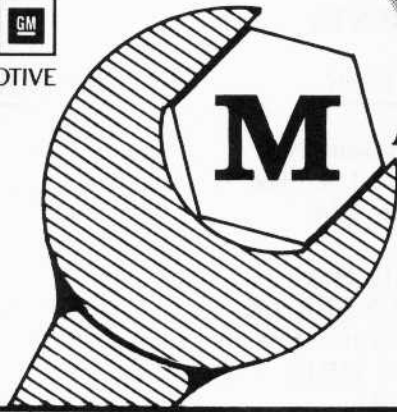




M.I. 9637



# MAINTENANCE INSTRUCTION

## MODERNIZATION RECOMMENDATION

### COOLING SYSTEM AUTOMATIC DRAIN MODIFICATION

**PURPOSE:** To provide the necessary information for retrofitting an automatic drain system to protect against cooling system freeze-ups.

**APPLICATION:** Locomotives equipped with electric cab heat.

**REFERENCES:** WS41761, WS41771, 9504826, 9504779, and 9506022.

**DISCUSSION:** A 9516379 low temperature drain valve kit has been made available to provide protection against cooling system freeze-ups in the event an engine has shut down and has not been manually drained. The valve, located in the compressor/temperature switch manifold water supply piping, discharges coolant into the engine drain sump when descending coolant temperature reaches 45° F.

The service kit includes all the necessary electrical and mechanical components along with work sketches and nameplates required for the modification. The kit does not include wiring, or faston connectors.

The following is the list of material required per locomotive:

<b>NEW MATERIAL REQUIRED:</b>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
	9516379	Low Temperature Drain Valve Kit	1

#### NOTE

The above listed kit consists of the components listed on the following page.

Approximate price of the 9516379 Low Temperature Drain Valve Kit is \$585.00. The kit will be billed at price in effect at time of shipment.

## KIT COMPONENTS

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
9512106	Valve Kit Assembly	1
8479675	Coupling - 1-1/4 Flex	1
9089914	Flange - 1-1/4 W	2
8448504	Gasket	4
271560	Bolt - 5/8-11 Hex	8
103325	Washer - 5/8 SPR LK	8
8458739	Circuit Breaker - 15A	1
8363168	Relay (FPX, DRL)	2
8357415	Relay (WDR)	1
8421017	Rectifier Assembly	1
9503883	Switch - Pushbutton (CWF)	1
9338686	Switch Rotary Snap (FP/ES)	1
8438423	Light Socket	1
8421182	Lamp	1
8438428	Lens White	1
9504826	N/PLT - Instruction (CAB)	1
9504779	N/PLT - Instruction (CWF)	1
9506022	N/PLT - Water Drain	1
8240495	Conduit - 1/2" Flex	50 Inches
8330835	Box Connector, Liquid Tight - 1/2"	1
8240529	Coupling - 1/2" FCCM	1
8147234	Clamp Asm	1
WS41761	Schematic MU Auto Dr	1
WS41771	Conduit & PPG Argt.	1