

# 1989-2001 4.0L JEEP CHEROKEE XJ PERFORMANCE ALUMINUM RADIATOR PARTS LIST & INSTALLATION GUIDE



## PARTS INCLUDED

**1PC** Aluminum Radiator

## TOOLS NEEDED

T30 Torx Socket  
8mm Socket  
10mm Socket  
11mm Socket  
1/4" Drive Ratchet  
1/4" Driver  
19mm Socket  
3/8" Drive Ratchet  
3/8" Drive Extension(s)  
30mm Socket  
1/2" Drive Ratchet  
10mm Wrench  
16mm Wrench  
19mm Wrench  
22mm Wrench  
Channellock Pliers  
Panel Tool  
Flathead Screwdriver

**INSTALL TIME** 2.5 Hours

**INSTALL DIFFICULTY**

## DISCLAIMER

- Raise vehicle only on jack stands or on a vehicle lift.
- Allow vehicle to cool completely prior to attempting installation.
- Do not run the engine or drive the vehicle while overheating; serious damage can occur.
- Please dispose of any liquids properly.
- Mishimoto is not responsible for any vehicle damage or personal injury due to installation errors, misuse, or removal of Mishimoto products.
- Mishimoto suggests that a trained professional install all Mishimoto products.

## ATTENTION

This procedure covers the installation of our radiator on a newer (open) style Jeep XJ cooling system. The installation will be very similar on older Jeeps, but some steps may differ.

## INSTALL PROCEDURE

1. Remove the tree clip that secures the passenger-side fender liner to the front bumper. Pull the liner down to gain access to the wheel well. Loosen the petcock on the radiator to drain the coolant. Remove the pressure cap on the radiator (or expansion tank on older jeeps) to expedite the draining process.



2. Remove the overflow hose from the radiator filler neck.



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# 01

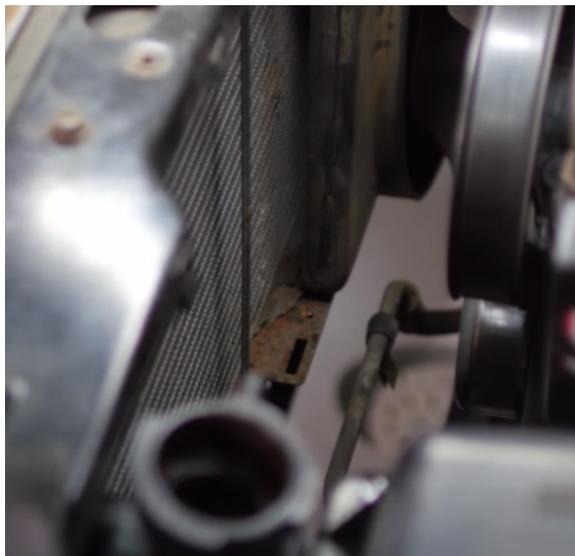
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3. Disconnect the wiring harness from the auxiliary fan. To release this connector, slide the red lock tab out and squeeze the black tab.



4. Remove the two bolts that secure the top of the auxiliary fan to the radiator support. Then lift the fan up to remove it from the vehicle. There are two clips on the bottom of the auxiliary fan that fit into a bracket at the bottom of the radiator support. (2x 8mm bolts)



5. Remove the two bolts that secure the top of the cooling fan shroud to the radiator support. Then lift the shroud up slightly and lean it toward the engine to get it out of the way. (2x 8mm bolts)



6. Remove the two nuts that secure the radiator to the radiator support. (2x 10mm nuts)
7. Remove the four nuts and four Torx bolts that secure the trim panel to the vehicle. Then remove the trim panel. The trim panel and radiator support can be removed together, but they need to be installed separately due to the increased size of the Mishimoto radiator. (4x 10mm bolts, 4x T30 bolts)



8. Remove the six bolts that secure the radiator support to the vehicle. Then remove the radiator support and trim panel from the vehicle. (6x 10mm bolts)



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9. Remove the thread cutting nut, nut, and washers that secure the AC condenser bracket. Then remove the bracket. Repeat this process on the driver side.  
(2x 11mm nuts, 2x 8mm nuts, 2x washers)



10. Place a drain bucket under the driver side of the radiator and loosen the clamp that secures the lower transmission cooler line to the fitting. Then remove the line from the fitting.  
(1x worm gear clamp)

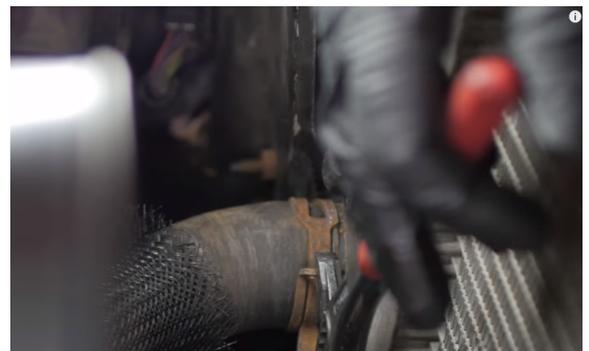


11. Loosen the flare nut that secures the upper

transmission cooler line to the radiator and separate the line from the radiator. If possible, use a flare wrench when working on this fitting to reduce the chance of damaging it.  
(1x 19mm flare nut)



