, with HEATER switch on START.
3. Does multimeter read 17 volts or more?

NO

GO TO **DY** (PAGE 0086 00-7)



YES

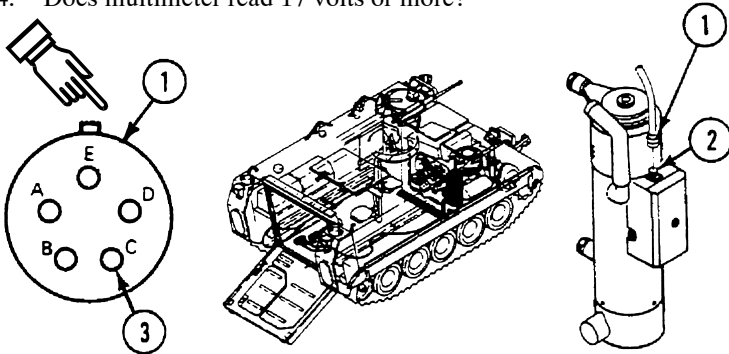
**C2Y**

1. Install harness 10942956 plug on heater control box jack.
2. Remove harness 10942956 plug (1) from heater jack (2).
3. Measure voltage between harness 10942956 plug (1), pin C (3), and ground, with HEATER switch on START.
4. Does multimeter read 17 volts or more?

NO

**C2YN**

1. Replace heater wiring harness.
2. Verify no faults found.



YES

**C3Y**

1. Replace heater (WP 0703 00 or WP 0704 00).
2. Verify no faults found.

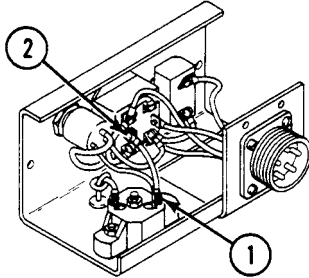


PERSONNEL HEATER MALFUNCTIONS—Continued

0086 00

**DY**

1. Remove heater control box (WP 0701 00).
2. Check continuity between lead ends, from circuit breaker terminal 17 (1) and ON/OFF/START switch terminal 15 (2).
3. Does multimeter read 0 ohms?



NO

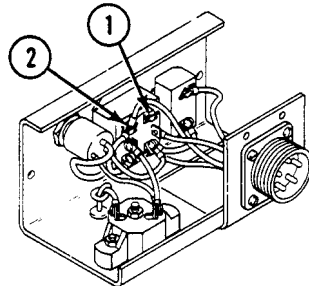
**DYN**

1. Repair faulty lead (WP 0382 00).
2. Verify no faults found.

YES

**D2Y**

1. Check continuity between lead ends from ON/OFF/START switch terminals 21 (1) and 14 (2).
2. Does multimeter read 0 ohms?



NO

**D2YN**

1. Repair heater switch jumper lead between terminal 21 and 14 (WP 0382 00).
2. Verify no faults found.

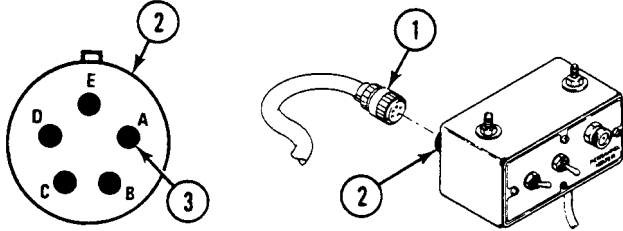
YES

**D3Y**

1. Replace heater ON/OFF/START switch (WP 0702 00).
2. Verify no faults found.

**EY**

1. Remove harness 10942956 plug (1) from heater control jack (2).
2. Measure voltage between heater control jack (2), pin A (3), and ground, with HEATER switch on START.
3. Does multimeter read 17 volts or more?

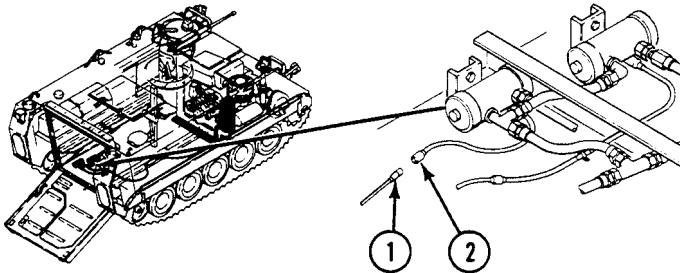


**NO** → GO TO FY (PAGE 0086 00-9)

**YES**

**E2Y**

1. Install harness 10942956 on heater control box jack.
2. Remove harness 10942956 plug (1) from heater fuel pump jack (2).
3. Measure voltage between harness 10942956, plug (1) pin, and ground, with HEATER switch on START.
4. Does multimeter read 17 volts or more?



**NO** → **E2YN**  
 1. Replace harness 10942956 circuit 402.  
 2. Verify no faults found.

**YES**

**E3Y**

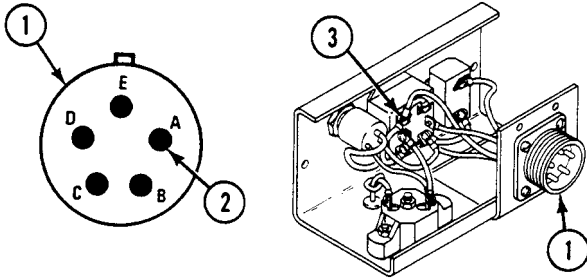
1. Replace heater fuel pump (WP 0695 00, WP 0696 00, or WP 0697 00).
2. Verify no faults found.

PERSONNEL HEATER MALFUNCTIONS—Continued

0086 00

**FY**

1. Remove heater control box (WP 0702 00).
2. Check continuity between lead ends of heater output jack (1), pin A (2), and ON/OFF/START switch terminal 14 (3).
3. Does multimeter read 0 ohms?



NO

**FYN**

1. Replace faulty lead (WP 0702 00).
2. Verify no faults found.

YES

**F2Y**

1. Replace heater ON/OFF/START switch (WP 0702 00).
2. Verify no faults found.

**GY**

1. Is heater exhaust cold?

NO

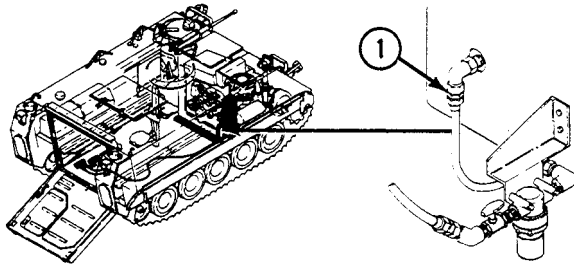
**GYN**

1. Replace heater (WP 0703 00 or WP 0704 00).
2. Verify no faults found.

YES

**G2Y**

1. Loosen fuel inlet line (1) to heater with heater switch on START.
2. Does fuel fail to flow out of loosened fitting?



NO

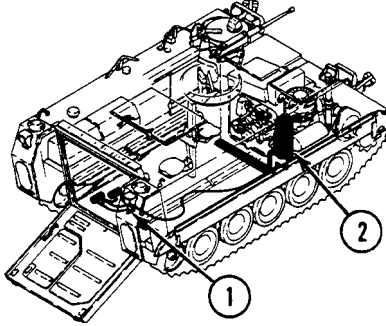
**G2YN**

1. Replace heater (WP 0703 00 or WP 0704 00).
2. Verify no faults found.

YES

**G3Y**

1. Inspect fuel lines between tee valve (1) and heater (2).
2. Are all lines free from kinks, restrictions, or other damage?



NO

**G3YN**

1. Replace heater fuel lines as required (WP 0685 00).
2. Verify no faults found.

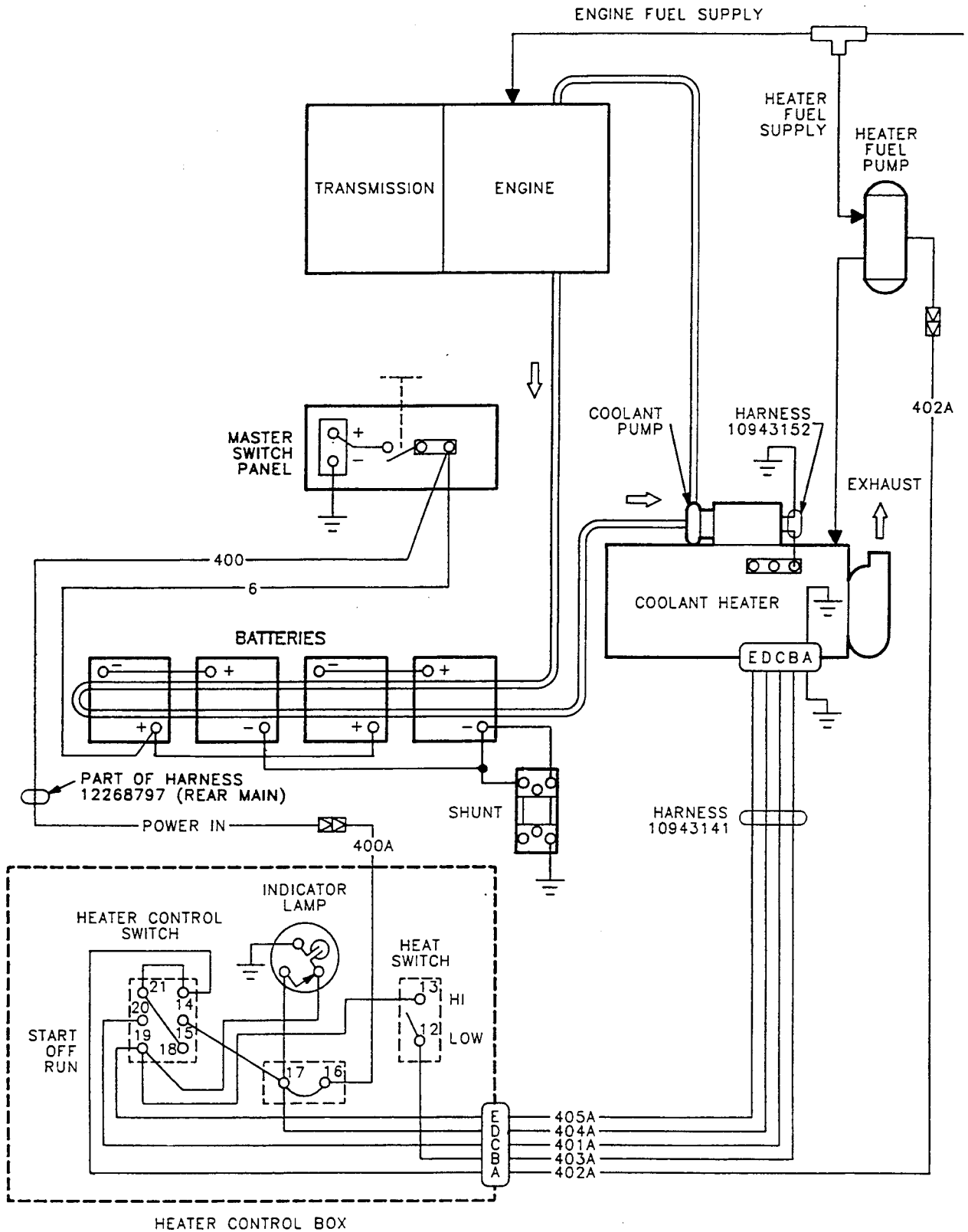
YES

**G4Y**

1. Replace heater fuel pump (WP 0695 00, WP 0696 00, or WP 0697 00).
2. Verify no faults found.

COOLANT HEATER SCHEMATIC

0087 00





**COOLANT HEATER MALFUNCTIONS**

**0089 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0926 00, Item 65)
- Electrical Connector Pliers (WP 0926 00, Item 31)
- Multimeter (WP 0926 00, Item 30)

Personnel Required

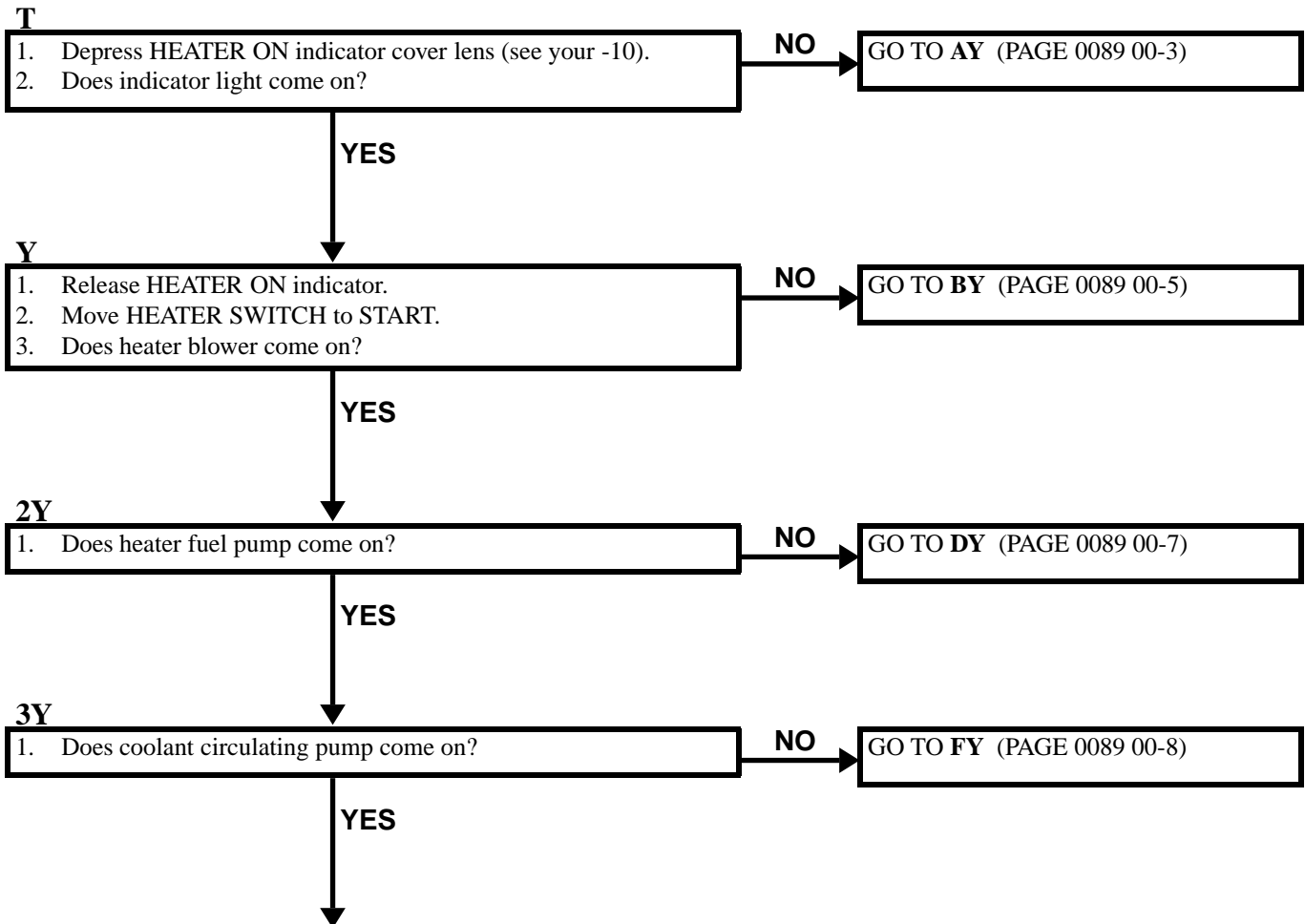
Unit Mechanic 63T10

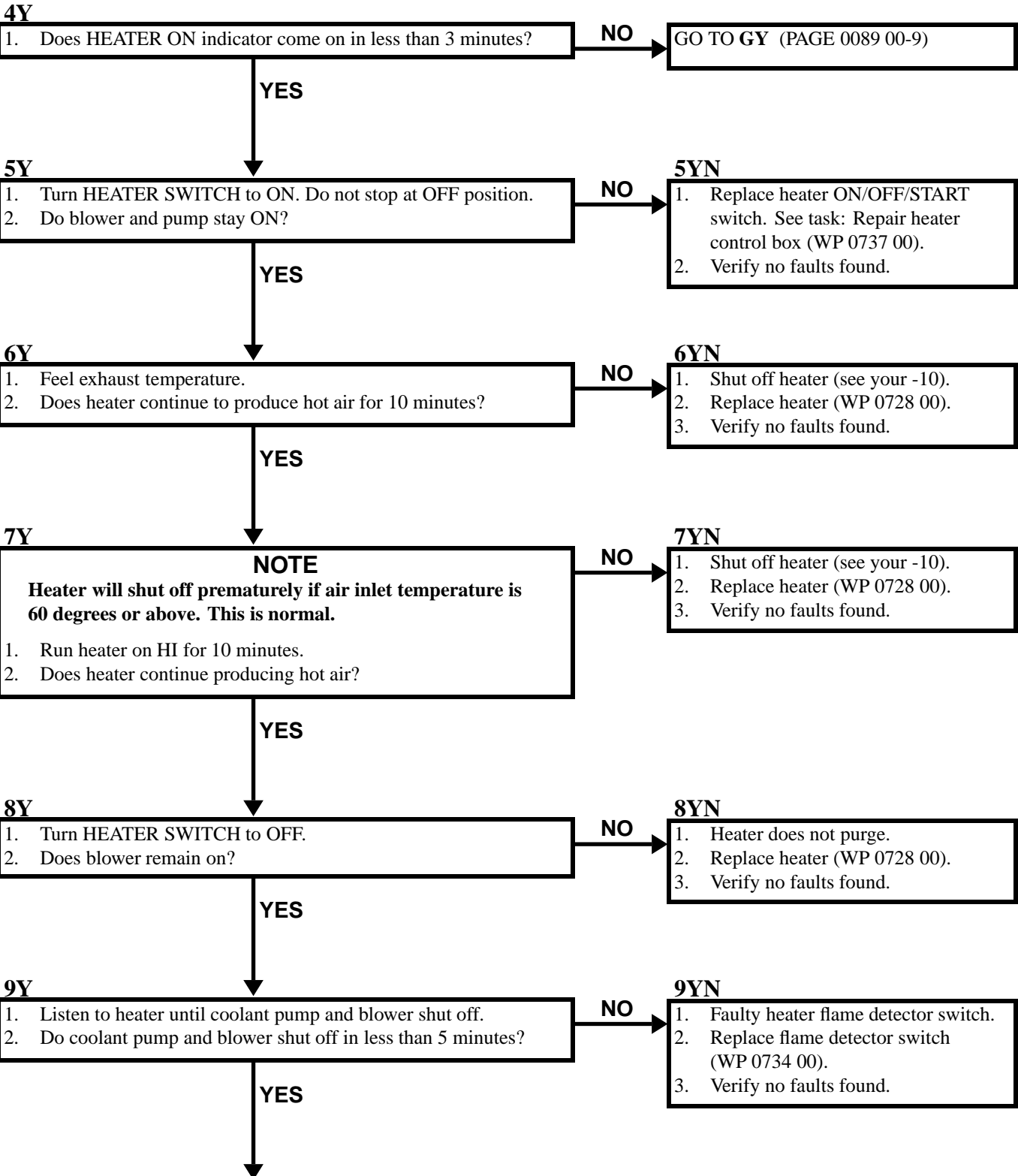
References

- See your -10
- TM 9-2450-205-24&P

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Driver's power plant access panel removed (see your -10)
- Power plant rear access panel removed (see your -10)
- Ramp lowered (see your -10)
- Heater on HI (see your -10)
- Rear floor plates removed (WP 0539 00) thru (WP 0545 00)
- Engine cold







COOLANT HEATER MALFUNCTIONS—Continued

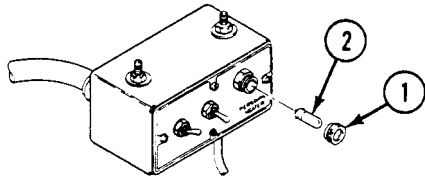
0089 00

**10Y**

1. Replace heater (WP 0728 00).
2. Verify no faults found.

**AY**

1. Remove heater indicator cover lens (1) and bulb (2).
2. Measure resistance between bulb center contact and base.
3. Does multimeter read less than 100 ohms?



YES



**AYN**

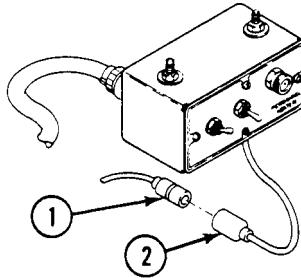
1. Replace heater bulb (WP 0702 00).
2. Verify no faults found.

NO



**A2Y**

1. Remove harness 12268797 circuit 400 plug (1) from control box jack (2).
2. Measure voltage between harness 12268797 circuit 400 plug (1) pin and ground.
3. Does multimeter read 17 volts or more?



YES



**A2YN**

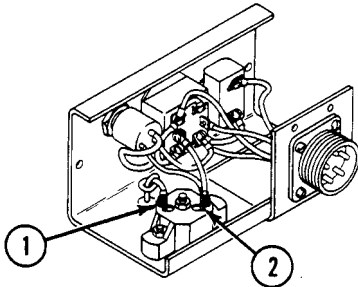
1. Repair harness 12268797 circuit 400 between MASTER SWITCH and heater control box (WP 0382 00).
2. Verify no faults found.

NO



**A3Y**

1. Remove heater control box (WP 0736 00).
2. Measure resistance between lead ends from circuit breaker terminals 16 (1) and 17 (2).
3. Does multimeter read 0 ohms?



NO

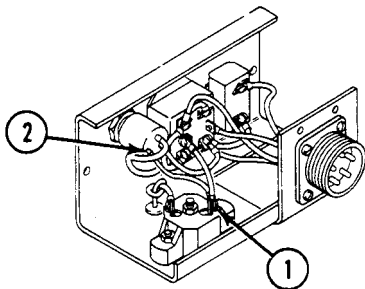
**A3YN**

1. Replace heater circuit breaker (WP 0737 00).
2. Verify no faults found.

YES

**A4Y**

1. Measure resistance between lead ends from circuit breaker terminal 17 (1) to indicator light terminal 3 (2).
2. Does multimeter read 0 ohms?



NO

**A4YN**

1. Repair/replace faulty lead (WP 0382 00) or (WP 0737 00).
2. Verify no faults found.

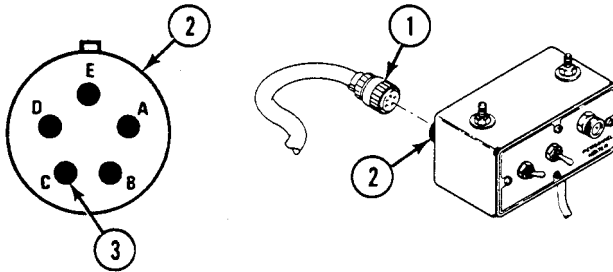
YES

**A5Y**

1. Replace indicator light assembly (WP 0737 00).
2. Verify no faults found.

**BY**

1. Remove harness 10943141 plug (1) from heater control box jack (2).
2. Measure voltage between heater control box jack (2) pin C (3) and ground with HEATER switch on START.
3. Does multimeter read at 17 volts or more?

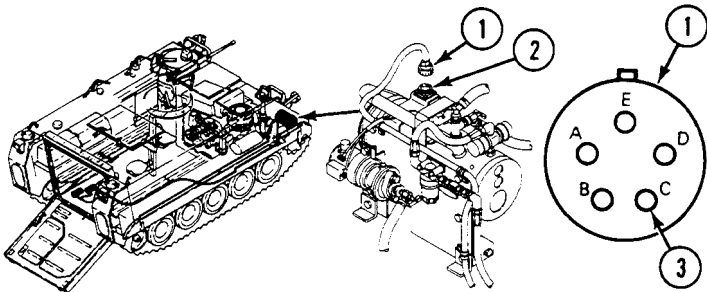


**NO** → GO TO CY (PAGE 0089 00-6)

**YES**

**B2Y**

1. Install harness 10943141 plug on heater control box jack.
2. Remove harness 10943141 plug (1) from heater jack (2).
3. Measure voltage between harness 10943141 plug (1) pin C (3) and ground with HEATER switch on START.
4. Does multimeter read at least 17 volts?



**NO** → **B2YN**  
 1. Replace faulty harness 10943141 (WP 0382 00).  
 2. Verify no faults found.

**YES**

**B3Y**

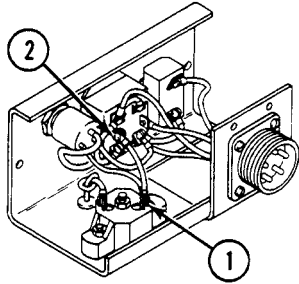
1. Replace heater (WP 0728 00).
2. Notify supervisor.

COOLANT HEATER MALFUNCTIONS—Continued

0089 00

**CY**

1. Remove heater control box (WP 0736 00).
2. Measure resistance between lead ends from circuit breaker terminal 17 (1) and ON/OFF/START switch terminal 15 (2) lead ends.
3. Does multimeter read 0 ohms?



NO

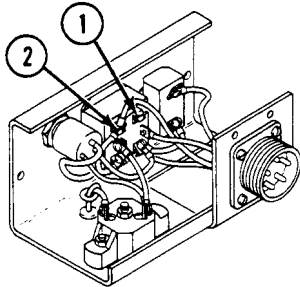
**CYN**

1. Repair faulty lead (WP 0382 00).
2. Verify no faults found.

YES

**C2Y**

1. Measure resistance between lead ends from ON/OFF/START switch terminals 21 (1) and 14 (2).
2. Does multimeter read 0 ohms?



NO

**C2YN**

1. Repair heater switch jumper lead between terminal 21 and 14 (WP 0382 00).
2. Verify no faults found.

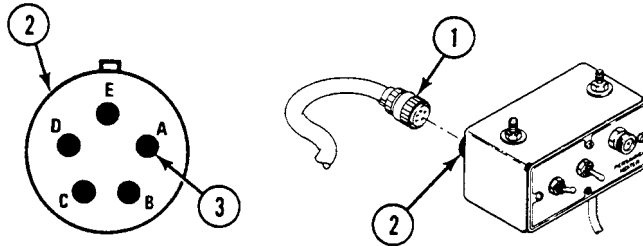
YES

**C3Y**

1. Replace heater ON/OFF/START switch (WP 0737 00).
2. Verify no faults found.

**DY**

1. Remove harness 10943141 plug (1) from heater control jack (2).
2. Measure voltage between heater control jack (2) pin A (3) and ground with HEATER switch on START.
3. Does multimeter read 17 volts or more?



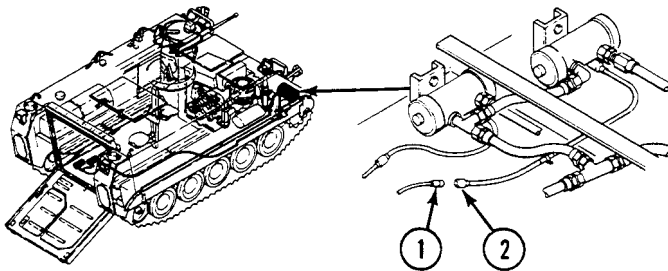
NO

GO TO EY (PAGE 0089 00-8)

YES

**D2Y**

1. Install harness 10943141 on heater control box jack.
2. Remove harness 10943141 plug (1) from heater fuel pump jack (2).
3. Measure voltage between harness 10943141 plug (1) pin and ground with HEATER switch on START.
4. Does multimeter read 17 volts or more?



NO

**D2YN**

1. Replace harness 10943141 circuit 402 (WP 0382 00).
2. Verify no faults found.

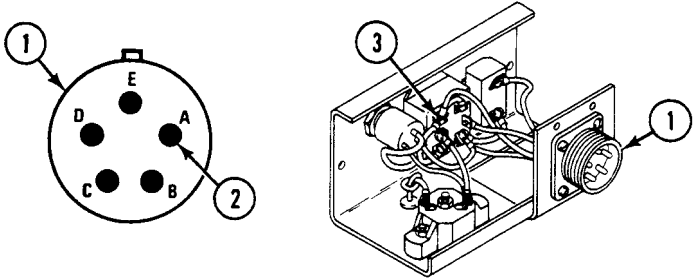
YES

**D3Y**

1. Replace coolant heater fuel pump (WP 0731 00).
2. Verify no faults found.

**EY**

1. Remove heater control box (WP 0736 00).
2. Measure resistance between lead ends of heater output jack (1) pin A (2) and ON/OFF/START switch terminal 14 (3).
3. Does multimeter read 0 ohms?



NO

**EYN**

1. Replace faulty lead (WP 0737 00).
2. Verify no faults found.

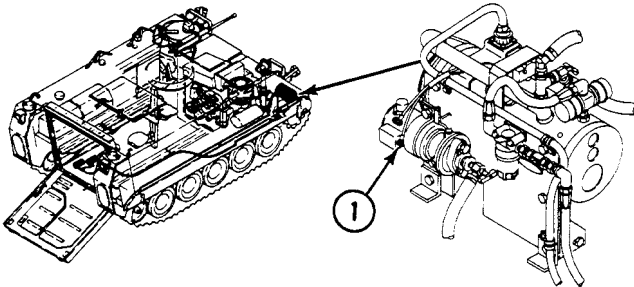
YES

**E2Y**

1. Replace heater ON/OFF/START switch (WP 0737 00).
2. Verify no faults found.

**FY**

1. Measure voltage between harness 10943152 circuit 402B terminal (1) on coolant pump and ground (switch on start).
2. Does multimeter read less than 17 volts?



NO

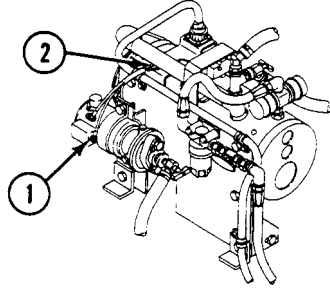
**FYN**

1. Replace coolant heater pump (WP 0731 00).
2. Verify no faults found.

YES

**F2Y**

1. Measure voltage between harness 10943152 circuit 402B (1) on terminal strip (2) and ground (switch on start).
2. Does multimeter read less than 17 volts?



NO

**F2YN**

1. Replace harness 10943152 (WP 0382 00).
2. Verify no faults found.

YES

**F3Y**

1. Faulty heater wiring. Beyond unit maintenance repair.
2. Notify supervisor.

**GY**

1. Is heater exhaust cold?

NO

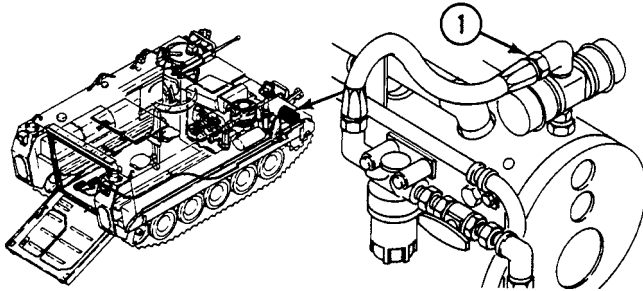
**GYN**

1. Replace flame detector switch (WP 0734 00).
2. Verify no faults found.

YES

**G2Y**

1. Loosen fuel inlet line (1) to heater with heater switch on start.
2. Does fuel fail to flow out of loosened fitting?



NO

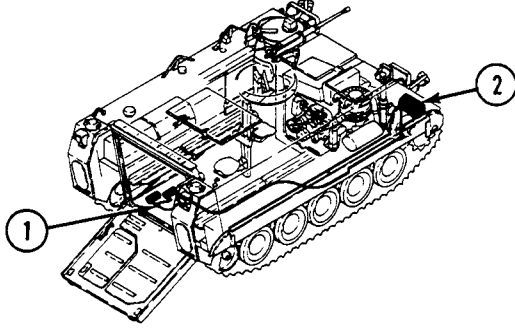
**G2YN**

1. Replace heater (WP 0728 00).
2. Verify no faults found.

YES

**G3Y**

1. Inspect fuel lines between tee valve (1) and heater (2).
2. Are all lines free from kinks, restrictions, or other damage?



**NO**

**G3YN**

1. Replace heater fuel lines as required (WP 0708 00) thru (WP 0737 00).
2. Verify no faults found.

**YES**

**G4Y**

1. Replace coolant heater fuel pump (WP 0723 00).
2. Verify no faults found.



**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE  
(M1068A3 ONLY)**

**0090 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Materials/Parts

Lockwasher (10)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Battery box cover removed (see your -10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

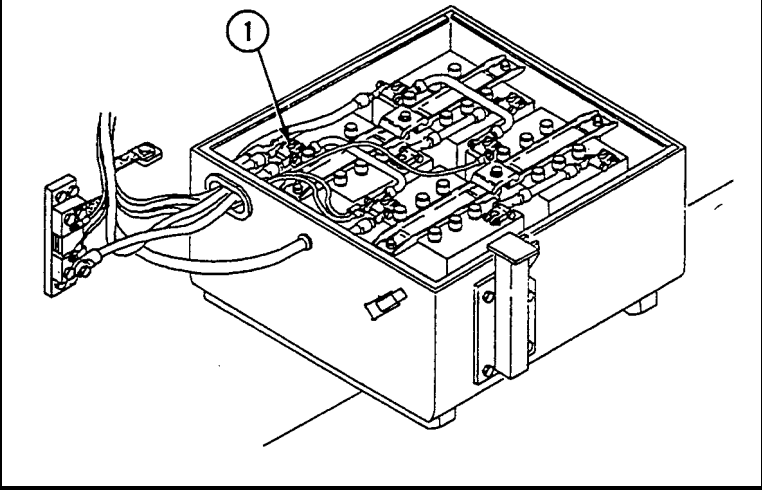
**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued

0090 00

**T**

1. Measure voltage between positive battery terminal (1) and ground.
2. Does multimeter read 22 volts DC or more?



**NO**

**TN**

1. Service carrier batteries (see your -10).
2. Verify no faults found.

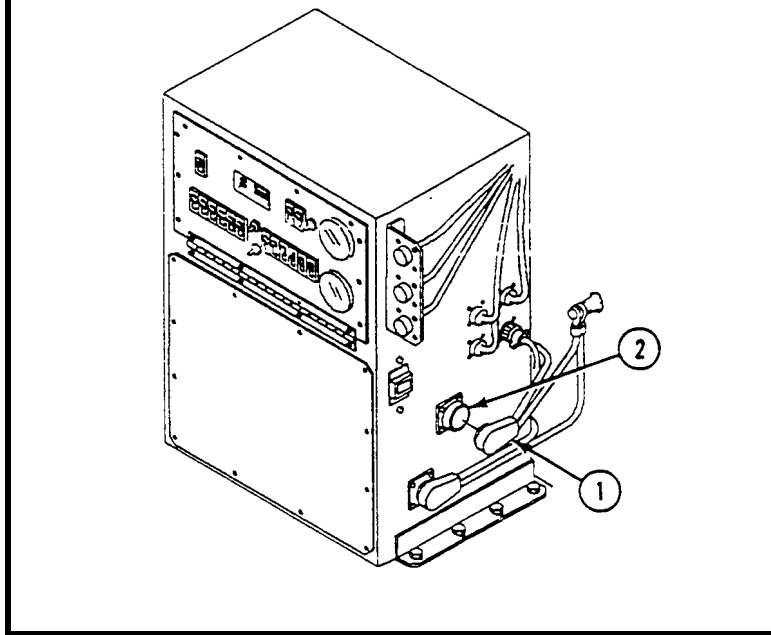
**YES**

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**Y**

1. Remove cable W4 plug P1 (1) from Power Control Enclosure jack J25 (2).
2. Measure voltage between center of P1 (1) and ground.
3. Does multimeter read 22 volts DC or more?



**YES**



**NO**

**YN**

1. Replace cable W4 (WP 0838 00).
2. Verify no faults found.

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

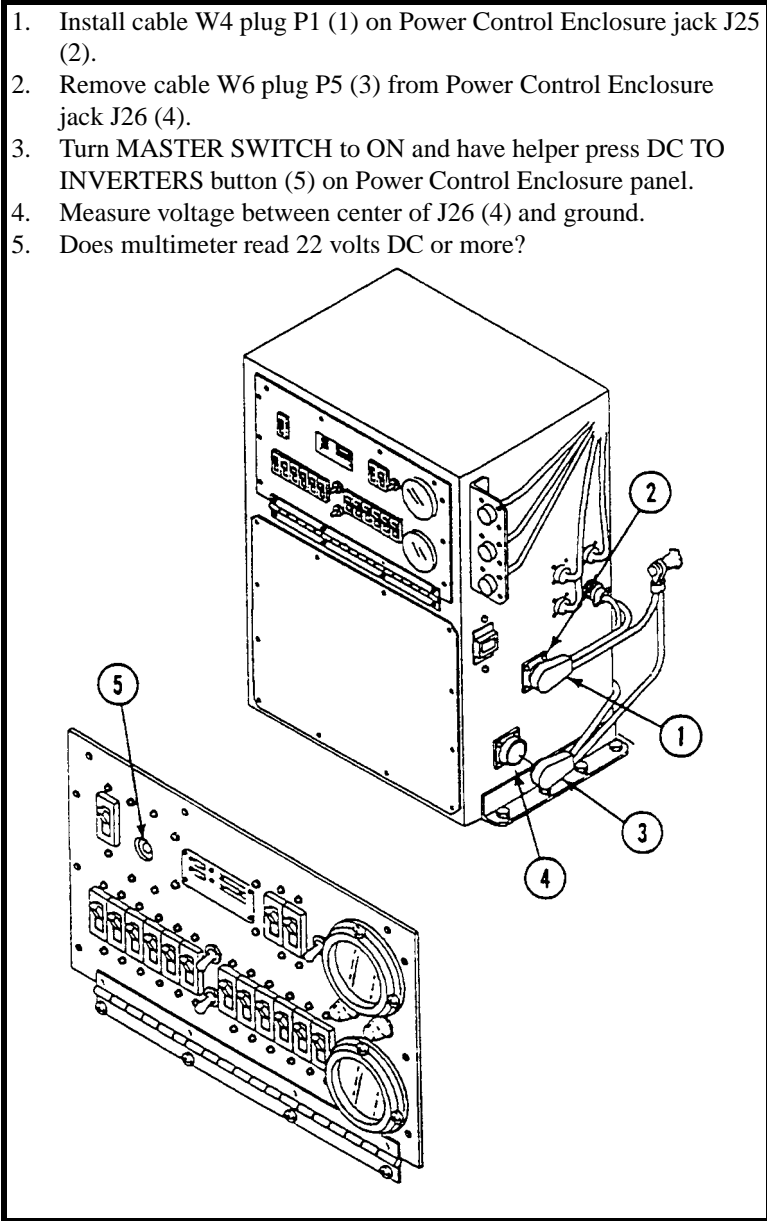
0090 00

**2Y**

1. Install cable W4 plug P1 (1) on Power Control Enclosure jack J25 (2).
2. Remove cable W6 plug P5 (3) from Power Control Enclosure jack J26 (4).
3. Turn MASTER SWITCH to ON and have helper press DC TO INVERTERS button (5) on Power Control Enclosure panel.
4. Measure voltage between center of J26 (4) and ground.
5. Does multimeter read 22 volts DC or more?

**NO**

**GO TO AY (PAGE 0090 00-6)**



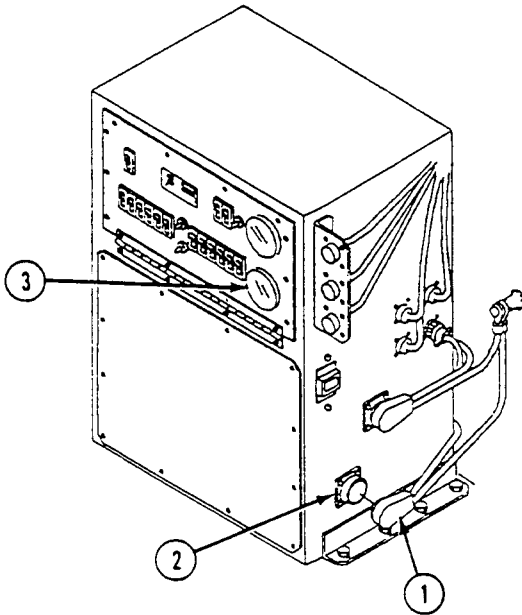
**YES**

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**3Y**

1. Set MASTER SWITCH to OFF.
2. Install cable W6 plug P5 (1) on Power Control Enclosure jack J26 (2).
3. Set MASTER SWITCH to ON.
4. Does voltage on DC VOLTS meter (3) on Power Control Enclosure panel read the same as voltage at carrier batteries?



**NO**

**GO TO BY (PAGE 0090 00-11)**

**YES**

**4Y**

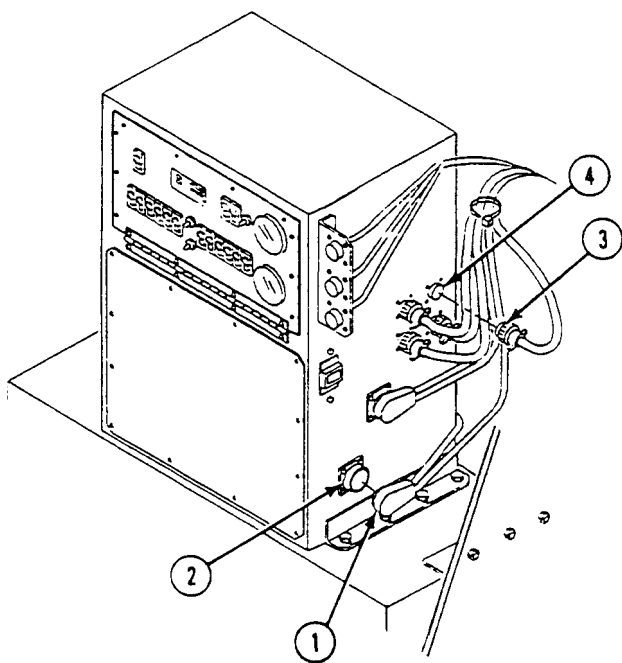
1. Verify no faults found.

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**AY**

1. Set MASTER SWITCH to OFF.
2. Install cable W6 plug P5 (1) on Power Control Enclosure jack J26 (2).
3. Remove cable W38 plug P7 (3) from Power Control Enclosure jack J28 (4).
4. Set MASTER SWITCH to ON.
5. Measure voltage between center of P7 (3) and ground.
6. Does multimeter read 22 volts DC or more?

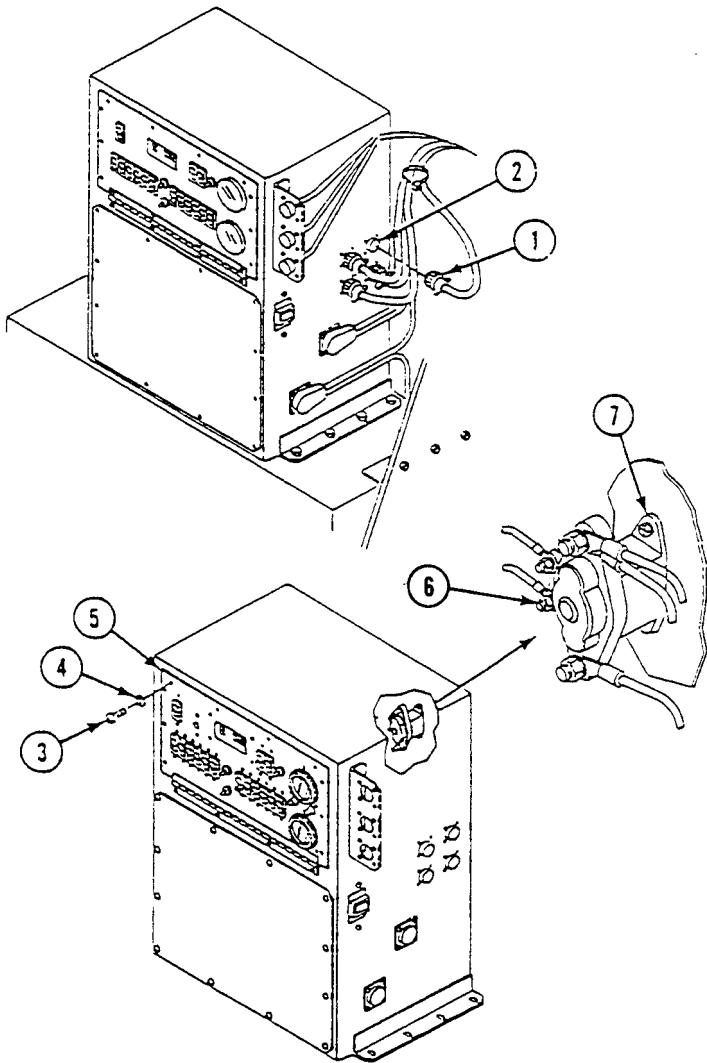
**NO****GO TO CY (PAGE 0090 00-12)****YES**

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**A2Y**

1. Set MASTER SWITCH to OFF.
2. Install cable W38 plug P7 (1) on Power Control Enclosure jack J28 (2).
3. Remove ten screws (3) and lockwashers (4), and lower faceplate (5). Discard lockwashers.
4. Set MASTER SWITCH to ON.
5. Measure voltage between terminal X1 (6) of relay K6 (7) and ground.
6. Does multimeter read 22 volts DC or more?



**NO**

**A2YN**

1. Replace circuit 44A lead (WP 0829 00).
2. Verify no faults found.

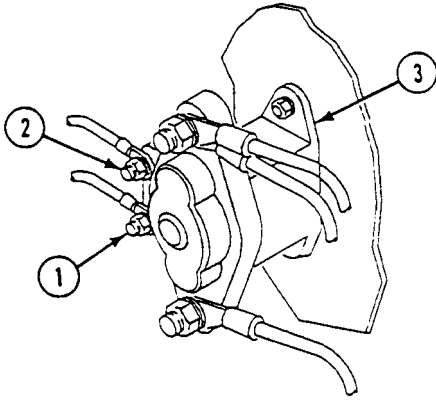
**YES**

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**A3Y**

1. Measure voltage between terminals X1 (1) and X2 (2) of relay K6 (3).
2. Does multimeter read 22 volts DC or more?



**NO**

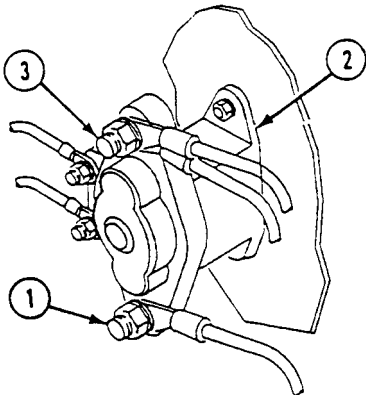
**A3YN**

1. Faulty relay K6 in Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**A4Y**

1. Measure voltage between terminal A1 (1) of relay K6 (2) and ground.
2. Repeat measurement between terminal A2 (3) and ground.
3. Does multimeter read 22 volts DC or more for both measurements?



**NO**

**A4YN**

1. Faulty relay K6 in Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

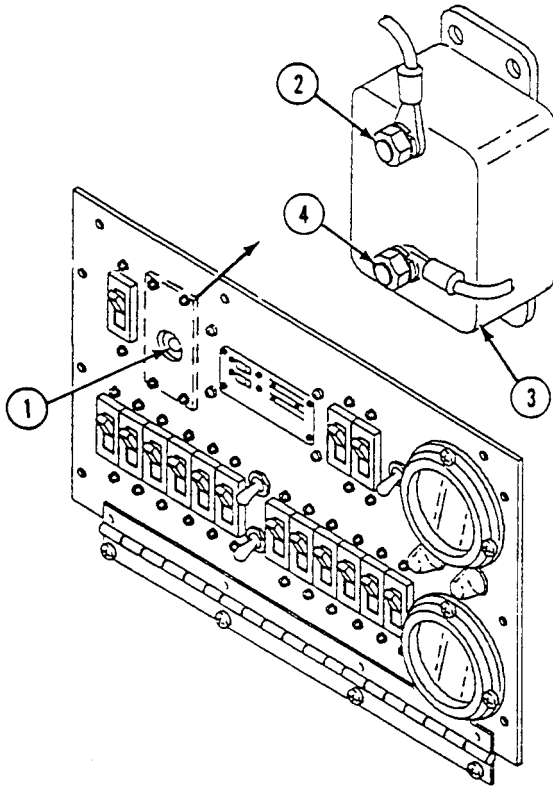


**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**A5Y**

1. Have helper depress DC TO INVERTERS button (1) on Power Control Enclosure panel.
2. Measure voltage between terminal 1 (2) of circuit breaker CB2 (3) and ground.
3. Repeat measurement between terminal 2 (4) and ground.
4. Does multimeter read 22 volts DC or more for both measurements?



**YES**

**NO**

**A5YN**

1. Replace circuit breaker CB2 (WP 0828 00).
2. Verify no faults found.

---

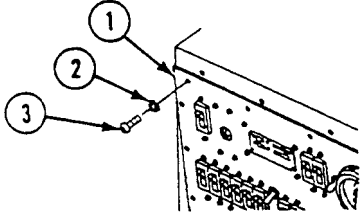
**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

---

0090 00

**A6Y**

1. Raise faceplate (1) and secure to Power Control Enclosure with ten new lockwashers (2) and screws(3).



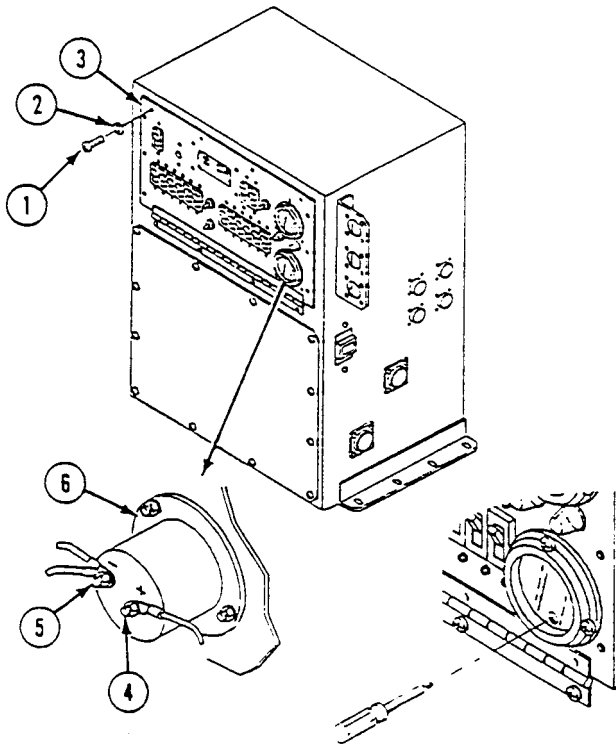
2. Verify no faults found.

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**BY**

1. Turn all vehicle power OFF (see your -10 and TM 11-7010-256-12&P).
2. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
3. Set MASTER SWITCH to ON
4. Measure voltage between positive (4) and negative (5) terminals on meter M2 (6).
5. Does multimeter read 22 volts DC or more, and the same as meter M2?



**YES**

**BYN**

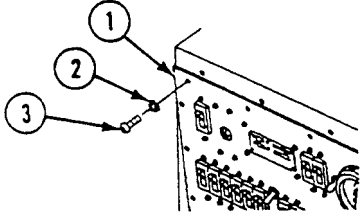
1. Adjust meter M2 needle to match multimeter reading.
2. If meter cannot be adjusted, replace DC meter M2 (WP 0827 00).
3. Verify no faults found.

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**B2Y**

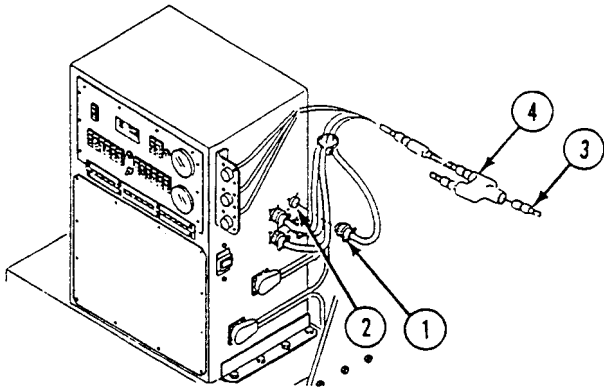
1. Raise faceplate (1) and secure to Power Control Enclosure with ten new lockwashers (2) and screws(3).



2. Verify no faults found.

**CY**

1. Set MASTER SWITCH to OFF.
2. Install cable W38 plug P7 (1) on Power Control Enclosure jack J28 (2).
3. Remove circuit 415 plug P1 (3) from adapter T2 plug P1 (4).
4. Set MASTER SWITCH to ON.
5. Measure voltage between circuit 415 plug P1 (3) and ground.
6. Does multimeter read 22 volts DC or more?



YES

NO

**CYN**

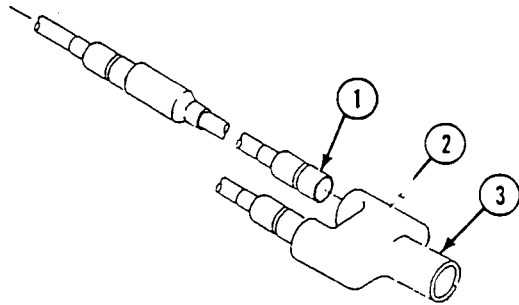
1. Go to: MASTER SWITCH ON indicator does not light (WP 0048 00).

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**C2Y**

1. Set MASTER SWITCH to OFF.
2. Remove cable W29 plug P1 (1) from adapter T2 plug P2 (2).
3. Measure resistance between adapter T2 plugs P2 (2) and P1 (3).
4. Does multimeter read 0 ohms?



NO

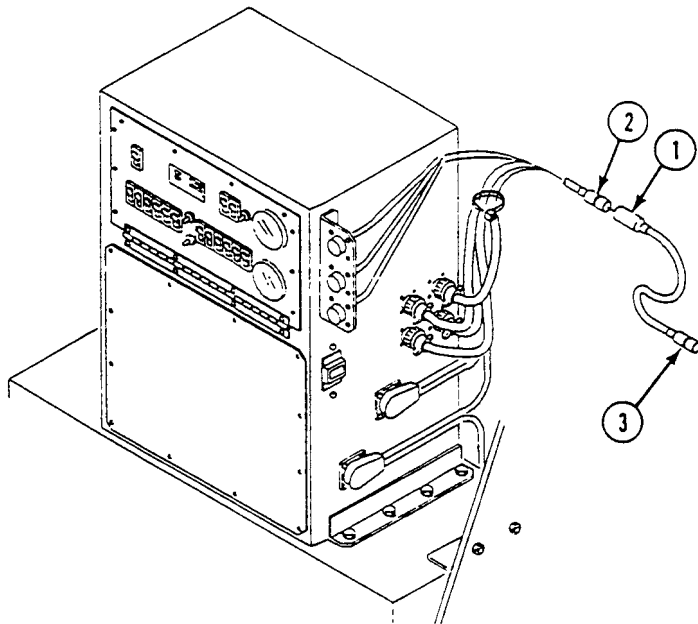
**C2YN**

1. Replace adapter T2 (WP 0850 00).
2. Verify no faults found.

YES

**C3Y**

1. Remove cable W29 plug P2 (1) from cable W38 plug P6 (2).
2. Measure resistance between plugs P2 (1) and P1 (3) of cable W29.
3. Does multimeter read 0 ohms?



NO

**C3YN**

1. Replace cable W29 (WP 0850 00).
2. Verify no faults found.

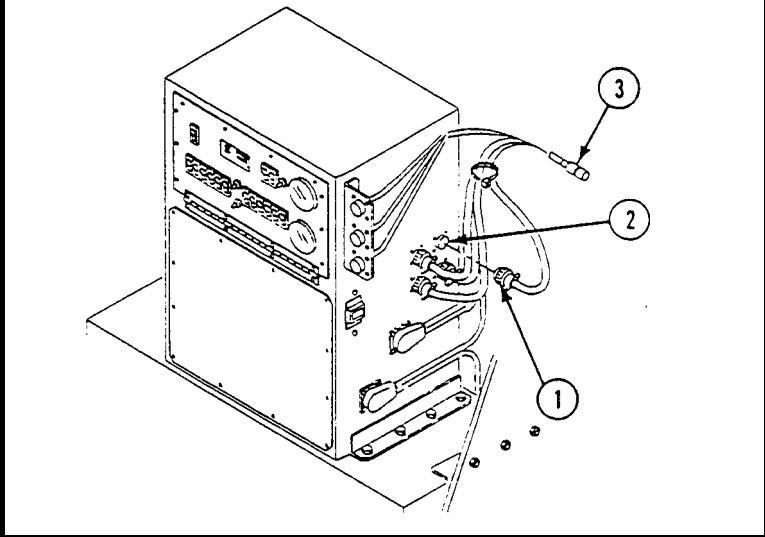
YES

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**C4Y**

1. Remove cable W38 plug P7 (1) from Power Control Enclosure jack J28 (2).
2. Measure resistance between center of plugs P7 (1) and P6 (3) of cable W38.
3. Does multimeter read 0 ohms?



**YES**



**NO**

**C4YN**

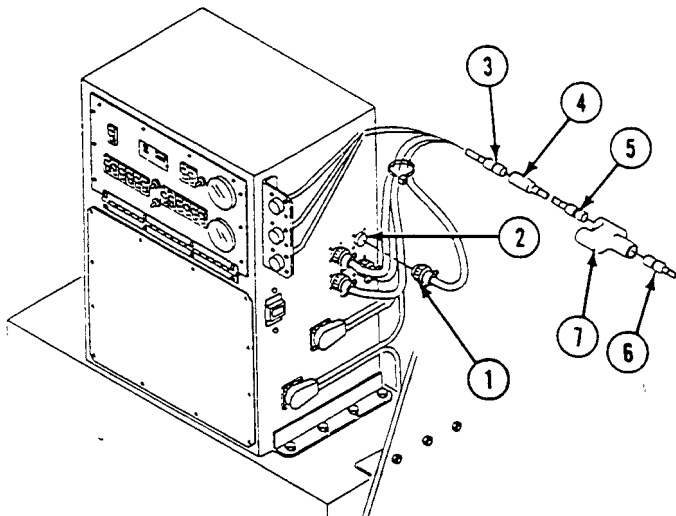
1. Replace cable W38 (WP 0850 00).
2. Verify no faults found.

**POWER CONTROL ENCLOSURE A1 DC INPUT/OUTPUT INOPERATIVE (M1068A3 ONLY)—Continued**

0090 00

**C5Y**

1. Install cable W38 plug P7 (1) on Power Control Enclosure jack J28(2).
2. Install cable W38 plug P6 (3) on cable W29 plug P2 (4).
3. Install cable W29 plug P1 (5) and circuit 415 plug P1 (6) on adapter T2 (7).



4. Verify no faults found.





---

**NO AC POWER FROM TENT INTERFACE PANEL A5 (M1068A3 ONLY)**

---

**0091 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

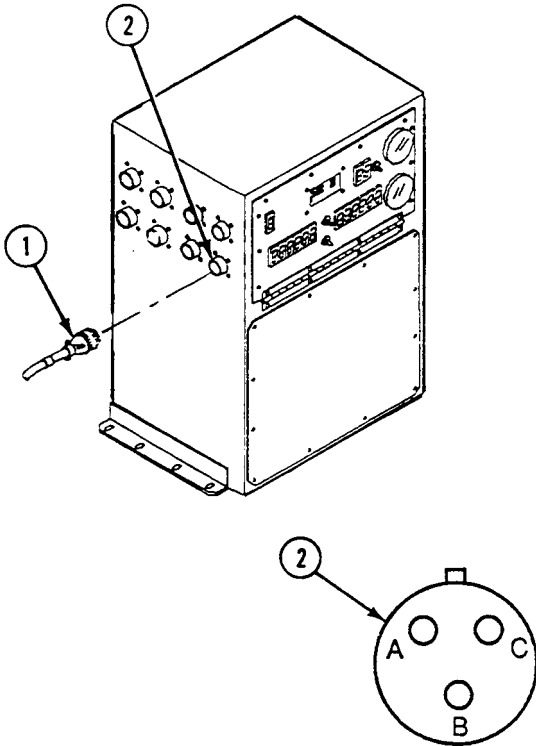
**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

T

1. Remove cable W32, plug P15 (1) from Power Control Enclosure jack J32 (2).
2. Apply AC power to SICPS system, TM 11-7010-256-12&P.
3. Measure voltage between socket A and socket B of jack J32 (2) and then between socket A and socket C.
4. Does multimeter read 110 volts AC or more for each measurement?

NO

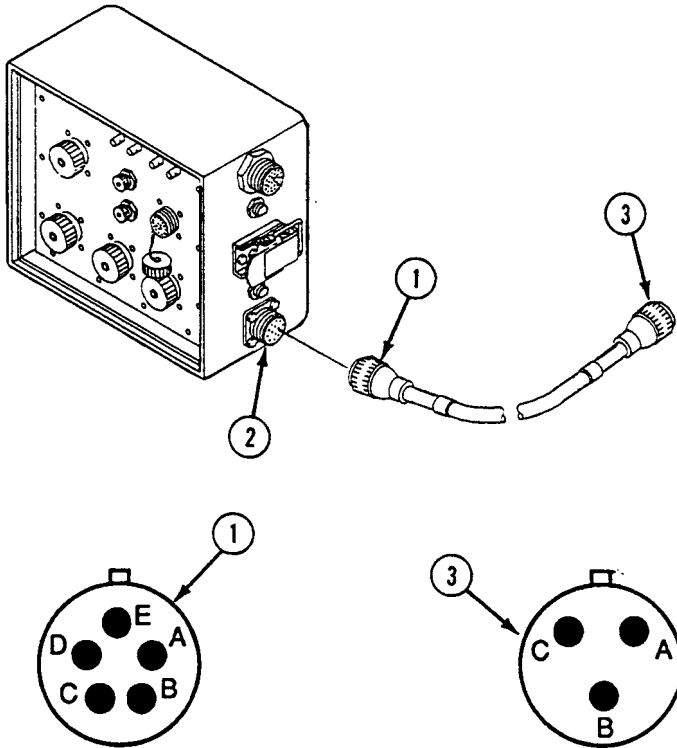
GO TO BY (PAGE 0091 00-4)



YES

**Y**

1. Turn all power OFF, (see your -10) and TM 11-7010-256-12&P.
2. Remove cable W32, plug P6 (1) from Tent Interface Panel jack J7 (2).
3. Measure resistance between pins on P6 (1) and P15 (3) of cable W32 as follows:
  - P6 pin C to P15 pin A
  - P6 pin D to P15 pin B
  - P6 pin E to P15 pin C
4. Does multimeter read 0 ohms for each set of measurements?



