COOL-PACK

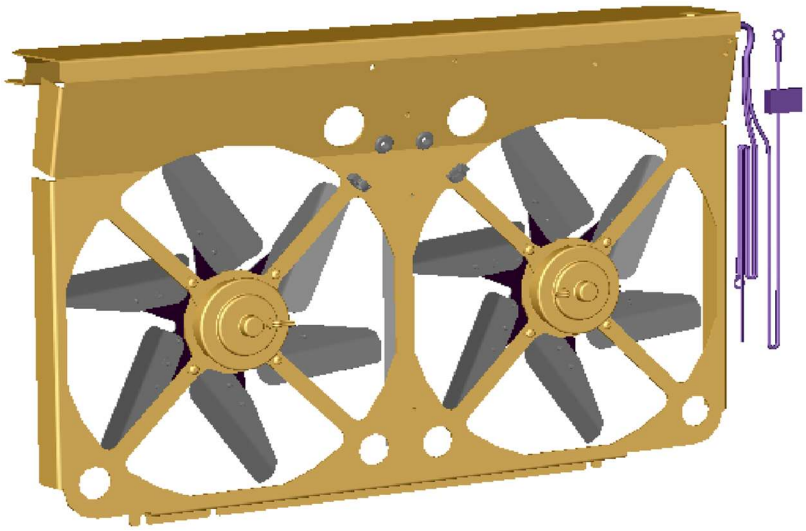
Radiator Cooling System

1988 to 1998 Chevrolet/GMC Pickups
1992 to 2003 Chevrolet/GMC Suburban, Yukon, Tahoe

Installation Instructions:

Part No. 19514 (17" x 34")
Part No. 19515 (19" x 34")
Part No. 19524 (17" x 28-1/2")

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



FRONT VIEW 19515 Shown

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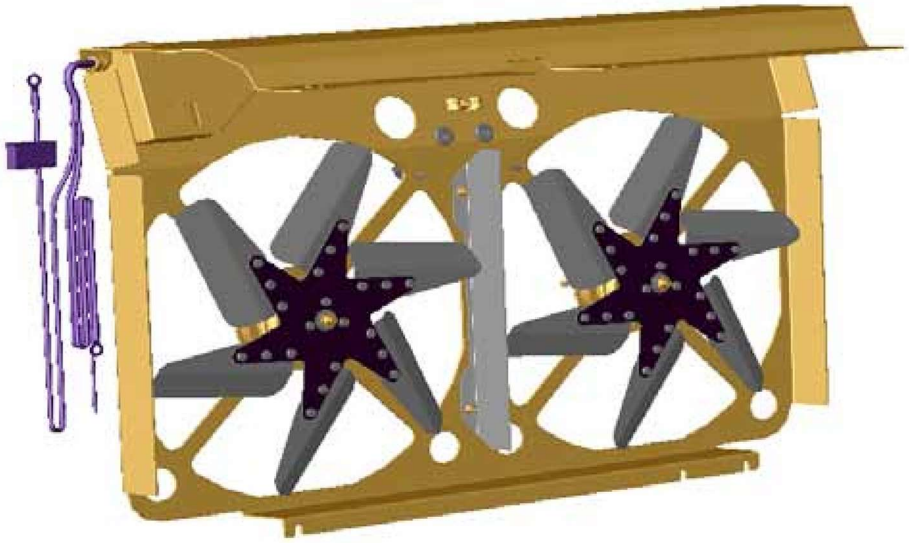

REAR VIEW 19515 Shown

Tools recommended:
Ratchet / socket set; 3/8 inch drive
Socket, 6-point 9MM
Box wrench, 1/2” and 12MM Large adjustable Wrench Mini-screw driver, 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 be 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.

Equipment removal (Retain all bolts and nuts): 19524 (17" x 28 1/2" Radiator core)

1. Remove the radiator shroud. Remove the rubber isolators from the shroud and insert them into the radiator retaining bracket supplied. Attach the radiator retaining bracket utilizing the bolts from the shroud and secure the radiator in place. Follow the section below, beginning with step three (3).

Equipment removal (Retain all bolts and nuts): 19514 and 19515 (17" x 34" and 19" x 34" Radiator cores)

