

# TG-13 Governors

## For Ajax Engines



## APPLICATIONS

The two TG-13 Governor models for combustion engines are self-contained mechanical-hydraulic governors and are intended for use where isochronous (constant speed) operation is not required. They are designed to quickly and efficiently replace mechanical governors on Ajax integral engine-compressors used for gas gathering and production.

As efficient speed control devices, the new models significantly reduce speed excursions during load changes. Their ability to stabilize engine operation eliminates both overspeed trips and bogged engines, which result from changing load conditions. In addition to improved engine operation, an operator often can realize reduced governor-service and governor-maintenance costs.

## DESCRIPTION

Simplicity and low cost are distinct advantages of the TG-13 Governors. The governors operate with speed droop for stability of control and allow the engines to run unattended.

An internal oil pump, driven by the governor's drive shaft, transports oil from the self-contained sump. Internal pressure is maintained by a relief valve accumulator system. The unit can use the same type of lube oil as the engine. A sight glass provides

ease in checking oil level. The built-in relief valve accumulator helps maintain full oil pressure in the governor hydraulic system during transient conditions.

The two governor models are identical except for the base and the drive shaft length. Both models are easily installed, require no modifications to engine mounting pad, and generally use existing linkage. Once installed, they require minimal maintenance.

Two types of speed-setting adjustments are available: Screw speed setting is standard, and pneumatic speed setting is optional.

Weather-resistant construction and a self-contained oil sump reduce, if not eliminate, the possibility of contamination.

- Self-Contained Mechanical/Hydraulic Governor
- Low Cost
- Accurate Speed Control
- Weather Resistant
- 12 Ft-Lbs Output
- Pneumatic Speed Setting Available

# SPECIFICATIONS

## SPEED SETTING

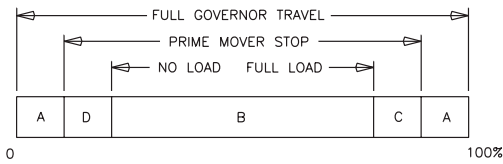
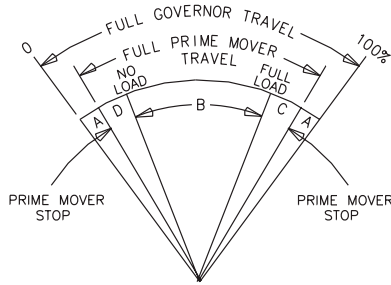
Screw .....adjustment on top of cover  
 Optional Pneumatic.....direct acting, 3 to 15 psi

## GOVERNOR DRIVE

Shaft .....1/2-in. diameter. Number 5 Woodruff key (1/8 in.)  
 Speed Range.....can be adjusted with a high speed of 1850 rpm and a low speed of 740 rpm (engine speed 500 to 200 rpm)  
 Drive Power Requirement.....1/2 hp maximum required to turn drive shaft at rated speed.  
 Rotation .....ccw as viewed from the top of the governor

## OUTPUT

TG-13



- A - OVERTRAVEL TO INSURE PRIME MOVER STOPS ARE REACHED.
- B - NO LOAD TO FULL LOAD TRAVEL - NORMALLY 2/3 OF FULL GOVERNOR TRAVEL IS RECOMMENDED.
- C - TRAVEL REQUIRED TO ACCELERATE THE PRIME MOVER.
- D - TRAVEL REQUIRED TO DECELERATE OR SHUT DOWN PRIME MOVER.

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Maximum work capacity over full governor travel of 46 degrees is 12 ft-lbs. See above for recommended governor output travel. In special applications min and max prime mover stops may be outside the governor stops.

Output Shaft .....625-36 serration (extends on both sides of case)

## CONTROL CHARACTERISTICS

Steady State Speed Band .....±0.75% of rated speed  
 Droop .....internally adjustable and must be set as required for stability. Factory set at 6% for 20 degrees terminal shaft travel  
 Operating Temperature .....continuous operating temperature: 60 °C (140 °F) to 93 °C (200 °F). Ambient temperature: 29 °C (-20 °F) to 93 °C (200 °F). Contact Woodward if operating beyond these limits.

