

Massive Oil Leak

by Tom Endy

A fellow Model A owner recently sold his Model A to a person who knew nothing about Model A's. The Model A was a 1930 Tudor that I was very familiar with. It had belonged to a friend that lives down the street from me. We had both done a lot of work on this car, and we had it in excellent condition. The new owner had spotted the Model A sitting in my friend's driveway and decided he had to have it. He approached my friend and offered him an unusually high price that he could not refuse.

A few weeks later the new owner came driving up to my house with my friend in the passenger seat and with oil pouring out from underneath the car. Upon examination we discovered the oil was coming out through the cotter pin drain hole in the bottom of the flywheel housing. This was not just a little oil leak, it was massive; oil was pouring out the flywheel housing hole in a steady stream as long as the engine was running.

My friend and I both felt an obligation to determine the problem and correct it. My thinking was that the oil was coming out through the rear main bearing and into the flywheel housing. This had to be caused by one of several malfunctions. The oil pipe attached to the rear main bearing cap could be plugged with debris. The thrust washer could have broken off and fallen away. The babbitt in the rear main may have failed and fallen out. The engine had recently been overhauled and re-babbitted and only had a few hundred miles on it and it ran very well.

The decision was made to drop the pan and remove the rear main bearing cap for inspection. When the task was complete we could find nothing out of the ordinary. The thrust washer was intact, the bearing was intact, and the return pipe was not plugged. We were somewhat stymied. Oil had been pouring out over the rear main bearing labyrinth seal, but why?

We had no other choice but to put everything back together without doing anything to resolve the problem. When everything was back together I went about the task of putting new oil into the engine.

I went to pull the cap off the end of the breather tube and the whole assembly came out from the engine block. A closer look revealed that the cap on the end of the breather tube was not original Model A. Instead it was round and highly polished chrome. It did not have any vent passages to allow venting of the crankcase. We tried blowing through the breather tube toward the cap, it was totally plugged off, and there was no venting.

We quizzed the owner and found that he had recently purchased the cap along with an abundance of other glitter accessories from a local Model A supplier and had installed it on the car a few days before. This day was the first time he had driven the car and the first time oil had poured out the rear main.

We had some difficulty removing the accessory breather tube cap, as it was jammed tight into the end of the breather tube. When we finally got it off we discarded it and installed a proper Model A cap. We started the engine and there was no oil leak. I was astounded; I knew an engine crankcase had to be vented, but I had no idea that completely plugging off the breather tube would have such a dramatic affect and cause such a massive oil leak.

Apparently a Model A engine can build up a tremendous amount of pressure inside the crankcase if the breather tube is plugged off. The pressure must be created by some amount of compression that sneaks past the piston rings and into the crankcase. This pressurization must be sufficient enough to cause oil from the rear main bearing to be forced out through the labyrinth rear oil seal.

This could have been a real disaster for the new owner if he had continued to drive the car and had not become aware of the oil leak. He would have soon starved the engine of oil and destroyed it,

The lesson learned here is that a blocked off Model A breather tube will cause excessive crankcase pressure that will force massive amounts of oil to pour out over the rear main bearing labyrinth seal.

This is something that should be considered by Model A owners when they get the idea of jamming a roll of steel wool or a Brillo pad into the breather tube cap to provide filtering of the air.