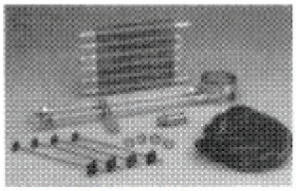
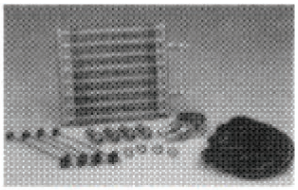
ENGINE OIL COOLER INSTALLATION PROCEDURE

Images of light, medium and heavy duty coolers.



LIGHT DUTY



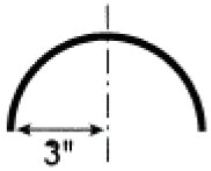
MEDIUM-DUTY

HEAVY-DUTY

Light Duty
Medium Duty
Heavy Duty

INSTALLATION REQUIREMENTS:

Illustration of a bend with no less than 3 inch radius.



3 inches

1. Keep rubber hoses away from sharp edges, hot exhaust pipes, manifolds and/or points of wear.
2. Do not bend hose less than 3 inch radius. Keep hose length as short as possible and always cut the hose 1 inch longer than measured.
3. Cooler must be mounted at least 1 inch from fans and 6 inches from exhaust manifolds.
4. Do not overtighten hose clamps. Tighten only until rubber protrudes level with slots in hose clamp. Overtightening can cause hose failure.
5. Use Teflon tape or suitable thread sealant when installing fittings. Tighten to 15 foot pounds.

REQUIRED TOOLS:

1. Filter Wrench & Catch Pan
2. Screwdriver, Wrench, Pliers & Knife
3. Drill & Drill Bits
4. Socket Set: US or Metric
5. Engine Oil as needed

Figure 1: Illustration of cooler positions.

FIG. 1

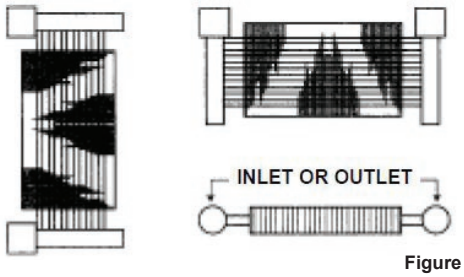


Figure 1
Inlet or Outlet

COOLER MOUNTING POSITIONS:

Note: Cooler may be mounted horizontally or vertically (Figure 1).

The oil cooler relies upon airflow for cooling.

Shown (Figure 2) are the three suggested locations for the cooler in relation to air conditioner condenser, radiator, and fan.

FIGURE 2: Illustration of engine layout with various cooler locations.

#1 Position: 100 percent efficient

#2 Position: 75 percent efficient

#3 Position: 60 percent efficient

FIG. 2

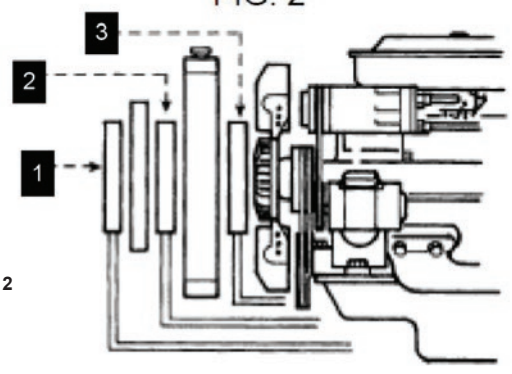


Figure 2
1
2
3

COOLER INSTALLATION:

Before starting installation, check filter clearance by adding depth of sandwich adapter and 3/4 inch to filter length. If insufficient clearance, the filter must be remote mounted using proper kit. In some cases a shorter filter will suffice.

1. For medium and heavy duty coolers, install hose barbs in cooler. Use a backup wrench on cooler fittings
2. Coolers without metal line kit: Install hose barbs in sandwich adapter (Figure 3). Go to step 4.

Figure 3: Illustration of Sandwich Adapter.

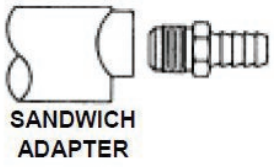


Figure 3
Sandwich Adapter

Figure 4: Illustration showing how to install hose barbs into a sandwich adapter.

