

The following MB212 instructions are intended to assist in modifying a vehicle to accept an OM617 diesel engine to a Chevy transmission with a standard 153 or 168tooth flywheel. Please read through the instructions before you begin. This procedure assumes the OM617 was previously removed from MB vehicle and is ready for installation. The transmission does not have to be removed from vehicle to complete this installation.

OM617 Engine Preparations.

1. Mark flywheel to crankshaft relationship (to maintain balance).
2. Remove flywheel from OM617 engine.
3. Remove the stock intermediate engine to transmission adapter plate from OM617.
4. Mount the MB135 bell housing adapter to back of the OM617 by lining up two existing dowel pins. Note: These holes have .002 tolerances they may need to be lightly filed with round file for final fit. This fit should be kept as tight as possible.
5. Install and hand tighten the 2- 35mm hex head center bolts to hold MB135 adapter in place.
6. Grind OM617 oil pan to accept stock starter motor (see photos below). NOTE: Grind to just meet MB135 adapter!



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8. When starter to block clearance is achieved remove the 2- 35mm center bolts but leave MB135 adapter on the engine.
9. Apply blue loctite to threads of 2 - 35mm center hex head bolts and install into 2-center holes and now apply blue loctite to threads of 2 - 30mm 2-upper block mounting holes and torque all 4 to 40 foot pounds.

Flywheel / Flexplate Assembly

1. Test fit the MB133 crankshaft adapter assembly to the OM617 engine.
2. When a Mercedes OM617 leaves the factory the flywheel is balanced to the engine. When replacing a MB flywheel / flexplate the balance should be maintained as much as possible. The best solution is to take both old and new flywheel to a machine shop and have a 180 degree balancing done. The alternate solution if original balance was not retained is to static balance new assembly to zero (with crankshaft adapter mounted).
3. Mount the MB133 crankshaft adapter to the existing Chevy flywheel with 6 original Chevy flywheel / flexplate bolts (tighten bolts but do NOT loctite at this time).
4. Place flywheel / flexplate face down (clutch side of flywheel on table) on a flat surface to inspect the 6 original Chevy flywheel / flexplate bolts to ensure they do NOT extend past the recessed area of the MB133 crankshaft adapter. These bolts can NOT interfere with the MB crankshaft mating surface. Shim or replace Chevy flywheel / flexplate bolts if necessary.
5. Balance this as an assembly with MB133 crankshaft adapter attached to Chevy flywheel / flexplate, after balancing is complete mark the relationship of MB133 adapter to flywheel / flexplate for re-alignment.
6. Remove 6 original Chevy flywheel / flexplate bolts from the MB133 crankshaft adapter.
7. Mount the MB133 crankshaft adapter to the OM617 MB engine crankshaft, using the supplied 6- M10-1.0 x 20mm Allen head socket cap screws apply blue loctite and torque to 40 pounds. NOTE: Extreme care must be taken not to cross thread these bolts into the OM617 crankshaft.
8. Mount the original Chevy flywheel / flexplate to the MB133 crankshaft adapter with original flywheel bolts, apply blue loctite and torque to 40 ft pounds.

Clutch & final Assembly

1. A new Chevy pilot bearing should be installed into the MB133 Crankshaft adapter. This item is NOT supplied in kit due to different Chevy transmission input shaft diameters.
2. At this time mount clutch assembly to the flywheel (a new clutch and throw out bearing is recommended but not necessary based on your specific vehicle).
3. The OM617 engine is now ready to be mated to the existing transmission.
4. Lower the OM617 into place and line up main input shaft to the clutch assembly (at this point you are lining up the splines at approximately 1-1/2" to 1" separation).
5. The next alignment is the line up at the main input shaft to the pilot bearing (approximately 1" to 1/2" separation). NOTE: Care must be taken not to force the two assemblies together at this point as you will damage the pilot bearing.
6. Final alignment comes from the existing transmission dowel pins to the corresponding MB135 bell housing adapter holes. At this point you may need to be able to slightly rotate the OM617 or the transmission to allow these holes to line up.
7. Note: All Chevy small block bellhousings use the same bolt pattern, but they do NOT all use the same length bolts in the bellhousings. We have supplied a set of the most popular bolts. Additional Grade 5 3/8-16 bolts may be required if supplied bolts do not have full thread engagement into nuts.
8. After first dowel pin drops into hole attach a 3/8 x 1-1/2 bolt, lock washer, and nut supplied into closest hole in bellhousing and only hand tighten.
9. Now line up second dowel pin hole (rotate up or down as needed) allowing dowel pin to drop into hole attach a 3/8 x 1-1/2 bolt, lock washer, and nut supplied closest hole in bellhousing and only hand tighten.
10. Now tighten the 2- installed bolts.
11. Install remaining 3/8 x 1-1/2 bell housing bolts supplied in kit with blue loctite and torque to 25 foot pounds.
12. Now remove first 2- installed 3/8 x 1-1/2 bolts apply blue loctite torque to 25 foot pounds.
13. Double check all bell housing connections and continue the conversion.

Torque Converter & Final Assembly

1. Test fit the crankshaft adapter center pilot hole to torque converter. Make SURE they fit snug this is .002 clearance. It may require light sanding of torque converter flange.
2. At this time mount torque converter on transmission if previously removed.
3. The OM617 engine is now ready to be mated to the existing transmission.
4. Lower the OM617 into place and line up correct flexplate bolt holes on torque converter with flexplate hole in access hole of MB135.
5. Final alignment comes from the transmission dowel pins on the MB135 bell housing adapter to the corresponding transmission holes. At this point you may need to be able to slightly rotate the OM617 or the transmission to allow these holes to line up.
6. Note: All Chevy small block bellhousings use the same bolt pattern, but they do NOT all use the same length bolts in the bellhousings. We have supplied a set of the most popular bolts. Additional Grade 5 3/8-16 bolts may be required if supplied bolts do not have full thread engagement into nuts.
7. After first dowel pin drops into hole attach a 3/8 x 1-1/2 bolt, washers (one on each side), and nut supplied attach through closest transmission hole and only hand tighten.
8. Now line up second dowel pin hole (rotate up or down as needed) allowing dowel pin to drop into hole attach a 3/8 x 1-1/2 bolt, washers, and nut supplied in kit attach through closest transmission hole and only hand tighten.
9. Rotate engine and torque converter bolt holes to attach original bolts from flexplate to torque converter.
10. Install remaining 3/8 x 1-1/2 bell housing bolts supplied in kit with blue loctite and torque to 25 foot pounds.
11. Now remove 2- previously installed 3/8 x 1-1/2 bolts and apply blue loctite torque to 25 foot pounds.
12. Double check all bell housing connections and continue the conversion.

Starter Shim Procedure

Due to the numerous flywheel and starter combinations used by Chevy over the years this kit will require you to check and possible shim the starter motor for proper depth engagement into flywheel ring gear.

1. Apply small amount of grease to the starter gear.
2. Install starter motor into bellhousing using all three supplied starter shims (use a 3/8-16 Allen head bolts and lock washers) and tighten.
3. Test starter gear engagement by bumping the starter to quickly engage but NOT start the engine.
4. Remove starter to inspect grease on the teeth of flywheel. Proper tooth depth engagement is minimum 50 % of flywheel ring gear has engagement NOT 100%. This allowed for the ring gear to be flipped or reused one time before replacement.
5. Repeat this procedure by adding or removing shims until final proper tooth engagement is obtained.

For more information, technical help, pictures, and accessories visit our website at www.MercedesDiesel4x4.com

You can also email us at sales@MercedesDiesel4x4.com or call 717-448-3800.