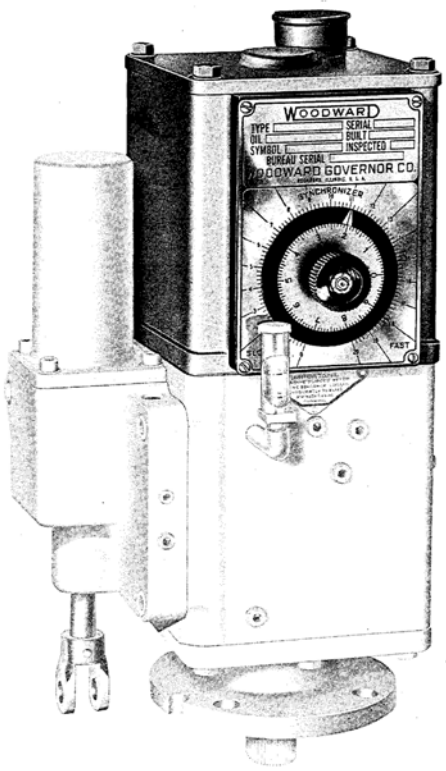
WOODWARD

Product Manual 36614
(Revision E, 11/2012)
Original Instructions



PG Governor
Dial Type Speed Setting

Operation and Maintenance Manual

General Precautions

Read this entire manual and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment.

Practice all plant and safety instructions and precautions.

Failure to follow instructions can cause personal injury and/or property damage.

Revisions

This publication may have been revised or updated since this copy was produced. To verify that you have the latest revision, check manual *26311* , *Revision Status & Distribution Restrictions of Woodward Technical Publications*, on the *publications page* of the Woodward website:

www.woodward.com/publications

The latest version of most publications is available on the *publications page*. If your publication is not there, please contact your customer service representative to get the latest copy.

Proper Use

Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment. Any such unauthorized modifications: (i) constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and (ii) invalidate product certifications or listings.

Translated Publications

If the cover of this publication states "Translation of the Original Instructions" please note:

The original source of this publication may have been updated since this translation was made. Be sure to check manual *26311* , *Revision Status & Distribution Restrictions of Woodward Technical Publications*, to verify whether this translation is up to date. Out-of-date translations are marked with ⚠. Always compare with the original for technical specifications and for proper and safe installation and operation procedures.

Revisions—Changes in this publication since the last revision are indicated by a black line alongside the text.

Contents

Illustrations and Tables

Warnings and Notices

Important Definitions

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

- **DANGER**—Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- **WARNING**—Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION**—Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE**—Indicates a hazard that could result in property damage only (including damage to the control).
- **IMPORTANT**—Designates an operating tip or maintenance suggestion.

⚠WARNING

Overspeed / Overtemperature / Overpressure

The engine, turbine, or other type of prime mover should be equipped with an overspeed shutdown device to protect against runaway or damage to the prime mover with possible personal injury, loss of life, or property damage.

The overspeed shutdown device must be totally independent of the prime mover control system. An overtemperature or overpressure shutdown device may also be needed for safety, as appropriate.

⚠WARNING

Personal Protective Equipment

The products described in this publication may present risks that could lead to personal injury, loss of life, or property damage. Always wear the appropriate personal protective equipment (PPE) for the job at hand. Equipment that should be considered includes but is not limited to:

- **Eye Protection**
- **Hearing Protection**
- **Hard Hat**
- **Gloves**
- **Safety Boots**
- **Respirator**

Always read the proper Material Safety Data Sheet (MSDS) for any working fluid(s) and comply with recommended safety equipment.

⚠WARNING

Start-up

Be prepared to make an emergency shutdown when starting the engine, turbine, or other type of prime mover, to protect against runaway or overspeed with possible personal injury, loss of life, or property damage.

⚠WARNING

Automotive Applications

On- and off-highway Mobile Applications: Unless Woodward's control functions as the supervisory control, customer should install a system totally independent of the prime mover control system that monitors for supervisory control of engine (and takes appropriate action if supervisory control is lost) to protect against loss of engine control with possible personal injury, loss of life, or property damage.

NOTICE

Battery Charging Device

To prevent damage to a control system that uses an alternator or battery-charging device, make sure the charging device is turned off before disconnecting the battery from the system.

