

## Vertically Up Oil Filter

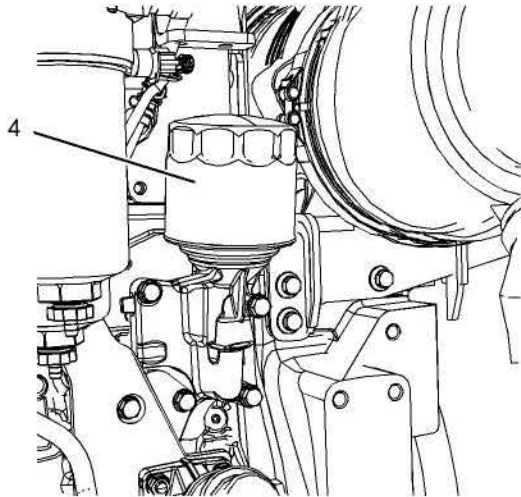


Illustration 62

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(4) Vertically up oil filter

Some oil filters may be installed vertically up. Use the same procedure to replace the oil filter. Ensure that all the oil has drained from the filter before removal.

## Fill the Oil Pan

1. Remove the oil filler cap. Refer to this Operation and Maintenance Manual, "Fluid Recommendations" for more information on suitable oils. Fill the oil pan with the correct amount of new engine lubricating oil. Refer to this Operation and Maintenance Manual, "Refill Capacities" for more information on refill capacities.

### NOTICE

If equipped with an auxiliary oil filter system or a remote filter system, follow the OEM or the filter manufacturer's recommendations. Under filling or over filling the crankcase with oil can cause engine damage.

2. Start the engine and run the engine at "LOW IDLE" for 2 minutes. Perform this procedure to ensure that the lubrication system has oil and that the oil filters are filled. Inspect the oil filter for oil leaks.
3. Stop the engine and allow the oil to drain back to the oil pan for a minimum of 10 minutes.



Illustration 63

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4. Remove the engine oil level gauge to check the oil level. Maintain the oil level between the MIN mark and MAX mark on the engine oil level gauge. Do not fill the crankcase above the MAX mark.

## Engine Oil Service Reset

### NOTICE

Failure to perform a schedule oil and filter service with an engine oil service reset will trigger an engine derate.

The low oil warning lamp has two functions. The lamp on solid will indicate that the engine has low oil pressure. The lamp flashing will indicate the engine oil and filter **MUST** be changed and the engine oil service reset **MUST** be completed. The lamp will only flash with the key in the ON position, with the engine in operation the lamp will be extinguished.

**Note:** If the engine oil and filter have been changed before the warning lamp has started to flash, the engine oil service reset procedure **MUST** still be completed. Upon completion of the reset procedure, the lamp will flash three times.

Some applications may have other methods to perform an engine oil service reset. For assistance with the engine oil service reset contact your Perkins distributor, or your OEM.

Use one of the following procedures after the engine oil and filter has been changed to complete an engine oil service reset:

## Throttle Control Option

**Note:** Some application the maximum throttle position can be reached before the throttle peddle has reached the stop. The actual maximum position of the throttle must be known before starting the procedure. With the known maximum position the middle position of the throttle can be calculated. The throttle must be positioned in the required positions for the prescribed period to perform an engine oil service reset.

1. With the engine stopped. Turn the keyswitch to the ON position, and wait 15 seconds, but not more than 20 seconds. Go to step 2.
2. Move the throttle to the maximum position for more than 15 seconds, but less than 20 seconds.
3. Return throttle to zero position for more than 15 seconds, but less than 20 seconds.
4. Move the throttle to the maximum position for more than 15 seconds, but less than 20 seconds.
5. Return throttle to zero position for more than 15 seconds, but less than 20 seconds.
6. Move the throttle to the middle position for more than 15 seconds, but less than 20 seconds. Return the throttle to zero position. The engine oil service reset procedure is complete.
7. On completion of the sequence, the low oil warning lamp will flash three times. Each flash will be for 1 second with a 1 second interval. This sequence of flashes indicates that the warning lamp has been reset and the engine can be started and operated normally.
8. Turn the keyswitch to the OFF position.
9. If the procedure has been interrupted before completion, turn the power off for 20 seconds before starting again.

## Multi-State Switch Option

1. With the engine stopped. Turn the keyswitch to the ON position, and wait 15 seconds, but not more than 20 seconds. Go to step 2.
2. Turn the multi-state switch to position 1 for more than 15 seconds, but less than 20 seconds.
3. Return the multi-state switch to position 0 for more than 15 seconds, but less than 20 seconds.
4. Turn the multi-state switch to position 1 for more than 15 seconds, but less than 20 seconds.
5. Return the multi-state switch to position 0 for more than 15 seconds, but less than 20 seconds

6. Turn the multi-state switch to position 1 for more than 15 seconds, but less than 20 seconds. Return the multi-state switch to position 0. The engine oil service reset procedure is complete.
7. On completion of the sequence, the low oil warning lamp will flash three times. Each flash will be for 1 second with a 1 second interval. This sequence of flashes indicates that the warning lamp has been reset and the engine can be started and operated normally.
8. Turn the keyswitch to the OFF position.
9. If the procedure has been interrupted before completion, turn the power off for 20 seconds before starting again.

## Perkins Electronic Service Tool

The Perkins electronic service tool can be used to reset the oil service indicator. Connect the electronic service tool and use the menu to reset the oil service reset procedure.

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## Fan Clearance - Check

There are different types of cooling systems. Refer to the OEM for information on clearance for the fan.

Ensure that the engine is stopped. Ensure that the battery disconnect switch is in the OFF position. Ensure that the cooling system is full. The clearance between the cover (1) and the fan (2) will require checking. The gap (A) between the edge of the cover and the tip of the fan blade must be checked in four equally spaced positions.