



Thank you for purchasing your AW4-to-OM617 adapter from Doomsday Diesel LLC! Please read this entire page **BEFORE** installation. Please be aware of potentially sharp edges!

Match-balancing your AW4 flexplate to the OM617 flexplate is a great idea to avoid any vibration issues. Make sure to index the OM617 flexplate to the crankshaft before removal so you know how to install the new AW4 flexplate and crank adapter. If possible, have your AW4 flexplate and crank adapter balanced as an assembly.

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. In this case, that would only include the top left M10 bolt. 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:

- (5) M10-1.5x30 10.9 FHCS (flat head) Positions 1
- (1) M10-1.5x35 10.9 FHCS (flat head with black marker on head) Position 2

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. Make sure both 12mm dowel pins are in the engine block. 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. You must now trace the outline of the starter contour onto the upper oil pan. Using an angle grinder with an aluminum grinding disc or other suitable method, remove *just enough* of the upper oil pan to allow the AX15 starter to be installed. Do not leave any sharp or jagged edges. Feather out the grind marks to make smooth transitions, as to prevent stress cracks from forming in the upper oil pan during service. Install the bellhousing and starter to verify everything will mate up correctly.

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

Crankshaft Adapter:

- (12) M10x1.0X17.8 ARP Flywheel Bolts

Use medium strength thread locker and torque to 60 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. Tighten the ARP bolts in the same pattern as prescribed in the factory service manual for the OM617. Spacing is extremely tight with this adapter. You must use a thin-wall 16mm 12-pt socket for installation. I've had good luck with a 3/8" drive socket from Harbor Freight.

The second piece of the crankshaft adapter is a round disc with a shoulder. This plate indexes the flexplate to the crankshaft. Make sure all mating surfaces are clean and free of debris, carefully set the 2nd adapter piece on top of the 1st. Tolerances are very tight, and the adapter will not slide on if it is not installed perfectly straight. If it binds up, do NOT force it on! Once the disc is installed, it should spin freely.



Flexplate to Crankshaft:

- (6) M10x1.0x17.8 ARP Flywheel Bolts
Use medium strength thread locker and torque to 60 lb*ft.

You **DO NOT** reuse the Mercedes flexplate washer. A new flexplate washer is included with this kit. Place the flexplate over the crank adapter, then install the new flexplate washer and finally the ARP bolts. Apply medium strength thread locker and torque the new bolts in a star-pattern to 60 lb*ft.



Torque Converter:

It is a good idea to ensure the end of your torque converter pilot stub is smooth and flat. If it has any burs, remove them before installation. The fitup of the torque converter and crank adapter is extremely tight with the AW4. You may access the torque converter bolts thru the bottom of the OM617 upper-oil pan.



Bellhousing to Adapter Plate:

Start by installing the Jeep dowel pin sleeves into the bellhousing. This will help ensure the bellhousing goes on straight. 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.

- M10-1.25x45 8.8 FHCS and Washer - Positions 3

Use medium strength thread locker and torque to 32lb*ft. Be sure to install the washers with the flanged heads to ensure clearance.

- 7/16-20 x 3-1/4 GR 8 HCS, Washers, Lock Nut, and Dowel Sleeve - Positions 4

Torque to 58lb*ft.

- M12-1.75x65 8.8 HCS, Washers, and Lock Nuts - Positions 5

Torque to 60lb*ft.

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

