

IRATE DIESEL PERFORMANCE

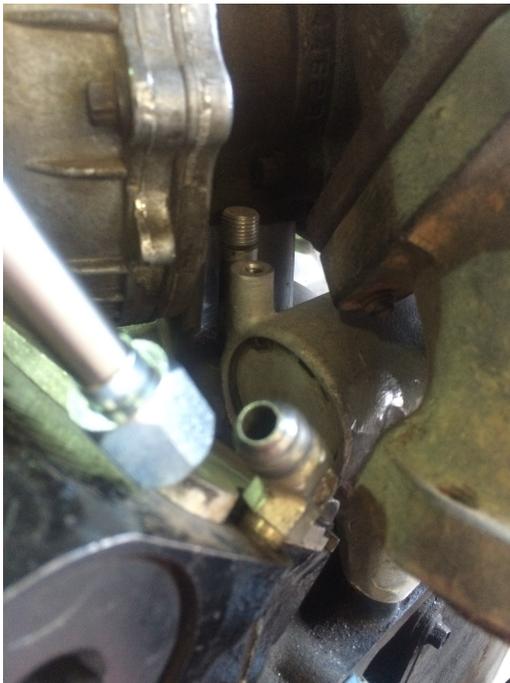


Irate Fuel System

FUEL SYSTEM PARTS LIST		
QUANTITIY	PART	TRUCK MODEL
2	6ORB x 6 JIC Straight	OBS/SD
1	6ORB x 6JIC 90* Fitting	OBS/SD
3	6PL x 6JIC Straight	OBS (2 included in SD kit)
1	6PL x 6JIC 90* Fitting	OBS/SD and Comp
2	Hose clamps	OBS
3	8PL x 8JIC Straight	Comp
1	1/8" NPTx 6JIC Straight	All
1	1/8" NPTx 6JIC 90*	All
2	1/8" NPTx 6JIC 45*	All
1	90* Bulkhead, sealing washer and -10 fitting for pickup tube, 5/8" stainless pickup tube	SD/Comp Pickup tube kit
1	Hose mender	OBS
1	6JIC x 8PL	SD/Comp Kit
1	3/8" PL Hose with quick connect	OBS/SD and Comp
5	1/2" PL Hose	SD Standard
20	1/2" PL Hose	Comp Kit
1	Plug	OBS
1	Turbo O-ring kit	All
2	3/8 bolts for mounting braket	All
1	IDP Weather Proof Wiring Harness	All
1	Fuelab 51502-1 Regulator	All
1	Fuel Pressure Gauge	All

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Remove IC piping and intake Y. It may also be easier to remove the downpipe and turbo to gain access to the back fittings. This will depend upon how much you want to work around them on the Super Duty trucks. But on the OBS trucks, you have no choice but to remove the turbo collector for access to the drivers side rear fitting. The #6 JIC straight fitting goes into the passenger side rear head and the #6 JIC 90* fitting goes in the drivers side rear pointed straight up. You will want to use some pipe sealant on these fittings.



2. Remove factory wiring harness and lay over the the passenger side of the engine bay. This will allow you to get the lines where they need to go to the back ports. The lines will lay just over the top of the heads below the injector harness. You will have to remove the lifting eye on the passenger head and leave it off to route the line properly.

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3. For access to the front lines and fittings, remove AC compressor and lay to the side (don't break the lines).
4. Remove Alternator and bracket
5. With AC compressor and Alternator removed you can take the bolts out of the front accessory brackets. Pull the brackets forward so that you can gain access to the front ports on the heads.



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6. Install the 1/8npt x 6 jic 45° fittings into both the front ports on the head pointing straight up.



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7. With all fittings installed you can now install the back lines and connect them to the supplied #6 jic T fitting in the valley of the motor. This is where you will **supply** fuel to. (See pics for reference)



GEN3/Dual pump rear lines.



