



**SUPER DUTY TRANSMISSION OIL COOLER
 CUMMINS DIESEL - 3.54 AXLE
 PART NUMBERS 82400846 & 82400994**

PARTS LIST

<u>Part Number</u>	<u>Description</u>	<u>Quantity</u>
04728938	Transmission Oil Cooler	1
52005748	Fan Assembly	1
04740448	Switch - Temperature Sensing	1
N/A	Side Plates - Cooler	2
N/A	Wire Harness	1
04728939	25' Hose - Transmission	1
06034065	Clamp - Hose	8
06025005	Nut w/Coned Washer	4
N/A	Wellnut w/Isolator	4
00181067	1/4" - 20 x 1 1/4" Hex Bolt	4
09414920	1/4" Flat Washer	4
04728940	Compression Fitting Straight	1
04728941	Compression Fitting - 90°	1
N/A	Bypass Connector "H"	1
N/A	Plastic Convolute 12"	1
N/A	Plastic Tie Straps	11
K6859059	Instruction Sheet	1

This package was developed to provide additional engine cooling protection for customers who wish to increase their maximum trailer tow rating from 12,000 GCW to 14,000 GCW, with a maximum trailer weight of 9,000 pounds or less, depending on model.

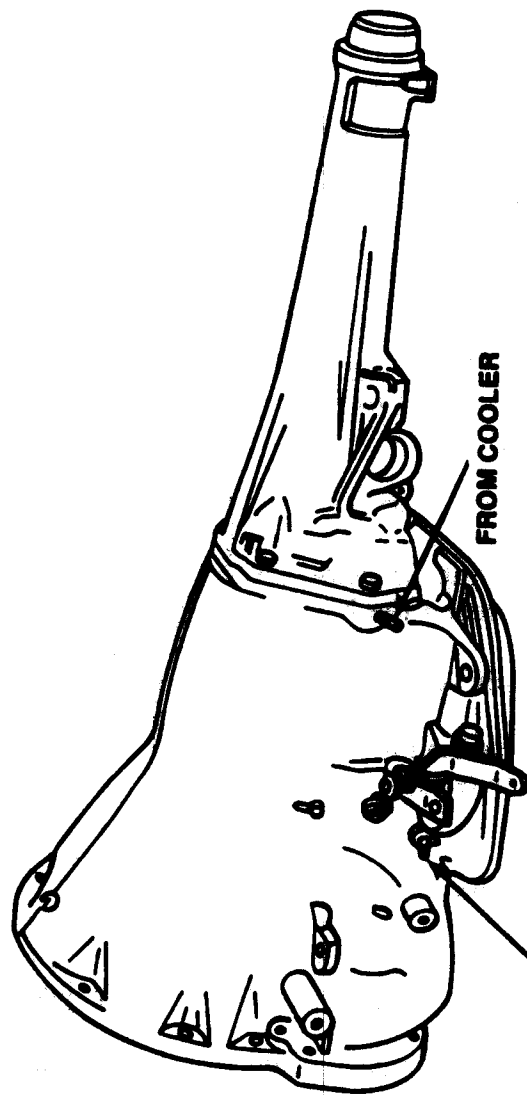
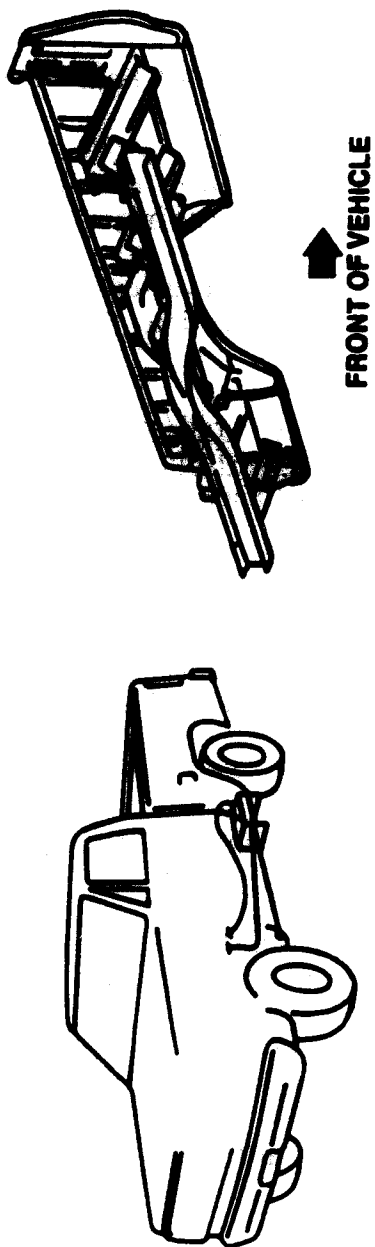
The cooler package mounts under the bed of the truck directly behind the cab to the left of the left frame rail. The cooler is installed in series in the To Transmission Cooler Line. The installation of the cooler package will reduce the temperature of the transmission fluid going to the transmission cooler located in the lower radiator tank, resulting in lower engine coolant temperatures.

INSTALLATION PROCEDURE

The auxiliary cooler package is to be installed in series with the transmission cooler line.

- 1 . Raise the vehicle so that you have access to the outboard side of the frame rail and transmission. The oil cooler assembly (OCA) will be mounted to the bed crossmembers located in front of the left rear tire (Figure 1).
- 2 . Assemble the two cooler side plates to the cooler using the four nuts w/cone washers in the package (Figure 2).
- 3 . Disconnect the wiring harness from the OCA (Figure 3).
- 4 . With the temperature switch facing the front of the vehicle raise the OCA to the two bed crossmembers. Make sure the OCA is evenly spaced on the crossmembers and located tight against the crossmember brackets (Figure 2). Mark the location of the four-side plate mounting holes on the crossmembers.
- 5 . Locate the center of each marked hole. Using a center punch mark the centers. Drill four ½" holes.
- 6 . With the OCA on the work bench, attach the wellnuts to the side plates using the four ¼" - 20 x 1 ¼" bolts and four ¼" flat washers. Hand tighten the bolt until the wellnut starts to deform (Figure 3).
- 7 . Make sure that the temperature switch faces the front of the vehicle, mount the OCA to the bed crossmembers by inserting the well nuts through the previously drilled ½" holes. Tighten the wellnuts until the rubber insulator starts to spin. **Do not use air wrench.**
- 8 . Remove the transmission oil cooler tube clamp (Figure 4). Position a drain pan under the vehicle.
- 9 . Using a small tubing cutter, cut the (To Transmission Cooler Tube) approximately four inches from the tube bend (Figure 4).
- 10 . Install the straight hose barb compression fitting on the cut tube going to the transmission cooler (Figure 5).
- 11 . Install the 90° hose barb compression fitting on the cut tube going to the transmission (Figure 5).
- 12 . Route the OCA cooler hose (supplied in the package) from the OCA outlet rear tube over the frame rail. The hose must be routed forward of the rubber cab mount and along the inside of the frame rail to the straight hose barb fitting (Figure 6, 8, and 10).
- 13 . Align the hose with the straight barb fitting, and cut the hose.
- 14 . Slide two of the supplied clamps over the hose ends, install hose ends on the OCA outlet tube and straight hose barb tube. Tighten the clamps.

