

## Installation Instructions

### 18SP519—Install 4-Liter Centrifugal Oil Filter Kit 23540453

#### Introduction

This new, optional 4-liter centrifugal oil filter kit is intended for installation on Detroit Diesel Series 4000™ models Txx37Kxx used in construction,

industrial, or generator set applications. It is not intended for use on marine engines. The kit includes the items listed in Table 1.

| Part No.        | Qty. | Description                    |
|-----------------|------|--------------------------------|
| 23540432        | 1    | FM 400 Filter Assembly         |
| 23540433        | 1    | Adaptor Plate, Filter Mounting |
| 524 997 0545    | 2    | O-Ring Seal, Filter Adaptor    |
| 000 933 012 093 | 6    | Bolt, M12 X 1.75 X 45          |
| 11500950        | 2    | Bolt, M12 X 1.75 X 90          |
| 000 125 013 012 | 8    | Washer, Mounting Bolt          |
| 18SP519         | 1    | Installation Instructions      |

**Table 1. 4-Liter Centrifugal Oil Filter Kit 23540453**

#### Installation

Install the kit as follows:

|  |                 |
|--|-----------------|
|  | <b>CAUTION:</b> |
| <b>To avoid injury from accidental engine start-up while servicing the engine, disconnect/disable the starting system.</b> |                 |

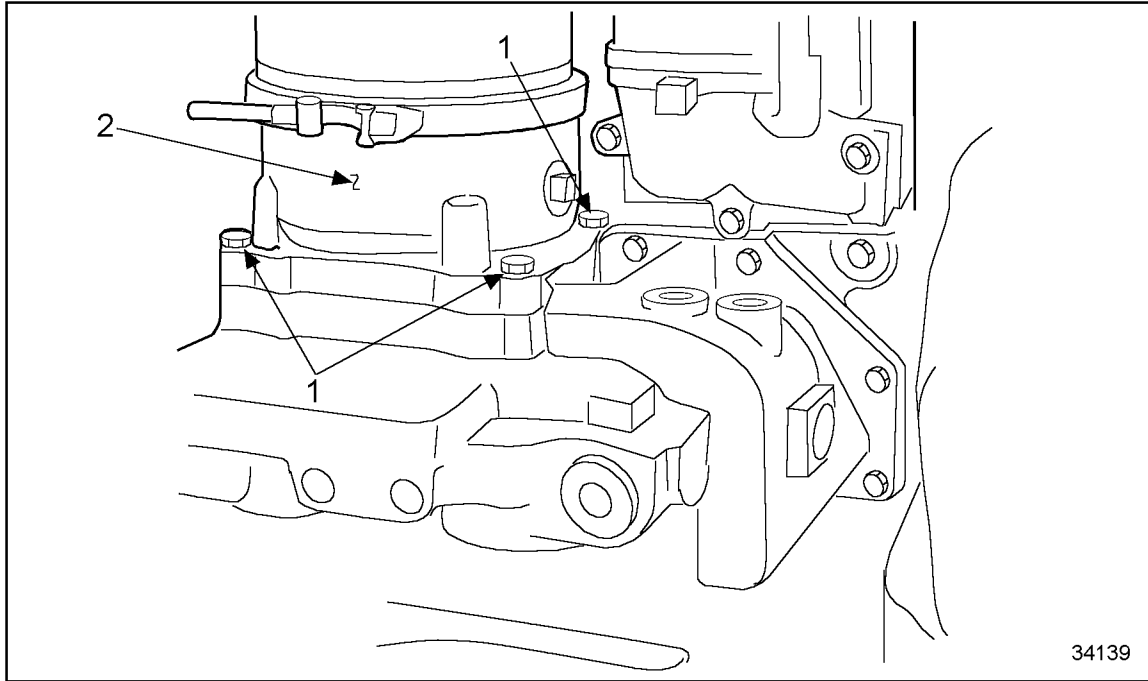
|   |                 |
|---|-----------------|
|   | <b>CAUTION:</b> |
| <b>To avoid injury from hot surfaces, allow engine to cool before removing any component. Wear protective gloves.</b> |                 |

1. With the engine shut down and at ambient temperature (cool to the touch), disconnect battery power to the starting system.
2. Place a suitable container under the oil filters to catch any oil that may drain when the original centrifugal oil filter assembly is removed.
3. Remove the (4) hex bolts securing the 2-liter centrifugal oil filter base to the oil filter housing. See Figure 1, Item 1.

4. Remove the centrifugal oil filter assembly from the housing and allow the oil to drain into a suitable container. See Figure 1, Item 2. Discard the filter assembly. Dispose of the drained oil in an environmentally responsible manner, according to state and/or federal (EPA) recommendations.

5. Remove and discard the O-ring seal from the housing. Carefully clean the mounting surface of the filter housing, making sure no dirt or debris enters the opening on the housing.

