Thank you for purchasing your OM60x-to-R150/A340 adapter from Doomsday Diesel LLC! Please read this entire page **BEFORE** installation. Please be aware of potentially sharp edges! This product is protected by US Patent D979606S.

The pictures in these instructions do not necessarily represent the specific parts in your kit. It is always a good idea to install the bellhousing on the adapter plate and fully install hardware to ensure hardware does not protrude out the back side in areas that may cause interference. If the bolt protrudes beyond the back side of the adapter plate, you will need to grind it to where it rests flush. This will also give you the opportunity to drill out bellhousing holes if they are not big enough for the supplied hardware.

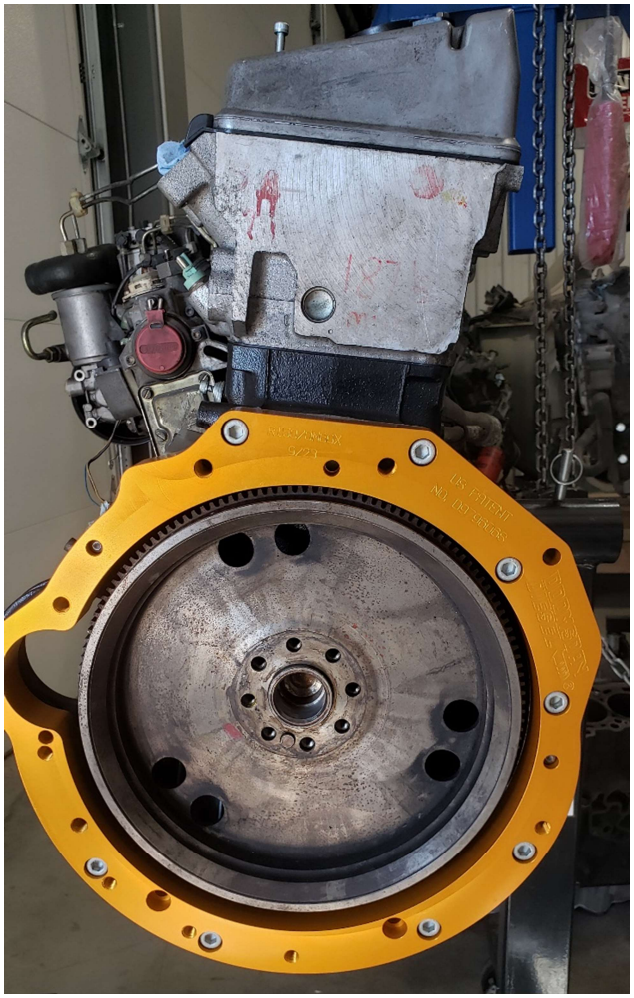
Adapter Plate to Engine:

- (8) M10-1.5x35 10.9 SHCS (socket head)

  Use medium strength thread locker and torque to 40 lb*ft.

  The adapter plate must first be mated to the engine block. The back of the block should be bare. Install both 10x36mm dowel pins in the engine block. If externally mounting the starter, install threaded inserts now (see Starter section for instructions). Install the plate over the dowels and tap it tight against the block with a dead-blow hammer. You may install a couple bolts dry, to secure the plate. Make sure your shallow-head bolts sit recessed in the plate so the bellhousing will not contact them.

  You may now install the adapter plate bolts by using medium thread locker and torquing to 40 lb*ft.



