

The Preventive Maintenance Series

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1966-1969 4 Speed Transmission Tips

Along with normal hand tools, you will need snap ring pliers (the snap rings are different sizes but one larger pliers will fit them all), and a press with large clamshell and suitable pipes, sockets, etc. to remove and install the synchronizer hubs and the rear bearing. PVC tubing is strong enough to fabricate "pressing on" tools.

Be aware of the following:

- The main shaft clutch gear bearing is available locally, such as NAPA, but the new snap ring that comes on the bearing is larger than the original; it will interfere with the retainer (cover). Transfer the old snap ring to the new bearing.
- The rear main shaft bearing is harder to find, so plan ahead. Parts stores will order what is supposed to be an exact replacement but it will be missing the shield. How important the shield is may be up for discussion, but I would try to get the correct part if at all possible. CCP carries it.
- To fabricate a dummy shaft for the counter gear, I cut a section from a spare Powerglide turbine shaft, which is the perfect size. Chamfer the cut ends slightly. Or you could shop at [Metal By The Foot](#) and pick up a 15/16 solid metal dowel or even use a wooden dowel since once you start the counter shaft moving, a wooden dowel would complete the job without significant effort. The length needed is 8 3/8".
- Be sure and start to remove the counter shaft by driving it towards the differential end. The hole at the opposite end is deformed to prevent movement out of the case, making damage to the shaft possible if you drive it out the wrong way.
- As you check all parts for wear and damage, pay particular attention to the spur gear teeth on the sliding gears, the small teeth on the synchronizer sleeves, the internal splines and key holes on the blocker rings and the spring washer adjacent to first gear. These seem to be more frequent problem areas.
- This is my method of assembling the side cover back on the case: Shift both synchronizers to neutral, set the shifter shaft to neutral, and attach the gasket to the cover with your favorite stuff. Use some Vaseline in the shift fork holes to help reduce fork rotation. Next, set the case opening facing you and slightly elevated. Set the cover bottom in towards the case leaving a wider opening at the top where you can use a long thin screwdriver to align the forks on to the synchronizer sleeves and then close the cover over the alignment pin. Screw in two bolts and check your shifter operation.

Dashboard Warning Lights Revisited

The Temp Press light is connected on one side to positive battery and on the other side to two switches which go to ground, but for different reasons.

1. The oil pressure sending unit (left of the fuel pump except '60 and some '61's) will ground the light anytime the engine is not running or if you have low oil pressure. When the engine starts, the switch goes open due to oil pressure and the light goes out. These switches can fail and stick in the open position, and they can leak oil.
2. The temperature switch (underside of the right head at the rear) is a snap switch; it is always open except for an overheat situation when it goes to ground and turns the light on. The temperature switch does not affect the light except for overheat.

The Gen Fan light is connected on one side to positive battery and the other side to the voltage regulator which is grounded until charging begins. When the engine starts and charging begins, both sides of the light have positive battery and the light is out. If you throw a belt, the charging stops and again the light is grounded on one side and comes on.

Check your system operation every time you run the engine – simply turn the key to on without starting. Both lights should be on and then go out when the engine starts.

Corvair engines do not overheat waiting in a parade. If your Temp Press light flickers, it is due to low oil pressure, not temperature. The faster you drive a Corvair, the hotter the engine – coming back to idle cools it down; just the opposite of water coolers.

There are a lot of oil pressure sending units that will fit a Corvair, and they will vary within the same part number as to what pressure turns the light out. Use an ohm meter, pressure gage and metered air supply to test switches. Most operate between 6-10 pounds.