

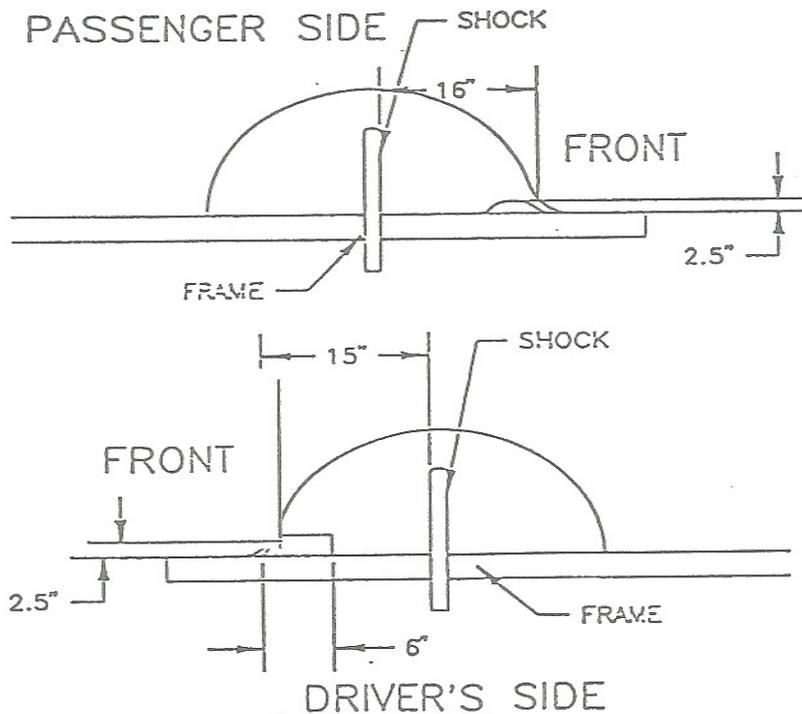
FORD 7.3L DI INTERCOOLER SYSTEM INSTALLATION INSTRUCTIONS
FOR 1994½ THRU 1997

READ THROUGH INSTRUCTIONS BEFORE INSTALLING!!!!

ATTENTION!!

YOU MUST HAVE THE NEW STYLE BUMPER WITH THE THREE HOLES IN IT TO
PROVIDE PROPER AIR FLOW TO THE INTERCOOLER.

1. Remove the five screws that hold the grill in place.
2. Remove the sway bar (Two wheel drive vehicles only). Remove the four 13mm headed bolts and the two 18mm headed bolts holding the sway bar on the vehicle. Lay the bar out of the way until re-installation.
3. Loosen the 13mm headed nut located at the bottom and center of the radiator guard. The 13mm headed nut holds the bottom of the bracket which goes up in front of the radiator to the hood latch assembly. After loosening the nut, push bracket so that it will sit 1/8" away from the air conditioning condenser coil. Re-tighten the nut using a 13mm socket.
4. Install the intercooler. NOTE: on some vehicles it is necessary to loosen the 21mm headed nuts on the bumper mount and install spacers or washers between the bumper mounts and the frame mounts to allow for clearance of the intercooler. Install the intercooler so that the tab on the top center is pointed towards the front of the vehicle. Slide the intercooler up between the front bumper and radiator. Install a 5/16" x 3/4" bolt with a flat washer through the existing hole in the body panel. Install a 5/16 lock washer and nut on to the bolt to hold the intercooler in place. NOTE: Before bolting the brackets to the radiator support check for clearance between the intercooler and the bumper mount bolts, mentioned earlier in the step. On some models it is necessary to drill holes in the radiator support for the bottom brackets to mount to. Place your bottom brackets over the spud on the bottom of the intercooler and against the radiator support mark holes, remove the brackets and place a 1/8" steel plate or thin piece of wood behind the radiator support and in front of radiator to prevent drill bit from hitting the radiator. Drill the four holes you marked with a 9/32 drill bit. CAUTION: Make sure you don't drill into the radiator!
5. Install the nut positioning brackets on the inside of the radiator guard so that only the nut area touches the radiator guard, not the whole bracket. The tabs on both of the nut positioning brackets will point towards the front of the vehicle when installed correctly. Then screw the four 1/4 x 1" studs into the nut positioning brackets, install the two intercooler mounting brackets with rubber grommets over the locating studs, then over the 1/4" studs. Install 1/4" nuts on the studs. Tighten the top mount bolt with a 1/2" wrench or socket. Next tighten the four nuts that hold the intercooler mounting brackets with a 7/16" flex socket. Install a 2 1/4 x 2 1/2" reducer hose on the air inlet and outlet port of the intercooler. Install a #36 hose clamp on each reducer hose and tighten.
6. Cut the inner fenders so that there is a 1/2" clearance around the intercooler pipe when installed. See the sketch on the next page.