15. Route the remaining hose from the OCA inlet front tube to the 90° hose barb tube, following the same path as the hose except, the hose must run further inside the frame rail past the shift linkage to the 90° fitting (Figure 6, 7, & 10).
16. Slide two of the supplied clamps over the hose ends, install hose ends on the OCA inlet tube and 90° hose barb tube. Tighten the clamps.
17. Install the twelve inch section of the plastic convolute tube over the inlet hose as shown in Figures 5 and 9.
18. Starting at the rear of the vehicle install five tie straps in the positions shown in Figures 5, 8, 9, and 11. Cut off the excessive strap ends.
19. Position the bypass valve (H-valve) as shown in Figure 9. Mark both OCA inlet and outlet hoses.
20. Cut the OCA inlet hose at the mark. Slide one clamp over each of the cut hose ends. Insert both ends of the bypass valve into the cut inlet hose.
21. Cut the OCA outlet hose at the mark. Slide one clamp over each of the cut hose ends. Insert the remaining ends of the bypass valve into the cut outlet hose. Tighten all four clamps.
22. Connect the wiring harness to the OCA. Be sure the red/red wire harness connector is connected to the black/black wire connector from the temperature switch. Connect the red/black connector to the white/black connector from the fan.
23. Route the wiring harness along the same path as the OCA hoses.
24. Tie strap the wire harness to the underside of the vehicle as shown in Figure 8. Fasten the harness to the cab using an existing body clip (Figure 9).
25. Lower vehicle, disconnect the battery negative.
26. Route the OCA harness up the engine compartment bulkhead and along the left inner fender as shown in Figure 12.
27. Remove the RWAL ground screw, position the OCA black ground wire terminal on the RWAL ground screw, install and tighten the screw.
28. Remove the positive battery terminal nut. Position the OCA harness red wire terminal on battery terminal bolt, install the terminal nut and tighten.
29. Secure the OCA fusible link and harness with the remaining tie straps as shown in Figure 12.
30. Connect the battery negative cable.
31. Add 1 quart of transmission fluid, P/N 4467721, start engine, check and adjust fluid level as outlined in the Rear Wheel Drive Truck Service Manual.
32. Raise vehicle and check for leaks.



