

Keeping up with New Technology

Oil Retentive Scroll Style (TRSE09) Replacement Compressors

Oil retentive scroll style (TRSE09) compressors feature an oil separator that retains oil in the compressor rather than circulating 40–60% of the oil throughout the A/C system. The addition of this oil separator greatly reduces the compressor’s oil capacity. For example, gpd compressor 6512639 for 2007–2014 Honda CR-Vs is an oil retentive scroll style replacement compressor. It is prefilled with 2.7 oz of oil.

Refrigerant Flow Inside of an Oil Retentive Scroll Style Compressor

1. The refrigerant enters through the suction side. (Figure 1.1)

Compressor Suction Port

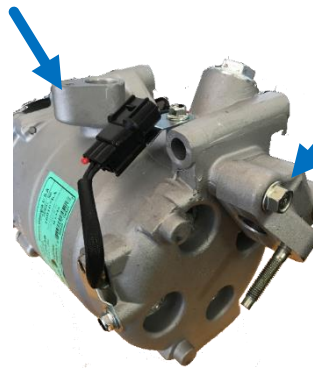


Figure 1.1

Compressor Discharge Port

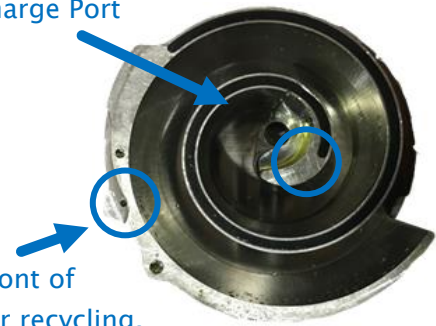
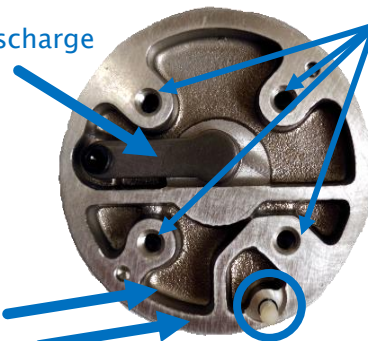


Figure 1.2

Oil outlet to front of compressor for recycling.

2. The orbital scroll compresses the refrigerant against the stationary scroll and the compressed gas is expelled through the discharge port. (Figure 1.1 / Figure 1.2)
3. The rear of the stationary scroll has a reed valve but is different than typical scrolls as it is divided into two sections with casting. (Figure 1.3)

Reed Valve and Discharge Port



Four Bolt/Screw Mount Holes

Oil Collection



Metered Tube

Figure 1.3: Discharge Area on Back of Scroll

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4. The refrigerant leaving the discharge port first enters two holes. (Figure 1.4)



Figure 1.3: Discharge Area on Back of Scroll

Four bolt holes to bolt to back of scroll (Circled in red)

Oil drips into oil collections area

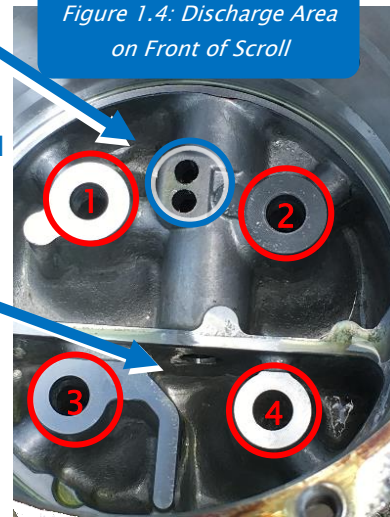


Figure 1.4: Discharge Area on Front of Scroll

5. The refrigerant then hits a metal sleeve/oil trapping device inside the discharge port (Figure 1.5) separating the oil from the refrigerant. The oil drips into the oil collection area. (Figure 1.4) Then, it passes through the metered tube back to the front of the compressor (Figure 1.2) to distribute oil to the shaft, bearings, and orbital scroll. Oil levels must be exact. Too much or not enough oil will be harmful to the system.

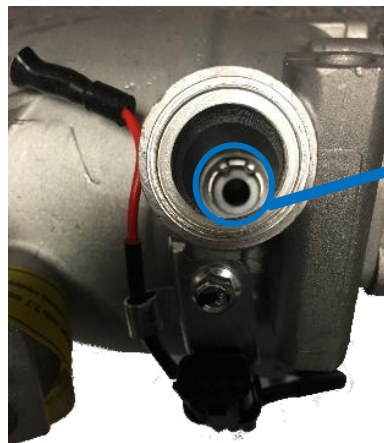


Figure 1.5

Metal Sleeve/Oil Trapping Device



Figure 1.6