



## Installation Instructions

### 18SP543—Install Coolant Level Sensor Kit 23529101 on Series 40E Engine

#### Introduction

This kit is intended for installation on a Detroit Diesel Series 40E® engine having a 24-volt electrical system. The kit includes the items listed in Table 1.

Part No.	Qty.	Description
23524167	1	Sensor, Coolant Level
15300030	1	Connector
12077411	6	Terminal
12015323	7	Seal
12034413	1	Plug
23528886	1	Module, 24-Volt
15300027	1	Connector
15300014	1	Connector
12129493	2	Terminal
12015193	1	Seal

**Table 1. Kit 23529101 Parts List**

#### Installation

Install coolant level sensor kit components as follows:



#### CAUTION:

**To avoid injury from accidental engine start-up while servicing the engine, disconnect/disable the starting system.**



#### CAUTION:

**To avoid injury from the expulsion of hot coolant, never remove the cooling system pressure cap while the engine is at operating temperature. Remove the cap slowly to relieve pressure. Wear adequate protective clothing (face shield or safety goggles, rubber gloves, apron, and boots).**

1. With the engine at ambient temperature (cool to the touch) and the starting system disconnected/disabled, place a suitable clean container under the radiator and drain the coolant until the level is below the mounting location for the sensor.
2. If coolant is to be reused, cover the container to prevent contamination and set aside. If coolant is not to be reused, dispose of it in an environmentally friendly manner, according to federal (EPA) and/or state recommendations.

#### NOTICE:

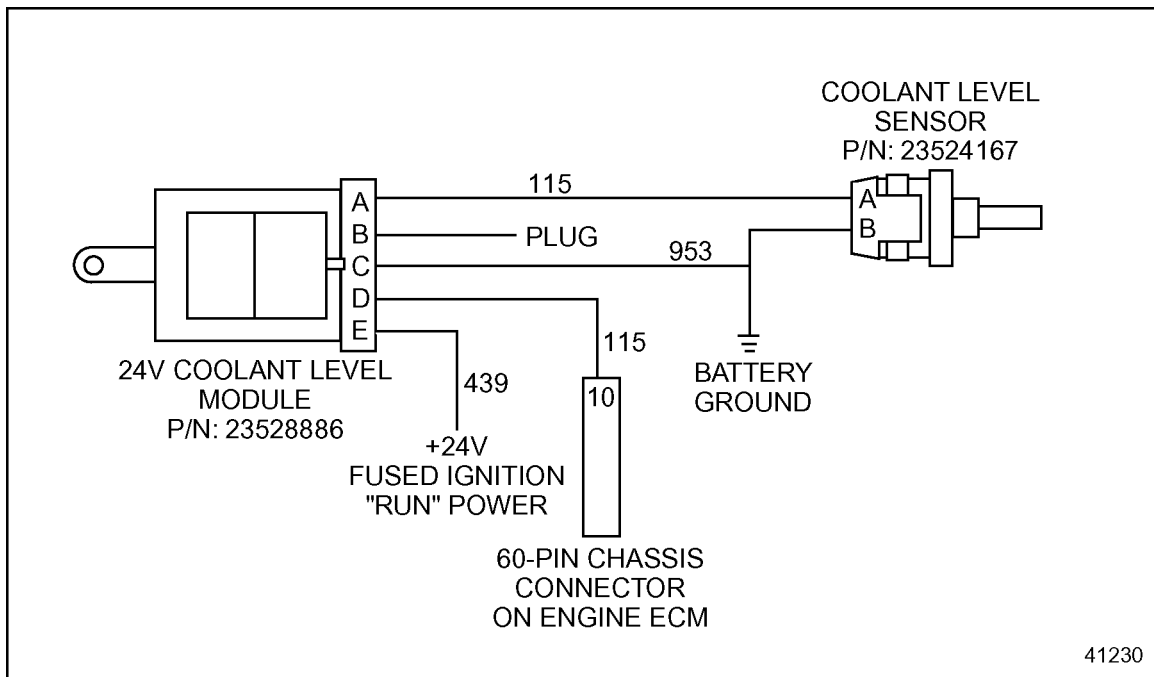
Do not overtighten the coolant level sensor, since this can result in sensor and/or radiator damage. Tighten only until it is secure and leak free.

4. The sensor has 1/4 in. - 18 NPTF threads and is pre-coated with sealant. To install the sensor, remove the required plug from the heat exchanger or radiator top tank, insert the sensor in the opening, and tighten securely.
5. Mount the coolant level sensor module in a convenient location. Connect the wiring harness to the sensor, the module, the 60-pin chassis connector, 24-volt engine electrical power, and battery ground. Use the terminals and connectors in the kit as required. See Figure 1.

#### NOTE:

To properly test coolant level sensor operation, do not replace the drained coolant before starting the engine.

6. Reconnect electrical starting power and start the engine.
7. Check for proper coolant level sensor operation. The warning lamp on the console should flash.



**Figure 1. Coolant Level Sensor Wiring Diagram**

8. Replace coolant previously drained from the radiator. The warning lamp should go out when the sensor is fully immersed.
9. Shut down the engine and check for leaks.

**DETROIT DIESEL**



13400 Outer Drive, West, Detroit, Michigan 48239-4001  
 Telephone: 313-592-5000  
 www.detroitdiesel.com

**18SP543 Page 2 of 2**