Starter:

IF MOUNTING INTERNALLY (THIS HARDWARE NOT SUPPLIED)

- (2) M10-1.5x70 12.9 SHCS w/ washer

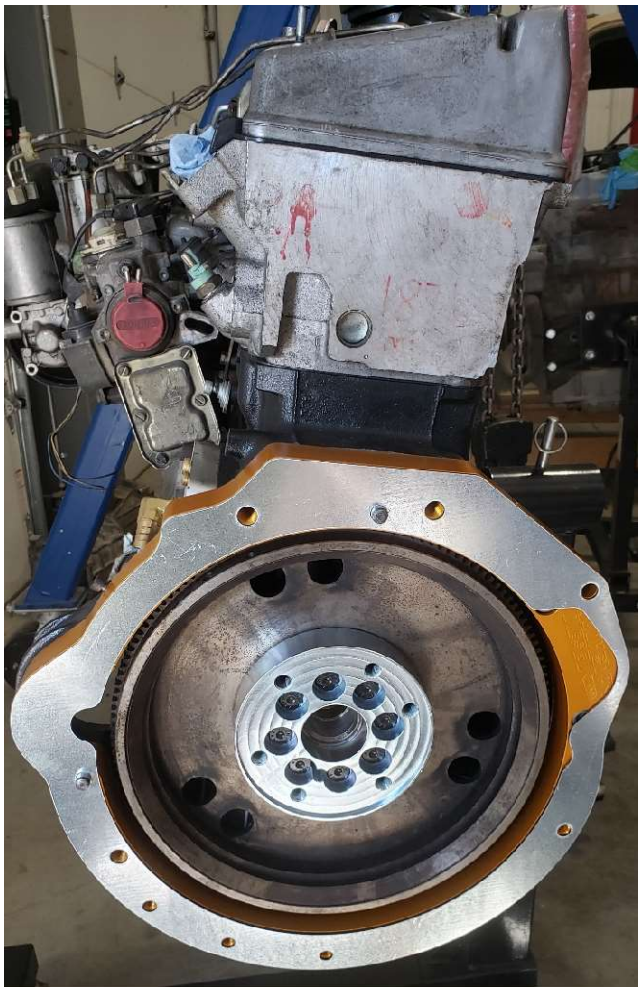
IF MOUNTING EXTERNALLY (THIS HARDWARE SUPPLIED)

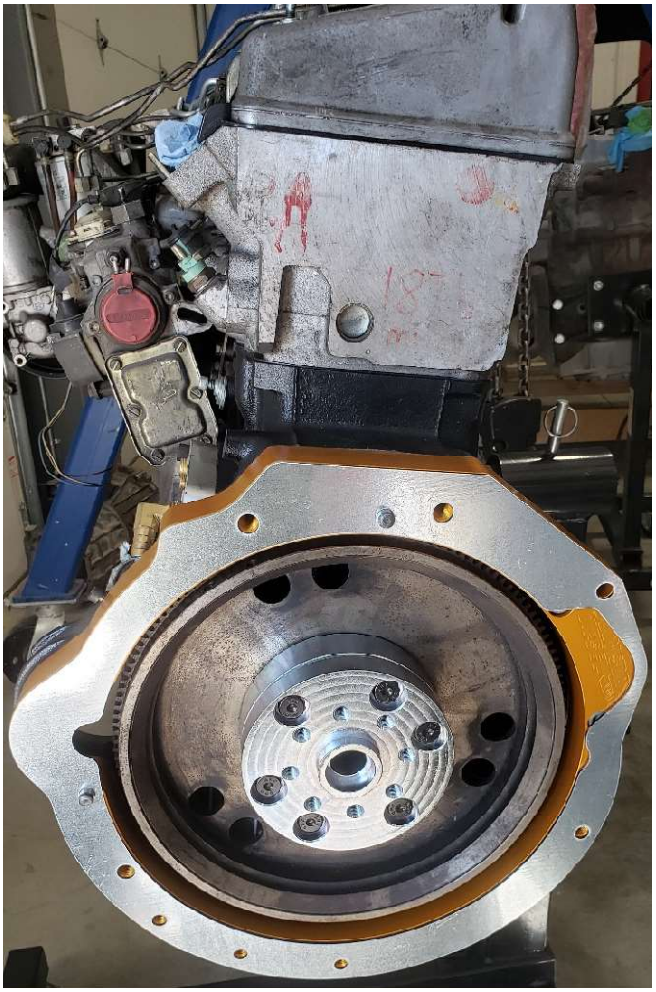
- (2) ½-13 x M8x1.25 threaded insert
- (2) M8 Washers
- (2) M8x1.25x75 SHCS

Before final installation of the starter, verify clearance from the transmission flywheel/flexplate. Clearance the starter nose or flexplate welds, if necessary.