**NO**

**YN**

1. Replace cable W32 (WP 0848 00).
2. Verify no faults found.

**YES**

**2Y**

1. Faulty Tent Interface Panel. Beyond unit maintenance repair.
2. Notify supervisor.

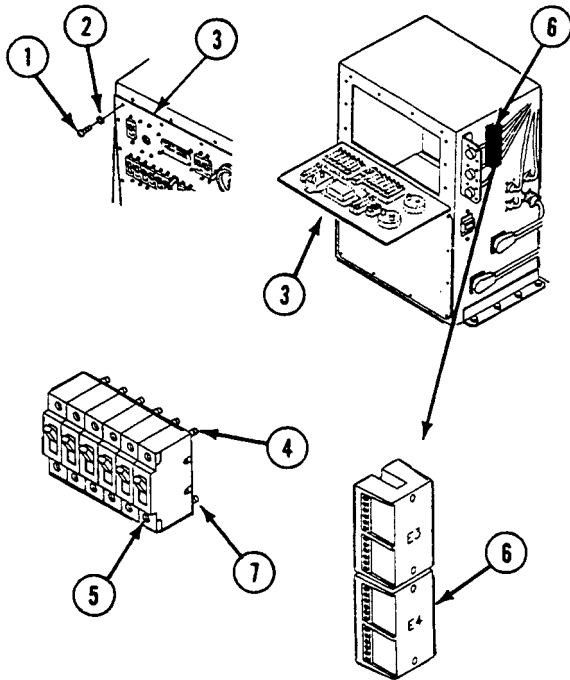
**BY**

1. Remove ALL power from SICPS system, (see your -10) and TM 11-7010-256-12&P.
2. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
3. Apply AC power to the SICPS system, (see your -10) and TM 11-7010-256-12&P.
4. Set AC TENT INTERFACE PANEL circuit breaker to ON, TM 11-7010-256-12&P.
5. Measure voltage between terminal 1 (4) of circuit breaker CB10 (5) to anywhere on bus bar E4 (6). Repeat measurement for terminal 2 (7) to bus bar E4.
6. Does multimeter read 110 volts AC for each measurement?

NO

**BYN**

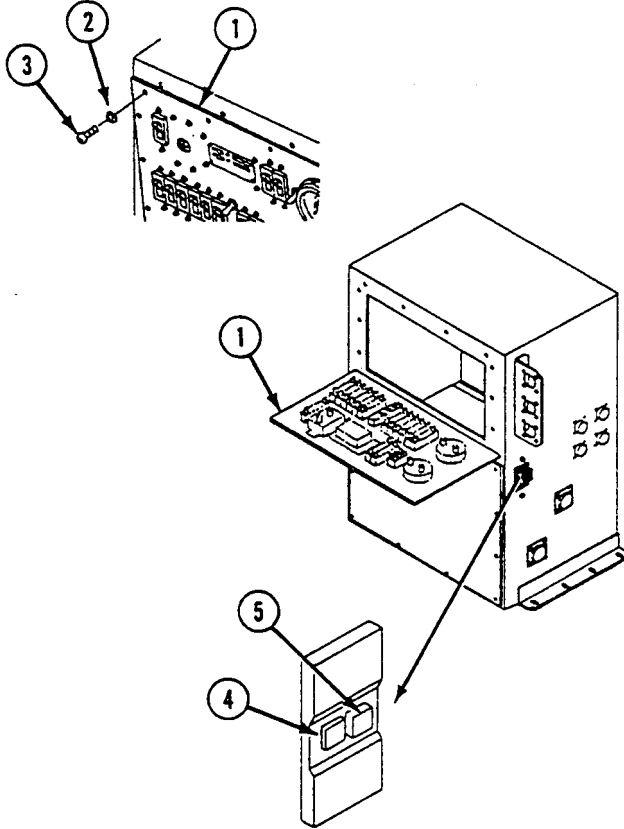
1. Replace circuit breaker CB10 (WP 0828 00).
2. Verify no faults found.



YES

**B2Y**

1. Raise faceplate (1) and secure to Power Control Enclosure with ten new lockwashers (2) and screws (3).
2. Press ground fault interrupter TEST button (4).
3. Does RESET button (5) pop out?



NO

**B2YN**

1. Faulty ground fault interrupter. Beyond unit maintenance repair.
2. Verify no faults found.

YES

**B3Y**

1. Go to: No Power To AC Circuits (M1068A3 Only) (WP 0107 00).



---

**NO DC POWER FROM TENT INTERFACE PANEL A5 (M1068A3 ONLY)**

---

**0092 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**

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**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

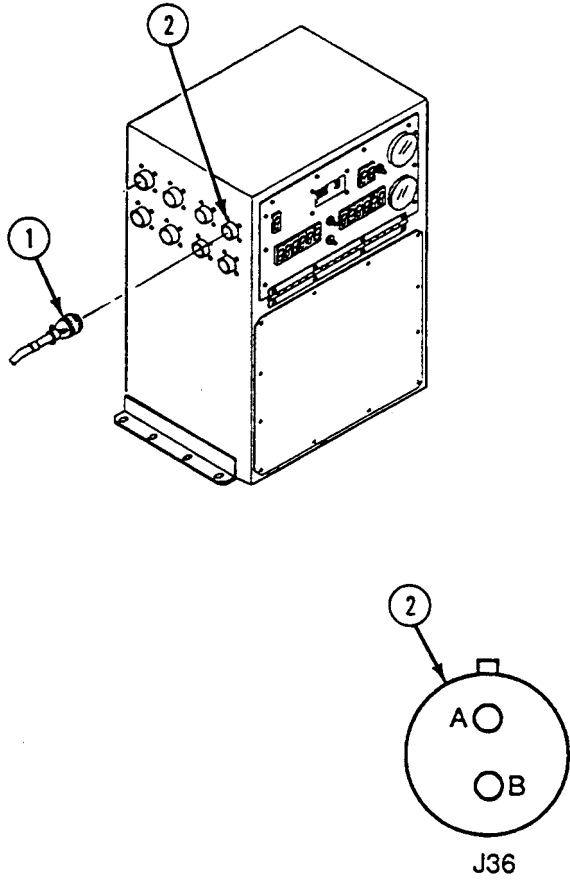
**DO NOT** attempt power cable connections until grounding system and signal/data cabling have been completed.

T

1. Remove cable W32, plug P16 (1) from Power Control Enclosure jack J36 (2).
2. Turn MASTER SWITCH to ON (see your -10).
3. Set DC TENT INTERFACE panel switch to ON TM 11-7010-256-12&P.
4. Measure voltage between jack J36 (2) socket A to socket B.
5. Does multimeter read 22 volts DC or more?

NO

GO TO BY (PAGE 0092 00-4)

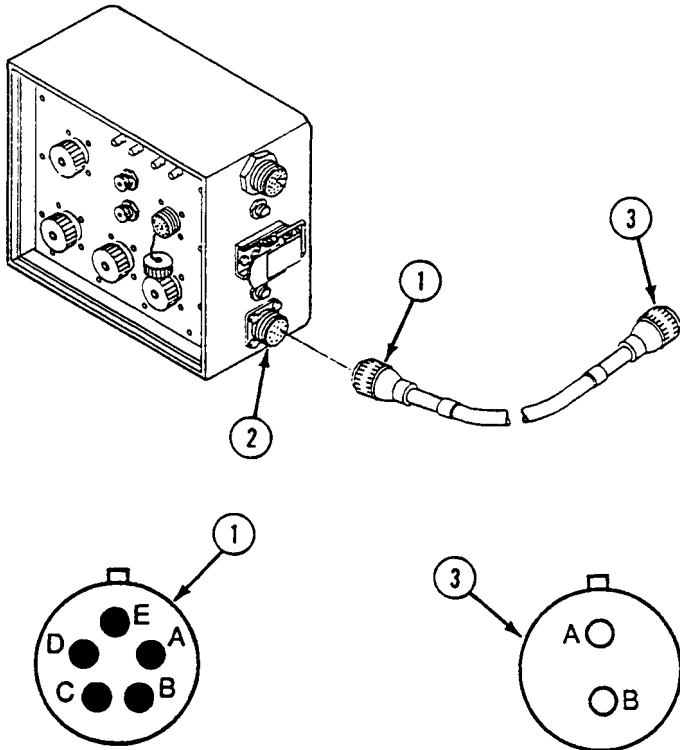


YES



**Y**

1. Turn MASTER SWITCH to OFF (see your -10).
2. Remove cable W32, plug P6 (1) from TENT INTERFACE panel jack J7 (2).
3. Measure resistance between pin A on plug P6 (1) and pin A on plug P16 (3) of cable W32.
3. Measure resistance between pin B on plug P6 (1) and pin B on plug P16 (3) of cable W32.
4. Does multimeter read 0 ohms for each set of measurements?



**NO**

**YN**

1. Replace cable W32 (WP 0848 00).
2. Verify no faults found.

**YES**

**2Y**

1. Faulty Tent Interface Panel. Beyond unit maintenance repair.
2. Notify supervisor.

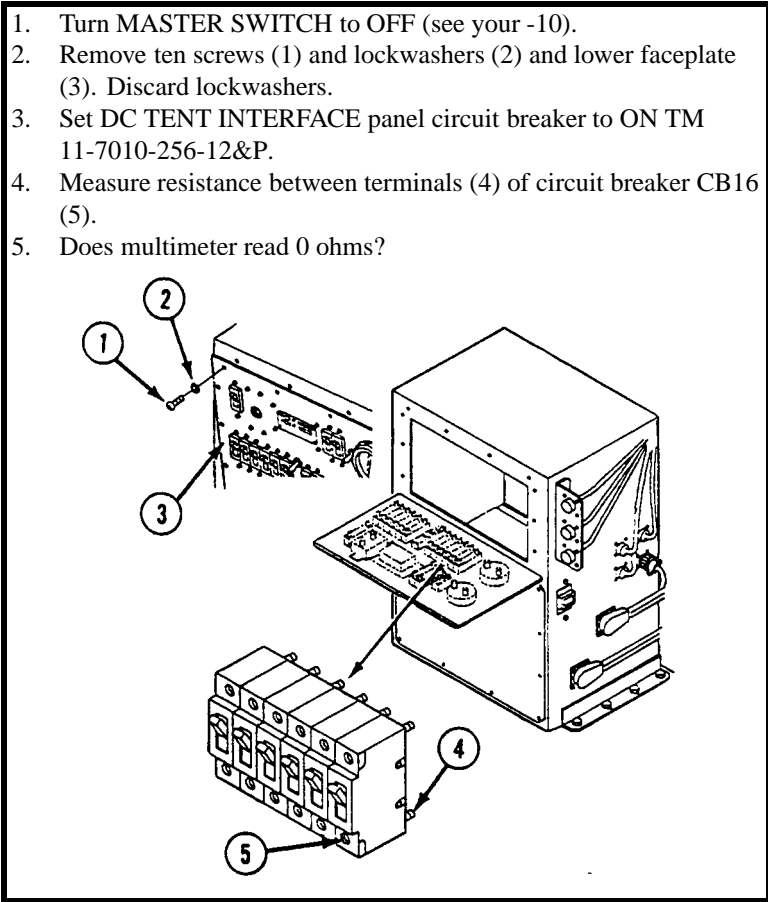
**BY**

1. Turn MASTER SWITCH to OFF (see your -10).
2. Remove ten screws (1) and lockwashers (2) and lower faceplate (3). Discard lockwashers.
3. Set DC TENT INTERFACE panel circuit breaker to ON TM 11-7010-256-12&P.
4. Measure resistance between terminals (4) of circuit breaker CB16 (5).
5. Does multimeter read 0 ohms?

NO

**BYN**

1. Replace circuit breaker CB16 (WP 0827 00).
2. Verify no faults found.



YES

**B2Y**

1. Raise faceplate and secure to Power Control Enclosure with ten new lockwashers and screws.
2. Go to: Power Control Enclosure A1 DC Input/Output Inoperative (M1068A3 Only) (WP 0090 00).

---

**NO POWER FROM ROADSIDE AC POWER EXTENSION BOX A6 (M1068A3 ONLY)**

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**0093 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**NO POWER FROM ROADSIDE AC POWER EXTENSION BOX A6 (M1068A3 ONLY)—Continued**

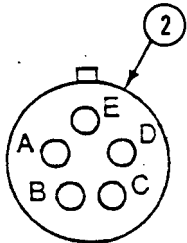
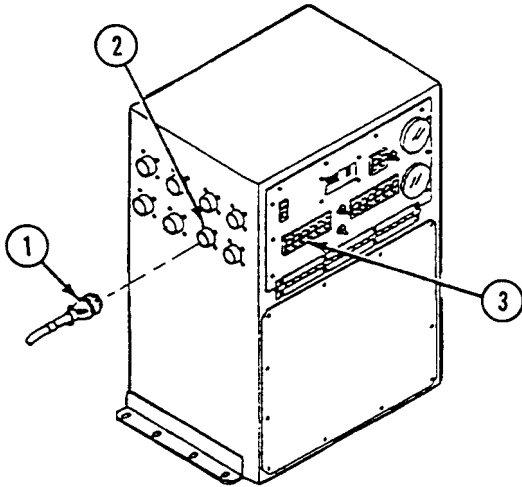
0093 00

**T**

1. Remove cable W7 plug P10 (1) from Power Control Enclosure jack J30 (2).
2. With AC power accepted, set AC LEFT OUTLETS switches (3) on Power Control Enclosure panel to ON, see TM 11-7010-256-12&P.
3. Measure voltage between sockets A and B of jack J30 (2).
4. Measure voltage between sockets C and D of jack J30 (2).
5. Does multimeter read 110 volts AC or more for both measurements?

**NO**

**GO TO BY (PAGE 0093 00-4)**



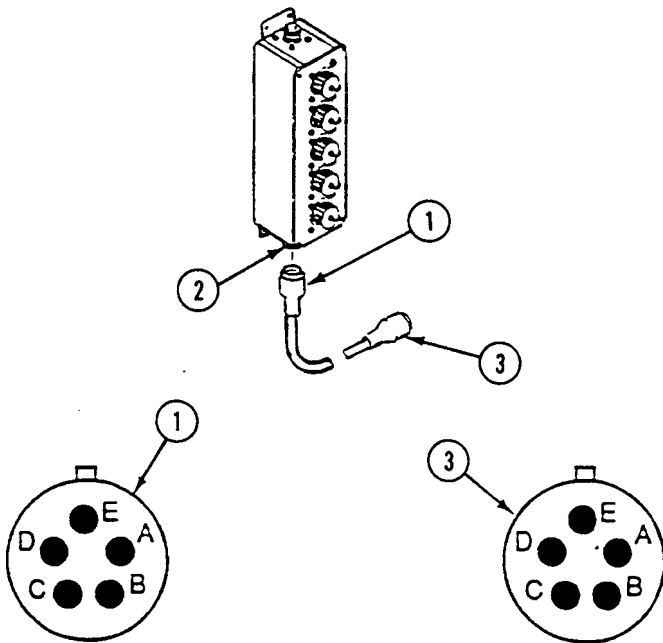
**YES**

**NO POWER FROM ROADSIDE AC POWER EXTENSION BOX A6 (M1068A3 ONLY)—Continued**

0093 00

**Y**

1. Set AC LEFT OUTLETS switches to OFF and remove all power from SICPS system (see your -10) and TM 11-7010-256-12&P.
2. Remove cable W7 plug P1 (1) from Roadside AC Power Extension Box jack J1 (2).
3. Measure resistance between pins of plugs P1 (1) and P10 (3) on cable W7 as follows:
  - P1 pin A to P10 pin A
  - P1 pin B to P10 pin B
  - P1 pin C to P10 pin C
  - P1 pin D to P10 pin D
  - P1 pin E to P10 pin E
4. Does multimeter read 0 ohms for each set of pins?



**NO**

**YN**

1. Replace cable W7 (WP 0842 00).
2. Verify no faults found.

**YES**

**2Y**

1. Replace Roadside AC Power Extension Box A6 (WP 0834 00).
2. Verify no faults found.

**NO POWER FROM ROADSIDE AC POWER EXTENSION BOX A6 (M1068A3 ONLY)—Continued**

0093 00

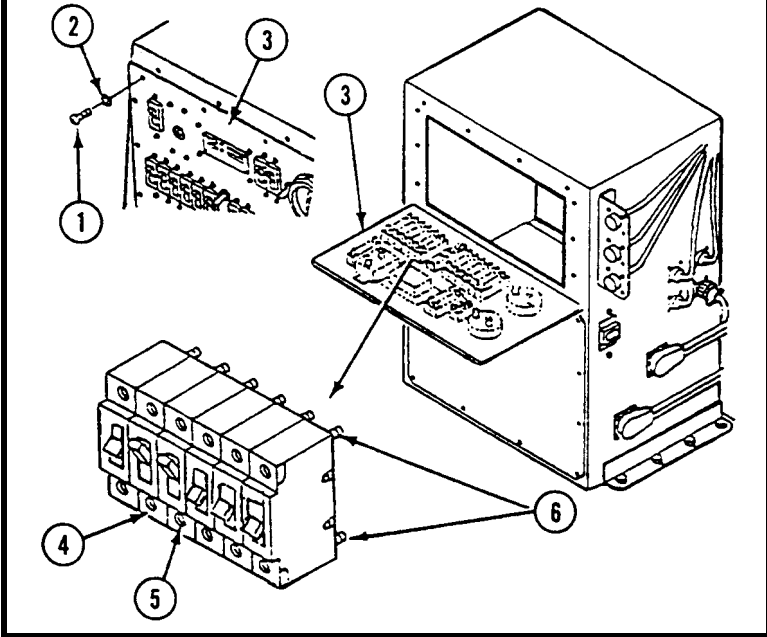
**BY**

1. Turn MASTER POWER switch to OFF (see your -10) and TM 11-7010-256-12&P.
2. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
3. Turn ON AC LEFT OUTLETS circuit breakers CB6 (4) and CB7 (5).
4. Measure resistance between terminals 1 and 2 (6) of circuit breakers CB6 (4) and CB7 (5).
5. Does multimeter read 0 ohms for each measurement?

**NO**

**BYN**

1. Resistance in CB6 and CB7 should be 0 ohms. If any resistance is present, replace that CB (WP 0828 00).
2. Verify no faults found.



**YES**

**B2Y**

1. Raise faceplate and secure to Power Control Enclosure with ten new lockwashers and screws.
2. Go to: No Power To AC Circuits (M1068A3 Only) (WP 0107 00).

---

**NO POWER FROM CURBSIDE AC POWER EXTENSION BOX A7 (M1068A3 ONLY)**

---

**0094 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**NO POWER FROM CURBSIDE AC POWER EXTENSION BOX A7 (M1068A3 ONLY)—Continued**

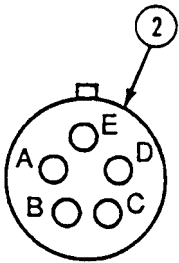
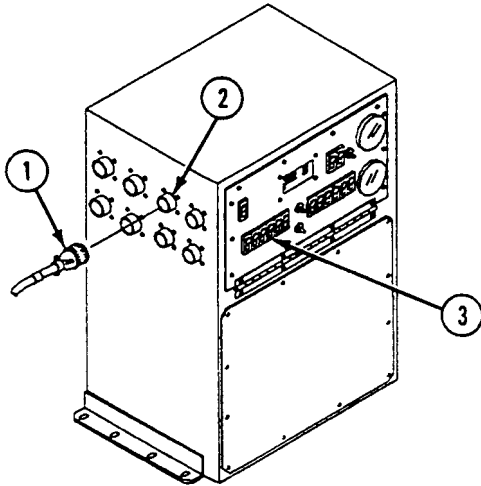
0094 00

**T**

1. With AC power accepted, set AC RIGHT OUTLETS switches (3) on Power Control Enclosure panel to ON, see TM 11-7010-256-12&P.
2. Measure voltage between sockets A and B of jack J31 (2).
3. Measure voltage between sockets C and D of jack J31 (2).
4. Does multimeter read 110 volts AC or more for both measurements?

**NO**

**GO TO BY (PAGE 0094 00-4)**



**YES**

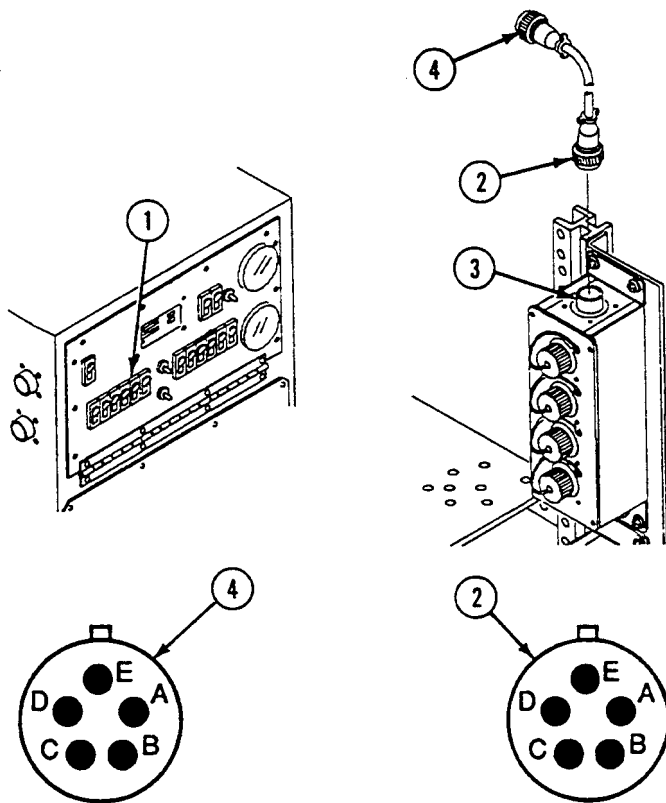


**NO POWER FROM CURBSIDE AC POWER EXTENSION BOX A7 (M1068A3 ONLY)—Continued**

0094 00

**Y**

1. Set AC RIGHT OUTLETS switches (1) to OFF and remove ALL power from SICPS system (see your -10) and TM 11-7010-256-12&P.
2. Remove cable W8 plug P1 (2) from Curbside AC Power Extension Box jack J1 (3).
3. Measure resistance between pins of plugs P1 (2) and P11 (4) on cable W8 as follows:
  - P1 pin A to P11 pin A
  - P1 pin B to P11 pin B
  - P1 pin C to P11 pin C
  - P1 pin D to P11 pin D
  - P1 pin E to P11 pin E
4. Does multimeter read 0 ohms for each set of pins?



**NO**

**YN**

1. Replace cable W8 (WP 0843 00).
2. Verify no faults found.

**YES**

**2Y**

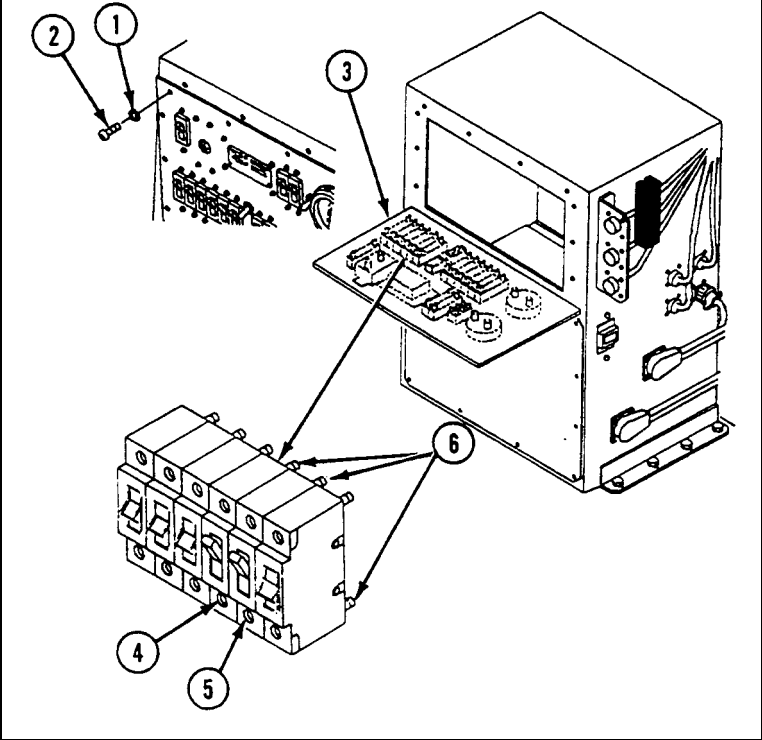
1. Replace Curbside AC Power Extension Box A7 (WP 0815 00).
2. Verify no faults found.

**NO POWER FROM CURBSIDE AC POWER EXTENSION BOX A7 (M1068A3 ONLY)—Continued**

0094 00

**BY**

1. Turn MASTER POWER switch to OFF (see your -10) and TM 11-7010-256-12&P.
2. Remove ten screws (1) and lockwashers (2). Lower faceplate (3). Discard lockwashers.
3. Turn ON AC RIGHT OUTLETS circuit breakers CB8 (4) and CB9 (5).
4. Measure resistance between terminal 1 and terminal 2 (6) of circuit breaker CB8 (4).
5. Measure resistance between terminal 1 and terminal 2 (6) of circuit breaker CB9 (5).
6. Does multimeter read 0 ohms for each measurement?



**NO**

**BYN**

1. Resistance in CB8 and CB9 should be 0 ohms. If any resistance is present, replace that CB (WP 0828 00).
2. Verify no faults found.

**YES**

**B2Y**

1. Raise faceplate and secure to Power Control Enclosure with ten new lockwashers and screws.
2. Go to: No Power To AC Circuits (M1068A3 Only) (WP 0107 00).

---

**NO POWER FROM DC POWER EXTENSION BOX A9 (ALL EXCEPT JACK J23) (M1068A3 ONLY)**

---

**0095 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**

---



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**NO POWER FROM DC POWER EXTENSION BOX A9 (ALL EXCEPT JACK J23) (M1068A3 ONLY)—Continued**

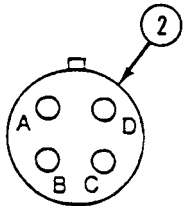
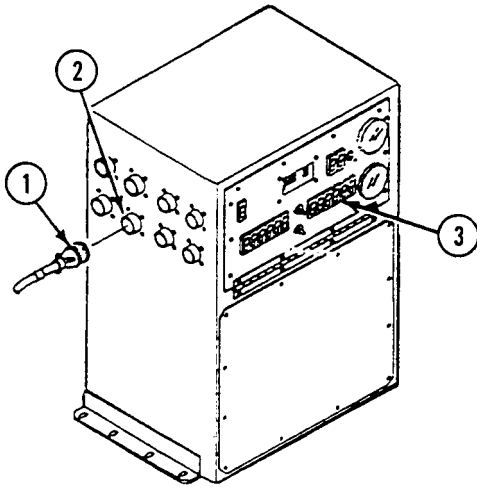
0095 00

**T**

1. Remove cable W10 plug P14 (1) from Power Control Enclosure jack J34 (2).
2. Turn MASTER SWITCH to ON.
3. Set DC LEFT OUTLETS switches (3) on Power Control Enclosure panel to ON (see TM 11-7010-256-12&P).
4. Measure voltage between sockets A and B of jack J34 (2). Repeat measurement for sockets C and D.
5. Does multimeter read 22 volts DC or more for each measurement?

**NO**

**GO TO AY (PAGE 0095 00-4)**



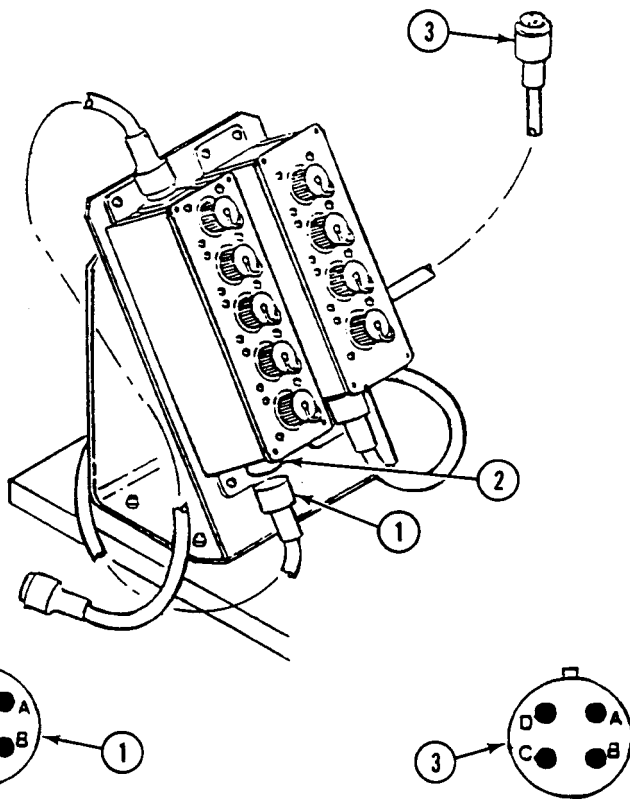
**YES**

**NO POWER FROM DC POWER EXTENSION BOX A9 (ALL EXCEPT JACK J23) (M1068A3 ONLY)—Continued**

0095 00

**Y**

1. Turn MASTER SWITCH to OFF.
2. Remove cable W10 plug P1 (1) from DC Power Extension Box A9 jack J1 (2).
3. Measure resistance between pins of plugs P1 (1) and P14 (3) on cable W10 as follows:
  - P1 pin A to P14 pin A
  - P1 pin B to P14 pin B
  - P1 pin C to P14 pin C
  - P1 pin D to P14 pin D
4. Does multimeter read 0 ohms for each set of pins?



**NO**

**YN**

1. Replace cable W10 (WP 0844 00).
2. Verify no faults found.

**YES**

**2Y**

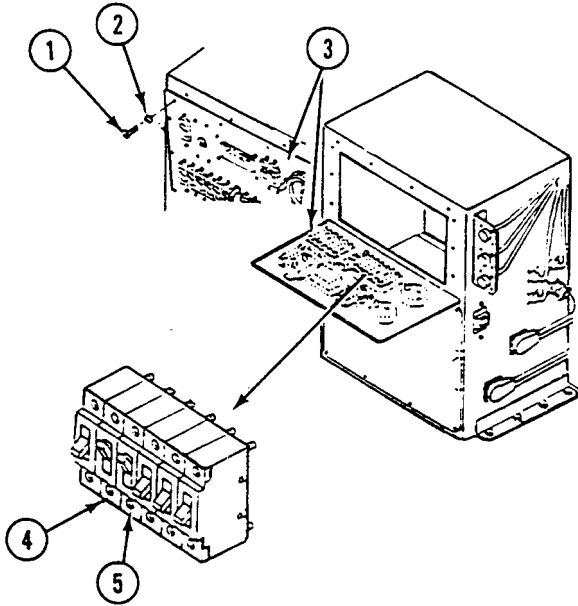
1. Replace DC Power Extension Box A9 (WP 0834 00).
2. Verify no faults found.

**NO POWER FROM DC POWER EXTENSION BOX A9 (ALL EXCEPT JACK J23) (M1068A3 ONLY)—Continued**

0095 00

**AY**

1. Turn MASTER SWITCH to OFF.
2. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
3. Turn ON DC LEFT OUTLETS circuit breakers CB12 (4) and CB13 (5).
4. Measure resistance between terminals 1 and 2 of circuit breakers CB12 (4) and CB13 (5).
5. Does multimeter read 0 ohms for each measurement?



**NO**

**AYN**

1. Resistance in CB12 and CB13 should be 0 ohms. If any resistance is present, replace that CB (WP 0828 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Raise faceplate and secure to Power Control Enclosure with ten new lockwashers and screws.
2. Go to: Power Control Enclosure A1 DC Input/Output Inoperative (M1068A3 Only) (WP 0090 00).

---

**NO POWER FROM DC POWER EXTENSION BOX A9, JACK J23 (JTIDS)  
(M1068A3 ONLY)**

---

**0096 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**NO POWER FROM DC POWER EXTENSION BOX A9, JACK J23 (JTIDS) (M1068A3 ONLY)—Continued**

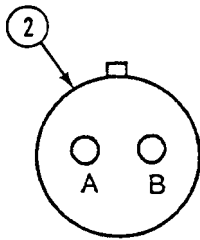
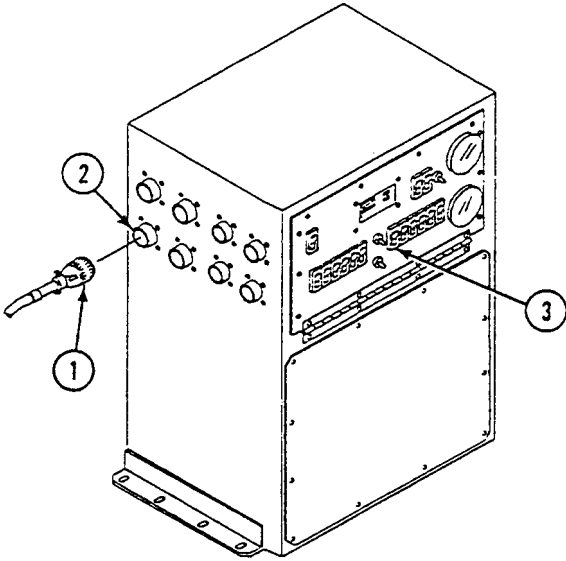
0096 00

**T**

1. Remove cable W45 plug P13 (1) from Power Control Enclosure jack J33 (2).
2. Turn MASTER SWITCH to ON.
3. Set JTIDS switch (3) on Power Control Enclosure panel to ON (see TM 11-7010-256-12&P).
4. Measure voltage between sockets A and B of J33 (2).
5. Does multimeter read 22 volts DC or more?

**NO**

**GO TO AY (PAGE 0096 00-4)**



**YES**

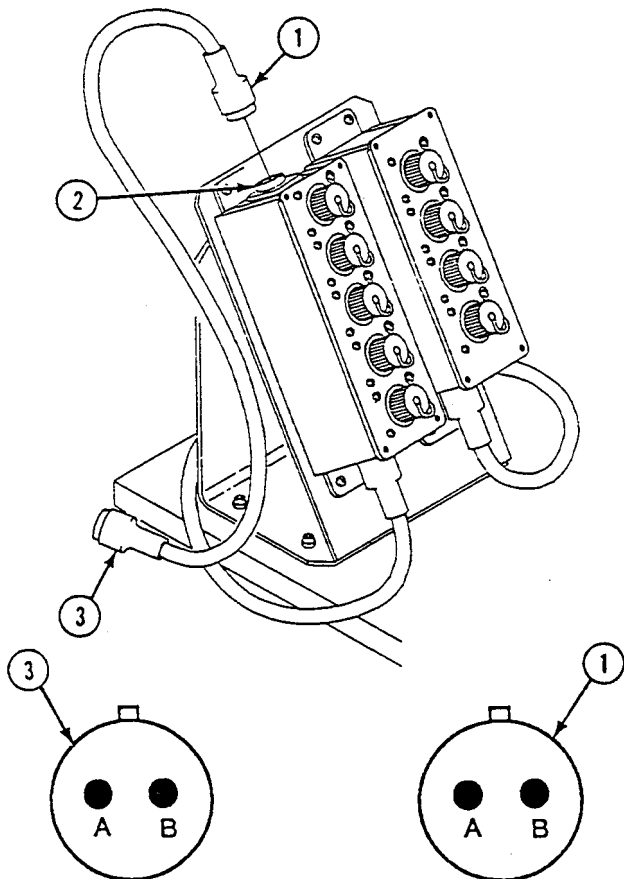


**NO POWER FROM DC POWER EXTENSION BOX A9, JACK J23 (JTIDS) (M1068A3 ONLY)—Continued**

0096 00

**Y**

1. Turn MASTER SWITCH to OFF.
2. Remove cable W45 plug P1 (1) from DC Power Extension Box A9 jack J2 (2).
3. Measure resistance between plug P1 (1) pin A and P13 (3) pin A of cable W45. Repeat measurement for pins B.
4. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace cable W45 (WP 0853 00).
2. Verify no faults found.

**YES**

**2Y**

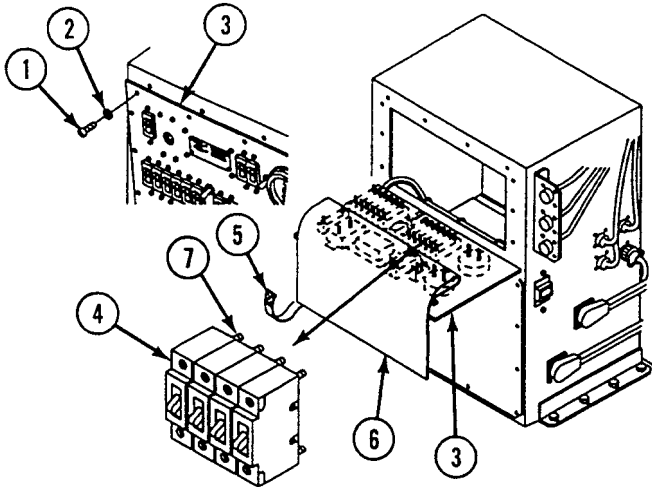
1. Replace DC Power Extension Box A9 (WP 0834 00).
2. Verify no faults found.

**NO POWER FROM DC POWER EXTENSION BOX A9, JACK J23 (JTIDS) (M1068A3 ONLY)—Continued**

0096 00

**AY**

1. Turn MASTER SWITCH to OFF.
2. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
3. Turn ON JTIDS circuit breaker CB11 (4).
4. Undo velcro strap (5) and lift safety cover (6) over top of faceplate (3).
5. Measure resistance between terminals 1 and 2 (7) of circuit breaker CB11 (4).
6. Does multimeter read 0 ohms?



**NO**

**AYN**

1. Replace circuit breaker CB11 (WP 0828 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Place safety cover over inside of faceplate and secure with velcro strap.
1. Raise faceplate and secure to Power Control Enclosure with ten new lockwashers and screws.
2. Go to: Power Control Enclosure A1 DC Input/Output Inoperative (M1068A3 Only) (WP 0090 00).

---

**NO DC POWER TO SINGLE POINT LAN GROUND BOX A15 (M1068A3 ONLY)**

---

**0097 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
 Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Personnel Required

Power-Generation Equipment Repairer 52D10  
 Helper (H)

Engine stopped (see your -10)

Carrier blocked (see your -10)

---

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

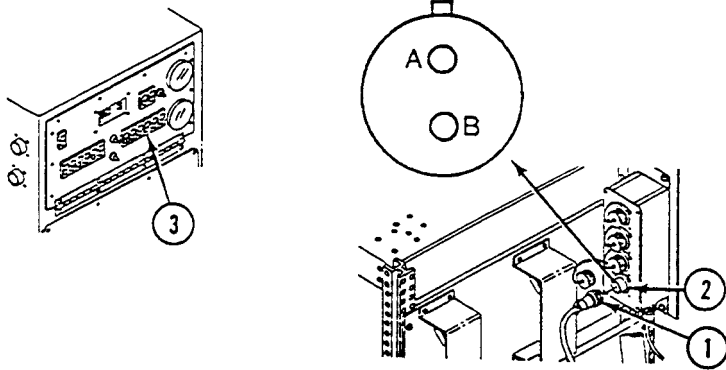
**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**T**

1. Remove cable W40 plug P1 (1) from DC Power Extension Box A8 jack J17 (2).
2. Turn MASTER SWITCH to ON (See your -10).
3. Set DC RIGHT OUTLETS switches (3) on Power Control Enclosure to ON (see TM 11-7010-256-12&P).
4. Measure voltage between sockets A and B of J17 (2).
5. Does multimeter read 22 volts DC or more?



**NO**

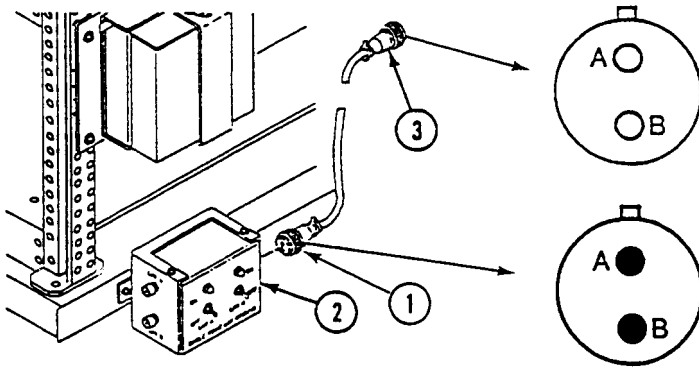
**TN**

1. Go To: No Power From DC Power Extension Box A8.
2. Verify no faults found.

**YES**

**Y**

1. Turn MASTER SWITCH to OFF (see your -10).
2. Disconnect cable W40 plug P2 (1) from Single Point LAN Ground Box A15 jack J1 (2).
3. Measure resistance between plug P1 (3) pin A and P2 (1) pin A of cable W40. Repeat measurement for pins B.
4. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace cable W40 (WP 0851 00).
2. Verify no faults found.

**YES**

**2Y**

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Repair LAN Ground Box A15 (WP 0820 00).</li><li>2. Verify no faults found.</li></ol> |
|---|



---

**NO POWER FROM UPS POWER EXTENSION BOX A18 (M1068A3 ONLY)**

---

**0098 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

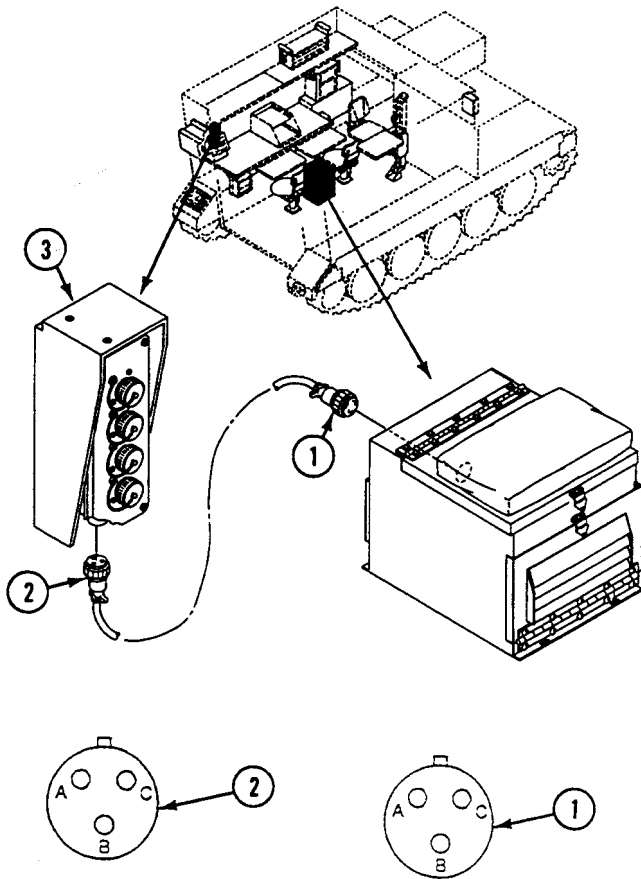
**T**

1. Open front cover on ATCCS UPS Storage Box and remove cable W251 plug P1 (1) from UPS jack AC OUT.
2. Remove cable W251 plug P2 (2) from UPS Power Extension Box A18 jack J6 (3).
3. Measure resistance between pins of plugs P1 (1) and P2 (2) of cable W251 as follows:
  - P1 pin A to P2 socket A
  - P1 pin B to P2 socket B
  - P1 pin C to P2 socket C
4. Does multimeter read 0 ohms for each measurement?

**NO**

**TN**

1. Replace cable W251 (WP 0852 00).
2. Verify no faults found.

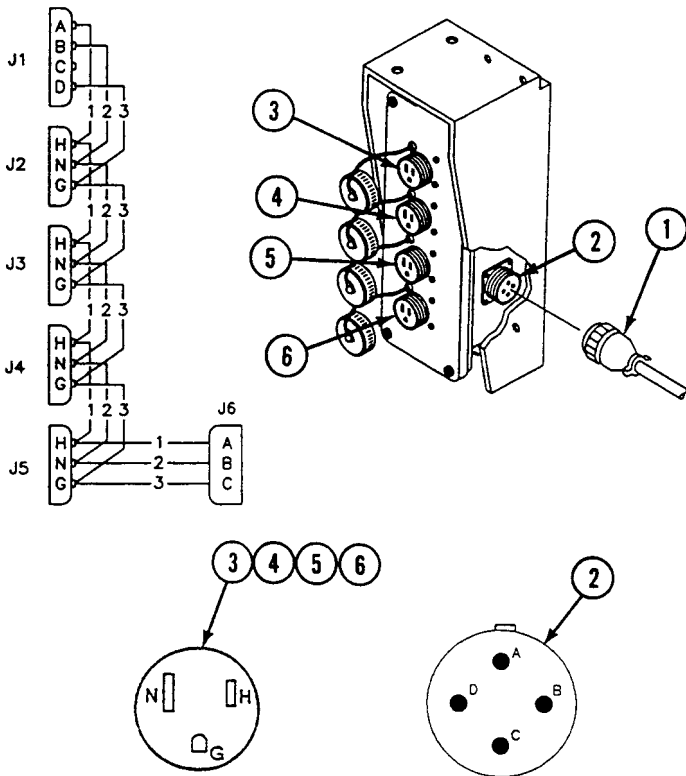


**YES**



**Y**

1. Remove cable W252 plug P1 (1) from UPS Power Extension Box A18 jack J1 (2).
2. Measure resistance between jacks J1 (2), J2 (3), J3 (4), J4 (5), J5 (6), and J6 (7) of UPS Power Extension Box A18 as follows:
  - J1 socket A to J2, J3, J4, and J5 socket H
  - J1 socket B to J2, J3, J4, and J5 socket N
  - J1 socket D to J2, J3, J4, and J5 socket G
  - J1 pin A to J6 socket A
  - J1 pin B to J6 socket B
  - J1 pin D to J6 socket C
3. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace/repair UPS Power Extension Box A18 (WP 0836 00).
2. Verify no faults found.

**YES**

**2Y**

1. Faulty ATCCS UPS Power. Beyond unit maintenance repair.
2. Notify supervisor.



---

**NO POWER FROM CURBSIDE UPS POWER EXTENSION BOX A19  
(M1068A3 ONLY)**

---

**0099 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

---

**WARNING**

---



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**NO POWER FROM CURBSIDE UPS POWER EXTENSION BOX A19 (M1068A3 ONLY)—Continued**

0099 00

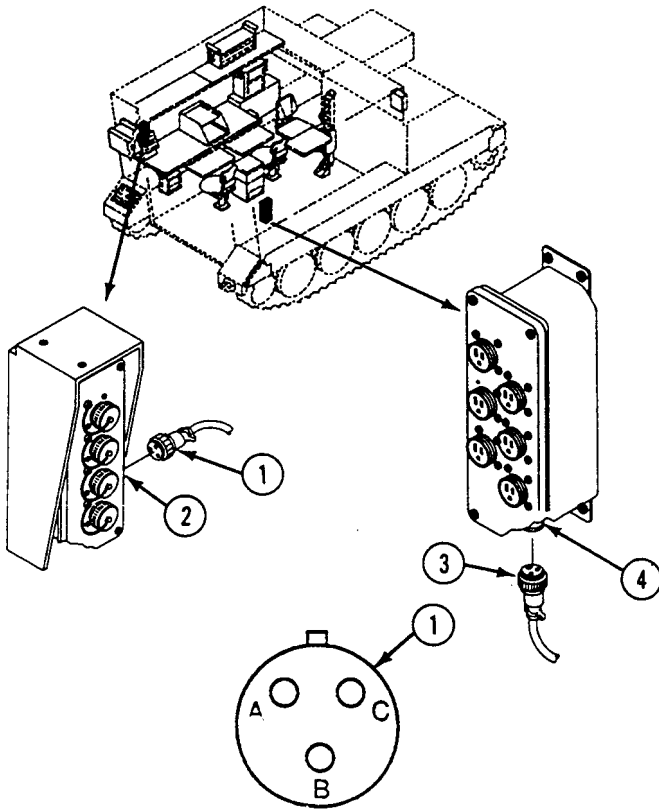
**T**

1. Remove cable W252 plug P1 (1) from UPS Power Extension Box A18 jack J1 (2).
2. Remove cable W252 plug P2 (3) from UPS Power Extension Box A19 jack J15 (4).
3. Measure resistance between pins of plugs P1 (1) and P2 (3) of cable W252 as follows:
  - P1 pin A to P2 socket A
  - P1 pin B to P2 socket B
  - P1 pin C to P2 socket C
4. Does multimeter read 0 ohms for each measurement?

**NO**

**TN**

1. Replace cable W252 (WP 0857 00).
2. Verify no faults found.



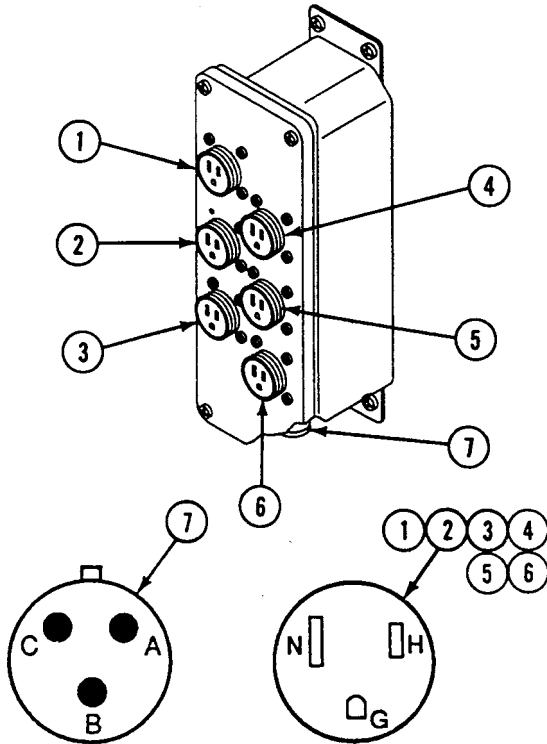
**YES**

**NO POWER FROM CURBSIDE UPS POWER EXTENSION BOX A19 (M1068A3 ONLY)—Continued**

0099 00

**Y**

1. Measure resistance between jacks J9 (1), J10 (2), J11 (3), J12 (4), J13 (5), J14 (6), and J15 (7) of UPS Power Extension Box A19 as follows:
  - J15 socket A to J9, J10, J11, J12, J13, and J14 socket H.
  - J15 socket B to J9, J10, J11, J12, J13, and J14 socket N.
  - J15 socket C to J9, J10, J11, J12, J13, and J14 socket G.
2. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace/repair UPS Power Extension Box A19 (WP 0822 00).
2. Verify no faults found.

**YES**

**2Y**

1. Faulty ATCCS UPS Power. Beyond unit maintenance repair.
2. Notify supervisor.



---

**NO AC/DC INPUT TO ATCCS UPS POWER BOX (M1068A3 ONLY)**

---

**0100 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (2)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

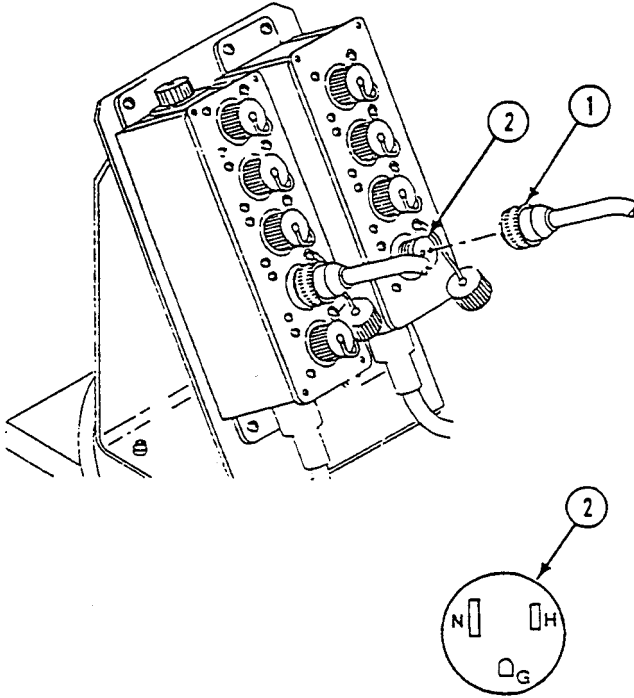
**T**

1. Remove cable W43 plug P2 (1) from Roadside AC Power Extension Box A6 jack J6 (2).
2. Apply AC power to SICPS system (TM 11-7010-256-12&P).
3. Set AC LEFT OUTLETS switches on Power Control Enclosure panel to ON.
4. Measure voltage between sockets H and N of J6 (2).
5. Does multimeter read 110 volts AC or more?

**NO**

**TN**

1. Go to: No Power From Roadside AC Power Extension Box A6 (WP 0093 00).

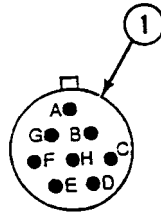
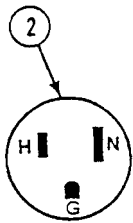
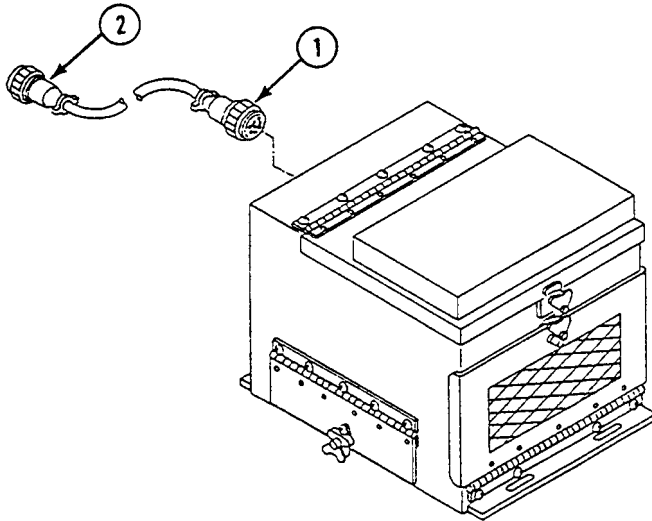


**YES**



**Y**

1. Turn all AC power OFF (TM 11-7010-256-12&P).
2. Open front cover on ATCCS UPS Storage Box and remove cable W43 plug P1 (1) from UPS jack AC IN.
3. Measure resistance between pins of plugs P2 (2) and P1 (1) of cable W43 as follows:
  - P2 pin H to P1 pin B
  - P2 pin N to P1 pin A
  - P2 pin G to P1 pin D
  - P1 pin F to P1 pin G
4. Does multimeter read 0 ohms for each measurement?



**NO**

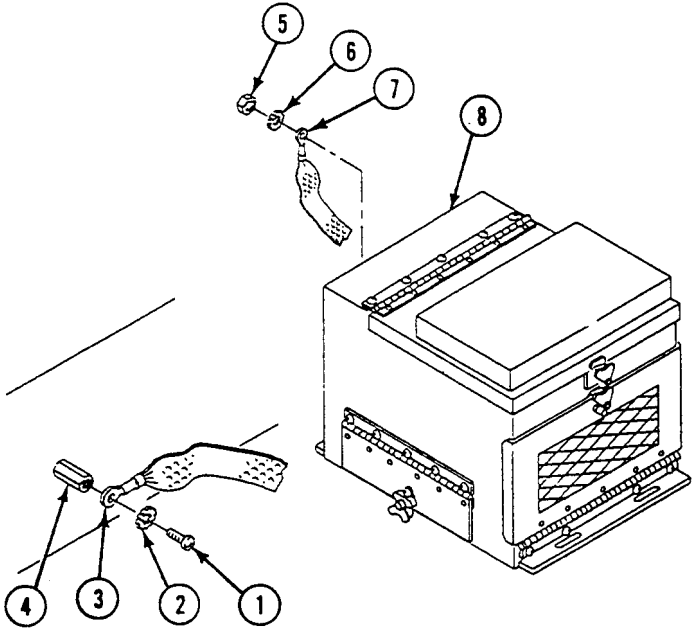
**YN**

1. Replace cable W43 (WP 0852 00).
2. Verify no faults found.

**YES**

**2Y**

1. Remove screw (1), lockwasher (2), and ground strap W12 terminal (3) from ground lug (4). Discard lockwasher.
2. Remove nut (5), lockwasher (6), and ground strap W12 terminal (7) from ATCCS UPS storage box (8). Discard lockwasher.
3. Measure resistance between terminals (3) and (7) of ground strap W12.
4. Does multimeter read 0 ohms?



**NO**

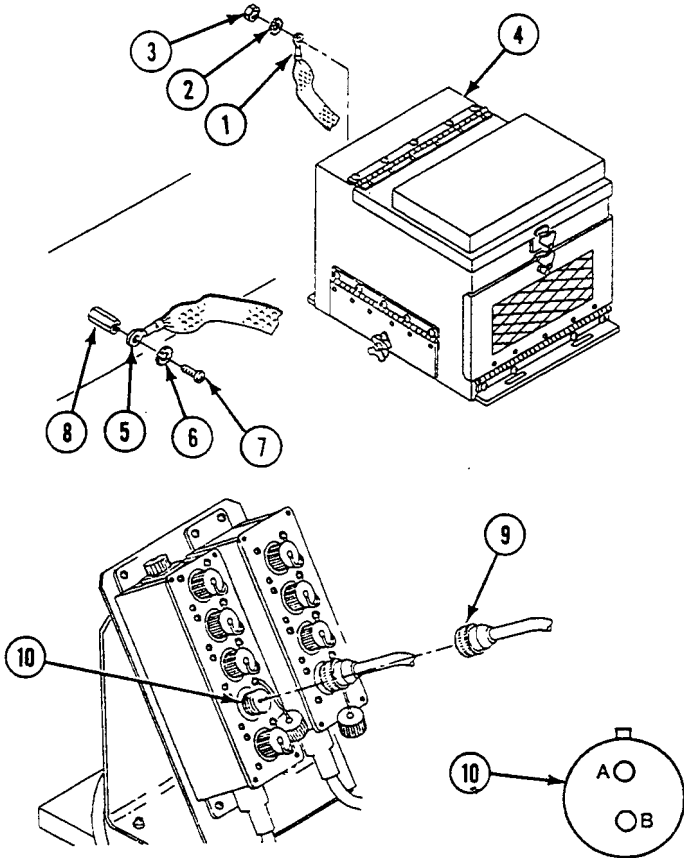
**2YN**

1. Replace ground strap W12 (WP 0846 00).
2. Verify no faults found.

**YES**

**3Y**

1. Install ground strap W12 terminal (1), new lockwasher (2), and nut (3) on ATCCS UPS storage box (4).
2. Install ground strap W12 terminal (5), new lockwasher (6), and screw (7) on ground lug (8).
3. Remove cable W42 plug P2 (9) from DC Power Extension Box A9 jack J21 (10).
4. Set MASTER SWITCH to ON.
5. Set DC LEFT OUTLETS switches on Power Control Enclosure panel to ON (TM 11-7010-256-12&P).
6. Measure voltage between sockets A and B of J21 (10).
7. Does multimeter read 22 volts DC or more?



**NO**

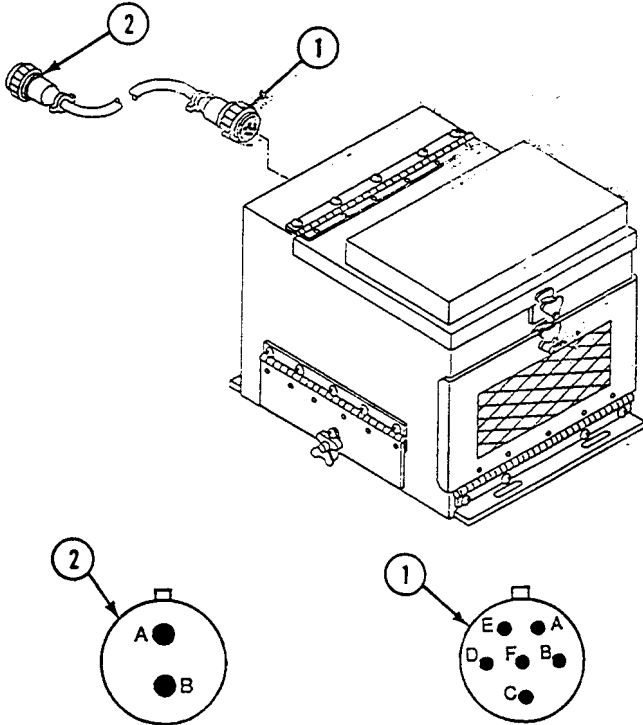
**3YN**

1. Go to: No Power from DC Power Extension Box A9 (WP 0095 00).

**YES**

**4Y**

1. Set MASTER SWITCH to OFF.
2. Open front cover on ATCCS UPS Storage Box and remove cable W42 plug P1 (1) from UPS jack DC IN.
3. Measure resistance between pins of plugs P2 (2) and P1 (1) of cable W42 as follows:  
 P2 pin A to P1 pin A, E, and F  
 P2 pin B to P1 pin B, C, and D
4. Does multimeter read 0 ohms for each measurement?



