

### Parts List

Item	Qty
Radiator & Fan Assembly	1
T Fitting for fill plug and thermo sensor	1
M6 rubber isolators	2
M6 flanged nuts	2
M6 bolts	2
Isolator drill template	1
Hose Clamps	6
6" radiator hose	1
28" radiator hose	1
17" radiator hose	1
Thermo switch kit	1
Intercooler Guard	1

### Sidewinder Radiator Installation Instructions

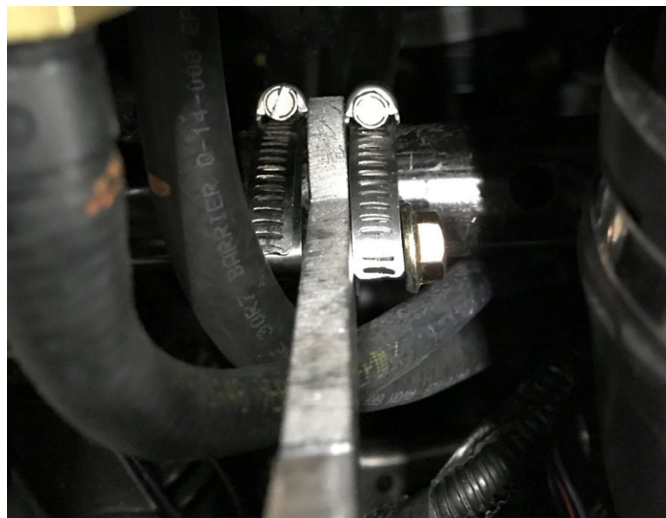
1. Remove hood and then proceed to remove the factory intercooler guard & nose cone.
2. Remove the plastic panel in front of the fuse box. Remove the fuse box from the holder and then drill the rivets to remove the fuse box mounting bracket. Pull fuse box out of way towards the clutch side of the sled for the time being. It will get secured later.
3. Next loosen the hose clamps to the intercooler hoses and slide the hoses off. Remove the hardware that secures the bumper support brackets to the bulkhead and bumper. Once hardware is out remove the whole intercooler with bumper support brackets as shown below.



4. Attach the isolators to the front mounting plate of radiator assembly. Isolator stud goes through the slotted hole on mounting plate. Do not tighten the nuts real tight as the isolators need to be free to float initially.
5. Next set the radiator and fan assembly into place. The rear mount will self locate on the horizontal cross tube of subframe. Situate the isolators so they sit flat on the bumper attachment plate as shown below. Both isolators should be tangent to the crease in the front of the bumper support plate. Snug up the nuts so isolators stay in place and then trace around isolator with a sharpie marker the best you can. These marks will serve as a guide to locate a template in next step.



6. Remove the radiator assembly. Align the isolator template with the markings made in step 6. Once template is in place tape it on and center punch the center of each isolator. Remove the template and drill a  $\frac{1}{4}$ " hole through each center punch mark.
7. Reinstall the radiator assembly. Secure the isolators to the bumper support plate with the M6 bolts provided. Secure the rear mount to the tube with a hose clamp on each side as shown below.



8. Next remove the frame spar marked with yellow "x" in photo so the main wire loom can be routed as shown in photo. From factory the loom is under the spar.



9. Next mount the fuse box next to the radiator as shown below. You can rivet the bracket to the black plastic.





10. Drain some coolant and remove the small connector hose that runs from the front of thermostat/fill housing to the aluminum coolant elbow. Pull the thermostat housing outward towards the overflow tank and then hook the 17" long hose to it and route it under the frame spar up to the radiator as shown below. If there any kinks in hose shorten it as needed.



11. Using the 6" long hose connect the T fitting to the aluminum coolant elbow as shown below.



12. Route the 27" long hose as shown in the photo below and connect it to the T fitting and the throttle side nipple of radiator. If there are any kinks in hose shorten hose as needed.



13. Ensure all clamps are tight and then proceed to add coolant. Start by filling the system with the oem fill cap. Add coolant until it is topped off. Once the oem fill point is topped off, the T fitting becomes your new fill point. The t fitting is the highest point in the radiator loop and will self bleed. Remove the bolt on the top of the fitting and using a small funnel fill the system. Pouring slowly helps allow air to bleed out.
14. Re install the intercooler and support brackets. Be sure to tilt the intercooler forward so it clears the radiator.
15. Once intercooler is installed set the hood next to sled and plug it back in so the sled can be run. Start the sled and let it get up to temperature. Check to ensure all hoses get hot and coolant is circulating. Coolant will flow as follows: thermostat housing to clutch side of radiator to clutch side of tunnel cooler to throttle side of tunnel cooler to front tunnel cooler. Check all connections for leaks.
16. Let sled cool down and then remove fill plug on T fitting to bleed any air that may still be in loop. Top off coolant if needed.
17. Next install the BOP intercooler guard and oem nose cone. There are photos on the website page that show where the nose cone gets trimmed.
18. Fan requires 12v power supply. Blue lead is hot and black is ground. Follow the instructions provided with the Derale thermo switch kit to wire it up. The control unit can be mounted as shown below and zip tied to the fuel rail. The thermo sensor gets mounted into the bottom of the T fitting.





19. The thermo switch is adjustable and needs to be set to 180. Turn the adjustment screw to full clockwise. Start the sled and display the coolant temp. Once the coolant temp hits 180 on the display turn the adjustment screw counterclockwise until the fan kicks on. Let sled cool and then test again. Fine tune this adjustment as needed so the fan comes on around 180. Also ensure fan polarity is correct. The fan should pull air in the top and discharge from bottom.

Note: the fan on temp needs to be at least 10 degrees hotter than normal operating temperature or the fan will never go off. Our experience has shown normal operating temp to be between 165-170 in good snow conditions. If your sled runs a little hotter in good snow conditions, then you may have to set the on temp a little higher than 180.