

DETROIT DIESEL



Installation Instructions

18SP580 – Install DDEC® IV EGR Ambient Air Temperature Sensor and Harness on Series 60® 2002 Engine

Introduction

The Ambient Air Temperature Sensor (ATS) is used to measure outside air temperature for DDEC IV. It uses a temperature sensor with an integral bracket for mounting purposes and a dedicated harness. Ambient Air Temperature Sensor kit P/N 23533916, listed in Table 1 includes the following items:

Part No.	Qty.	Description
23533915	1	Harness, Air Temp. Sensor
23518328	1	Sensor, Air Temp. (w/Mtg. Brkt.)
12162193	1	Connector, Air Temp. Sensor
12103881	5	Terminal, Female
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Table 1 Ambient ATS Kit P/N: 23533916

Additional Tool Required

The following Kent-Moore® tool is required for proper kit installation:

- J-35123 Packard Crimp Tool for Metri-Pack™ 150 Series Terminals.

This tool can be ordered directly from an authorized Detroit Diesel service outlet.

Installation of the Ambient Air Temperature Sensor and Harness

Use the following procedure to install the ambient air temperature sensor and harness:

NOTE:

The terminals contained in this kit are “pull to seat.” Insert the cable into the connector before installing the terminal on the cable. For crimping instructions, refer to section “Connector and Terminal Information” in the DDEC IV Application and Installation Manual (7SA743). This manual is available through authorized Detroit Diesel service outlets.

1. Unplug the connector from the turbo boost pressure sensor.
2. Take the ambient ATS harness and plug the TBS connector into the turbo boost sensor. Plug the turbo boost sensor (from the engine sensor harness) into the 3-pin connector (turbo boost sensor connector mate) on the ATS harness.
3. Route the harness along the engine sensor harness towards the ECM 30-way connector.
4. Remove the vehicle interface harness 30-way connector from the ECM.
5. Insert the single lead (circuit 907) into cavity D-3. Crimp a 12103881 terminal on the lead using tool J 35123.
6. Seat the terminal into the connector and reinstall the 30-way connector.
7. Route the body of the harness to the desired location for the ATS Sensor. Remove any excess harness material and discard.
8. Install the black lead (circuit 452) into cavity “A” of ATS connector 12162193 and the green lead (circuit 907) into cavity “B.” Crimp the 12103881 terminals on each lead using tool J 35123. Insert the terminals into the connector.
9. Secure the sensor to the desired location and plug in the ATS connector.

NOTE:

Preferred mounting location for the sensor is on the front bumper away from any heat sources.

10. Secure the harness to adjacent components with wire ties.

DETROIT DIESEL



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