**OIL COOLER PACKAGE TO BE
INSTALLED IN SERIES IN THE
TO TRANSMISSION COOLER LINE**

FIGURE 1

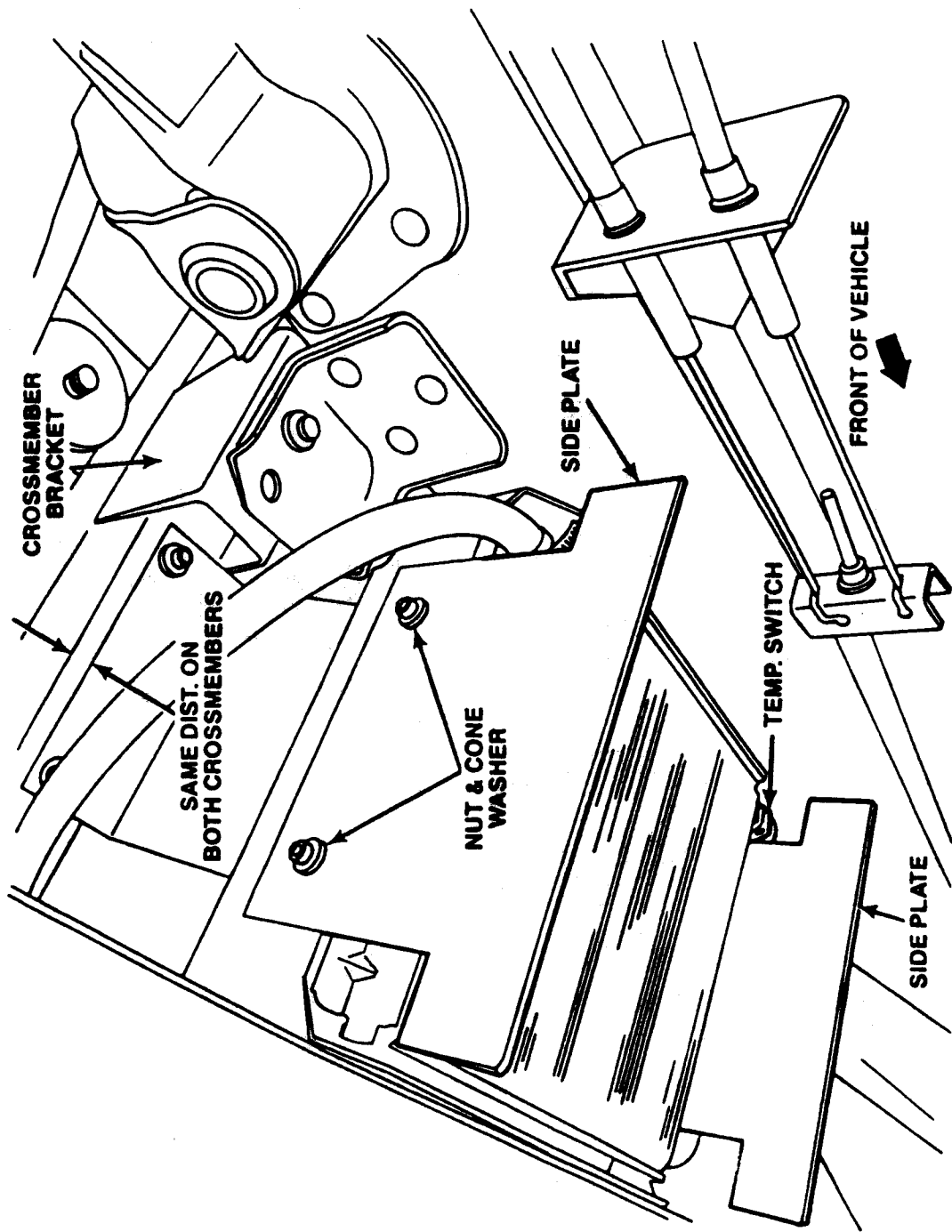


FIGURE 2

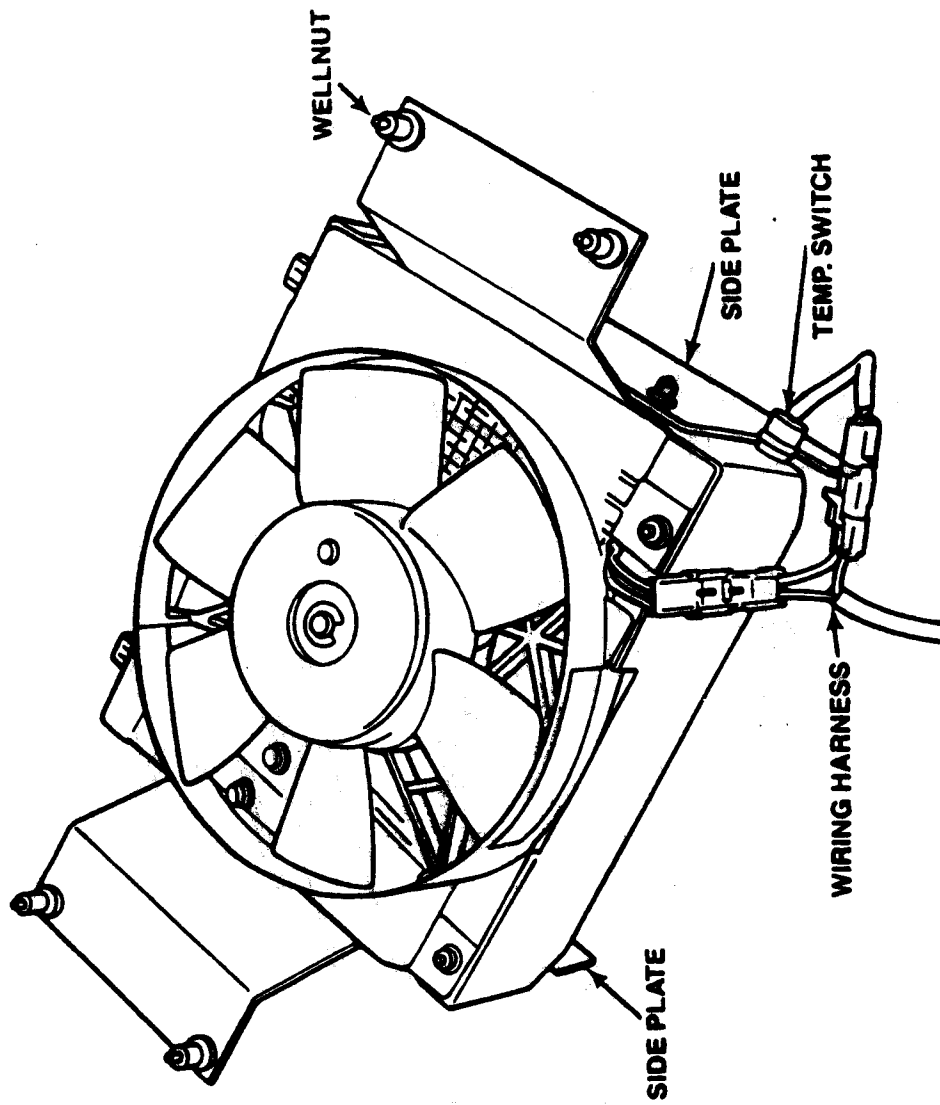


FIGURE 3

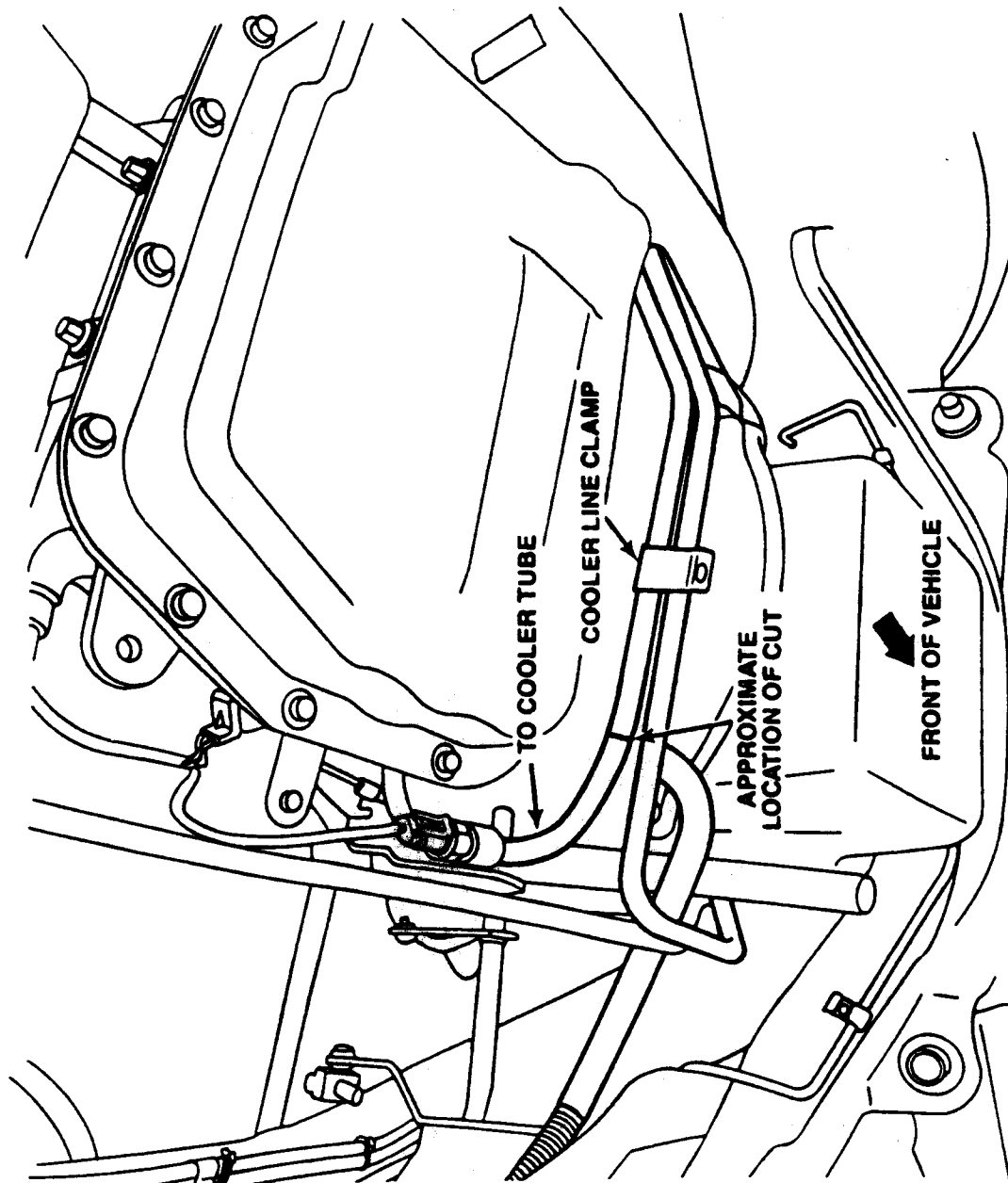


