THE PREVENTIVE MAINTENANCE SERIES

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Oil leaks can be caused by, or prevented with, technique and parts choice.

Oil Filter: GM called for 15-20 ft.lbs. of torque (15 seems to work fine), which is necessary for this type of filter. Many folks do not do this and leaks occur. Follow up with a check of the torque a week later, and do not use the filters with the cap type outer rubber gaskets; they may not let the center seal reach its seat. These gaskets were an early ’60 design but for some reason have re-appeared.

Oil Cooler: When you tighten the oil cooler you are pressing metal to metal which gives a specific crush to the two seals. The book calls for 8-12 ft.lbs.; more tightening will only distort the cooler.

Rear Cover: There is more than one gasket available for the rear engine cover. The original style gasket thickness is 0.015” thick, a bit soft, and will crush around the four stud holes with the recommended 40-50 ft.lbs. Another available gasket is 0.030” thick with much harder composition. It appears to withstand the higher torque, but since you are tightening four nuts on 3/8” studs in aluminum, it would seem the torque recommendation is high – you risk pulling the studs as well as crushing the gasket. I have been successfully using the thicker gasket (red-pink in color) with 35 ft.lbs. The thinner gasket may also work with the lower torque reading but I have not tried it. Of course the mating seal areas must be clean and not dented or deeply scratched. If the mating surfaces are perfect then no gasket sealer is necessary and this would be ideal. If you think sealer is appropriate, use a very light coat to prevent it winding up in the oil passages. Coppercoat in a spray can works well for this.

Crankshaft Seal: There are several considerations. Do not use an NOS GM seal, and do not use a seal with out the rubber press fit area (some were metal and would fall out when hot). Use either the black or the Viton reproductions. Press the seal in carefully, making sure it will not spring back out; I use Coppercoat (liquid) which lubricates and seals. Once installed, check for distortion and be sure the lip spring is in place. Pack the area between the seal lips with grease – the Viton outer lip will adhere to the hub and crumble if you do not. Polish the crank hub and check for a wear groove; if you have a really bad groove, you can change bell housings to relocate the seal lips (see previous PMS article 12/2009).

Pushrod Tube Seals: Use only Viton seals, clean the seating areas, and remember that the small flange end of the tube goes in the crankcase. I use Coppercoat (liquid) on the seals to both lubricate and compensate for flaws and baked on oil residue. Lightly tap on the end of the tubes with a socket to seat them completely.

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