

TWINCAM NOISE

The front of the Lotus twincam engine can be an area rich in strange sounds. They're fairly easy to sort out, especially if you are aware of the frequently experienced ones. Timing chain noise is fairly common. It's a clackety-clack sound usually heard at the idle range only. Remedy is to adjust the slack in the chain to the 1/2" free play specification called for in the manual. The following is a method which is a satisfactory method, requiring no removal of the cam cover. With the engine at operating temperature the rattle should be obvious. If not, loosen the adjuster lock nut and back off slowly (unscrew), usually not more than one turn, until you hear a pronounced rattle. Now slowly turn the screw in until the noise just disappears (800-1000 RPM). Lock the lock nut. This method, if done properly, will result in the proper freeplay between the cam sprockets. If any doubt exists use the cam cover removal-visual inspection method. NEVER RUN YOUR TWINCAM WITHOUT PROPER FREEPLAY OR YOU MAY BREAK A CAMSHAFT!!

Another noise which can be difficult to sort is a dead ball bearing in the front of the Lucas generator. They can scream, grind, and give off a hissing noise which sounds exactly like a blown exhaust manifold gasket. The syndrome is usually evident at first after a long hot run. Gradually it is constant. The culprit is a cheap, unsealed bearing which eventually loses all its lubricant at 20,000-30,000 miles. First impulse is to spend your cash on another unit, which is unfortunate because they will last forever if properly maintained and outfitted with a good bearing. Experience with a number of the units has shown two differently designed bearing case retainers. One version has the alloy hub and a retaining plate riveted together. It's simple to grind or file off the rivet heads and punch the rivets out. A later version has no rivets or plate, but an inside circlip which must be removed (screwdrivers forever). In either case you must remove the old bearing from the shaft. Any good puller will do. Use a good sealed, bearing for replacement (Fafnir 202K, MRC 202S, SKF 6202, New Departure 3202). Find a piece of pipe or other suitable tube to use as a driver, position new bearing carefully and drive it on. A good plan is to use Loctite bearing preparation or equivalent. To secure the rivet style case and plate use machine screws and nuts or tap the alloy case. None of the original seals need be used.

A third noise is that of a failed waterpump bearing. They whine, grind, rattle and yowl, but sometimes make no noise at all. You can head off problems here by checking for play at the fan blade-shaft area periodically. The pump is critical. If you suspect something confirm or completely eliminate it before that next long trip. Refer to water pump repair article 26CS021. Just before going to press the author's water pump let go completely with no warning. Immediate shutdown was required. The bearing shaft spindle assembly had lost all the ball bearings. The few engine revolutions before shutdown resulted in the fan pulley chewing into the aluminum timing case in several places. Nothing to fool with. Life of that pump, 40,000 miles.