Electrostatic Discharge Awareness

NOTICE

Electrostatic Precautions

Electronic controls contain static-sensitive parts. Observe the following precautions to prevent damage to these parts:

- **Discharge body static before handling the control (with power to the control turned off, contact a grounded surface and maintain contact while handling the control).**
- **Avoid all plastic, vinyl, and Styrofoam (except antistatic versions) around printed circuit boards.**
- **Do not touch the components or conductors on a printed circuit board with your hands or with conductive devices.**

To prevent damage to electronic components caused by improper handling, read and observe the precautions in Woodward manual *82715*, *Guide for Handling and Protection of Electronic Controls, Printed Circuit Boards, and Modules*.

Follow these precautions when working with or near the control.

1. Avoid the build-up of static electricity on your body by not wearing clothing made of synthetic materials. Wear cotton or cotton-blend materials as much as possible because these do not store static electric charges as much as synthetics.
2. Do not remove the printed circuit board (PCB) from the control cabinet unless absolutely necessary. If you must remove the PCB from the control cabinet, follow these precautions:
   - Do not touch any part of the PCB except the edges.
   - Do not touch the electrical conductors, the connectors, or the components with conductive devices or with your hands.
   - When replacing a PCB, keep the new PCB in the plastic antistatic protective bag it comes in until you are ready to install it. Immediately after removing the old PCB from the control cabinet, place it in the antistatic protective bag.

Regulatory Compliance

European Compliance for CE Marking:

These listings are limited only to those units bearing the CE Marking.

ATEX – Potentially Explosive Atmospheres Directive: Declared to 94/9/EEC COUNCIL DIRECTIVE of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres.
Zone 1, Category 2, Group II G, c II T3

Other European and International Compliance:

Compliance with the following European Directives or standards does not qualify this product for application of the CE Marking:

Machinery Directive: Compliant as partly completed machinery with Directive 2006/42/EC of the European Parliament and the Council of 17 May 2006 on machinery.

Pressure Equipment Directive: Compliant as “SEP” per Article 3.3 to Pressure Equipment Directive 97/23/EC of 29 May 1997 on the approximation of the laws of the Member States concerning pressure equipment.

Substitution of components may impair suitability for Zone 1.

Chapter 1.
General Information

General

This manual covers operation, maintenance and a replacement parts list for the dial-type speed setting for short-column PG governors. This type speed setting (one of many arrangements available for use on PG governors) allows a precise means of manually adjusting speed at the governor. Additional manuals cover other components of the PG governor.

Refer to manual 54056, *PG Dial and Lever Governor Installation*, for installation instructions and safety information.

Operation

Refer to the schematic diagram (Figure 1-1). The governor speed setting is determined by the compression of the speeder spring. The speeder spring compression is determined by the position of the speeder plug, which is raised or lowered by rotation of the speed setting knob. Refer to the Woodward manual 36600, *PG Governor Basic Elements*, for a description of the effect of a speed setting change on the operation of the basic elements.

⚠WARNING

The engine, turbine, or other type of prime mover should be equipped with an overspeed shutdown device to protect against runaway or damage to the prime mover with possible personal injury, loss of life, or property damage.

The overspeed shutdown device must be totally independent of the prime mover control system. An overtemperature or overpressure shutdown device may also be needed for safety, as appropriate.

