

July 2019

### Woodward UG 40 DI Replacement

## UG 40 MAS + Governor



SERIAL NO.

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GOVERNOR SPEED CUSTOMER'S NO.



64



SPEED DROOP STATISME P-BEREICH CAIDA DE VELOCIDAD

SPEED SETTING **REGLAGE DE VITESSE** DREHZAHLEINSTELLUNG ADJUSTE DE VELOCIDAD





LOAD LIMIT LIMITE DE CHARGE LASTBEGRENZUNG LIMITE DE CARGA INDICATEUR VITESSE AFFICHEE SOLLWERTANZEIGER INDICADOR DE VELOCIDAD

Turner Engine Control Solutions | A Turner Group Company | Woodward Business Partner



#### Woodward UG40-DI Replacement - UG40 MAS+ - Governor with Digital Inteface



Turner ECS has developed the UG40 MAS+ governor as a direct replacement/upgrade for the obsolete Woodward UG40-DI governor.

The Woodward UG40-DI (Digital Interface) was a product designed to have all the features of the traditional UG40 governor, but with a digital interface for remote speed setting, start fuel limiting and shutdown.

Turner ECS has designed, tested and validated a solution to replace the obsolete UG-40DI governor. This is accomplished by modifying the UG40-DI governor, keeping the proven mechanical-hydraulic reliability of the UG-40DI, and by adding the electronic reliability of the Woodward MAS driver box.

The following changes were made to the UG40-DI design:

- E-box functionality and fuel limiter assembly is replaced by a modified UG40 governor and a small cabinet
- The start fuel limiter assembly is replaced with an on/off adjustable solenoid that provides the start limiter functionality

Turner ECS will install and test the UG40 MAS+ governor onboard, delivering a full service after which the upgraded engine is ready for operation.

#### **ADVANTAGES**

The upgrade of the UG-40DI will provide the following advantages to end users:

- Keep existing UG40
- 18 months warranty
- Proven UG40 parts
- No linkage adjustment
- Form and fit will remain identical
- Same dynamic performance
- Keep fuel rack sensor
- Functionality remains the same
- Quick and easy modification





#### Woodward UG40-DI Replacement - UG40 MAS+ - Governor with Digital Inteface

#### Accessories

Cable Set



Cables are included to connect the UG40 MAS+ to the control box and to connect the control box to the MAK engine control cabinet.

#### **Mounting Bracket**



For easy installation close to the UG40 MAS+ governor, a mounting bracket is included to mount the control box.

#### **Control Box**

#### MAS Driver Box

#### Programmable Logic Controller



**Terminal Strip** 

Wiring Conduits

### **FUNCTIONALITY**

- Ballhead governor
- Adjustable start fuel limiter
- Alarm contact to limit speed setting
- Adjustable ramp rates for speed setting

#### **OPTIONS**

The UG40 MAS+ can be ordered in the following configurations, always on exchange basis:

#### Kit #1:

- Top cover & E-box
- Control box
- Cables and bracket
- Installation & testing

#### Kit #2:

- Overhauled governor
- Top cover & E-box
- Control box
- Cables and bracket
- Installation & testing



#### Turner Range of Services

LSTK Projects, Retrofits & Upgrades Turner ECS delivers reliable retrofit solutions for a wide range of prime movers and other applications. This includes lump sum turnkey projects on turbines and compressors.

Genuine Parts & Service Exchange Turner ECS has the largest stock of parts, service exchange governors and electronics in Europe and can provide a fast turnaround service.

#### **Product Training**

Turner ECS can provide official Woodward product training covering both theoretical and practical training on a wide range of Woodward products.

## Electronic Repair & Mechanical Governor Overhaul Service

Turner ECS provides a comprehensive overhaul and repair service for electronic, mechanical and hydraulic governors.

#### World Wide Field Service

Turner ECS field service engineers and technicians provide comprehensive solutions for commissioning and on-site repair.

#### Service Contracts

Turner ECS provides long term service contracts to support users with Woodward governors and/ or control products and electronic control systems.

#### ROTATING EQUIPMENT CONTROL SOLUTIONS DELIVERED ACROSS EUROPE & THE MIDDLE EAST

Turner ECS is an official Woodward Channel Partner with offices located in:

- The Netherlands
- England
- Germany
- Italy
- Abu Dhabi
- Qatar
- Saudi Arabia

Turner ECS also operates and manages an extensive network of official agents throughout Europe & the Middle East

#### CONTACT INFORMATION

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