

HUBB® Oil Filter Installation & Maintenance









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Installing the HUBB® Oil Filter for the first time

This procedure outlines the basic installation of a HUBB[®] Oil Filter to a standard oil filter engine mount.

Preparation

Make sure the engine is cool. Make sure you are working on a clear, flat and level surface when working on the vehicle. You will need the following items:

- 1. Standard oil filter wrench
- 2. Oil recycling catch basin
- 3. HUBB® Oil Filter wrench
- 4. HUBB® Oil Filter

Remove old filter

Remove the old filter. You will most likely have to use an oil filter wrench to remove the old filter.

Using a shop rag, wipe any residual oil from the area around the oil filter inlet on your engine. Make sure to scrape clear old filter gasket remnants taking care not to damage the oil filter seal seat.

Unpack the HUBB® Oil Filter

Remove the new HUBB® Oil Filter from its box.

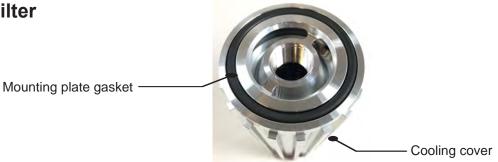


Do not discard the HUBB® Oil Filter wrench

Installing the HUBB® Oil Filter for the first time

Install the HUBB® Oil Filter

Using your finger, apply a small amount of clean oil to the gasket on the mounting plate.



Grasp the cooling cover and screw the filter onto the engine.

It is only necessary to hand tighten the filter.

Do Not use Loctite or any other thread locking adhesive.

Congratulations you have just installed the HUBB® Oil Filter. Now you can operate the vehicle with confidence knowing that it is protected by the best oil filter available and our 100,000 mile or 5,000 hour performance guarantee!

Section 2

Getting to know the HUBB® Oil Filter

FAQs

The HUBB® Oil Filter is the most advanced oil filter available on the market but like all mechanical components, it must be maintained.

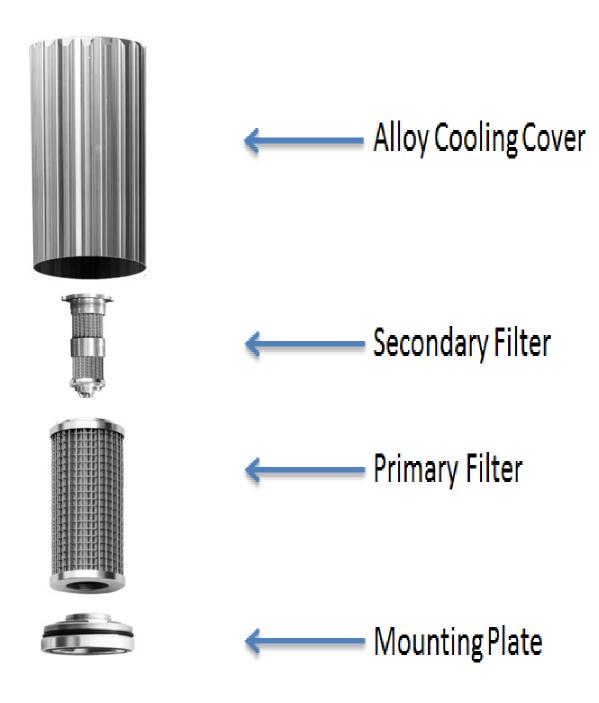
It is required to Clean the filter media as per our agreement using the HUBB Filters Ultrasonic Cleaning Station to maintain proper operation.

Filter components lost during maintenance are not covered by our performance guarantee. If you require additional components, please contact our Customer Service department to order replacement items.

The HUBB® Oil Filter wrench is a required component for proper maintenance of the filter. If you lose this item, please contact our Customer Service department to order a new one.

Getting to know the HUBB® Oil Filter

Components



Removing the HUBB® Oil Filter

Performance Guarantee

Failure to follow the instructions as listed in this manual could result in damage to the filter and void the Performance Guarantee. Please read these instructions carefully.

Remove the HUBB® Oil Filter from the engine

Grasp the cooling cover and rotate the filter counterclockwise.

If the cooling cover, mounting plate and primary filter assembly all come away from the engine as a single unit (as in the diagram below) proceed to "Remove media assembly from cooling cover" on page 7. Otherwise proceed to the next step.



