

# Maintenance Procedure

## No. P303

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| TASK DESCRIPTION<br>TEST VOICE ALARM SYSTEM<br>(Interim procedure does not provide testing of entire system)   |
| BUILDER'S OR VENDOR'S MAINTENANCE INSTRUCTIONS<br>GM F59 Service Manual – Section 8H   |
| SPECIAL TOOLS REQUIRED:<br>Battery Voltage Simulator<br>Portable UHF radio   |
| RELATED MAINTENANCE PROCEDURES MODIFICATIONS, POINTERS, ETC.   |
| SAFETY PRECAUTIONS:<br>CONTRACTOR TO ASSUME RESPONSIBILITY FOR SAFETY RULES AND COMPLIANCE.  |
| PREPARATION:<br>1) Secure locomotive from movement.<br>2) Shut down main and HEP engines.<br>3) Place locomotive on wayside power.<br>4) Place layover switch to ON position.<br>5) Disconnect antenna cable from UHF radio.<br>6) UHF radio circuit breaker to be in ON position. |

### PROCEDURE

- 1 Close or place door override switch in ON position.
- 2 Open battery knife switch.
- 3 At the voice alarm monitor, verify that the power indicator light is on. If this light is not on, it indicates that the UHF radio breaker is off, the power switch on the front of the panel is off or the fuse on the back of the monitor is blown or missing.

**Note:** Any other lights illuminated on the monitor would indicate the monitor is receiving an alarm signal from the locomotive.

- 4 Ensure that the portable UHF radio is on and set to receive.
- 5 Place the alarm monitor # 8 switch in the ON (up) position.

**Note:** New alarm units have only one switch.

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- 6 Observe the # 8 indicator light above the switch for approximately 90 seconds to ensure that the light does not illuminate.

**Note:** *The light (all active alarms) has a built in time delay of approximately 1 minute. If the #8 indicator light does come on it indicates that an alarm is being generated. As the UHF antenna cable is disconnected the voice alarm will only be picked up by the portable due to its proximity.*

### 7. Voice Alarm Monitor Test

7.1 Depress test button on the monitor.

7.2 Monitor the UHF radio for test message to be transmitted for each alarm.

Alarm #1 Test: "Wayside power has failed".

- a. Shut off the wayside (575 volts) supply.
- b. After 1 minute the monitor will transmit "Attention Willowbrook shop, this is locomotive....."
- c. After the locomotive identification, the voice alarm monitor will transmit "Wayside power has failed".
- d. This message will be repeated until the voice monitor receives an acknowledgment or until wayside power is restored.

**Note:** *All voice alarms have a designated 1-minute time delay in order to avoid nuisance or false alarms.*

Alarm #2 Test: "Engine coolant has dropped to 65° F."

- a. There is no simulation test available for this alarm at present.

Alarm #3 Test: "Engine coolant is dumping".

- a. There is no simulation test available for this alarm at present.

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Alarm #4 Test: "Battery voltage is critically low".

- a. Shut off the wayside battery trickle charger and connect a battery voltage simulator to the alarm monitor circuit.
- b. The threshold of the low battery voltage alarm has been established at 57 volts.
- c. The voice alarm monitor will react to this simulated battery voltage deterioration as per alarm # 1.
- d. Disconnect the battery simulator and place the trickle charger breaker in the ON position.
- e. The alarm distress message will cease.

Alarm #8 Test: "Reporting an unauthorized entry". (This can only be tested if the locomotive is attached to a consist). For this the procedure is as follow:

- a. Turn # 8 switch to ON or armed position.
- b. Open doors or open the DIR breaker and observe that the green door light indicator goes out.
- c. After approximately 1 minute an alarm should sound.
- d. Turn # 8 switch off to disable intrusion alarm.

**8** Voice Alarm Monitor Radio Operation Test

8.1 Radio PTT Light -while performing test 1 through 8, this light will be illuminated when the monitor is transmitting an alarm message.

8.2 Radio COR Light – reconnects the UHF radio antenna cable.  
As it is monitoring the UHF transmissions, this light will normally flicker and is an indication that the voice monitor is set up and able to receive a message over the radio.

9. Record work completed and inform supervisor of any discrepancies.

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