NO

**4YN**

1. Replace cable W42 (WP 0852 00).
2. Verify no faults found.

YES

**5Y**

1. Faulty ATCCS UPS Power. Beyond unit maintenance repair.
2. Notify supervisor.

---

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY  
(M1068A3 ONLY)**

---

**0101 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)

Materials/Parts

Lockwasher (10)

Carrier blocked (see your -10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

All AC External and Internal Power is OFF (see TM 710-256-12&P)

---

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

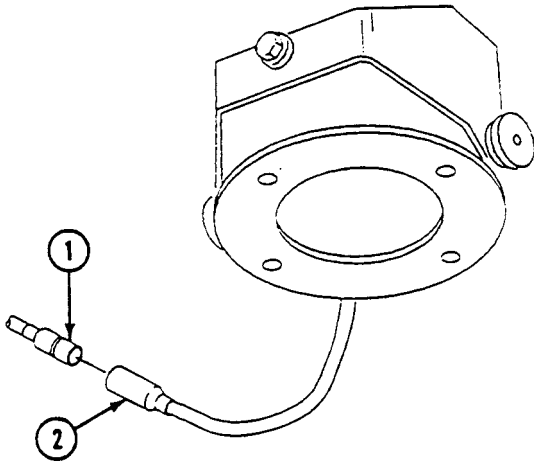
**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY (M1068A3 ONLY)—Continued**

0101 00

**T**

1. Disconnect cable W28, plug P2 (1) from light lead (2).
2. Ensure ramp door is open or down. Set MASTER SWITCH to ON (see your -10).
3. Turn on dome lights from either the front dome light switch (on master switch panel) or at the rear dome light switch near the ramp. To do this, the blackout-bypass switch must be OFF, the ramp up, and the rear door closed.
4. Measure voltage between plug P2 (1) and ground.
5. Does multimeter read 22 volts DC or more?



**NO**

**GO TO AY (PAGE 0101 00-3)**

**YES**

**Y**

1. Turn MASTER SWITCH to OFF (see your -10).
2. Have light bulbs been replaced?

**NO**

**YN**

1. Replace light bulbs (WP 0312 00).
2. Verify no faults found.

**YES**

**2Y**

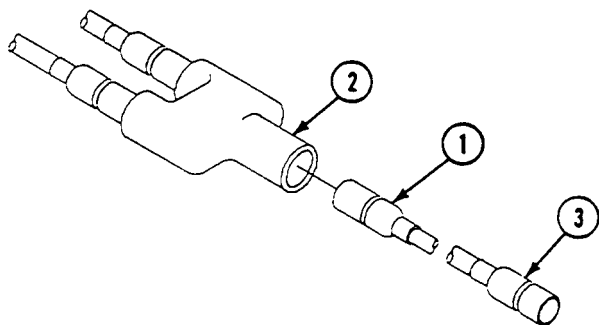
1. Repair light assembly (WP 0310 00).
2. Verify no faults found.

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY (M1068A3 ONLY)—Continued**

0101 00

**AY**

1. Set MASTER SWITCH to OFF.
2. Remove cable W28, plug P1 (1) from adapter plug P1 (2).
3. Measure resistance between cable W28 plugs P1 and P2 (3).
4. Does multimeter read 0 ohms?



**NO**

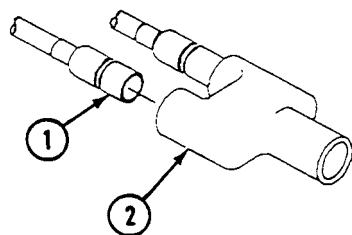
**AYN**

1. Replace cable W28 (WP 0849 00).
2. Verify no faults found.

**YES**

**A2Y**

1. Remove lead 38B (1) from adapter plug P3 (2).
2. Set MASTER SWITCH to ON.
3. Measure voltage between lead 38B (1) and ground.
4. Does multimeter read 22 volts DC or more?



**NO**

**A2YN**

1. Refer to: Dome Light Malfunction (M577A3 Only) (WP 0040 00).

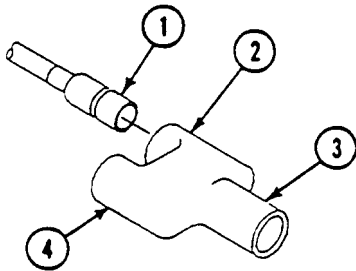
**YES**

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY (M1068A3 ONLY)—Continued**

0101 00

**A3Y**

1. Set MASTER SWITCH to OFF.
2. Remove cable W35, plug P1 (1) from adapter plug P2 (2).
3. Measure resistance between plugs P1 (3), P2 (2), and P3 (4) of adapter.
4. Does multimeter read 0 ohms for each measurement?



NO

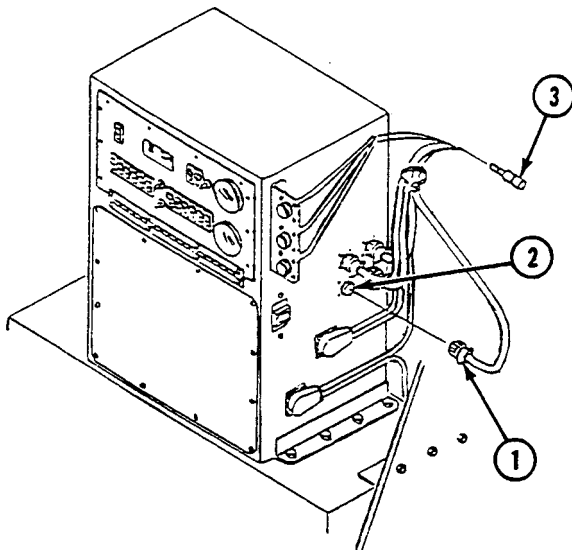
**A3YN**

1. Replace adapter (WP 0849 00).
2. Verify no faults found.

YES

**A4Y**

1. Remove cable W35 plug P9 (1) from jack J29 (2) of Power Control Enclosure.
2. Measure resistance between plugs P1 (3) and P9 (1) of cable W35.
3. Does multimeter read 0 ohms?



NO

**A4YN**

1. Replace cable W35 (WP 0849 00).
2. Verify no faults found.

YES



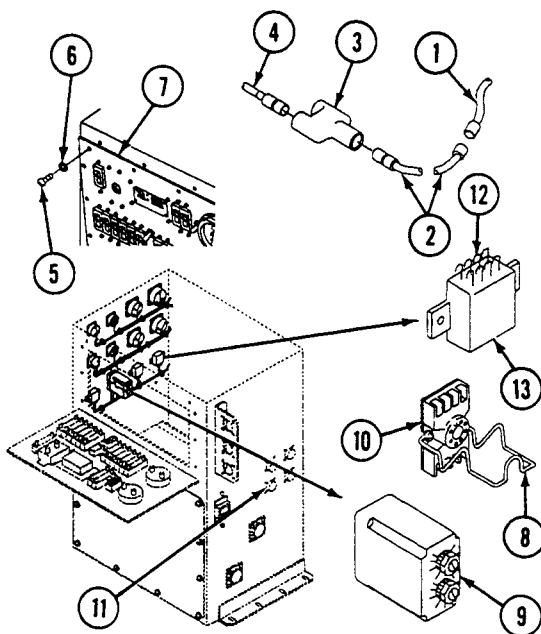
A5Y

**WARNING**



Make sure ALL AC external and internal power is OFF.

1. Install front light lead 38B (1) on cable W28 P2 (2) and cable to plug P1 of adapter (3).
2. Install rear domelight lead 38B (4) on plug P3 of adapter (3).
3. Remove ten screws (5) and lockwashers (6), and lower faceplate (7). Discard lockwashers.
4. Lift relay bail (8) and remove XK2 relay (9) from relay socket (10).
5. Measure resistance between jack J29 center pin (11) and pin X1 (12) of relay XK5 (13).
6. Does multimeter read 0 ohms?



YES

A5YN

1. Faulty inside lead 34A of Power Control Enclosure. Beyond unit maintenance repair.
2. Notify Supervisor.

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY (M1068A3 ONLY)—Continued**

0101 00

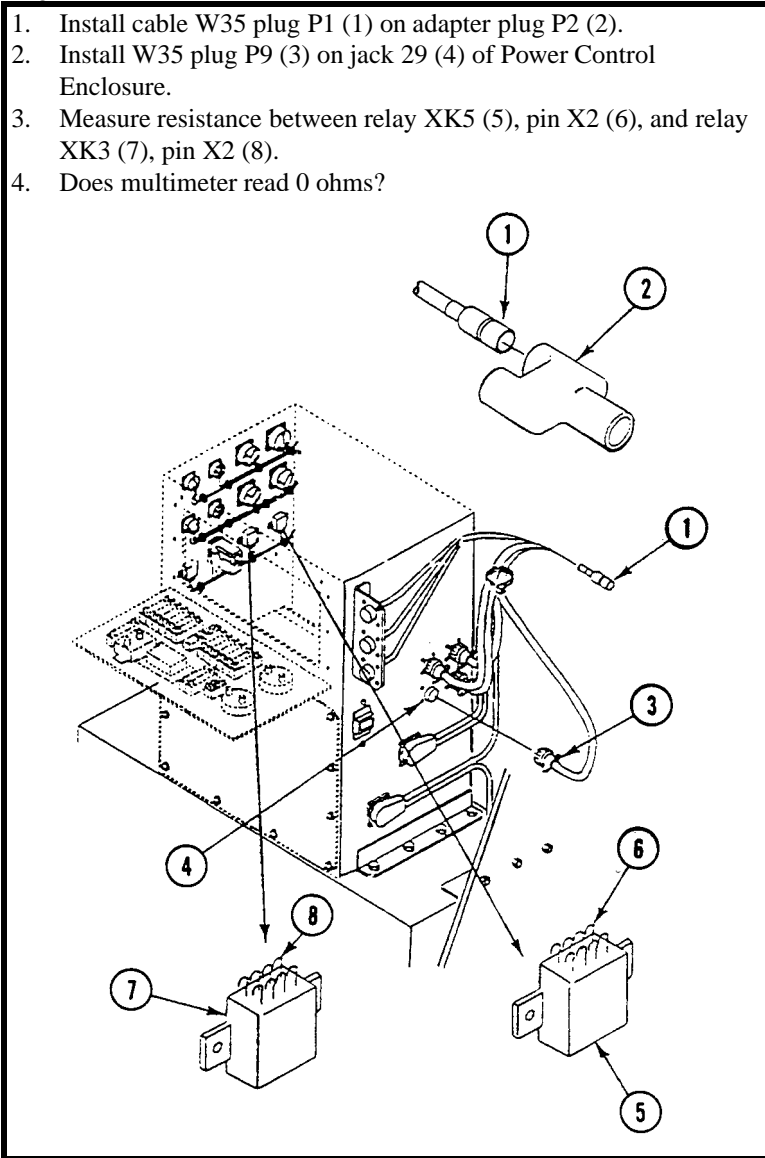
**A6Y**

1. Install cable W35 plug P1 (1) on adapter plug P2 (2).
2. Install W35 plug P9 (3) on jack 29 (4) of Power Control Enclosure.
3. Measure resistance between relay XK5 (5), pin X2 (6), and relay XK3 (7), pin X2 (8).
4. Does multimeter read 0 ohms?

**NO**

**A6YN**

1. Faulty lead 3F of XK2. Beyond unit maintenance repair.
2. Notify Supervisor.



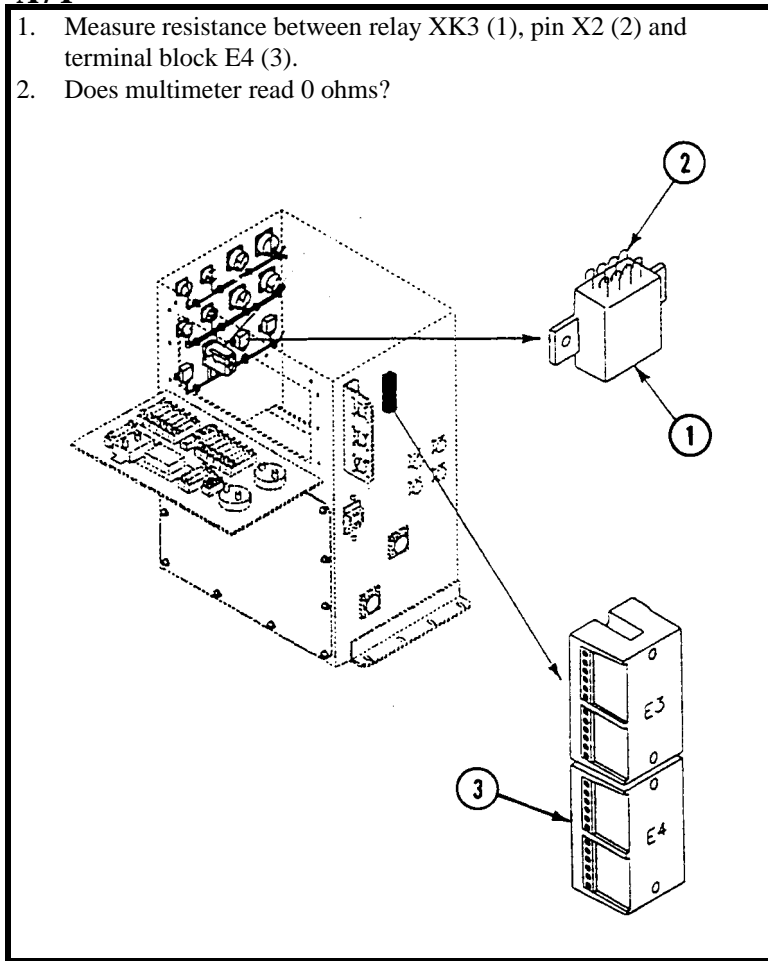
**YES**

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY (M1068A3 ONLY)—Continued**

0101 00

**A7Y**

1. Measure resistance between relay XK3 (1), pin X2 (2) and terminal block E4 (3).
2. Does multimeter read 0 ohms?



**NO**

**A7YN**

1. Faulty lead 3E of XK3. Beyond unit maintenance repair.
2. Notify Supervisor.

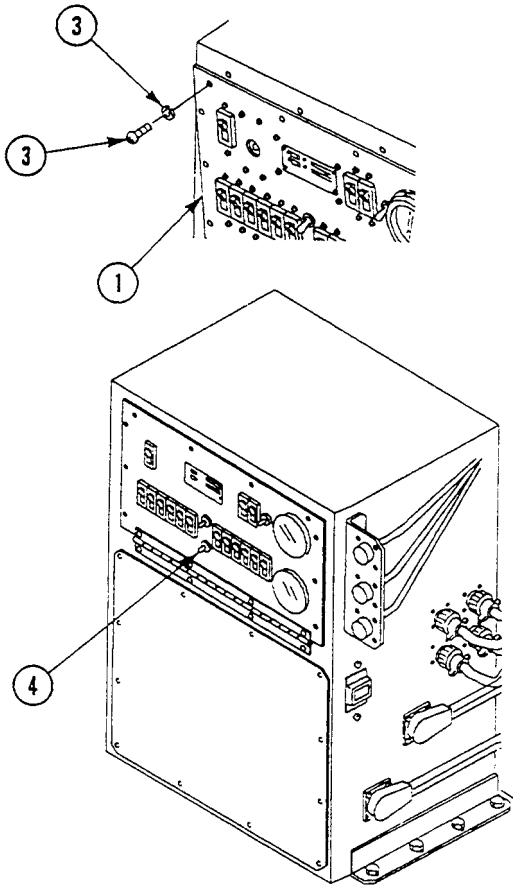
**YES**

**IN BLACKOUT MODE, FLUORESCENT LIGHTS OPERATE INCORRECTLY (M1068A3 ONLY)—Continued**

0101 00

**A8Y**

1. Lift relay bail and install XK2 relay on relay socket.
2. Raise faceplate (1) and secure to enclosure with ten new lockwashers (2) and screws (3).
3. Set MASTER SWITCH to ON. Set vehicle BLACKOUT LIGHT to ON. Be sure ramp door is open.
4. Apply AC power to SICPS system. Set BLACKOUT ENABLE switch (4) on Power Control Enclosure panel in upward position (TM 11-7010-256-12&P).
5. Do fluorescent lights illuminate?



**NO**

**A8YN**

1. Faulty relay XK5. Beyond unit maintenance repair.
2. Notify Supervisor.

**YES**

**A9Y**

1. Verify no faults found.

**FLUORESCENT LIGHTS DO NOT OPERATE (M1068A3 ONLY)**

**0102 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
 TM 10-5410-229-13&P  
 TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
 Digital multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
 Carrier blocked (see your -10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
 Helper (H)

**WARNING**



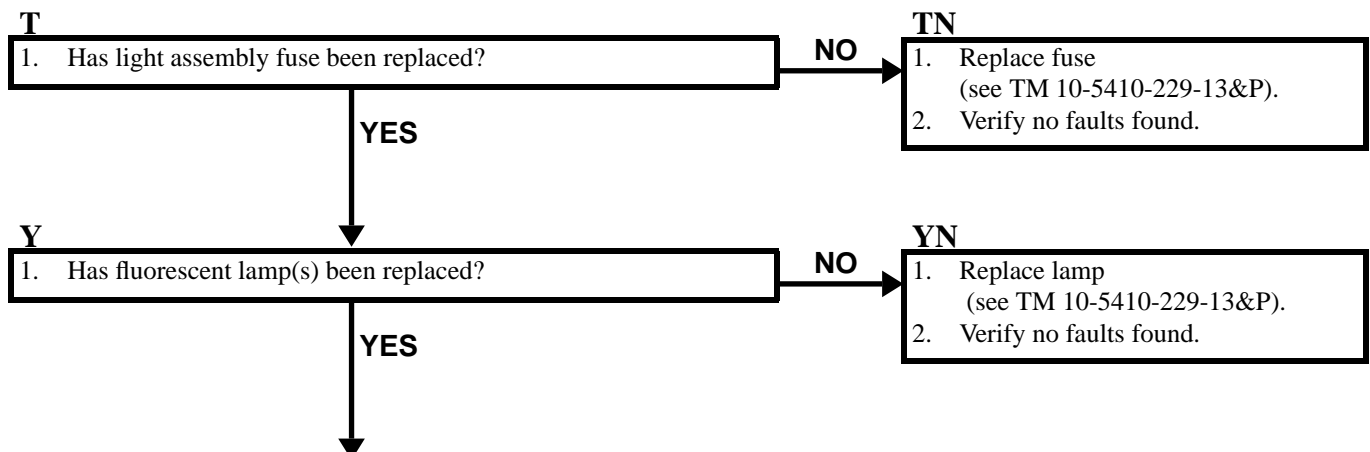
**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

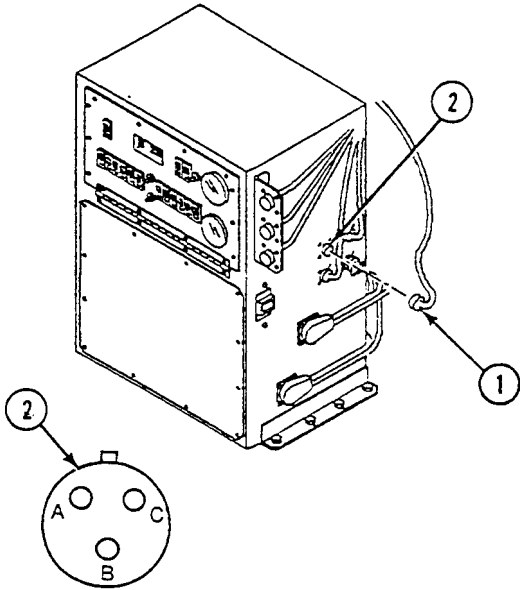
**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.



**2Y**

1. Remove all power (see your -10 and TM 11-7010-256-12&P).
2. Remove cable W11, plug P17 (1) from power control enclosure jack J37 (2).
3. Apply AC power and set AC LIGHTS and BLACKOUT ENABLE switches to upward position (see TM 11-7101-256-12&P).
4. Measure voltage between sockets A and B of jack J37 (2).
5. Does multimeter read 110 volts AC or more?



**NO**

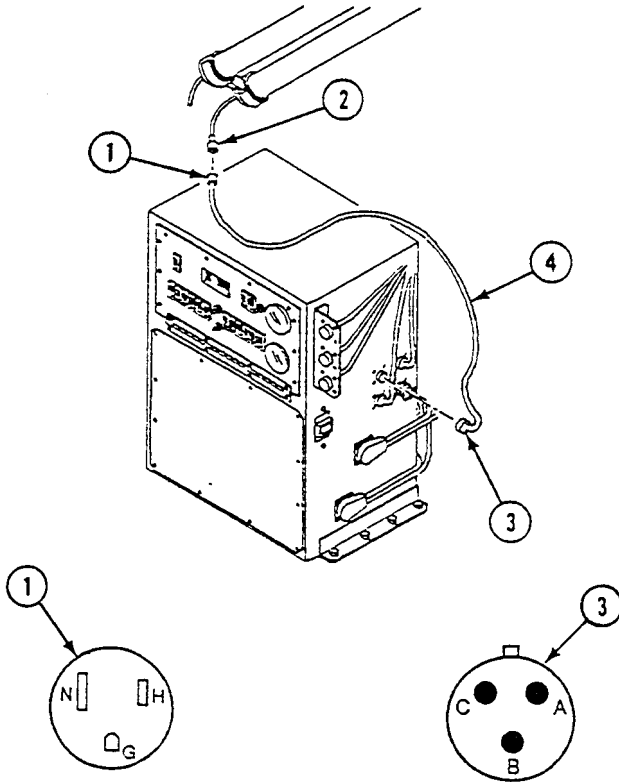
**2YN**

1. Go to: No Power To AC Circuits (M1068A3 Only) (WP 0107 00).

**YES**

**3Y**

1. Set power control enclosure AC MAIN switch to OFF (see TM 11-7010-256-12&P).
2. Remove cable W11 plug P2 (1) from light assembly plug P1 (2).
3. Measure resistance between sockets of P2 (1) and pins of plug P17 (3) on cable W11 (4) as follows:  
 P2 socket H to P17 pin A  
 P2 socket N to P17 pin B  
 P2 socket G to P17 pin C
4. Does multimeter read 0 ohms for each measurement?



**NO**

**3YN**

1. Replace cable W11 (WP 0845 00).
2. Verify no faults found.

**YES**

**4Y**

1. Replace/repair light set assembly (WP 0825 00 and TM 10-5410-229-13&P).





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**VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED  
(M1068A3 ONLY)**

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**0103 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwashers (22)

Personnel Required

Power-generation Equipment Repairer 52D10  
Helper (H)

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**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

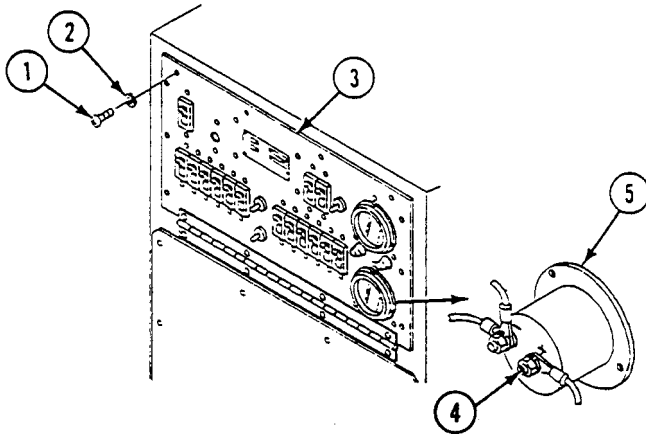
**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued

0103 00

**T**

1. Remove ten screws (1), lockwashers (2), and lower faceplate (3) on Power Control Enclosure. Discard lockwashers.
2. Set MASTER SWITCH to ON.
3. Measure voltage between positive (+) terminal (4) on meter M2 (5) and ground.
4. Does multimeter read 22 volts DC or more?



**NO**

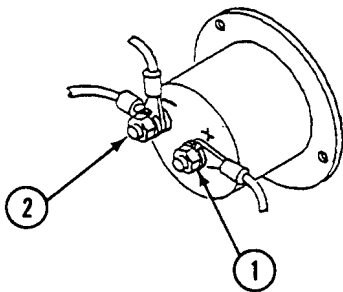
**TN**

1. Go to: Power Control Enclosure A1 DC Input/Output Inoperative (M1068A3 Only) (WP 0090 00).

**YES**

**Y**

1. Measure voltage between positive (+) terminal (1) and negative (-) terminal (2) of Power Control Enclosure A1 meter M2 (3).
2. Does multimeter read 22 volts DC or more?



**NO**

**YN**

1. Replace Power Control Enclosure A1 meter M2 (WP 0827 00).
2. Verify no faults found.

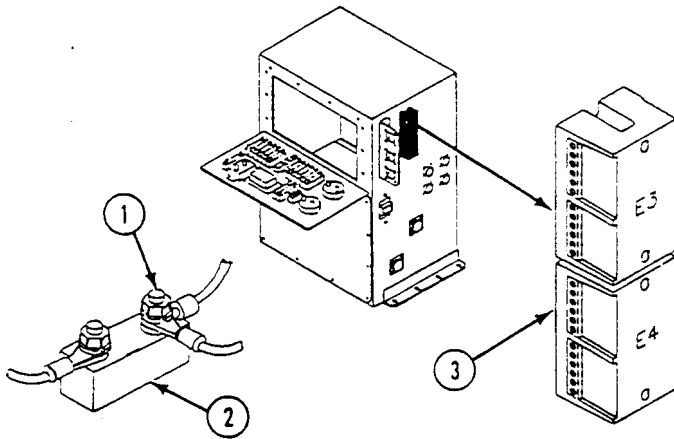
**YES**

**VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued**

0103 00

**2Y**

1. Set MASTER SWITCH to OFF.
2. Apply external AC power to SICPS vehicle (TM 11-7010-256-12&P).
3. Measure voltage between terminal 1 (1) of circuit breaker CB1 (2) and terminal block E4 (3).
4. Does multimeter read 110 volts AC or more?



**YES**



**NO**

**2YN**

1. Go to: Vehicle Will Not Accept External AC Power (M1068A3 Only) (WP 0104 00).

VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued

0103 00

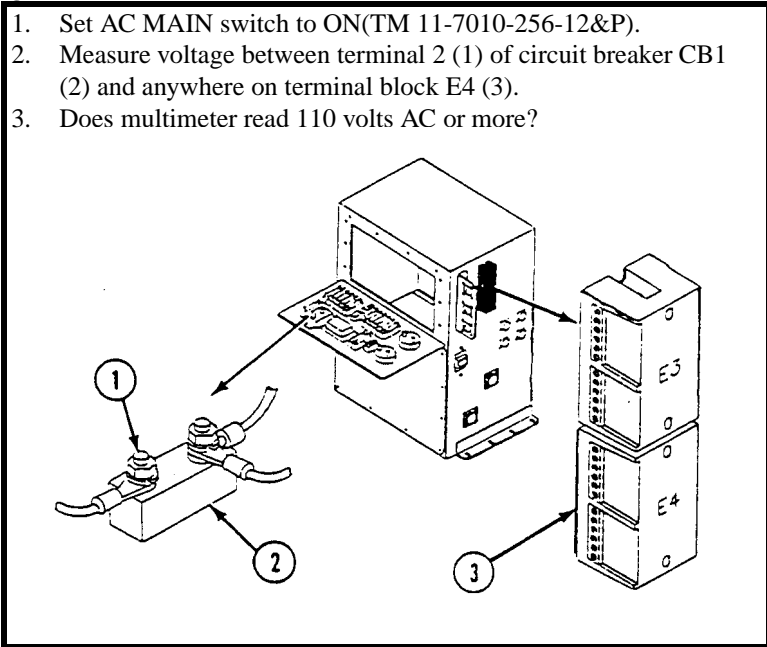
**3Y**

1. Set AC MAIN switch to ON(TM 11-7010-256-12&P).
2. Measure voltage between terminal 2 (1) of circuit breaker CB1 (2) and anywhere on terminal block E4 (3).
3. Does multimeter read 110 volts AC or more?

NO

**3YN**

1. Replace circuit breaker CB1 (WP 0828 00).
2. Verify no faults found.



YES

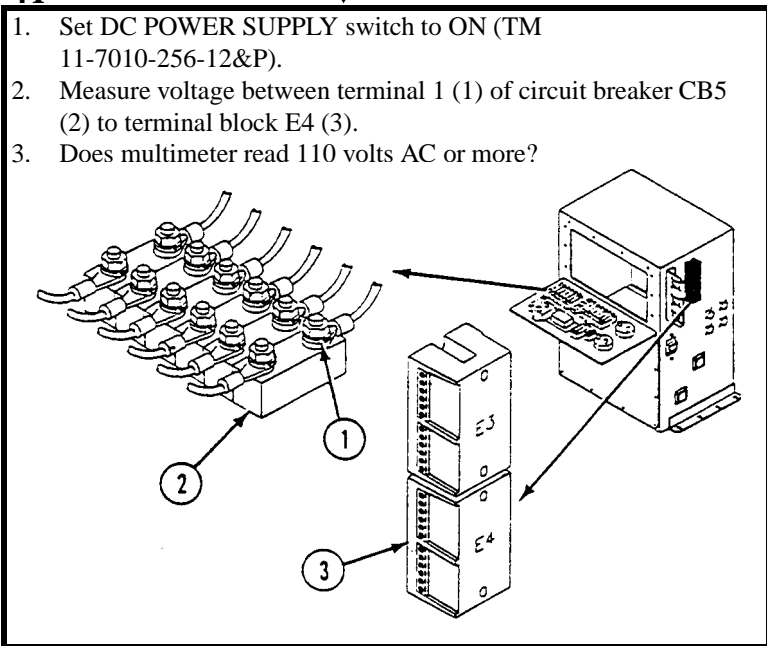
**4Y**

1. Set DC POWER SUPPLY switch to ON (TM 11-7010-256-12&P).
2. Measure voltage between terminal 1 (1) of circuit breaker CB5 (2) to terminal block E4 (3).
3. Does multimeter read 110 volts AC or more?

NO

**4YN**

1. Faulty circuit 9D. Beyond unit maintenance repair.
2. Notify supervisor.



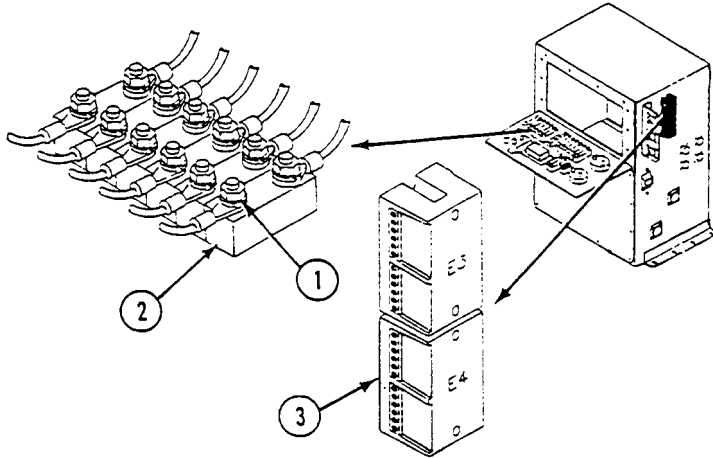
YES

VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued

0103 00

**5Y**

1. Measure voltage between terminal 2 (1) of circuit breaker CB5 (2) and terminal block E4 (3).
2. Does multimeter read 110 volts AC or more?



**NO**

**5YN**

1. Replace circuit breaker CB5 (WP 0828 00).
2. Verify no faults found.

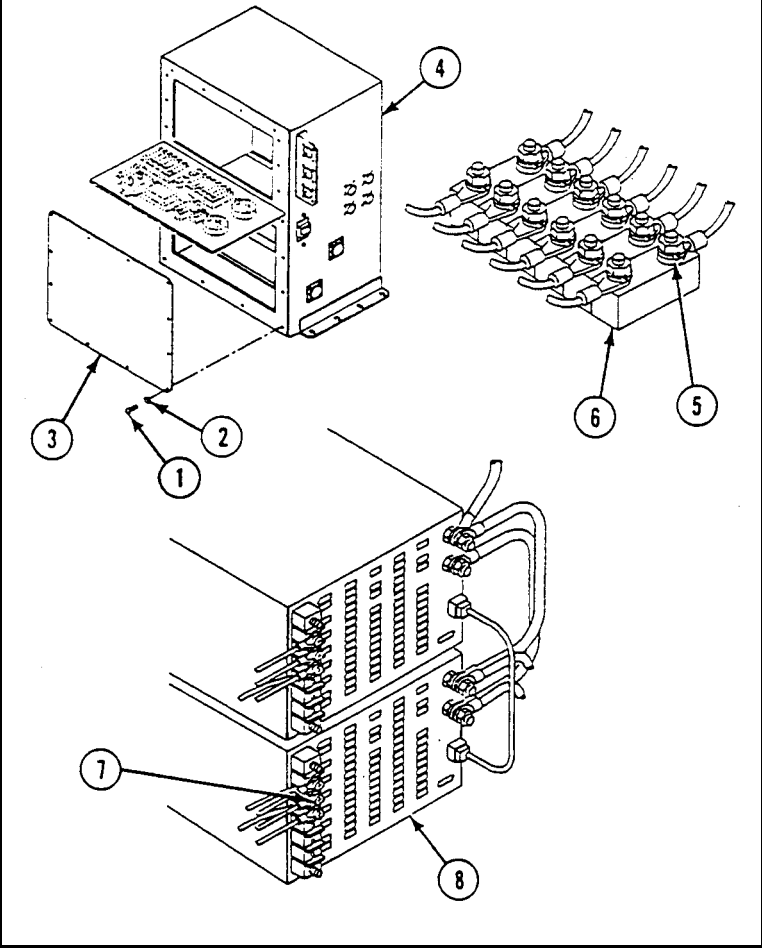
**YES**

VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued

0103 00

6Y

1. Turn OFF AC and DC Power (TM 11-7010-256-12&P).
2. Remove 12 screws (1), lockwashers (2), and cover (3) from Power Control Enclosure (4). Discard lockwashers.
3. Measure resistance between terminal 2 (5) of circuit breaker CB5 (6) and AC HIGH terminal (7) of power supply PS2 (8).
4. Does multimeter read 0 ohms?



NO

6YN

1. Faulty circuit 10A. Beyond unit maintenance repair.
2. Notify supervisor.

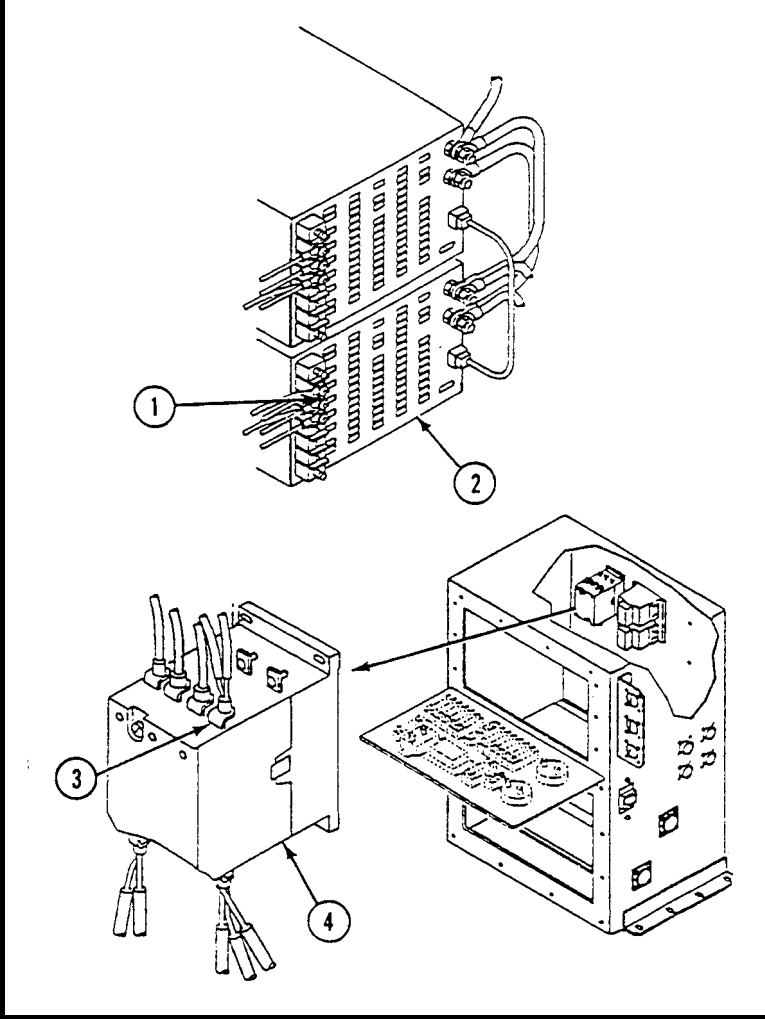
YES

VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued

0103 00

7Y

1. Measure resistance between terminal AC LOW (1) of power supply PS2 (2) and terminal L2 (3) of relay K1 (4).
2. Does multimeter read 0 ohms?



NO

7YN

1. Faulty circuit 8B. Beyond unit maintenance repair.
2. Notify supervisor.

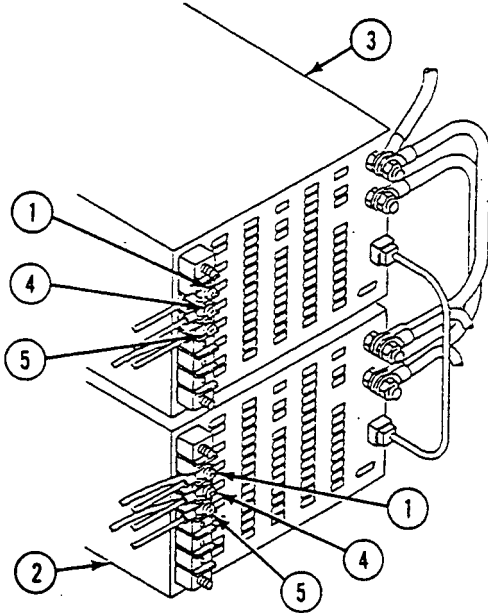
YES

VEHICLE BATTERIES DISCHARGE WITH EXTERNAL AC POWER APPLIED (M1068A3 ONLY)—Continued

0103 00

**8Y**

1. Measure resistance between circuit 10B terminals (1) on power supply PS2 (2) and power supply PS1 (3).
2. Measure resistance between circuit 8C terminals (4) on power supply PS2 (2) and power supply PS1 (3).
3. Measure resistance between circuit 3Z terminals (5) on power supply PS2 (2) and power supply PS1 (3).
4. Does multimeter read 0 ohms for each measurement?



**NO**

**8YN**

1. Faulty circuit 10B, 8C, and/or 3Z. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**9Y**

1. Install 12 screws, new lockwashers, and cover on Power Control Enclosure A1.
2. Raise faceplate on Power Control Enclosure A1 and secure with ten screws and new lockwashers.
3. Faulty power supply(s). Beyond unit maintenance repair.
4. Notify supervisor.



**VEHICLE WILL NOT ACCEPT EXTERNAL AC POWER (M1068A3 ONLY)**

**0104 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Vehicle grounded (see your -10) and  
(TM 11-7010-256-12&P)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

**WARNING**



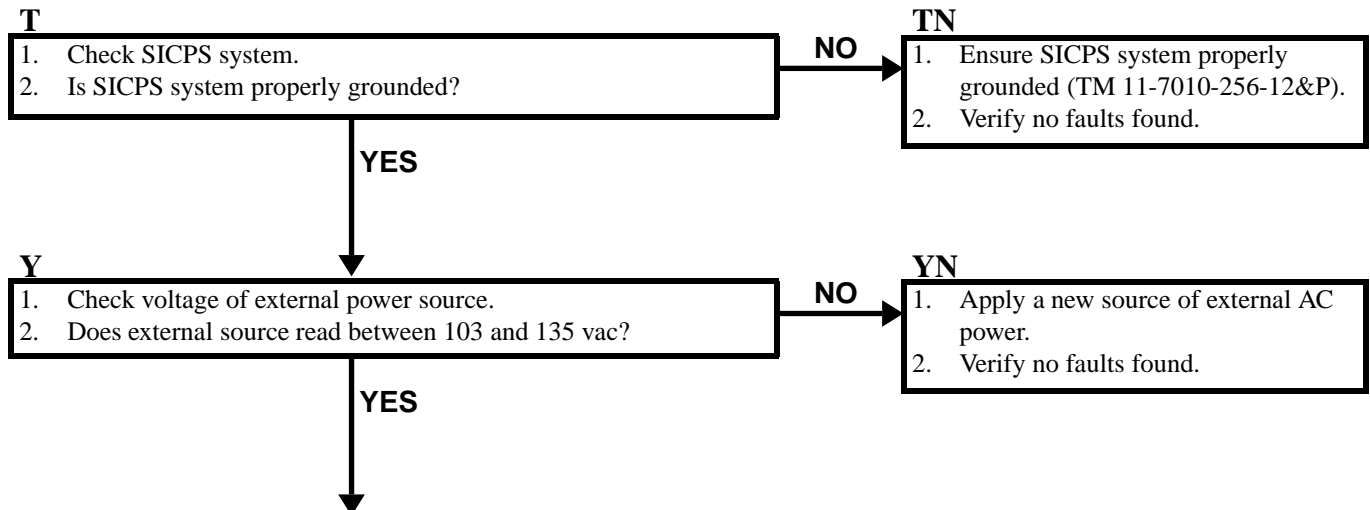
**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

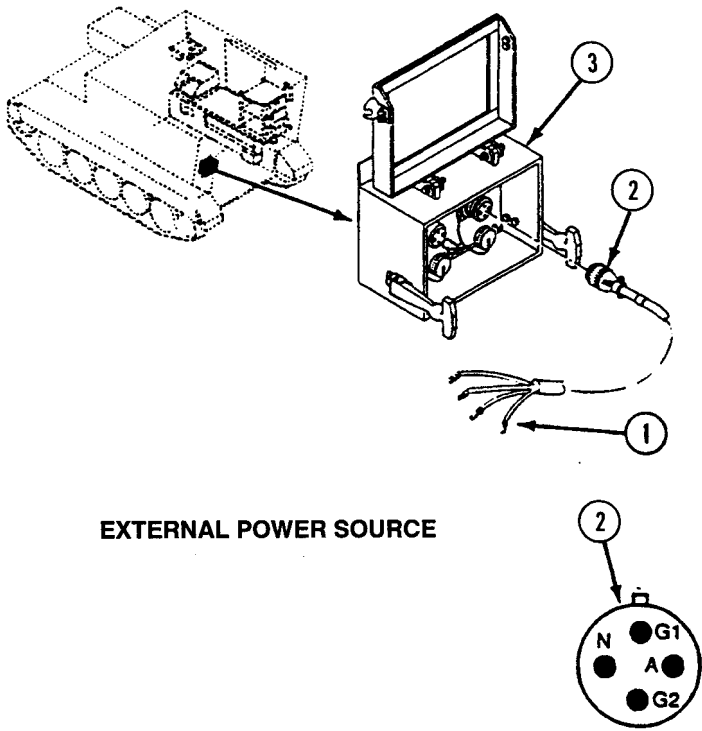
**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.



**2Y**

1. Apply external source of AC power to SICPS vehicle (TM 11-7010-256-12&P).
2. Remove cable W1 leads (1) from external power source, if applicable.
3. Remove cable W2, J1 (2) from Power Entry Box (3).
4. Measure resistance between W1 leads and W2 plug J1 (2) as follows:
  - W1 HOT to J1 pin A
  - W1 NEU to J1 pin N
  - W1 GND1 to J1 pin G1
  - W1 GND2 to J1 pin G2
5. Does multimeter read 0 ohms for all readings?



EXTERNAL POWER SOURCE

YES

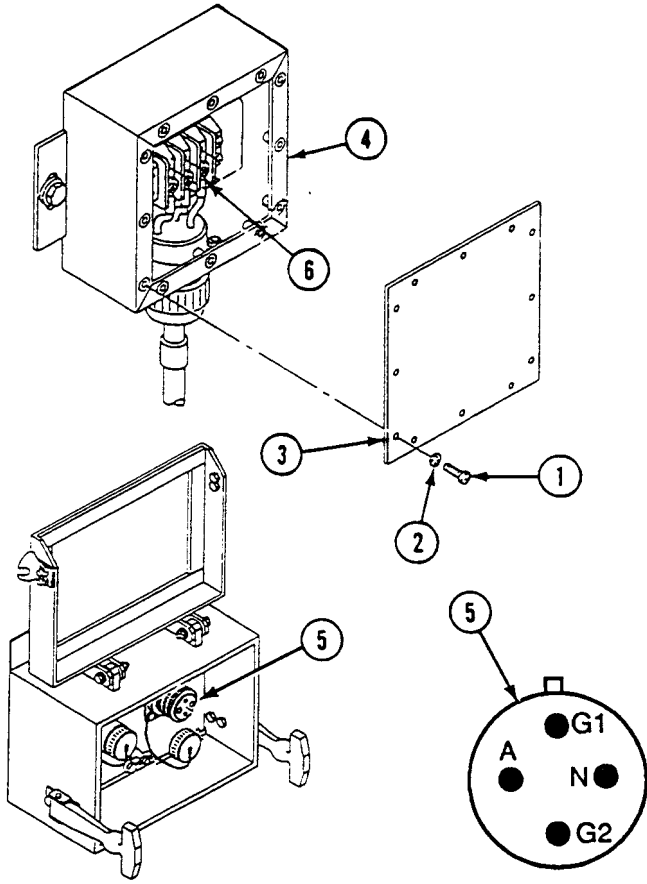
NO

**2YN**

1. Replace cable W1/2 (see TM 11-7010-256-12&P).
2. Verify no faults found.

**3Y**

1. Remove 12 screws (1), lockwashers (2), and cover (3) from Power Distribution Box (4).
2. Measure resistance between Power Entry Box A4 plug P1 (5) and Power Distribution Box A3 (4) terminal block as follows:
  - P1 socket A to post E1
  - P1 socket N to post E2
  - P1 socket G1 to post E3
  - P1 socket G2 to post E3
3. Does multimeter read 0 ohms for each reading?



YES

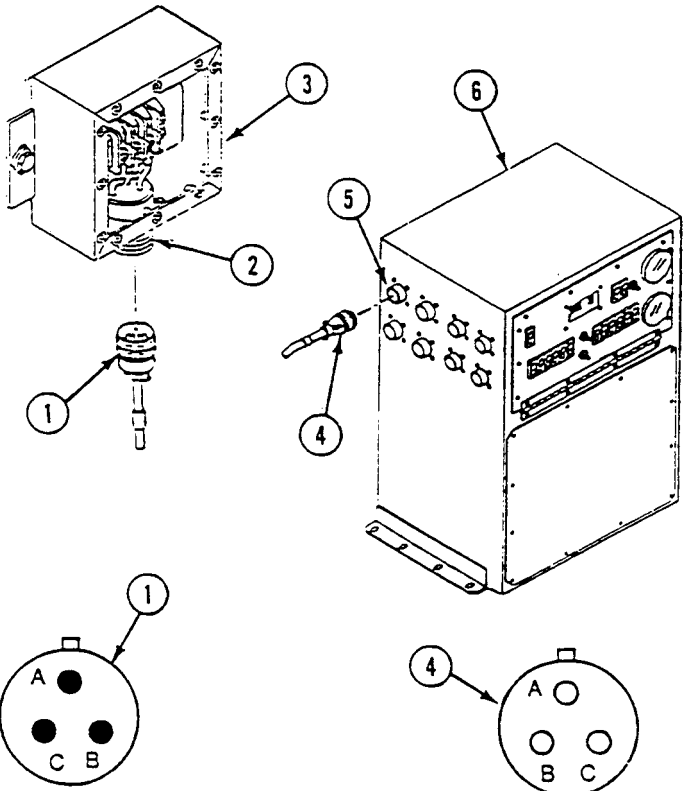
NO

**3YN**

1. Replace Power Entry Box Assembly A4 (M1068A3 Only) (WP 0832 00).
2. Verify no faults found.

**4Y**

1. Remove cable W3 plug P1 (1) from jack J1 (2) on Power Distribution Box (3) and plug P3 (4) from jack J24 (5) on Power Control Enclosure (6).
2. Measure resistance between plug P1 (1) and plug P3 (4) as follows:
  - P1 pin A to P3 socket A
  - P1 pin B to P3 socket B
  - P1 pin C to P3 socket C
3. Does multimeter read 0 ohms for each reading?



NO

**4YN**

1. Replace cable W3 (WP 0837 00).
2. Verify no faults found.

YES

**5Y**

1. Faulty Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

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**VEHICLE WILL NOT ACCEPT INVERTER AC POWER (M1068A3 ONLY)**

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**0105 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)

Digital multimeter (WP 0926 00, Item 30)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10

Helper (H)

References

See your -10

TM 11-7010-256-12&P

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

Carrier grounded (see your -10) and  
(TM 11-7010-256-12&P)

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**WARNING**

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**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

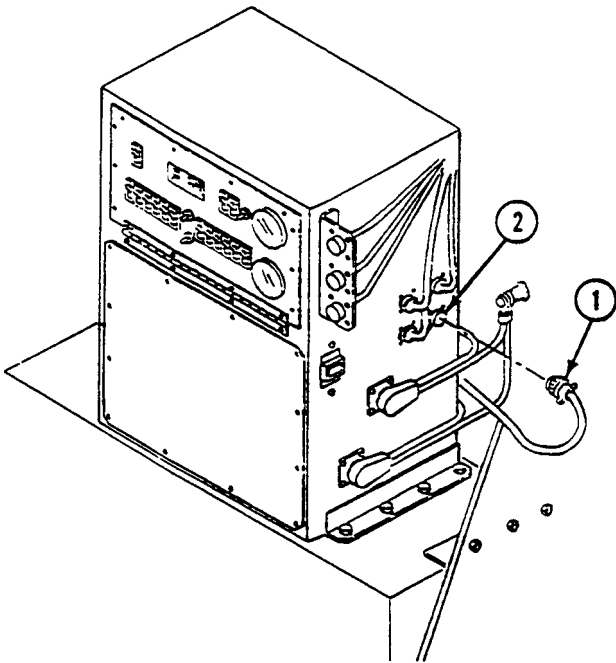
**T**

1. Remove all external power from SICPS system (see your -10) and (TM 11-7010-256-12&P).
2. Remove cable W5 plug P6 (1) from power enclosure jack J27 (2).
3. Turn MASTER POWER switch ON.
4. Turn on inverters (TM 11-7010-256-12&P).
5. Measure voltage between pins A and B of plug P6 (1). Repeat measure for pins C and D.
6. Does multimeter read 110 volts AC or more for both measurements?

**NO**

**TN**

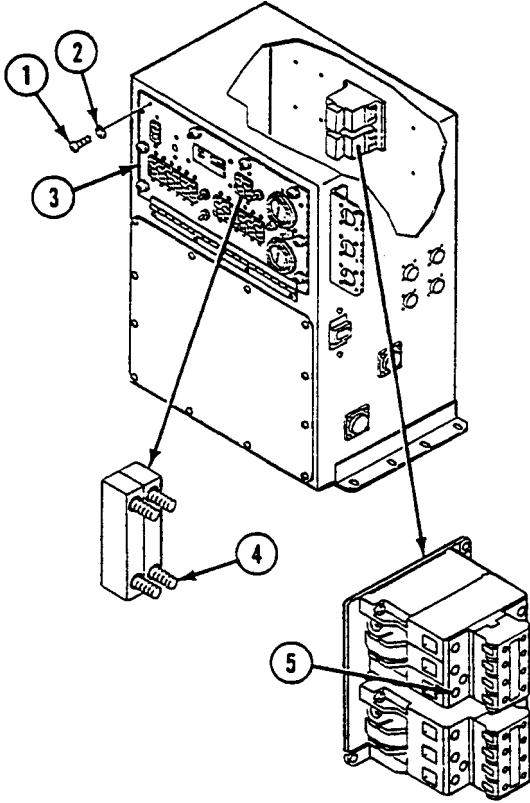
1. Go to: No AC Power From Inverters (M1068A3 Only) (WP 0109 00).



**YES**

**Y**

1. Turn MASTER POWER switch OFF.
2. Install cable W5 on power enclosure.
3. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
4. Measure resistance between circuit breaker CB3 pin 2 (4) and reversing contactor RC1-REV terminal L1 (5).
5. Does multimeter read 0 ohms?



**NO**

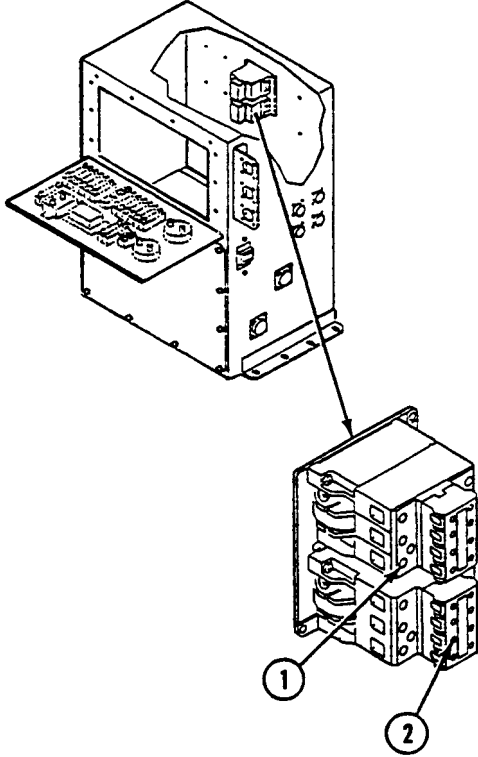
**YN**

1. Faulty lead 13A. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

2Y

1. Measure resistance between reversing contactor RC1-REV terminal L1 (1) and reversing contactor RC1-FWD terminal 51 (2).
2. Does multimeter read 0 ohms?



NO

2YN

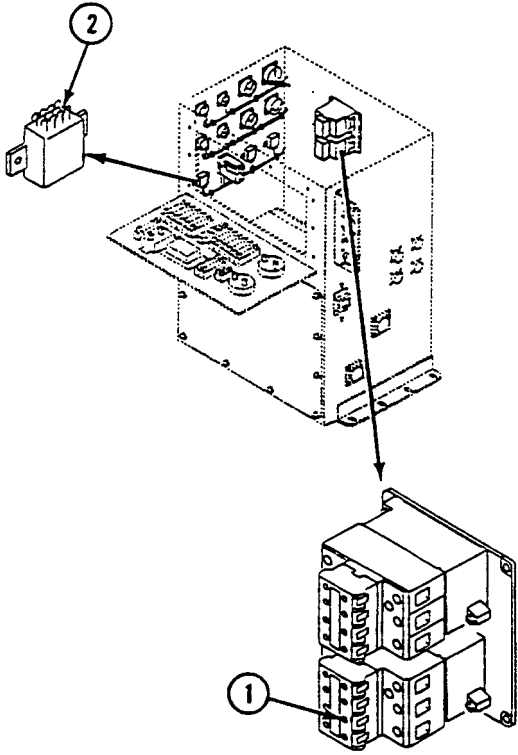
1. Faulty lead 13D. Beyond unit maintenance repair.
2. Notify supervisor.

YES



**3Y**

1. Measure resistance between reversing contactor RC1-FWD terminal 52 (1) and relay K4 terminal A3 (2).
2. Does multimeter read 0 ohms?



YES



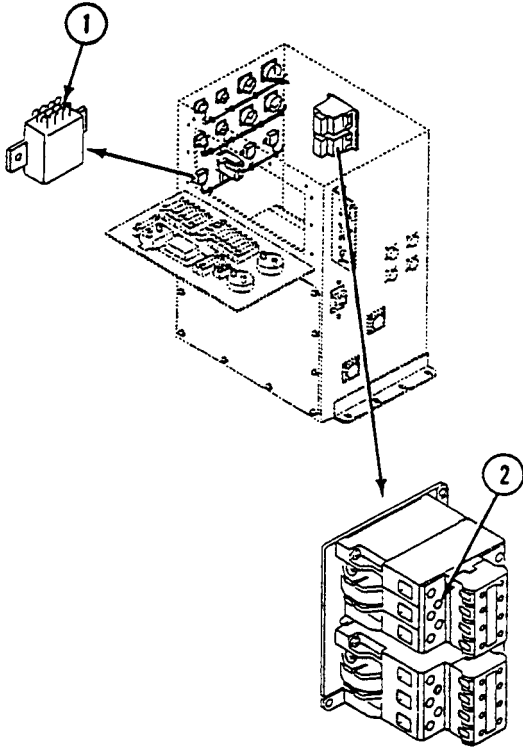
NO

**3YN**

1. Faulty lead 14A. Beyond unit maintenance repair.
2. Notify supervisor.

**4Y**

1. Measure resistance between relay K4 terminal A2 (1) and reversing contactor RC1-REV terminal A2 (2).
2. Does multimeter read 0 ohms?



**NO**

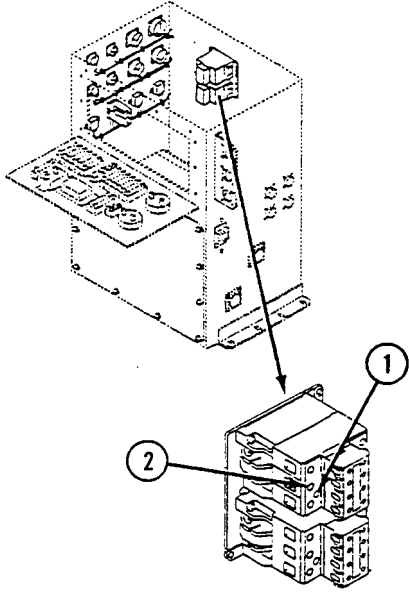
**4YN**

1. Faulty lead 16A. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**5Y**

1. Measure resistance between reversing contactor RC1-REV terminal A1 (1) and terminal L2 (2).
2. Does multimeter read 0 ohms?



**YES**



**NO**

**5YN**

1. Faulty lead 28D. Beyond unit maintenance repair.
2. Notify supervisor.

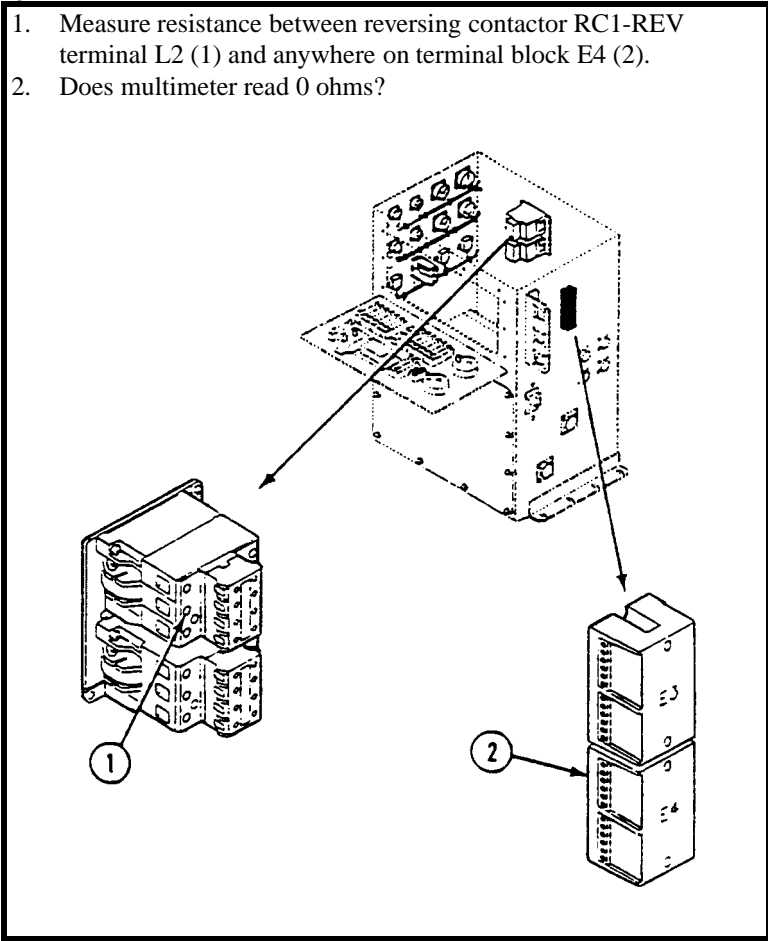
**6Y**

1. Measure resistance between reversing contactor RC1-REV terminal L2 (1) and anywhere on terminal block E4 (2).
2. Does multimeter read 0 ohms?

NO

**6YN**

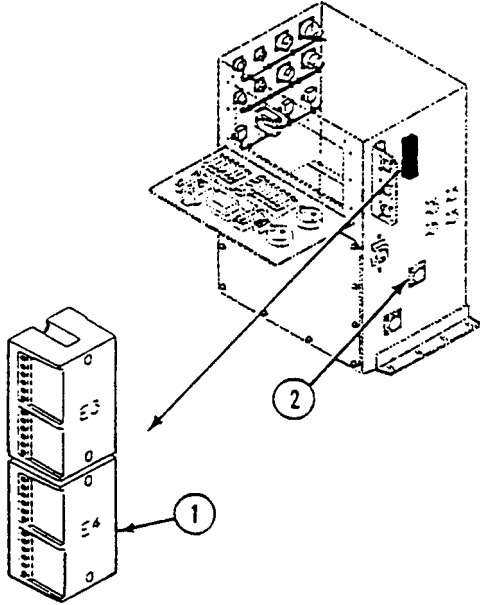
1. Faulty lead 28G. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**7Y**

1. Measure resistance between anywhere on terminal block E4 (1) and power enclosure jack J26 outer shell (2).
2. Does multimeter read 0 ohms?



