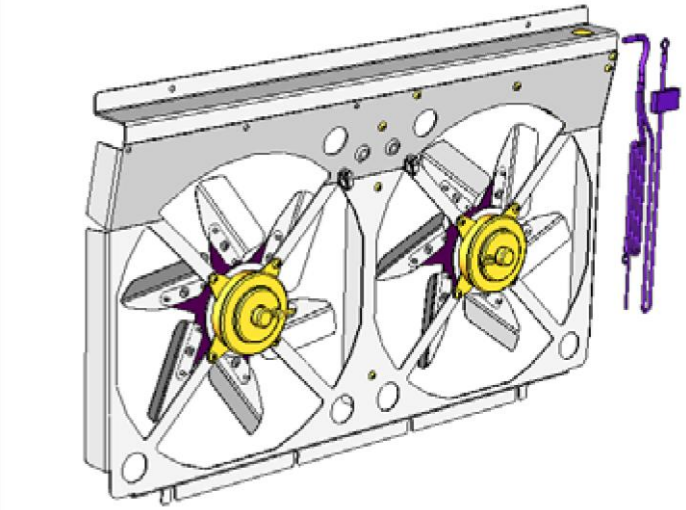
COOL-PACK

Radiator Cooling System

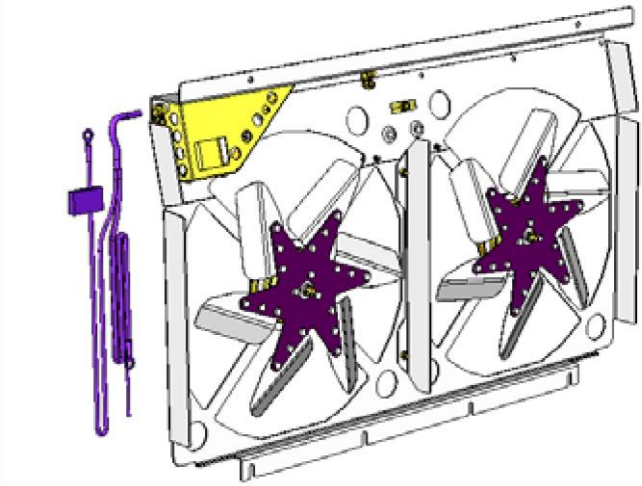
1999 to 2005 Chevrolet/GMC Pickups
2000 to 2005 Chevrolet/GMC Suburban, Yukon

Installation Instructions:	**Part No. 19516 (17" x 34")**
	Part No. 19517 (17" x 28-1/2")

PLEASE READ ALL OF THE INSTRUCTIONS BEFORE BEGINNING INSTALLATION OF THIS SYSTEM



FRONT VIEW 19516 Shown



REAR VIEW 19516 Shown

Tools recommended:

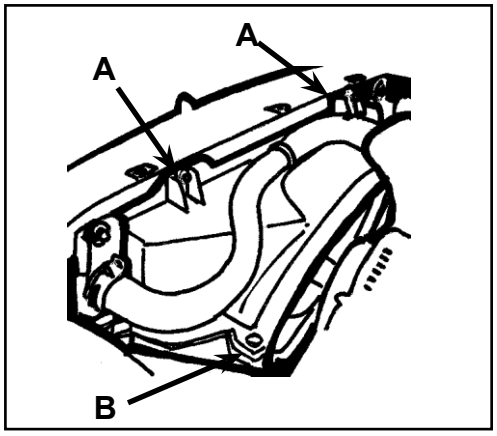
Ratchet / socket set; 3/8 inch drive
Sockets, 6-point 9MM and 3/8 inch
Box wrench, 1/2 inch and Large adjustable (Crescent) wrench
Mini-screwdriver, flat blade (supplied)

Notes:

1. Verify that your vehicle's cooling system is functioning correctly. It is important that the coolant is fresh and properly mixed per factory specifications. The radiator should free of any corrosion or blockage. Cooling system should be filled to factory specified level.
2. Vehicles equipped with Heavy Duty / 4-Wheel Drive option will require the removal of the lower front skidpan, if so equipped.
3. Some GM applications feature an OEM thread-on fan clutch. Verify that you have the necessary tool on hand before beginning installation.
4. Some GM vehicles were designed with a 28.5" x 17" radiator and others with a 34" x 17" radiator. **Part Number 19516** has been designed for use with the 34" x 17" radiator. **Part Number 19517** has been designed for the 28.5" x 17" radiator.

