

Borg Warner R-10-R11 Solenoid Removal and Installation:

First disconnect the battery then take a picture of the old solenoid before removing the wires, this way you have a reference point when re-installing. Next remove the wires from the old solenoid and remove the two mounting bolts. Remove the old solenoid by turning 1/4 turn to the right or left to disengage the internal pawl from the solenoid.

Remove the solenoid and the old seal that is inside the hole where the solenoid was inserted. We highly recommend replacing this oil seal so lubricant does not enter the new solenoid. These seals can be installed either way, there is no front or back to the seal just insert with your finger. If having problems removing the old seal, take a hook and pull seal out.

Next apply a small amount of white grease or Vaseline to the center of the seal and the solenoid shaft this will prevent damage to the seal and provide as good seal.

With a set of battery cables or alligator leads, energize the solenoid negative to the solenoid case and the positive to # 4 terminal on the solenoid. (reverse with positive ground system) this will extend the shaft outward.

With the shaft extended, locate the flat spot on the end of the shaft, put the flat spot at 12 o'clock, now insert the solenoid until it stops then rotate 1/4 turn to the left or right, this action will engage the pawl with the solenoid shaft, then line up the bolt holes and install the bolts just tight enough to keep solenoid aligned in housing. Do not over twist the solenoid or force it as you can damage the shaft and points within the solenoid.

Note the new solenoid may have the flat spot on the shaft in a different location, not to worry, if you follow these directions with flat spot at 12 o'clock and insert will always work. Now remove the battery cables and the solenoid will suck in and snug up against the housing then tighten up the bolts. Replace the wiring, reconnect the battery and test for operation. A quick way to test the solenoid for operation, remove the wire going to the governor and ground that wire, this will activate the relay and solenoid, this fools the system and you should hear both relay and solenoid make a clicking sound. When inspecting the solenoid, never press down on the shaft to feel spring tension this can damage and misalign the points inside the solenoid.

