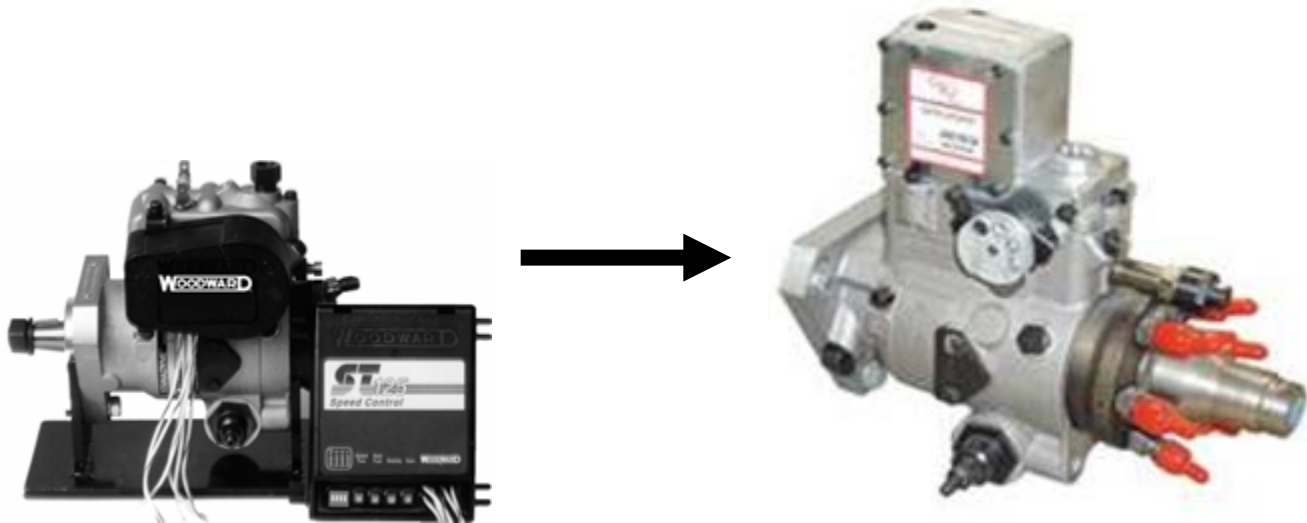


# Replacing a Woodward ST-125 Control System on a Stanadyne “D” Series Fuel Injection Pump with a GAC ADC100

## 1 INTRODUCTION

The following details removal of a Woodward ST-125 actuator on a Stanadyne D Series Fuel Injection Pump in preparation for replacing it with a GAC ADC100 actuator.

Additional steps for the ADC100 installation are available at the GAC website. See your GAC representative for more information.



## 2 MATERIALS AND TOOLS

The following parts are needed for this solution:

PART NUMBER	DESCRIPTION	QTY
16279 (Stanadyne)	Shaft Plug	1
12253 (Stanadyne)	Shaft Plug Retainers (2)	2
14408 (Stanadyne)	Washer	1
17438 (Stanadyne)	Seal (O-ring)	1
GA102 (GAC)	Actuator seal	1
ADC100X-X (GAC)	ADC100 Actuator	1

## 3 COMPLETE SOLUTION

The ADC100 actuator, when paired with any of the following GAC Controllers, is compatible with the ADC100, making a complete solution:

- EEG6500 (Digital)
- ECC328 (No MSP required)
- ESD2244
- ESD2402
- ESD5120
- ESD5500-II
- ESD5520E
- ESD5570