FIGURE 4

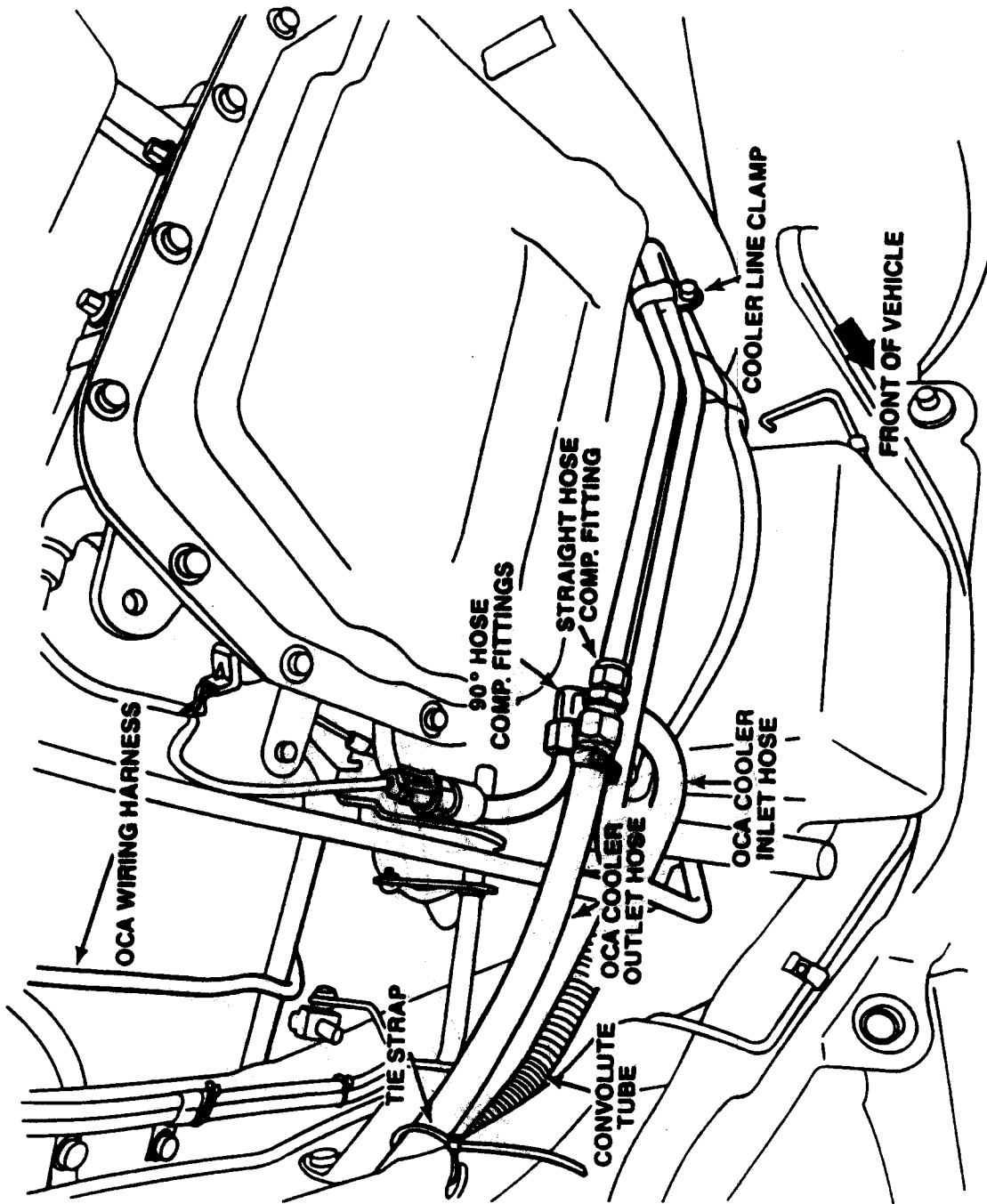


FIGURE 5

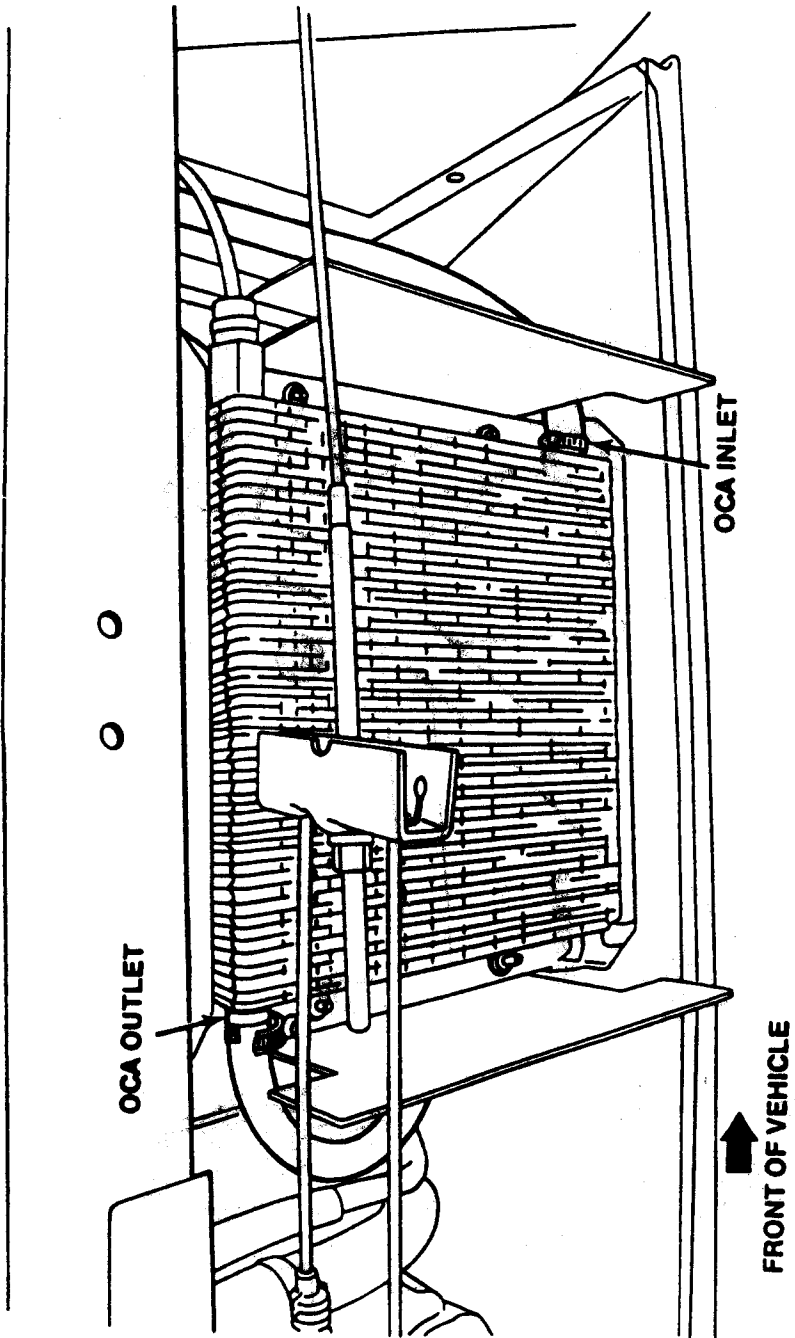