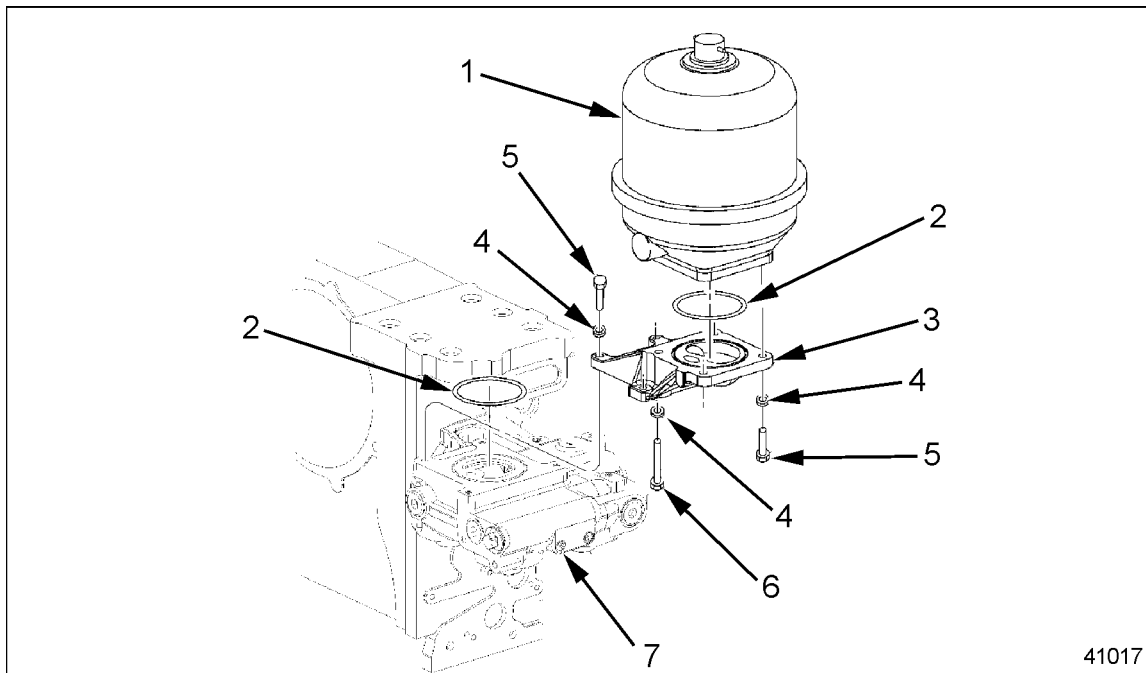
6. Lightly coat (1) large O-ring with clean lubricating oil or petroleum jelly and install in the filter adaptor O-ring groove. See Figure 2, Item 3.



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1. Bolt, Centrifugal Filter Assembly Mounting    2. Filter Assembly, 2-Liter Centrifugal


**Figure 1. 2-Liter Centrifugal Oil Filter Assembly Removal**



- |   |                               |
|---|-------------------------------|
| 1. Oil Filter Assembly, 4-Liter Centrifugal | 5. Bolt, M12 X 1.75 X 45mm L. |
| 2. O-Ring Seal                              | 6. Bolt, M12 X 1.75 X 90mm L. |
| 3. Adaptor Plate, Centrifugal Filter        | 7. Housing, Oil Filter        |
| 4. Washer                                   |                               |

**Figure 2. 4-Liter Centrifugal Oil Filter Assembly Installation**

7. Align the centrifugal oil filter assembly with the adaptor boltholes. Insert (2) 45mm long bolts and washers in the outboard bolt locations. See Figure 2, Item 5. Insert (2) 90mm long bolts and washers in the inboard bolt locations. See Figure 2, Item 6. Torque bolts to 100 - 110 N•m (74 - 81 lb-ft).
8. Lightly coat (1) large O-ring (Item 2) with clean lubricating oil or petroleum jelly and install in the O-ring groove of the oil filter housing (Item 7). See Figure 2.
9. Carefully place the oil filter and adaptor assembly onto the oil filter housing, making sure the seal is not displaced in the groove.
10. Align the adaptor boltholes with the threaded holes in the oil filter housing. Install (4) 45mm long bolts (Item 5) and washers and torque to 100 - 110 N•m (74 - 81 lb-ft). See Figure 2.
11. Reconnect engine-starting power and check engine oil level.

|   |
|---|
|  <b>CAUTION:</b>   |
| <p><b>Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects and other reproductive harm.</b></p> <ul style="list-style-type: none"> <li>■ <b>Always start and operate the engine in a well-ventilated area.</b></li> <li>■ <b>If operating the engine in an enclosed area, vent the exhaust to the outside.</b></li> <li>■ <b>Do not modify or tamper with the exhaust system or the emission control system.</b></li> </ul> |

12. Start the engine, allow it to idle, and check for leaks. Operate the engine for 3 - 5 minutes at no-load full rpm, and again check for leaks. Shut the engine down, allow sufficient time for oil drain back, and check the oil. Add oil as required to

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