1968 Corvette: Engineering Service Letter: Incorrect Camshafts in Production at Flint Engine Plant

Subject: Incorrect Camshafts in Production at Flint Engine Plant
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CAMSHAFT PROBLEMS - Continued

Incorrect Camshaft

At the V-8 Plant, only three different camshafts are used in production: 302 mechanical lifter, cat no. 9347; 327 Corvette hydraulic lifter hi-lift, cast no. 3152; and cast no. camshaft 6930 which fits all other Flint V-8 engines in current production.

When a hi-performance camshaft is erroneously installed in a regular V-8 engine, it will have the following noticeable effects:

- Rough idle.
- Low vacuum
- Compression may be noticeably lower, but even, particularly when a mechanical lifter camshaft has been erroneously installed.

Since installation of wrong camshaft seldom happens, all other factors contributing to rough idle and lower power should be checked first, such as electrical, carburetion, and intake manifold problems.

If it is determined the camshaft is at fault, final identification of wrong camshaft will be made with the cast numbers on the shaft.

Incorrectly Ground Camshaft

Most frequent grind problem on camshafts is that which causes excessive base circle runout which prevents proper closing of the valves.

The effects of this problem are a poor quality idle and, in most cases, an uneven compression reading as well as low vacuum.

After eliminating electrical and carburetion problems, a poorly ground camshaft (for base circle) can be detected by the following method:

- With the engine running, back off all lifters to zero lash. This should improve idle quality and raise vacuum reading.
- If lower (uneven compression readings have been noted), perform a compression reading test with the lifters backed off to zero lash. The compression reading should be normal indicating a camshaft problem.

Base circle runout cannot be physically seen on the camshaft. it would be difficult to check for this condition in the field; however, the above mentioned check procedure should isolate the problem.