**YES**

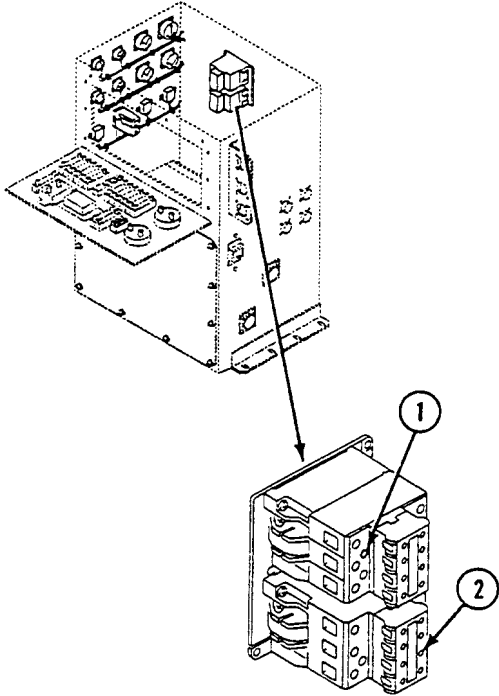
**NO**

**7YN**

1. Faulty lead 32C. Beyond unit maintenance repair.
2. Notify supervisor.

**8Y**

1. Measure resistance between reversing contactor RC1-REV terminal A2 (1) and reversing contactor RC1-FWD terminal 52 (2).
2. Does multimeter read 0 ohms?



**NO**

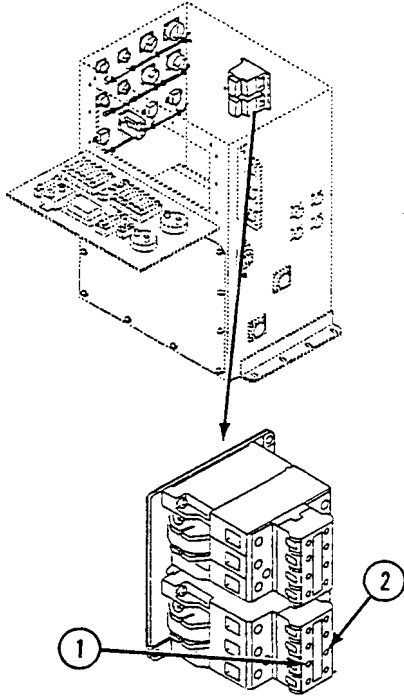
**8YN**

1. Faulty relay K4. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**9Y**

1. Measure resistance between reversing contactor RC1-FWD terminal 51 (1) and terminal 52 (2).
2. Does multimeter read 0 ohms?



**NO**

**9YN**

1. Faulty reversing contactor. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**10Y**

1. Raise faceplate and secure with ten new lockwashers and screws.
2. Verify no faults found.





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**NO POWER TO DC CIRCUITS (M1068A3 ONLY)**

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**0106 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (22)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

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**WARNING**

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**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

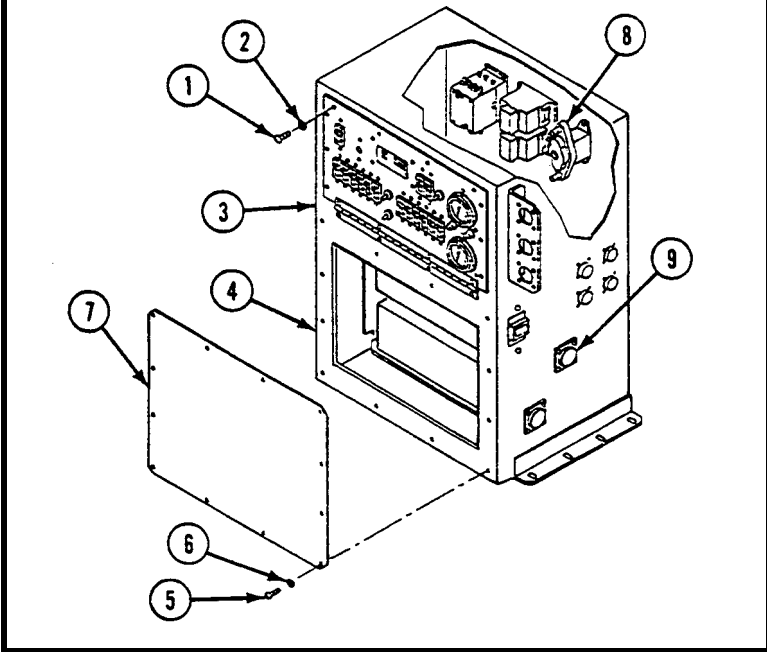
**T**

1. Remove all external power from SICPS system (see your -10 and TM 11-7010-256-12&P).
2. Remove ten screws (1) and lockwashers (2), and lower faceplate (3) of Power Control Enclosure (4). Discard lockwashers.
3. Remove twelve screws (5), lockwashers (6), and cover (7) from front of Power Control Enclosure (4). Discard lockwashers.
4. Set MASTER SWITCH to ON.
5. Measure voltage between relay K6 (8) terminal 2 and Power Control Enclosure jack J25 (9) negative terminal.
6. Does multimeter read 22 volts DC or more?

**NO**

**TN**

1. Go to: Power Enclosure A1 DC Input/Output Inoperative (M1068A3 Only) (WP 0090 00).

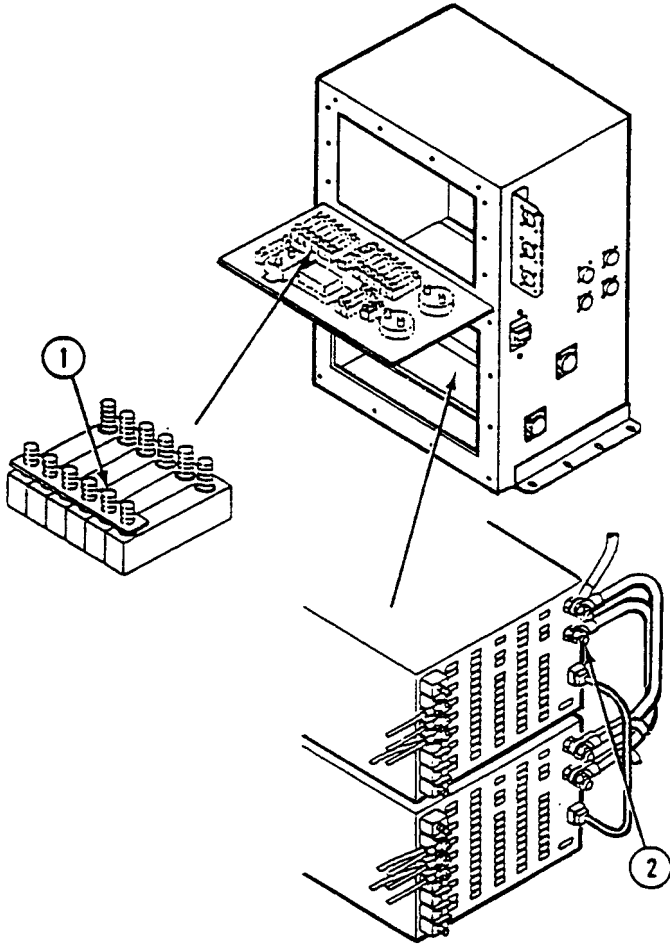


**YES**



**Y**

1. Measure voltage between circuit breaker CB15 (1) terminal 1 at DC bus bar and Power Supply PS1 output negative terminal (2).
2. Does multimeter read 22 volts DC or more?



**NO**

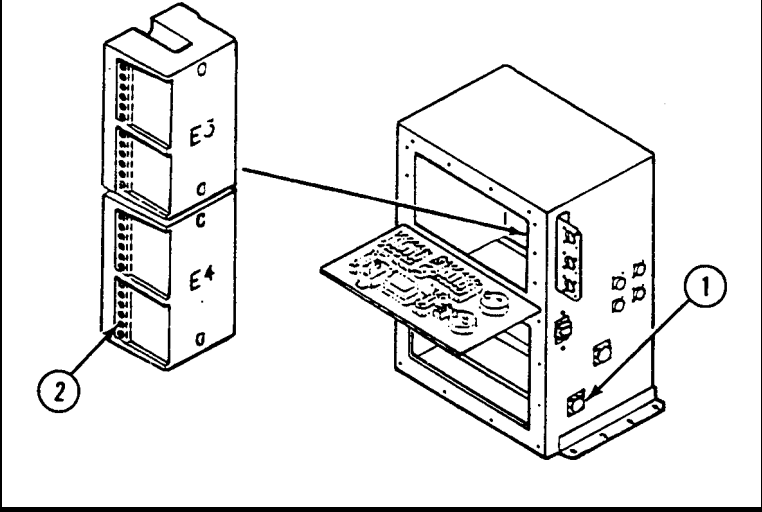
**YN**

1. Go to: Vehicle Batteries Discharge with External AC Power Applied (WP 0103 00).

**YES**

2Y

1. Set MASTER SWITCH to OFF.
2. Measure resistance of circuit 32C between Power Control Enclosure jack J26 (1) and terminal block E4 terminal 2 (2).
3. Does multimeter read 0 ohms?



YES

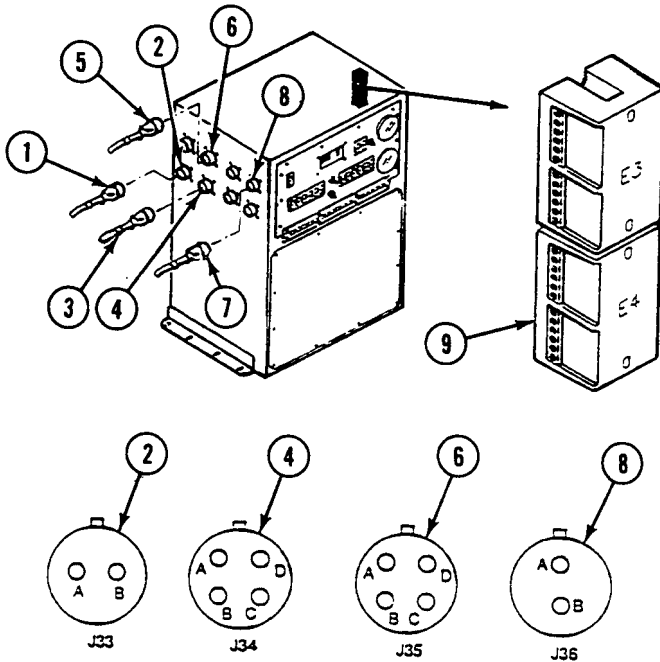
NO

2YN

1. Faulty lead 32C in Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

**3Y**

1. Remove the following cable plugs from jacks on Power Control Enclosure:
  - W45 plug P13 (1) from jack J33 (2)
  - W10 plug P14 (3) from jack J34 (4)
  - W9 plug P15 (5) from jack J35 (6)
  - W32 plug P16 (7) from jack J36 (8)
2. Measure resistance of the following leads between terminal block E4 (9) and the following jacks on Power Control Enclosure:
  - Lead 32G to J33 (2) socket B
  - Lead 32H to J34 (4) socket B
  - Lead 32J to J34 (4) socket D
  - Lead 32L to J35 (6) socket B
  - Lead 32N to J35 (6) socket D
  - Lead 32P to J36 (8) socket B
3. Does multimeter read 0 ohms for all readings?



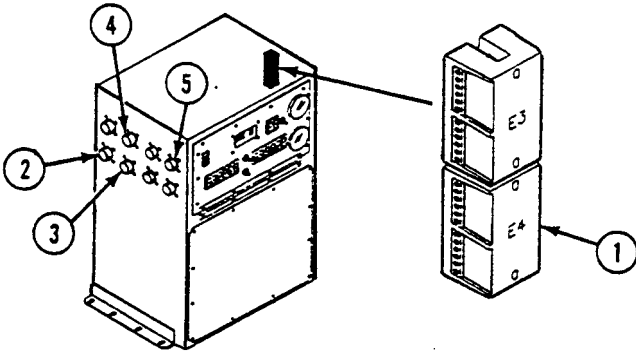
YES

**3YN**

1. Faulty leads 32G, H, J, L, N, and P in Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

**4Y**

1. Set MASTER SWITCH to ON.
2. Set all DC CIRCUITS circuit breakers on Power Control Enclosure panel to ON.
3. Measure voltage between terminal block E4 (1) and the following jacks on Power Control Enclosure:
  - J33 (2) socket A
  - J34 (3) socket A
  - J35 (4) socket A
  - J36 (5) socket A
4. Does multimeter read 22 volts DC or more for all readings?



YES

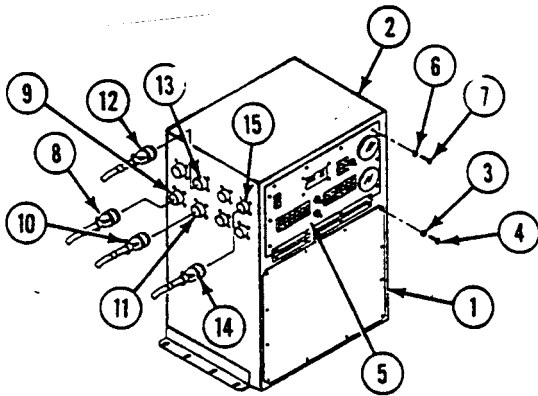
NO

**4YN**

1. Go to: Power Enclosure A1 DC Input/Output Inoperative (WP 0090 00).

**5Y**

1. Install cover (1) on Power Control Enclosure (2) and secure with twelve new lockwashers (3) and screws (4).
2. Raise faceplate (5) and secure to Power Control Enclosure (2) with ten new lockwashers (6) and screws (7).
3. Install the following cable plugs:
  - W45 plug P13 (8) on jack J33 (9)
  - W10 plug P14 (10) on jack J34 (11)
  - W9 plug P15 (12) on jack J35 (13)
  - W32 plug P16 (14) on jack J36 (15)
4. Verify no faults found.







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**NO POWER TO AC CIRCUITS (M1068A3 ONLY)**

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**0107 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

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**WARNING**



**HIGH VOLTAGE** is used in operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with operation and hazards of equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is **OFF/disconnected**.

**BE CAREFUL** not to touch high-voltage connections when installing or operating this equipment.

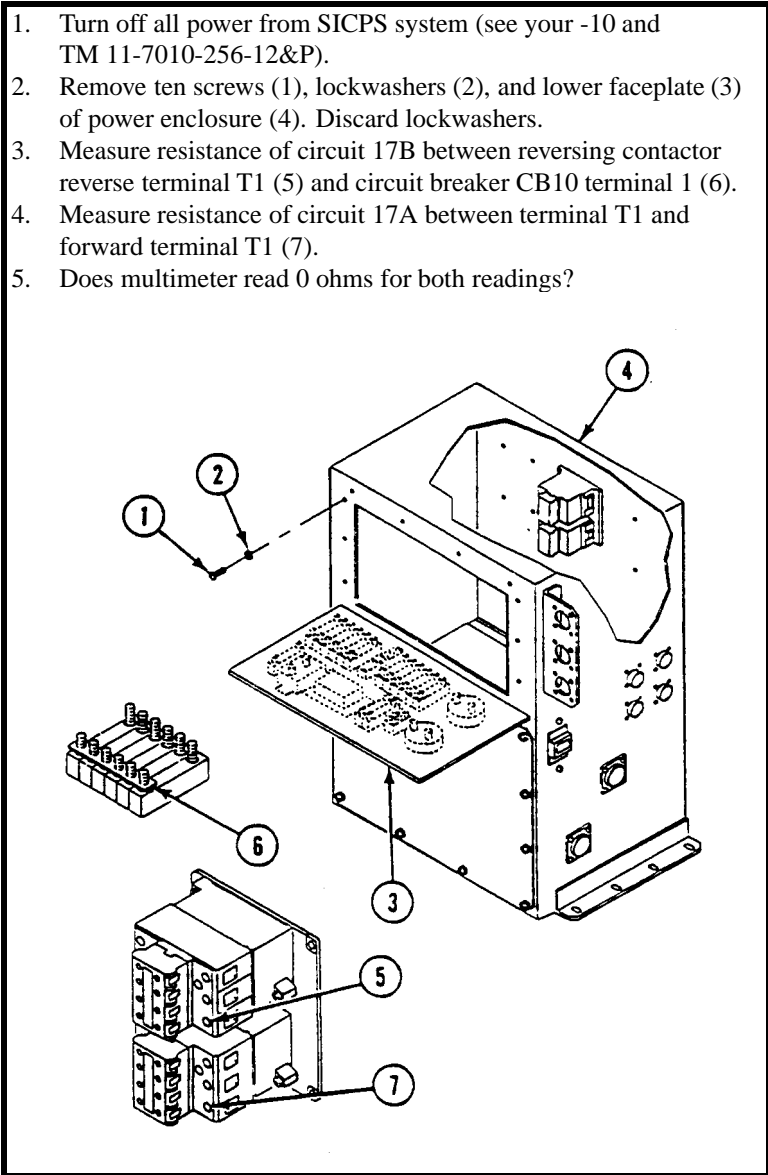
**T**

1. Turn off all power from SICPS system (see your -10 and TM 11-7010-256-12&P).
2. Remove ten screws (1), lockwashers (2), and lower faceplate (3) of power enclosure (4). Discard lockwashers.
3. Measure resistance of circuit 17B between reversing contactor reverse terminal T1 (5) and circuit breaker CB10 terminal 1 (6).
4. Measure resistance of circuit 17A between terminal T1 and forward terminal T1 (7).
5. Does multimeter read 0 ohms for both readings?

**NO**

**TN**

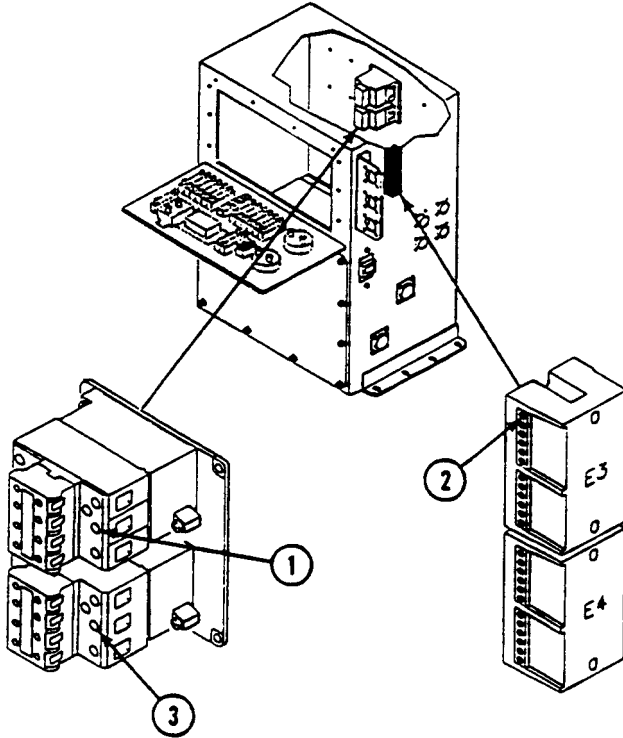
1. Faulty lead 17A and/or lead 17B. Beyond unit maintenance repair.
2. Notify supervisor.



**YES**

Y

1. Measure resistance of circuit 18B between reversing contactor reverse terminal T2 (1) and terminal block E3 terminal 1 (2).
2. Measure resistance of circuit 18A between terminal T2 (1) and forward terminal T2 (3).
3. Does multimeter read 0 ohms for both readings?



NO

YN

1. Faulty lead 18A and/or lead 18B. Beyond unit maintenance repair.
2. Notify supervisor.

YES

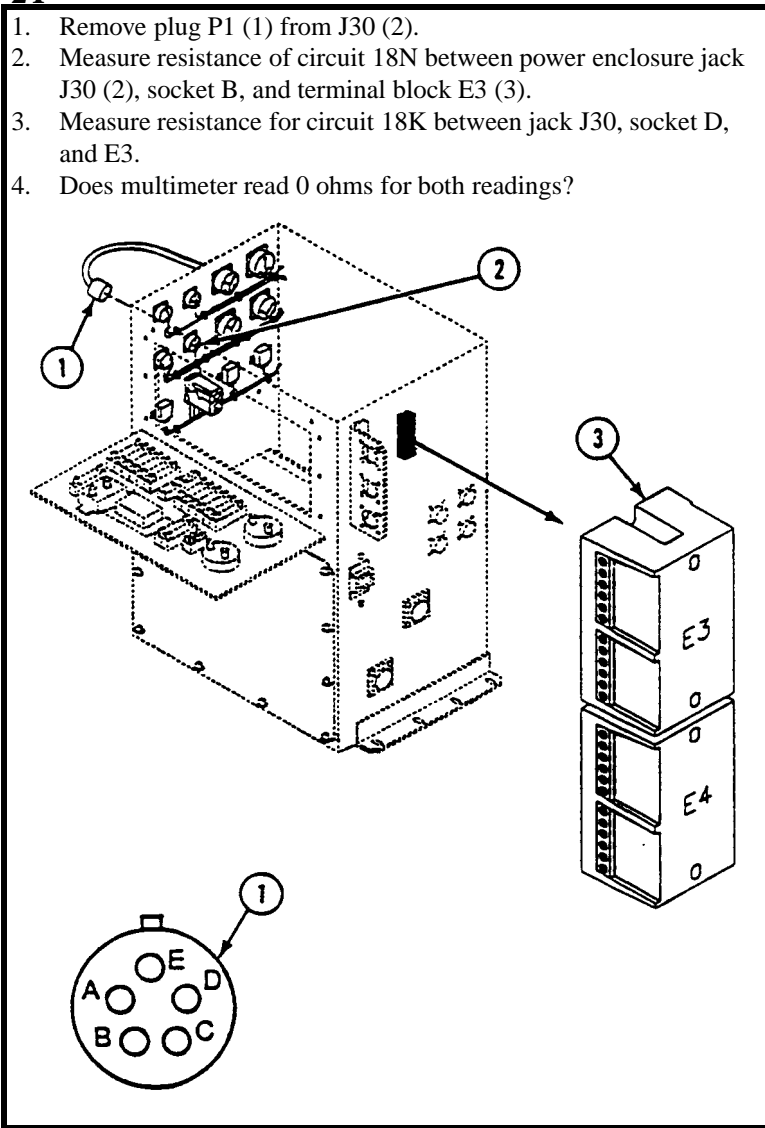
2Y

1. Remove plug P1 (1) from J30 (2).
2. Measure resistance of circuit 18N between power enclosure jack J30 (2), socket B, and terminal block E3 (3).
3. Measure resistance for circuit 18K between jack J30, socket D, and E3.
4. Does multimeter read 0 ohms for both readings?

NO

2YN

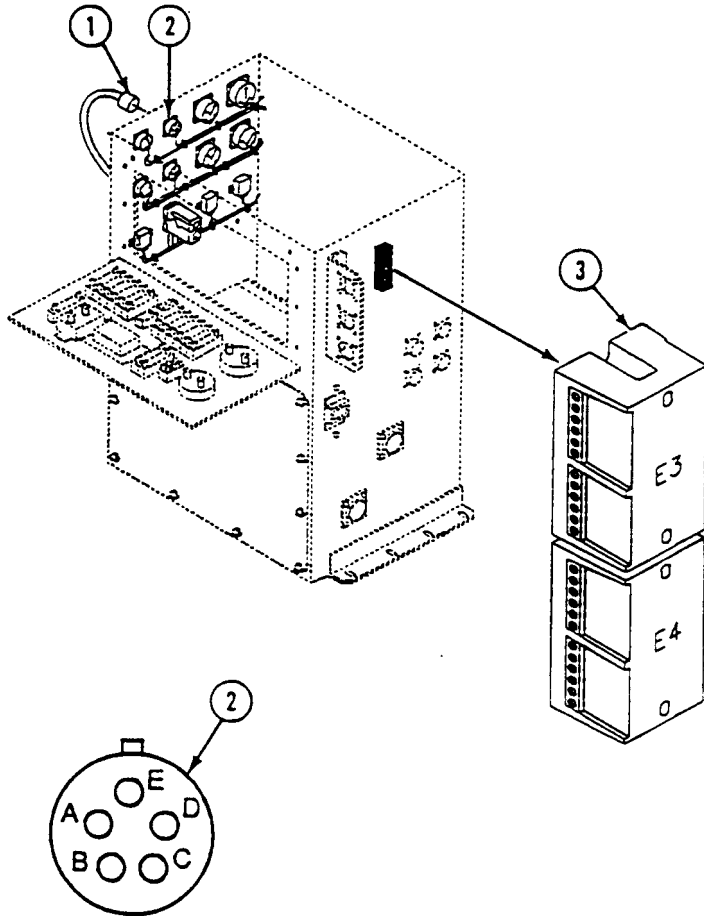
1. Faulty lead 18N and/or lead 18K.  
Beyond unit maintenance repair.
2. Notify supervisor.



YES

**3Y**

1. Remove plug P11 (1) from J31 (2).
2. Measure resistance of circuit 18H between power enclosure jack J31 (2), socket B, and terminal block E3 (3).
3. Measure resistance for circuit 18E between jack J31, socket D, and E3.
4. Does multimeter read 0 ohms for both readings?



NO

**3YN**

1. Faulty lead 18E and/or lead 18H.  
Beyond unit maintenance repair.
2. Notify supervisor.

YES

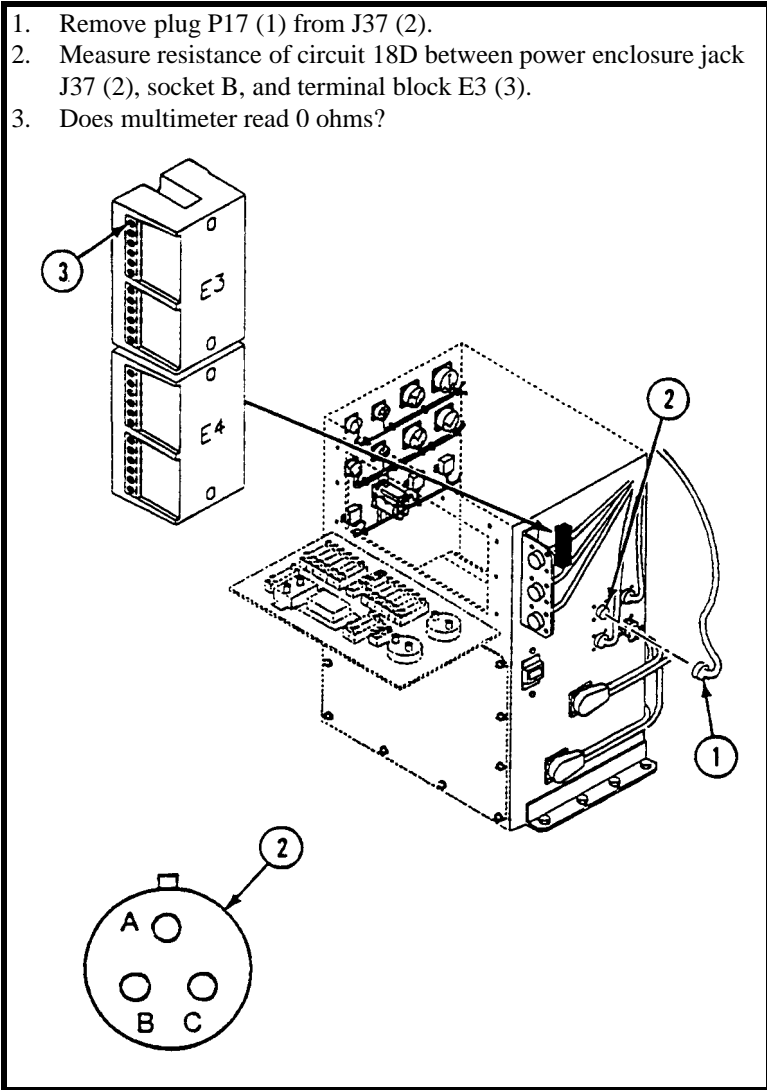
**4Y**

1. Remove plug P17 (1) from J37 (2).
2. Measure resistance of circuit 18D between power enclosure jack J37 (2), socket B, and terminal block E3 (3).
3. Does multimeter read 0 ohms?

NO

**4YN**

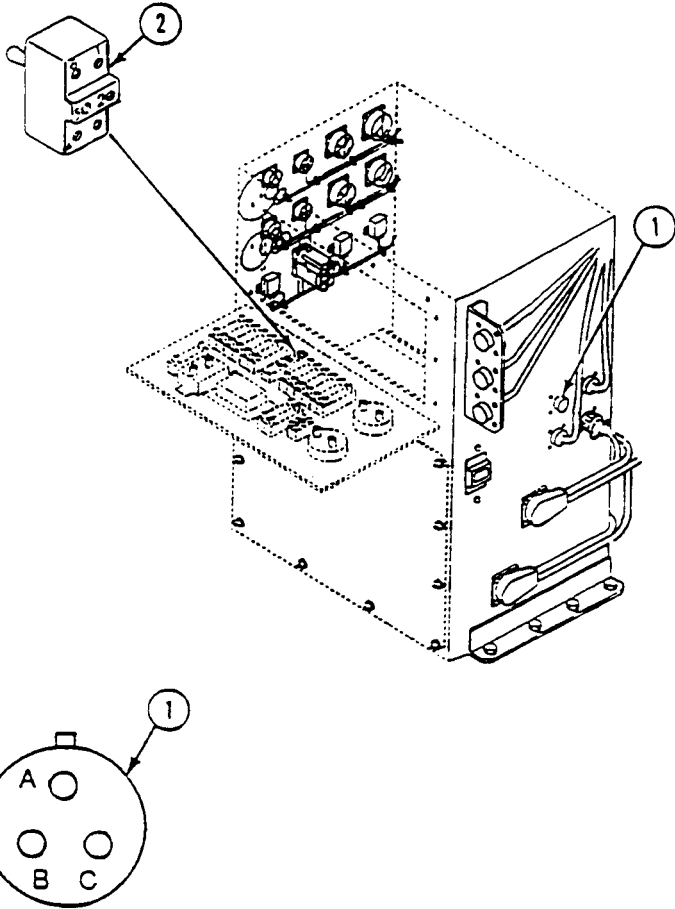
1. Faulty lead 18D. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**5Y**

1. Set BLACKOUT ENABLE switch to upward position.
2. Measure resistance of circuit 20B between power enclosure jack J37 (1), socket A, and BLACKOUT ENABLE switch S1 (2), terminal 3.
3. Does multimeter read 0 ohms?



**NO**

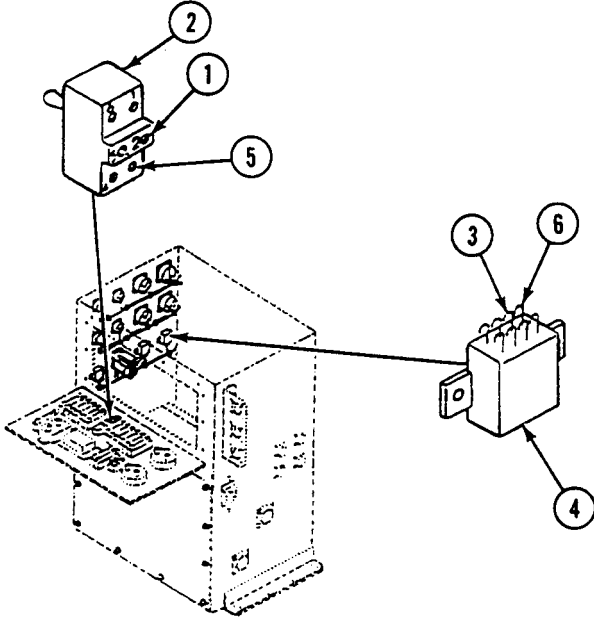
**5YN**

1. Faulty lead 20B. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**6Y**

1. Measure resistance of circuit 19B from terminal 2 (1) of switch S1 (2) and terminal A2 (3) of relay K5 (4).
2. Measure resistance of circuit 20A from terminal 3 (5) of switch S1 (2) and terminal A3 (6) of relay K5 (4).
3. Does multimeter read 0 ohms?



**NO**

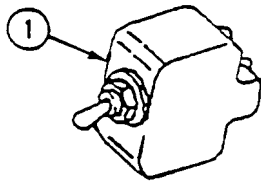
**6YN**

1. Faulty leads 19B and/or lead 20A. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**7Y**

1. Remove leads 19A and 19B from switch S1 position 2.
2. Measure resistance with switch S1 (1) in both up and down positions.
3. Does multimeter read 0 ohms when switch is down and infinite ohms when switch is up?



**NO**

**7YN**

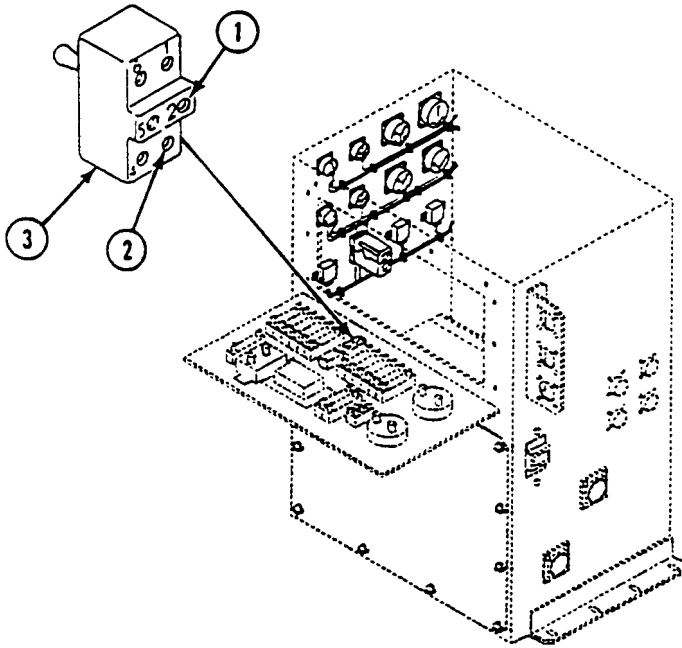
1. Replace switch S1 (WP 0828 00).
2. Verify no faults found.

**YES**



**8Y**

1. Reconnect leads 19A and 19B to S1 position 2.
2. Set BLACKOUT ENABLE switch to upward position.
3. Measure resistance between terminal 2 (1) and terminal 3 (2) of BLACKOUT ENABLE switch S1 (3).
4. Does multimeter read infinite ohms?



YES



NO

**8YN**

1. Faulty relay K5. Beyond unit maintenance repair.
2. Notify supervisor.

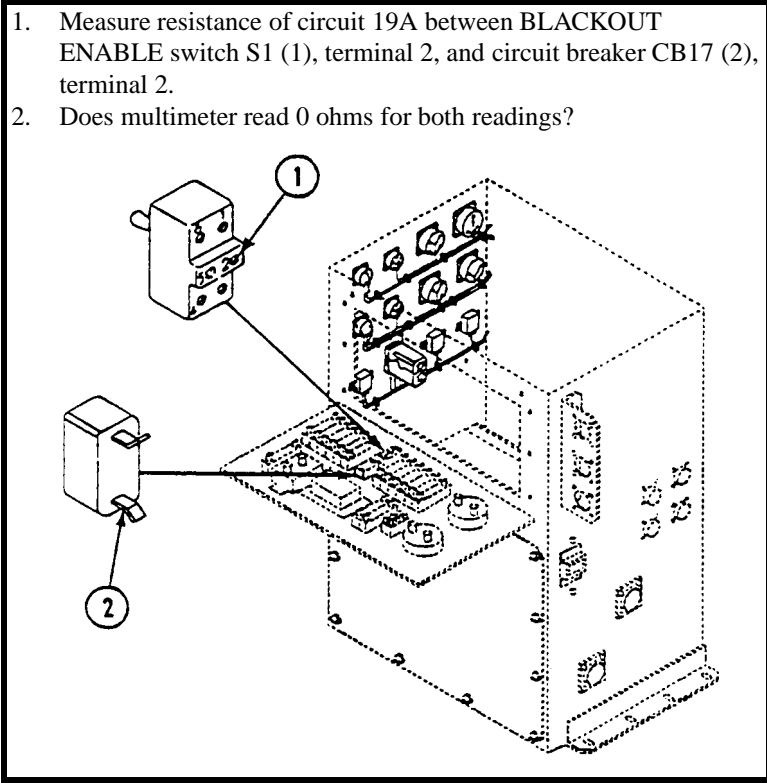
**9Y**

1. Measure resistance of circuit 19A between BLACKOUT ENABLE switch S1 (1), terminal 2, and circuit breaker CB17 (2), terminal 2.
2. Does multimeter read 0 ohms for both readings?

**NO**

**9YN**

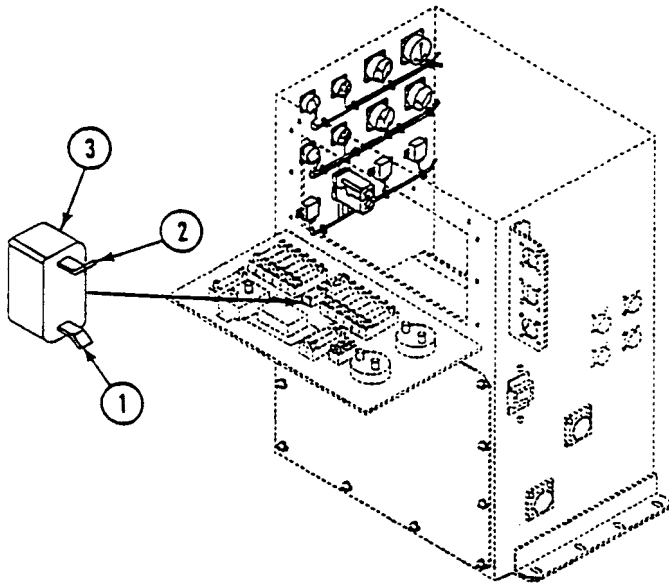
1. Replace lead 19A (WP 0828 00).
2. Verify no faults found.



**YES**

**10Y**

1. Set BLACKOUT ENABLE switch to down position.
2. Set AC LIGHTS switch in upward position.
3. Measure resistance between terminal 2 (1) and terminal 1 (2) of circuit breaker CB17 (3).
4. Does multimeter read 0 ohms?



YES



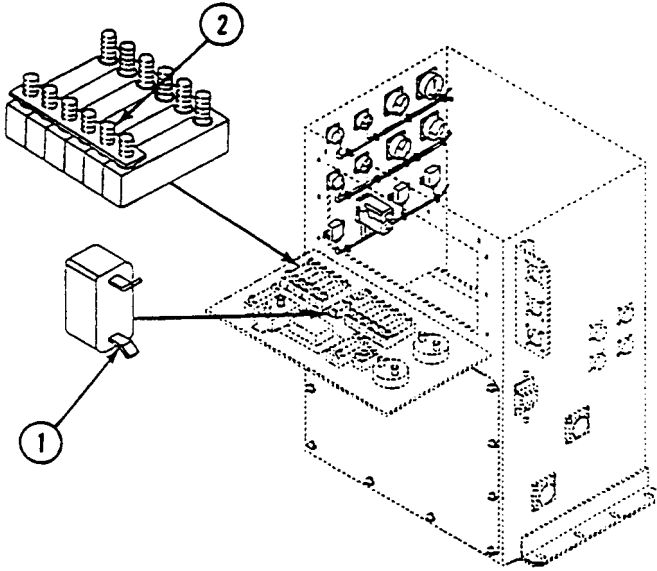
NO

**10YN**

1. Replace circuit breaker CB17 (WP 0828 00).
2. Verify no faults found.

**11Y**

1. Set AC LIGHTS switch in upward position.
2. Measure resistance of circuit 17C between circuit breaker CB17, terminal 2 (1), and AC bus bar at CB9 (2) terminal 1.
3. Does multimeter read 0 ohms?



NO

**11YN**

1. Replace lead 17C (WP 0828 00).
2. Verify no faults found.

YES

**12Y**

1. Raise faceplate and secure with 10 new lockwashers and screws.
2. Verify no faults found.

---

**NO DC OUTPUT FROM DC POWER SUPPLY (M1068A3 ONLY)**

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**0108 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (22)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

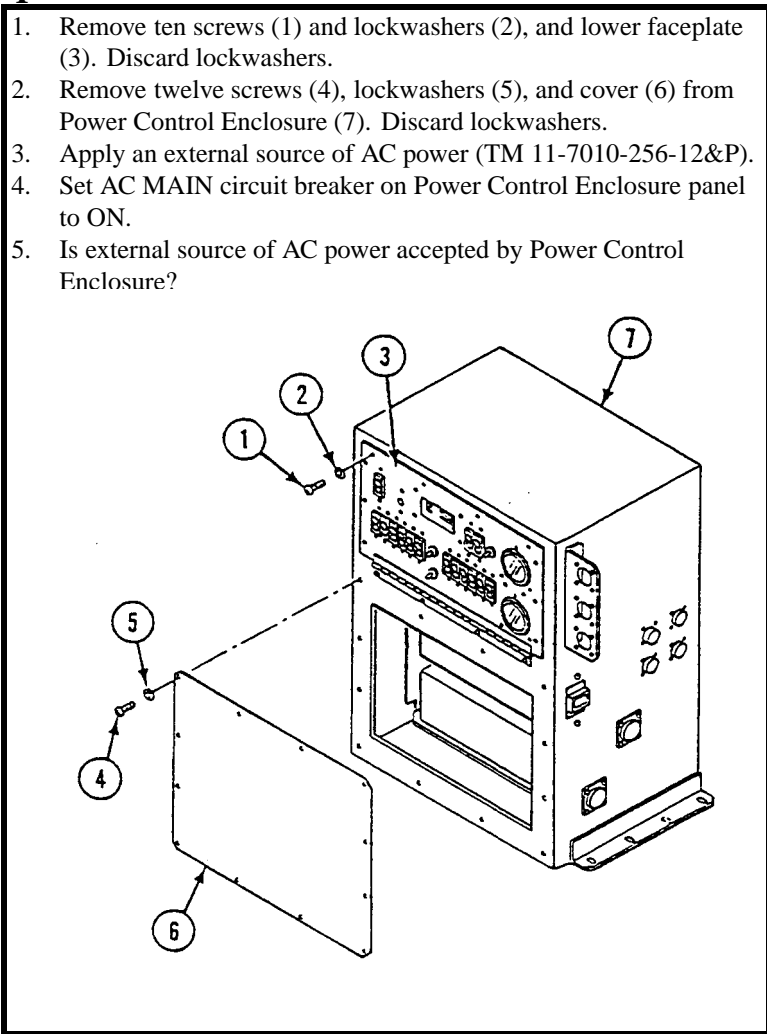
**T**

1. Remove ten screws (1) and lockwashers (2), and lower faceplate (3). Discard lockwashers.
2. Remove twelve screws (4), lockwashers (5), and cover (6) from Power Control Enclosure (7). Discard lockwashers.
3. Apply an external source of AC power (TM 11-7010-256-12&P).
4. Set AC MAIN circuit breaker on Power Control Enclosure panel to ON.
5. Is external source of AC power accepted by Power Control Enclosure?

**NO**

**TN**

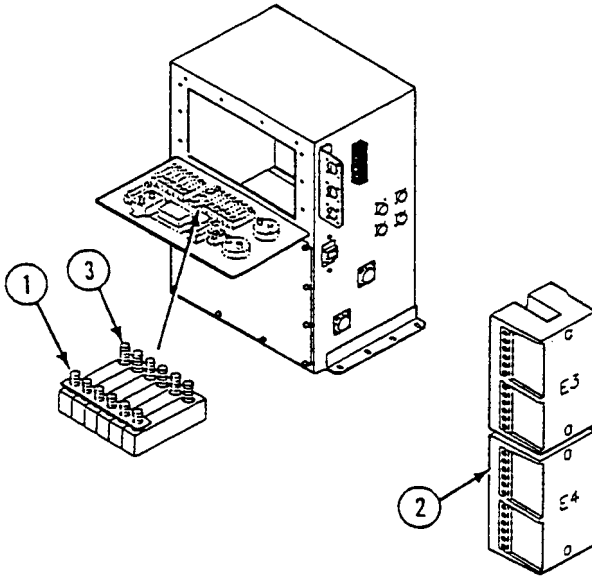
1. Go to: Vehicle Will Not Accept External AC Power (WP 0104 00).



**YES**

**Y**

1. Set DC POWER SUPPLY circuit breaker on Power Control Enclosure panel to ON.
2. Measure voltage between CB5 terminal 1 (1) and terminal block E4 (2). Also measure voltage from CB5 terminal 2 (3) to E4 (2).
3. Does multimeter read 110 volts AC or more for both measurements?



**YES**



**NO**

**YN**

1. Replace circuit breaker CB5 (WP 0828 00).
2. Verify no faults found.

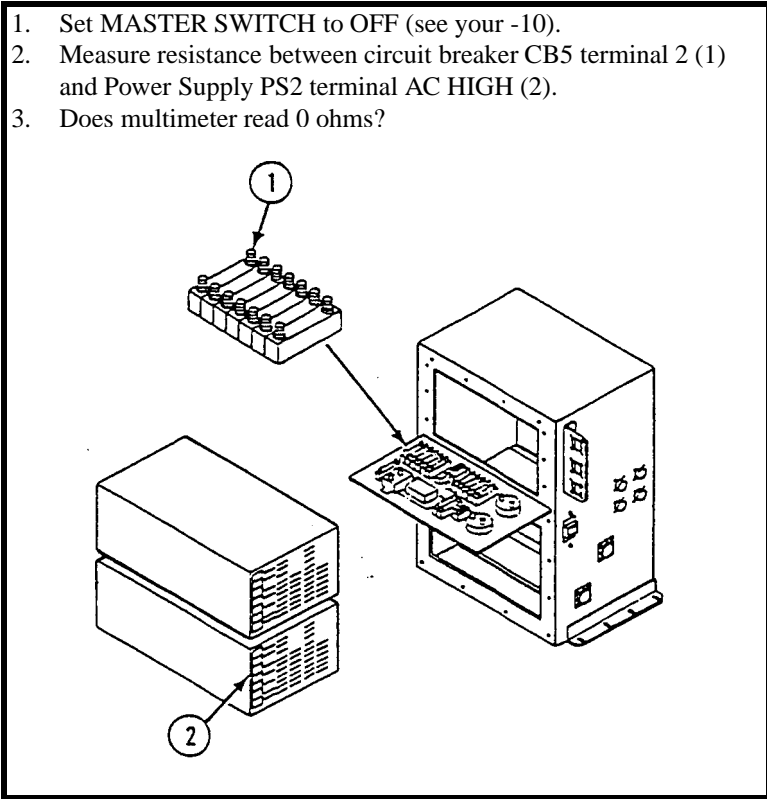
**2Y**

1. Set MASTER SWITCH to OFF (see your -10).
2. Measure resistance between circuit breaker CB5 terminal 2 (1) and Power Supply PS2 terminal AC HIGH (2).
3. Does multimeter read 0 ohms?

**NO**

**2YN**

1. Faulty lead 10A in Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

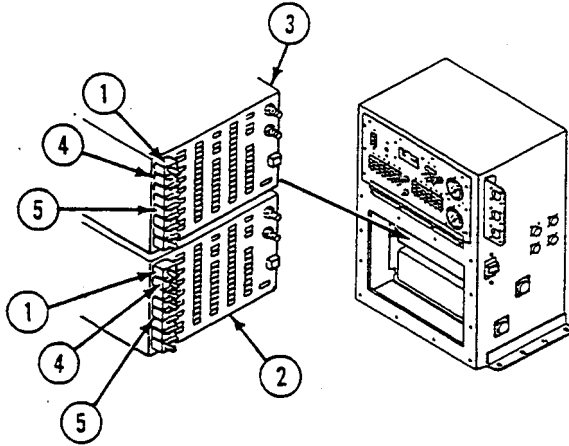


**YES**



**3Y**

1. Measure resistance between circuit 10B terminals (1) on Power Supply PS2 (2) and Power Supply PS1 (3).
2. Measure resistance between circuit 8C terminals (4) on Power Supply PS2 (2) and Power Supply PS1 (3).
3. Measure resistance between circuit 3Z terminals (5) on Power Supply PS2 (2) and Power Supply PS1 (3).
4. Does multimeter read 0 ohms for each measurement?



**NO**

**3YN**

1. Faulty lead 10B, 8C, and 3Z in Power Control Enclosure. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**4Y**

1. Faulty Power Supply. Beyond unit maintenance repair.
2. Notify supervisor.



---

**NO AC POWER FROM INVERTERS (M1068A3 ONLY)**

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**0109 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 11-7010-256-12&P

Tools and Special Tools

General Mechanic's Tool Kit (WP 0926 00, Item 65)  
Digital Multimeter (WP 0926 00, Item 30)  
Inverter Test Solo Plug (WP 0927 00, Figure 0927 00-2)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

Materials/Parts

Lockwasher (10)

Personnel Required

Power-Generation Equipment Repairer 52D10  
Helper (H)

All external power disconnected  
(TM 11-7010-256-12&P)

**WARNING**



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel do not observe safety precautions.

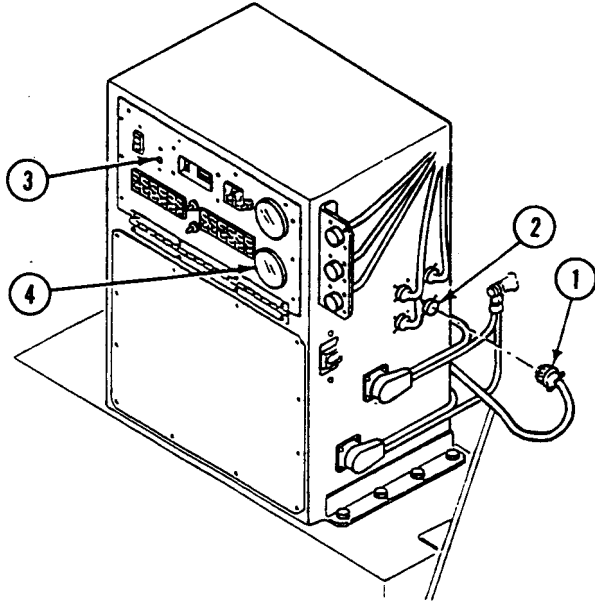
**NEVER** work on equipment unless at least one other person is nearby, familiar with the operation and hazards of the equipment and is familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**T**

1. Remove cable W5 plug P6 (1) from Power Control Enclosure jack J27 (2).
2. Set MASTER SWITCH to ON.
3. If popped out, press DC TO INVERTERS button (3) on Power Control Enclosure panel.
4. Does DC VOLTS meter (4) on Power Control Enclosure panel read 26 volts DC or more?



YES



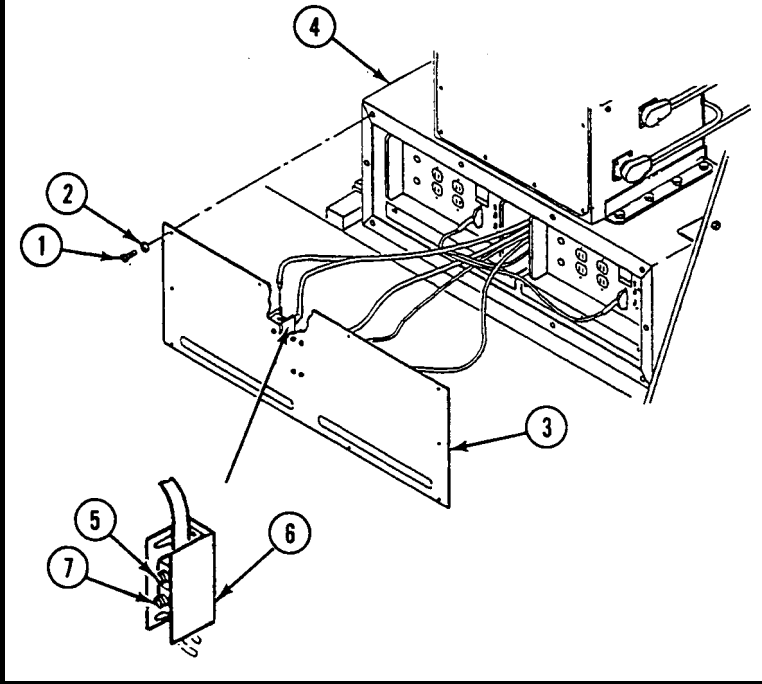
NO

**TN**

1. Go to: Power Control Enclosure A1 DC Input/Output Inoperative (WP 0090 00).

**Y**

1. Remove ten screws (1), lockwashers (2), and cover (3) from inverter housing (4). Discard lockwashers.
2. Measure voltage between terminal E2 (5) on terminal block TB1 (6) and ground.
3. Repeat measurement between terminal E4 (7) and ground.
4. Does multimeter read 22 volts DC or more for both measurements?



**YES**

**NO**

**YN**

1. Faulty terminal block TB1. Beyond unit maintenance repair.
2. Notify supervisor

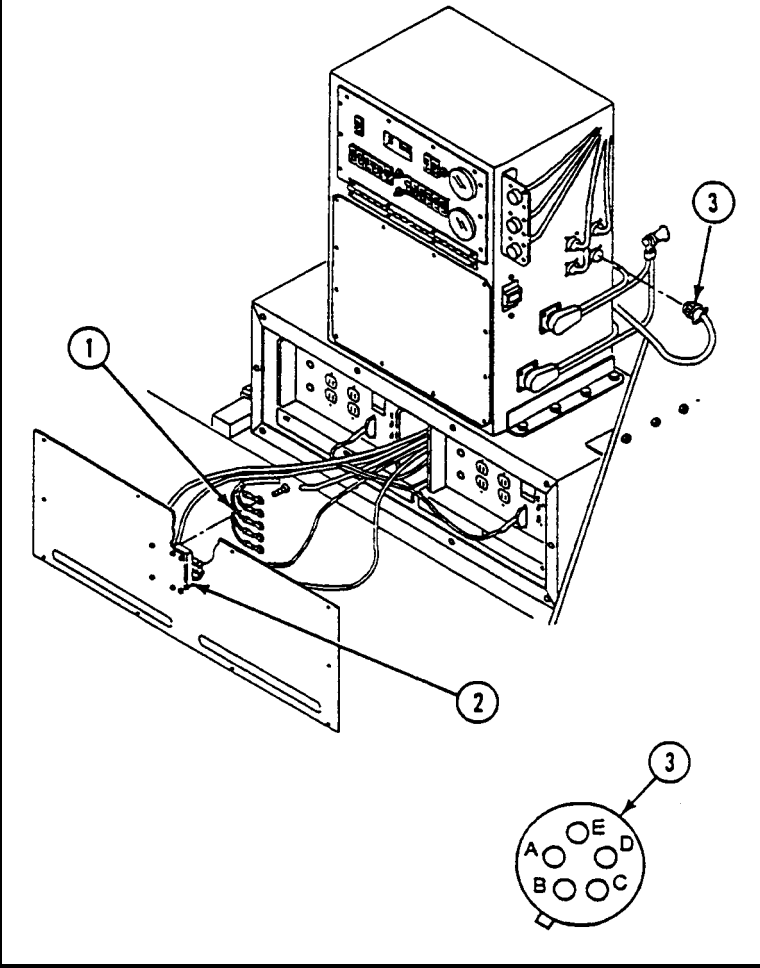
2Y

1. Set MASTER SWITCH to OFF.
2. Tag leads E1 thru E5 before removal. Remove cable W5 leads (1) from posts on terminal block TB2 (2).
3. Measure resistance between sockets of plug P6 (3) and W5 leads (1) as follows:
  - Socket A to lead E1
  - Socket B to lead E2
  - Socket C to lead E3
  - Socket D to lead E4
  - Socket E to lead E5
4. Does multimeter read 0 ohms for each measurement?

NO

2YN

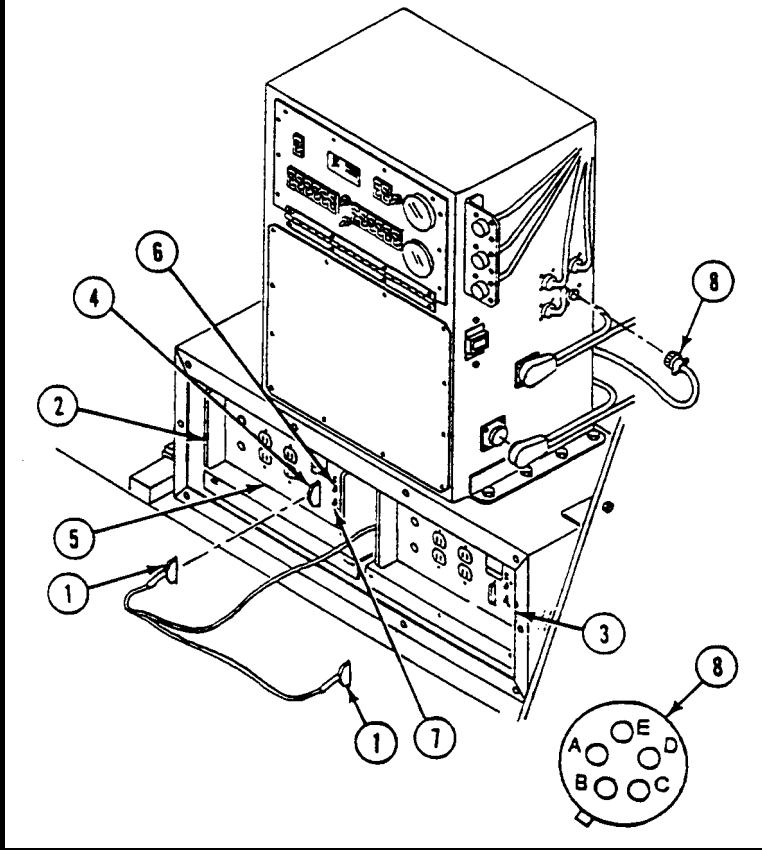
1. Replace cable W5 (WP 0839 00).
2. Verify no faults found.



YES

**3Y**

1. Install cable W5 leads on terminal block TB2.
2. Remove cable W15 plugs (1) from inverters IN1 (2) and IN2 (3).
3. Install inverter test solo plug (4) in inverter IN1 (2).
4. Set MASTER SWITCH to ON.
5. On inverter front panel (5), set POWER switch (6) to ON and momentarily move RESET switch (7) up.
6. Measure voltage between sockets A and B of cable W5 plug P6 (8).
7. Does multimeter read 110 volts AC or more?



YES



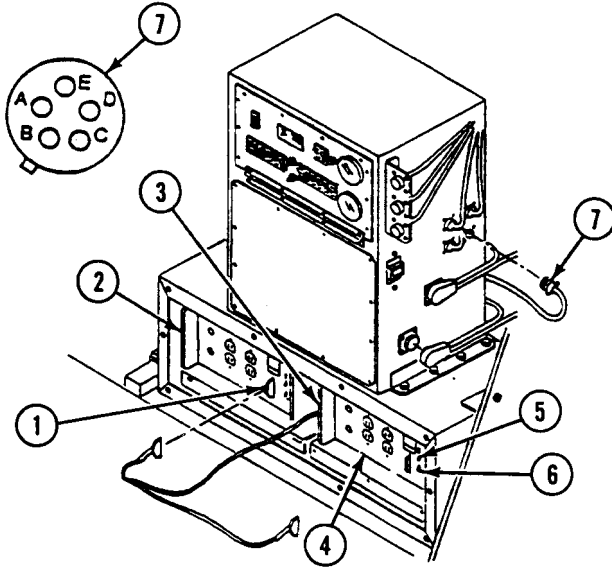
NO

**3YN**

1. Faulty inverter IN1 (with solo plug installed). Beyond unit maintenance repair.
2. Notify supervisor.

**4Y**

1. Set MASTER SWITCH to OFF.
2. Remove solo plug (1) from tested inverter IN1 (2) and install in other inverter IN2 (3).
3. Set MASTER SWITCH to ON.
4. On inverter front panel (4), set POWER switch (5) to ON and momentarily move RESET switch (6) up.
5. Measure voltage between sockets C and D of cable W5 plug P6 (7).
6. Does multimeter read 110 volts AC or more?



NO

**4YN**

1. Faulty inverter IN2 (with solo plug installed). Beyond unit maintenance repair.
2. Notify supervisor.

YES

**5Y**

1. Install cable W5 plug P6 on Power Control Enclosure jack J27.
2. Replace cascade remote harness W15 (WP 0847 00).
3. Verify no faults found.



