The oil coolers on the Caterpillar 3208 came in three different varieties. Depending on the application and engine specification, the cooler cores can come with or without mounting studs (early style versus late style) as shown here. The oil cooler bases need to be matched up with the cores. To assemble a core without studs to a cooler base with openings for the tree studs, the base can be modified by plugging the holes with pipe plugs.

All cooler incorporate a cooler by-pass valve and later styles also a filter by-pass valve.

A bove photos show oil cooler cover (left) and cooler core (right) for the 3208 oil cooler found on the low-horsepower turbo and some non-turbo off-road 3208 engines. To assemble this cooler requires additional parts shown in Figure 7. The short plastic divider (top of Figure 11) gets placed between the plates in the middle of the cooler core which would be in-between the two inlet and outlet pipes of the cooler base shown above.

A bove, the cover (left) and cooler core (right) for a standard non-turbo engine are shown. This assembly has to be matched with a cooler base that has openings for the three studs to pass through. These bases are shown in Figures 10 and 11.

On the left is the cooler base for the non-turbo/low horsepower turbo as seen from inside. On the right is the exterior of the base.
The oil coolers used on the Cat 3208 all incorporated a cooler by-pass valve and later styles also had a filter by-pass valve. From left to right, you’ll see the cooler by-pass valve for early non-turbo oil coolers (the filter by-pass is part of the oil filter). In the middle, you’ll see the cooler by-pass and filter by-pass used in later non-turbo and low-horsepower turbo oil coolers (short cooler). On the right, the cooler by-pass and filter by-pass used in 250 HP and up turbo engines (long cooler).

Above, the components for an oil cooler used primarily on 250 horsepower and up turbo Cat 3208 engines are shown. On the left is the cover; on the right is the core. This configuration requires the use of the long plastic divider as shown on the bottom of Figure 11. The proper base is shown below. To determine the right cooler refer to engine S/N and arrangement number. Watch for correct installation of divider to get maximum cooling.

On the left is the long cooler base found on the higher horsepower turbo as seen from inside. On the right is the exterior of this base.

Figure 11: The upper divider is for low HP turbo engines (short cooler). The lower divider is for high HP turbo engines (long cooler).