

# 1 PREPARING THE 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 will prevent contaminates from entering the pump. The cleaning solvent as well as fuel oil can be collected by placing a suitable container underneath the pump.

1. Disconnect the pump's Electric Shutoff Solenoid wire from its connection point on the pump's Governor Cover. This wire connection is no longer necessary and it can be eliminated at its source.
2. Remove the Fuel Return Line from the Fuel Return Line Connector.
3. Remove the three (3) Governor Cover Screws. These will be replaced by mounting screws provided with the ADC100 Series Actuator.
4. Remove the Governor Cover assembly with care, to insure that no dirt is allowed to enter the fuel injection pump.
5. Remove the Fuel Return Line Connector and the Gasket from the Governor Cover Assembly. Save the Fuel Return Line Connector and Gasket for later assembly use with the ADC100 electric actuator.

# 2 INSTALLING THE ACTUATOR

1. Re-install the straight Fuel Return Line Connector and original pump Gasket to the ADC100 electric actuator.
2. Position the ADC100 electric actuator on the fuel injection pump with the tail end of the electric actuator tilted slightly upward.
3. Slide the ADC100 electric actuator toward the rear (injector) end of the fuel injection pump until the actuator's "U" shaped coupler engages the pump's Governor Linkage Hook. After engagement has been made, align the mounting holes between the electric actuator and the fuel injection pump.

**CAUTION** Improper engagement of the actuator coupler to the pump's Governor Linkage Hook can cause an engine overspeed condition.

4. Securely fasten the ADC100 electric actuator to the fuel injection pump, using the (3) screws provided with the actuator.
5. Re-attach the return Fuel Line to the Fuel Return Line Connector seated on the ADC100 electric actuator.

# 3 FUEL INJECTION PUMP SET-UP

**NOTE** Prior to starting the engine, the pump's shut off lever, throttle lever and mechanical governor must be set, to insure compatibility with the electronic governor.

1. Secure the shut-off lever in the "Run" position, if the Stanadyne pump is equipped with one.
2. Lock the throttle lever in the "Full" fuel setting position. This setting should be 10 - 12% above the desired governor speed.
3. Adjust the pump's mechanical governor Droop by turning the Droop Adjusting Screw counterclockwise (CCW) until it stops. Then turn it clockwise (CW) two turns. This adjustment will provide compatibility between the mechanical governor and the electric governor.
4. Purge the air in the fuel by removing the allen head plug located on top of the actuator.

# 4 WIRING

The ADC100 Series is designed to have a dedicated coil for use in the 12 VDC operation and another dedicated coil for 24 VDC operation. These actuators are respectively identified as ADC100-12 and ADC100-24.

The output from the selected GAC speed control unit is connected to the ADC100 Series actuator using the GAC cable harness CH1215. See the specific speed control unit literature for wiring information.

CH1215 includes the pre-wired actuator mating half connector for the ADC100 Series actuator. The actuator connector offers a vibration resistant and environmentally sealed electrical connection.

# 5 SPECIFICATIONS

POWER INPUT	
Operating Voltage (Dedicated Coil)	12 or 24 VDC Available
Normal Operating Current	1.9 A at 12 VDC 1.5 A at 24 VDC
Maximum Current (Continuous)	2.7 A at 12 VDC 1.9 A at 24 VDC
Coil Resistance	3.3 Ohms at 12 VDC 7.8 Ohms at 24 VDC
ENVIRONMENT	
Operating Temperature Range	-40°F to +180°F (-40°C to +83°C)
Relative Humidity	up to 100%
All Surface Finishes	Fungus Proof and Corrosion Resistant
Agency	RoHS Compliant
PHYSICAL	
Dimensions	See Section 8 OUTLINE DRAWING
Weight	2.2 lb (1.0 kg)
Mounting	Directly on STANADYNE "D" Series Pumps
MATING HARDWARE	
Wiring Harness	CH1215
Includes 2 Wires with Packard connector	



# 6 TROUBLESHOOTING

If the governor system fails to operate and the actuator is suspected to be the problem, make the following tests.	Measure Coil Resistance: 3.3 ohms 12 VDC 7.8 ohms 24 VDC
	Measure Coil Isolation: >1M ohm to ground

Remove actuator cover and manually move the actuator through its range by depressing the actuator's armature. Energize the actuator to full fuel (follow steps in control unit publication). No binding or sticking should occur. Install new cover gasket (GA102) and replace actuator cover.

If the actuator passes these tests, the problem is elsewhere in the governor system. Refer to the speed control unit trouble shooting publication.

