

SERVICE INSTRUCTION

DATE: April 20, 2001

Service Instruction No. 1506
Engineering Aspects are
FAA Approved

SUBJECT: Replacement of Impulse Coupling Magnetos on 4-Cylinder Engines

MODELS AFFECTED: All Textron Lycoming O, IO, or AEIO-360 series engines presently equipped with impulse coupling magnetos.

TIME OF COMPLIANCE: At owner's discretion.

Presently, magnetos utilize two methods for generating and retarding the ignition spark required for engine starting. The mechanical method, called impulse coupling, uses the energy from a coil spring to snap the magneto through its firing position to produce a spark. The retard breaker or shower of sparks method accomplishes the same thing electronically using an externally mounted ignition vibrator.

The engine may have either one or two impulse coupling magnetos presently installed. If the engine is equipped with two impulse coupling magnetos, a plain magneto should be installed on the right.

NOTE

It may be necessary to contact the airframe manufacturer for possible modifications to the aircraft wiring harness.

1. To replace the left impulse coupling magneto with a retard breaker magneto, first remove nuts, washers, and clamps securing the magneto to the accessory housing. Remove the magneto, adapter and gaskets. Refer to Figure 1.
2. When the impulse coupling magneto has been removed, remove the two P/N 31C-19 studs from the accessory housing and install P/N 31C-12 studs. If minimum (25 in. lbs.) drive torque cannot be reached, install the next larger size oversize studs. The specified driven stud height is .94-.98 in.
3. Select the correct replacement magneto based on ignition timing (See Figure 2). Install the retard breaker magneto and P/N 68C19622 gear as shown in Figure 2. Install a new gasket, P/N LW-12681, between the magneto and the accessory housing.
4. Install ignition vibrator (e.g., Unison Slick Start) available from vibrator manufacturer.
5. Make appropriate logbook entry.

Replacement of impulse coupling magnetos with retard breaker magnetos will require an FAA Form 337 for the airframe. Alternatively, Unison Slick Start can be installed under an STC which can be obtained by contacting Unison Industries – Slick Aircraft Products, 530 Blackhawk Park Avenue, Rockford, IL 61104.

