

Stock water pump drive. No aftermarket replacement parts available.

Left: early-style 1992 and 1993 timing set cover; middle: 1994 and 1995 cover; right: 1996 and 1997 timing set cover. Notice the crank sensor mount (arrow) on the late style.

The first production LT1 chain was a “link”-style chain. The second design turned into a “bicycle” style. The LT4 version is much more of a true roller style.

Camshaft

All of the factory-design camshafts for the LT1/LT4 engines are of the hydraulic roller variety. Generally speaking, there are five different camshaft grinds.

The camshafts for all LT1 and LT4 engines are the same; the only difference is the length of the drive pin and the center hole to receive a late-model distributor.

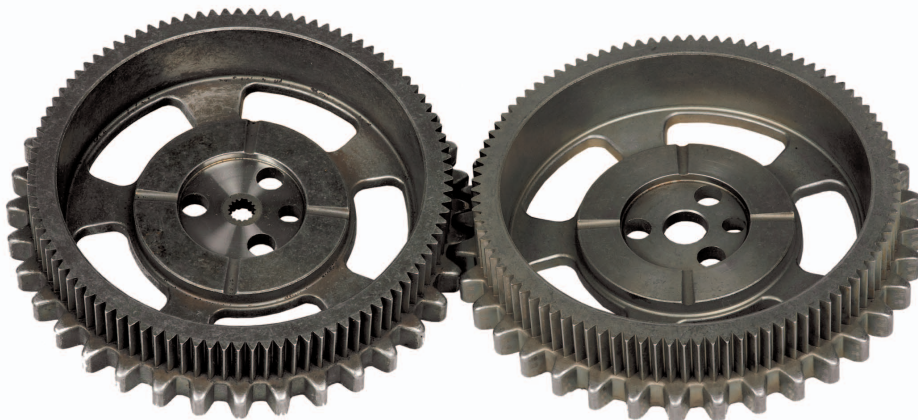
There are two styles of camshaft snout. The “early” snout from 1992 to 1995 with aluminum heads has a shallow hole and a short drive pin. The “late” snout from 1995 to 1997 with aluminum heads has a larger, deeper hole and a longer drive pin. Any GM small-block camshaft can be drilled for the late-design distributor to install the long pin. All iron-headed LT1s have the late-style cam snout.

When measuring your camshaft, make sure your test data is collected at the same value. The industry standard is .050-inch lift, and you see cam specifications called out at this lift dimension on cam cards and spec sheets.

These factory camshafts do not have casting numbers like most other parts of the engine. Instead they are stamped with ID numbers.

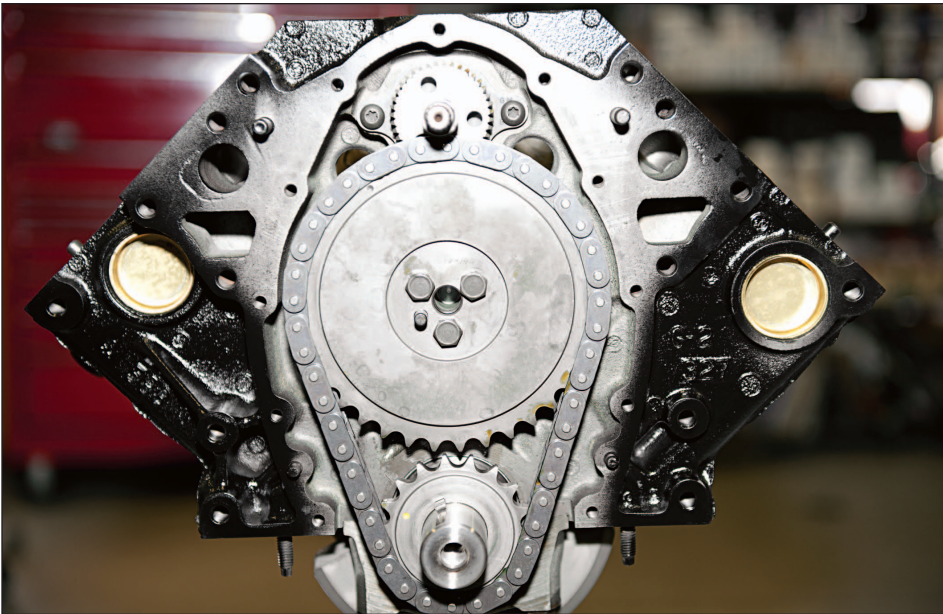
Lifters

The factory lifters in the LT engines are all of the same design: hydraulic rollers. These are interchangeable with all hydraulic-roller, small-block Chevrolet engines dating back to the late-1986 Corvette. All aluminum-headed engines (including the L98 and LT1/LT4) can accept this style of lifter without modification.

