

Monitor And Capture Peak Speeds.

Reduce Down Time, Maintenance Costs And Potential Turbine Failures.

- Designed for all Woodward TG governors
- ✓ Horizontal & vertical mounts
- Scalable for multiple mag pickups
- ✓ Configured for digital retrofits
- Easy to install & read. Field configurable
- Tachometer can be remotely mounted



- ✓ Tracks speed & operating hours
- ✓ Time/date stamps speed in real time
- ✓ Built-in over-speed & hour meter data logging
- ✓ Gear-encased housing
- Adapts to multiple magnetic pickup requirements

Official
WOODWARD
Recognized Turbine
Retrofit Partner
(RTR)

The self-powered TG Tach Kit provides easy, reliable speed monitoring and data logging.



MSHS TG Tachometer Kit mounts on mechanical-hydraulic **WOODWARD** TG governors used on general purpose steam turbines.





- API 611/612* Compliance
- Historic Tracking & Display
- Five (5) digit back-lit display
- Universal Fit On Most Small To Medium Turbines
- Encased Gear, Shock, Vibration & Moisture Resistant
- Intrinsically Safe Tach Class
 I, Div II Approved
- No External Power Required

*API Standard 611 General-Purpose Steam Turbines for Refinery Service.

*API Standard 612 Special-Purpose Steam Turbines for Petrochemical, Chemical, and Gas Industry Services.

MSHS offers comprehensive control system support from engine and turbine systems integration to turnkey project management for a broad range of marine, power generation, and industrial projects. Learn more at www.mshs.com or email us at sales@mshs.com









TG611 Governor with integral overspeed test device:

- ✓ Designed for API611*based turbine applications
- Maintains control of turbine speed throughout overspeed test
- Automatically returns to rated speed if test is aborted
- ✓ Includes a special Overspeed Test Device
- ✓ Allows a safe and controlled way of testing the turbine's overspeed trip device
- ✓ TG611 Conversion Kits may be installed on your existing TG13 or TG17 Governors.
- ✓ Cost effective





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Convert TG13 and **TG17** Governors to a TG611 and ensure you **meet the new API STANDARD 611 requirements**. The integral Overspeed Test Device allows the speed to be safely increased in a controlled manner up to the turbine's overspeed trip speed.

Conversions are performed in MSHS' authorized Woodward Service Centers.

*API STANDARD 611, Fifth Edition, March 2008, Paragraph 7.4.2.2.11 states: "Unless otherwise specified, the oil relay governor shall include a manual method to safely increase the speed of the turbine over the maximum continuous speed of the governor to allow for a safe and controlled test of the independent emergency overspeed system. This system shall be arranged that releasing of the device shall allow the turbine to return to maximum continuous speed with no further operator action. This device shall not allow the turbine to exceed the trip setting by 2%.

Together, the Woodward TG611 and the MSHS TG Tachometer Kit take the guesswork out of tracking turbine speed and meet the API611 requirements.



MSHS TG tachometer Kit:

Successfully monitor and capture peak turbine speeds with a TG Tachometer Kit mounted on a TG611 governor.

Woodward TG611

TG611 Governor with Overspeed test device, directly replaces the TG13 or TG17 Governor. Safely and easily test the overspeed of your steam turbine.



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