FIGURE 6

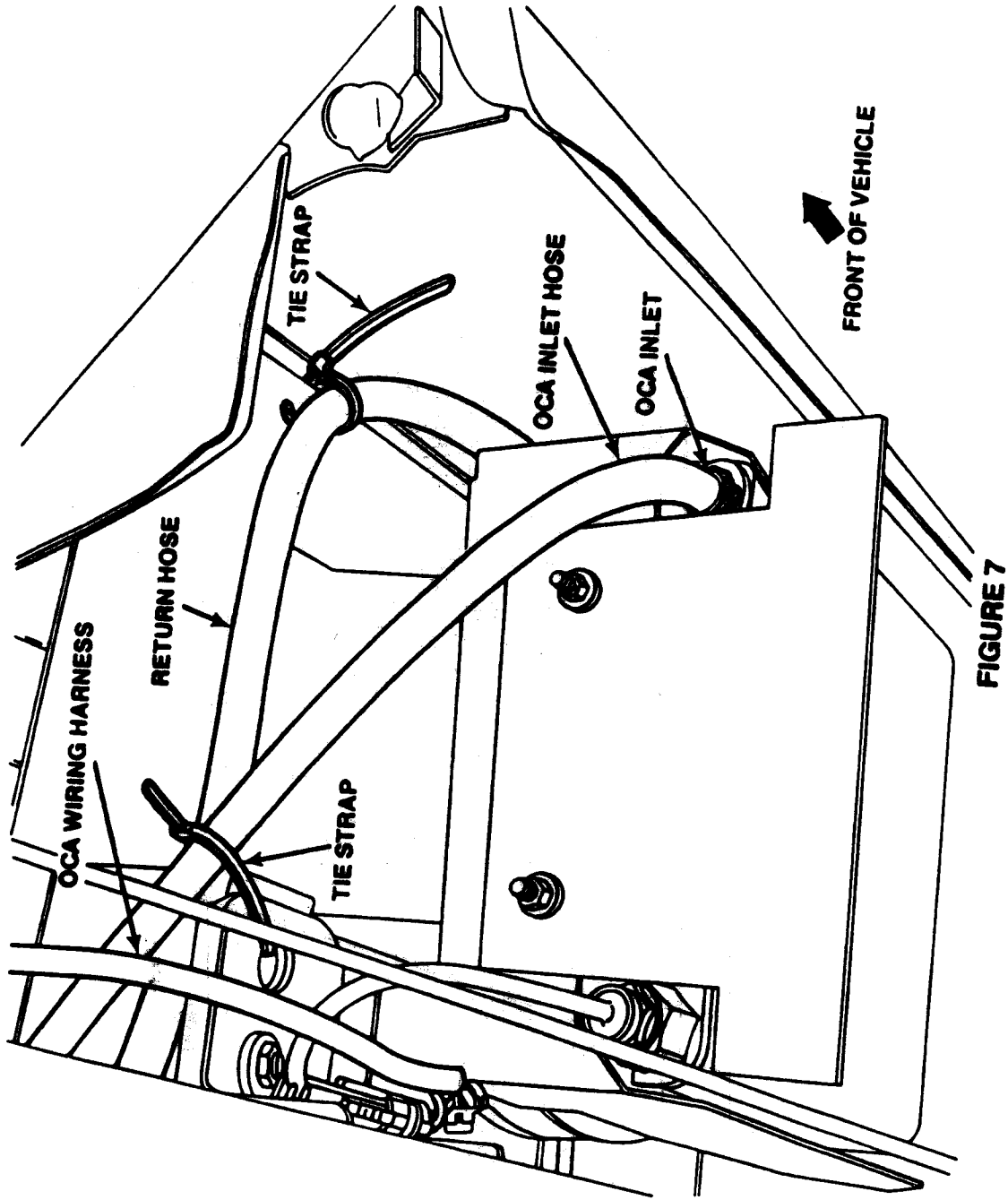
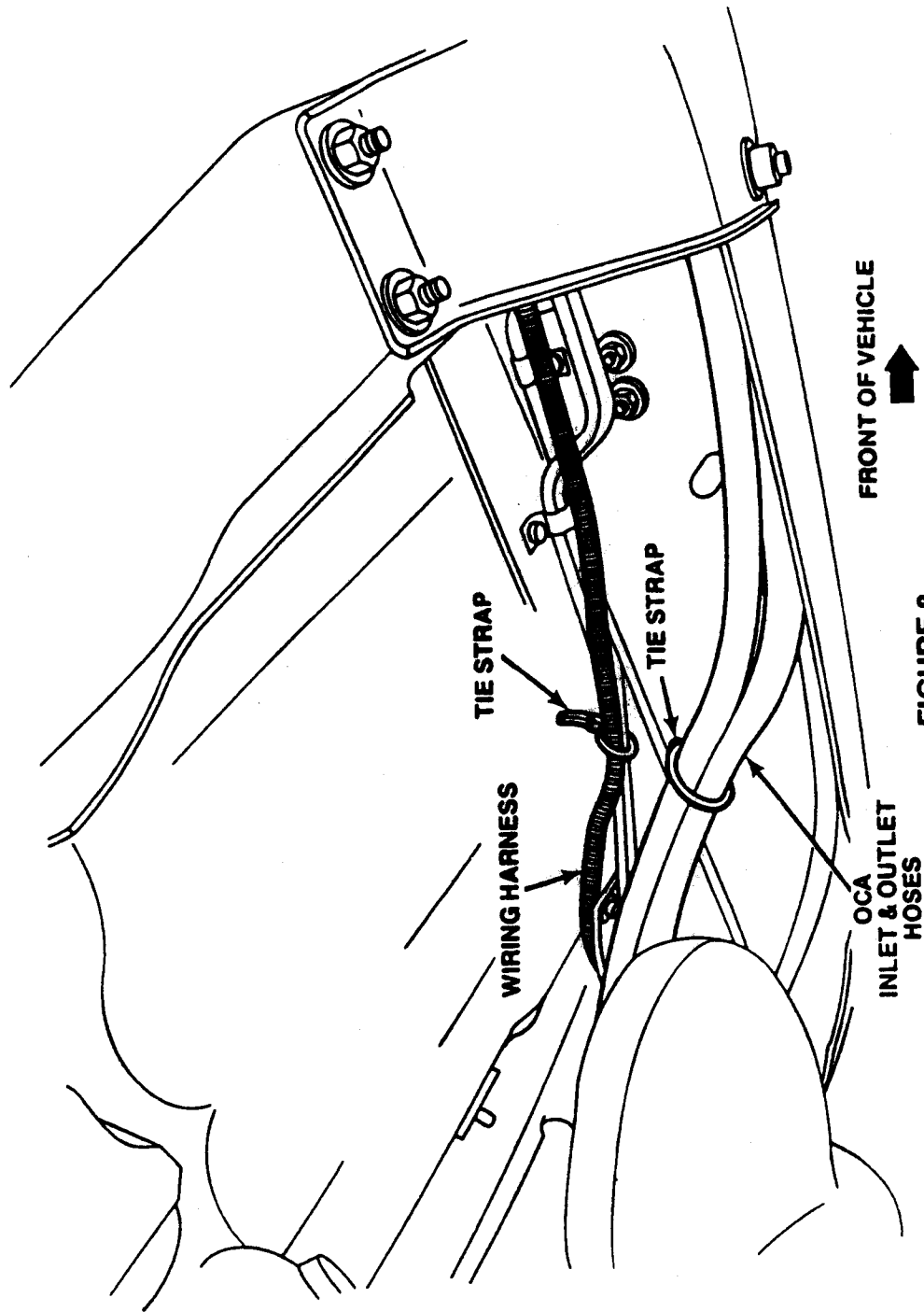


