Installation Instructions
8-5145 Gear Drive

BEFORE YOU BEGIN: *READ ALL OF THESE INSTRUCTIONS FIRST* !!!

Note: The installation procedures which follow assume that the engine has been disassembled and cleaned as it would be for a normal timing set change.

The following are some important notes concerning the installation of this gear drive.

1. The reverse idler gear (18 tooth idler) should have between .005 and .070 in vertical travel when the set is installed on the engine with the power idler (21 tooth idler) in hard mesh between the crank and cam gears. If this is not the case excessive, heat can be generated causing damage to the gear set.
2. The purpose of the reverse idler gear is to prevent the power idler from disengaging when the crankshaft rotates backwards as happens in shutting off the engine.
3. The engine is timed with the timing marks facing one another just as you would with a chain and sprocket drive.(Refer to Figure 1)
4. If a factory timing cover is not used some minor machining to the timing cover may be needed for use with this set.
5. Idler pins will always be in contact with the timing cover during use. **Back of idler pins must have a minimum of .015 clearance to block.**
6. The Dual Idler Gear Drive is intended for use with a harmonic balancer. **It is not for use with an aluminum hub.**

Installation instructions

1. First, place the bronze wear ring on the counterbore side of the camshaft gear. A small amount of grease will keep the ring in place during installation of cam gear.
2. Install the camshaft gear on the camshaft and torque to factory specs.
3. Install the crankshaft gear on the crankshaft using the desired keyway. The rounded keyway is for standard camshaft timing. The triangle shaped keyway is for 4-degree camshaft advance while the flat topped keyway is for 4-degree camshaft retard.
4. Align the timing marks as shown in Figure 1.
5. Install the idler bracket in place. (It may be necessary to rotate the engine slightly to align the gears)
6. After idler bracket is in place turn the crankshaft forward slightly to place the power idler in hard mesh. The reverse idler **must** have between .005 to .070 in vertical travel.
7. Pull the idler gears halfway out of mesh with the crank gear. With timing cover gasket in place take timing cover and push into place. Remove timing cover and that is where the idler bracket will run. If the front of the idler gears do not line up with the front of the crankshaft gears, machining of the timing cover is required. (Refer to Figure 2.)
8. After the idler gear alignment has been completed; check the clearance between the idler pins and the block. There should be between .015 and .060 in clearance. Remove the idler bracket and grind off end of idler pin if necessary to achieve the required clearance.

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9. Replace the idler bracket and install the timing cover.

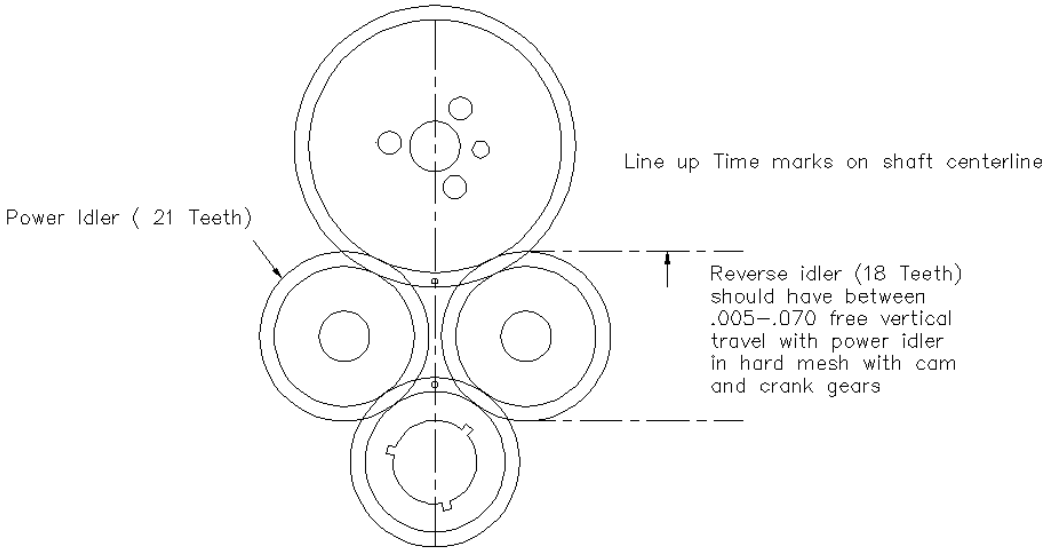

Figure 1

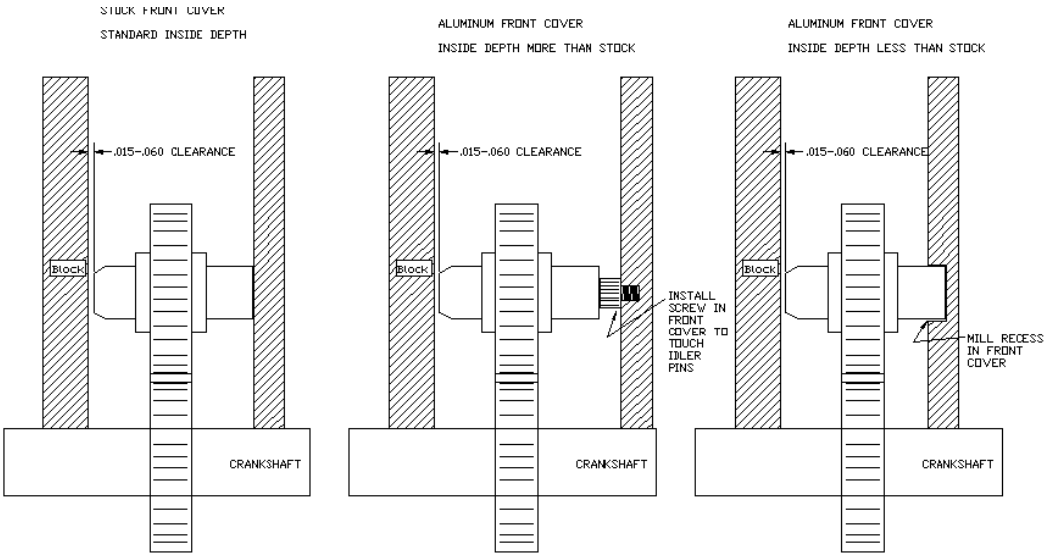

Figure 2

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