

# 2016+ NISSAN TITAN XD ALUMINUM RADIATOR

## PARTS LIST AND INSTALLATION GUIDE



### PARTS INCLUDED

- 1PC | ALUMINUM RADIATOR      MOUNTING HARDWARE
- 1PC | FILL NECK

### TOOLS NEEDED

- 8MM SOCKET      19MM WRENCH
- 10MM SOCKET      FLATHEAD SCREWDRIVER
- 1/4" DRIVE RATCHET      PANEL TOOL
- 1/4" EXTENSIONS      SMALL PICK
- 12MM SOCKET      LINEMAN PLIERS
- 13MM SOCKET      NEEDLENOSE PLIERS
- 3/8" DRIVE RATCHET      DIAGONAL CUTTERS
- 8MM ALLEN KEY/SOCKET      HOSE PINCH-OFF PLIERS
- LARGE ADJUSTABLE WRENCH      HOSE CLAMP TOOL
- PRYBAR OR FAN CLUTCH TOOL

**INSTALL TIME 1.5 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.

### CAUTION

Never work on the cooling system when it is hot. The coolant temperature in the radiator can be considerably higher than

boiling, and the system may be under pressure. Opening a cooling system that is hot or under pressure can result in serious injury. Always wait until the system has cooled completely before servicing it in any way.

### NOTE

The radiator and intercooler on this truck are both quite large and unwieldy. It is a good idea to have a friend on hand to assist with the removal and installation of these heavy components.

### INSTALL PROCEDURE

01. Set the vehicle on an automotive lift or raise it with a jack and place it securely on jack stands. Refer to your owner's manual for safe lifting points if you are unsure.
02. Loosen the three bolts that secure the skid plate to the front crossmember, and remove the four Allen bolts that secure the plate to the frame. Then slide the plate toward the driver side and remove it from the vehicle. (3x 12mm bolts, 4x 8mm Allen bolts)



03. Remove the four tree clips that secure the air diversion panel to the underside of the fan shroud. (4x tree clips)



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04. Locate the petcock on the passenger side of the radiator, and open it to drain the coolant.



05. Remove the pressure cap from the radiator to accelerate the draining process.
06. Compress the clamp that secures the overflow hose to the radiator and disconnect the hose. Then separate the overflow hose from the three clips that secure it to the fan shroud, and move the hose out of the way. (1x spring clamp)
07. Remove the two bolts that secure the water neck to the radiator, and then separate the water neck from the radiator. (2x 8mm bolts)



08. Remove the eight pop clips that secure the cover to the radiator support and fan shroud. Then remove the cover from the vehicle. (8x pop clips)



09. Separate the transmission cooler lines from the clips that secure them to the fan shroud.



10. Remove the five bolts that secure the fan shroud to the radiator. (5x 8mm bolts)



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11. Separate the electrical harness from the fan clutch. To release this connector, lift up the gray locking tab and then depress the black tab.



12. Remove the bolt that secures the retainer for the fan clutch harness, and then remove the retainer. (1x 10mm bolt)



13. Use a fan clutch tool to hold the crankshaft pulley and break the engine fan loose from the pulley with a large adjustable wrench. If you don't have access to a fan clutch tool, simply insert a long prybar into one of the holes on the pulley to hold it.



14. Loosen the fan by hand to remove it from the crankshaft drive pulley.
15. Now lift the fan shroud and engine fan upward together, and remove them from the engine bay.
16. Compress the clamp that secures the lower radiator hose to the radiator. Then separate the hose from the radiator. (1x spring clamp)
17. Place an oil drain bucket under the passenger-side end of the radiator, and use a line clamp to pinch off the upper transmission cooler line. Compress the clamp that secures this line to the radiator, and then separate the line from the radiator. (1x spring clamp)



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18. Now repeat this process on the lower transmission cooler line. (1x spring clamp)
19. Remove the two bolts that secure the radiator to the radiator support. (2x 13mm bolts)



20. Loosen the clamps that secure the cold-side intercooler pipe to the intake and the intercooler. Then remove the cold-side intercooler pipe. (2x 11mm T-bolt clamps)



21. Loosen the clamps that secure the hot-side intercooler pipe to the turbo outlet and the intercooler. Then remove the hot-side intercooler pipe. (2x 11mm T-bolt clamps)
22. Take note of the arms at the base of the radiator. These must clear the end tanks on the intercooler during removal. Now remove the radiator from the vehicle. This radiator is quite large, so it's a good idea to have a friend on hand to help.
23. Remove the two rubber isolators from the bottom of the stock radiator and transfer them to the mounts on the truck. (2x isolators)



24. Remove the two upper mounting bushings from the factory radiator. Push the collar out of the bushing, and then remove the bushing. Now transfer these bushings to the Mishimoto radiator.