# 7 SPEED CONTROL OPTION FOR ADC100

ESD2402  
Analog Speed Control



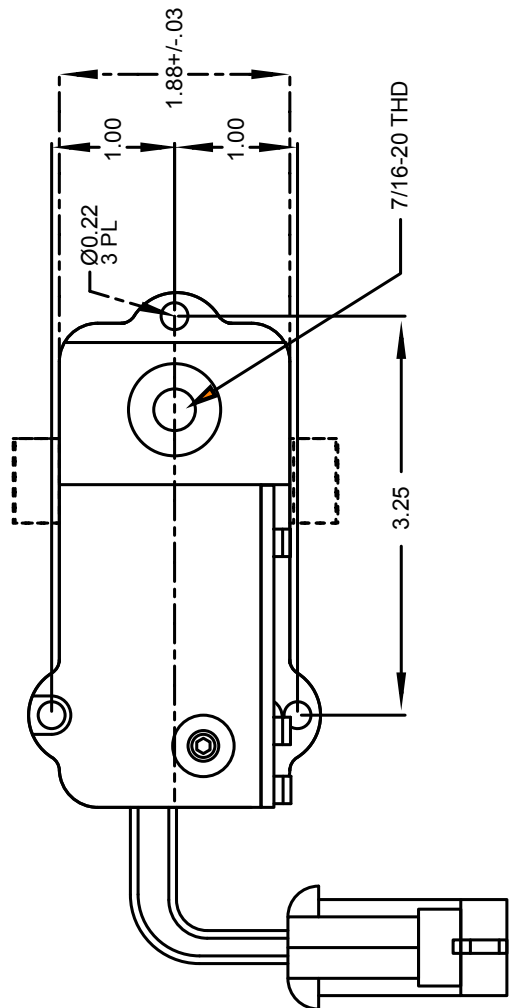
- Light Force
- Low Gain Adjustable
- Idle Speed Adjustment
- Dynamic Control Circuit

The electronic ESD2400 Series speed control delivers a quick and precise response to transient load changes. When coupled with a proportional electric actuator and a magnetic speed sensor, the ESD will control a wide variety of engines operating in an isochronous or droop mode. Armed with high quality components, the ruggedly designed ESD will endure the harshness of any industrial engine environment.



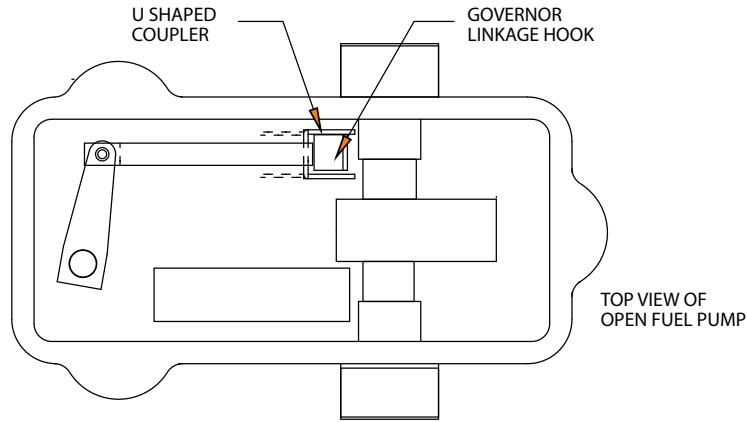
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# 8 OUTLINE DRAWING

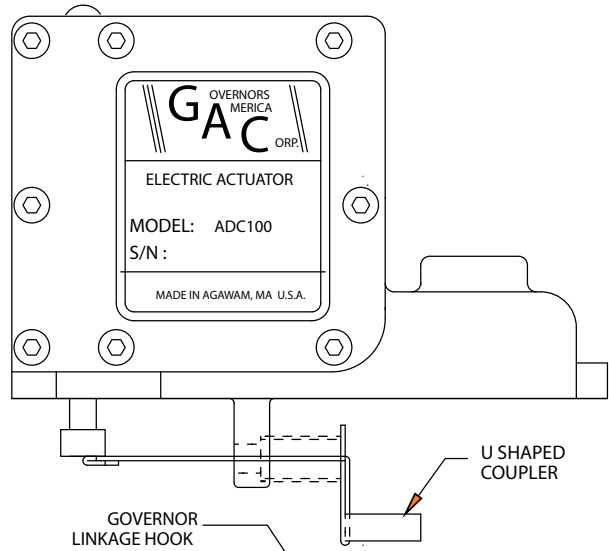


PACKARD CONNECTOR SHOWN

FRONT (DRIVE END)



TOP VIEW OF OPEN FUEL PUMP



REAR (INJECTOR END)