---

**NO DATA OUTPUT FROM DATA PANEL A12 (M1068A3 ONLY)**

---

**0110 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

Radio equipment tool kit (WP 0926 00, Item 66)

Multimeter (WP 0926 00, Item 30)

Personnel Required

Signal Support System Specialist 31U10

Helper (H)

References

See your -10

TM 11-7010-256-12&P

Equipment Condition

Engine stopped (see your -10)

Carrier blocked (see your -10)

---

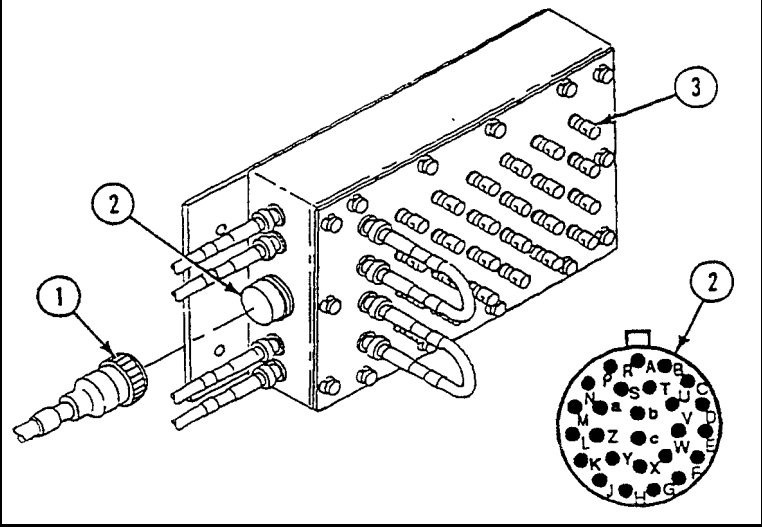
**T**

1. Remove cable W124 plug P1 (1) from Data Panel A12 jack J3 (2).
2. Measure resistance between posts (3) and pins of jack J3 (2) as follows:
  - Post 1 (Red) to pin A
  - Post 1 (Blk) to pin B
  - Post 2 (Red) to pin C
  - Post 2 (Blk) to pin D
  - Post 3 (Red) to pin E
  - Post 3 (Blk) to pin F
  - Post 4 (Red) to pin G
  - Post 4 (Blk) to pin H
  - Post 5 (Red) to pin J
  - Post 5 (Blk) to pin K
  - Post 6 (Red) to pin L
  - Post 6 (Blk) to pin M
  - Post 7 (Red) to pin N
  - Post 7 (Blk) to pin P
  - Post 8 (Red) to pin R
  - Post 8 (Blk) to pin S
  - Post 9 (Red) to pin T
  - Post 9 (Blk) to pin U
  - Post 10 (Red) to pin V
  - Post 10 (Blk) to pin W
  - Post 11 (Red) to pin X
  - Post 11 (Blk) to pin Y
  - Post 12 (Red) to pin Z
  - Post 12 (Blk) to pin a
3. Does multimeter read 0 ohms for each measurement?

**NO**

**TN**

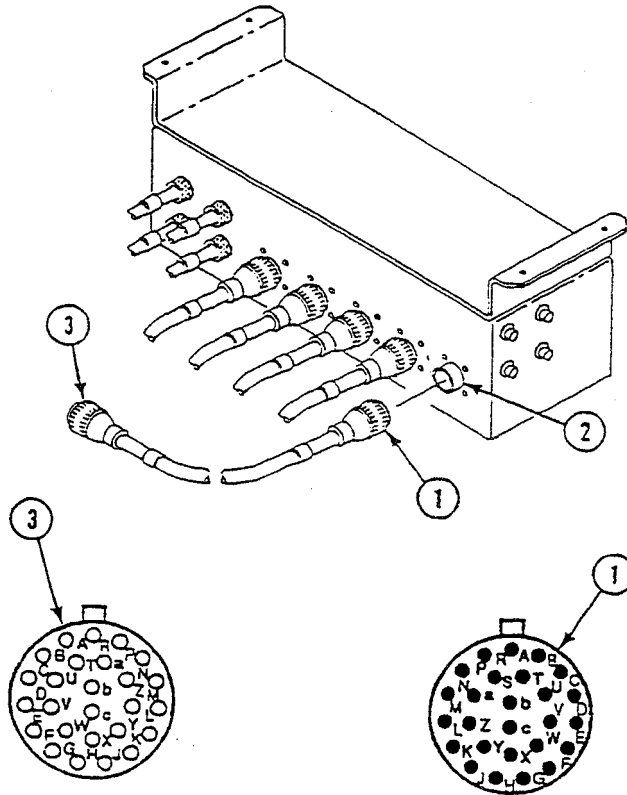
1. Replace Data Panel A12 (WP 0819 00).
2. Verify no faults found.



**YES**

**Y**

1. Remove cable W124 plug P109 (1) from Patch Panel Box A10 jack J140 (2).
2. Measure resistance between pin A on plug P109 (1) and socket A on plug P1 (3) of cable W124. Repeat for pins B through a.
3. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace cable W124 (WP 0855 00).
2. Verify no faults found.

**YES**

**2Y**

1. Replace Signal Patch Panel Box A10 (WP 0816 00).
2. Verify no faults found.



---

**NO LAN OUTPUT FROM DATA PANEL A12 (M1068A3 ONLY)**

---

**0111 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

Radio equipment tool kit (WP 0926 00, Item 66)  
Multimeter (WP 0926 00, Item 30)

Personnel Required

Signal Support System Specialist 31U10  
Helper (H)

References

See your -10  
TM 11-7010-256-12&P  
See M1068A3 Wiring Diagram (FO-7 and FO-8)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

---

**WARNING**

---



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

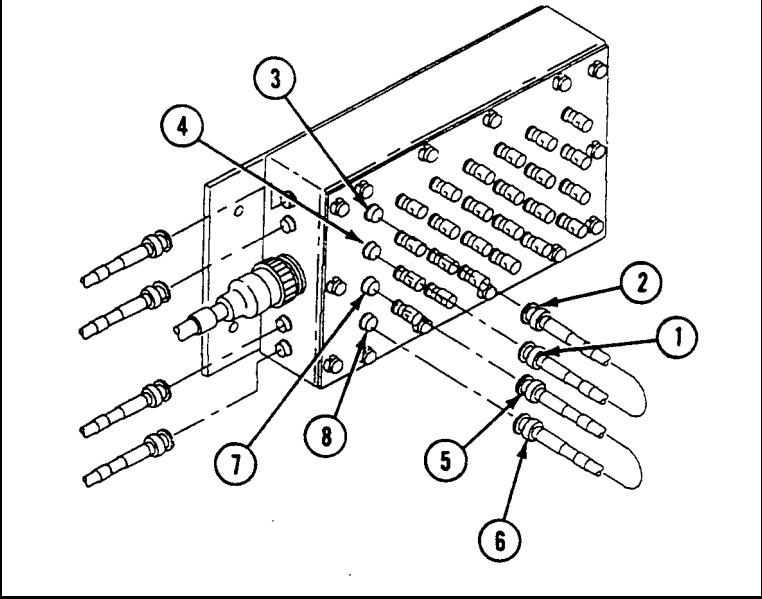
**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**T**

1. Remove cable W108 plugs P1 (1) and P2 (2) from Data Panel A12 jacks J107 (3) and J108 (4).
2. Remove cable W107 plugs P1 (5) and P2 (6) from Data Panel A12 jacks J105 (7) and J106 (8).
3. Measure resistance between center pins of plugs P1 and P2 of each cable.
4. Does multimeter read 0 ohms for each measurement?



**NO**

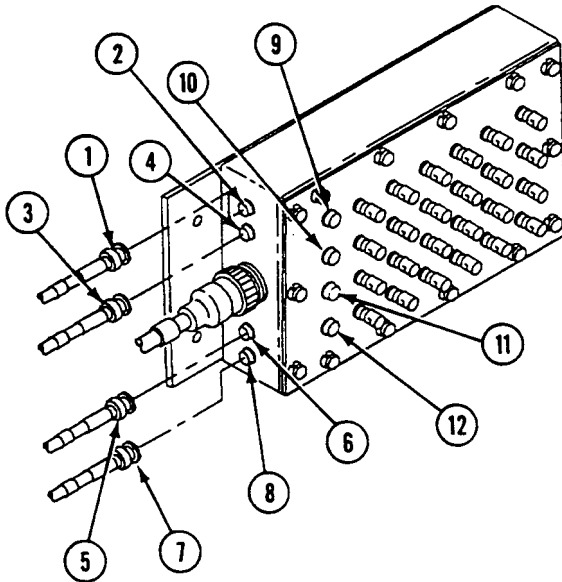
**TN**

1. Replace cable W107 and/or W108 (WP 0819 00).
2. Verify no faults found.

**YES**

**Y**

1. Remove the following cable plugs from jacks on Data Panel A12:
  - W101 plug P1 (1) from jack J1 (2)
  - W103 plug P1 (3) from jack J2 (4)
  - W102 plug P1 (5) from jack J4 (6)
  - W104 plug P1 (7) from jack J5 (8)
2. Measure resistance between pins of the following jacks on Data Panel A12:
  - J1 (2) to J105 (9)
  - J2 (4) to J106 (10)
  - J4 (6) to J107 (11)
  - J5 (8) to J108 (12)
3. Does multimeter read 0 ohms for each measurement?



**YES**



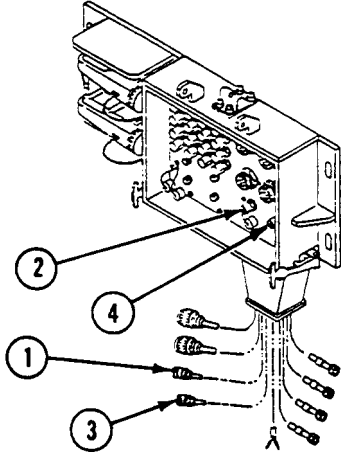
**NO**

**YN**

1. Replace Data Panel A12 (WP 0819 00).
2. Verify no faults found.

**2Y**

1. Measure resistance between cable W101 plug P1 (1) and External Communication Box A11 jack J103 (2).
2. Measure resistance between cable W102 plug P1 (3) and External Communication Box A11 jack J104 (4).
3. Does multimeter read 0 ohms for each measurement?



**YES**

**NO**

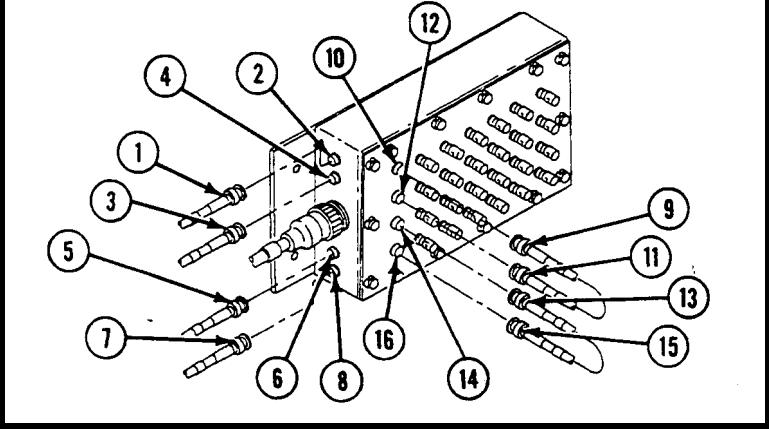
**2YN**

1. Faulty cables W101 and/or W102. Beyond unit maintenance repair.
2. Notify supervisor.



**3Y**

1. Install the following plugs and cables on Data Panel A12 jacks:
  - W101 plug P1 (1) on jack J1 (2)
  - W103 plug P1 (3) on jack J2 (4)
  - W102 plug P1 (5) on jack J4 (6)
  - W104 plug P1 (7) on jack J5 (8)
  - W107 plug P1 (9) on jack J105 (10)
  - W107 plug P2 (11) on jack J106 (12)
  - W108 plug P1 (13) on jack J107 (14)
  - W108 plug P2 (15) on jack J108 (16)
2. Verify no faults found.





---

**NO DATA OUTPUT FROM DATA PANEL A13 (M1068A3 ONLY)**

---

**0112 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

Radio equipment tool kit (WP 0926 00, Item 66)  
Multimeter (WP 0926 00, Item 30)

Personnel Required

Signal Support System Specialist 31U10  
Helper (H)

References

See your -10  
TM 11-7010-256-12&P  
See M1068A3 Wiring Diagram (FO-7 and FO-8)

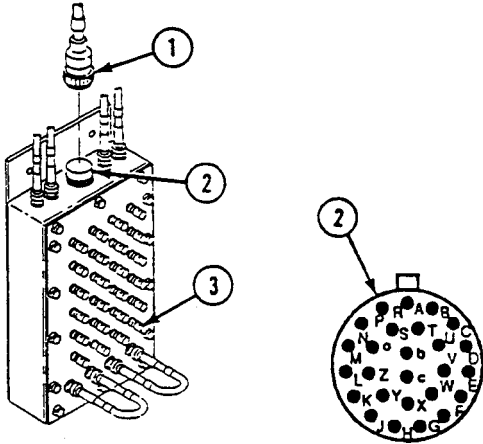
Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

---

**T**

1. Remove cable W126 plug P1 (1) from Data Panel A13 jack J3 (2).
2. Measure resistance between posts (3) and pins of jack J3 (2) as follows:
  - Post 1 (Red) to pin A
  - Post 1 (Blk) to pin B
  - Post 2 (Red) to pin C
  - Post 2 (Blk) to pin D
  - Post 3 (Red) to pin E
  - Post 3 (Blk) to pin F
  - Post 4 (Red) to pin G
  - Post 4 (Blk) to pin H
  - Post 5 (Red) to pin J
  - Post 5 (Blk) to pin K
  - Post 6 (Red) to pin L
  - Post 6 (Blk) to pin M
  - Post 7 (Red) to pin N
  - Post 7 (Blk) to pin P
  - Post 8 (Red) to pin R
  - Post 8 (Blk) to pin S
  - Post 9 (Red) to pin T
  - Post 9 (Blk) to pin U
  - Post 10 (Red) to pin V
  - Post 10 (Blk) to pin W
  - Post 11 (Red) to pin X
  - Post 11 (Blk) to pin Y
  - Post 12 (Red) to pin Z
  - Post 12 (Blk) to pin a
3. Does multimeter read 0 ohms for each measurement?



**NO**

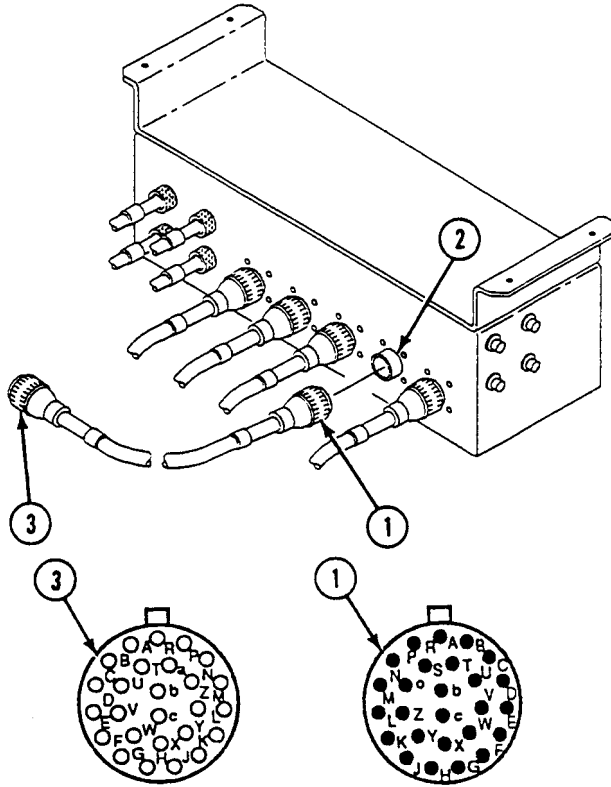
**TN**

1. Replace Data Panel A13 (WP 0835 00).
2. Verify no faults found.

**YES**

**Y**

1. Remove cable W126 plug P108 (1) from Patch Panel Box A10 jack J139 (2).
2. Measure resistance between pin A on plug P108 (1) and socket A on plug P1 (3) of cable W126. Repeat for pins B through a.
3. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace cable W126 (WP 0856 00).
2. Verify no faults found.

**YES**

**2Y**

1. Replace Signal Patch Panel Box A10 (WP 0816 00).
2. Verify no faults found.



---

**NO LAN OUTPUT FROM DATA PANEL A13 (M1068A3 ONLY)**

---

**0113 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

Radio equipment tool kit (WP 0926 00, Item 66)  
Multimeter (WP 0926 00, Item 30)

Personnel Required

Signal Support System Specialist 31U10  
Helper (H)

References

See your -10  
TM 11-7010-256-12&P  
See M1068A3 Wiring Diagram(FO-7 and FO-8)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)

---

**WARNING**

---



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

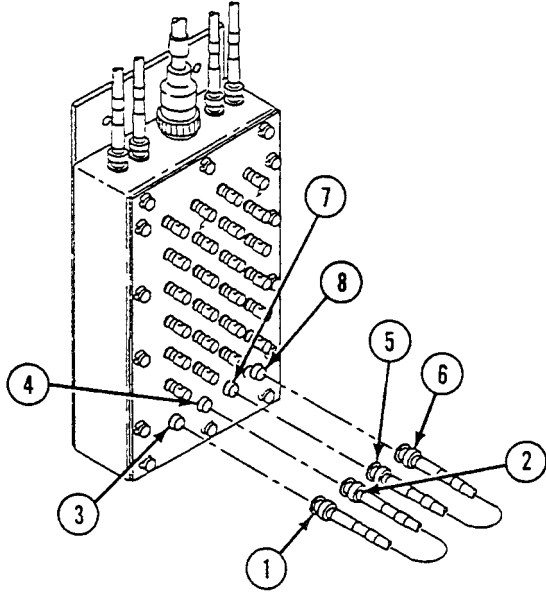
**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

**T**

1. Remove cable W109 plugs P1 (1) and P2 (2) from Data Panel A13 jacks J109 (3) and J110 (4).
2. Remove cable W110 plugs P1 (5) and P2 (6) from Data Panel A13 jacks J111 (7) and J112 (8).
3. Measure resistance between center pins of plugs P1 and P2 of each cable.
4. Does multimeter read 0 ohms for each measurement?



**YES**

**NO**

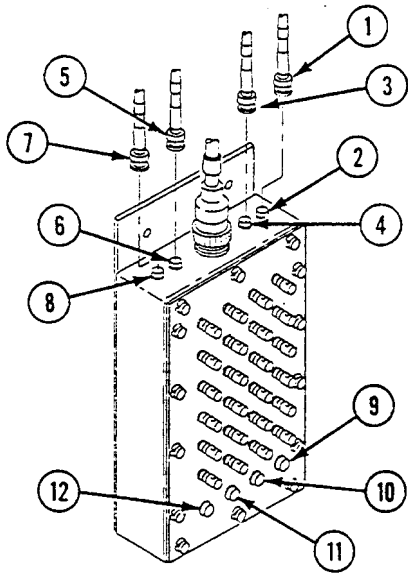
**TN**

1. Replace cable W109 and/or W110 (WP 0835 00).
2. Verify no faults found.



**Y**

1. Remove the following cable plugs from jacks on Data Panel A13:
  - W32 plug P5 (1) from jack J1 (2)
  - W104 plug P2 (3) from jack J2 (4)
  - W32 plug P4 (5) from jack J4 (6)
  - W103 plug P2 (7) from jack J5 (8)
2. Measure resistance between pins of the following jacks on Data Panel A13:
  - J1 (2) to J112 (9)
  - J2 (4) to J111 (10)
  - J4 (6) to J110 (11)
  - J5 (8) to J109 (12)
3. Does multimeter read 0 ohms for each measurement?



**YES**

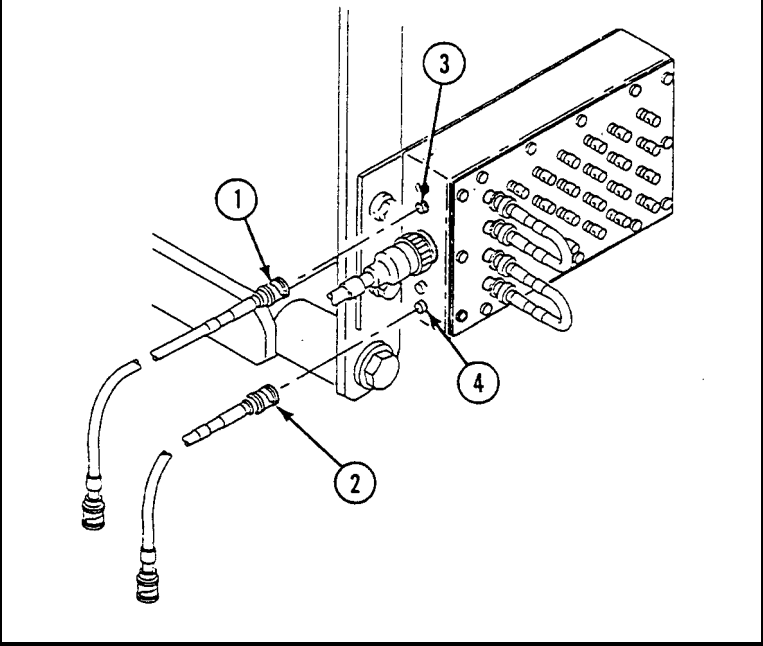
**NO**

**YN**

1. Replace Data Panel A13 (WP 0835 00).
2. Verify no faults found.

**2Y**

1. Remove cables W103 plug P1 (1) and W104 plug P2 (2) from jacks J2 (3) and J5 (4) on Data Panel A12.
2. Measure resistance between center pins of plugs P1 and P2 of cables W103 and W104.
3. Does multimeter read 0 ohms for each measurement?



**NO**

**2YN**

1. Replace cable W103 and/or W104 (WP 0854 00).
2. Verify no faults found.

**YES**

**3Y**

1. Go to: No LAN Output from Data Panel A12 (WP 0111 00).

---

**PHONE EXTENSION BOX A14 POST(S) INOPERATIVE (M1068A3 ONLY)**

---

**0114 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

Radio Equipment Tool Kit (WP 0926 00, Item 66)  
 Digital Multimeter (WP 0926 00, Item 30)

Personnel Required

Signal Support System Specialist 31U10  
 Helper (H)

References

See your -10  
 TM 11-7010-256-12&P  
 See M1068A3 Wiring Diagram (FO-7 and FO-8)

Equipment Condition

Engine stopped (see your -10)  
 Carrier blocked (see your -10)

---

**WARNING**

---



**HIGH VOLTAGE** is used in the operation of this equipment.

**DEATH ON CONTACT** may result if personnel fail to observe safety precautions.

**NEVER** work on equipment unless at least one other person familiar with the operation and hazards of the equipment is nearby. That person should also be familiar with giving first aid. When an operator helps a mechanic, that operator must be warned about dangerous areas.

**SHUT OFF POWER** supply to equipment before beginning work. Make sure all external power is off/disconnected.

**BE CAREFUL** not to contact high-voltage connections when installing or operating this equipment.

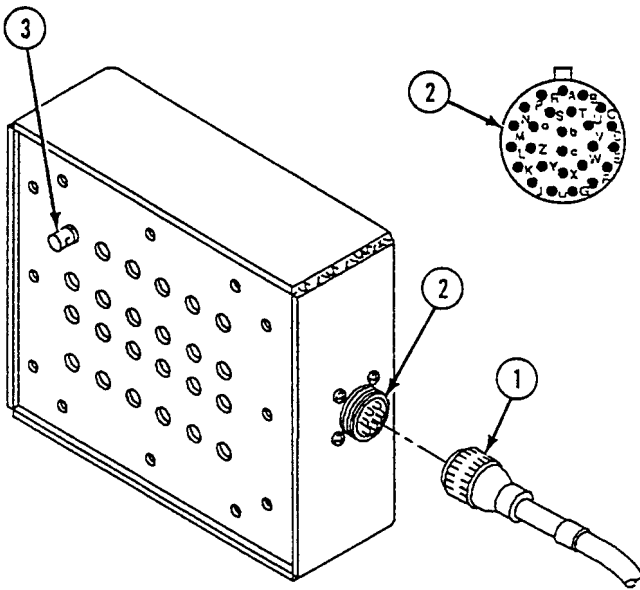
**T**

1. Remove cable W129 plug P2 (1) from Phone Extension Box A14 jack J1 (2).
2. Measure resistance between posts (3) and pins of jack J1 (2) as follows:
  - Post 1 (Blk) to pin A
  - Post 1 (Red) to pin B
  - Post 2 (Blk) to pin C
  - Post 2 (Red) to pin D
  - Post 3 (Blk) to pin E
  - Post 3 (Red) to pin F
  - Post 4 (Blk) to pin G
  - Post 4 (Red) to pin H
  - Post 5 (Blk) to pin J
  - Post 5 (Red) to pin K
  - Post 6 (Blk) to pin L
  - Post 6 (Red) to pin M
  - Post 7 (Blk) to pin N
  - Post 7 (Red) to pin P
  - Post 8 (Blk) to pin R
  - Post 8 (Red) to pin S
  - Post 9 (Blk) to pin T
  - Post 9 (Red) to pin U
  - Post 10 (Blk) to pin V
  - Post 10 (Red) to pin W
  - Post 11 (Blk) to pin X
  - Post 11 (Red) to pin Y
  - Post 12 (Blk) to pin Z
  - Post 12 (Red) to pin a
3. Does multimeter read 0 ohms for each measurement?

**NO**

**TN**

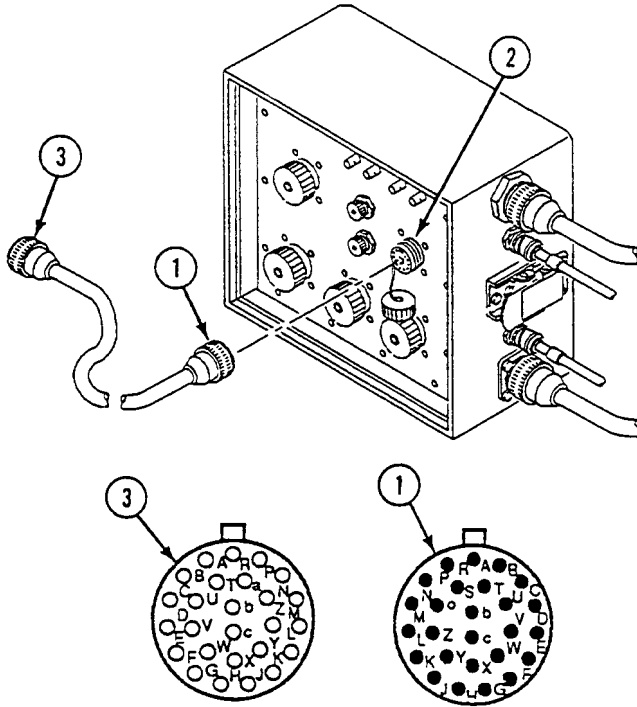
1. Replace Phone Extension Box A14. See TM 11-7010-256-12&P.
2. Verify no faults found.



**YES**

**Y**

1. Remove cable W129 plug P1 (1) from Tent Interface Panel jack J137 (2).
2. Measure resistance between pin A on plug P1 (1) and socket A on plug P2 (3) of cable W129. Repeat for pins B through a
3. Does multimeter read 0 ohms for each measurement?



**NO**

**YN**

1. Replace cable W129.
2. Verify no faults found.

**YES**

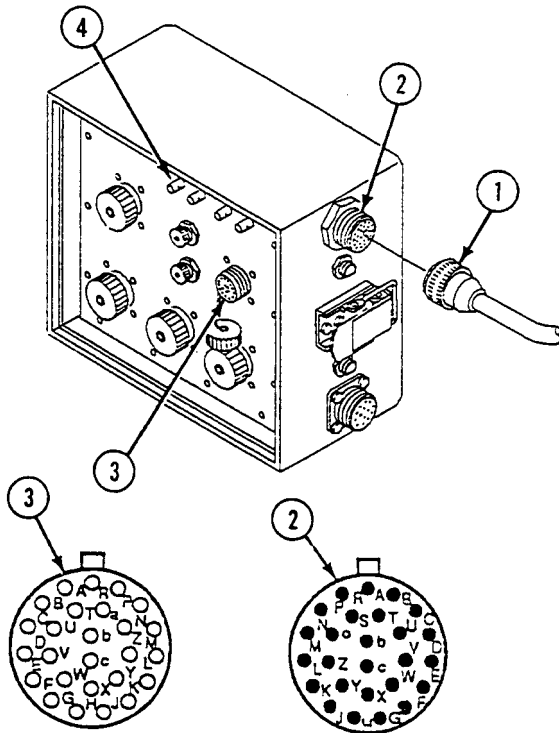
2Y

1. Remove cable W32 plug P7 (1) from Tent Interface Panel jack J8 (2).
2. Measure resistance between socket A of jack J137 (3) and pin A of jack J8 (2). Repeat for sockets/pins B through a.
3. Measure resistance between sockets of J137 (3) and posts (4) as follows:
  - Socket A to E117
  - Socket B to E118
  - Socket C to E119
  - Socket D to E120
4. Does multimeter read 0 ohms for each measurement?

NO

2YN

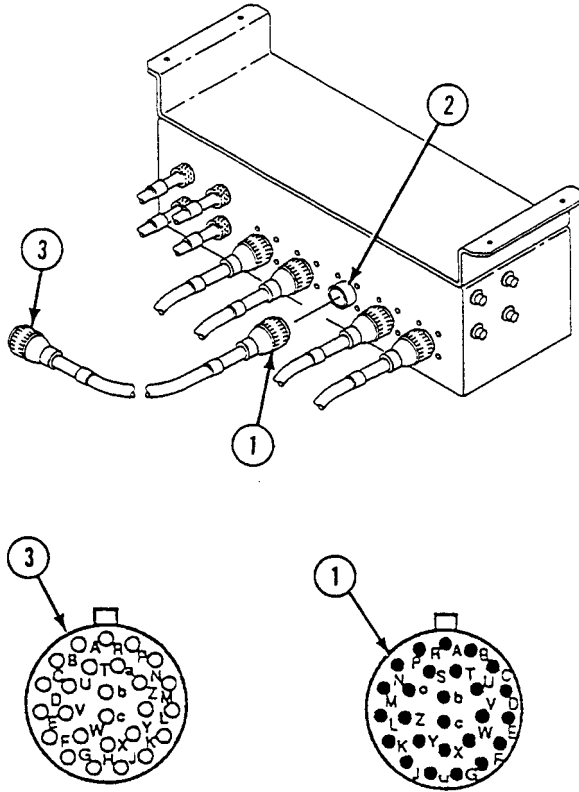
1. Replace Tent Interface Panel Box A5 (WP 0833 00).
2. Verify no faults found.



YES

**3Y**

1. Remove cable W32 plug P107 (1) from jack J138 (2) on Patch Panel Box A10.
2. Measure resistance between socket A of plug P7 (3) and pin A of plug P107 (1). Repeat for socket/pins B through a.
3. Does multimeter read 0 ohms for each measurement?



**NO**

**3YN**

1. Replace cable W32 (WP 0848 00).
2. Verify no faults found.

**YES**

**4Y**

1. Replace Signal Patch Panel Box A10 (WP 0816 00).
2. Verify no faults found.





**SPEEDOMETER MALFUNCTIONS**

**0115 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access door opened (see your -10)  
Power plant access cover removed (WP 0441 00)  
Driver's power plant access panel removed (see your -10)

Personnel Required

Unit Mech  
Helper (H)

**T**

1. Does speedometer fail to give any reading?

NO

GO TO AY (PAGE 0115 00-2)

YES

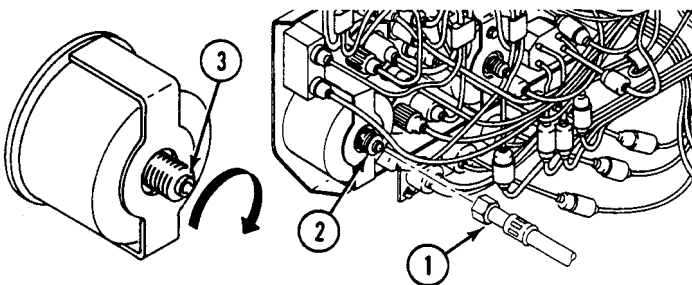
**Y**

1. Remove speedometer cable (1) from speedometer (2).
2. Check speedometer drive (3).
3. Does speedometer drive spin freely?

NO

**YN**

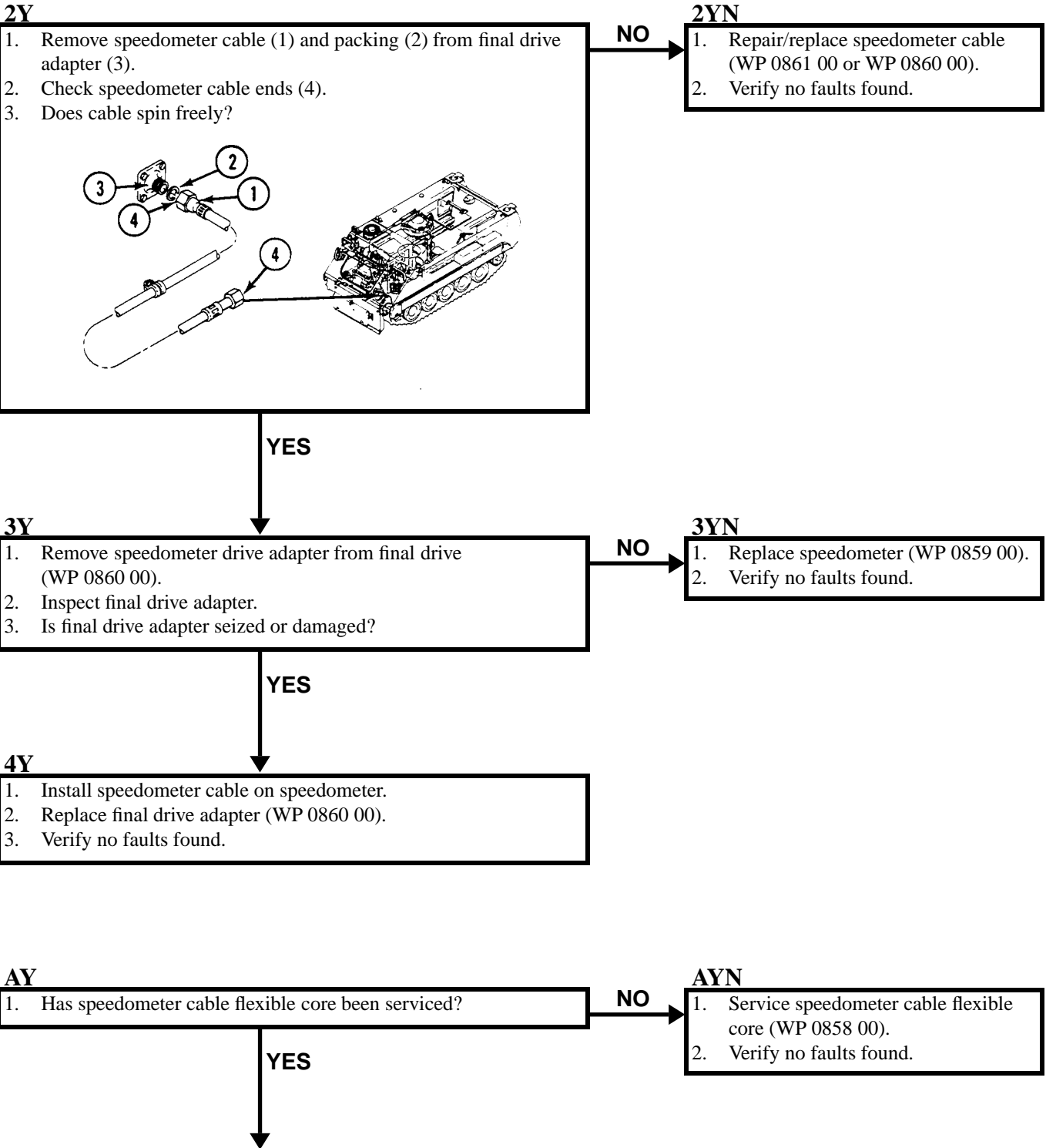
1. Replace speedometer (WP 0859 00).
2. Verify no faults found.



YES

**SPEEDOMETER MALFUNCTIONS—Continued**

**0115 00**

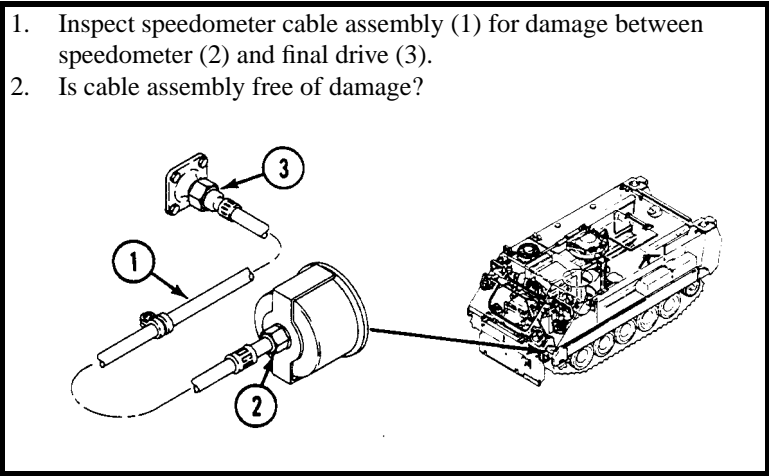


**SPEEDOMETER MALFUNCTIONS—Continued**

**0115 00**

**A2Y**

1. Inspect speedometer cable assembly (1) for damage between speedometer (2) and final drive (3).
2. Is cable assembly free of damage?



**NO**

**A2YN**

1. Replace speedometer cable assembly (WP 0860 00).
2. Verify no faults found.

**YES**

**A3Y**

1. Replace speedometer (WP 0859 00).
2. Verify no faults found.



**TACHOMETER MALFUNCTIONS**

**0116 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10

Tools and Special Tools

General mechanic's tool kit: automotive  
(WP 0926 00, Item 65)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access door opened (see your -10)  
Power plant access cover removed (WP 0441 00)  
Driver's power plant access panel removed (see your -10)

Personnel Required

Unit Mech  
Helper (H)

**T**

1. Start engine (see your -10).
2. Does tachometer fail to show any reading?

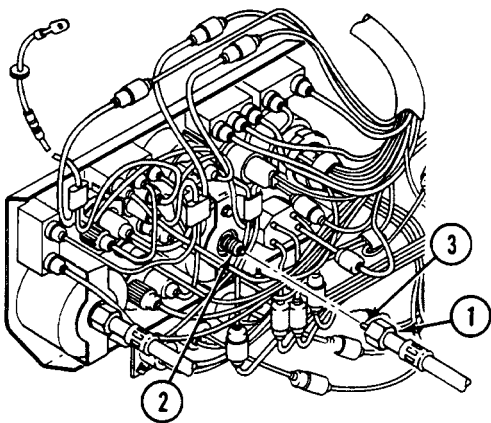
**NO**

**GO TO AY (PAGE 0116 00-2)**

**YES**

**Y**

1. Stop engine (see your -10)
2. Remove tachometer cable (1) from tachometer (2).
3. Start engine (see your -10).
4. Observe tachometer cable drive tip (3).
5. Does tachometer cable drive tip fail to rotate?

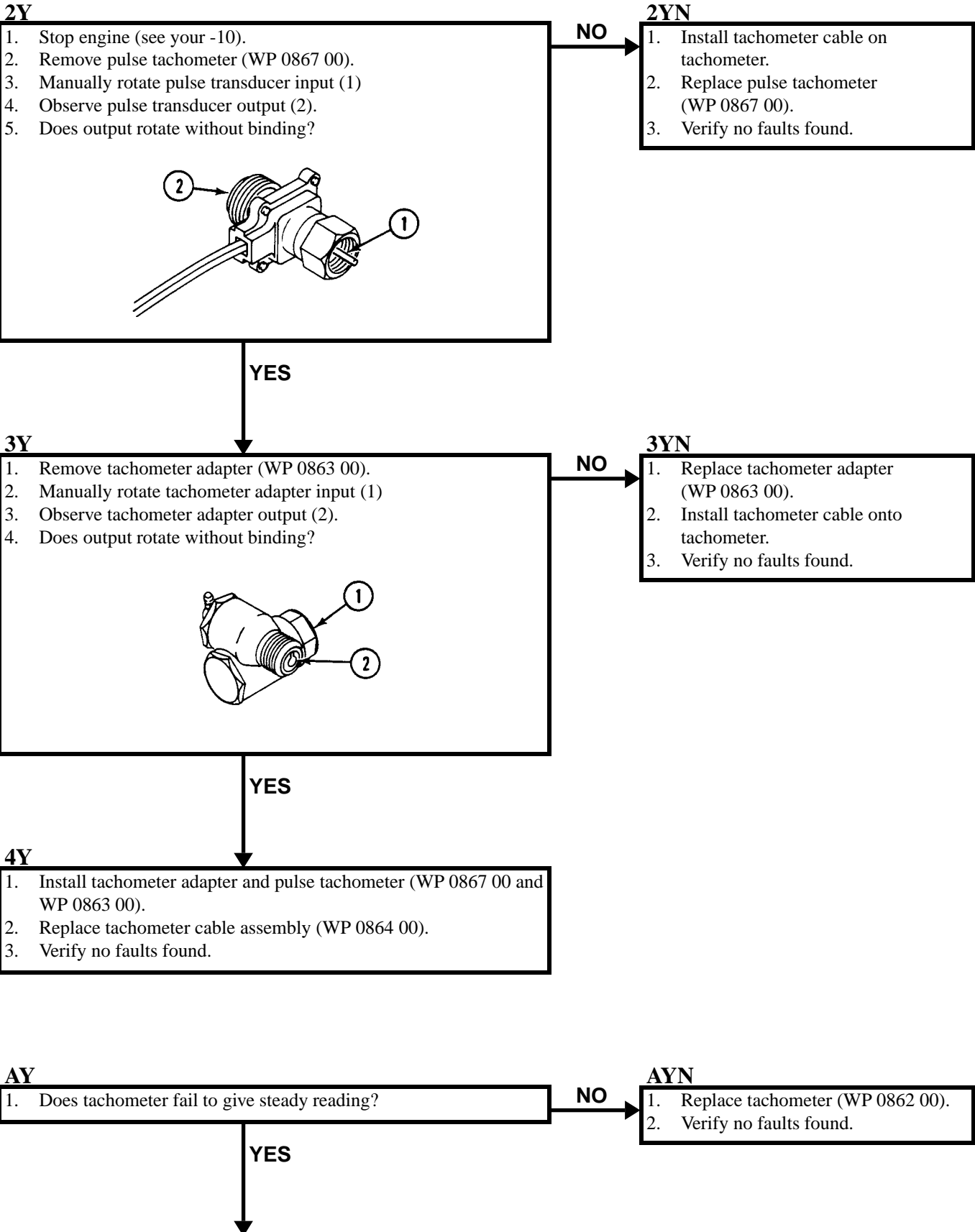


**NO**

**YN**

1. Stop engine (see your -10).
2. Replace tachometer (WP 0862 00).
3. Verify no faults found.

**YES**



**A2Y**

1. Has tachometer cable flexible core been serviced?

**NO**

**A2YN**

1. Service flexible core (WP 0858 00).
2. Verify no faults found.

**YES**

**A3Y**

1. Repair/replace tachometer cable assembly (WP 0865 00 or WP 0864 00).
2. Verify no faults found.





**DRIVER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)**

0116 01

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
 TM 11-5855-304-TBD  
 See M58 Wiring Diagram (FO-7)

Tools and Special Tools

General mechanic's tool kit: automotive  
 (WP 0926 00, Item 65)  
 Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
 DVE power switch off (see your -10)

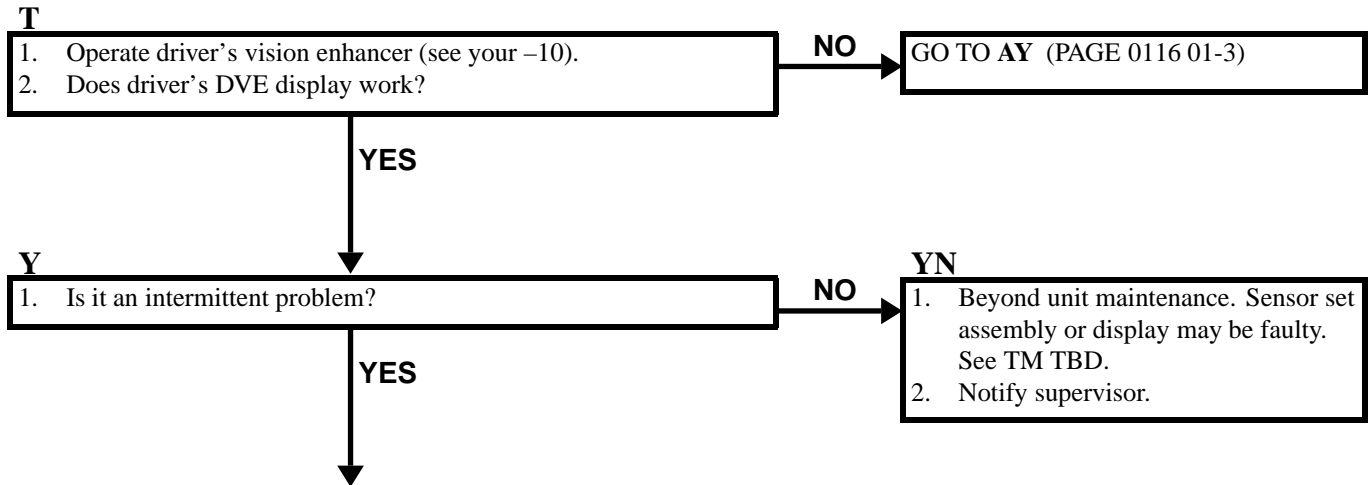
Personnel Required

Unit Mech

**NOTE**

These procedures cover the DVE with a commander's DVE installed. Cable 12461152 includes power and video cable to commander's display and power to the driver's display through cable 12460610. See TM TBD for the sensor set assembly or display. If vehicle does not have commander's DVE display installed, power cable 12460610 is plugged directly into DVE power switch.

If problems in operation are because of the sensor set assembly or driver's/commander's display, see TM 11-5855-304-TBD (this will apply only if TBD TM is at unit level maintenance (-24). If TBD TM is -34 level only, then this will be changed to identify the items needed to be turned into DS maintenance for repairs).

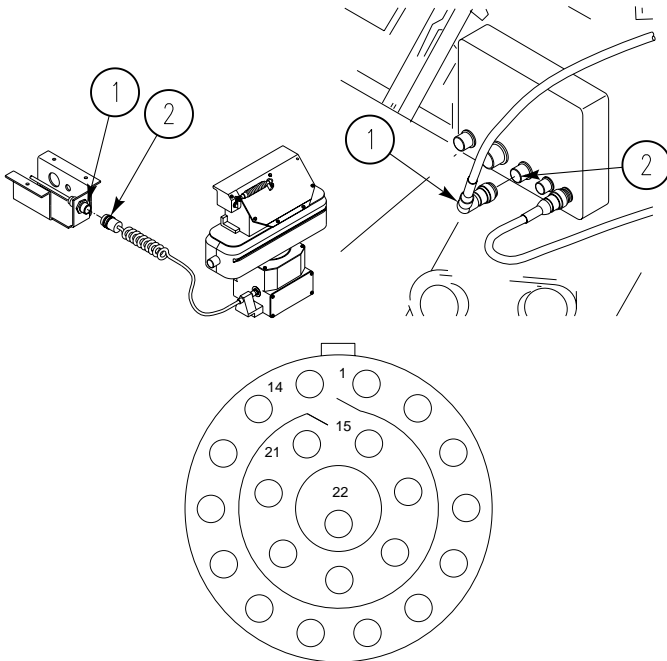


**DRIVER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)—Continued**

0116 01

**2Y**

1. Remove sensor video cable 12461148 connector W2P1 (2) from connector W1P2 (1) on driver's hatch and connector W2P2 (1) from connector A1J2 (2) on driver's display.
2. Measure continuity between cable 12461148 connector W2P1 and connector W2P2 . Check pins 1, 2, 3, 4, 5, 8, 9, 10, 11, 18, and 19.



3. Does multimeter read 0 ohms?

**NO**

**2YN**

1. Faulty sensor video cable 12461148. Replace sensor video cable 12461148 (WP 0866 01).
2. Verify no faults found.

**YES**

**3Y**

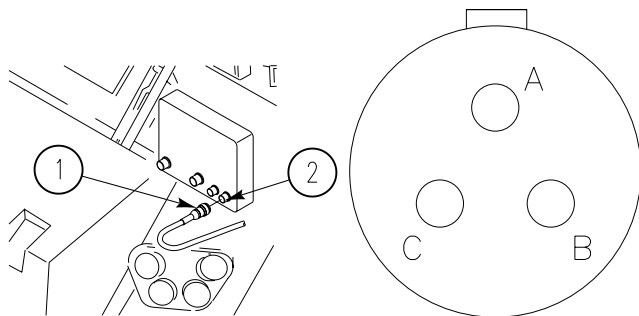
1. Bad driver's display. Replace driver's display (see your -10).
2. Verify no faults found.

**DRIVER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)—Continued**

0116 01

**AY**

1. Remove power cable connector 516B P2 (1) from connector A1J1 (2) on driver's display. Use a multimeter on connector 516B P2 pin A (1) and pin B to check for voltage.



2. Turn DVE power switch ON (see your -10).
3. Is voltage reading less than 16 volts?

**NO**

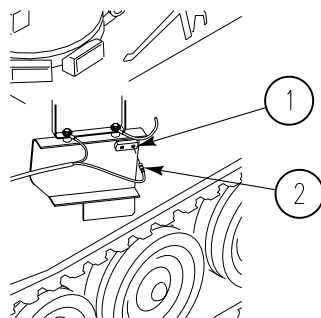
**AYN**

1. Faulty display. Replace display (see your -10). If commander's display is good, swap with driver's display to verify.
2. Verify no faults found.

**YES**

**A2Y**

1. Turn DVE power switch OFF (see your -10).
2. Remove power cable connector 516B P1 or connector W3P4 (2) from DVE power switch (1). Use a multimeter on DVE power switch to check for continuity. Turn DVE power switch ON and OFF.



3. Does multimeter read 0 ohms when DVE power switch is ON?

**NO**

**A2YN**

1. Faulty DVE power switch. Replace DVE power switch (WP 0282 00).
2. Verify no faults found.

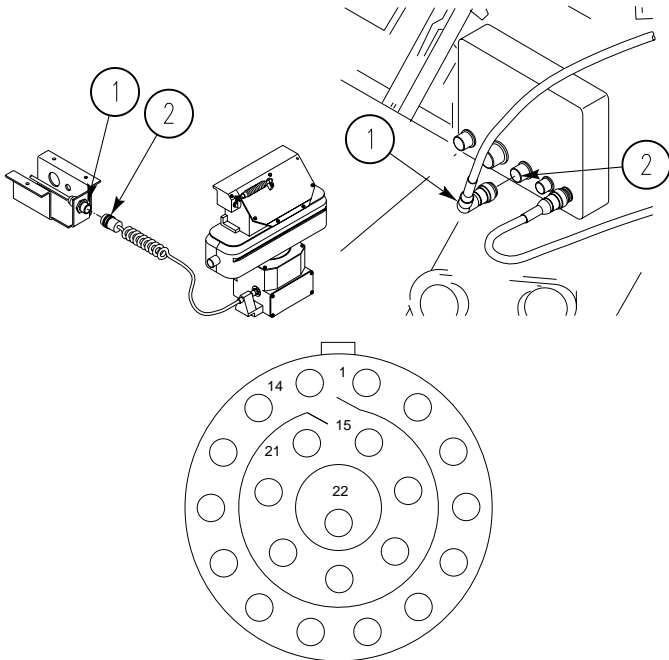
**YES**

**DRIVER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)—Continued**

0116 01

**A3Y**

1. Remove sensor video cable 12461148 connector W2P1 (2) from connector W1P2 (1) on driver's hatch and connector W2P2 (1) from connector A1J2 (2) on driver's display. Use multimeter to measure continuity. Check pins 1, 2, 3, 4, 5, 8, 9, 10, 11, 18, and 19.



2. Does multimeter read 0 ohms?

**NO**

**A3YN**

1. Faulty sensor video cable 12461148. Replace sensor video cable 12461148 (WP 0866 01).
2. Verify no faults found.

**YES**

**A4Y**

1. Faulty sensor set assembly or DVE display.
2. Notify supervisor.

**COMMANDER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK  
(M58 ONLY)**

0116 02

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
 TM 11-5855-304-TBD  
 See M58 Wiring Diagram (FO-7)

Tools and Special Tools

General mechanic's tool kit: automotive  
 (WP 0926 00, Item 65)  
 Multimeter (WP 0926 00, Item 30)

Equipment Condition

Engine stopped (see your -10)  
 DVE power switch off (see your -10)

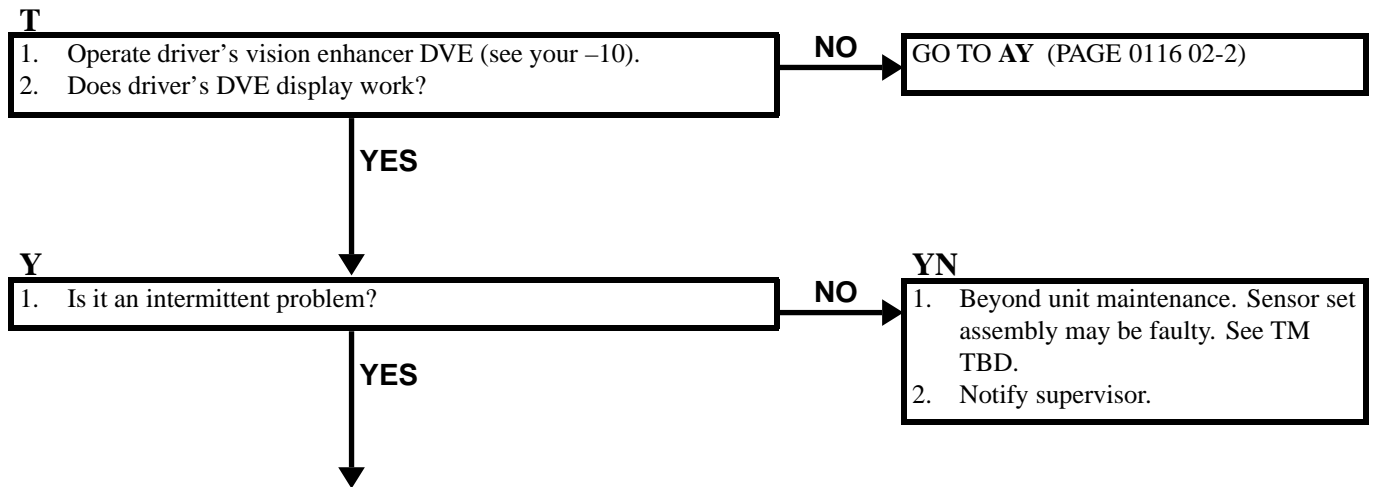
Personnel Required

Unit Mech

**NOTE**

These procedures cover the DVE with a commander's DVE installed. Cable 12461152 includes power and video cable to commander's display. See TM TBD for the sensor set assembly or display.

If problems in operation are because of the sensor set assembly or driver's/commander's display, see TM 11-5855-304-TBD (this will apply only if TBD TM is at unit level maintenance (-24). If TBD TM is -34 level only, then this will be changed to identify the items needed to be turned into DS maintenance for repairs).

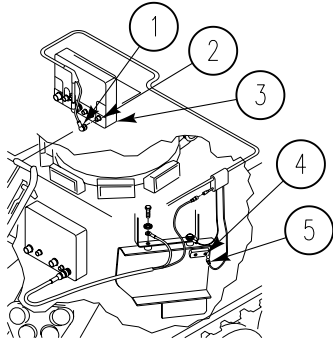


**COMMANDER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)—Continued**

0116 02

**2Y**

1. Measure continuity between cable 12461152 connector W3P3 pin A (1) and connector W3P4 (4) and between connector W3P3 pin B (1) and ground point (5) on instrument panel.



2. Does multimeter read 0 ohms?

**NO**

**2YN**

1. Faulty cable 12461152. Replace cable 12461152 ( ).
2. Verify no faults found.

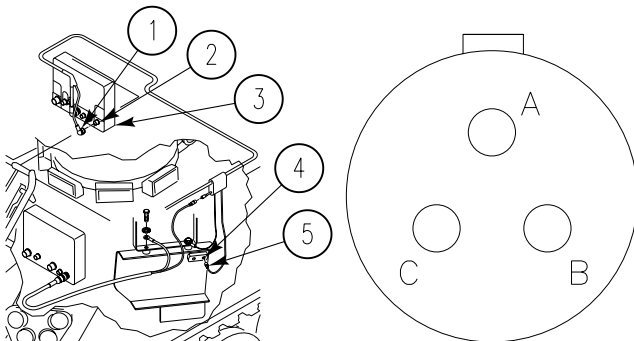
**YES**

**3Y**

1. Bad commander's display. Replace commander's display (see your -10).
2. Verify no faults found.

**AY**

1. Remove power connector W3P3 (1) from connector A1J1 (2) on commander's display (3). Use a multimeter on connector W3P3 pin A and pin B (1) to check for voltage.



2. Is voltage reading less than 18 volts?

**NO**

**AYN**

1. Faulty display. Replace display (see your -10).
2. Verify no faults found.

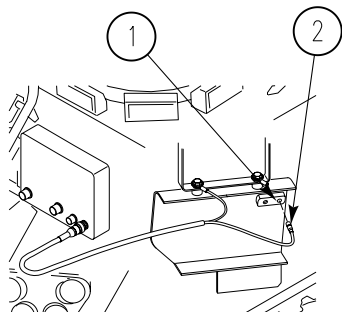
**YES**

**COMMANDER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)—Continued**

0116 02

**A2Y**

1. Remove cable connector W3P4 (2) from DVE power switch (1). Use multimeter on DVE power switch to check for continuity. Turn DVE power switch ON and OFF.



2. Does multimeter read 0 ohms when DVE power switch is in ON position?

**NO**

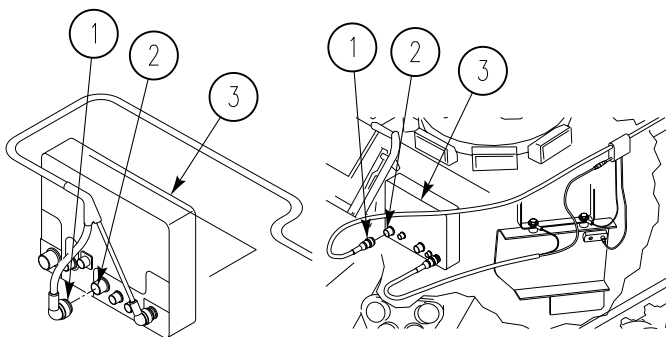
**A2YN**

1. Faulty DVE power switch. Replace DVE power switch (WP 0282 00).
2. Verify no faults found.

**YES**

**A3Y**

1. Remove cable 12461152 connector W3P2 (1) from connector A1J2 (2) on commander's display (3) and connector W3P1 (1) from connector A1J5 (2) on driver's display (3). Use multimeter to measure continuity.



2. Does multimeter read 0 ohms?

**NO**

**A3YN**

1. Faulty cable 12461152. Replace cable 12461152 ()
2. Verify no faults found.

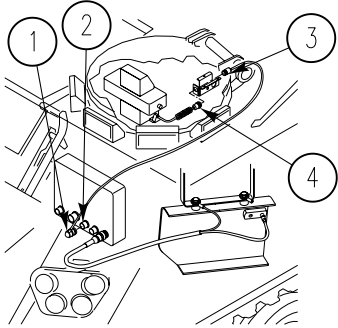
**YES**

**COMMANDER'S VISION ENHANCER (DVE) DISPLAY DOES NOT WORK (M58 ONLY)—Continued**

0116 02

**A4Y**

1. Remove sensor video cable 12461148 connector W2P2 (1) from connector A1J2 (2) on driver's display and connector W2P1 (3) from connector W1P2 (4) on driver's hatch. Use multimeter to measure continuity.



2. Does multimeter read 0 ohms?

**NO**

**A4YN**

1. Faulty sensor video cable 12461148. Replace sensor video cable 12461148 ()
2. Verify no faults found.

**YES**

**A5Y**

1. Faulty sensor set assembly or DVE display.
2. Notify supervisor.



**HOOK UP/REMOVE STE/ICE TEST SET TO DCA 6**

**0117 00**

**THIS WORK PACKAGE COVERS:**

- Hook up (page 0117 00-1).
- Removal (page 0117 00-2).

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

- STE/ICE Test Set (WP 0926 00, Item 61)
- Electrical connector pliers (WP 0926 00, Item 31)

Equipment Condition

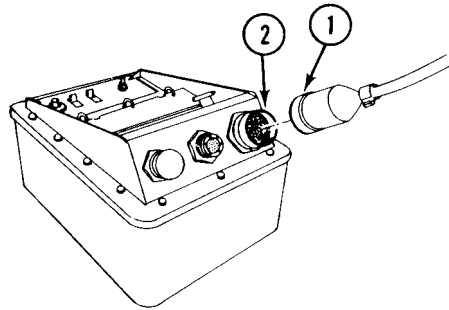
Engine stopped (see your -10)  
Vehicle blocked (see your -10)

Personnel Required

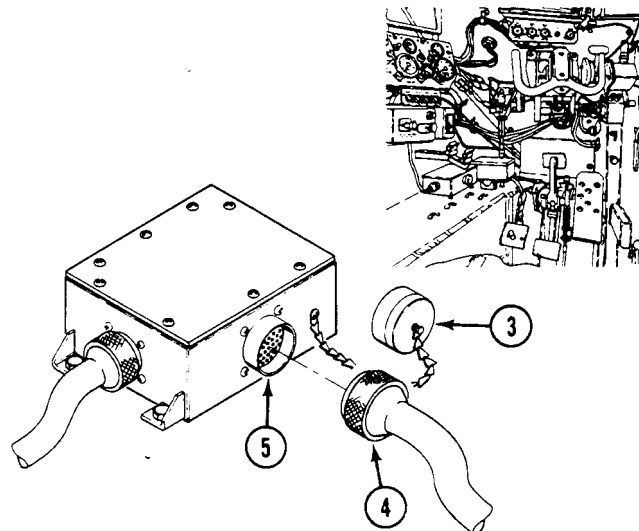
Unit Mech 63T10

**HOOK-UP**

1. Remove VTM and cable W1 from transit case.
2. Pull VTM circuit breaker to OFF.
3. Install plug W1 P1 (1) on VTM jack J1 (2).