## HYDRAULIC SYSTEM

Oil .....self-contained sump. When governor is at operating temperature, oil with a viscosity of 100 to 300 SUS is recommended. See Woodward Manual 25071 for more information on oils.  
 .....capacity: 1.75 quarts

## CONSTRUCTION

Case and Pump Housing .....die cast aluminum  
 Standard Cover-Screw Speed Setting Governor .....cast aluminum  
 Optional Cover-Pneumatic Speed Setting Governor .. sand cast aluminum  
 Weight .....16 lbs. (18 lbs. with optional pneumatic speed-setting device)  
 Internal Parts .....aluminum, mild, and/or case-hardened steel

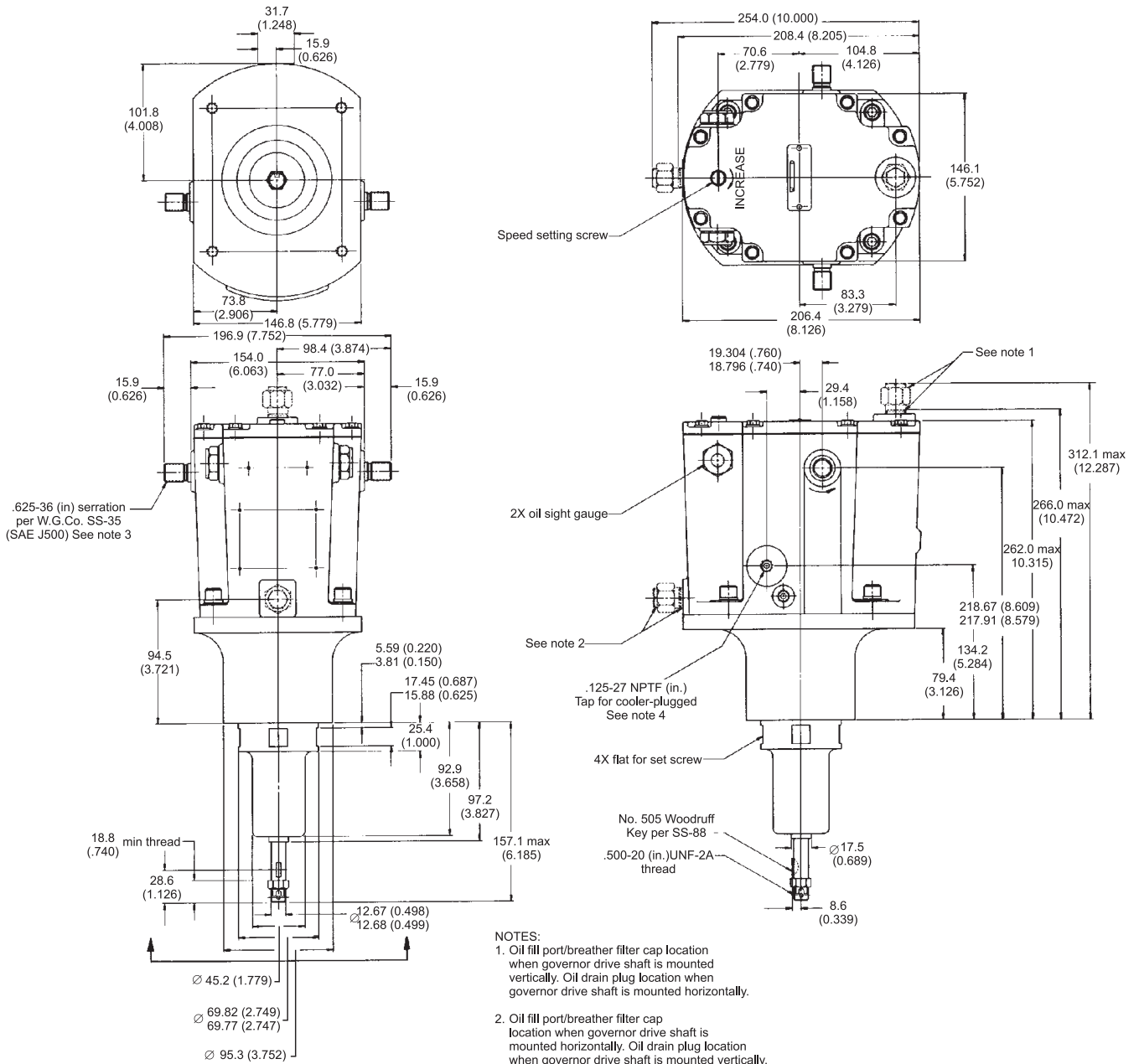
## MOUNTING

Configuration .....vertical or horizontal (breather cap up)

