

TECHNICAL BULLETIN

TB NO.1015
REV. 1

Subject: **ALTERATION OF ENGINE FIRING ORDERING**

REFERENCE: All Vee Style Superior Engines

PURPOSE: To provide a smoother running engine and for better distribution of crankshaft journal loading resulting from cylinder combustion.

MATERIALS REQUIRED: New Ignition Wiring Harness
NOTE: The existing harness may be spliced if desired.

RESULTS: As examples the original firing order, which fires 1R - 1L - and so on, is altered to:

Counter-Clockwise Rotation

1R-6L-4R-3L-2R-5L-6R-1L-3R-4L-5R-2L

1R-8L-3R-6L-7R-2L-4R-5L-8R-1L-6R-3L-2R-7L-5R-4L

or

1R-8L-3R-6L-2R-7L-5R-4L-8R-1L-6R-3L-7R-2L-4R-5L

NOTE: The original firing order for the right bank does not change (refer to the instruction manual). The left bank camshaft is rotated 180 degrees, and the ignition is altered for the new sequence.

PROCEDURE:

With both the intake and exhaust cam followers resting on the base circle of the cam lobes, set the rocker-arms of the No.1 right and the No.6 or No.8 left cylinders at .125" valve lash.

2. Check and adjust the camshaft drive chains to the recommended tension.

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3. Loosen the bolts in the camshaft sprocket and hub assemblies.
4. Rotate the engine (crankshaft) until the correct flywheel degree mark (see your engine manual) for the No.1/6 or No.1/8 right bank is aligned with the right bank pointer.
5. Rotate the right bank camshaft, in the direction of normal rotation, until the intake valve (No.1 right) begins to open.
6. Tighten the right camshaft hub bolts.
7. Rotate the engine crankshaft (counter clockwise/facing flywheel) until the correct flywheel degree mark (see your engine Manual) for the No.1/6 or No.1/8 left bank is aligned with the left bank pointer.
NOTE: During this step the engine crankshaft is rotated less than 270 degrees.
8. Rotate the left bank camshaft, in the direction of normal rotation, until the intake valve (No.6 left or No.8 left) begins to open.
9. Tighten the left camshaft hub bolts.
10. It is recommended that the timing of the valve opening and closing of the No.1 and No.6 or No.8 cylinders be checked and recorded for both the right and left bank camshafts.
11. Insure that all hub bolts are tightened and tie-wired.
12. Disconnect the magneto wiring harness leads at each cylinder coil. Disconnect the harness from the magneto.
13. Connect the new harness to the magneto and wire to each cylinder coil to correlate with the new firing order.

NOTE:

- a. The existing wiring harness may be spliced to accommodate the new firing order.
- b. A nylon strap wrench is recommended for rotating the camshafts.
- c. All rocker-arms must be adjusted for proper running lash (see your engine manual) after work is completed.

For further information concerning Superior engine firing orders (inline or vees), please contact **EnDyn's** Technical Service Department or your local authorized **PowerParts®** Distributor.