Equipment removal (Retain all bolts and nuts):

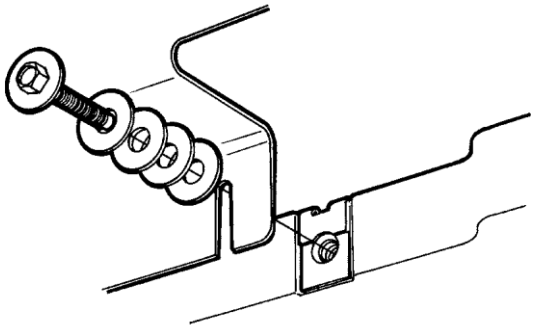
1. Remove the two top shroud bolts [**A**].
2. Remove the bolts or clips that attach the upper half of the shroud to the lower half [**B**]. Remove the top half of the shroud. It may be necessary to remove the air intake duct between the air cleaner and the intake plenum.

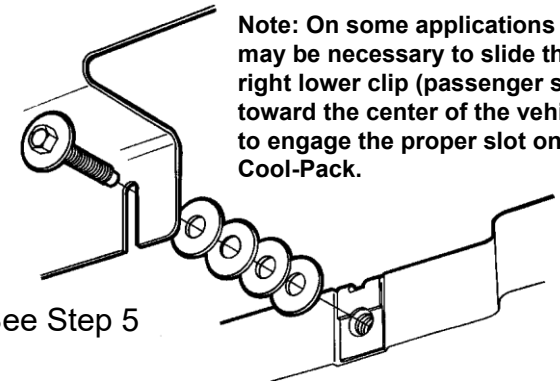


3. Remove the main nut/fan clutch assembly that screws onto the water pump shaft/pulley assembly. The use of a crescent wrench should be adequate for typical removal.
4. The remaining water pump/pulley assembly is fully functional and no other adjustments or item removals are required.
5. Remove the lower shroud from the radiator core support. Note: The lower radiator hose, engine oil, and/or automatic transmission lines may need to be gently repositioned.
6. Lift the lower half of the shroud up and out through the top of the engine compartment.

Cool-Pack Installation (Mechanical):

1. Carefully remove any factory wiring harness from the lower portions of the core support but leave the push-in connectors attached to the wiring harness (do not destroy or discard connectors).
2. Install the two (2) supplied 1/4"-20 or M6 x 30mm bolts into the two existing mount holes in the lower radiator shroud support. Finger-tighten a few turns only.



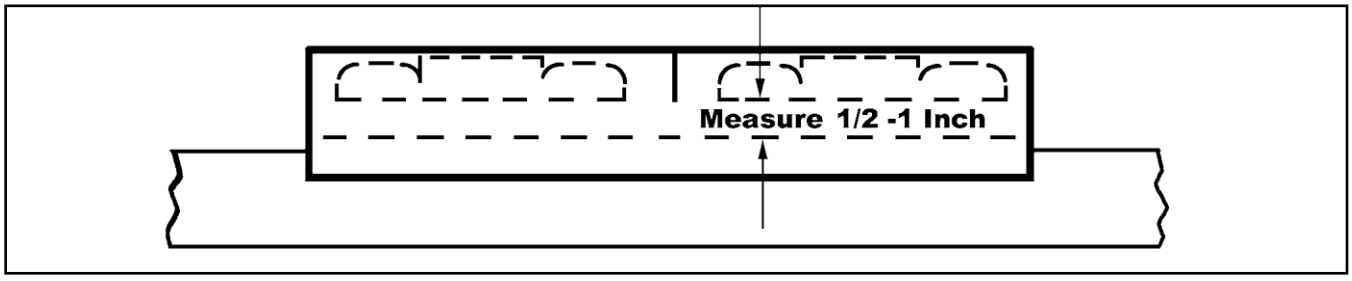


Note: On some applications it may be necessary to slide the right lower clip (passenger side) toward the center of the vehicle to engage the proper slot on the Cool-Pack.