1. Remove the three top center shroud bolts [A]. DO NOT remove the extreme right and left bolts [B]!

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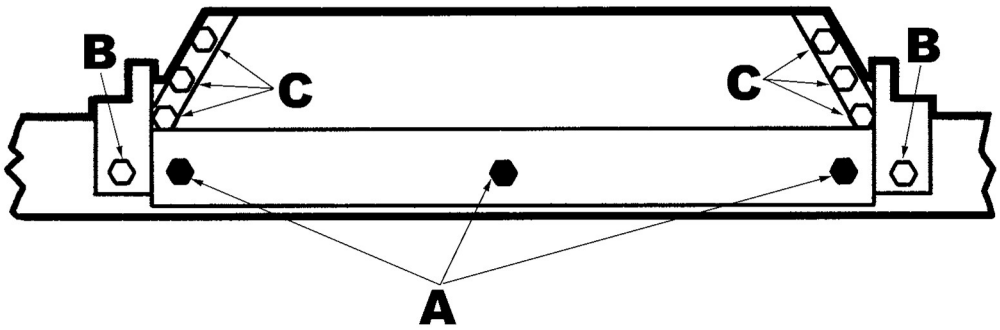
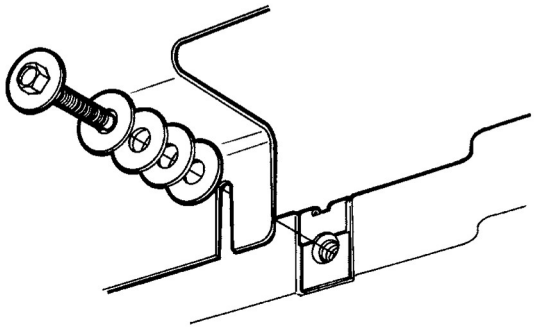
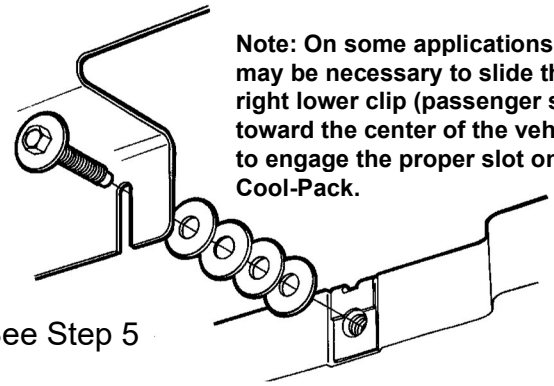


2. Remove the six bolts that attach the upper half of the shroud to the lower half [**C**]. Remove the top half of the shroud.
3. Loosen and remove the four nuts that attach the fan clutch assembly to the water pump flange. Remove the fan clutch and fan assembly. Models with four (4) mounting studs on fan clutch unit will require their removal. To remove the studs, use the nuts just removed from fan clutch. Screw two (2) nuts (on top of each other) onto a stud and then lock the nuts together. Place wrench on the inner nut and back the studs out of the fan clutch flange. Unlock nuts and repeat on the other studs. Install the four (4) bolts provided and tighten to 22-25 ft.-lbs. of torque. Note: Both 5/16”-24 and 8mm bolts are supplied. Determine which is correct for the water pump flange and discard the others.
4. Remove the lower shroud bolts from the radiator core support. Note: The lower radiator hose, engine oil, and/or automatic transmission lines may need to be gently repositioned.
5. Lift the lower half of the shroud up and out through the top of the engine compartment.

Cool-Pack Installation (Mechanical):

1. Install the two (2) supplied 1/4"-20 or M6 x 30 bolts with four (4) spacer washers on each bolt into the two existing mount holes in the lower radiator shroud support. Finger-tighten a few turns only.



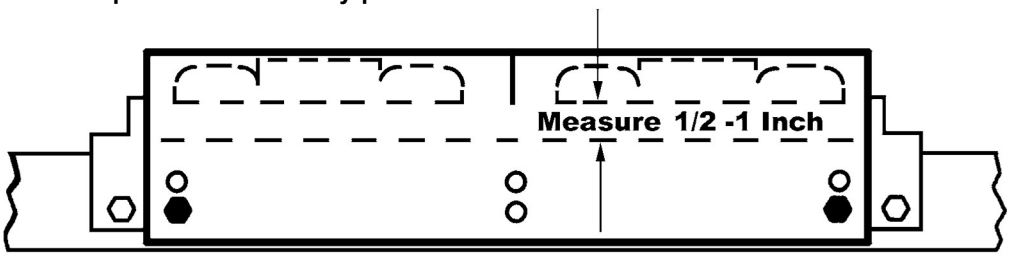


Note: On some applications it may be necessary to slide the right lower clip (passenger side) toward the center of the vehicle to engage the proper slot on the Cool-Pack.

See Step 5

2. Lower the Cool-Pack unit 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. Carefully place the Cool-Pack unit in position where the top half of the shroud was located, using the outermost holes.
3. Insert two (2) of the shroud bolts into the unit. Finger-tighten only.
4. Measure the clearance between the Cool-Pack unit’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 unit. Next measure the distance between the radiator and the

electric fan blades. If the distance is <u>at least</u> 1/2 inch, but no more than 1 inch, the unit will mount in the outer position. If the distance is greater than 1 inch, the unit will mount in the inner position. **Do not place the unit 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!

5. With all the clearances noted, move the Cool-Pack unit 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 4 above.
6. 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 unit mechanical install. Access is best through one of the vent holes.
7. With the probe securely in place, align the top three outer or inner holes with the existing factory retainer nuts. Place the fan shroud bolts into the three selected holes and tighten until contact is made with the Cool-Pack unit mounting surface.
8. (Optional) Attach the radiator hose support assembly to the Cool-Pack unit, using clamp, bolt, and nut (*Hardware for this step may or may not be included)*. Hold the nut in place with finger (through the vent holes), lining up to accept bolt. Tighten until snug.
9. Tighten the bottom bolts that were installed in step 1. Tighten until snug.
10. Tighten the top three bolts until snug.

<u>Cool-Pack Installation (Electrical):</u>

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.****