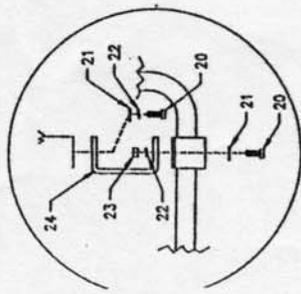


7. Make sure all pipes are clean and free of foreign material. Install the intercooler pipe #ATS444ICPS. This pipe is to be installed on the passenger side of the vehicle from the intercooler into the engine compartment. Set the pipe so there is a $\frac{1}{2}$ " clearance between the frame and pipe. Install a #36 hose clamp on the intercooler reducer hose, install it on the intercooler and slightly tighten it. Install a hump hose on the open end of the pipe with two #36 hose clamps.
8. Install intercooler pipe #ATS444ICDS. This pipe is to be installed on the driver's side of the vehicle from the intercooler into the engine compartment. Set pipe so there is a $\frac{1}{2}$ " clearance between the frame and pipe. Install a #36 hose clamp on the intercooler reducer hose, install it onto the intercooler and slightly tighten it. Install a hump hose on the open end of the pipe with two #36 hose clamps.
9. Re-install the sway bar (Two wheel drive vehicles only). Install the $3\frac{1}{2}$ " spacers and the four 17mm headed bolts supplied in the kit, to the frame where the sway bar was originally mounted, then bolt the sway bar to the $3\frac{1}{2}$ " spacer using the four 17mm headed bolts and nuts. Tighten all bolts and nuts holding the sway bar to the vehicle.
10. Remove the air cleaner assembly by first loosening the 3" T-bolt clamp at the turbo which holds the hump hose onto the lid of the air cleaner. Next loosen the hose clamp holding the vent hose to the air cleaner lid, and then remove three bolts or three nuts holding the lid to the bottom. Remove the two bolts holding the bottom to the intake manifold,