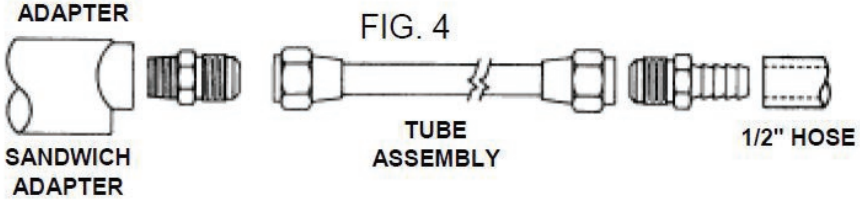


Figure 4
Sandwich Adapter
Tube Assembly
1/2 inch Hose

3.
   a. Coolers with metal line kit- install fitting in sandwich adapter as shown in Figure 4.
   b. Install 1/2 inch SAE flare x 1/2 inch hose barb fitting on lines. Use back-up wrench to avoid damage to lines.
   c. Position rubber coated loop clamps approximately 6 inches back from hosebarb fitting.
   d. Bolt lines, using the loop clamps, to metal bracket provided. This bracket will be used to support the lines upon completed installation.
   e. Connect the assembly to sandwich adapter

4. Apply a light coating of engine oil to o-ring seal in adapter, fastening it to the engine with mounting nut. Tighten mounting nut and re-install oil filter. Coolers without metal line kit, go to step 6.
5. Using the metal bracket as a guide determine a convenient oil pan bolt to remove. Secure metal bracket to engine oil pan using the bolt which was removed. Torque bolt to factory specification. Do not, under any circumstances, fasten the support bracket to the vehicle chassis or any other part of the vehicle other than the engine itself. Failure to properly install the metal bracket will cause the metal line to fail.
6. Cut the hoses to length and attach to sandwich adapter. Tighten clamps.
7.
   a. Attach light and medium duty coolers to radiator or AC condenser with Quick-Mount nylon ties, making sure that rubber pads are installed between cooler and radiator or AC condenser (Figure 5).
   b. Attach Heavy Duty Coolers with rubber block hardware. Install rubber block mounting hardware in between oil cooler tubes (Figure 6). Tighten screws until the end of the screw is flush with the surface of the tree nut.

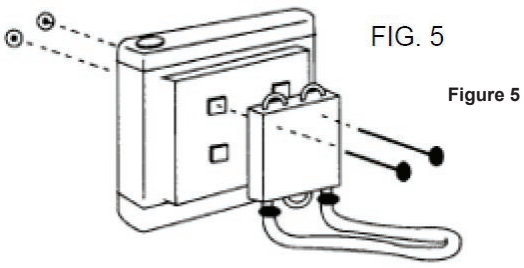


Figure 5

Figure 5: Illustration of how to connect the cooler to the radiator with rods and buttons.

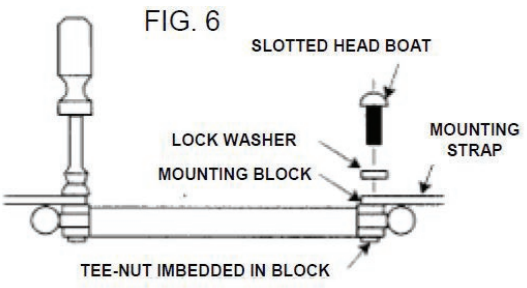


Figure 6
Slotted Head Boat
Lock Washer
Mounting Strap
Bounting Block
Tree-Nut
Imbedded In Block

Figure 6: Ilustration showing how to install rubber block mounting hardware.

8. Heavy Duty Coolers:
   a. Position oil cooler in mounting location.
   b. Fit and bend mounting straps as needed.
   c. Drill 1/8 inch hole using mounting straps as a guide.
   d. Mount cooler to vehicle using the sheet metal screws.
9. Attach hoses to cooler. Tighten clamps.
10. When installation is complete, test as follows:
   a. Start engine, immediately check for oil pressure.
   b. Check for possible leaks.
   c. Run engine at idle for ten minutes.
   d. Check the oil level. Some additional oil may be necessary. Do not overfill.