12. Compress the clamp that secures the lower radiator hose and separate the hose from the radiator. (1x spring clamp)



13. Compress the clamp that secures the upper radiator hose and separate the hose from the radiator. (1x spring clamp)



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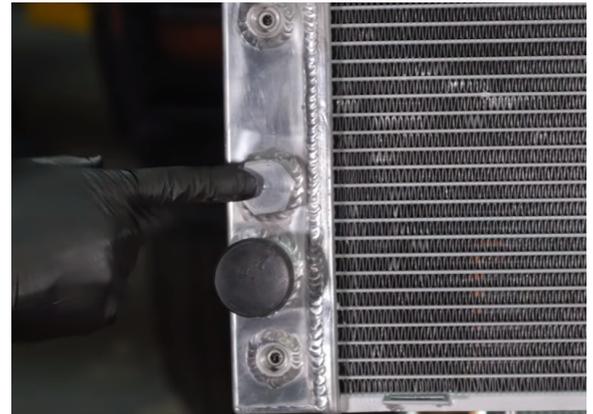
14. Remove the radiator from the vehicle.
15. Remove the upper isolators from the factory radiator. (4x 8mm nuts)



16. Locate the filler neck hardware included with your kit. If you have a newer style jeep or you are converting to an open cooling system, you will install the fitting with the overflow tube. If you have an older style jeep, you will install the plug.
17. Select the appropriate fitting for your installation and wrap the threads with Teflon tape. Wrap in the direction shown here so the tape will tighten itself around the fitting when you install it. Make sure to clear the tip of the fitting to prevent Teflon tape from getting into the cooling system. Then install the fitting to the threaded overflow port on the radiator filler neck. (1x 10mm fitting)



18. Snug the drain bolt on the Mishimoto radiator. (1x 19mm drain bolt)
19. Locate the temperature sensor plug on the back of the Mishimoto radiator. If you have a newer style jeep, simply tighten this plug until snug. If you have an older style jeep, remove the plug and transfer the coolant temperature sensor from your old radiator.



20. Install the provided transmission line adapter fitting to the lower port on the transmission cooler. Leave this fitting loose for now, you will tighten it once the radiator is installed in the vehicle. (1x 22mm fitting, 1x 16mm fitting)
21. Reposition the AC condenser in the vehicle. The lower bracket on the AC condenser must sit over the isolator grommets for the radiator. When the radiator is installed, the pins on the bottom of the radiator must pass through the brackets on the AC condenser.



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22. Lower the radiator into place so that the pins on the bottom of the radiator engage the isolator grommets and the brackets on the AC condenser.
23. Lift the cooling fan shroud up slightly and engage the tabs on the bottom of the shroud with the slots in the Mishimoto radiator. Position the lower transmission line adapter fitting so that the tube on the fitting is clear of the body, and then tighten the fitting to lock the tube in place.
24. Install the lower transmission cooler line to the fitting on the radiator and secure the hose with the clamp. (1x worm gear clamp)



25. Install the upper transmission cooler line to the fitting at the top of the radiator. Align the flared end of the cooler line with the end of the fitting, and then slip the flare nut over the fitting and tighten it completely. (1x 19mm flare nut)



26. Reconnect the lower radiator hose and secure it with the clamp. (1x spring clamp)
27. Reconnect the upper radiator hose and secure it with the clamp. (1x spring clamp)
28. Lower the auxiliary fan into place so that the tabs on the bottom of the shroud engage the slots on the radiator. Reconnect the fan to the electrical harness and lock the connector.
29. Secure the top of the radiator to the AC condenser. The design has changed over the years so you may have to do some test fitting to find out what works for your vehicle. New AC adapter brackets have been included for older Jeeps. Secure the brackets with the original hardware. (2x 11mm nuts, 2x 8mm nuts, 2x washers)



30. Install the upper isolators to the radiator and secure them with the provided hardware. (4x 10mm nuts)



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31. Install the radiator support over the Mishimoto radiator and thread in the original hardware. (2x 10mm nuts, 6x 10mm bolts)
32. Install the trim plate over the radiator support and secure it with the four nuts and four Torx bolts. (4x 10mm nuts, 4x T30 Torx)
33. Now go back and tighten all the fasteners on the radiator support and the trim piece.
34. Lead the overflow hose across the top of the cooling fan shroud. Secure the shroud and the overflow hose with the two original bolts. (2x 8mm bolts)
35. Secure the top of the auxiliary fan with the two original bolts. (2x 8mm bolts)
36. Reattach the overflow hose to the radiator.
37. Tuck the fender liner back into place and secure it with the tree clip. (1x tree clip)

Fill the cooling system with premixed, Jeep-approved coolant, start the engine, and allow it to idle with the cap off. Turn the heater control valve on the vehicle's HVAC unit to full hot, and put the fan on low. Monitor the engine temperature and coolant level in the reservoir. Add coolant as needed to maintain proper level in the reservoir, and check your connections for leaks. If the vehicle begins to overheat or coolant starts to overflow from the reservoir, shut off the engine and allow it to cool before continuing. Once the vehicle is fully warmed up and the coolant level has stabilized, allow the vehicle to cool off completely, and then top off the coolant level. Coolant level should be checked once more after putting in some miles.

**Congratulations! You have finished installing the Mishimoto 1989-2001 4.0L Jeep XJ Performance Aluminum Radiator.**