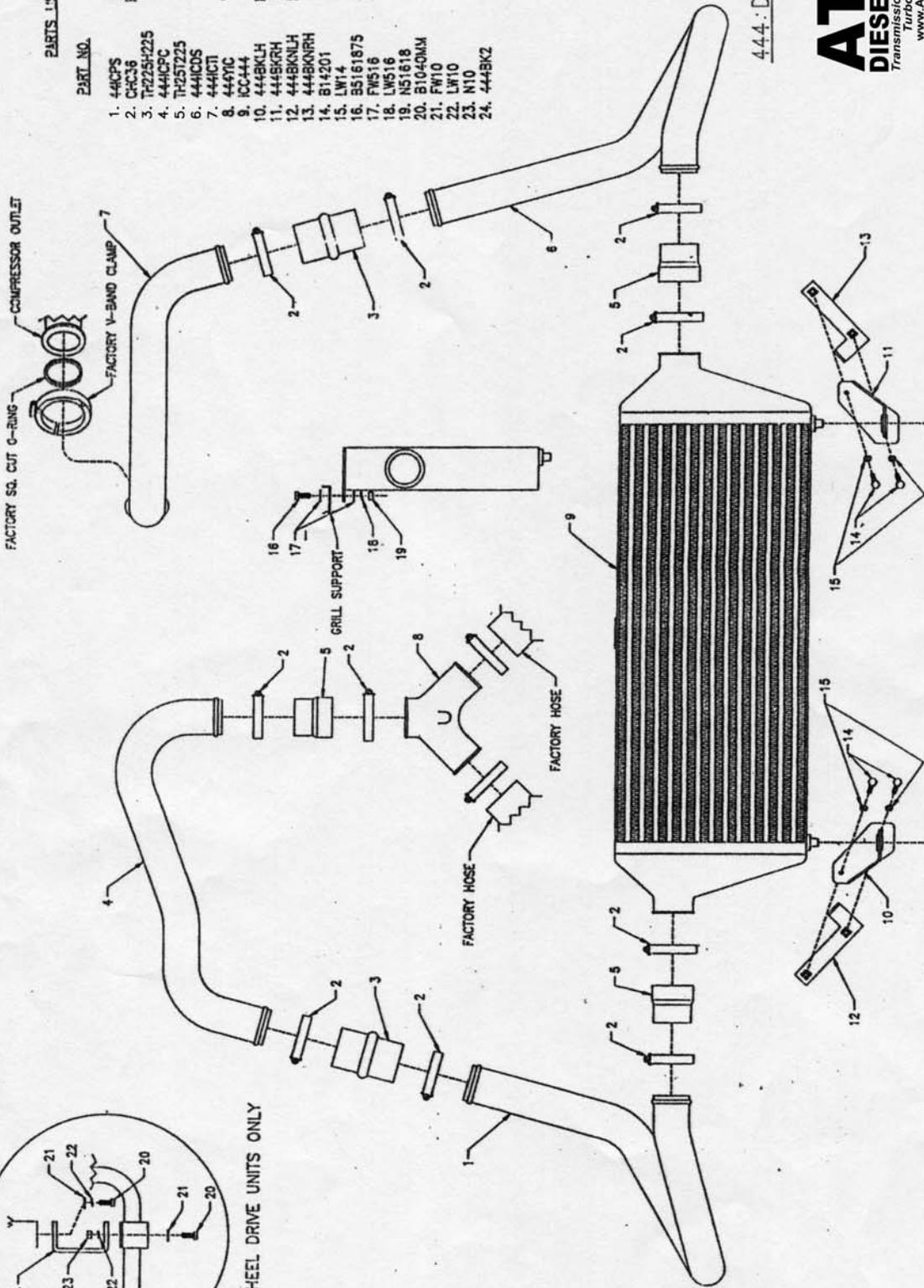
remove the bottom from the engine. Remove the vent hose or vent tube from the CDR valve.