4. Remove cap (3) from DCA 6 J2 (5).
5. Install plug W1 P2 (4) on DCA 6 J2 (5).



6. Push VTM circuit breaker to ON.
  - a. If display reads **(8888)** and (- - - -), go to Step 7.
  - b. If display is not blank, but does not read **(8888)** and (- - - -), write up DA form 2404 on faulty VTM display. Notify supervisor.
  - c. If display is blank, go to VTM blank display diagnostic troubleshooting (WP 0138 00).
7. Perform VTM confidence check TM 9-4910-571-12&P. If VTM confidence check does not pass, go to STE/ICE confidence test diagnostic troubleshooting (WP 0139 00).
8. Select test 60, then press and release TEST button.
9. Enter vehicle I.D. **(26)** into VTM, then press and release TEST button.
10. Select test 61, then press and release TEST button. If vehicle I.D. **(26)** does not appear on VTM display, see TM 9-4910-571-12&P.
11. Select test 62, then press and release TEST button. If DCA to which VTM is connected does not appear on VTM display, see TM 9-4910-571-12&P.
12. Return to troubleshooting.

**REMOVAL**

1. Pull VTM circuit breaker to OFF.
2. Turn master switch to OFF.
3. Remove W1 cable from DCA 6 J2 and VTM jack J1.
4. Install cap on DCA 6 J2.
5. Stow VTM and cable W1 in transit case.

---

**STE/ICE TEST 10 ENGINE RPM**

**0118 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0118 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. SELECT TEST 10.
2. PRESS AND RELEASE TEST BUTTON.
3. VTM WILL DISPLAY ENGINE RPM:

**Table 1.**

<b>CONDITION</b>	<b>ENGINE RPM</b>
<b>Cranking</b>	<b>100 Minimum</b>
<b>Idle</b>	<b>600-700</b>
<b>Governed speed (no load)</b>	<b>2900-3050</b>

- a. If error message appears, see TM 9-4910-571-12&P.
  - b. If display is erratic or reads 0 with engine turning, go to: STE/ICE Test 10 Diagnostic Troubleshooting (WP 0140 00).
4. RETURN TO TROUBLESHOOTING.



---

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE**

**0119 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0119 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. SELECT TEST 24.
2. PERFORM OFFSET TEST.
  - a. Push and hold TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-10** and **+10**, offset test passes.
  - c. If offset test fails, go to: STE/ICE Test 24 Diagnostic Troubleshooting (WP 0143 00).
3. PRESS AND RELEASE TEST BUTTON.
4. START ENGINE AND RUN AT GOVERNED NO LOAD SPEED (WP 0155 00).
  - a. If VTM reads 55 (psi) or more, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If readings are erratic or cannot be obtained, go to: STE/ICE Test 24 Diagnostic Troubleshooting (WP 0143 00).
5. STOP ENGINE (see your -10).
6. RETURN TO TROUBLESHOOTING.



---

**STE/ICE TEST 25 FUEL RETURN PRESSURE**

**0120 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0120 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63t10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. SELECT TEST 25.
2. PERFORM OFFSET TEST.
  - a. Push and hold TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-10** and **+10**, offset test passes.
  - c. If offset test fails, go to: STE/ICE Test 25 Diagnostic Troubleshooting (WP 0144 00).
3. PRESS AND RELEASE TEST BUTTON.
4. START ENGINE AND RUN AT GOVERNED NO LOAD SPEED (WP 0155 00).
  - a. If VTM reads 18 (psi) or more, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If readings are erratic or cannot be obtained, go to: STE/ICE Test 25 Diagnostic Troubleshooting (WP 0144 00).
5. STOP ENGINE (see your -10).
6. RETURN TO TROUBLESHOOTING.





---

**STE/ICE TEST 26 FUEL FILTER PRESSURE DROP**

**0121 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0121 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech  
Helper

References

See your -10  
TM 9-4910-571-12&P

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
STE/ICE hooked up to DCA 6 (WP 0117 00)

- 
1. SELECT TEST 26.
  2. PRESS AND RELEASE TEST BUTTON. VTM SHOULD DISPLAY **PASS**.
    - a. If error message appears, see TM 9-4910-571-12&P.
    - b. If readings are erratic or cannot be obtained or reads **FAIL**, go to: STE/ICE Test 26 Diagnostic Troubleshooting (WP 0145 00).
  3. START ENGINE (see your -10).
  4. PERFORM ROAD TEST (WP 0155 00).
  5. WHEN ENGINE RPM REACHES 2400 DURING ROAD TEST, PRESS AND RELEASE TEST BUTTON. HAVE HELPER ASSIST.
  6. VTM SHOULD DISPLAY **PASS OR FAIL**.
    - a. If error message appears, see TM 9-4910-571-12&P.
    - b. If readings are erratic or cannot be obtained, go to: STE/ICE Test 26 Diagnostic Troubleshooting (WP 0145 00).
  7. STOP ENGINE (see your -10).
  8. RETURN TO TROUBLESHOOTING.



---

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE**

---

**0122 00**

**THIS WORK PACKAGE COVERS:**

Test (page 0122 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. SELECT TEST 30.
2. PERFORM OFFSET TEST.
  - a. Press and hold TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-3 to+3**, offset test passes.
  - c. If offset test fails, go to: STE/ICE Test 30 Diagnostic Troubleshooting (WP 0146 00).
3. PRESS AND RELEASE TEST BUTTON.
4. START ENGINE (see your -10).
5. PERFORM ROAD TEST (RUN ACCELERATION PORTION AFTER WARMING UP) (WP 0155 00).
  - a. If VTM reads **20** or more, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If readings are erratic or cannot be obtained, go to: STE/ICE Test 30 Diagnostic Troubleshooting (WP 0146 00).
6. STOP ENGINE (see your -10).
7. RETURN TO TROUBLESHOOTING.



---

**STE/ICE TEST 32 AIR BOX PRESSURE**

**0123 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0123 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. SELECT TEST 32.
2. PERFORM OFFSET TEST.
  - a. Press and hold TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-3 to+3**, offset test passes.
  - c. If offset test fails, go to: STE/ICE Test 32 Diagnostic Troubleshooting (WP 0147 00).
3. PRESS AND RELEASE TEST BUTTON.
4. START ENGINE (see your -10).
5. ACCELERATE ENGINE TO GOVERNED NO LOAD SPEED (WP 0155 00). RECORD READING.
  - a. If VTM reads **6.0** or more at no load governed RPM, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If readings are erratic or cannot be obtained, go to: STE/ICE Test 32 Diagnostic Troubleshooting (WP 0147 00).
6. STOP ENGINE (see your -10).
7. RETURN TO TROUBLESHOOTING.



---

**STE/ICE TEST 67 BATTERY VOLTAGE**

**0124 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0124 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. Select TEST 67.
2. Press and release TEST button.

**CONDITIONS**

**VOLTS**

**Engine off/MASTER SWITCH OFF.**

**21 or more**

**Cranking engine fuel off.**

**17 or more**

**Charging 1100-1300 RPM/service lights on.**

**26 to 29.5**

- a. If display is erratic or shows **0** (volts), go to: STE/ICE DCA Battery Voltage Diagnostic Troubleshooting (WP 0142 00).
  - b. If error message appears, see TM 9-4910-571-12&P.
3. Return to troubleshooting.





---

**STE/ICE TEST 68 STARTER MOTOR VOLTAGE**

**0125 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0125 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. Select TEST 68.
2. Press and release TEST button.
3. Turn MASTER SWITCH to ON.
4. Press START switch for 3 seconds and observe VTM reading.
  - a. If display reads 16 (volts) or more, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If starter cranks normally, but no reading appears, go to: STE/ICE Test 68 Diagnostic Troubleshooting (WP 0148 00).
5. Turn MASTER SWITCH to OFF.
6. Return to troubleshooting.



---

**STE/ICE TEST 69 STARTER NEGATIVE CABLE VOLTAGE DROP**

**0126 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0126 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. Select TEST 69.
2. Press and release TEST button.
3. Turn MASTER SWITCH to ON.
4. Press START switch for 3 seconds and observe VTM reading.
  - a. If display reads .60 (volts) or less, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If engine cranks normally, but reading is erratic or cannot be obtained, go to: STE/ICE Test 69 Diagnostic Troubleshooting (WP 0149 00).
5. Turn MASTER SWITCH to OFF.
6. Return to troubleshooting.



---

**STE/ICE TEST 70 STARTER SOLENOID VOLTAGE**

---

**0127 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0127 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. Select TEST 70.
2. Press and release TEST BUTTON.
3. Turn MASTER SWITCH to ON.
4. Press START switch for 3 seconds and observe VTM reading.
  - a. If display reads **16** (volts) or more, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If engine cranks normally, but reading is erratic or cannot be obtained, go to: STE/ICE Test 70 Diagnostic Troubleshooting (WP 0150 00).
5. Turn MASTER SWITCH to OFF.
6. Return to troubleshooting.



---

**STE/ICE TEST 71 STARTER CURRENT (AVERAGE)**

---

**0128 00****THIS WORK PACKAGE COVERS:**

Test (page 0128 00-1).

---

**INITIAL SETUP:**Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

Personnel Required

Unit Mech 63T10

References

See your -10

TM 9-4910-571-12&amp;P

- 
1. Select TEST 71.
  2. Perform offset test.
    - a. Press TEST button until display reads **CAL**. Release TEST button.
    - b. If VTM reads between **-250** and **+250**, offset test passes.
    - c. If offset test fails, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
  3. Press and release TEST button.
  4. Crank engine for five seconds and note steady reading.
    - a. If VTM reads between **200** and **490**, test passes.
    - b. If error message appears, see TM 9-4910-571-12&P.
    - c. If no reading appears and engine cranks normally, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
  5. Return to troubleshooting.





---

**STE/ICE TEST 72 STARTER CURRENT (FIRST PEAK)**

---

**0129 00****THIS WORK PACKAGE COVERS:**

Test (page 0129 00-1).

---

**INITIAL SETUP:**Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

Fuel shut off (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&amp;P

- 
1. Select TEST 72.
  2. Perform offset test.
    - a. Press and hold TEST button until **CAL** appears. Release TEST button.
    - b. If VTM reads between **-250** and **+250**, offset test passes.
    - c. If offset test fails, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
  3. Press and release TEST button.
  4. Crank engine for one second and note reading displayed on VTM.
    - a. If VTM reads between **900 - 1540**, test passes.
    - b. If error message appears, see TM 9-4910-571-12&P.
    - c. If no reading appears and engine cranks normally, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
  5. Return to troubleshooting.



---

**STE/ICE TEST 73 BATTERY RESISTANCE AND STE/ICE TEST 75 BATTERY RESISTANCE CHANGE (PACK)**

---

**0130 00**

**THIS WORK PACKAGE COVERS:**

Test (page 0130 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

Personnel Required

Unit Mech 63T10

All electrical accessories turned off (see your -10)

Fuel OFF, engine must not start (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

**NOTE**

**Both TEST 73 and TEST 75 must be performed to determine battery pack condition.**

1. Select TEST 73.
2. Perform offset test.
  - a. Press and hold TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-250** and **+250**, offset test passes.
  - c. If offset test fails, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
3. Press and release TEST button.
  - a. If VTM display is erratic or cannot be obtained, go to STE/ICE DCA battery voltage diagnostic troubleshooting (WP 0141 00).
  - b. If fault cannot be corrected in (WP 0141 00), go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
4. When **GO** appears, crank engine over for two seconds or until one of the following appears on display:

**DISPLAY**

**PERFORM/RESULT**

**OFF**

**Stop cranking and wait for message to appear.**

**A number**

**BATTERY RESISTANCE (go to Step 5)**

**.9.9.9**

**Beyond range of VTM, cannot be measured**

**Error message**

**See TM 9-4910-571-12&P**

**(—)**

**VTM lost power during test. Batteries may be too weak. Try powering VTM using external source.**

5. Observe VTM reading.
  - a. If VTM reading is **30** (milliohms) or less, test passes.

**STE/ICE TEST 73 BATTERY RESISTANCE AND STE/ICE TEST 75 BATTERY  
RESISTANCE CHANGE (PACK)—Continued**

**0130 00**

- b. If VTM reading is more than **30** (milliohms), test fails.
- 6. Select TEST 75.
- 7. Repeat Steps 2 thru 5.
- 8. Determine condition of battery pack using table.

<b>TEST 73 BATTERY INTERNAL RESISTANCE TEST RESULT</b>	<b>TEST 75 BATTERY RESISTANCE CHARGE TEST RESULT</b>	<b>BATTERY PACK CONDITION</b>
<b>PASS</b>	<b>PASS</b>	<b>The batteries tested are OK and in good state of charge.</b>
<b>PASS</b>	<b>FAIL</b>	<b>The batteries tested are in poor condition, but have a fresh charge.</b>
<b>FAIL</b>	<b>PASS</b>	<b>The batteries tested are OK but need to be recharged.</b>
<b>FAIL</b>	<b>FAIL</b>	<b>The batteries tested are in poor condition and in a state of discharge.</b>

- a. If batteries are in poor condition, go to individual battery tests 77 and 79. See TM 9-4910-571-12&P.

---

**STE/ICE TEST 74 STARTER CIRCUIT RESISTANCE**

**0131 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0131 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

References

See your -10  
TM 9-4910-571-12&P

---

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
All electrical accessories turned off (see your -10)  
Fuel OFF, engine must not start (see your -10)  
STE/ICE hooked up to DCA 6 (WP 0117 00)

1. Select TEST 74.
2. Perform offset test.
  - a. Press an hold TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-250** and **+250**, offset test passes.
  - c. If offset test fails, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
3. Press and release TEST button.
4. When **GO** appears, turn MASTER SWITCH to ON and crank engine for five seconds or until one of the following appears on the VTM:

<b>DISPLAY</b>	<b>PERFORM/RESULT</b>
<b>OFF</b>	<b>Stop cranking and wait for message to appear.</b>
<b>A number</b>	<b>CIRCUIT RESISTANCE (in milliohm)</b>
<b>.9.9.9.9</b>	<b>Beyond range of VTM, cannot be measured</b>
<b>Error message</b>	<b>See TM 9-4910-571-12&amp;P</b>

5. Turn MASTER SWITCH to OFF.
6. Observe VTM reading.
  - a. If VTM reads 30 (milliohms) or less, test passes.
  - b. If reading is erratic or cannot be obtained, go to STE/ICE DCA battery voltage diagnostic troubleshooting (WP 0141 00) and STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
7. Return to troubleshooting.



---

**STE/ICE TEST 80 BATTERY CURRENT**

**0132 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0132 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
All electrical accessories turned off (see your -10)  
STE/ICE hooked up to DCA 6 (WP 0117 00)

Personnel Required

Unit Mech

---

1. Select TEST 80.
2. Perform offset test.
  - a. Press TEST button until **CAL** appears. Release TEST button.
  - b. If VTM reads between **-250** and **+250**, offset test passes.
  - c. If offset test fails, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
3. Press and release TEST button.
4. Turn MASTER SWITCH to ON.
5. Depress START button for five seconds.
  - a. If VTM reads **0.0** or less, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If engine cranks normally, but reading is erratic or cannot be obtained, go to STE/ICE DCA current shunt diagnostic troubleshooting (WP 0142 00).
6. Turn MASTER SWITCH to OFF.
7. Return to troubleshooting.





---

**STE/ICE TEST 82 GENERATOR OUTPUT VOLTAGE**

---

**0133 00**

**THIS WORK PACKAGE COVERS:**

Test (page 0133 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. Select TEST 82
2. Start engine and run at 1400-1600 RPM (see your -10).
3. Turn MASTER LIGHT switch to SERV DRIVE.
4. Press and release TEST button on VTM
5. Observe VTM reading.
  - a. If VTM reads between **26** to **29.5** (volts), test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If reading is erratic or cannot be obtained, go to STE/ICE test 82 diagnostic troubleshooting (WP 0151 00).
6. Stop engine (see your -10).
7. Turn MASTER LIGHT switch to OFF.
8. Return to troubleshooting.



---

**STE/ICE TEST 83 GENERATOR FIELD VOLTAGE**

**0134 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0134 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

See your -10

TM 9-4910-571-12&P

---

1. Select TEST 83.
2. Press and release TEST button.
3. Start engine and run at 1400-1600 RPM (see your -10).
4. OBSERVE VTM DISPLAY.
  - a. If VTM reads **26** to **29.5** (volts), test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If reading is erratic or cannot be obtained, go to STE/ICE test 83 diagnostic troubleshooting (WP 0152 00).
5. Stop engine (see your -10).
6. Return to troubleshooting.



---

**STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP**

**0135 00**

---

**THIS WORK PACKAGE COVERS:**

Test (page 0135 00-1).

---

**INITIAL SETUP:**

Maintenance Level

Unit

Personnel Required

Unit Mech 63T10

Equipment Condition

Engine stopped (see your -10)

Vehicle blocked (see your -10)

STE/ICE hooked up to DCA 6 (WP 0117 00)

References

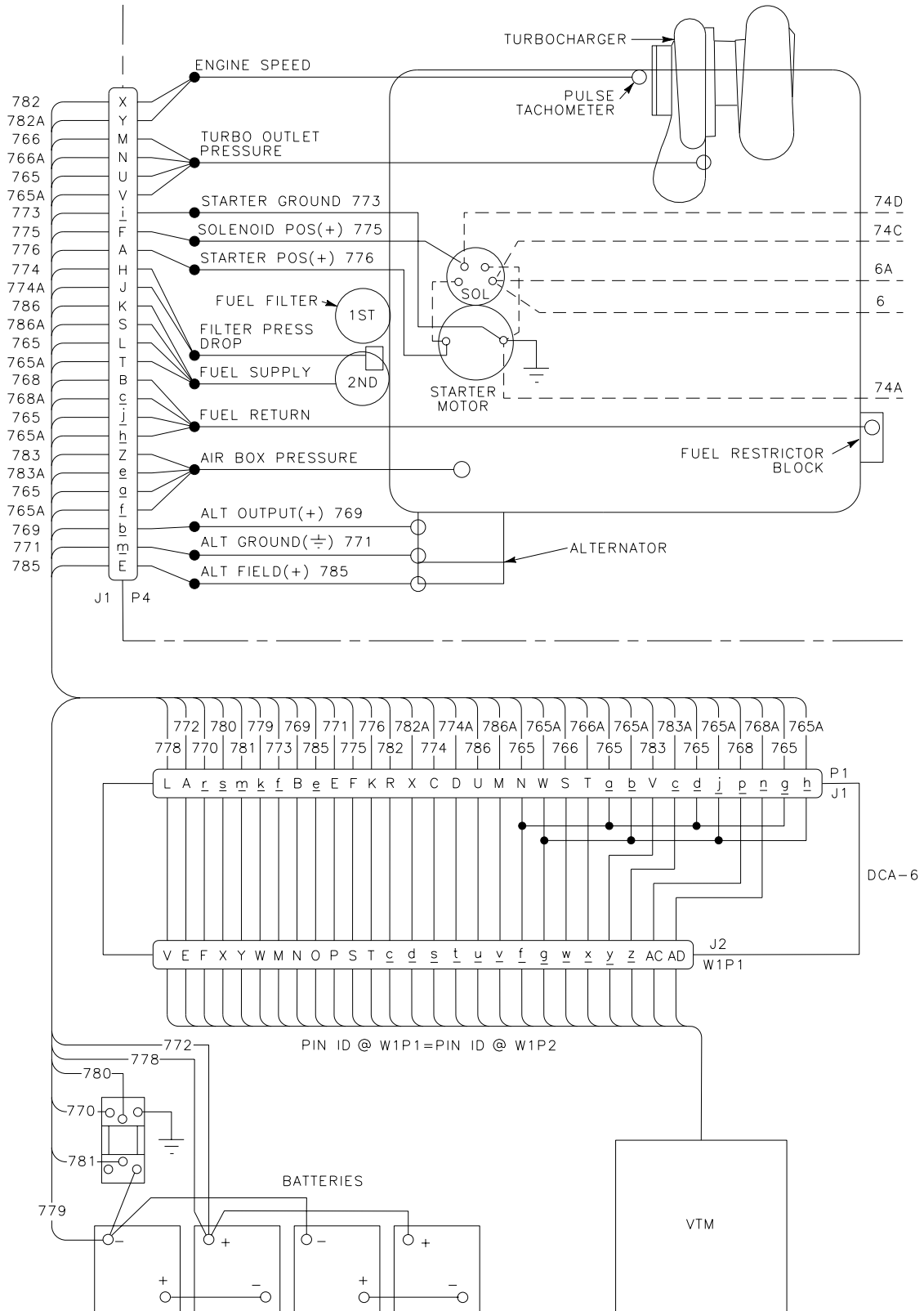
See your -10

TM 9-4910-571-12&P

---

1. Select TEST 84.
2. Start engine and run at 1400-1600 RPM (see your -10).
3. Turn MASTER LIGHT switch to SER DRIVE.
4. Press and release TEST button on VTM.
5. Observe VTM display.
  - a. If VTM reads **0.60** (volts) or less, test passes.
  - b. If error message appears, see TM 9-4910-571-12&P.
  - c. If reading is erratic or cannot be obtained, go to STE/ICE test 84 diagnostic troubleshooting (WP 0153 00).
6. Stop engine (see your -10).
7. Turn MASTER LIGHT switch to OFF.
8. Return to troubleshooting.









**STE/ICE BLANK DISPLAY DIAGNOSTIC TROUBLESHOOTING**

**0138 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
STE/ICE test set (WP 0926 00, Item 61)

Equipment Condition

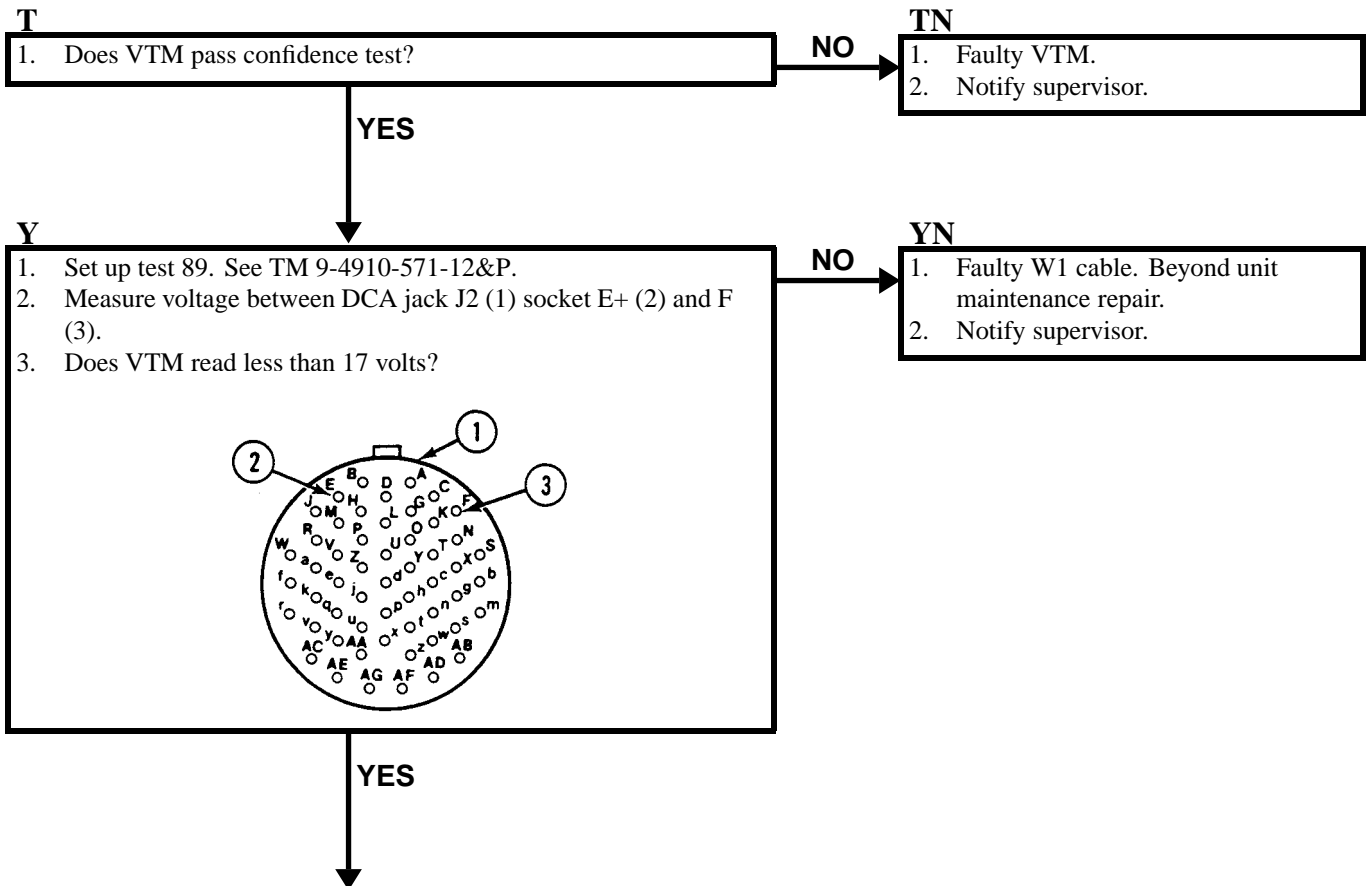
Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
STE/ICE hooked up to vehicle batteries  
(see TM 9-4910-571-12&P)  
Driver's power plant access panel removed  
(WP 0441 00)  
Trim vane lowered (see your -10)  
Power plant access door open (see your -10)

Materials/Parts

Electrical tape

Personnel Required

Unit Mech 63T10



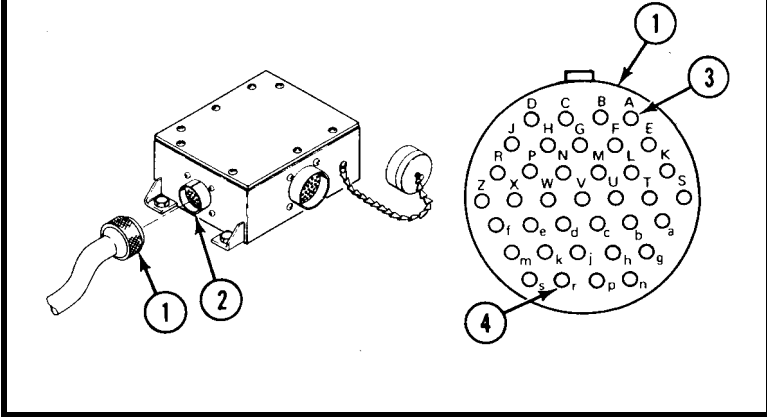
**2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure voltage between harness 12354593 plug P1 (1) socket A(+) (3) and r (4).
3. Does VTM read less than 17 volts?

NO

**2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.



YES

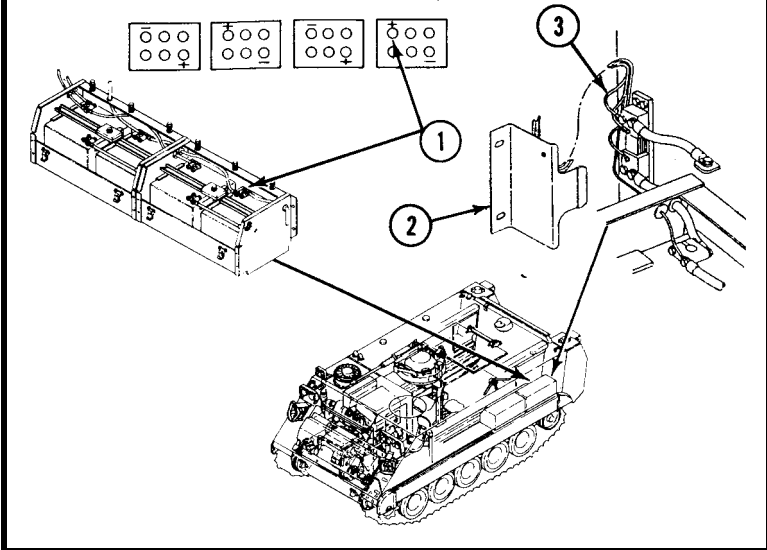
**3Y**

1. Inspect harness 12354593 circuit 772 terminal (1) on battery positive.
2. Remove shunt guard (2) and inspect harness 12354593 circuit 770 terminal (3) on current shunt.
3. Are all connections tight, clean and free from damage?

NO

**3YN**

1. Clean, tighten, or replace parts as necessary. Service vehicle batteries (see your -10).
2. Verify no faults found.



YES

**4Y**

1. Replace STE/ICE crew harness (WP 0878 00, WP 0879 00, WP 0880 00 or WP 0881 00).
2. Verify no faults found.



**STE/ICE CONFIDENCE TEST DIAGNOSTIC TROUBLESHOOTING**

**0139 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- General mechanic's tool kit: automotive (WP 0926 00, Item 65)
- Electrical connector pliers (WP 0926 00, Item 31)
- Jumper wire (WP 0927 00)
- STE/ICE Test Set (WP 0926 00, Item 61)

Materials/Parts

Electrical tape

Personnel Required

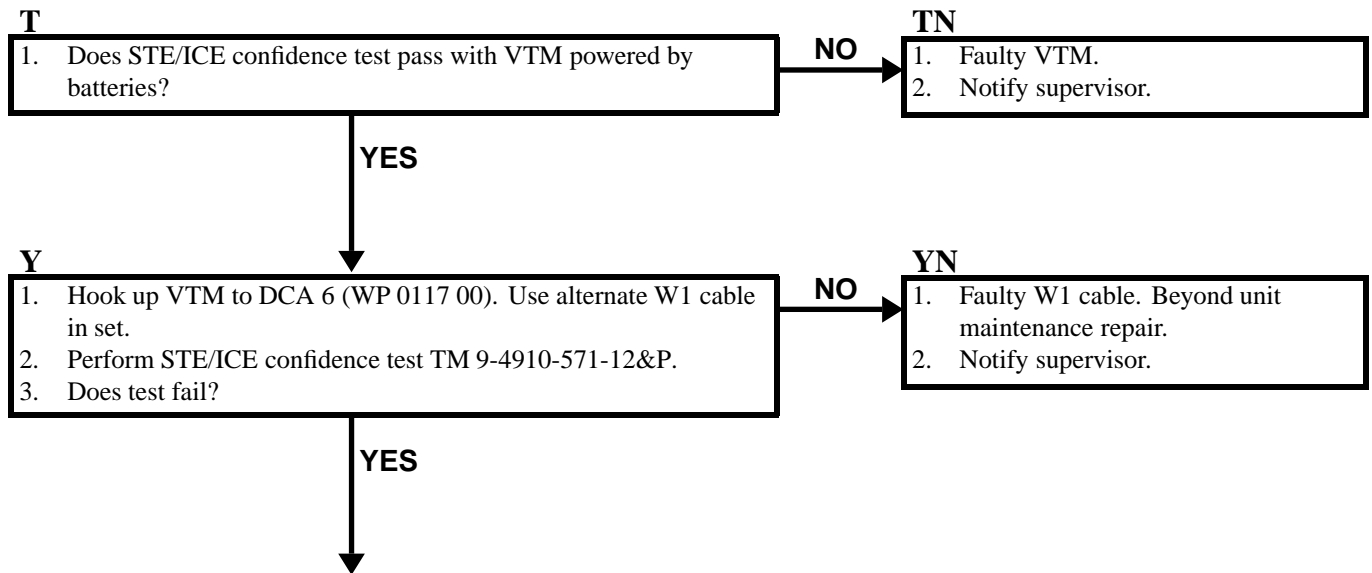
Unit Mech 63T10

References

See your-10  
TM 9-4910-571-12&P

Equipment Condition

- Engine stopped (see your -10)
- Vehicle blocked (see your -10)
- Driver's power plant access panel removed (WP 0441 00)
- Power plant access panel removed (WP 0439 00)
- STE/ICE hooked up to vehicle batteries (see TM 9-4910-571-12&P)
- Trim vane lowered (see your -10)



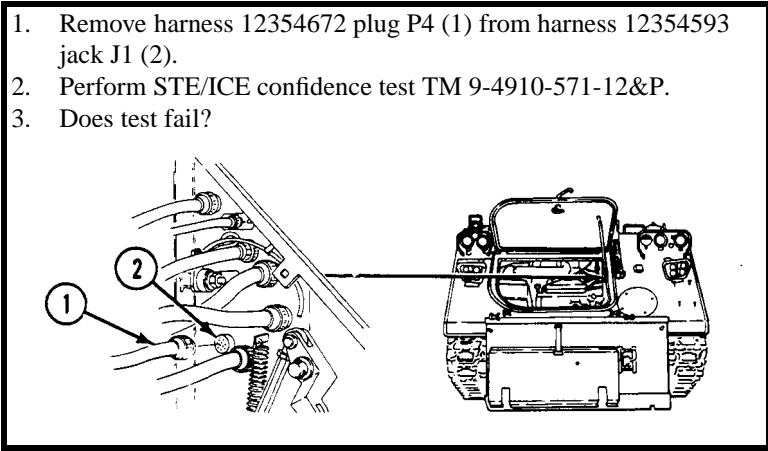
**2Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Perform STE/ICE confidence test TM 9-4910-571-12&P.
3. Does test fail?

NO

**2YN**

GO TO BY (PAGE 0139 00-3)



YES

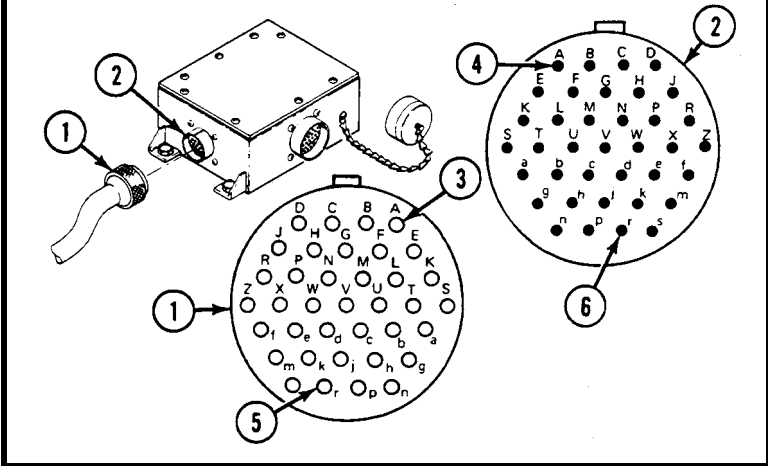
**3Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Install jumper wire between harness 12354593 plug P1 (1), pin A (3), and STE/ICE distribution box jack J1 (2), pin A (4).
3. Install jumper wire between harness 12354593 plug P1 (1), pin r (5), and STE/ICE distribution box jack J1 (2), pin r (6).
4. Perform STE/ICE confidence test TM 9-4910-571-12&P.
5. Does test fail?

NO

**3YN**

1. Faulty harness 12354593. Beyond unit maintenance repair.
2. Notify supervisor.



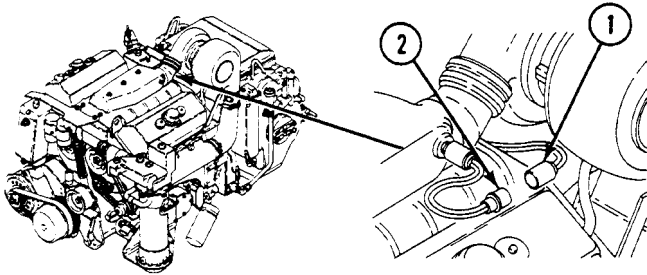
YES

**4Y**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**BY**

1. Install harness 12354672 plug P4 on harness 12354593 jack J1.
2. Remove harness 12354672 plug P3 (1) from turbo outlet tachometer jack (2).
3. Perform STE/ICE confidence test (TM 9-4910-571-12&P).
4. Does test fail?



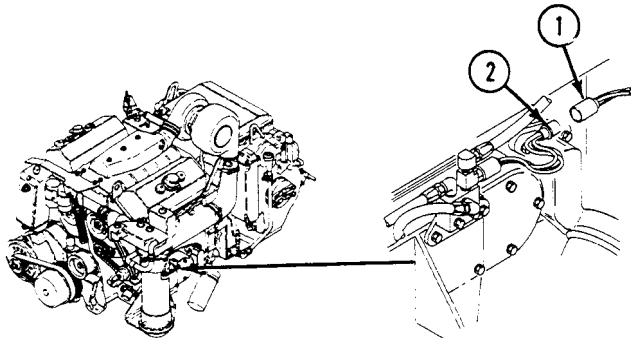
**BYN**

1. Replace turbo outlet tachometer (WP 0326 00).
2. Verify no faults found.

YES

**B2Y**

1. Pull VTM circuit breaker to OFF.
2. Install harness 12354672 plug P3 on turbo outlet pressure tachometer.
3. Remove harness 12354672 plug P1 (1) from fuel return pressure tachometer jack (2).
4. Perform STE/ICE confidence test TM 9-4910-571-12&P.
5. Does test fail?



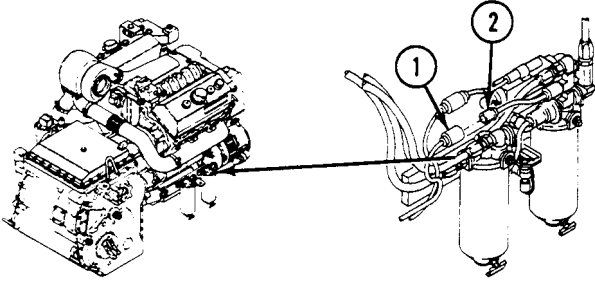
**B2YN**

1. Replace fuel return pressure tachometer (WP 0325 00).
2. Verify no faults found.

YES

**B3Y**

1. Pull VTM circuit breaker to OFF.
2. Install harness 12354672 plug P1 on fuel return pressure tachometer.
3. Remove harness 12354672 plug P8 (1) on fuel supply pressure tachometer jack (2).
4. Perform STE/ICE confidence test TM 9-4910-571-12&P.
5. Did test fail?



NO

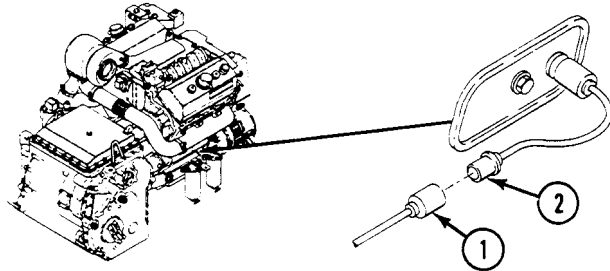
**B3YN**

1. Replace fuel supply pressure tachometer (WP 0324 00).
2. Verify no faults found.

YES

**B4Y**

1. Pull VTM circuit breaker to OFF.
2. Install harness 12354672 plug P8 on fuel supply pressure tachometer.
3. Remove harness 12354672 plug P9 (1) from air box pressure tachometer (2).
4. Perform STE/ICE confidence test TM 9-4910-571-12&P.
5. Did test fail?



NO

**B4YN**

1. Replace air box pressure tachometer (WP 0327 00).
2. Verify no faults found.

YES

**B5Y**

1. Repair/replace harness 12354672 (WP 0882 00).
2. Verify no faults found.



**STE/ICE TEST 10, 11, 12 AND 13 DIAGNOSTIC TROUBLESHOOTING**

**0140 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- Electrical connector pliers (WP 0926 00, Item 31)
- Jumper wire (WP 0927 00)
- STE/ICE Test set (WP 0926 00, Item 61)

Materials/Parts

Electrical tape

Personnel Required

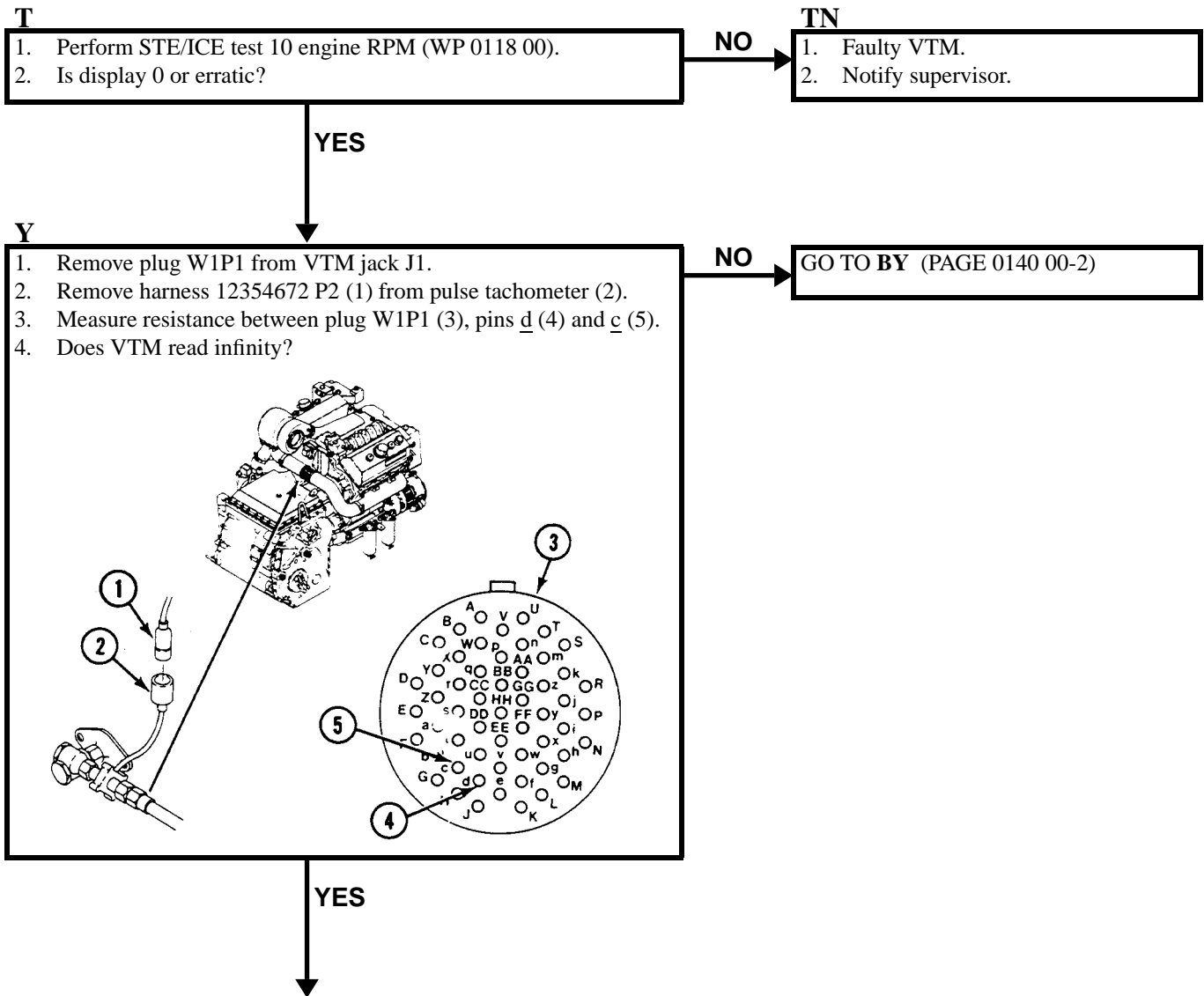
Unit Mech 63T10

References

See your -10  
TM 9-4910-571-12&P

Equipment Condition

- Engine stopped (see your -10)
- Vehicle blocked (see your -10)
- STE/ICE VTM hooked up to DCA 6 (WP 0117 00)
- Transmission controller in "SL"(see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)

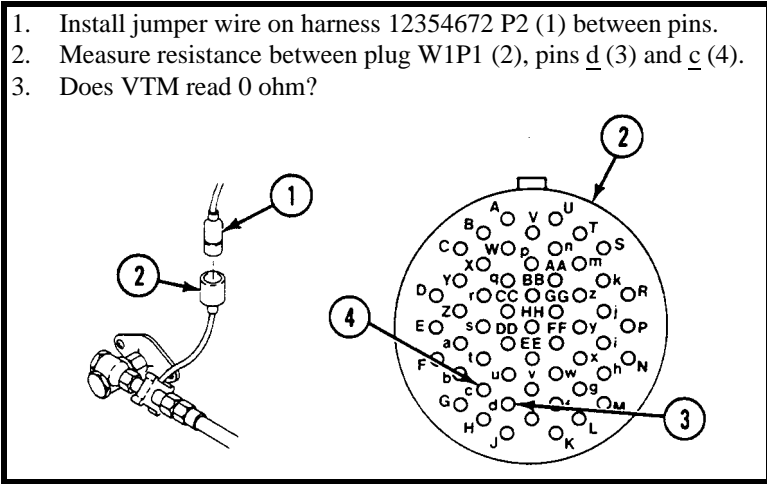


**2Y**

1. Install jumper wire on harness 12354672 P2 (1) between pins.
2. Measure resistance between plug W1P1 (2), pins d (3) and c (4).
3. Does VTM read 0 ohm?

NO

GO TO CY (PAGE 0140 00-4)



YES

**3Y**

1. Replace pulse tachometer (WP 0867 00).
2. Verify no faults found.

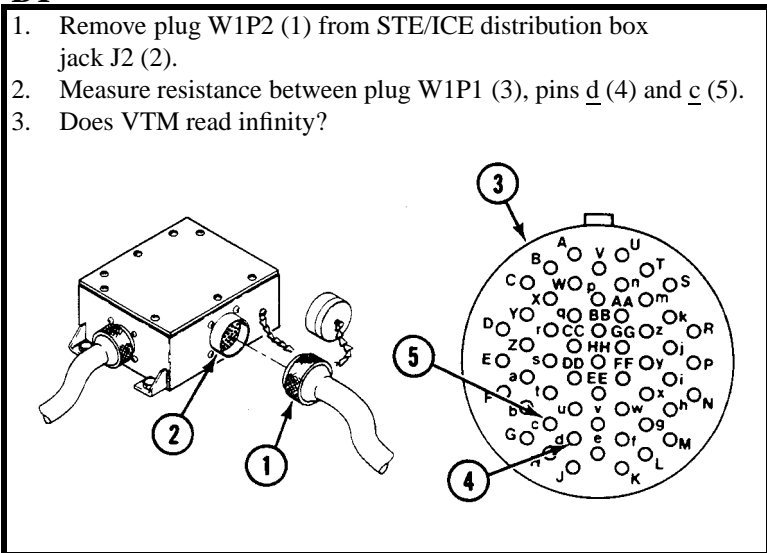
**BY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between plug W1P1 (3), pins d (4) and c (5).
3. Does VTM read infinity?

NO

**BYN**

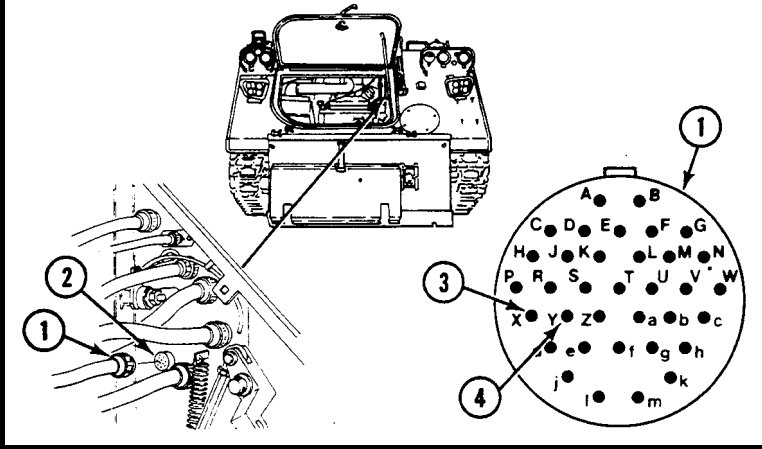
1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**B2Y**

1. Remove harness 12354672 P4 (1) from jack 12354593 J1 (2) at bulkhead.
2. Measure resistance between harness 12354672 P4 (1), pins X (3) and Y (4).
3. Does VTM read infinity?



NO

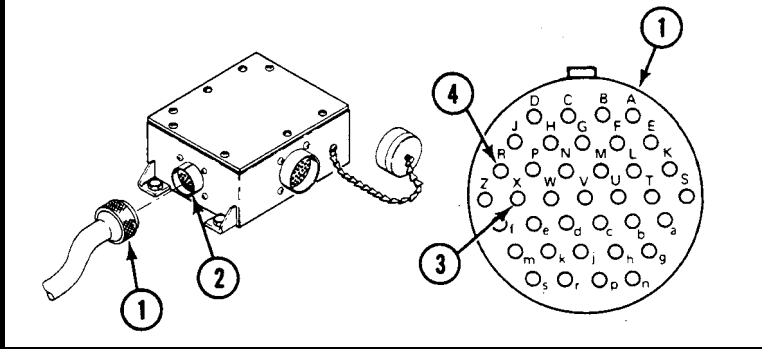
**B2YN**

1. Replace harness 12354672 (WP 0882 00).
2. Verify no faults found.

YES

**B3Y**

1. Remove harness 12354593 P1 (1) STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 P1 (1), pins X (3) and R (4).
3. Does VTM read infinity?



NO

**B3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

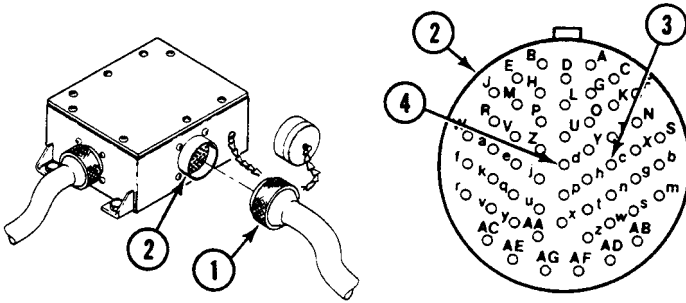
YES

**B4Y**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**CY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins c (3) and d(4).
3. Does VTM read more than 0 ohm?



NO

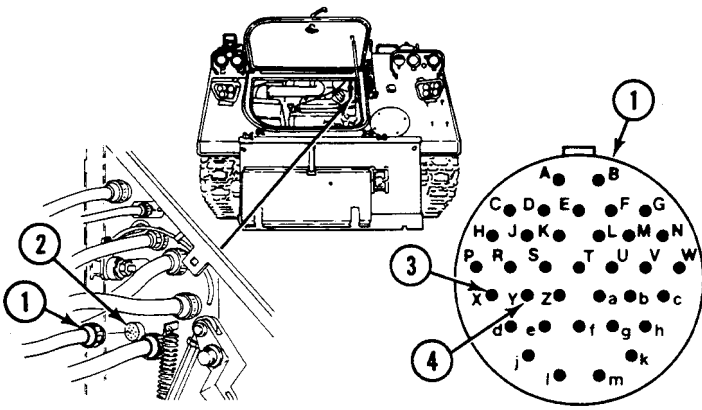
**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**C2Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 J1 (2) at bulkhead.
2. Measure continuity between harness 12354672 P4 (1), pins X (3) and Y (4).
3. Does VTM read 0 ohm?



NO

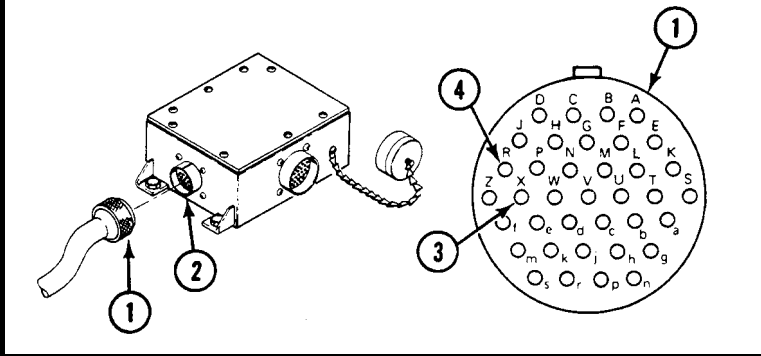
**C2YN**

1. Repair/replace wiring harness 12354672 (WP 0382 00) or (WP 0882 00) .
2. Verify no faults found.

YES

**C3Y**

1. Install harness 12354672 P4 on jack 12354593 J1 at bulkhead.
2. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
3. Measure resistance between harness 12354593 P1 (1), pins X (3) and R (4).
4. Does VTM read 0 ohm?



**NO**

**C3YN**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**YES**

**C4Y**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.



**DCA BATTERY VOLTAGE DIAGNOSTIC TROUBLESHOOTING**

**0141 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

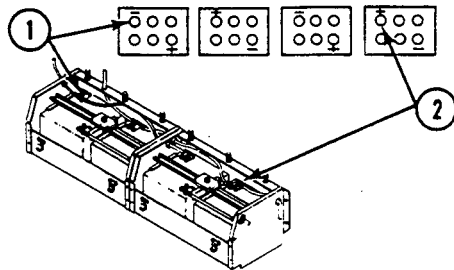
Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
Battery compartment cover opened (see your -10)

Personnel Required

Unit Mech 63T10  
Helper (H)

**T**

1. Remove plug W1 P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 89 TM 9-4910-571-12&P.
4. Measure voltage between battery terminals (1) and (2) with engine cranking for 3 seconds.
5. Does VTM read 17 volts or more?



**YES**

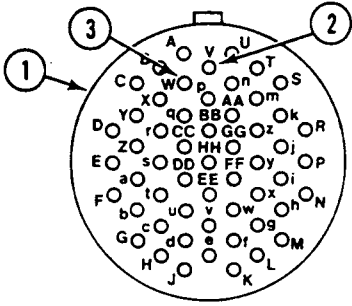
**NO**

**TN**

1. Service vehicle batteries (WP 0337 00) thru (WP 0358 00).
2. Verify no faults found.

**Y**

1. Measure voltage between plug W1 P1 (1), pin V (+) (2) and ground. VTM should read 22 volts or more.
2. Set up Test 91 TM 9-4910-571-12.
3. Measure voltage between plug W1 P1 (1), pin W (-) (3) and ground. VTM should read 22 volts or more.
4. Does VTM indicate a fault?



**NO**

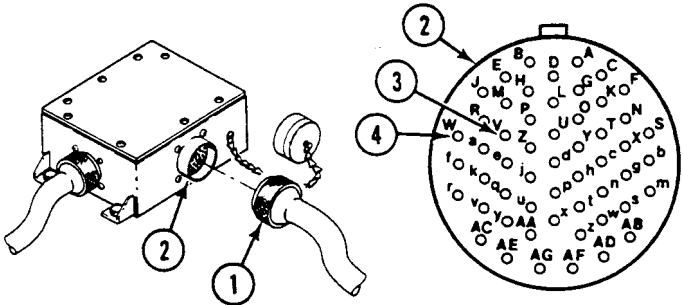
**YN**

1. Faulty VTM.
2. Notify supervisor.

**YES**

**2Y**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure voltage between STE/ICE distribution box jack J2 (2), pins V (+) (3) and W (-) (4).
3. Does VTM indicate other than battery voltage?



**NO**

**2YN**

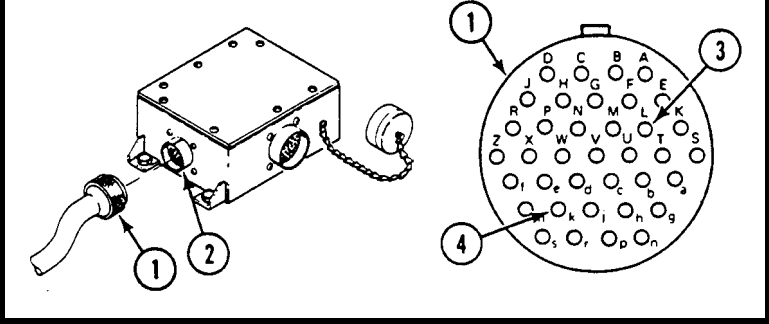
1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**



**3Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Measure voltage between 12354593 P1 (1), pins L (+) (3) and k (-) (4).
3. Does VTM indicate other than battery voltage?



**NO**

**3YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**4Y**

1. Repair/replace wiring harness 12354593 circuit 778 or 779 (WP 0382 00) or (WP 0882 00).
2. Verify no faults found.



**DCA CURRENT SHUNT DIAGNOSTIC TROUBLESHOOTING**

**0142 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

Jumper wire (WP 0927 00)  
STE/ICE Test Set (WP 0926 00, Item 61)

Personnel Required

Unit Mech

References

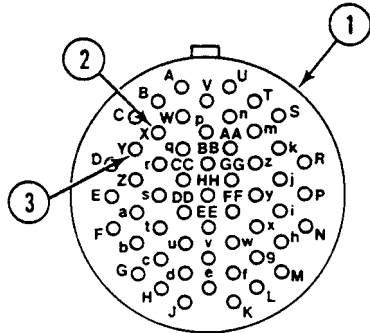
See your -10  
TM 9-4910-571-12&P

Equipment Condition

Engine stopped (see your -10)  
Vehicle blocked (see your -10)

**T**

1. Remove plug W1 P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 89 TM 9-4910-571-12&P.
4. Measure resistance between plug W1 P1(1), sockets X (2) and Y (3).
5. Does VTM read 0 ohms?



**NO**

**GO TO BY (PAGE 0142 00-3)**

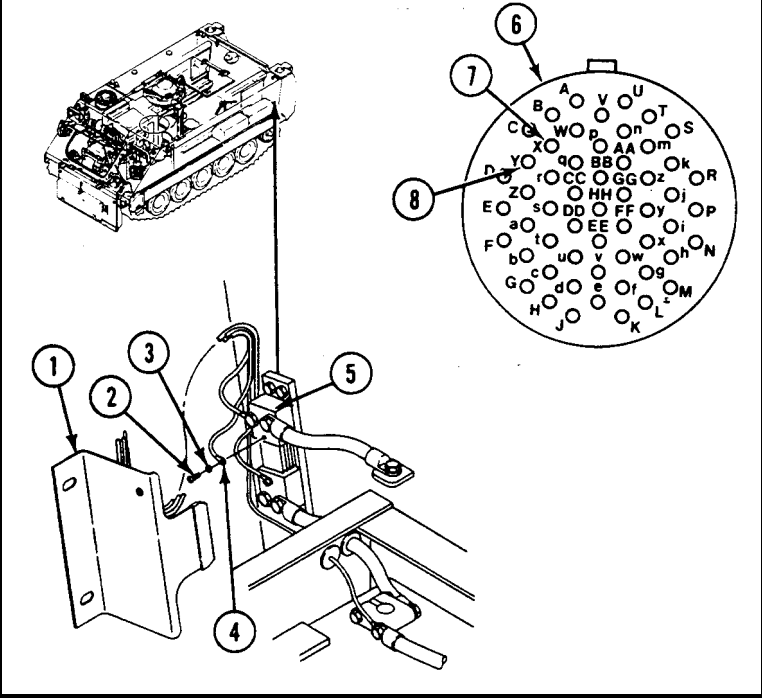
**YES**

**Y**

1. Remove shunt guard (1) with attached lead.
2. Remove screw (2), lockwasher (3), and harness 12354593 circuit 780 terminal lead E1 (4) from current shunt 1228937(5).
3. Wrap terminal lead E1 (4) with electrical tape.
4. Measure resistance between plug W1 P1 (6), socket X (7) and Y (8).
5. Does VTM read infinity?

**NO**

GO TO CY (PAGE 0142 00-4)



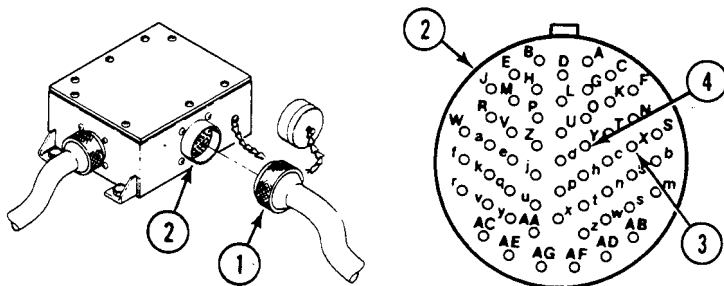
**YES**

**2Y**

1. Faulty VTM.
2. Notify supervisor.

**BY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), socket X (3) and Y (4).
3. Does VTM read more than one ohm?



**NO**

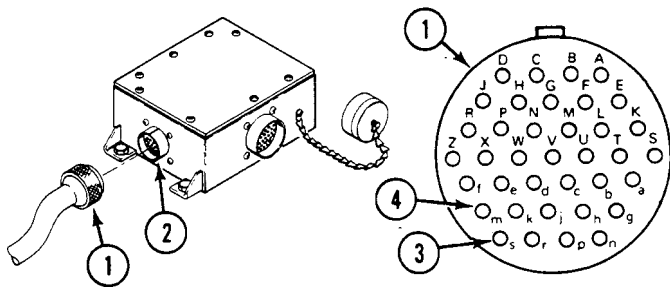
**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**B2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 P1 (1), socket s (3) and m(4).
3. Does VTM read more than one ohm?



**NO**

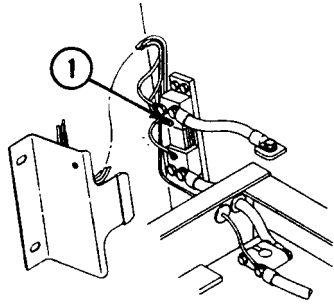
**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**B3Y**

1. Inspect harness 123454593 circuit 780 and 781 terminals (1) on current shunt.
2. Are all connections tight, clean, and free from damage?