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8. Install the front lines. The short line goes on the driver side head the line has a 15* and a 30* bend. The 15* bend will go down. On the regulator with it facing the front of the engine, the #6 90* o-ring fitting goes on the drivers side and the straight #6 o-ring goes in the passenger. The return comes off the bottom of the regulator as a #6 oring to straight. You can now attach the regulator to this line and install the other line form the passenger side. Attach the lines loosely and get all lined up and then tighten into place. Be sure not to over tighten the JIC fittings as this can cause leaks! The torque spec for the JIC lines is 2.5 wrench flats past finger tight! Be very careful when tightening.

9. With all lines in place and tight you can now put every thing back together on the truck. (FOR A FUEL SYSTEM YOU STILL NEED TO ROUTE THE SUPPLY AND RETURN RUBBER LINES UNDER THE DRIVERS SIDE BRACKET LIKE THE OEM ONES WERE)

10. Once back together with the fuel supply and return plumbed, the pressure gauge installed, you can key on power and check for leaks. You may have to cycle the key a couple of times to check everything. If no leaks then start the truck and set the fuel pressure on the regulator. We typically set them around 65psi. They can be ran between 60 and 70psi by adjusting the allen bolt on the regulator in for more pressure and out for less.

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If installing a full OBS fuel system:

1. Cut supply line off of hard line after the selector valve at the frame, insert the 5/16" brass barb onto existing rubber hose from selector and install hose clamp. It is a good idea to clamp the line off as to not have fuel coming out of the line while completing the next few steps.
2. Mount Fuel bracket on inside of frame. (Bracket has to go on outside of frame on regular cab trucks.) This is easiest done by clamping the bracket to the frame and drilling two holes for the 3/8" bolts to bolt to the frame. Once the bracket is mounted you can then add onto the black hose as needed with the new supplied hose to attach to the pre pump filter. Use the supplied push-lok fitting. Once plumbed and mounted you can now run the new line from the post pump filter to the motor. The Pre filter needs to be installed between the pump and the tank with the supplied fittings.



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3. Once the supply line is attached to the T fitting in the valley you can now run the new line off of the regulator behind the AC compressor also. This line will attach to the factory return hard line on the frame with supplied quick connect fitting on 3/8" fuel line. The return line is located just behind the drivers side front tire, or below the steering shaft. The top hard line is the return line to be used as pictured below.



4. The supplied wiring harness can then be ran. Inspect for leaks. Be sure to route all lines and wiring so that nothing is close to high heat sources.

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Superduty Installation

After dropping the tank and installing the 5/8" pickup tube, mount the fuel bracket to the frame using the supplied 3/8" bolts. This can be mounted right behind the transfer case. Once the filter and pump bracket is mounted to the frame you can now route the 5/8 Push-Lok hose and cut it to the length needed and install the fitting and attach it to the pre pump filter. Run the 1/2" or 3/8" fuel line (depending on comepetition or standard fuel system) to the motor and connect to the t fitting in the valley using the supplied fitting. (See Pickup tube install instructions at back of packet)

5. Once the supply line is ran you can now run the return line from the regulator back to the factory return line. This line can be routed behind the alternator where the factory lines were routed.
6. Once all is ran you can prime the system, you may need to crack a filter so that the pump can gain prime easier. This may take a few key cycles to get the filters primed.
7. Check the system after installation for leaks and ensure all fittings and connections are tight and noting is rubbing that could cause future failure.

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OBS/Superduty Wiring Harness Diagram

We recommend you mount the relay on the drivers side fender or firewall and wire as follows:

-Off of the relay you will have two large RED wires, the short one will go to + on the battery and have the breaker we sent go in-between as close to the battery as possible. The other RED wire will go to the + on the pump.

-The small BLACK wire will go to ground (you can ground it where you mount the relay if you like or on the battery).

-The YELLOW wire will be a trigger signal to tell the pump to come on and should go to a key hot. On the 94-97 trucks you can use the under hood fuse box, on the 99-03 you can use a key hot OR the old fuel pump wire as the trigger, on the SD trucks it is recommended to tie into the factory pump hot wire as this will tie into the inertia switch.

-On the pump itself use black ground wire in harness and connect to negative terminal on the battery.