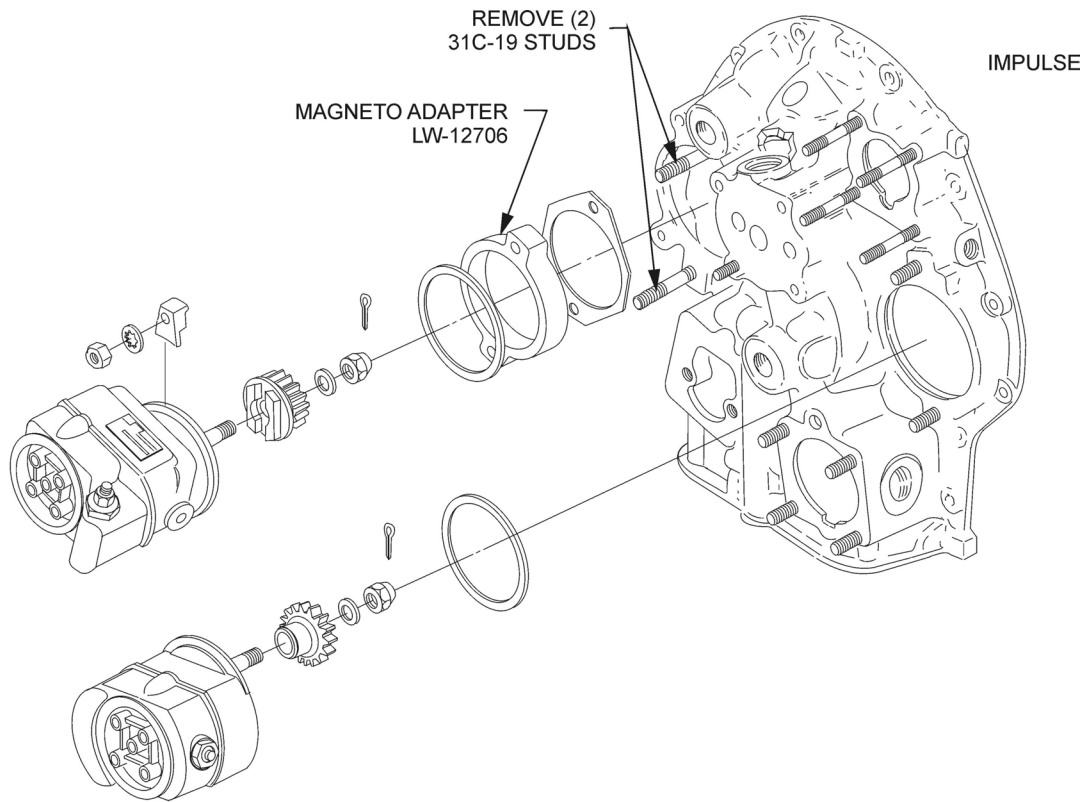


Figure 1 (Removal)

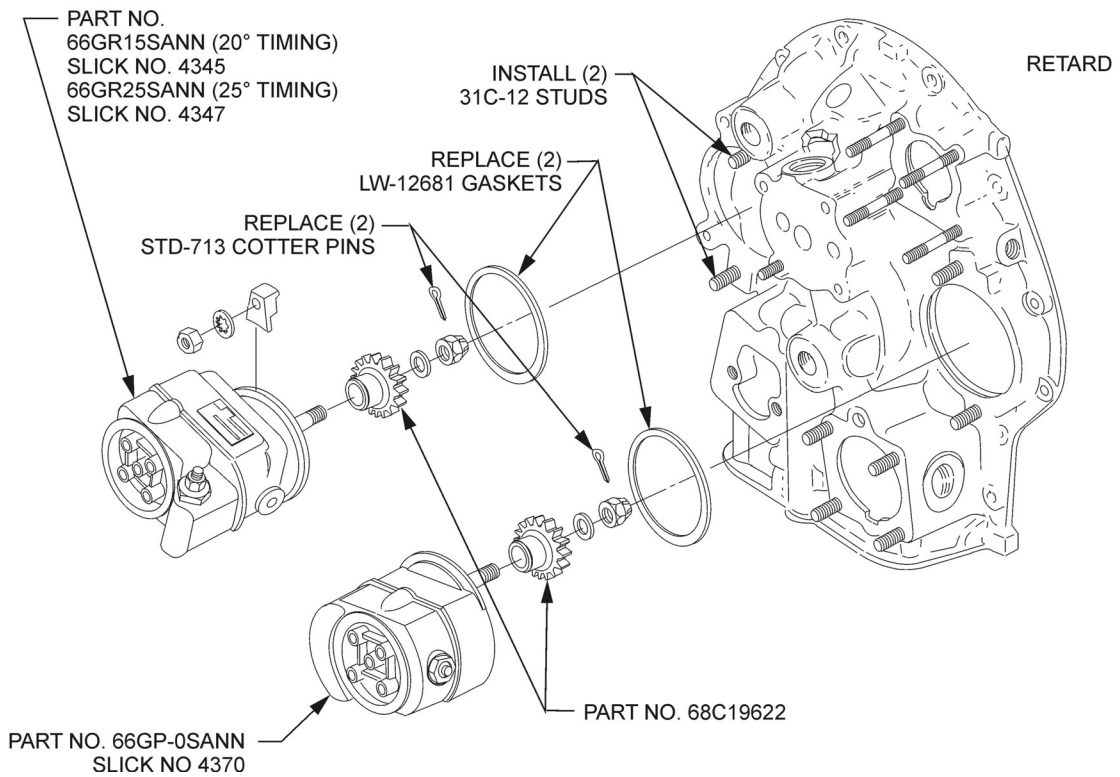


Figure 2 (Installation)