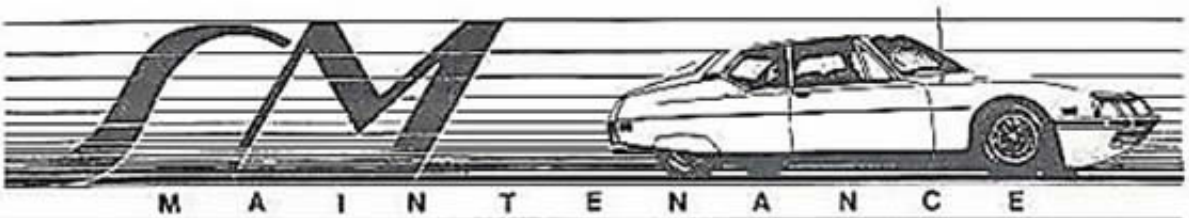
close window



M A I N T E N A N C E

REPLACING PRIMARY CHAIN & TENSIONER

In cases of abnormal engine noise, especially when using the air conditioner, proper tensioning of the primary chain should be checked.

Take a pair of large vise grips or a pipe wrench and grab the accessory drive shaft, close to the engine end, and try to move it slightly. If you notice an ease of movement followed by resistance, in either direction, the primary tensioner has come to the end of its effective range. A normal healthy chain and tensioner should exhibit no play at all during this test. When applying force with the wrench do not exceed 20-25 ft lbs of torque. You are only looking for a play range of 10-15 degrees of arc. Any engine whose chains have not been changed usually need it between 45,000 to 50,000 miles.

PROCEDURE

1. Remove cam covers
2. Bring piston #1 to TDC end of exhaust, start of intake. In this position all long timing marks should line up with index marks on the cam bearing caps. Note: if the primary chain has broken remove both cam chains and cylinder heads and inspect for bent or broken valves.
3. Loosen the front cap on each camshaft and insert a strip of leather between the cap and the shaft. Then, retighten the cap slightly to lock the camshaft. Insert the leather only 1/3rd of the distance of the width of the cap.
4. Remove exhaust pipes from headers and primary muffler. Remove asbestos heat shields.
5. Drain engine oil and remove oil pan.
6. Remove oil pump and splash pan.
7. Remove intake manifold with carbs and linkage.
8. Remove water distribution pipe and water pump cover.
9. Remove timing cover and guide it carefully up over the top of the engine. Be careful not to bend or strain the oil pump drive shaft on the end of the crankshaft. Pull it out of the crankshaft and turn it around and reinsert it to equalize wear in the splines.
11. Remove the tensioner and chain limiter and look in the oil pan for any parts that may have broken off the tensioner, limiter, or tension shoe.
12. Remove the primary chain by grinding one of the links with a high speed grinder or cutoff wheel.

REASSEMBLY

1. Mount a new primary chain Part # L 5405683 with master link part # 5423424. Before mounting the chain observe that the 0 on the crankshaft sprocket should line up with the 0 on the block. As the chain is installed make sure that it is tight on the left span and slack on the right span.
2. Observe the old tensioner and make sure that you have ordered the proper one as two styles were used. As a rule engines with five speed gearboxes use the new type tensioner, if their number is above 200263. Above 250045 if the engine has an automatic gearbox.
3. Mount the tensioner and tighten the bolt to 9 ft lbs. Make sure that you put the washer between the block and the tensioner.
4. Mount the curved shoe and tighten the bolt to 8 ft lbs. The washer goes between the shoe and the block.
5. Release the tensioner spring by turning the lock screw ½ turn. The tensioner shoe will now apply pressure to the chain.
6. Install the chain limiter and tighten the bolts to 8 ft lbs. Make sure the clearence between the span of the chain and the limiter is .008".
7. Press out the old shaft seal in the timing cover and press in a new one. Replace the main oil gallery seal on the timing cover.

(continued on p.5)