NO

**B3YN**

1. Clean, tighten or replace parts, as necessary. See Service Vehicle Batteries (WP 0337 00) thru (WP 0358 00).
2. Verify no faults found.

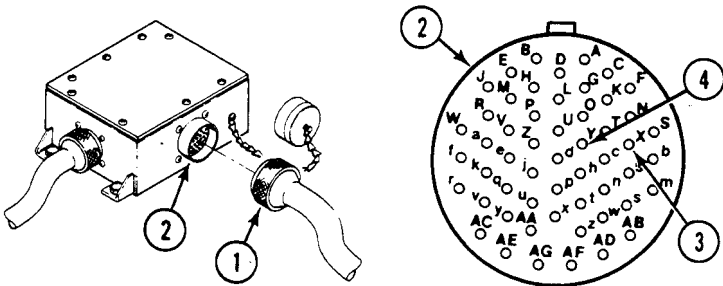
YES

**B4Y**

1. Repair/replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

**CY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), socket X (3) and Y (4).
3. Does VTM still fail to read infinity?



NO

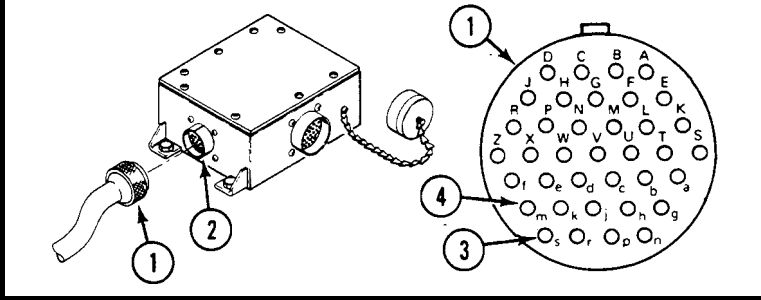
**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**C2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 P1 (1), socket s (3) and m(4).
3. Does VTM still fail to read infinity?



**NO**

**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**C3Y**

1. Repair/Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.





**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC TROUBLESHOOTING**

**0143 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
Jumper wire (WP 0927 00)  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

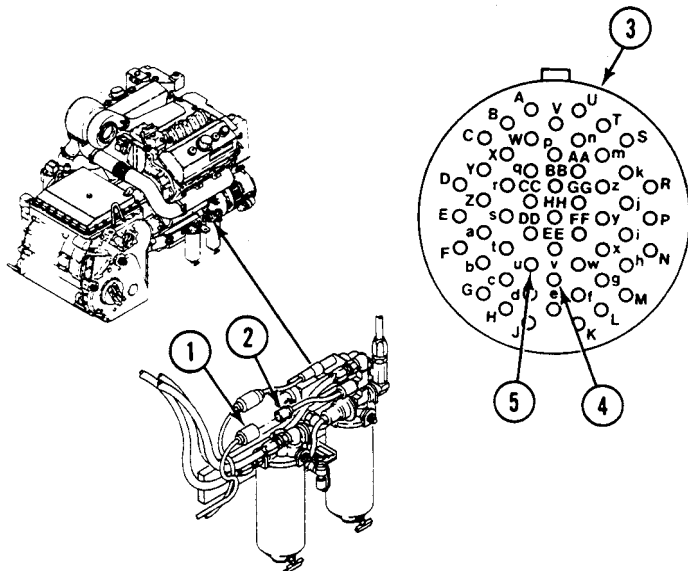
Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access panel open (see your -10)  
Driver's power plant access panel removed(WP 0441 00)

Personnel Required

Unit Mechanic 63T10

**T**

1. Remove plug W1 P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Remove harness 12345672 plug P8 (1) from fuel supply pressure tachometer (2).
4. Set up Test 91 TM 9-4910-571-12&P.
5. Measure resistance between W1 P1 (3), pins v (4) and u (5).
6. Does VTM read infinity?



**NO**

**GO TO BY (PAGE 0143 00-4)**

**YES**

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

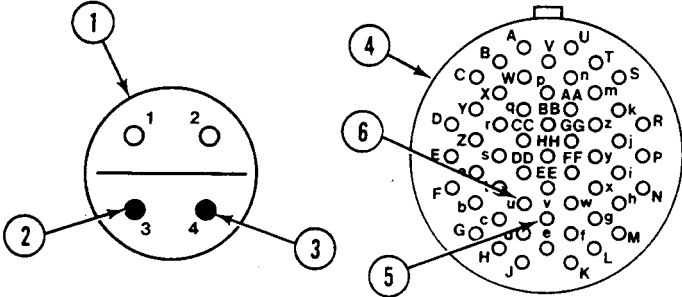
0143 00

**Y**

1. Install jumper wire between harness 12354672 plug P8 (1), pins 3 (2) and 4 (3).
2. Measure resistance between plug W1 P1 (4), pins v (5) and u (6).
3. Does VTM read 0 ohms?

**NO**

GO TO CY (PAGE 0143 00-6)



**YES**

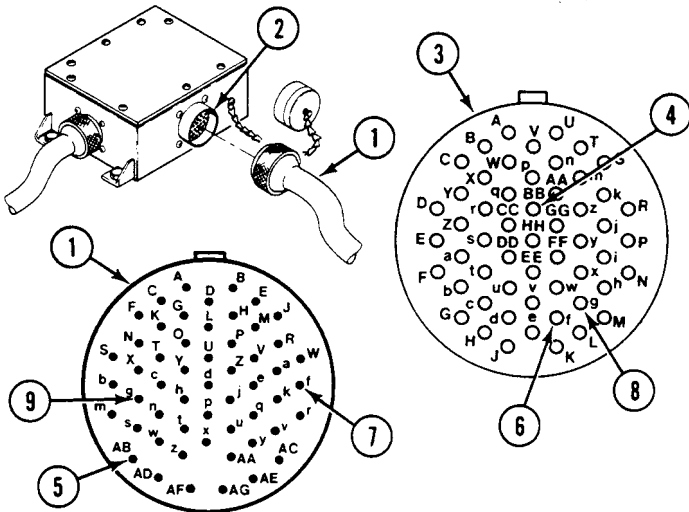
**2Y**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between the following plug pins:  
W1 P1 (3), pin BB (4) to W1 P2 (1), pin AB (5)  
W1 P1 (3), pin f (6) to W1 P2 (1), pin f (7)  
W1 P1 (3), pin g (8) to W1 P2 (1), pin g (9)
3. Does VTM read 0 ohms for each measurement?

**NO**

**2YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



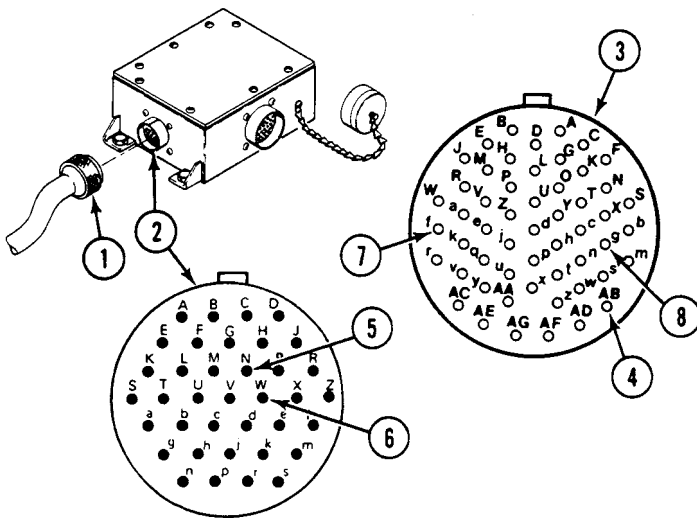
**YES**

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**3Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Set up Test 92 TM 9-4910-571-12&P.
3. Measure resistance between STE/ICE distribution box jack J2 (3), pin AB (4) and the following jack pins:
  - STE/ICE distribution box jack J2 (3) pin f (7)
  - STE/ICE distribution box jack J2 (3) pin g (8)
  - STE/ICE distribution box jack J1 (2) pin N (5)
  - STE/ICE distribution box jack J1 (2) pin W (6)
4. Does VTM read between 3600 and 4400 ohms for each measurement?



**NO**

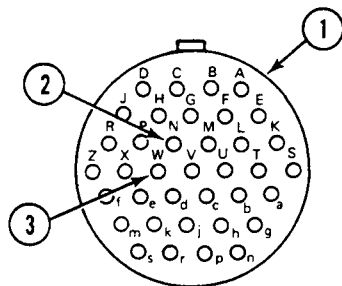
**3YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**4Y**

1. Set up Test 91 TM 9-4910-571-12&P.
2. Measure resistance between harness 12354593 plug P1 (1), pins N (2) and W (3).
3. Does VTM read infinity?



**NO**

**GO TO DY (PAGE 0143 00-8)**

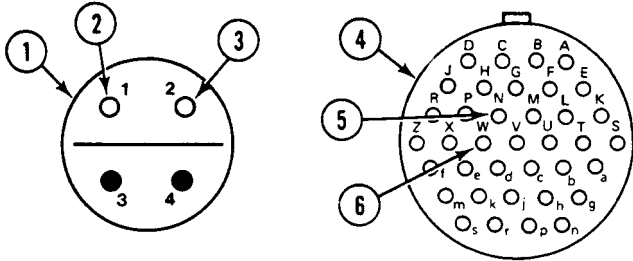
**YES**

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**5Y**

1. Move jumper wire on harness 12354672 plug P8 (1) from pins 3 and 4 to pins 1 (2) and 2 (3).
2. Measure resistance between harness 12354593 plug P1 (4), pins N (5) and W (6).
3. Does VTM read 0 ohms?



**NO** → GO TO EY (PAGE 0143 00-9)

**YES**

**6Y**

1. Has fuel supply pressure tachometer been replaced?

**NO** → **6YN**  

1. Replace fuel supply pressure tachometer (WP 0324 00).
2. Verify no faults found.

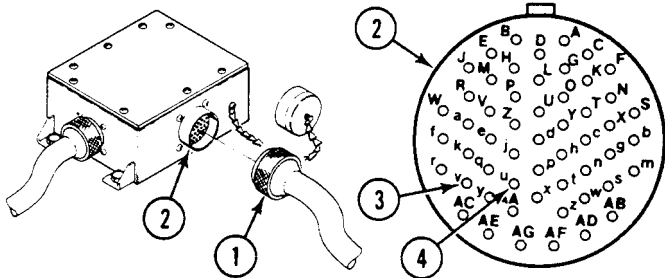
**YES**

**7Y**

1. Faulty VTM.
2. Notify supervisor.

**BY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins v (4) and u (5). VTM should read infinity.
3. Does VTM indicate a fault?



**NO** → **BYN**  

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

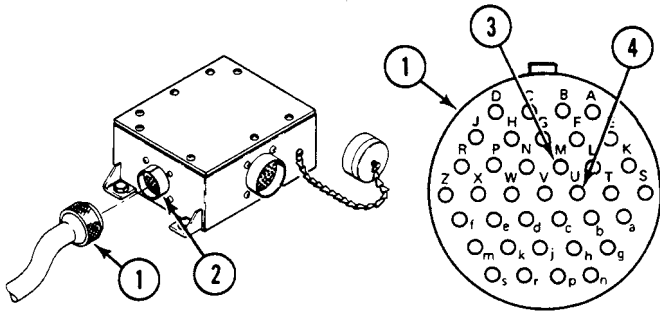
**YES**

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**B2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins M (3) and U (4). VTM should read infinity.
3. Does VTM indicate a fault?



NO

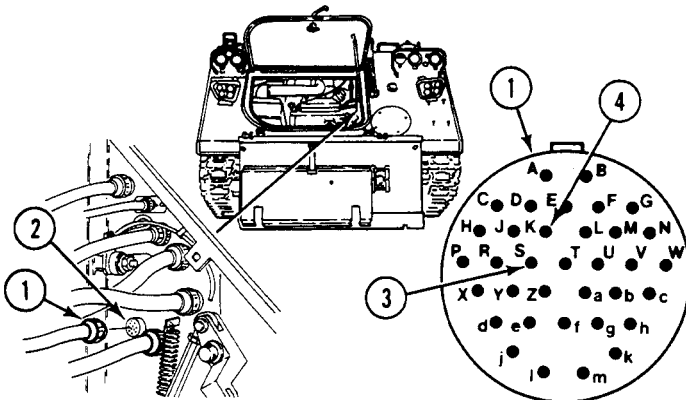
**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

YES

**B3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins S (3) and K (4).
3. Does VTM read infinity?



NO

**B3YN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

YES

**B4Y**

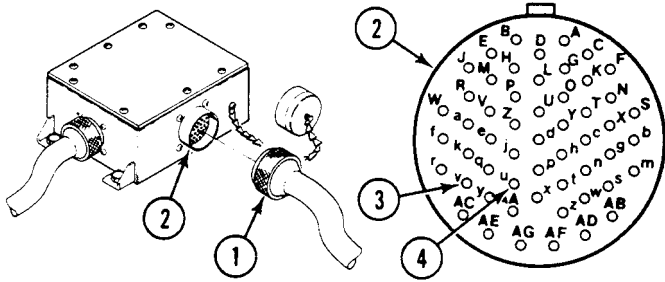
1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**CY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins v (3) and u (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

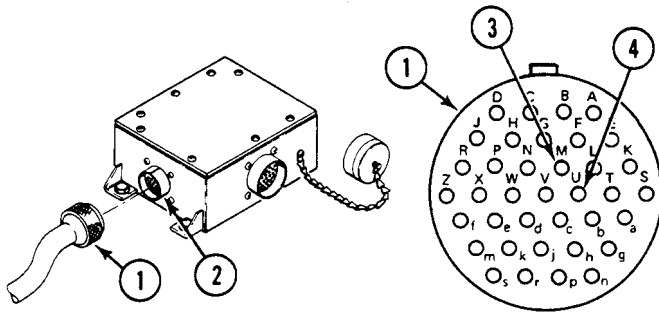
**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**C2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins M (3) and U (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

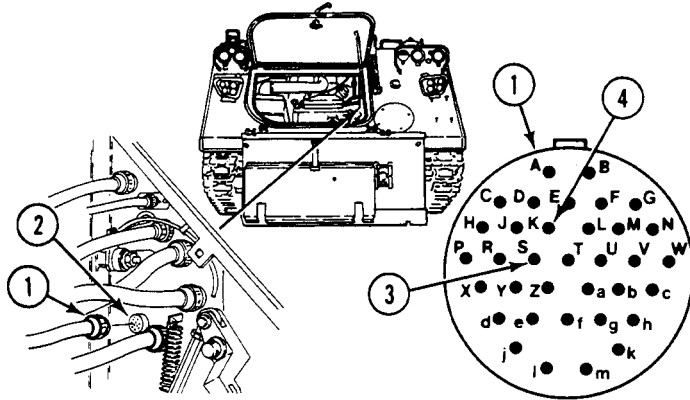
**YES**

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**C3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins S (3) and K (4).
3. Does VTM read 0 ohms?



**NO**

**C3YN**

1. Repair/replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**C4Y**

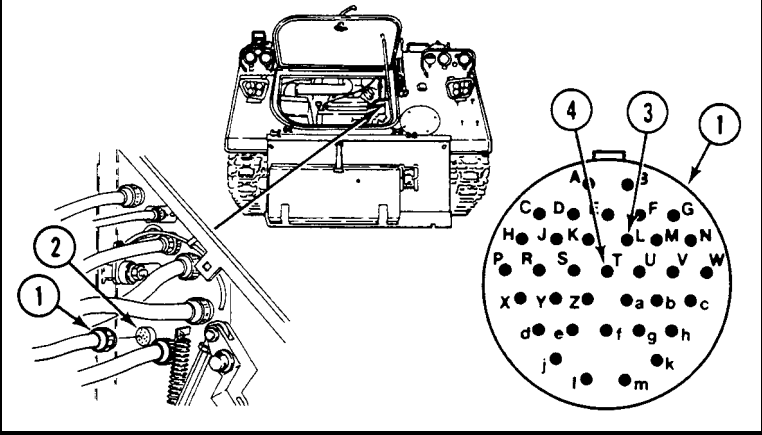
1. Repair/replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**DY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins L (3) and T (4). Use VTM.
3. Does VTM read infinity?



**NO**

**DYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**D2Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

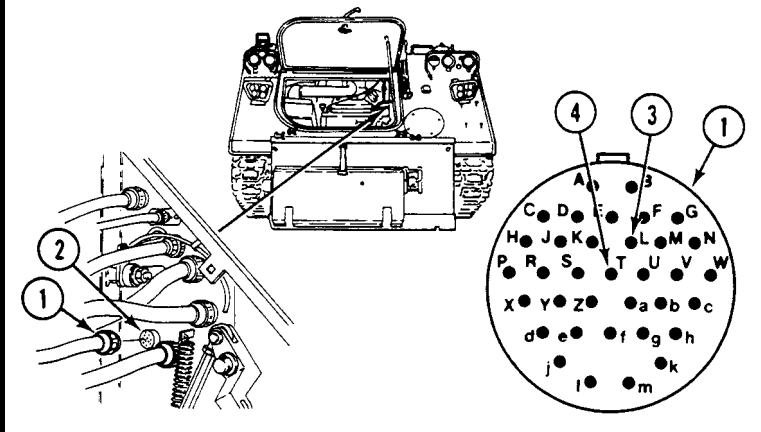


**STE/ICE TEST 24 FUEL SUPPLY PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0143 00

**EY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins L (3) and T (4).
3. Does VTM read 0 ohms?



**NO**

**EYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**E2Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.



**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC TROUBLESHOOTING**

**0144 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

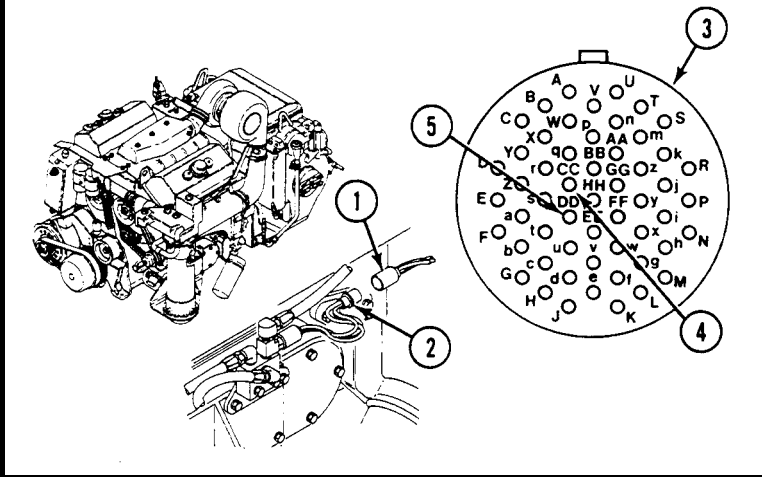
Engine stopped (see your -10)  
Vehicle blocked (see your -10)  
STE/ICE hooked up to vehicle batteries (TM 9-4910-571-12&P)  
Trim vane lowered (see your -10)  
Power plant access panels open (see your -10)  
Power plant access panel removed (WP 0439 00)

Personnel Required

Unit Mechanic 63T10

**T**

1. Remove plug W1 P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 91 TM 9-4910-571-12&P.
4. Remove harness 12345672 plug (1) from fuel pressure tachometer jack (2).
5. Measure resistance between W1 P1 (3), pins CC (4) and DD (5).
6. Does VTM read infinity?



**NO** → **GO TO BY (PAGE 0144 00-5)**

**YES** ↓

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

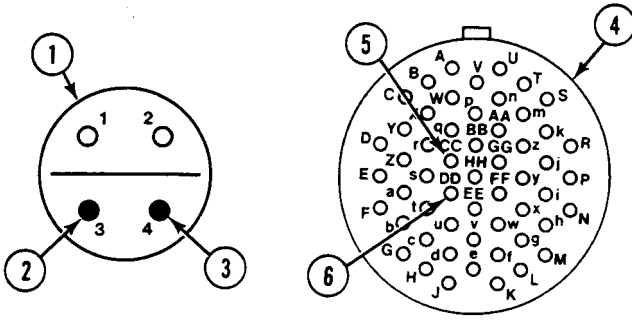
0144 00

**Y**

1. Install jumper wire between harness 12354672 plug P1 (1), pins 3 (2) and 4 (3).
2. Measure resistance between plug W1 P1 (4), pins CC (5) and DD (6).
3. Does VTM read 0 ohms?

**NO**

**GO TO CY (PAGE 0144 00-6)**



**YES**

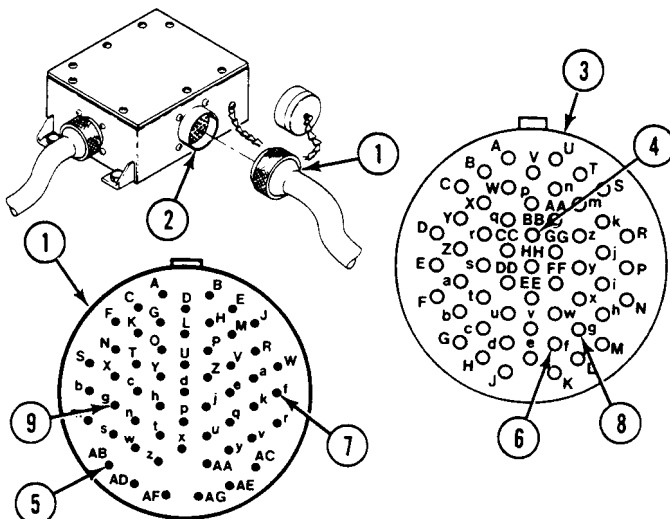
**2Y**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between the following plug pins:  
 W1 P1 (3), pin BB (4) to W1 P2 (1), pin AB (5)  
 W1 P1 (3), pin f (6) to W1 P2 (1), pin f (7)  
 W1 P1 (3), pin g (8) to W1 P2 (1), pin g (9)
3. Does VTM read 0 ohms for each measurement?

**NO**

**2YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



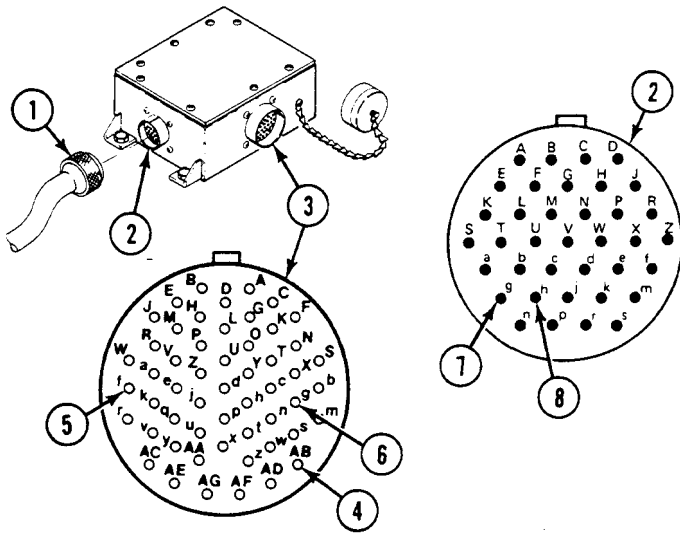
**YES**

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0144 00

**3Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (3), pin AB (4) and the following jack pins:  
 STE/ICE distribution box jack J2 (3) pin f (5)  
 STE/ICE distribution box jack J2 (3) pin g (6)  
 STE/ICE distribution box jack J1 (2) pin g (7)  
 STE/ICE distribution box jack J1 (2) pin h (8)
3. Does VTM read between 3600 and 4400 ohms for each measurement?



**NO**

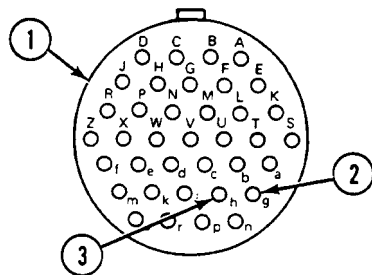
**3YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**4Y**

1. Measure resistance between harness 12354593 plug P1 (1), pins g (2) and h (3).
2. Does VTM read infinity?



**NO**

**GO TO DY (PAGE 0144 00-8)**

**YES**

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

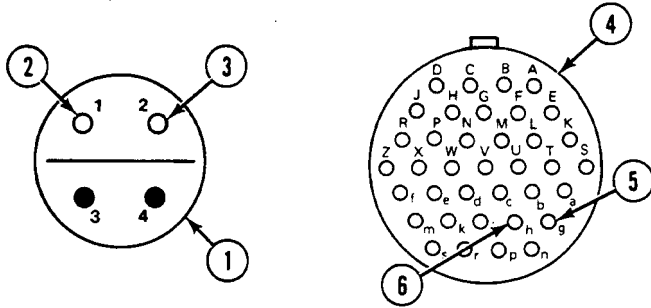
0144 00

**5Y**

1. Move jumper wire on harness 12354672 plug P1 (1) from pins 3 and 4 to pins 1 (2) and 2 (3).
2. Measure resistance between harness 12354593 plug P1 (4), pins g (5) and h (6).
3. Does VTM read 0 ohms?

**NO**

**GO TO EY (PAGE 0144 00-9)**



**YES**

**6Y**

1. Has fuel return pressure tachometer been replaced?

**NO**

**6YN**

1. Replace fuel return pressure tachometer (WP 0325 00).
2. Verify no faults found.

**YES**

**7Y**

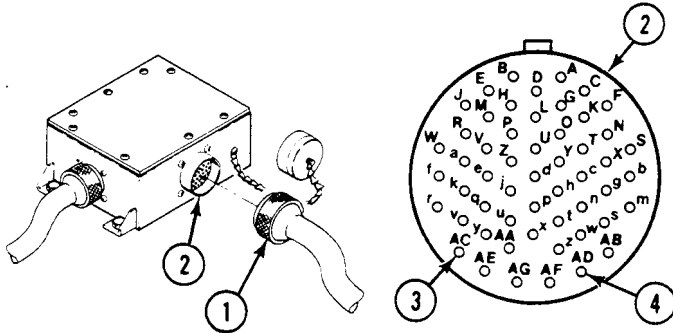
1. Faulty VTM.
2. Notify supervisor.

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0144 00

**BY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins AC (3) and AD (4). VTM should read infinity.
3. Does VTM indicate a fault?



**NO**

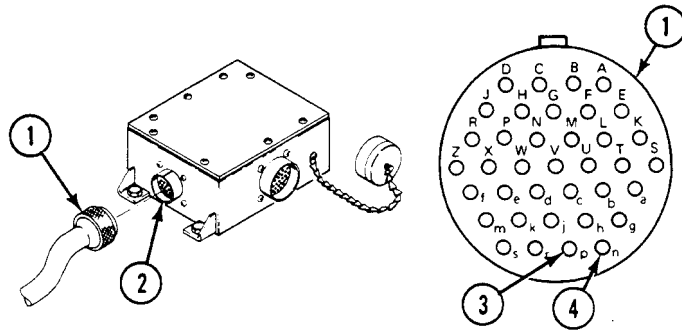
**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**B2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins p (3) and n (4). VTM should read infinity.
3. Does VTM indicate a fault?



**NO**

**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0144 00

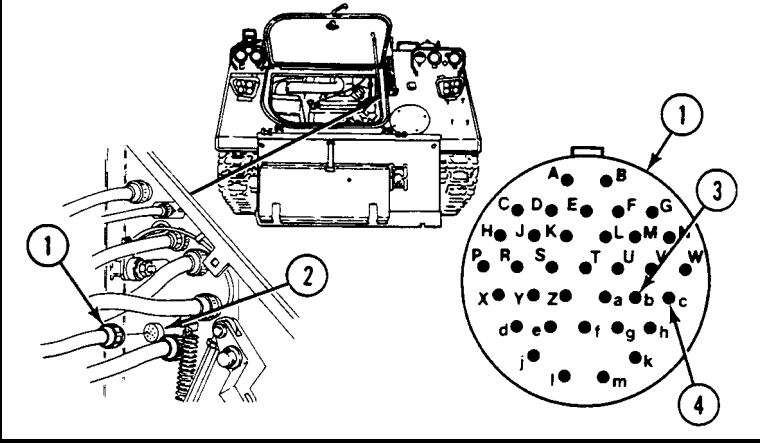
**B3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins b (3) and c (4).
3. Does VTM read infinity?

NO

**B3YN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



YES

**B4Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

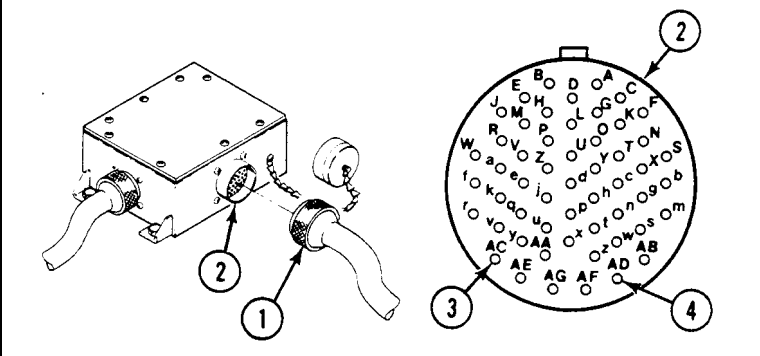
**CY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins AC (3) and AD (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?

NO

**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



YES

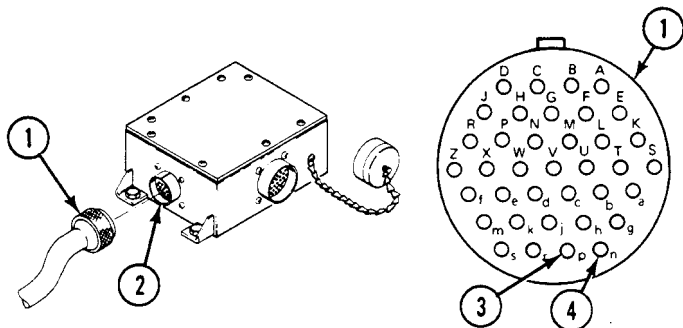


**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0144 00

**C2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins p (3) and n (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

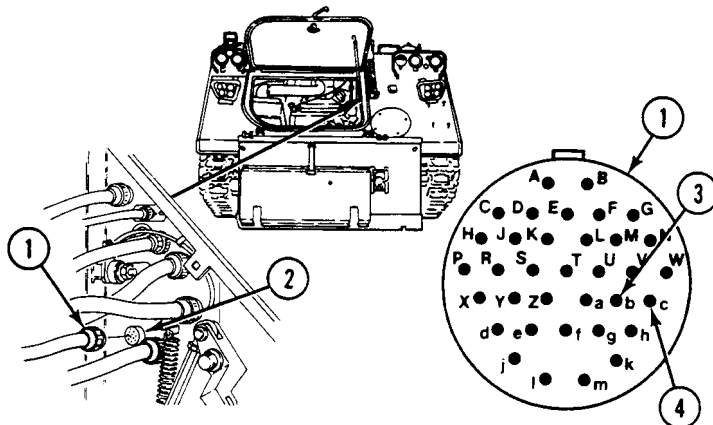
**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**C3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins b (3) and c (4).
3. Does VTM read 0 ohms?



**NO**

**C3YN**

1. Repair/replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**C4Y**

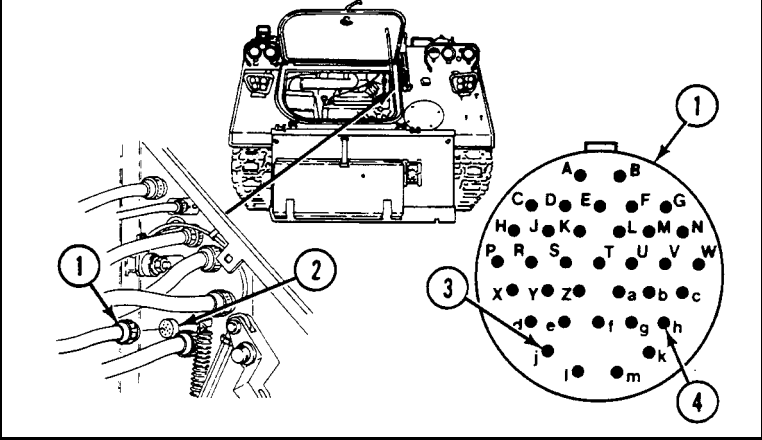
1. Repair/replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0144 00

**DY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins j (3) and h (4).
3. Does VTM read infinity?



**NO**

**DYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**D2Y**

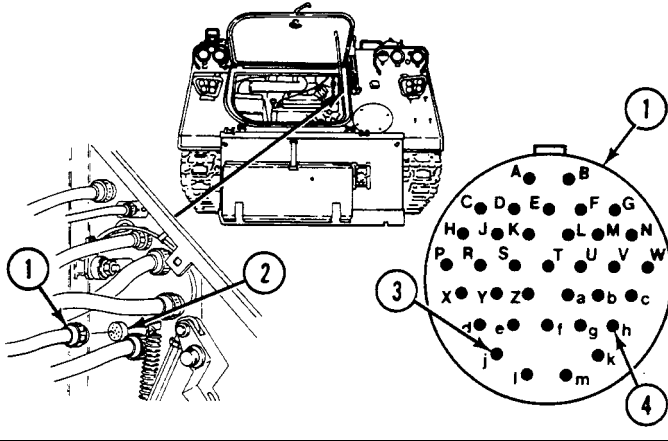
1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 25 FUEL RETURN PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0144 00

**EY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (1).
2. Measure resistance between harness 12354672 plug P4 (1), pins j (1) and h (1).
3. Does VTM read 0 ohms?



**NO**

**EYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**E2Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.



**STE/ICE TEST 26 FUEL FILTER PRESSURE DROP DIAGNOSTIC  
TROUBLESHOOTING**

**0145 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
STE/ICE Test Set (WP 0926 00, Item 61)  
Jumper wire (WP 0927 00)

Equipment Condition

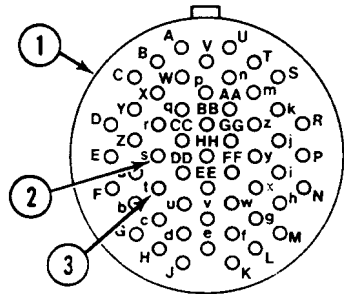
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Power plant access door open (see your -10)  
Trim vane lowered (see your -10)  
Driver's power plant access panel removed(WP 0441 00)

Personnel Required

Unit Mechanic 63T10

**T**

1. Remove plug W1 P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 91 TM 9-4910-571-12&P.
4. Measure resistance between W1P1 (1), pins s (2) and t (3).
5. Does VTM read 0 ohms?



**NO**

**GO TO 2Y (PAGE 0145 00-2)**

**YES**

STE/ICE TEST 26 FUEL FILTER PRESSURE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued

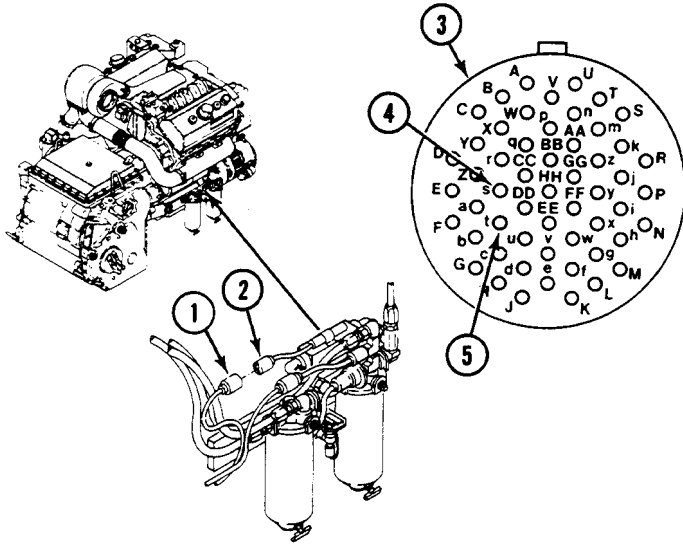
0145 00

**Y**

1. Remove harness 12354672 plug P7 (1) from FUEL FILTER PRESSURE DROP switch (2).
2. Measure resistance between plug W1 P1 (3), pins s (4) and t (5).
3. Does VTM read more than 0 ohms?

**NO**

GO TO **CY** (PAGE 0145 00-5)



**YES**

**2Y**

1. Set up Test 92 TM 9-4910-571-12&P.
2. Repeat step 2 in block T20120-9-2350-277-brY above.
3. Does VTM read more than 52k ohms?

**NO**

GO TO **BY** (PAGE 0145 00-3)

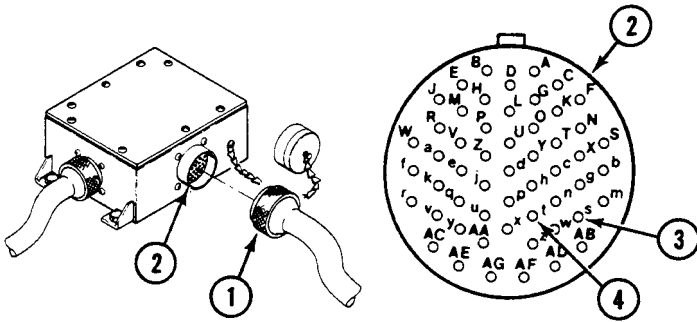
**YES**

**STE/ICE TEST 26 FUEL FILTER PRESSURE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0145 00

**3Y**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins s (3) and t (4).
3. Does VTM read more than 52k ohms?



**NO**

**3YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

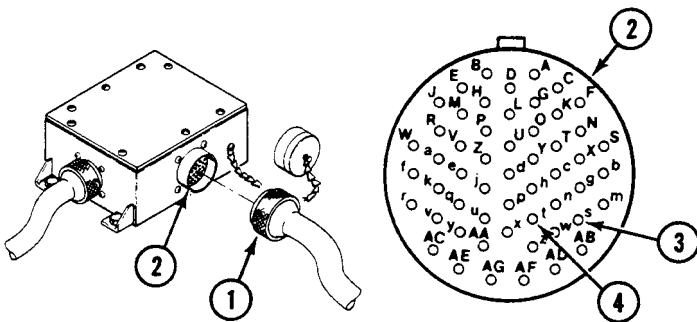
**YES**

**4Y**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**BY**

1. Remove plug WIP2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure continuity between STE/ICE distribution box jack J2 (2), pins s (3) and t (4).
3. Does VTM read more than 0 ohms?



**NO**

**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**STE/ICE TEST 26 FUEL FILTER PRESSURE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0145 00

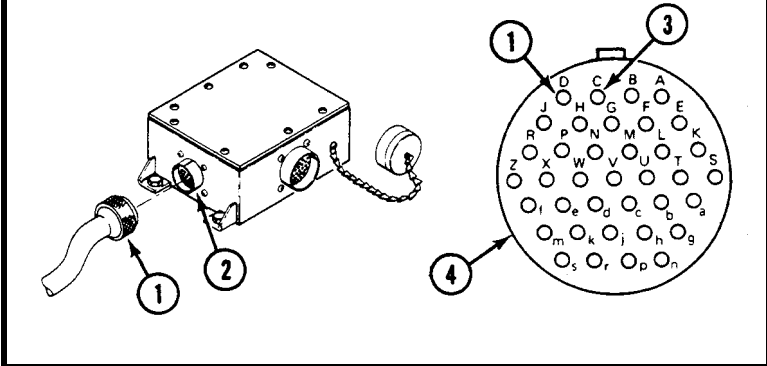
**B2Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (4), pins C (3) and D (1).
3. Does VTM read more than 0 ohms?

NO

**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.



YES

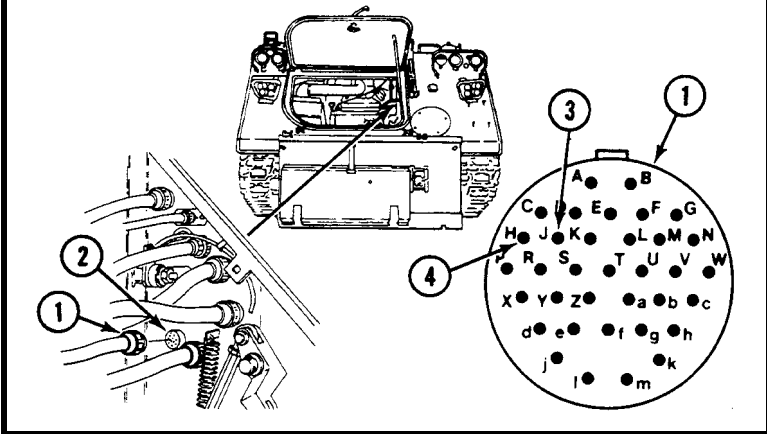
**B3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins J (3) and H (4).
3. Does VTM read more than 0 ohms?

NO

**B3YN**

1. Replace FUEL FILTER PRESSURE DROP switch (WP 0328 00).
2. Verify no faults found.



YES

**B4Y**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

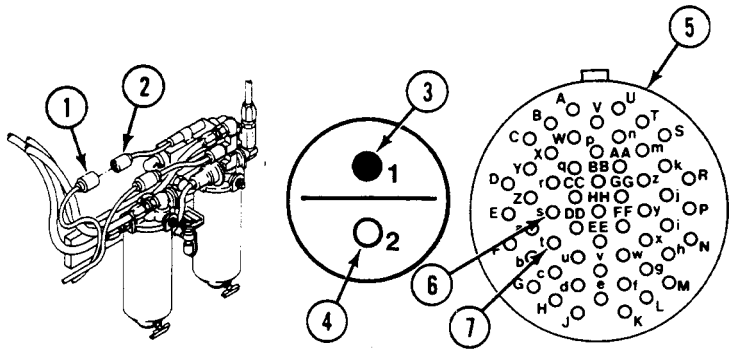


**STE/ICE TEST 26 FUEL FILTER PRESSURE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0145 00

**CY**

1. Remove harness 12354672 plug P7 (1) from FUEL FILTER PRESSURE DROP switch (2).
2. Short harness 12354672 plug P7 (1), pins 1 (3) to 2 (4).
3. Set up Test 91 TM 9-4910-571-12&P.
4. Measure resistance between W1 P1 (5), pins s (6) and t (7).
5. Does VTM read 0 ohms?



**NO**

**GO TO BY (PAGE 0145 00-3)**

**YES**

**C2Y**

1. Replace FUEL FILTER PRESSURE DROP switch (WP 0328 00).
2. Verify no faults found.



**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC TROUBLESHOOTING**

**0146 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

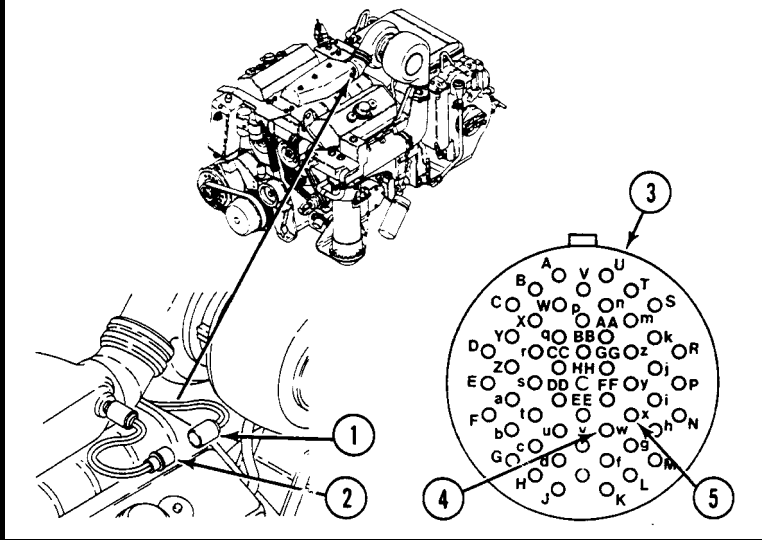
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Trim vane lowered (see your -10)  
Power plant access door open (see your -10)  
Driver's power plant access panels removed (WP 0441 00)  
Power plant access panels removed (WP 0439 00)

Personnel Required

Unit Mechanic 63T10  
Helper (H)

**T**

1. Remove plug W1P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 91 TM 9-4910-571-12&P.
4. Remove harness 12345672 plug P3 (1) from turbo pressure tachometer jack (2).
5. Measure resistance between W1 P1 (3), pins w (4) and x (5).
6. Does VTM read infinity?



**NO**

**GO TO BY (PAGE 0146 00-5)**

**YES**

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

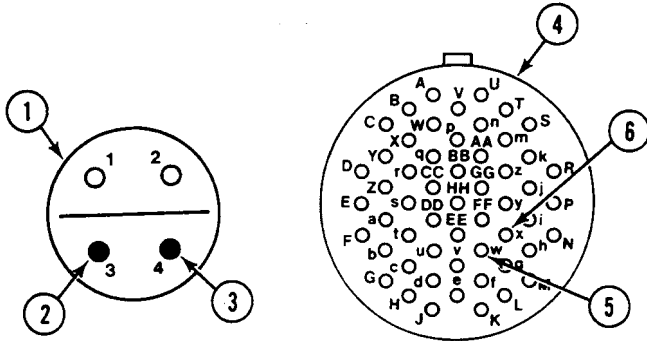
0146 00

**Y**

1. Install jumper wire between harness 12354672 plug P3 (1), pins 3 (2) and 4 (3).
2. Measure resistance between plug W1 P1 (4), pins w (5) and x (6).
3. Does VTM read 0 ohms?

**NO**

**GO TO CY (PAGE 0146 00-7)**



**YES**

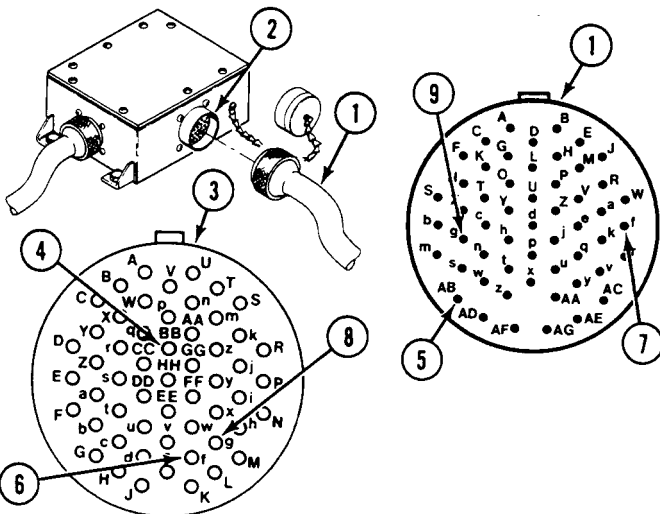
**2Y**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between the following plug pins:  
 W1P1 (3), pin BB (4) to W1 P2 (1), pin AB (5)  
 W1P1 (3), pin f (6) to W1 P2 (1), pin f (7)  
 W1P1 (3), pin g (8) to W1 P2 (1), pin g (9)
3. Does VTM read 0 ohms for each measurement?

**NO**

**2YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



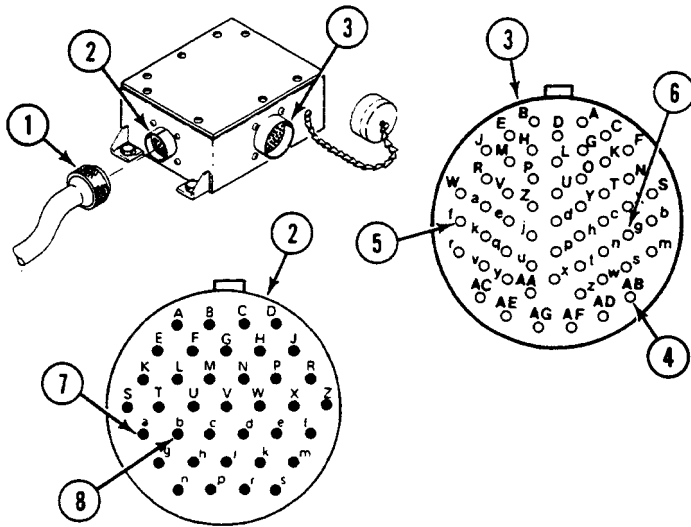
**YES**

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0146 00

**3Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Set up Test 92 TM 9-4910-571-12&P.
3. Measure resistance between STE/ICE distribution box jack J2 (3), pin AB (4) and the following jack pins:
  - a. STE/ICE distribution box jack J2 (3) pin f (5)
  - b. STE/ICE distribution box jack J2 (3) pin g (6)
  - c. STE/ICE distribution box jack J1 (2) pin a (7)
  - d. STE/ICE distribution box jack J1 (2) pin b (8)
4. Does VTM read between 3600 and 4400 ohms for each measurement?



**NO**

**3YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

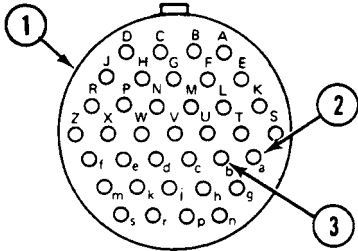
**YES**

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0146 00

**4Y**

1. Set up Test 91 TM 9-4910-571-12&P.
2. Measure resistance between harness 12354593 plug P1 (1), pins a (2) and b (3).
3. Does VTM read infinity?

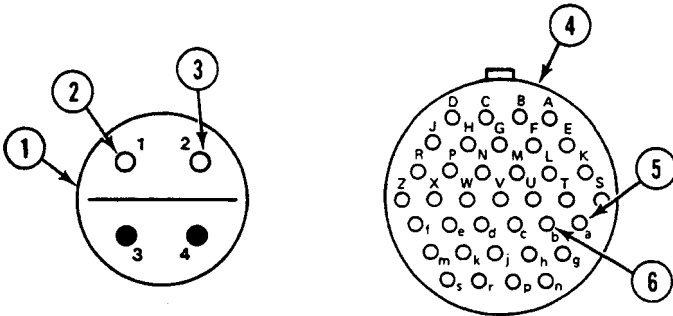


**NO** → GO TO **DY** (PAGE 0146 00-9)

**YES**

**5Y**

1. Move jumper wire on harness 12354672 plug P3 (1) from pins 3 and 4 to pins 1 (2) and 2 (3).
2. Measure resistance between harness 12354593 plug P1 (4), pins a (5) and b (6).
3. Does VTM read 0 ohms?



**NO** → GO TO **EY** (PAGE 0146 00-10)

**YES**

**6Y**

1. Has turbo outlet pressure tachometer been replaced?

**NO** → **6YN**  
 1. Replace turbo outlet pressure tachometer (WP 0326 00).  
 2. Verify no faults found.

**YES**

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

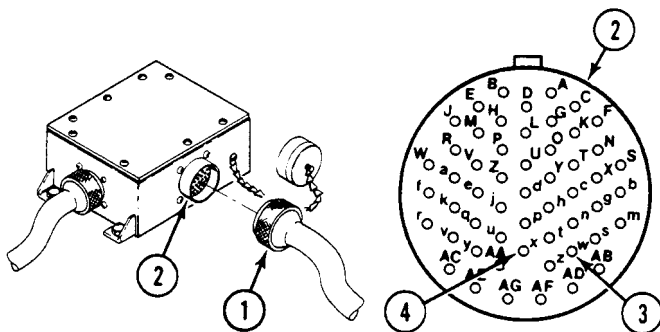
0146 00

**7Y**

1. Faulty VTM.
2. Notify supervisor.

**BY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins w (3) and x (4). VTM should read infinity.
3. Does VTM indicate a fault?



**NO**

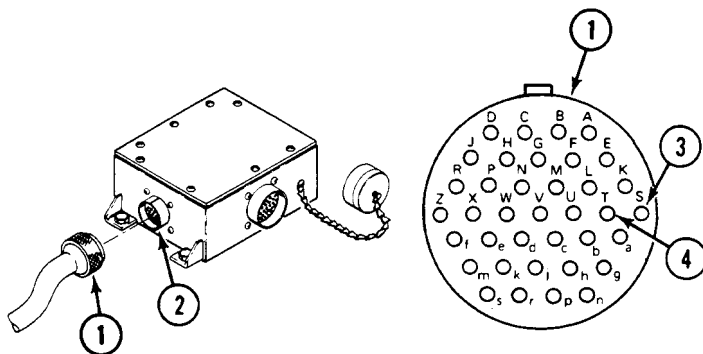
**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**B2Y**

1. Remove harness 12354593 P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins S (3) and T (4). VTM should read infinity.
3. Does VTM indicate a fault?



**NO**

**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0146 00

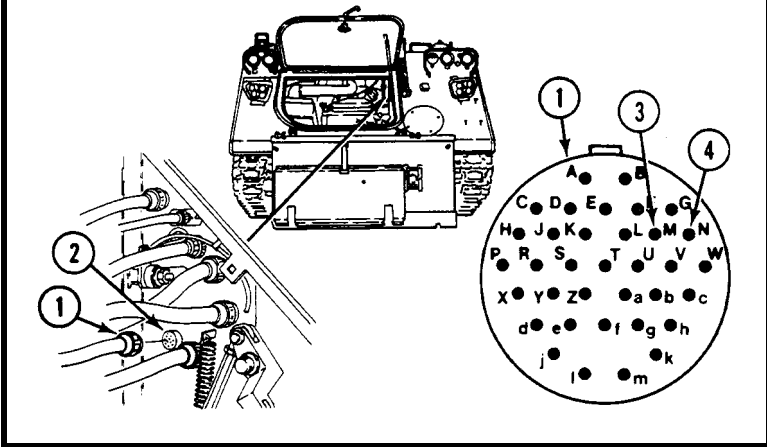
**B3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins M (3) and N (4).
3. Does VTM read infinity?

**NO**

**B3YN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



**YES**

**B4Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

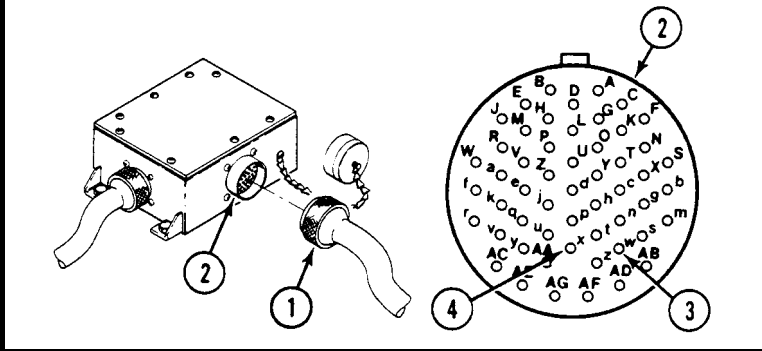


**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0146 00

**CY**

1. Remove plug W1 P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins w (3) and x (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

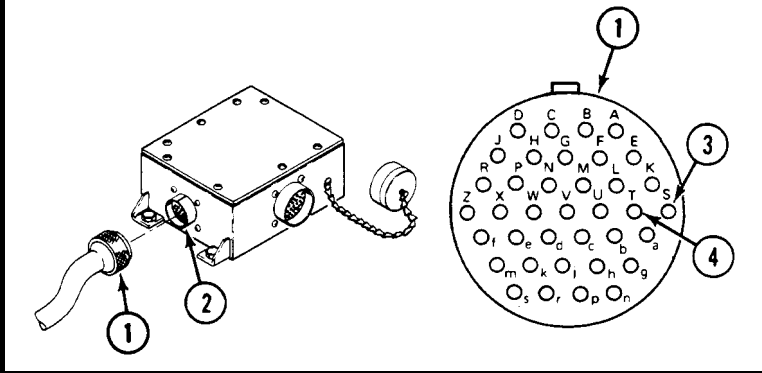
**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**C2Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins S (3) and T (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued

0146 00

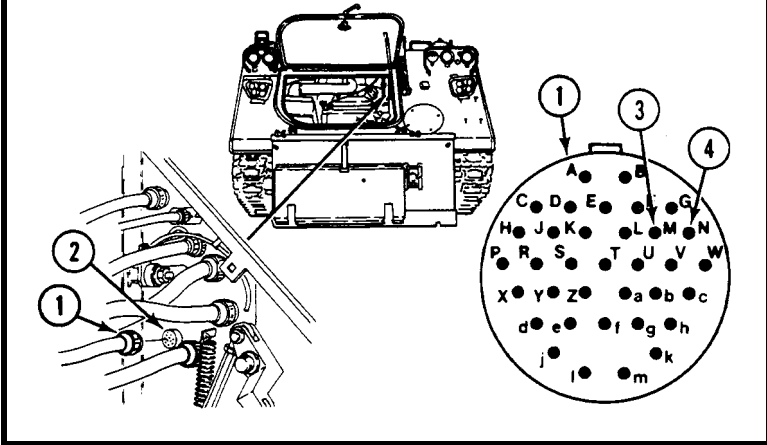
**C3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins M (3) and N (4).
3. Does VTM read 0 ohms?

**NO**

**C3YN**

1. Repair/replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



**YES**

**C4Y**

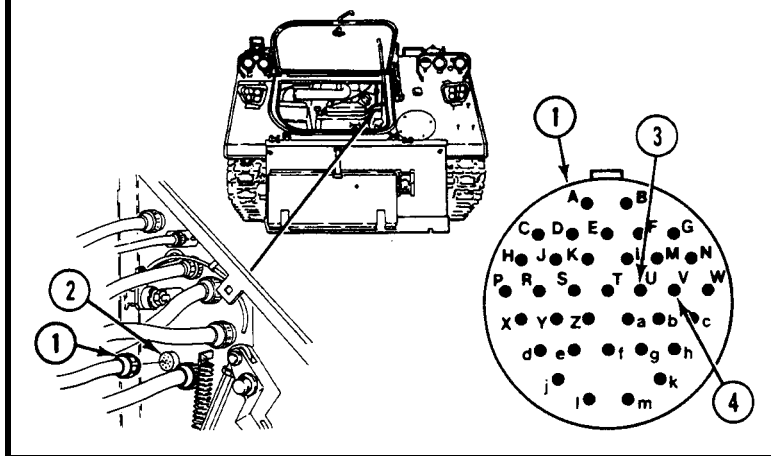
1. Repair/replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0146 00

**DY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins U (3) and V (4).
3. Does VTM read infinity?



**NO**

**DYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**D2Y**

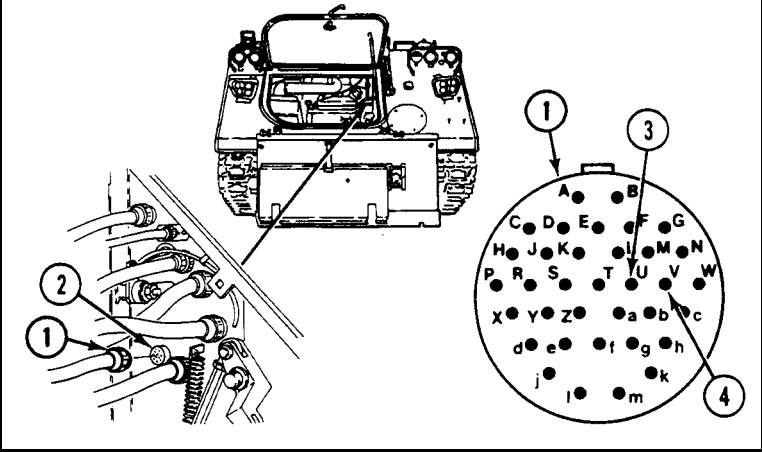
1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 30 TURBOCHARGER OUTLET PRESSURE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0146 00

**EY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins U (3) and V (4).
3. Does VTM read 0 ohms?



**NO**

**EYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**E2Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 32 AIR BOX PRESSURE DIAGNOSTIC TROUBLESHOOTING**

**0147 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

- Electrical connector pliers (WP 0926 00, Item 31)
- Jumper wire (WP 0927 00)
- STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Trim vane lowered (see your -10)
- Power plant access door open (see your -10)
- Driver's power plant access panel removed (WP 0441 00)
- Power plant access panels removed (WP 0439 00)

Materials/Parts

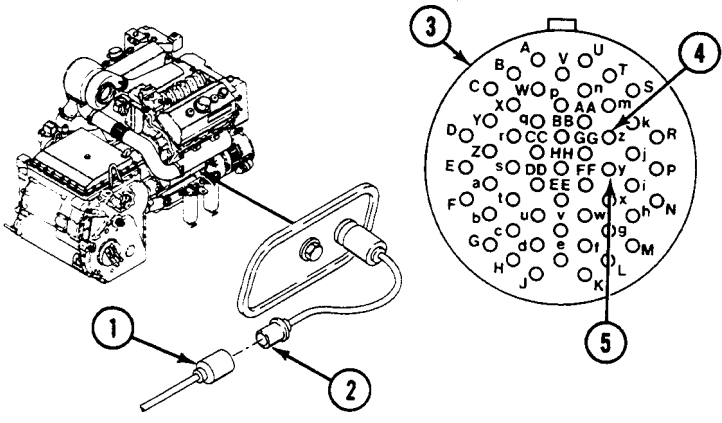
Insulation tape (WP 0928 00, Item 39)

Personnel Required

- Unit Mechanic 63T10
- Helper (H)

**T**

1. Remove plug W1P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 91 TM 9-4910-571-12&P.
4. Remove harness 12345672 plug P9 (1) from air box pressure transducer (2).
5. Measure resistance between plug W1P1 (3) pins z (4) and y (5).
6. Does VTM read infinity?