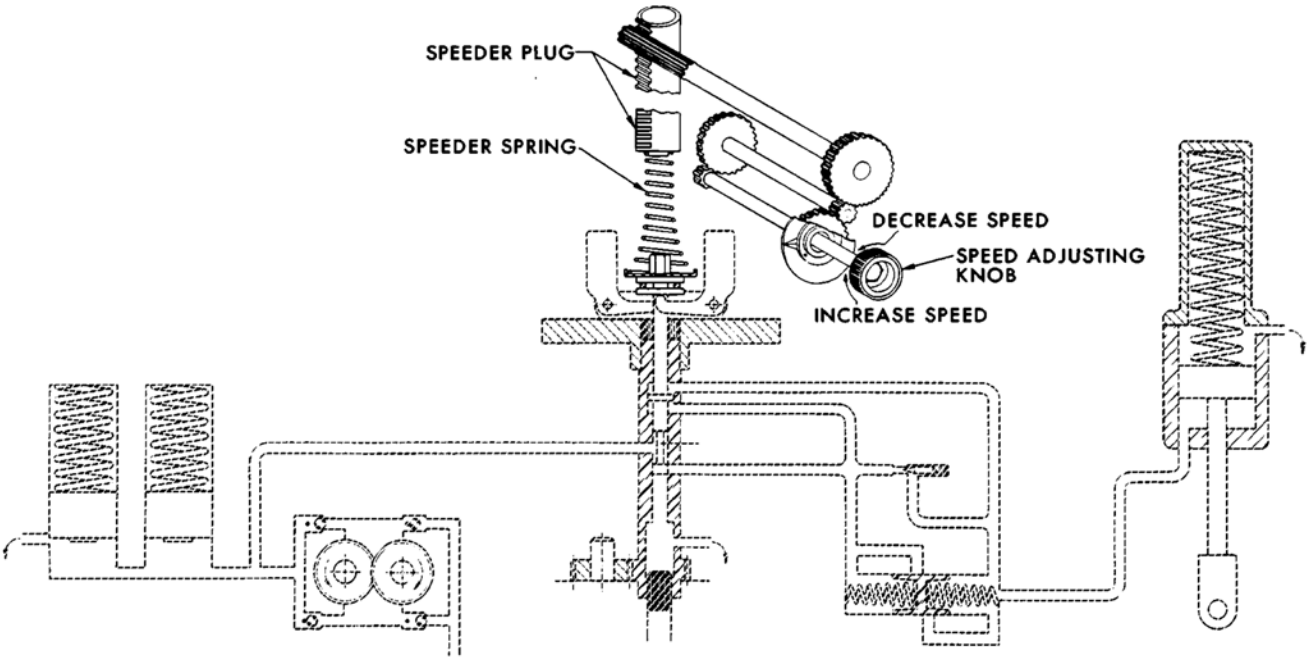


Figure 1-1. Schematic Diagram, PG Dial Speed Setting

Chapter 2. Maintenance

Introduction

This chapter provides information for the dial speed setting system. The main PG manual for the particular governor provides disassembly procedures for the basic governor. Manual 36692 provides disassembly instructions for the power cylinder. This chapter also provides assembly and adjustment procedures.

Disassembly

Refer to Figure 3-1, the exploded view of the dial speed setting, and the following for disassembly.

Top Cover

1. Remove cover screws (1) and washers (2).
2. Remove cover (4) and gasket (5).

Column Assembly

1. Back out four fillister head screws (6) (located at lower inside corners of column) and lift column (8), gasket (11), lockwashers (7), and screws (6) vertically from the power case, as shown in Figure 2-1.
2. Turn the speed indicating dial counterclockwise against the low speed stop.
3. Measure and record the distance from the top of the speeder plug (14) to the top of the column (8).
4. Remove round head screws (28) and take off dial plate (27).
5. Remove screws (23), panel (15), and panel gasket (9).
6. Taking care that speeder plug (14) does not slip out, back off elastic stop nut (34) and remove the speed setting knob (33), numbered disc (32), indicator gear (30) with pointer disc (31), dial shaft assembly (17), washer (18). spring (19), and pinion assembly (12). Turn gear shaft assembly (22) to run speeder plug (14) out of bore in column. Remove shaft assembly.

Cleaning

Immerse all parts in solvent and wash ultrasonically or by agitation. Remove all traces of contaminants from corners, holes, apertures and threads. Dry all parts with clean wipers or blow dry with a jet of clean dry air.