25. Remove the five clip nuts from the stock radiator, and transfer them to the Mishimoto radiator. Use a screwdriver to bend the tang on the clip nut to retain it on the radiator. (5x clip nuts)



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26. Snug the drain plug on the Mishimoto radiator. (1x 19mm drain plug)
27. Install the Mishimoto radiator. Lower the radiator down to engage the mounting pegs with the isolators you installed earlier. **NOTE:** If you have the Mishimoto intercooler, this is a tight fit. Remove the driver-side intercooler mounting bolt to give yourself more room to work.
28. Install the two bolts that secure the radiator, to the radiator support. (2x 13mm bolts)
29. Reconnect the lower radiator hose to the radiator and secure it with the original clamp. (1x spring clamp)
30. Install the straight adapter for the transmission cooler to the lower port on the radiator. Then reconnect the lower transmission cooler line to the adapter, and secure it with the spring clamp. (1x spring clamp)



31. Lower the fan shroud part of the way into the engine bay, and slide the engine fan under the top of the shroud. Then thread the engine fan onto the crankshaft drive pulley. Spin the fan on by hand until the clutch begins to slip.
32. Now lower the fan shroud into place. There are two tabs on the top of the fan shroud that slip over the rear edge of the radiator to locate it properly.

33. Reinstall the five bolts that secure the fan shroud to the radiator. Thread in all the bolts by hand, and then go back to tighten them. (5x 10mm bolts)
34. Reinstall the retainer for the fan clutch harness, and secure it with the original bolt. Then reconnect the electrical harness and lock the connector. (1x 10mm bolt)
35. Secure the upper transmission cooler line to the fan shroud with the integrated clips.
36. Locate the curved adapter for the transmission line in your kit and install it to the Mishimoto radiator. Slip the upper transmission cooler line over the adapter, and then tighten the adapter. Secure the transmission cooler line with the spring clamp. (1x spring clamp)
37. Locate the water neck included with your kit and install it to the radiator. Secure the water neck with the two provided bolts. (2x 10mm flange bolts)



38. Reinstall the hot-side intercooler pipe. Lower the pipe into place and install it over the turbocharger outlet first, and then to the intercooler inlet. Now secure the pipe with the clamps. (2x T-bolt clamps)
39. Compress the clamp that secures the upper radiator hose to the stock water neck. Remove the water neck from the hose, and install the hose to the Mishimoto radiator. Then secure the hose with the original clamp. (1x spring clamp)

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40. Clip the metal portion of the bypass hose into the fan shroud. Install the overflow hose to the nipple on the water neck, and secure it with the spring clamp. (1x spring clamp)
41. Install the cold-side intercooler pipe. Lower the pipe into place and attach it to the intake first, and then to the intercooler. Secure the pipe with the two T-bolt clamps. (2x T-bolt clamps)
42. Reinstall the cover over the radiator support, and secure it with eight pop clips. (8x pop clips)
43. Secure the transmission cooler lines to the bottom of the fan shroud with the integrated clips.
44. Install the four pop clips that secure the air diversion panel to the bottom of the fan shroud. (4x pop clips)
45. Reinstall the skid plate and secure it with the four Allen bolts. Then tighten the three bolts that secure it to the crossmember. (3x 12mm bolt, 4x 8mm Allen bolts)
46. Fill the cooling system with premixed, Nissan-approved coolant through the reservoir filler neck. Push down the bleeder valve as you are filling until coolant flows from the

screw to release the air from the top of the radiator. 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.

**Congrats! You just finished installing the 2016+ Nissan Titan XD Aluminum Radiator.**