## REFERENCES

### MANUAL

04042 .....TG-13 and TG-17 Governors  
 25071 .....Oils for Hydraulic Controls



**METRIC**

INCHES IN PARENTHESIS

040-180  
98-08-11 skw

## OUTLINE DRAWING OF TG-13 GOVERNOR (AJAX SGL)

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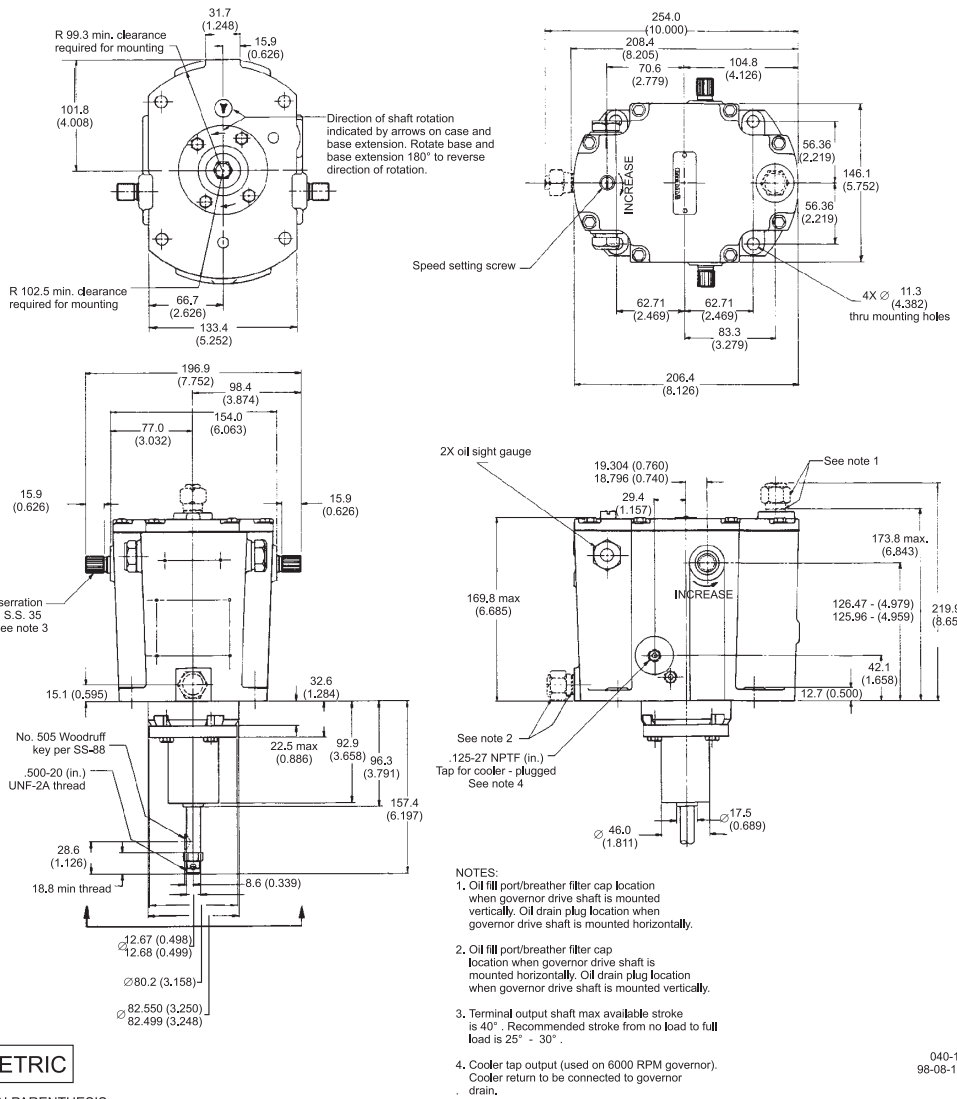
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Woodward has a network of distributors and service facilities. For your nearest representative call 1 800-835-5182 or see the Worldwide Directory on our web site.

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