The diagram consists of two parts. On the left, a mechanical assembly is shown with a plug labeled '1' being removed from a jack labeled 'J1'. A harness plug labeled '2' is also shown. On the right, a circular connector pinout diagram is shown with pins labeled '3', '4', and '5'. Pin '3' is at the top, pin '4' is on the right, and pin '5' is at the bottom. The diagram shows various alphanumeric labels for the pins, including A, B, C, D, E, F, G, H, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

**NO** → **GO TO BY (PAGE 0147 00-5)**

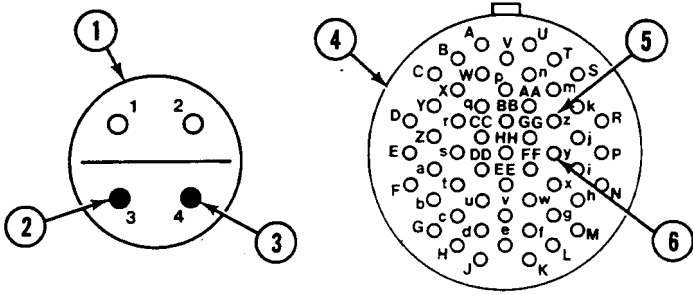
**YES** ↓

Y

1. Install jumper wire between harness 12354672 plug P9 (1), pins 3 (2) and 4 (3).
2. Measure resistance between plug W1P1 (4), pins  $\underline{z}$  (5) and  $\underline{y}$  (6).
3. Does VTM read 0 ohms?

NO

GO TO CY (PAGE 0147 00-7)



YES

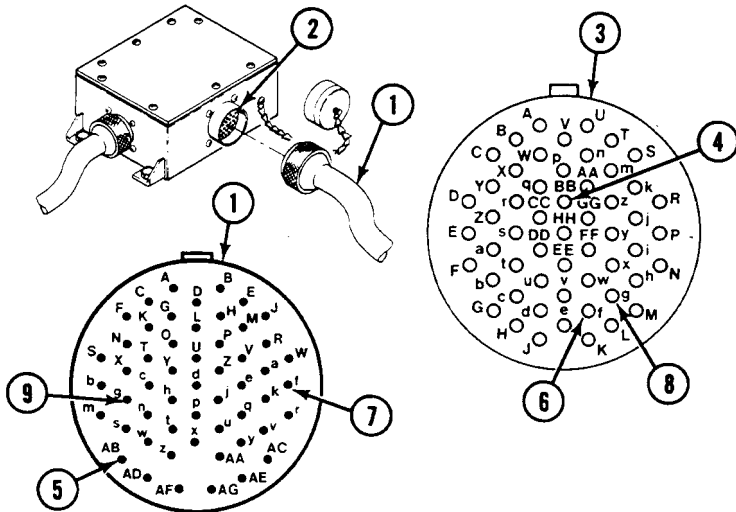
2Y

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between the following plug pins:  
 W1P1 (3) pin BB (4) to W1P2 (1) pin AB (5).  
 W1P1 (3) pin  $\underline{f}$  (6) to W1P2 (1) pin  $\underline{f}$  (7).  
 W1P1 (3) pin  $\underline{g}$  (8) to W1P2 (1) pin  $\underline{g}$  (9).
3. Did VTM read 0 ohms for each measurement?

NO

2YN

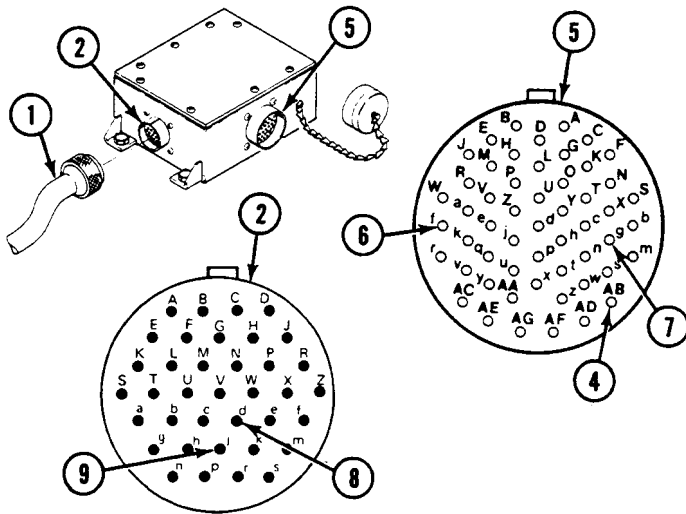
1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



YES

**3Y**

1. Remove harness 12354593 plug P1(1) from STE/ICE distribution box jack J1 (2).
2. Set up Test 92 TM 9-4910-571-12&P.
3. Measure resistance between STE/ICE distribution box jack J2 (3), pin AB (4) and the following jack pins:  
 STE/ICE distribution box jack J2 (5) pin f (6)  
 STE/ICE distribution box jack J2 (5) pin g (7)  
 STE/ICE distribution box jack J1 (2) pin d (8)  
 STE/ICE distribution box jack J1 (2) pin i (9)
4. Does VTM read between 3600 and 4400 ohms for each measurement?



YES



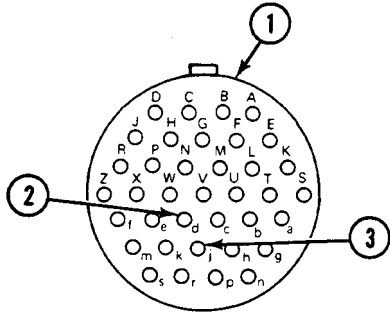
**3YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

NO

**4Y**

1. Set up Test 91 TM 9-4910-571-12&P.
2. Measure resistance between harness 12354593 plug P1 (1), pins d (2) and j (3).
3. Does VTM read infinity?

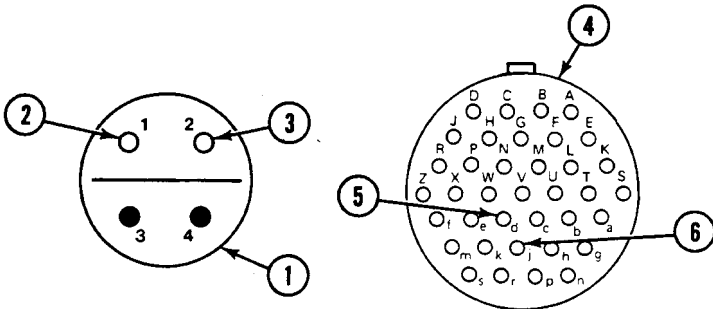


**NO** → GO TO **DY** (PAGE 0147 00-9)

**YES**

**5Y**

1. Move jumper wire on harness 12354672 plug P9 (1) from pins 3 and 4 to pins 1 (2) and 2 (3).
2. Measure resistance between harness 12354593 plug P1 (4), pins d (5) and j (6).
3. Does VTM read 0 ohms?



**NO** → GO TO **EY** (PAGE 0147 00-10)

**YES**

**6Y**

1. Has air box pressure transducer been replaced?

**NO** → **6YN**  
 1. Replace air box pressure transducer (WP 0327 00).  
 2. Verify no faults found.

**YES**

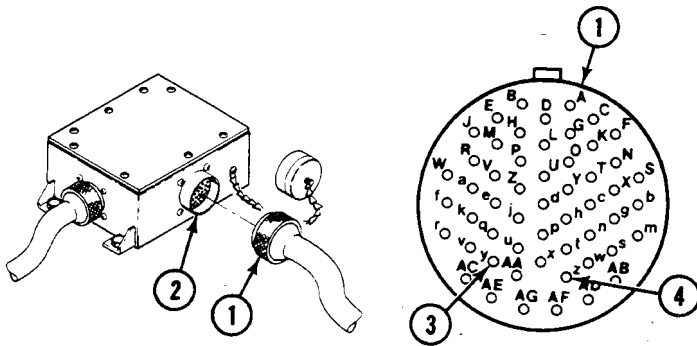


**7Y**

1. Faulty VTM.
2. Notify supervisor.

**BY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins y (3) and z (4). VTM should read infinity.
3. Does VTM indicate a fault?



NO

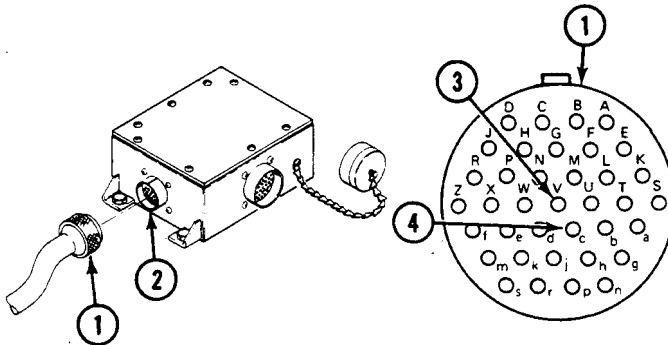
**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

YES

**B2Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins V (3) and c (4). VTM should read infinity.
3. Does VTM indicate a fault?



NO

**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

YES

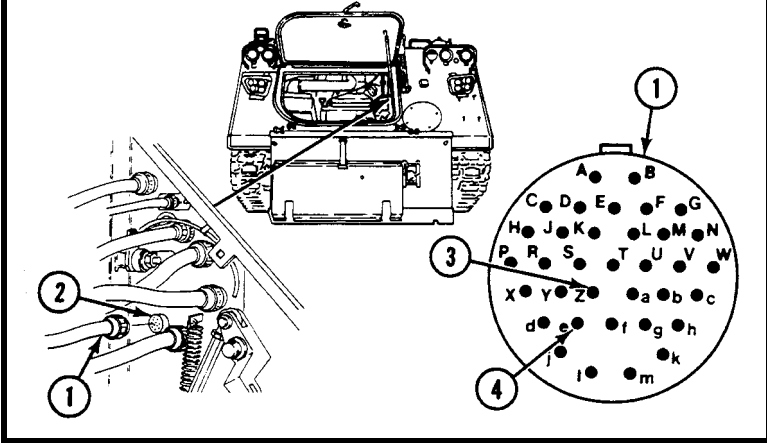
**B3Y**

1. Remove harness 12354672 P4(1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins Z (3) and e (4).
3. Does VTM read infinity?

NO

**B3YN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



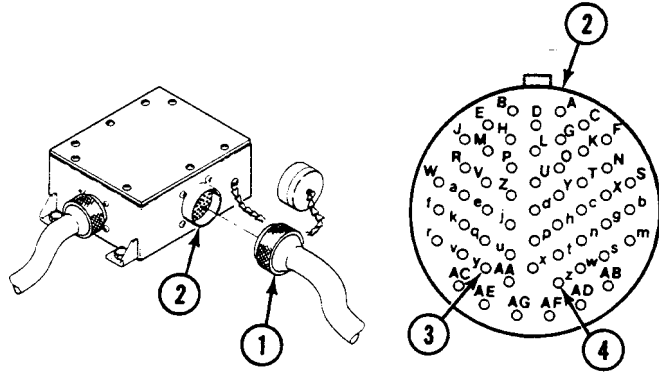
YES

**B4Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**CY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins y (3) and z (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

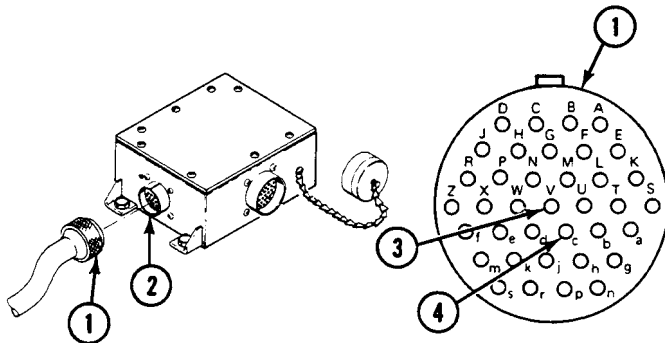
**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**C2Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 P1 (1), pins V (3) and c (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

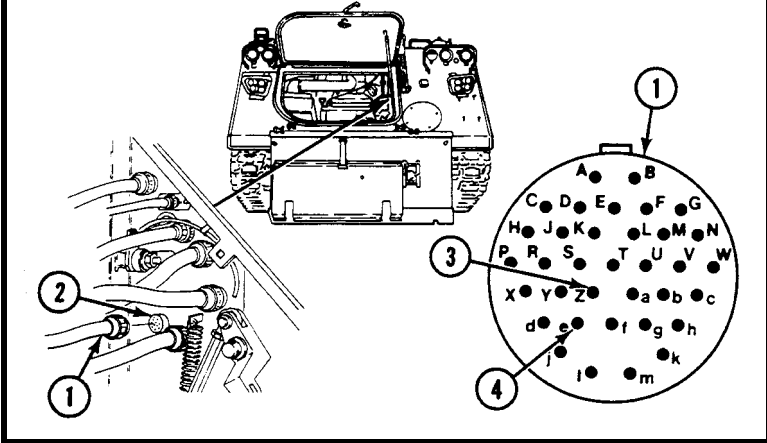
**C3Y**

1. Remove harness 12354672 plug P4(1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins Z (3) and e (4).
3. Does VTM read 0 ohms?

NO

**C3YN**

1. Repair/replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



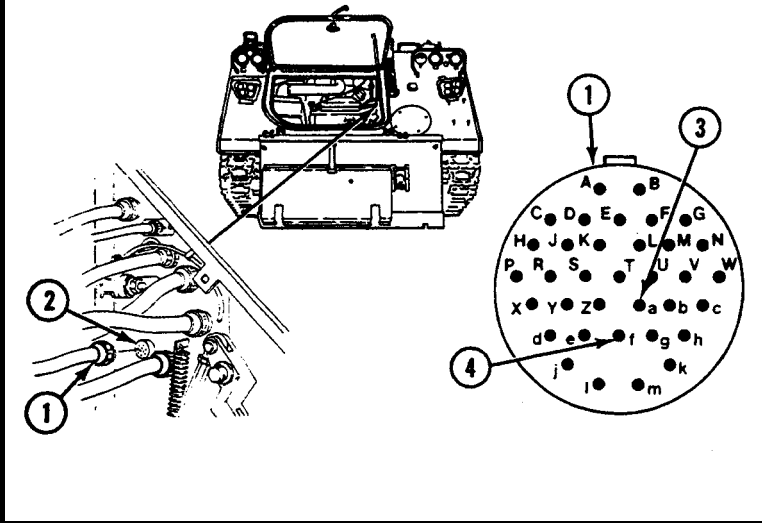
YES

**C4Y**

1. Repair/replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**DY**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins a (3) and f (4).
3. Does VTM read infinity?



**NO**

**DYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.

**YES**

**D2Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

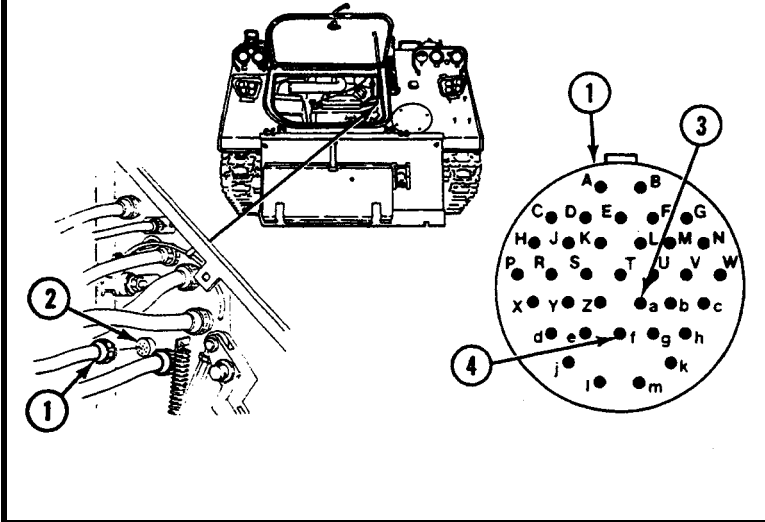
**EY**

1. Remove harness 12354672 plug P4(1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins a (3) and f (4).
3. Does VTM read 0 ohms?

**NO**

**EYN**

1. Replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



**YES**

**E2Y**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 68 STARTER MOTOR VOLTAGE DIAGNOSTIC TROUBLESHOOTING**

**0148 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
Jumper wire (WP 0927 00)  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

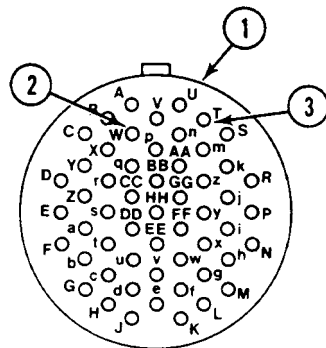
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Power plant access door open (see your -10)  
Trim vane lowered (see your -10)  
Driver's power plant access panel removed (WP 0441 00)

Personnel Required

Unit Mechanic 63T10

**T**

1. Remove plug W1P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Turn MASTER SWITCH ON.
4. Set up Test 89 TM 9-4910-571-12&P.
5. Measure voltage between W1P1 (1) pins W (2) and T (3) with START switch depressed.
6. Does VTM read 0 volts?



**NO**

**TN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

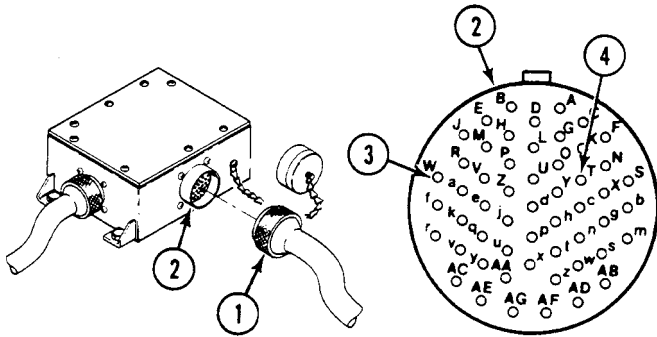
**YES**

**STE/ICE TEST 68 STARTER MOTOR VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0148 00

**Y**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure voltage between STE/ICE distribution box jack J2 (2), pins W (3) and T (4).
3. Press START button for 2 to 4 seconds.
4. Does VTM read 0 volts?



**NO**

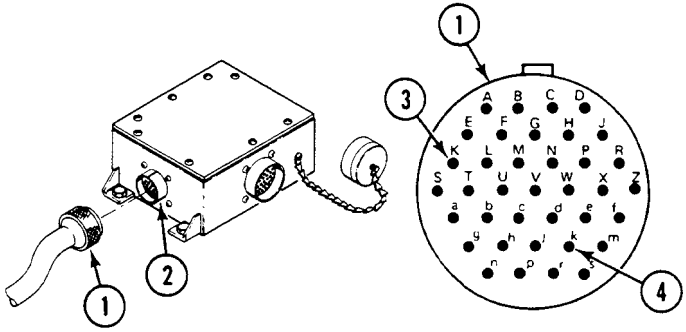
**YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Remove harness 12354593 P1(1) from STE/ICE distribution box jack J1 (2).
2. Measure voltage between 12354593 plug P1 (1), pins K (+) (3) and k (-) (4).
3. Press START button for 2 to 4 seconds.
4. Does VTM read 0 volts?



**NO**

**2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

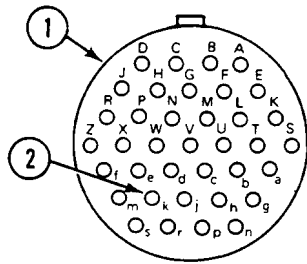


**STE/ICE TEST 68 STARTER MOTOR VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0148 00

**3Y**

1. Turn MASTER SWITCH OFF.
2. Set up Test 91 TM 9-4910-571-12&P.
3. Measure resistance between harness 12354593 plug P1 (1), pin k (2) and ground.
4. Does VTM read more than 0 ohms?



NO

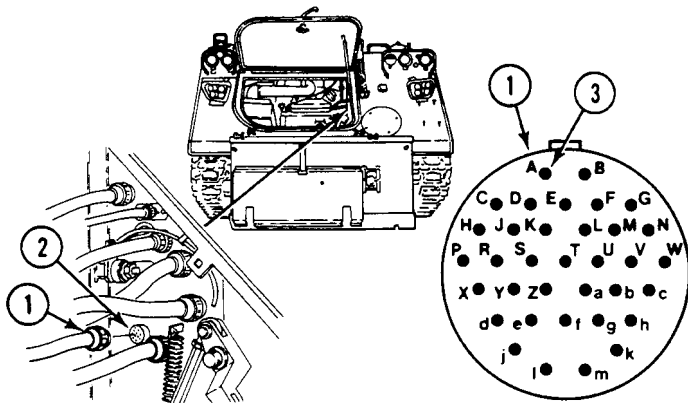
**3YN**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

YES

**4Y**

1. Set up Test 89 TM 9-4910-571-12&P.
2. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
3. Turn MASTER SWITCH ON.
4. Measure voltage between harness 12354672 plug P4 (1), pin A (3) and ground.
5. Depress START button for 2 to 4 seconds.
6. Does VTM read 0 volts?



NO

**4YN**

1. Repair/replace wiring harness 12354593 circuit 799 (WP 0382 00) or (WP 0882 00).
2. Verify no faults found.

YES

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**STE/ICE TEST 68 STARTER MOTOR VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

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0148 00

**5Y**

1. Repair/replace wiring harness 12354672 circuit 776 (WP 0382 00) or (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 69 STARTER NEGATIVE CABLE VOLTAGE DROP  
DIAGNOSTIC TROUBLESHOOTING**

0149 00

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
Jumper wire  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

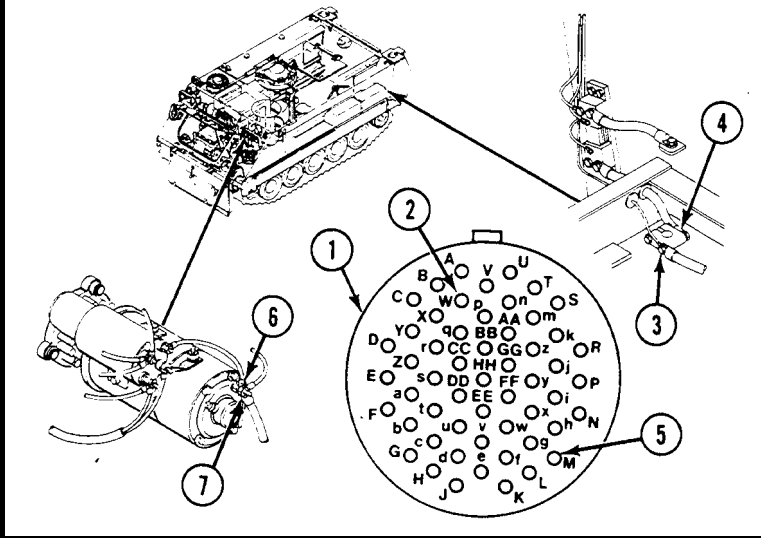
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Power plant access door opened (see your -10)  
Driver's power plant access panel removed (WP 0441 00)  
Trim vane lowered (see your -10)

Personnel Required

Unit Mech 63T10

**T**

1. Remove plug W1P1 from VTM jack J1.
2. Hook up VTM to carrier batteries TM 9-4910-571-12&P.
3. Set up Test 89 TM 9-4910-571-12&P.
4. Measure resistance between plug W1P1 (1), pin W (2) and harness 12354593 circuit 779 terminal E4 (3) on battery negative terminal (4).
5. Measure resistance between W1P1 (1), pin M (5) and harness 12354672 circuit 773 terminal E2 (6) on starter ground stud (7).
6. Did VTM read more than one ohm either time?



**NO**

**TN**

1. Faulty VTM.
2. Notify supervisor.

**YES**

**STE/ICE TEST 69 STARTER NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0149 00

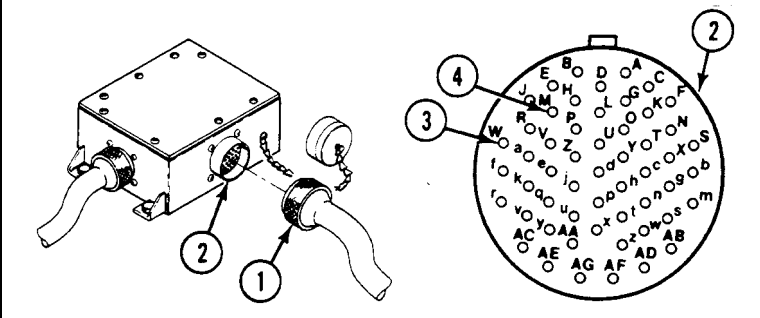
**Y**

1. Remove cable W1P2 plug (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pin W (3) and harness 12354593 circuit 779 terminal E4 on battery negative terminal.
3. Measure resistance between STE/ICE distribution box jack J2 (2), pin M (4) and harness 12345472 circuit 773 terminal E2 on starter.
4. Did VTM read more than one ohm either time?

**NO**

**YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



**YES**

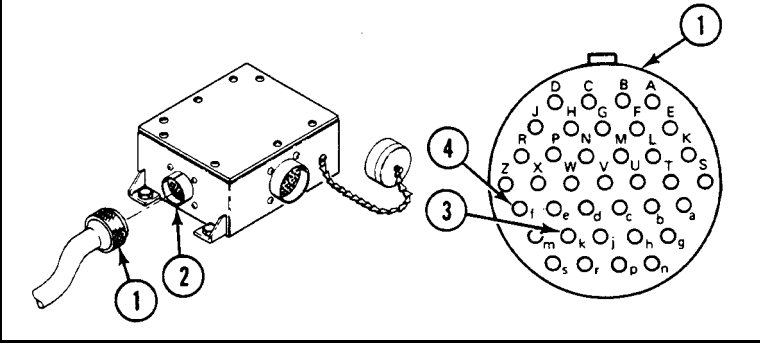
**2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 plug P1 (1), pin k (3) and harness 1235493 circuit 779 terminal E4 on battery negative terminal (1).
3. Measure resistance between 12354593 plug P1 (1), pin f (4) and harness 12354672 circuit 773 terminal E2 on starter.
4. Does VTM read more than one ohm either time?

**NO**

**2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.



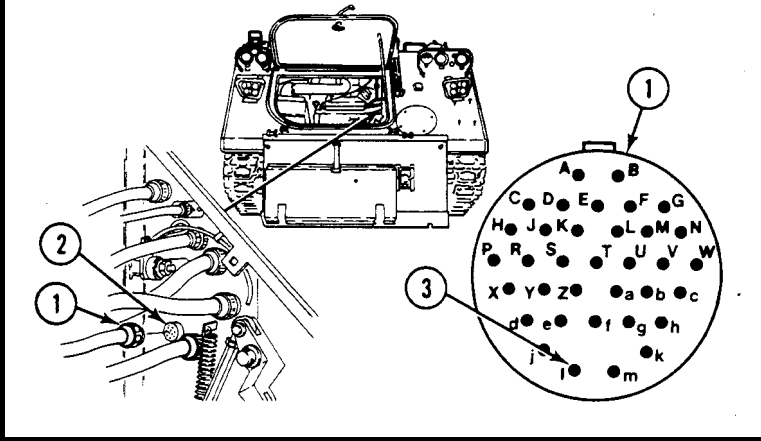
**YES**

**STE/ICE TEST 69 STARTER NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0149 00

**3Y**

1. Remove harness 12354672 P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pin 1 (3) and starter ground stud (4).
3. Does VTM read more than 1 ohm?



**NO**

**3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

**YES**

**4Y**

1. Replace harness 12354672 (WP 0882 00).
2. Verify no faults found.



**STE/ICE TEST 70 STARTER SOLENOID VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING**

**0150 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
Jumper wire  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

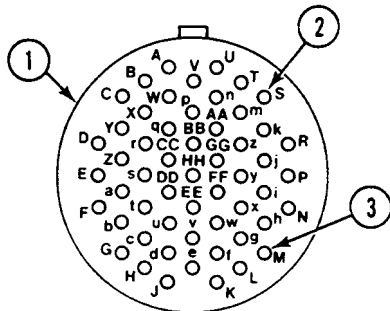
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Power plant access door open (see your -10)  
Driver's power plant access panel removed  
(WP 0441 00)  
Trim vane lowered (see your -10)

Personnel Required

Unit Mechanic 63T10

**T**

1. Remove plug W1P1 from VTM jack J1.
2. Hook up VTM to carrier batteries TM 9-4910-571-12&P.
3. Set up Test 89 TM 9-4910-571-12&P.
4. Turn MASTER SWITCH ON.
5. Measure voltage between W1P1 (1), pins S (+) (2) and M (-) (3).
6. Does VTM read 0 volts?



**YES**

**NO**

**TN**

1. Faulty VTM.
2. Notify supervisor.

**STE/ICE TEST 70 STARTER SOLENOID VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0150 00

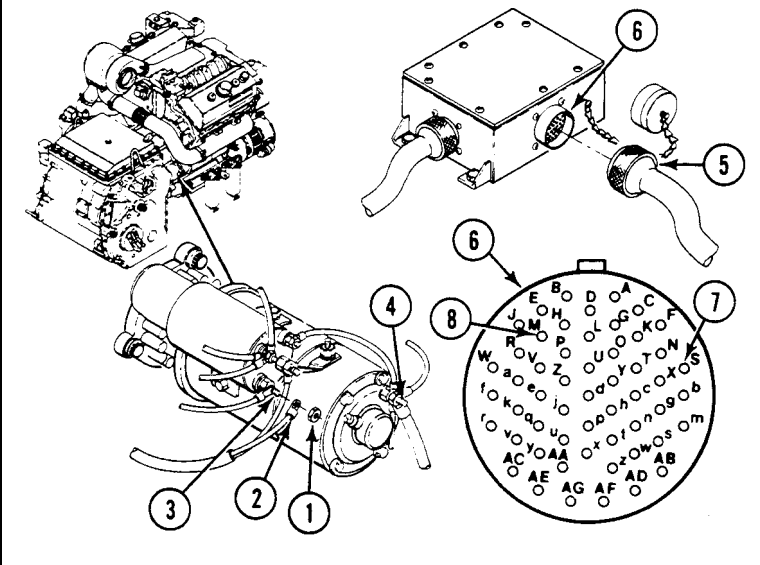
**Y**

1. Turn MASTER SWITCH OFF.
2. Set up Test 91 TM 9-4910-571-12&P.
3. Remove nut (1) and harness 12354672 circuit 775 terminal end E3 (circuit 775) (2) from solenoid positive terminal (3).
4. Ground terminal E3 to starter ground stud (4).
5. Remove plug W1P2 (5) from STE/ICE distribution box jack J2 (6).
6. Measure resistance between STE/ICE distribution box jack J2 (6), pins S (7) and M (8).
7. Does VTM read more than 0 ohms?

**NO**

**YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



**YES**

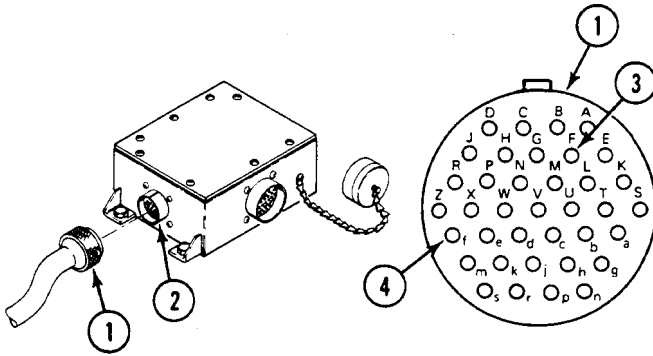


**STE/ICE TEST 70 STARTER SOLENOID VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0150 00

**2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between 12354593 plug P1 (1), pins F (3) and f(4).
3. Does VTM read more than 0 ohms?



**NO**

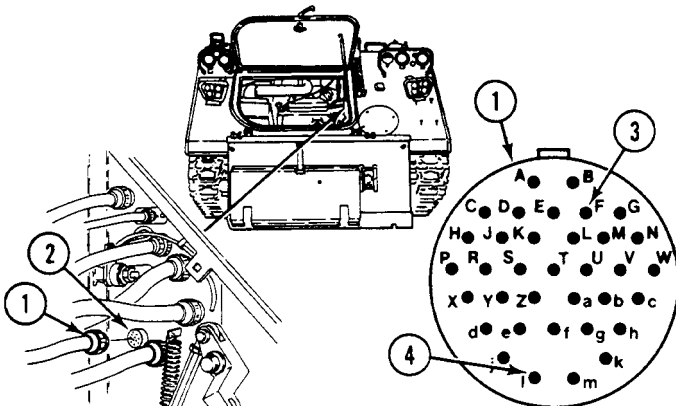
**2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**3Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins F (3) and f (4).
3. Does VTM read more than 0 ohms?



**NO**

**3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

**YES**

---

**STE/ICE TEST 70 STARTER SOLENOID VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

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**0150 00**

**4Y**

- |  |
|--|
| <ol style="list-style-type: none"><li>1. Replace harness 12354672 (WP 0882 00).</li><li>2. Verify no faults found.</li></ol> |
|--|

**STE/ICE TEST 82 GENERATOR OUTPUT VOLTAGE DIAGNOSTIC TROUBLESHOOTING**

**0151 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

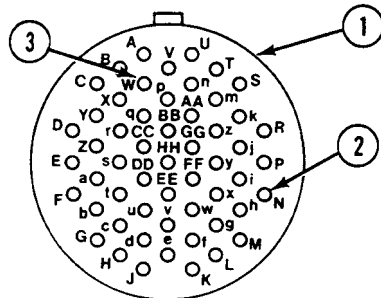
Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Driver's power plant access panel removed (WP 0441 00)  
Trim vane lowered (see your -10)  
Power plant access door open (see your -10)

Personnel Required

Unit Mech 63T10  
Helper (H)

**T**

1. Remove W1P1 from VTM J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 89 TM 9-4910-571-12&P.
4. Measure voltage between plug W1P1 (1), pins N (+) (2) and W (-) (3).
5. Does VTM read 0 volts?



**YES**



**NO**

**TN**

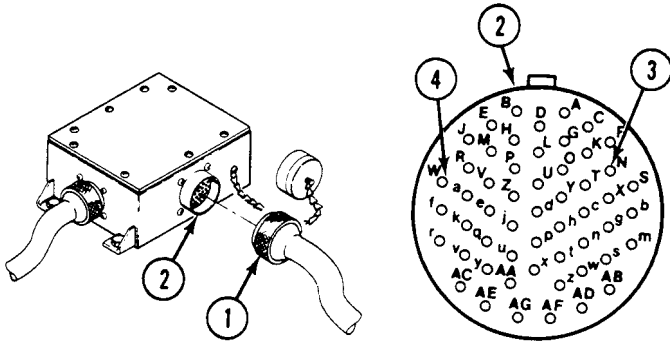
1. Faulty VTM.
2. Notify supervisor.

**STE/ICE TEST 82 GENERATOR OUTPUT VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0151 00

**Y**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure voltage between STE/ICE distribution box jack J2 (2), pins N (+)(3) and W (-) (4).
3. Does VTM read 0 volts?



**NO**

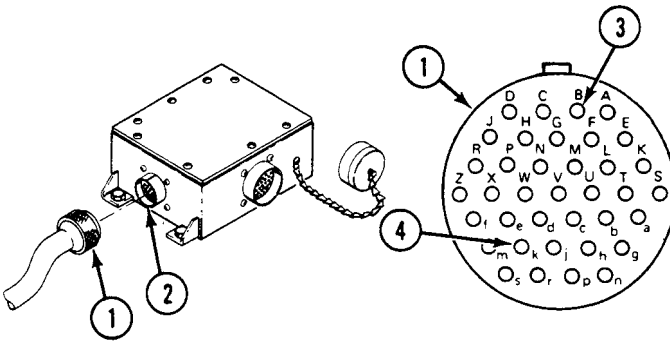
**YN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 plug P1 (1), pins B (+) (3) and k (-) (4).
3. Does VTM read 0 volts?



**NO**

**2YN**

1. Replace wiring harness 12354593 (WP 0882 00).
2. Verify no faults found.

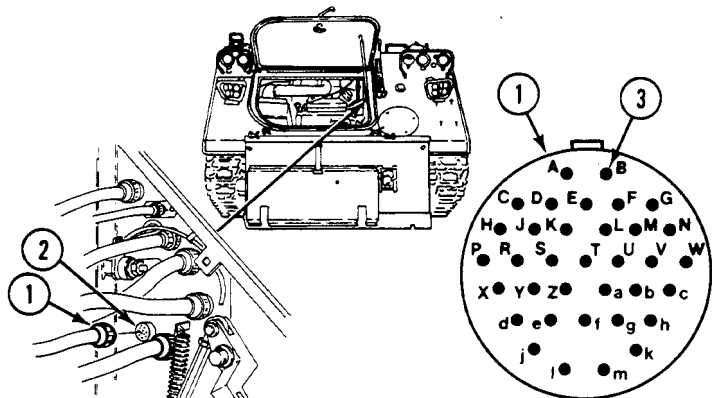
**YES**

**STE/ICE TEST 82 GENERATOR OUTPUT VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0151 00

**3Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Measure voltage between harness 12354672 plug P4 (1), pin B (3) and ground.
3. Does VTM read 0 volts?



**NO**

**3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

**YES**

**4Y**

1. Repair/replace wiring harness 12354672 (WP 0882 00).
2. Verify no faults found.



**STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC TROUBLESHOOTING**

**0152 00**

**INITIAL SETUP:**

Maintenance Level

Unit

Tools and Special Tools

- Electrical connector pliers (WP 0926 00, Item 31)
- Jumper wire
- STE/ICE Test Set (WP 0926 00, Item 61)

Materials/Parts

Insulation tape (WP 0928 00, Item 39)

Personnel Required

- Unit Mech 63T10
- Helper (H)

References

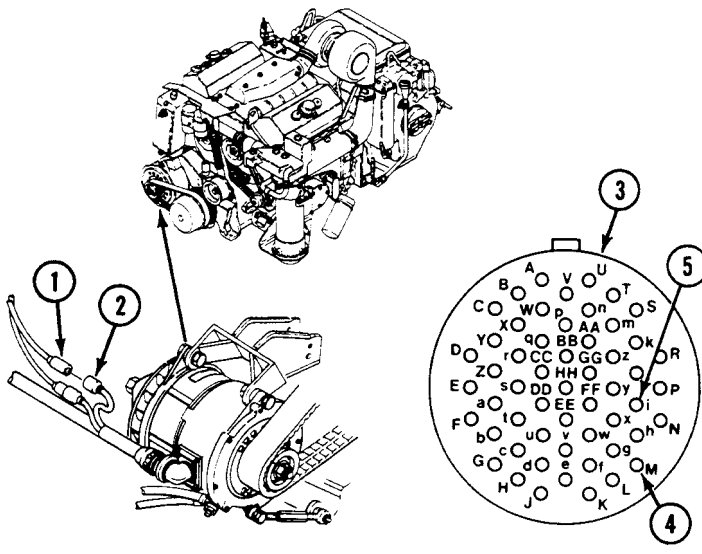
See your -10  
TM 9-4910-571-12&P

Equipment Condition

- Engine stopped (see your -10)
- Carrier blocked (see your -10)
- Power plant access door open (see your -10)
- Driver's power plant access panel removed (WP 0441 00)
- Trim vane lowered (see your -10)

**T**

1. Remove plug W1P1 from VTM J1.
2. Hook up VTM to carrier batteries TM 9-4910-571-12&P.
3. Set up Test 91 TM 9-4910-571-12&P.
4. Remove harness 12354672 circuit 785 plug P6 (1) from harness 12349873 (2).
5. Measure resistance between W1P1 (3), pins M (4) and i (5).
6. Does VTM read infinity?



**NO**

**GO TO BY (PAGE 0152 00-3)**

**YES**

STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued

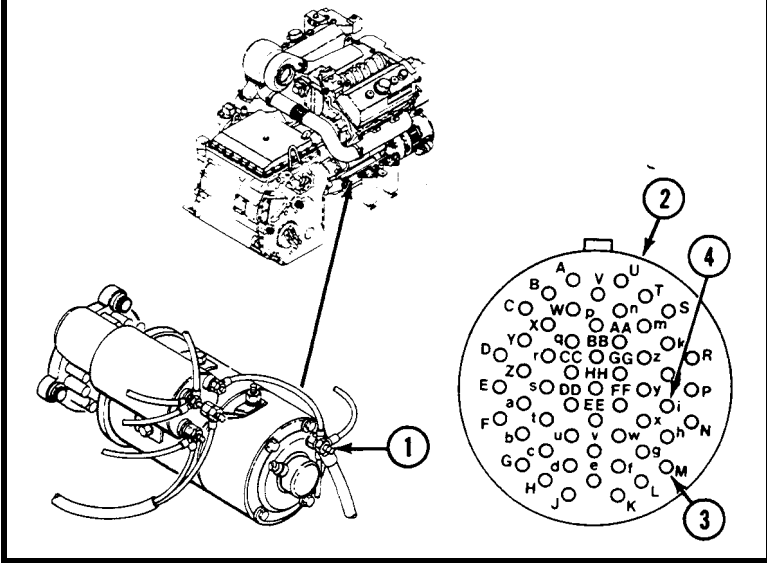
0152 00

**Y**

1. Install jumper wire between harness 12354672 circuit 785 plug P6 and starter ground post (1).
2. Measure resistance between plug W1P1 (2), pins M (3) and i (4).
3. Does VTM read 0 ohms?

**NO**

GO TO CY (PAGE 0152 00-5)



**YES**

**2Y**

1. Faulty VTM.
2. Notify supervisor.

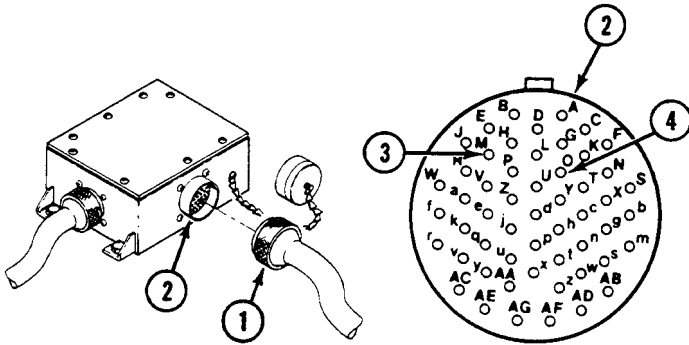


**STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0152 00

**BY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins M (3) and O (4). VTM should read infinity.
3. Does VTM indicate a fault?



**NO**

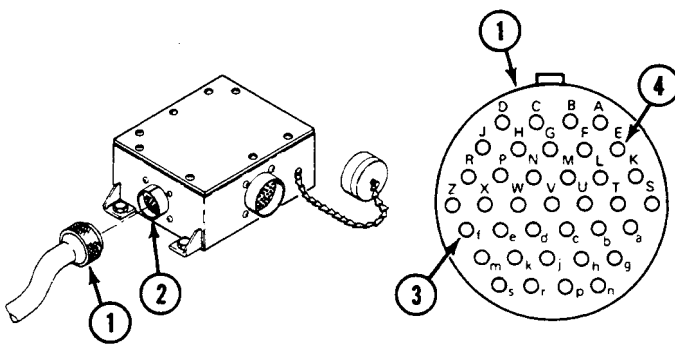
**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**B2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 plug P1 (1), pins f (3) and E (4). VTM should read infinity.
3. Does VTM indicate a fault?



**NO**

**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0152 00

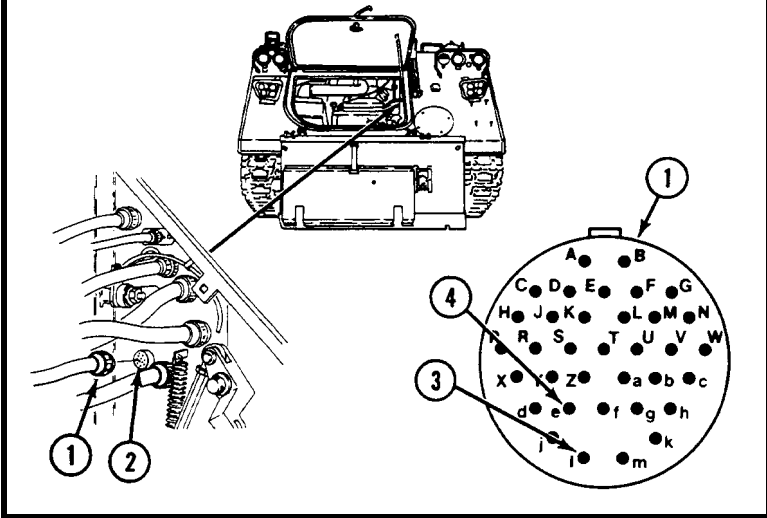
**B3Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins l (3) and E (4). VTM should read infinity.
3. Does VTM indicate a fault?

**NO**

**B3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.



**YES**

**B4Y**

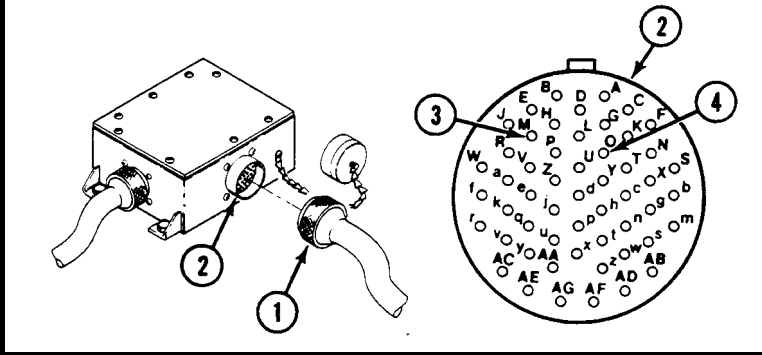
1. Replace harness 12354672 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0152 00

**CY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins M (3) and O (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

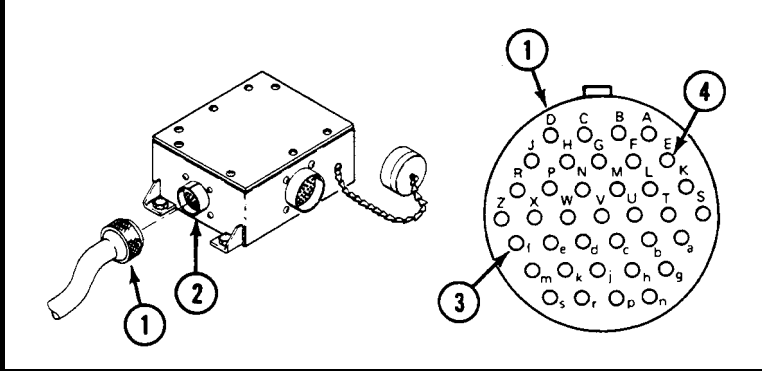
**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**C2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (1).
2. Measure resistance between 12354593 plug P1 (1), pins f (3) and E (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

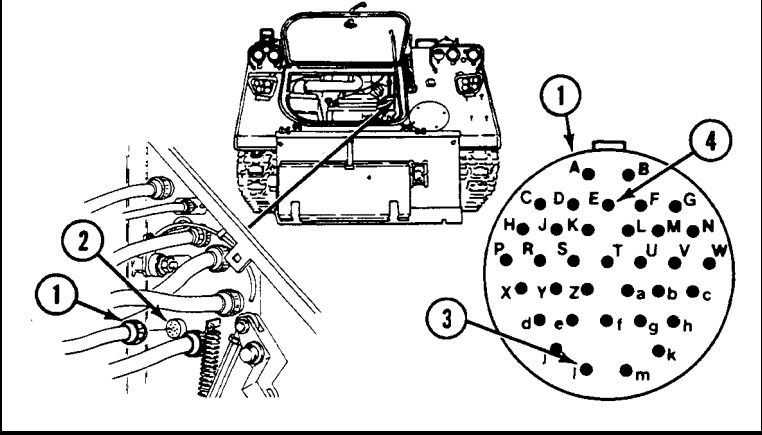
**YES**

**STE/ICE TEST 83 GENERATOR FIELD VOLTAGE DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0152 00

**C3Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins I (3) and E (4). VTM should read 0 ohms.
3. Does VTM indicate a fault?



**NO**

**C3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

**YES**

**C4Y**

1. Replace harness 12354672 (WP 0882 00).
2. Verify no faults found.

**STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP  
DIAGNOSTIC TROUBLESHOOTING**

**0153 00**

**INITIAL SETUP:**

Maintenance Level

Unit

References

See your -10  
TM 9-4910-571-12&P

Tools and Special Tools

Electrical connector pliers (WP 0926 00, Item 31)  
Jumper wire  
STE/ICE Test Set (WP 0926 00, Item 61)

Equipment Condition

Engine stopped (see your -10)  
Carrier blocked (see your -10)  
Driver's power plant access panel removed (WP 0441 00)  
Trim vane lowered (see your -10)  
Power plant access door open (see your -10)

Materials/Parts

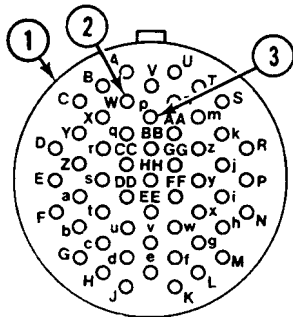
Insulation tape (WP 0928 00, Item 39)

Personnel Required

Unit Mech 63T10

**T**

1. Remove plug W1P1 from VTM jack J1.
2. Hook up VTM to vehicle batteries TM 9-4910-571-12&P.
3. Set up Test 91 TM 9-4910-571-12&P.
4. Measure resistance between W1P1 (1), pins W (2) and P (3).
5. Does VTM read less than one ohm?



**NO**

**GO TO BY (PAGE 0153 00-3)**

**YES**

**STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

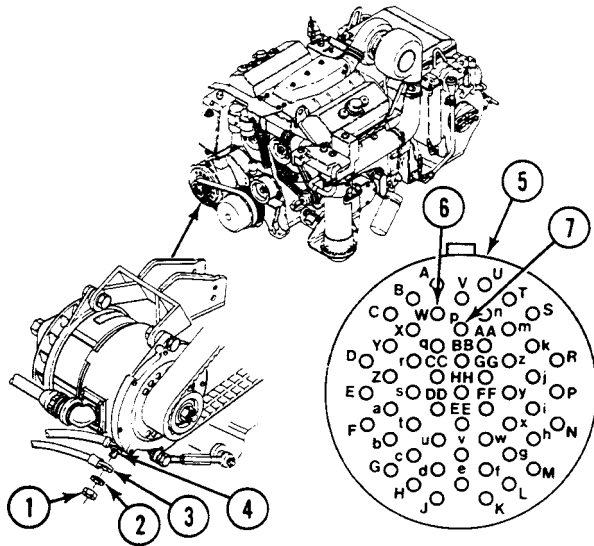
0153 00

**Y**

1. Remove nut (1), lockwasher (2), and harness 12354672 circuit 771 terminal end E2 (3) from generator ground stud (4).
2. Wrap harness 12354672 circuit 771 terminal end E2 (3) with tape.
3. Measure resistance between plug WIP1 (5), pins W (6) and P (7).
4. Does VTM read infinity?

**NO**

**GO TO CY (PAGE 0153 00-4)**



**YES**

**2Y**

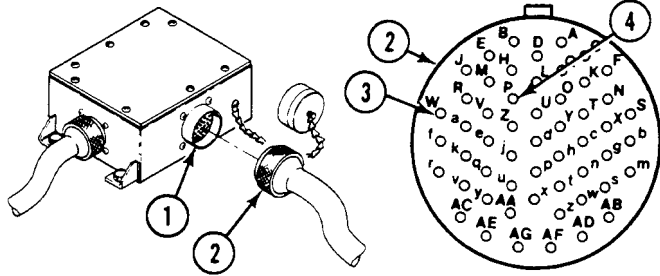
1. Faulty VTM.
2. Notify supervisor.

**STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0153 00

**BY**

1. Remove plug W1P2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins W (3) and P (4).
3. Does VTM read more than one ohm?



**NO**

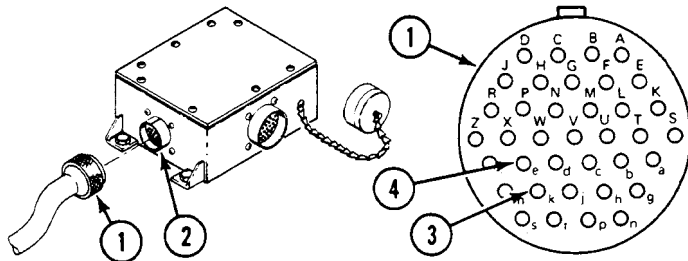
**BYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.

**YES**

**B2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 plug P1 (1), pins k (3) and e (4). Use VTM.
3. Does VTM read more than one ohm?



**NO**

**B2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC

0153 00

TROUBLESHOOTING—Continued

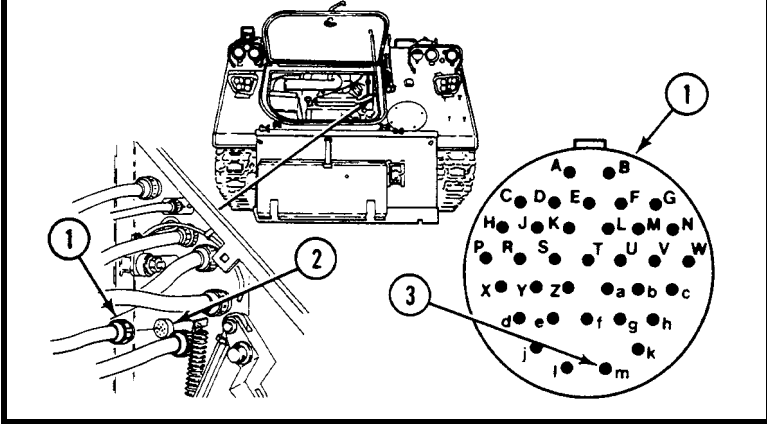
**B3Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pins m (3) and ground.
3. Does VTM read more than one ohm?

NO

**B3YN**

1. Replace harness 12354693 (WP 0882 00).
2. Verify no faults found.



YES

**B4Y**

1. Replace harness 12354672 (WP 0882 00).
2. Verify no faults found.

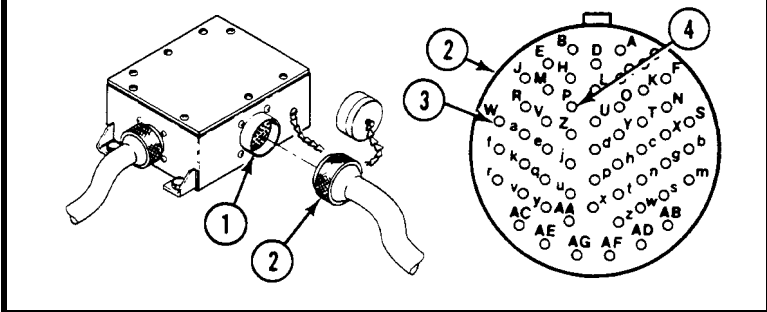
**CY**

1. Remove WIP2 (1) from STE/ICE distribution box jack J2 (2).
2. Measure resistance between STE/ICE distribution box jack J2 (2), pins W (3) and P (4).
3. Does VTM fail to read infinity?

NO

**CYN**

1. Faulty W1 cable. Beyond unit maintenance repair.
2. Notify supervisor.



YES

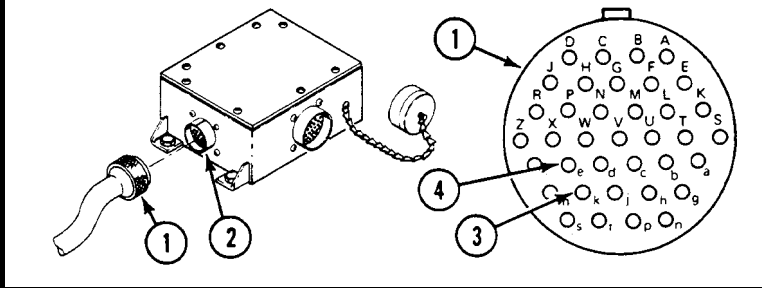


**STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

0153 00

**C2Y**

1. Remove harness 12354593 plug P1 (1) from STE/ICE distribution box jack J1 (2).
2. Measure resistance between harness 12354593 plug P1 (1), pins k (3) and e (4).
3. Does VTM fail to read infinity?



**NO**

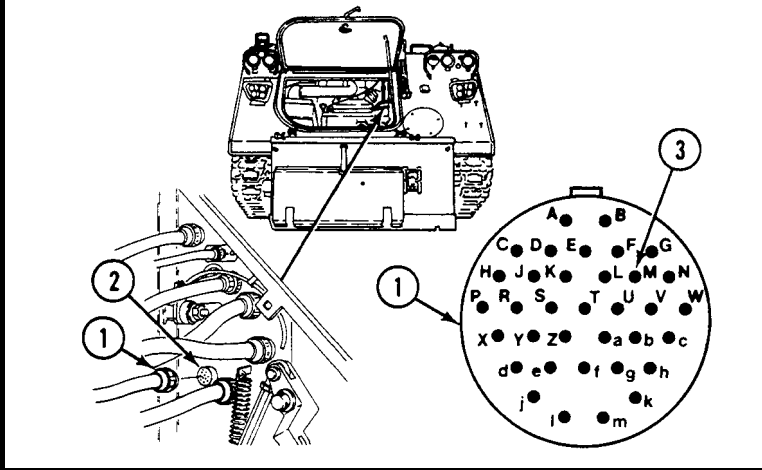
**C2YN**

1. Replace STE/ICE distribution box (WP 0874 00) thru (WP 0877 00).
2. Verify no faults found.

**YES**

**C3Y**

1. Remove harness 12354672 plug P4 (1) from harness 12354593 jack J1 (2).
2. Measure resistance between harness 12354672 plug P4 (1), pin M (3) and ground.
3. Does VTM read other than infinity?



**NO**

**C3YN**

1. Replace harness 12354593 (WP 0882 00).
2. Verify no faults found.

**YES**

---

**STE/ICE TEST 84 GENERATOR NEGATIVE CABLE VOLTAGE DROP DIAGNOSTIC  
TROUBLESHOOTING—Continued**

---

**0153 00**

**C4Y**

1. Replace harness 12354672 (WP 0882 00).
2. Verify no faults found.

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<b>RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS</b>	Use Part II ( <i>reverse</i> ) for Repair Parts and Special Tools Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	Date 23 JUL 02
For use of this form, see AR 25-30; the proponent agency is ODISC4.		
TO: ( <i>Forward to proponent of publication or form</i> ) ( <i>Include ZIP Code</i> )		FROM: ( <i>Activity and location</i> ) ( <i>include ZIP code</i> ) COMMANDER COMPANY A, 216 CAV FORT KNOX, KY 40121

**PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS**

PUBLICATION/FORM NUMBER TM 9-2350-277-20-1	DATE 02 JAN 01	TITLE Unit Maintenance Manual for M113A3 FOV
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ITEM	PAGE	PARA	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON
	0014 00-2					STEP b. THE SCREWS (4) ON BRACKET (2) MUST BE TORQUED PLEASE ADD TORQUE INFORMATION.
	0023 00-34			5 (SH15)		THERE ARE FOUR CLAMPS (144) ON WIRING HARNESS (217), NOT THREE AS SHOWN. PLEASE CORRECT

\*Reference to line numbers within the paragraph or subparagraph.

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO: <i>(Forward direct to addressee listed in publication)</i>	FROM: <i>(Activity and location) (Include Zip Code)</i>	DATE
--	---	------

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER			DATE			TITLE		
PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III - REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

SAMPLE

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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Use Part II (*reverse*) for Repair Parts and Special Tools Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).

Date

**TO:** (*Forward to proponent of publication or form*) (*Include ZIP Code*)

**FROM:** (*Activity and location*) (*include ZIP code*)

**PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS**

PUBLICATION/FORM NUMBER  
TM 9-2350-277-20-1

DATE  
02 JAN 01

TITLE  
Unit Maintenance Manual for M113A3 FOV

ITEM	PAGE	PARA	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON

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By Order of the Secretary of the Army:

Official:



JOEL B. HUDSON

*Administrative Assistant to the  
Secretary of the Army*

9913202

ERIC K. SHINSEKI  
*General, United States Army  
Chief of Staff*

**DISTRIBUTION:** To be distributed in accordance with the initial distribution requirements for IDN: 371205, requirements for TM 9-2350-277-20-1.



# THE METRIC SYSTEM AND EQUIVALENTS

## LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches  
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches  
 1 Kilometer = 1000 Meters = 0.621 Miles

## WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces  
 1 Kilogram = 1000 Grams = 2.2 Lb.  
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

## LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces  
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

## SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches  
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet  
 1 Sq. Kilometer = 1,000 Sq. Meters = 0.386 Sq. Miles

## CUBIC MEASURE

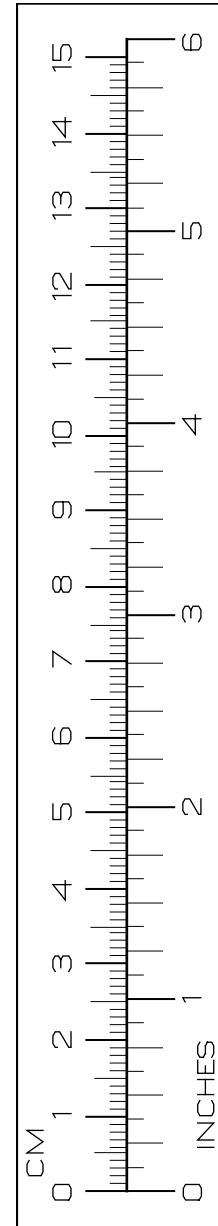
1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches  
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

## TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$   
 212° Fahrenheit is equivalent to 100° Celsius  
 90° Fahrenheit is equivalent to 32.2° Celsius  
 32° Fahrenheit is equivalent to 0° Celsius  
 $(9/5 \times ^{\circ}\text{C}) + 32 = ^{\circ}\text{F}$

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Millimeters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



**PIN: 062444-000**