If opting to mount the starter from inside the bellhousing, apply medium thread locker to the (2) M10-1.5x70 bolts, install washers, and tighten into starter.

If opting to mount the starter externally, begin by installing the threaded inserts with a flat-head screwdriver into the adapter plate until flush with the front of the adapter plate. To ensure the inserts are flush, it is easier to complete this step with the adapter on the block. The pre-applied red thread locker must be removed, and red Loctite applied, as the pre-applied substance cannot be trusted. Next, dry fit the assembly to ensure proper clearance and fitment with the flywheel/flexplate. Before final installation, apply either anti-seize or medium strength thread-locker to the M8 SHCS. **DO NOT USE RED THREAD LOCKER AS YOU WILL NEVER GET IT APART WITHOUT DAMAGING SOMETHING.**





Crankshaft adapter (Manual Transmission):

- (8) M10x1.0X32.4 ARP Flywheel Bolts
  Use medium strength thread locker and torque to 70 lb*ft.

  The crankshaft adapter is comprised of 2 pieces. The thicker piece indexes off the outside of the crankshaft. Make sure the crankshaft mating surface and outside diameter are clean and smooth. The only Mercedes piece you retain is the one with the starter ring gear attached to it. The Base Adapter installs over top of it. You may need to heat the Base Crank Adapter up to 350°F to get it to slide over the crank. It should be a tight slip fit or a shrink fit. Line up the locating pin in the crankshaft with the adapter. Install the 8 ARP bolts, applying the ARP Lube to the head and medium-strength thread-locker to the threads. Torque the bolts in a star pattern, making sure to do it while the adapter is still hot if you had to heat it up.

- (6) 7/16-20x1.25 ARP Bolts
  Use medium strength thread locker and torque to 85 lb*ft.

  The second piece of the crankshaft adapter is a round disc with a shoulder. This plate indexes the flywheel to the crankshaft. You can install your pilot bearing before bolting on the Top Crank Adapter. Make sure all mating surfaces are clean and free of debris, and carefully set the 2nd adapter piece inside of the 1st. Install the (6) ARP 7/16-20x1.25 bolts the same way as before (with lube and thread-locker), and torque in a star pattern.

Crankshaft adapter (Automatic Transmission):

- (8) M10x1.0X25.4 ARP Flywheel Bolts
  This replaces the Mercedes crankshaft hardware. You will still use the flexplate washer if yours had one. Use medium strength thread locker and torque to 70 lb*ft.
- (6) 7/16-20x1.25 ARP Crankshaft Adapter Bolts
  Use medium strength thread locker and torque to 85 lb*ft.
- (6) M8x1.25x25 ARP Torque Converter Adapter Bolts
  Use medium strength thread locker and torque to 18 lb*ft.

  The automatic transmission adapter is comprised of 2 pieces. Begin by marrying pilot stub to the aluminum torque converter adapter with the M8 flanged HCS. Use blue Loctite and tighten firmly. Marry the steel crank adapter to the back of the aluminum torque converter adapter. Install the (6) 7/16-20x1.25 ARP Bolts, applying lube under the heads and thread-locker to the threads, and torque in a star pattern using the supplied spanner wrench. Next, mate the AW4 flexplate to the steel adapter as if you're installing it on a 3VZ/5VZ, using Toyota hardware and installation specs (although I will note that thread-locker is **mandatory** here). Now, marry the torque converter to the flexplate per the Toyota FSM. You may need to use a closed-end wrench or a crow's foot to reach the bolts' heads. Then, install the torque converter on the transmission. You are now ready to marry the transmission to the engine, **but make sure you install the dust shield first!** You will attach the aluminum torque converter adapter to the Mercedes flexplate using the supplied ARP M8 hardware by lubricating under the head and applying thread locker to the threads. It is best to do the tightening in 3 phases to assure even tightening.