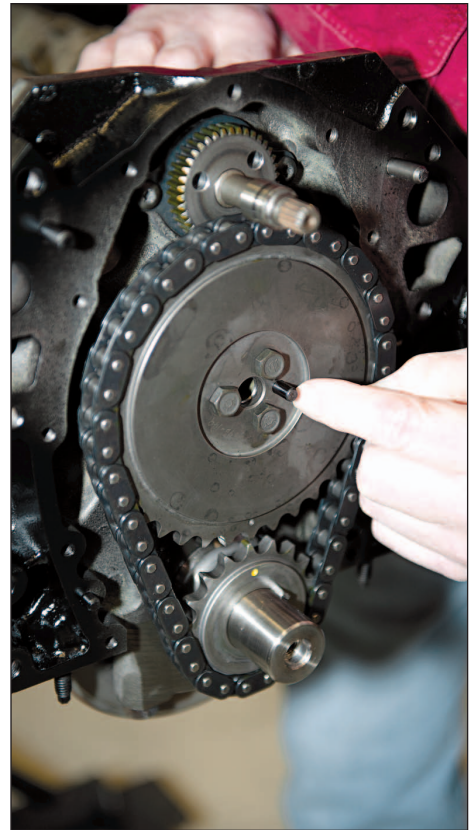


Left: early-style LT timing chain gear with a splined distributor drive center hole; right: late-style gear with smooth hole; pin driven.

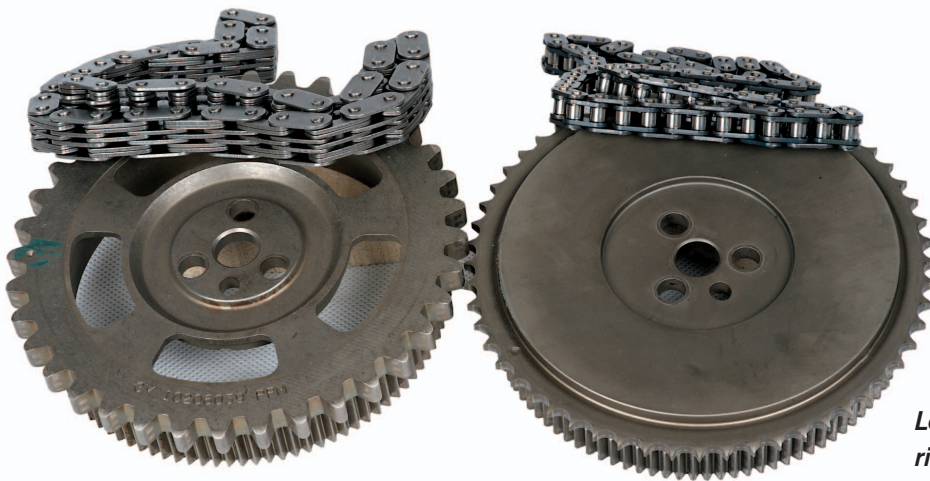
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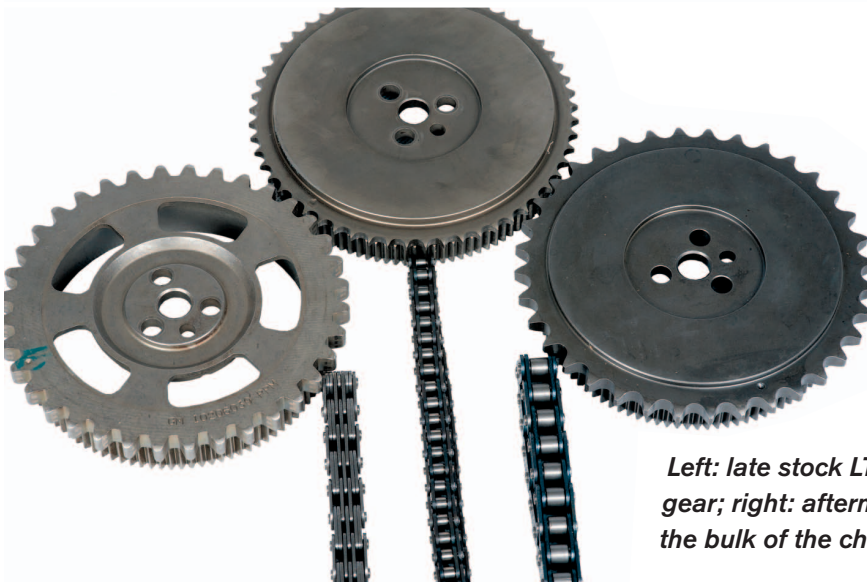
A completed and installed cam and timing set.



Here we point out the only way a cam can be installed on the timing set, making it virtually idiot proof.



Left: standard LT timing chain and gear; right: LT4 gear and chain.



Left: late stock LT1 chain and gear; middle: stock LT4 chain and gear; right: aftermarket billet gear and true roller chain. Notice the bulk of the chain and gear set.