

SPAL DUAL BRUSHLESS 14" FAN & SHROUD Z40123

'01 - '05 GM TRUCK W/ 6.6L DURAMAX

MECHANICAL FAN/SHROUD REMOVAL:

1. Make sure the engine is cool, and then remove negative battery cable.
2. **DO NOT GROUND transmission control module (TCM).** Remove the TMC cover that is attached to the factory shroud and place it out of the way. **Note:** you may need to remove the plastic belly pan on the underside of the chassis.
3. Remove the bolts and plastic rivets to remove the top half of the factory shroud.
4. The factory fan/clutch assembly can now be removed. A large wrench needs to be used on the nut and pull the wrench in the direction of rotation.
Note: We suggest using a rag to hold the fan blade as you pull the wrench.
5. Remove the plastic belly pan and then remove the remainder of the factory shroud. The radiator mounts will need to be loosened to get the shroud out. It should come out the top, not the bottom.

SHROUD MOUNTING:

1. Place the aluminum shroud between the radiator and engine so that the fan pigtails are facing down.
2. Use a clamp or locking pliers to secure the shroud lip to the radiator lip that runs parallel along the top/bottom.
3. With the shroud secured by the clamps, you can use the self-tapping screws supplied to screw the shroud to the radiator. **SEE PHOTO 1.**

TEMPERATURE SWITCH:

1. The temperature switch can be screwed into the aluminum temperature splicer. Use a small amount of pipe thread compound to prevent leaks.
2. The upper radiator hose needs to be cut to install the temperature splicer.
3. Use the hose clamps provided to secure the splicer into the upper radiator hose. **SEE PHOTO 2.**
4. The wiring harness, made to fit into the sensor, can be plugged into the sensor at this time.



PHOTO 1: Shroud Mount

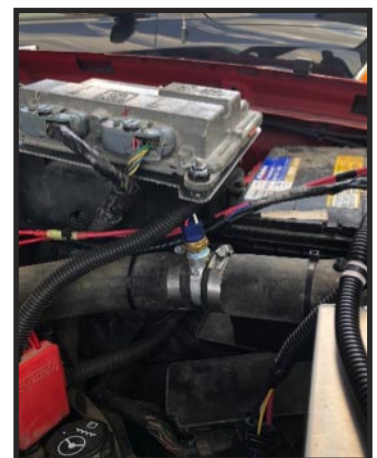


PHOTO 2: Upper Radiator Hose

WIRING:

1. The fan pigtails can now be plugged into the fans. The pigtail contains a red, black, white, and yellow wire.
2. The sensor harness can be plugged into the sensor. The sensor harness contains a red, white, blue, and black wire.
3. Take the white wire from the each fan pigtail and butt connect those two wires to the single white wire coming from the sensor harness.
4. Ground the thick black wire from each fan pigtail and the thin black wire from the temp sensor to a grounding stud located on the firewall. **SEE PHOTO 3.**
5. The MAXI fuse holders can be connected to the power junction box located on the driver side of the engine.
6. Cut the red heat shrink tube in half and slide them onto the thick red wire from each fan pigtail, then crimp to the MAXI fuse holders using the large uninsulated butt connector.
Note: One fuse holder per one thick red wire from the fan pigtail. **SEE PHOTO 4.**
7. After crimping the uninsulated butt connector, slide the heat shrink tube over the connection and use an appropriate heat source to shrink it.
8. The yellow wire from the fan pigtail is not used. It can be cut or coiled up out of the way.
9. Run the red wire from the temperature sensor harness to the fuse box and splice into the fuse adaptor (add-a-fuse). The fuse adaptor can be plugged into the 10 AMP ignition slot, which is not being used. **SEE PHOTO 5.**



PHOTO 3: Pigtail/Black Wire



PHOTO 4: Red Wire/Pigtail



PHOTO 5: Fuses

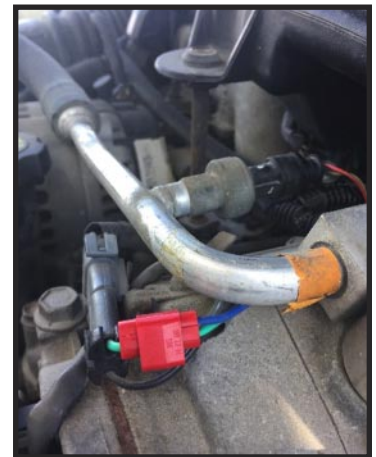


PHOTO 6: A/C

A/C OR OPTIONAL OVERRIDE SWITCH:

1. The blue wire coming from the temperature sensor is used to turn the fans on when the air conditioning coil is active. This must be used if you intend on running A/C.
2. Use the scotch lock splice to tie into the green wire coming off the A/C coil. **SEE PHOTO 6**
3. The blue wire may also be used as an optional override switch. In this case, it must be triggered by a 12 volt positive signal.

TRANSMISSION MODULE RELOCATION:

1. The aluminum relocation plate for the TCM needs to be mounted on the top of the fuse box lid using the 3 rivets provided.
Note: It is crucial that the TCM is mounted so the truck hood is not touching it when shut. Beware of this when mounting the relocation plate. **SEE PHOTO 7**
2. Secure the TCM to the relocation plate using the hardware provided.



PHOTO 7: Transmission

FINISHING TOUCHES:

1. Zip ties are provided in the kit to help tidy up the engine bay of wires.
2. Be sure to check coolant level after install as some coolant was probably lost in the install of the temperature splicer.
3. Double check clearance of all the wires from moving parts i.e.; pulleys, belts, steering components.
4. Reinstall the plastic belly pan on the underside of the chassis.
5. Reconnect the negative battery cable.

INITIAL START:

1. Start the truck with the A/C off and let it idle. The fans should be off at this time.
2. Turn on the A/C. The fans will initially spin for a split second and then stop. This is normal, the computer is finding home on the fan. After finding home, the fans will begin to speed up if the A/C coil is active. Once the coil is deactivated, the fans will begin slowing to a stop.
3. Turn off the A/C and bring the truck up to temperature. Under cool temperature conditions idling may not bring the engine temperature up enough to turn the fans on. The fans will kick on at 175°F to low duty cycle. **Note:** The factory gauge is NOT accurate. To get an accurate reading of engine temperature you will need a tuner capable of reading engine temperature or a diagnostic computer.
4. The fans are variable speed and will begin to speed up as the temperature reaches higher levels.
5. When fans are on the lower duty cycle of their capabilities the A/C being turned on will ramp them up to full duty cycle. This is normal.
6. After the first couple trips of normal driving conditions, be sure to double check the shroud screws for tightness. As well as check for wiring that may have moved and needs to be secured.