## 4 INSTALLATION PROCEDURE



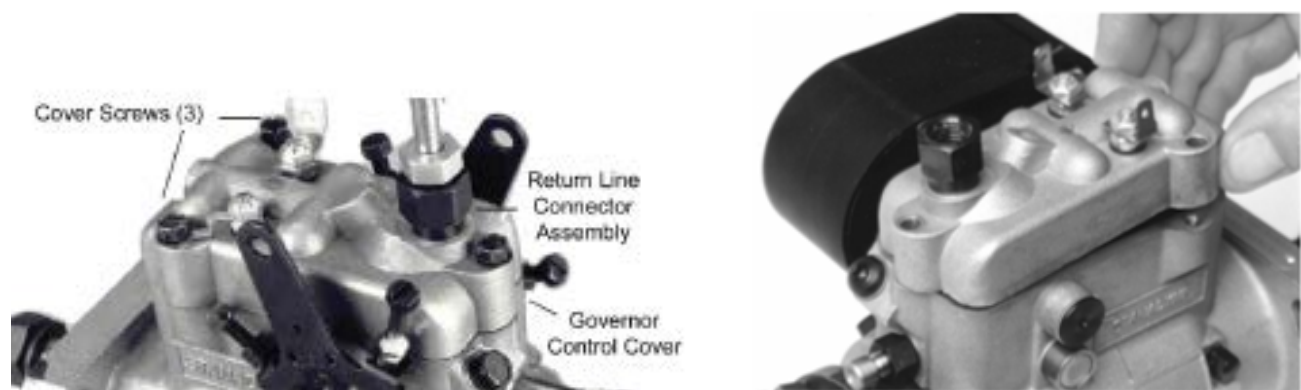
An overspeed shutdown device, Independent of the governor system should be used. Equipment damage or personal injury may result due to loss of engine control

### PREPARING FUEL PUMP

Before the fuel injection pump's governor cover can be removed and replaced by the ADC100 Series electric actuator, it is important for the outside of the pump to be clean. If necessary, remove any dirt with a solvent. This prevents contaminants from entering the pump. Collect the cleaning solvent and any fuel by placing a suitable container under the pump.

1. Disconnect the pump's electric shutoff solenoid wire from its connection point on the pump governor cover. This wire is no longer necessary and can be eliminated at its source.
2. Remove the fuel return line from the fuel return line connector.
3. Remove the three governor cover screws. The cover screws are replaced by mounting screws provided with the ADC100 Series actuator.
4. Remove the governor cover assembly with care (Figure 1) to ensure that no dirt or debris is allowed to enter the fuel injection pump.
5. Remove the return fuel fitting (housing pressure regulator assembly) from the governor cover.

FIGURE 1 REMOVE GOVERNOR COVER



### REMOVING THE ST-125 ACTUATOR

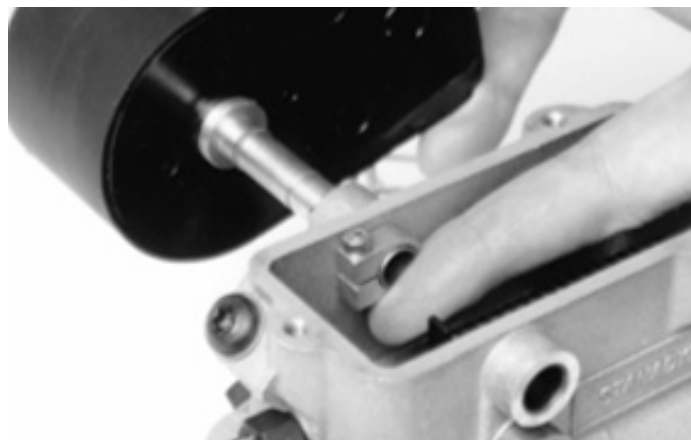
6. Remove shutoff cam (clip) (Figure 2) from the actuator shaft using fingers or gently using a pair of needle nose pliers.

**FIGURE 2 REMOVE SHUT OFF CAM**



7. Loosen the retainer collar on the actuator shaft and slide out actuator holding firmly onto collar so it does not drop into pump (Figure 3).

