



Installation Manual v1.0:

P/N 319-904-A326

4R Performance Transmission Installation

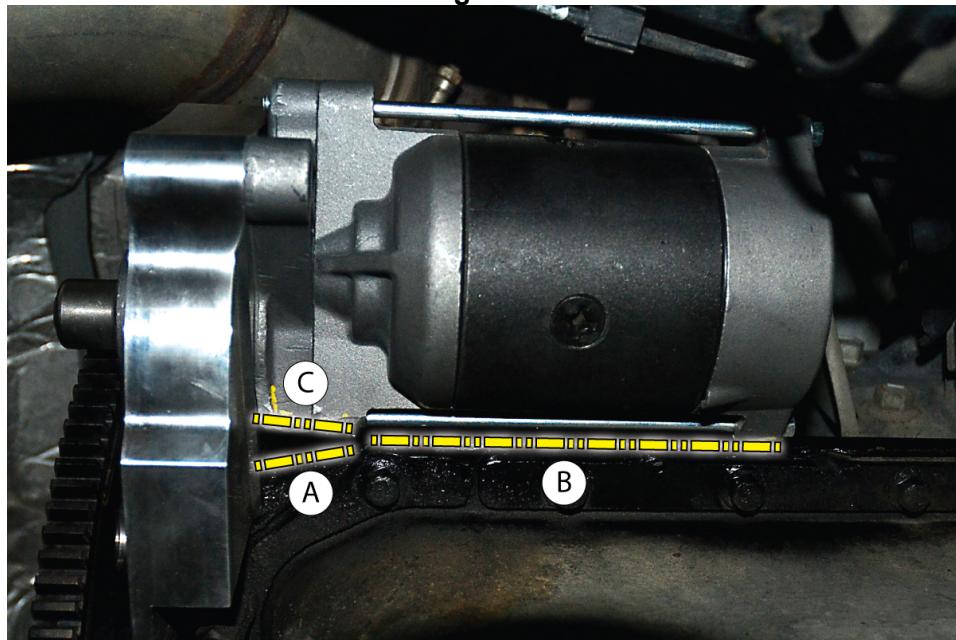
2007.5-2013 Dodge Cummins 6.7L

Please read all instructions before installation.



1. Remove the old transmission, transfer case, flex plate, transmission adapter plate, and starter
2. Flush the transmission cooler
 - 2.1. ATS Diesel Performance requires that all transmission installations include cooler line flushing. ATS recommends the G-Tec TTCF-7AR Heated Cooler Line Flusher. Find out more at:
http://www.g-tec.com/store/p68/TTCF-7AR_Heated_Cooler_Line_Flusher.html
Watch a video: <https://youtu.be/7gFp75actxE>
3. Uninstall the old transmission adapter plate and starter
4. Temporarily mount the ATS 4R-Performance adapter plate so you can mark and measure for placement. In this step, there will be three areas that you will need to mark out. These areas will need to be ground down to allow proper clearance to mount the adapter bracket and the starter.
 - 4.1. First, mark where the ear is on the passenger side of the engine block. This will need to be ground down to allow clearance for the new starter. (Figure 1 A)
 - 4.2. The Lip of the oil pan will also need to be ground down for the length of the starter. (Figure 1 B)
 - 4.3. Part of the supplied starter may need to be ground down to allow for needed clearance. (Figure 1 C)

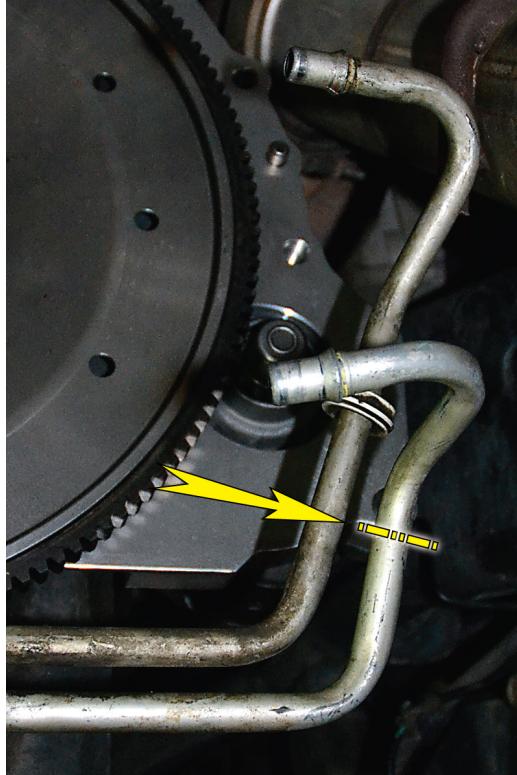
Figure 1



5. Open the loom for the starter's power wire and signal wire. These two (2) wires will be rerouted so they are going to the front of the motor mount. At this point, attach the provided starter power wire, and extend the starter signal wire the same distance. Route both wires along cross-member while securing them to the steel brake line. **(Make sure there is clearance from the steering shaft)**