FIGURE 7



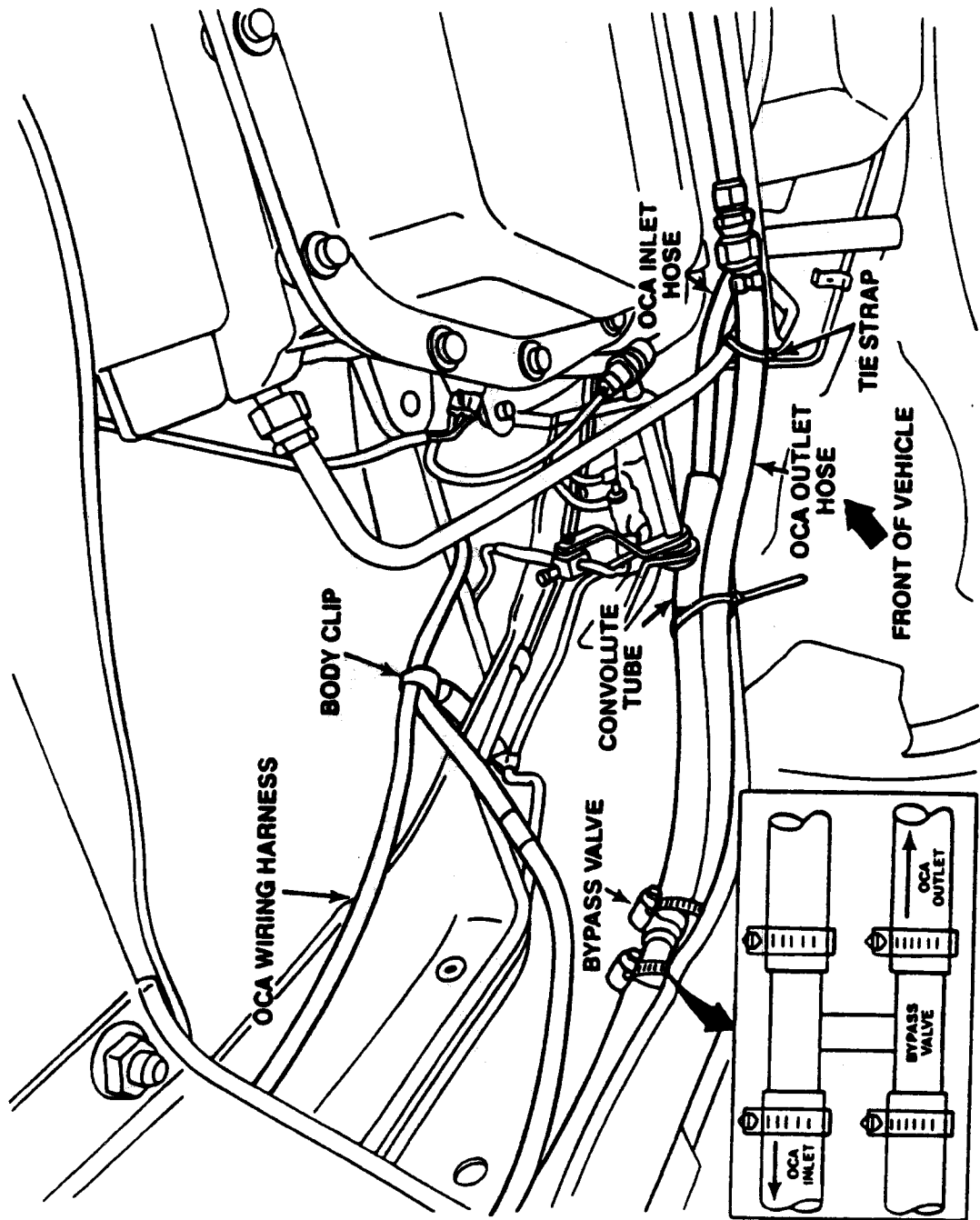


FIGURE 9

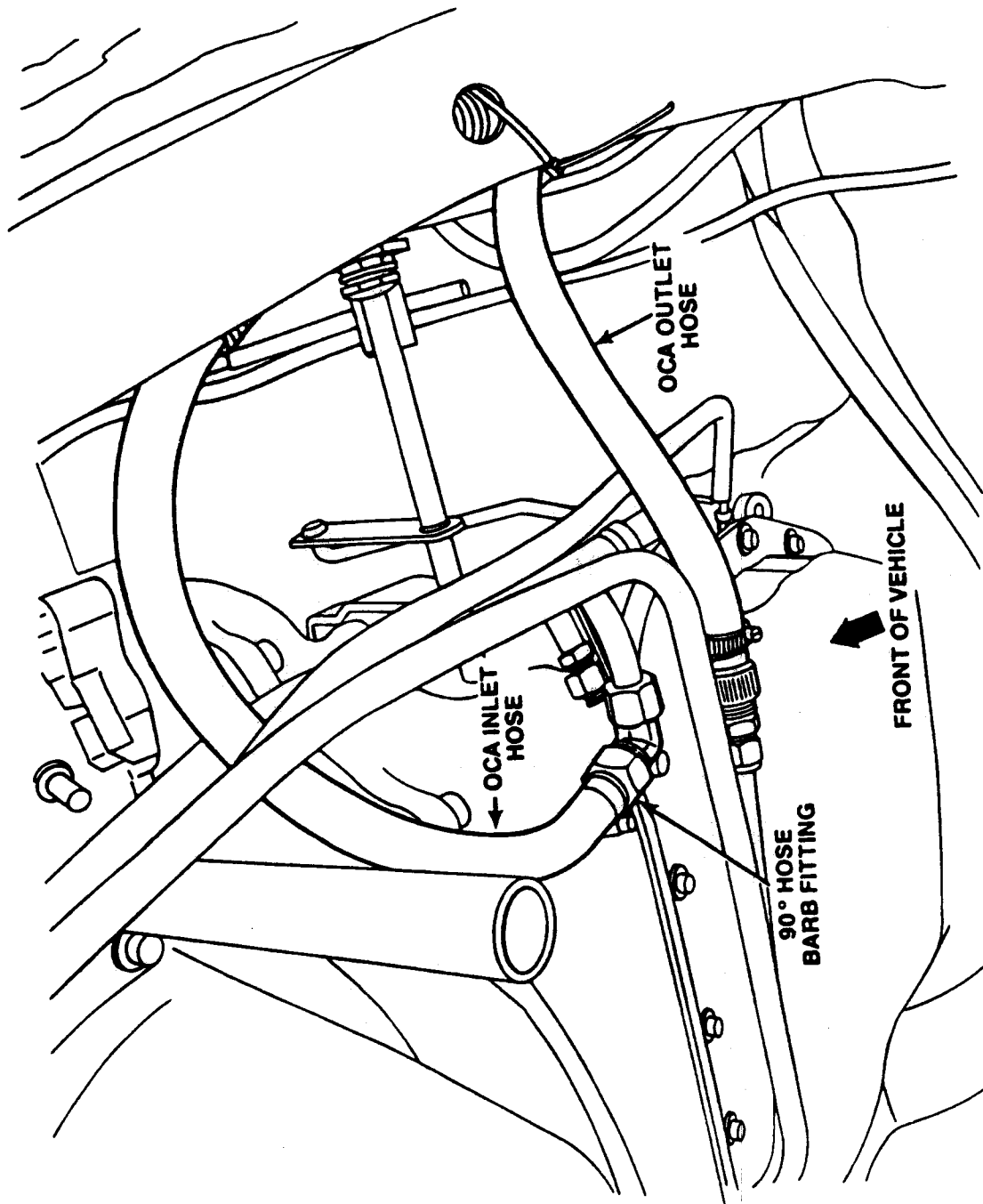