Removing the HUBB® Oil Filter

Remove media assembly from engine

The media assembly may have remained attached to the engine upon removal of the cooling case.



In this situation, grip the primary filter media assembly by the base (do not grip the filter by the outer cage) carefully unscrew the primary filter media assembly from the mounting plate (turning counterclockwise).

If at this stage the mounting plate comes loose with the primary filter media, proceed to "Remove the mounting plate from primary filter media" on page 8. Otherwise proceed to the next step.

Remove media assembly from cooling cover

Using the provided HUBB® Filter wrench, unscrew the primary filter media assembly from the cooling cover (turning counterclockwise.)





Preparing to Clean the HUBB® Oil Filter

Remove the mounting plate from primary filter media

Gripping the primary filter media assembly by the base (do not grip the filter by the outer cage), use the provided HUBB[®] Oil Filter wrench to unscrew the mounting plate from the primary filter media assembly.



Remove secondary filter

Place the primary filter media on a flat surface with the primary filter facing up. Unscrew the secondary filter from the primary filter using the provided HUBB® Filter wrench.





Preparing to Clean the HUBB® Oil Filter

Remove the pressure differential valve

Unscrew the primary pressure differential valve from the secondary filter using the provided HUBB® Filter wrench. (It is not necessary to remove the secondary differential valve for cleaning)









4.

Cleaning the HUBB® Oil Filter

You are now ready to clean the filters. Follow the HUBB® Filters Cleaning Station instructions below for proper cleaning of the primary and secondary filters. The valve components should not be put into the cleaning station.



Differential valve components.
(Do not put these into Cleaning Station)

1. Place disassembled filters on to cleaning rack



3. Add correct measured amount of HUBB Cleaning Concentrate to Cleaning Station.



5. Press ON/OFF to begin the cleaning cycle. Once cleaning cycle is complete, the cleaning station will automatically shut off.



2. Place rack with filters in to cleaning station



4. Add tap water to fill line in cleaning station or just enough to cover filters. (HOT tap water is preferred).



6. Remove filters from cleaning machine and allow to cool.

Rinse with clean tap water and allow to dry completely.

Follow the reassembling instructions in Section 6 (page 11).

Dispose of used cleaning solution in accordance with EPA guidelines.

<u>DO NOT</u> leave filters in cleaning station. Remove promptly once cleaning cycle has completed.

| Amount of Concentrate Usage by Cleaning Machine Size | | |
|--|---|--|
| | Single - 3" or 8" filter Cleaning Station | Multi (6 filters) - 3" or 8" filter Cleaning Station |
| | HUBB SKU# 3309 | HUBB SKU# 3310 |
| 3 Inch Filter | 9 oz | 18 oz |
| 8 Inch Filter | 21 oz | 40 oz |

Reassembling the HUBB® Oil Filter

Reassemble pressure differential valve



Insert the pressure differential valve into the secondary filter. First, make sure the spring is properly positioned on the stem and the valve is sitting securely on the end of the spring. Screw the valve seat into the housing by hand until tight. Use the HUBB[®] Filter wrench to further tighten until the valve seat is flush to the secondary filter assembly housing. Do not overtighten.



Reassemble primary filter components

Insert the secondary filter assembly into the primary filter assembly. Tighten using the provided HUBB® Filter wrench.





Reassembling the HUBB® Oil Filter

Attach mounting plate

Screw the mounting plate back onto the primary filter assembly (turning clockwise). Tighten using the provided HUBB® Filter wrench. If the mounting plate is still fastened to the engine, skip to "Footnote" on page 13.



Insert media into cooling cover

Screw the primary filter media assembly back into the cooling cover. Tighten using the provided HUBB[®] Filter wrench (turning clockwise). Ensure cooling cover is completely screwed on and touching the mounting plate.





Install filter on engine

Screw the filter onto the engine.

It is only necessary to hand tighten the filter.

Reassembling the HUBB® Oil Filter

Footnote

If the mounting plate is still attached to the engine upon removal of the primary filter assembly, grasp the primary filter assembly by the base (do not grip the filter by the outer cage), and screw it to the mounting plate (turning clockwise).

It is only necessary to hand tighten the filter. Continue by screwing the cooling cover over the primary filter media and onto the mounting plate. There will be resistance as the mounting plate seal contacts the inside of the cooling cover. Continue to screw until the cooling cover top contacts the mounting plate.

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