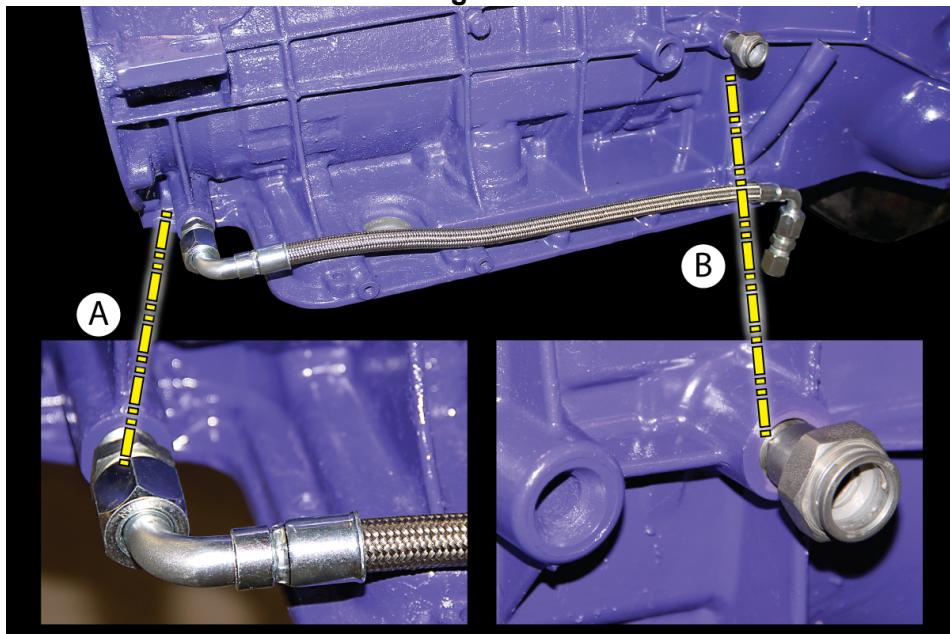
6. Using a pipe cutter, cut the cooler line at the designated spot in Figure 2. Once the line is cut, sand down the end of the cooler line. This will ensure a clean smooth connection with the compression fitting. Connect the supplied braided line to the cooler line using the compression fitting.

Figure 2



7. Install the braided cooler line to the rear port (Figure 3 A). Install the ATS Cooler Line Adapter (314005A326) into the front port of the 4R-Performance transmission (Figure 3 B). Then insert the O.E. line and retainer clip.

Figure 3



8. Now install the adapter plate and starter to the engine block. Then install the flex plate.
9. Install the transmission dipstick tube. It is easier to get it installed now rather than after the transmission is in place.
10. Install the 4R100 transmission (Please refer to Manual Shift Assembly Instructions if you are using your own transmission)
11. Using the hardware provided, install the ATS Transmission Mount Adapter to the 4R100 transmission. On the cross member, take off the O.E. rubber mount. Make sure you pay attention to the direction it is mounted. Install the rubber mount on the ATS Transmission Mount Adapter, making sure it is mounted in the same direction.

Transfer Case must have ATS Modified Head Gear Installed Before Proceeding

12. Install the transfer case using the supplied gasket. There is no need for silicone under normal circumstances.
13. Reinstall the original cross member. If there are any issues with alignment, there might be a chance that the O.E. rubber mount may be installed backwards on the ATS Transmission Mount Adapter.
14. Insert the shifter cable into the modified shifter bracket that is supplied in the kit. While the gauge cluster and the manual lever assembly are both in park, secure the shifter bracket.
15. Install the neutral safety switch onto the transmission.
16. Once the transmission and transfer case are installed, measure for proper driveshaft adjustment.
(While we do supply suggested measurements for the front and rear drive shafts, ATS does not guarantee that these dimensions will work on your truck due to any modifications)
17. Please refer to the ATS StandAlone Instructions (Use instructions for 6019553224)

Have Any Questions?

Thank you for purchasing the 4R Performance Transmission Kit. Please check our website at <http://www.atsdiesel.com> for technical support and other products such as the 5-Star™ torque converter, ATS High Performance Valve Body and ATS High Performance Transmission. Please call or e-mail our Technical Service Department, 7:30am to 5:30pm Mountain Standard Time, Monday through Friday.

Contact Information

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We strive to make our instructions as clear and complete as possible. To achieve this, our instructions are under constant construction. We encourage you to visit our website to check for the most up-to-date manuals and diagrams as well as other information. If you have any suggestions as to how we can improve this installation manual, let us know at Suggestions@ATSDiesel.com.

Bill of Materials

1. (Qty: 1) 5 Star Torque Converter – 4R-Performance	PN: 317950A326
2. (Qty: 1) Stand Alone Transmission Harness (Not pictured)	PN: TCM4108
3. (Qty: 1) Automatic Transmission Controller (TCU)	PN: TCM2000
4. (Qty: 1) Ford 6.0 Starter	PN: 03-0904
5. (Qty: 1) Dipstick Tube	PN: 314201A272
6. (Qty: 1) Transmission Dipstick (Not pictured)	PN: BC3Z-7A020-D
7. (Qty: 1) Billet Conversion Flex Plate (Not pictured)	PN: 315910A272
8. (Qty: 1) Conversion Adapter Plate	PN: 316100A326
9. (Qty: 1) Starter Cable	PN: 319001A326
10. (Qty: 1) Adapter, Cooler line fitting	PN: 314005A326
11. (Qty: 1) Adapter, Cooler line	PN: 314006A326
12. (Qty: 1) Linkage, Manual Valve	PN: 314050A326
13. (Qty: 1) ATS Modified 4R100 Trans Shift Cable Bracket	PN: 314051A326
14. (Qty: 1) ATS Manufactured Transmission Mount	PN: 314076A326
15. (Qty: 1) Gasket, Transmission to Transfer Case 325304	PN: 325304
16. (Qty: 1) Ford 4R100 Neutral Safety Switch	PN: D36410C
17. (Qty: 1) 271, Input Head Gear (Modified)	PN: 304410A326