

Q: What are likely sources of oil leaks from an Atomic 4?

A: Most oil leaks occur along the carburetor side of the engine. Starting at the flywheel end of the engine and working rearward, leaks could be from the oil sending unit directly behind the flywheel housing (or from its connecting fittings), from under the valve cover, from between the block and fuel pump, or from around the oil pressure regulating valve.

NOTE: On (later) late model engines, the surface of the block where the valve cover gasket seats is sometimes rather irregular and difficult to seal. You may have to put a slight bend in the cover to pull the ends in against the block to prevent leaks.

If the leak seems to be from the rear of the engine, the rear seal around the output coupling could be leaking. However, almost all leaks from along the carburetor side of the engine usually run back along the upper ledge of the oil pan and end up dripping off the aft end of the engine. Therefore, to be certain that the rear oil seal is really leaking, it is necessary to thoroughly clean the rear end of the oil pan so that the oil can actually be seen to run down from the seal.

On the starter side of the engine, leaks are usually limited to the area of the water pump and accessory drive, with the shaft seal of the pump (the seal toward the engine) being the most likely. If this seal is leaking, you should be able to feel oil dripping out of the weep hole in the housing of the pump, between the mounting flange and the impeller section. Leaks from the oil seal of the water pump have the potential to leak up to a quart per hour in worst cases.

Still in the area of the water pump, the lower bolt of the mounting flange of the pump, or the lower bolt in the flange of the accessory drive (both of which enter into the crankcase) will at times allow a small amount of oil to drip from out of the crankcase.

If the leak is clearly coming from the front of the engine, it could be that the return holes in the flywheel housing below the air seal (or "slinger seal") around the front of the crankshaft are clogged. When these holes are clogged, oil being flung outward by the tapered collar around the front of the crankshaft cannot drain back into the crankcase, and it is leaking (instead) down behind the flywheel, along the front face of the flywheel housing, and out through a drain hole in the bottom of the same housing.