11. Remove the pressure chamber using a 9/16" socket to remove the bolt that holds the pressure chamber to the intake. Then using a 1/2" socket remove the two bolts holding the oil drain casting to the intake manifold. By using a pry bar, slightly move the turbo towards the rear of the engine just enough to slide the pressure chamber off the turbo. Next re-install the two 1/2" bolts that hold the oil drain casting to the intake manifold and tighten them up.
12. (Factory 7.3L IDI turbo only). Remove the oil pressure sending unit from the oil manifold mounted on the turbo, using a SC46 MAC socket. Then remove the oil feed line from the oil manifold, using a 3/4" combination wrench. Remove the oil feed line fitting from the oil manifold using an 11/16" wrench. Next remove the two 1/2" headed bolts that hold the oil manifold to the turbo. (Make sure to use thread sealer on all fittings). Install the tee fitting (supplied in the kit) into the treaded hole in the top of the turbo, re-install the oil pressure sending unit into the front of the tee fitting and tighten. Hook up the oil pressure sending unit wire. Re-install oil feed line fitting (removed earlier) in back of tee fitting using a 11/16" combination wrench and tighten, then tighten oil feed line using a 3/4" wrench.
13. Install the new ATS intercooler pressure chamber. Make sure you clean the intake, and pressure chamber O-ring so that you will get a good seal. Install the O-ring back on the intake manifold, then set the new pressure chamber on the intake, position the new pressure chamber at 7 o'clock. Leave the bolt slightly loose yet. Re-install the vent hose or vent tube.
14. Re-install the air cleaner bottom. Tighten the two 9/16" headed bolts and install the air filter.
15. Install ATS turbo outlet driver side top pipe. Remove the upper rear 10mm headed bolt on the air conditioner compressor. Install the angle hose on the ATS turbo outlet pipe which end is farthest away from the bracket with two #36 hose clamps. Do not tighten yet. Set the pipe into place sliding the angle hose over the turbo outlet and pushing the other end into the hump hose. Line up the hole in the bracket with the hole in the A/C compressor, install the 10mm headed bolt and tighten. It may be necessary to rotate the return fitting on top of the injection pump to make clearance for the pipe. Then tighten both the hose clamps on the angle hose, make sure pipes are not touching each other at the hump hose connection. Tighten both clamps on the hump hose.
16. Install the air cleaner lid, hook up the breather connection and make sure the hose is properly on the turbo inlet. Install the three bolts or nuts that hold the air cleaner lid to the bottom and tighten, then tighten the hose clamp on the breather connection. Tighten the clamp on the turbo inlet.
17. Install the ATS pressure chamber passenger side top pipe. Remove the inside 9/16" headed bolt on the fuel filter housing. Install the reducer hose on the ATS pressure chamber with two #36 clamps. Slide the pipe into the reducer hose on the pressure chamber and then into the hump hose. Line up the hole in the bracket with the hole in the fuel filter housing, install the bolt and tighten. Make sure pipes are not touching in the hump hose connection. Tighten both hose clamps on the hump hose and both clamps on the reducer hose. Go through and make sure all hose clamps are tight. Tighten the 9/16" headed bolt that holds pressure chamber to the intake manifold, when properly aligned with the pipe.
18. Re-install the grill with the five original screws and align the grill.

FACTORY SQ. CUT O-RING
 COMPRESSION OUTLET
 FACTORY V-BAND CLAMP



FOR 2 WHEEL DRIVE UNITS ONLY



PARTS LIST

PART NO.	DESCRIPTION
1. 44KPCS	INTERCOOLER PIPE PASSENGER SIDE
2. CHC36	HOSE CLAMP #36
3. TR2ZSH225	2 1/4 X 2 1/4 HUMP HOSE
4. 444HPC	INTERCOOLER PIPE PRESSURE CHAMBER
5. TR25T225	2 1/2 X 2 1/4 TRANSITION HOSE
6. 444HDS	INTERCOOLER PIPE DRIVER SIDE
7. 444ICT	INTERCOOLER TURBO INLET
8. 4449TC	INLET FOR 444 D.I.
9. IC444	INTERCOOLER ASSEMBLY
10. 444BKHL	INTERCOOLER MOUNTING BRACKET L.H.
11. 444BKRH	INTERCOOLER MOUNTING BRACKET R.H.
12. 444BKHLH	NUT POSITIONING PLATE L.H.
13. 444BKVRH	NUT POSITIONING PLATE R.H.
14. B14201	1/4 X 1/4 BOLT N/C
15. LW14	1/4" LOCK WASHER
16. B5161875	5/16 X 3/4" BOLT N/C
17. FWS16	5/16 FLAT WASHER
18. LWS16	5/16 LOCK WASHER
19. NS1618	10 X 40 MM BOLT
20. B1040MM	10 X 40 MM BOLT
21. FW10	10 MM FLAT WASHER
22. LW10	10 MM LOCK WASHER
23. N10	10 MM NUT
24. 444BK2	SWAY BAR SPACER

444: D.I. INTERCOOLER SYSTEM
 PARTS ASSEMBLY



Transmissions - TripleLok Torque Converters
 Turbochargers - Power Stroke
 www.ATSDiesel.com - 800.949.6002 IC.DWG