

# BEK156 / 157

## Balance Shaft Elimination Kit Instructions

### ENGINEQUEST

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**BEK156** - Chrysler / Mitsubishi 2.6L  
Kit includes: replacement bushing, balance  
shaft replacement pin, oil pump drive chain



**BEK157** - Chrysler / Mitsubishi 2.6L  
Kit includes: replacement bushing, balance  
shaft replacement pin, oil pump drive chain,  
oil pump sprocket, crank sprocket, lower right  
chain guide.



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### Follow these steps...

1. With the timing cover removed, unbolt and remove the balance shaft drive chain, chain guides and sprockets. Remove balance shaft from oil pump and save bolt.
2. Unbolt the two retaining bolts and remove entire upper balance shaft assembly. Drive the large bushing into front upper balance shaft bore to stop oil supply as shown in Figure 3. The upper balance shaft is not to be reinstalled.
3. Install the oil pump plug in the oil pump's lower balance shaft bore (see Figure 4). Insert the threaded end of the plug through from the cover (rear) side of the pump. Use the lower balance shaft bolt to secure the plug in the oil pump, tighten using threadlocker or equivalent, to 44-50 ft. - lbs./60-70 nm. The squared end of the plug may be held in a vise or with a wrench to assist in tightening to the proper torque. (The lower balance shaft is not to be reinstalled.)  
**CAUTION:** The oil pump plug must be tightened with the correct torque to prevent the plug from loosening and falling into the engine.

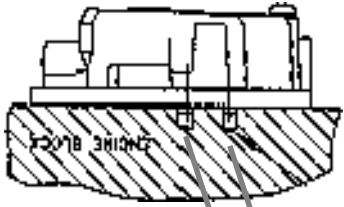
4. Reinstall oil pump to block with plug in place. It is mandatory to use a new oil pump gasket. (See Figure 1 and 4.) Reassemble oil pump drive with the chain provided. Before installing chain on oil pump, it is best to spin the oil pump with a drill motor to prime oiling system. Check for oil pressure and oil leaks.

5. Reassemble the rest of the engine in the normal manner. If balance shafts are being eliminated because of failure, a thorough cleaning of all engine components and replacement of oil pump may be necessary. Rod and main bearings should also be checked.

**Figure 1: Mounting Oil Pump**

**CAUTION:** Improper mounting will result in pump damage causing failure.

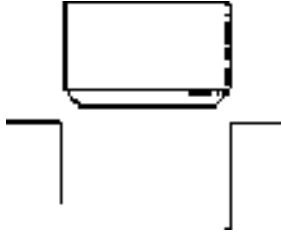
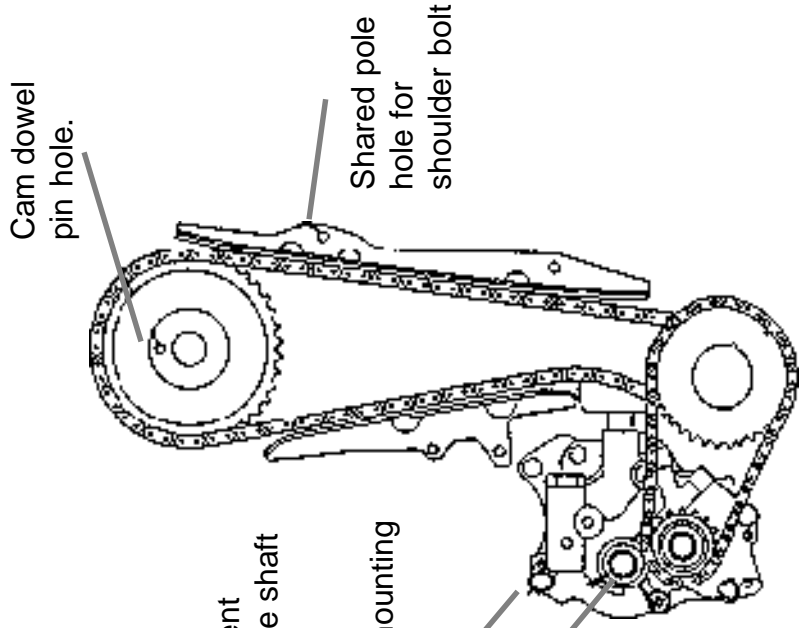
Block must be cleared thoroughly. Removing all old gasket material. Use new mounting gasket (order part # GOPG54) and do not apply any sealant. Dowels must be properly located in block and pump must be flush with mounting surface.



**Figure 2: Timing & oil pump drive system**

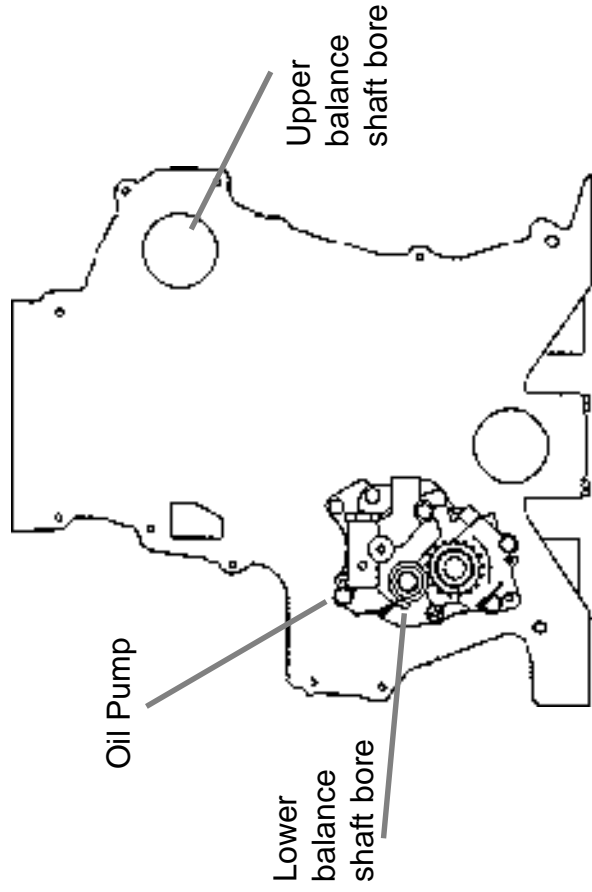
Use original equipment mounting and balance shaft bolts only.

Do not over torque mounting bolts.



**Figure 3: Hollow Bushing Plug**

**Figure 4: Balance Shaft Bore**



Fill pump with oil before mounting, prime engine by rotating pump in direction shown until oil pressure builds up in engine before installing balance shaft chain.

Torque Specs

**Oil Pump Mounting Bolts:** 5 11-lbs. / 9 NM

**Gear & Balance Shaft:** 44-50 ft.-lbs. / 60-70 NM