Dust Shield:

- If your kit came with a galvanneal dust shield, now is the time to install it. Install your bellhousing dowel pins and set the dust shield over them.

Flywheel to crankshaft:

Your flywheel/flexpate installs the same as it would have behind the engine your transmission originally came behind.

Bellhousing to Adapter Plate:

It is a good idea to mount the plate to the bellhousing before final installation, so you can ensure the bolts aren't going to protrude thru the adapter plate. Bellhousings can vary, and the hardware and plate are designed to use every possible thread. If the hardware protrudes thru, simply grind the end off with an angle grinder (flap disc) until flush.

Holes may have to be drilled out on bellhousing for hardware to fit thru. Positions are from looking at the back of the bellhousing.

- (3) M10-1.25x45 8.8 FHCS – Positions 4, 6, 7 & 8 o'clock (varies by model of R150)

  Use medium strength thread locker and torque to 32lb*ft.

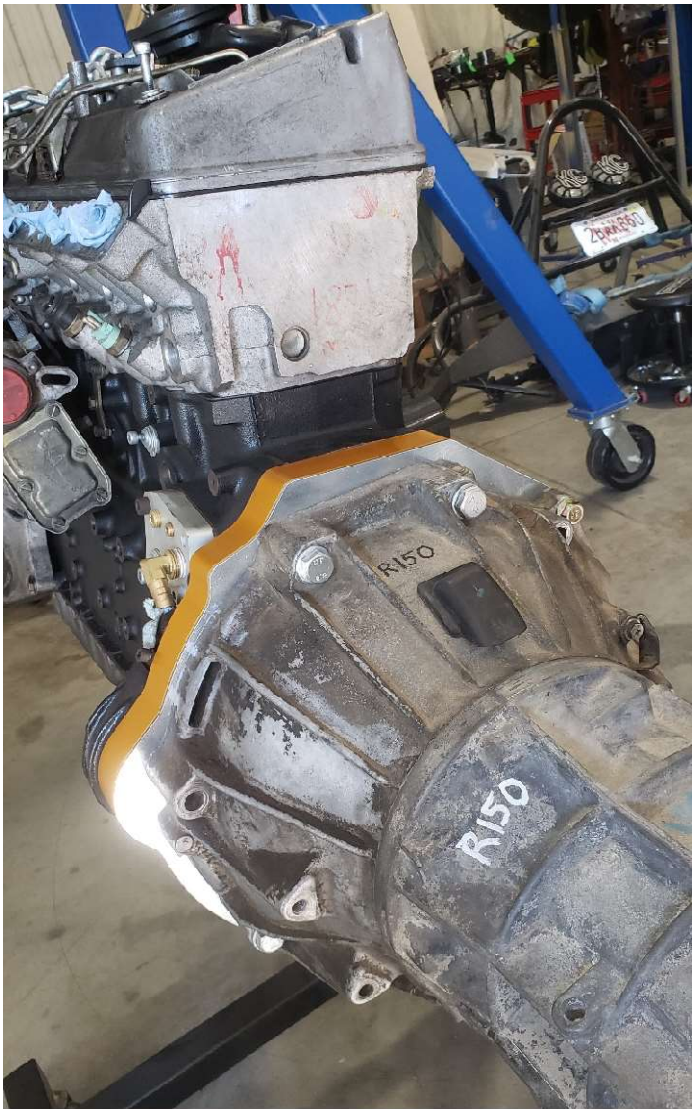
- (3) M12-1.25x80 HCS, Washer – Positions 8, 12 & 1 o'clock

  Use medium strength thread locker and torque to 60lb*ft.

- (1) M10-1.5x70 Flanged HCS, Washer, lock nut – Position 2 o'clock

  Use medium strength thread locker and torque to 60lb*ft.

- 10x28mm Dowel Pins



All torque values were attained from Fastenal. This product is for off road use, only. This kit carries no warranty.