



PROVERBIAL REAR MAIN LEAK

After 30 plus years of experience with the Model A & B engines, the most common problem is a rear main oil leak. This problem can be very simple to correct or it can turn into costly time consuming job. What is important is a correct diagnoses. You do not want to rebuild engine if you have a bad oil filler cap. Do not assume the worst until you have checked out the problem thoroughly.

1. After wiping clean flywheel housing. Check that oil is leaking from out of cotter pin hole at bottom of flywheel housing. If oil does not leak out of cotter pin hole you have a leak some place else, suggestions oil pan, timing case cover, front seal, valve cover, oil pipe to mention a few. Most oil leaks drip off of the cotter pin. You need to determine that oil is leaking out of the cotter pin hole not off of the cotter pin to be a rear main leak. If oil is leaking out of cotter pin hole go to step 2.
2. Remove oil filler cap check to see that oil filler pipe is not restricted or plugged. With oil filler cap removed from car take car for a drive. If leak stopped the oil filler cap is bad. There are tabs bent over under top of cap to stop cap from seating all the way down. The stops could be bent or missing on your cap. This will seal crankcase pressures in and will force oil out. Replace oil filler cap. This is a common problem, overlooked and easy to fix.
3. Hold a plastic food storage bag around oil filler pipe and bring engine to high idle. Bag should flutter if does not and fills up with air, you have excessive blow by in crankcase. This can be caused by bad rings, pistons, cylinders or possibly valves and guides. Excessive pressures in crankcase will cause oil to leak out rear main and any other place not sealed.
4. If above is all good now remove half moon inspection cover on flywheel housing, three hex head screws. Chock wheels. Check to see if inside of flywheel is wet with oil. If flywheel is wet inside this means oil is leaking out rear main cap and or cap to block. Start engine, with flash light look for oil leak. EXHAUST IS HOT AND MUST BE VENTED.

POSSIBLE PLACES FOR OIL LEAK.

Checking inside flywheel housing with half moon cover removed.

Engine running

- A. Dripping or running down right side of engine around outside of rear main cap. Probably gasket between engine and flywheel housing. Remove engine and replace gasket. We seal around camshaft hole with RTV no longer use a gasket.
- B. Dripping between rear main cap and block at shims. Cap must fit flat to engine block. Rear seal part A6335 must be filed flat with block. I use a thin film of RTV on both sides of shim to prevent leakage.
- C. Dripping out side of rear main block could be oil running up rear main bolts, I use RTV under heads of the rear main bolts and on threads of the two upper bolts that secure flywheel housing to block. These leaks are generally slow drips and are not common.
- D. Dripping or running out of back of rear main cap into flywheel is common. This is a rear main leak. If you have not seen oil leak at this time take car for a drive, immediately chock wheels and check again. If rear main leaks. Remove oil pan.
- E. Check oil tube on rear main cap that it is not missing, broken or cut off. The end of this pipe must be in oil in bottom of sump. If pipe is not in oil, pressures in crankcase will blow oil out rear main. If pipe is screwed into cap too far this will restrict oil flow back to sump and cause rear main leak. The oil galley plug in rear main should be installed again to stop crankcase pressures from pushing oil out rear main. Next remove rear main cap, oil galley in cap must be open and clean so oil can flow back to sump. With cap removed from engine you can now inspect Babbitt for wear, cracks chips, ECT. The last quarter inch of the bearing must be full diameter of Babbitt no cuts, grooves or chips. Shims must fit tight to crankshaft. Plastigage can be used to check bearing clearance at this time with engine still in car. I suggest a jack be used to apply pressure upward on crankshaft. This will seat crankshaft up into bearings in block to give you an accurate measurement. Desired clearance is .001 to .0015.

By now you should have diagnosed the problem. I hope that your problem was easy to fix. I have seen newly rebuilt engines leak and

many times it was just the oil filler cap. Do not assume the worst till you have checked out the problem thoroughly.

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