FIGURE 10

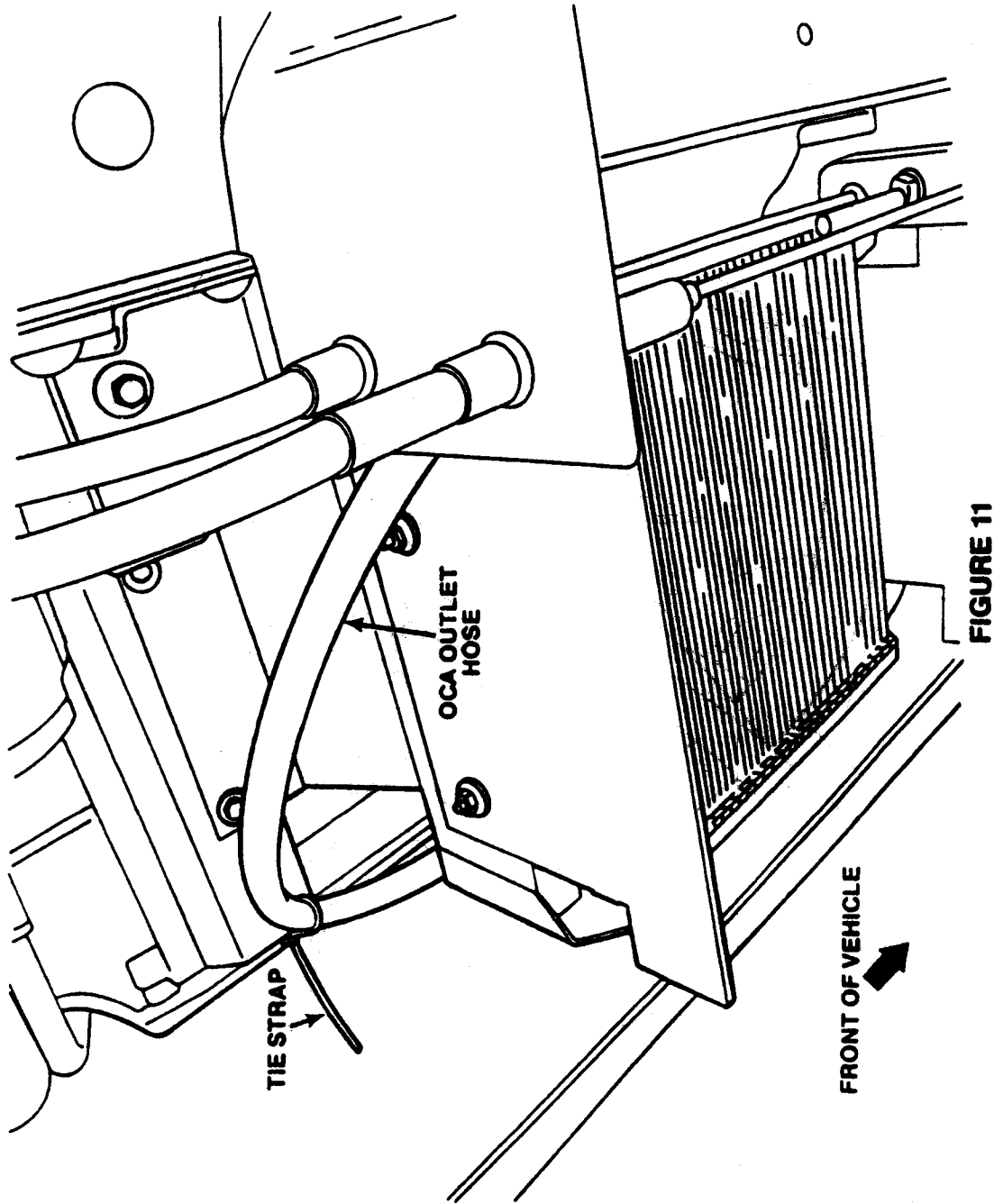


FIGURE 11

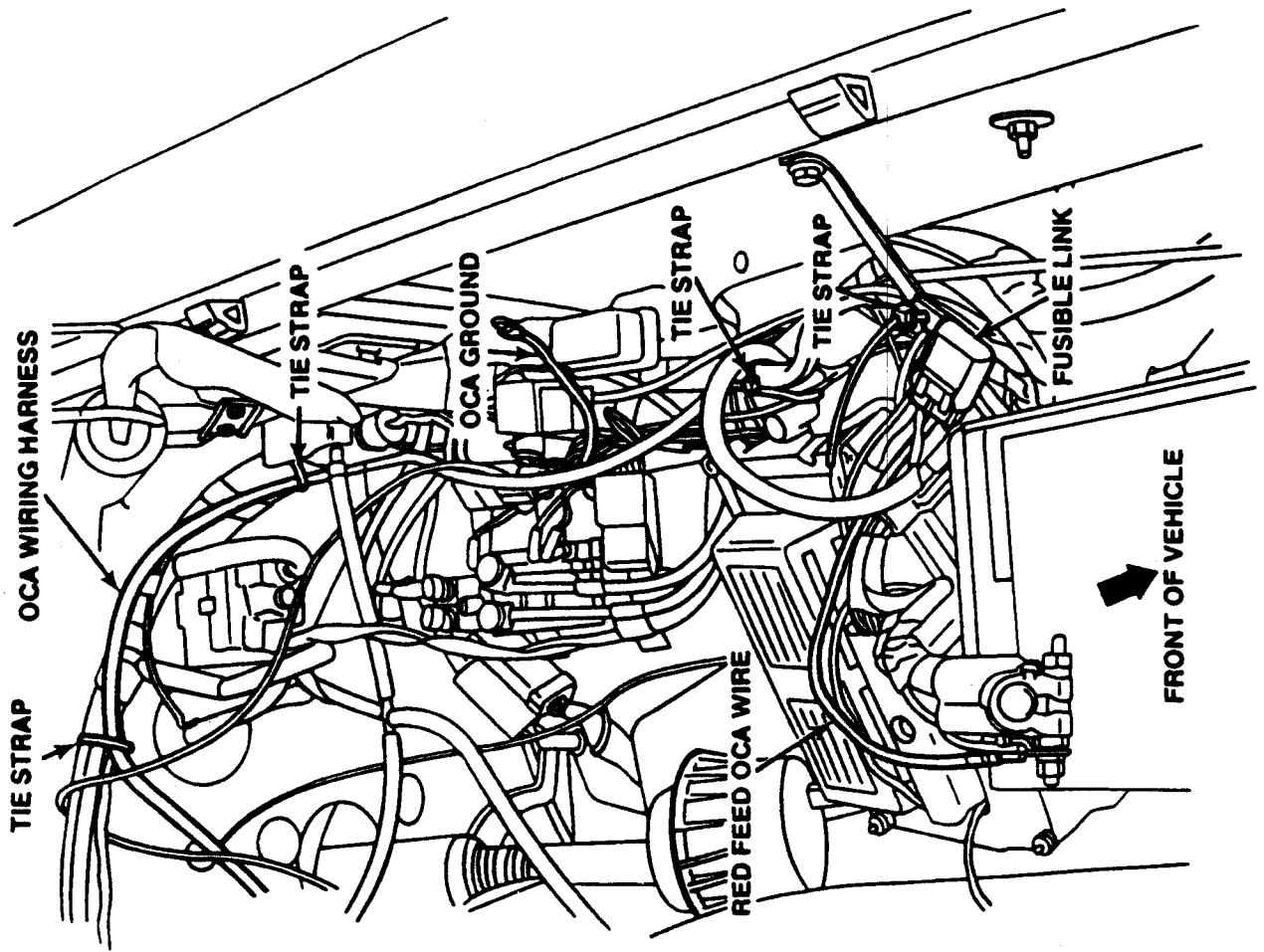


FIGURE 12