See Step 5

3. Lower the Cool-Pack Assembly into position on the radiator shroud support. Line up the slots in the angle flange with the bolts installed in step 1 above. Locate the angle flange between the spacer washers and the radiator core support.
4. Reinstall the two (2) upper shroud bolts removed during the equipment removal process, (finger tight with spacer washers).
5. Measure the clearance between the Cool-Pack Assembly's side flanges and the radiator core. A ***minimum of 1/8 inch clearance is required*** between the radiator and the side and center flanges of the Cool-Pack Assembly. Next measure the distance between the radiator and the electric fan blades.

Do not place the assembly in any position where the Distance between the radiator core and the electric fan blade is less than 1/2 inch, nor more than 1 inch!



6. With all the clearances noted, move the Cool-Pack Assembly in or out, utilizing the spacer washers on the bottom and the top mounting holes to achieve the optimum match to the tolerances that were detailed in step 5 above.
7. Insert the sensor probe through the foam pad, adhesive side out. Remove the adhesive backing and insert probe into radiator. The ideal probe location is three to five inches (3" to 5") below the top of the core in the center. Secure the probe wiring loom to prevent contact with the fan blades or any other moving parts. Note: It is recommended to install the probe before finalizing the Cool-Pack mechanical installation. Access is best through one of the vent holes.
8. With the probe securely in place, tighten all top and bottom bolts until snug.

9. (Optional) Attach the radiator hose support assembly to the Cool-Pack Assembly, using clamp, bolt, and nut. An additional 1/4" hole will be needed depending on your application. Hold the nut in place with finger (through the vent holes), lining up to accept bolt. Tighten until snug.

Cool-Pack Installation (Electrical):

1. Disconnect the positive (red) battery cable. Remove the OEM bolt located in the end of the battery cable.
2. Inspect and clean battery cable. Reconnect the battery cable to the battery, using the brass connector bolt provided.

3a. Connect the blue wire to the A/C compressor clutch supply wire. To determine or identify the wire, find the location on the compressor where the wires are connected. Unwrap the factory tape enough to view the insulation colors. The supply wire is generally Green-with Black. **Note:** *If you are unsure or cannot locate the proper wire, it may be necessary to consult a repair manual or wiring schematic.* **Do not cut the A/C wire on the vehicle!** Use the provided wire splice-tap instead.

3b. If a manual turn-on switch is desired, and there is no A/C connected in the system, the blue wire can be energized from a manual toggle switch to turn the unit on.

3c. If the vehicle does not have air conditioning, and a manual turn-on switch is not desired, cut the blue wire and install the provided wire cap to the end of the wire.

4. Connect the fused power wire to the brass connector installed on the battery in step 2 above.
5. Connect the black wire to body ground. Recommended attachment points are underneath an upper radiator core support bolt, the negative battery pigtail, or drill 1/8" hole in (metal) core support, frame, or fenderwell and use either of the sheet metal screws provided. To ensure a better electrical connection, scratch or scuff the paint surface where you will be attaching the wire.

Cool-Pack Adjustment:

1. After vehicle has reached normal operating temperature, the preset temperature (approx. 195˚F) controller can be adjusted for the fans to turn on at any temperature between 170˚F-220˚F.
2. Turn adjustment screw clockwise (CW) for a higher turn on temperature. Conversely, turn the screw counterclockwise (CCW) for a lower turn on temperature.
3. For units manufactured in 2022 or later, the adjustment is reverse! Turn the adjustment screw counterclockwise (CCW) for a higher turn on temperature. Conversely, turn the screw clockwise (CW) for a lower turn on temperature.

Note: Setting the turn-on temperature to *lower than 185˚F may affect vehicle emission control compliance.*

****The small blue adjustment screw can be found by following the power wire to where it enters the potted switch, next to the relay.****