**FIGURE 3 LOOSEN RETAINER COLLAR**

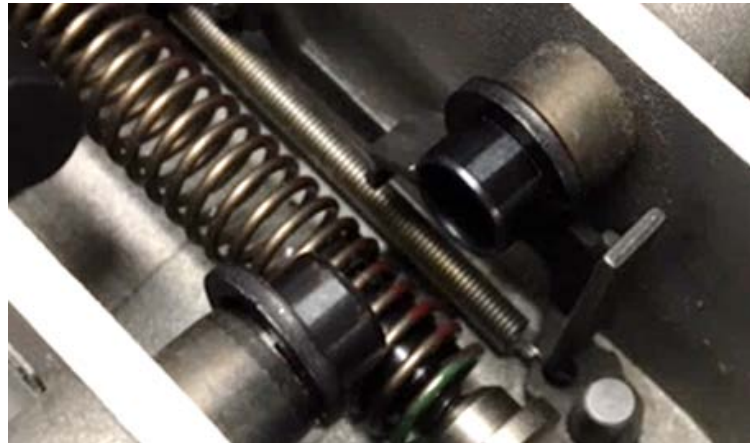


8. Insert shaft plug in place of the 125 actuator and insert the two supplied retaining clips in both throttle shaft plugs (Figures 4 & 5). Use caution when inserting clips.

**FIGURE 4 SHAFT PLUG ASSEMBLY & RETAINING CLIPS**



FIGURE 5 SHAFT PLUGS INSTALLED WITH RETAINING CLIPS



The pump is ready for installation of GAC ADC100 actuator.

## 5 PREPARING TO INSTALL THE ADC100 ACTUATOR



Improper engagement of the actuator to the governor linkage hook could cause an engine over-speed condition.

An overspeed shutdown device, independent of the governor system, should be provided to prevent loss of engine control, which may cause personal injury.

1. Install the return fuel fitting into the ADC100 actuator.
2. Install actuator seal, GAC part number GA102, into the O-ring groove (Figure 6).
3. Position the ADC100 actuator on the fuel injection pump with the tall end of the actuator slightly upward and positioned as closely to front of the governor compartment as possible.
4. Slide the ADC100 actuator toward the rear of the injection pump until the actuator's "U" shaped coupler engages the pump's governor linkage hook. (Figure 6)
5. Securely fasten the ADC100 electric actuator to the fuel injection pump, using the (3) screws provided with the actuator. Torque the screws to 21 lbf-in.

FIGURE 6 INSTALL O-RING

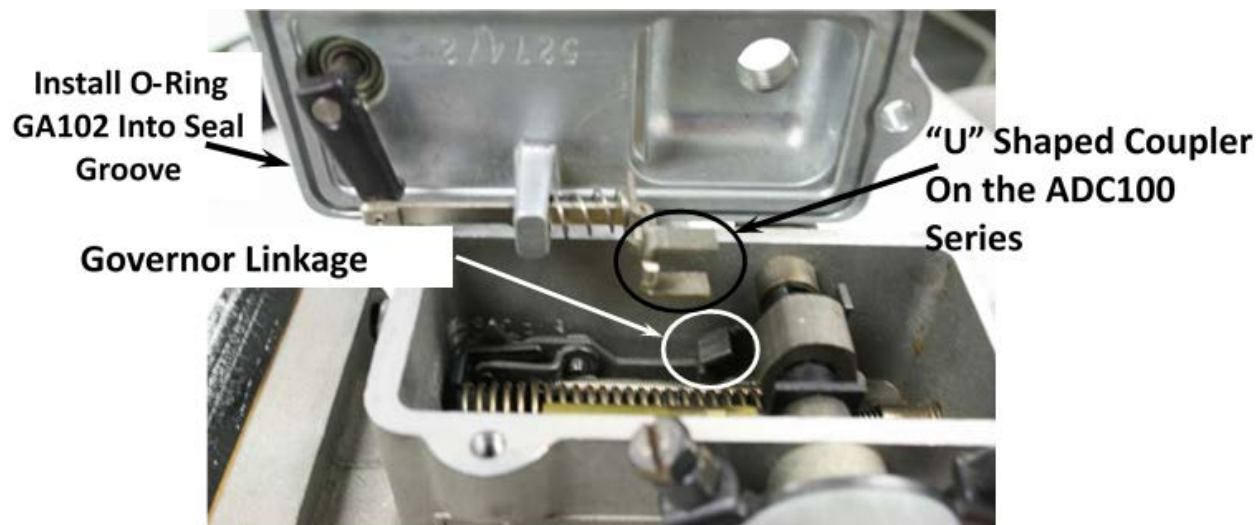


FIGURE 7 MOUNT ADC100



You are now ready to configure your solution. See your ADC100 Installation Manual for details.