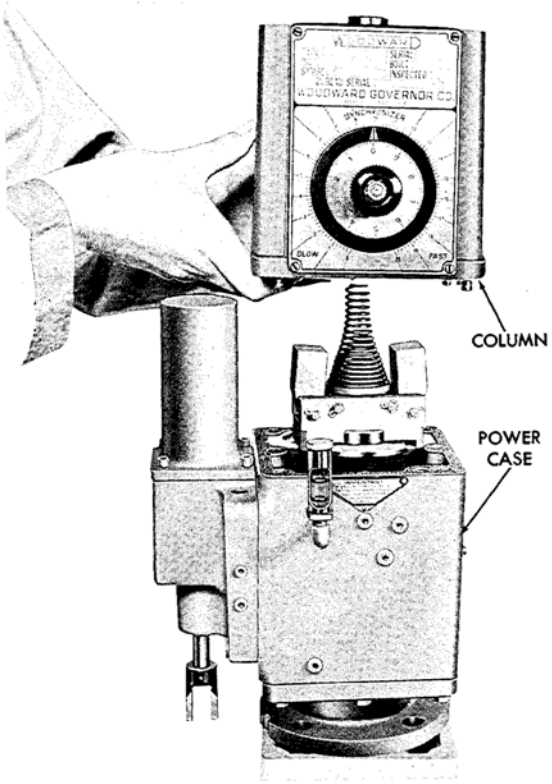


Figure 2-1. Column Removal

Parts Check

Check all parts for wear, corrosion, nicks, cracks, or other damage. Mating or rubbing surfaces must be particularly examined for nicks, burrs, scores or other roughness, and evidence of wear.

Check threads for stripping, cross-threading or other deformation.

Check for mis-match of serrations or other tooth damage.

Assembly

Replace all gaskets, 5, 9, and 11.

1. Install gear shaft assembly (22) and speeder plug (14).

2. Place the spring (19) and washer (18) in position with one hand, and with the other replace the dial shaft assembly (17) and the pinion assembly (12).

3. Holding the dial shaft assembly (17) in position, install indicator gear (30) with pointer disc (31), and turn the dial shaft until the speeder plug (14) is the same distance from the top of the column as recorded in disassembly.

4. Position the indicator gear against the low speed stop and install pointer disc (31), numbered disc (32), speed setting knob (33), and secure with elastic stop nut (34).

5. Replace dial plate (27) with round head screws (28).

6. Install panel (15) and new gasket (9) with screws (23).

7. Install new case-column gasket (11).

8. Place lockwashers (7) and fillister head screws (6) in holes in lower flange of the column (8). Align speeder spring check plug (shown in manual 36600 or 36602) so that it will seat properly in the bore in the speeder plug. Align dowel pins (in column) with the holes in the power case and place the column on the power case. Fasten with screws (6) and lockwashers (7).

9. Install cover (4) with new gasket (5). Secure with screws (1) and lockwashers (2).

Speed Limit Adjustment

When changing speed setting adjustments or the pointer indication, use the following procedure. Do not make these adjustments unless the linkage from the governor to the engine fuel racks (or metering valve) has been properly adjusted. Make certain that the engine is at idle speed or lower when the governor is set for low speed.

⚠WARNING **Shut down the engine before performing any work on the governor.**

Shut down the engine and remove the governor cover and dial plate. Back off the elastic stop nut securing the speed adjusting knob, as shown in Figure 2-2, until the fiber insert in the nut comes off the threads of the dial shaft. At this point, the nut will turn much easier.

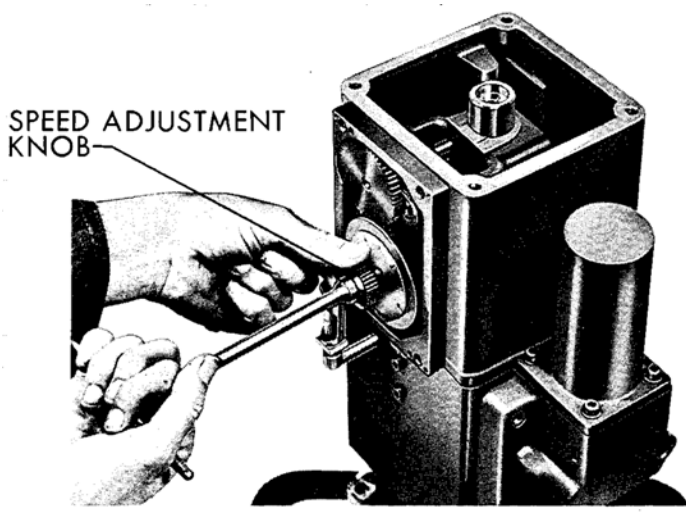


Figure 2-2. Speed Adjustment Knob Removal

Now, before the nut is turned off the shaft, hold the inside end of the shaft (pc. 17, Figure 3-1) with a screwdriver (Figure 2-3) to prevent its being forced back through the bushing by the dial shaft spring, and remove the elastic stop nut, speed adjusting knob, and numbered disc. Replace the knob (leaving numbered disc off) and turn the stop nut back on, using only about two threads. Do not tighten. Remove the screwdriver and pull the indicator gear (30) with pointer disc (31) out of mesh with the pinion assembly (Figure 2-4).

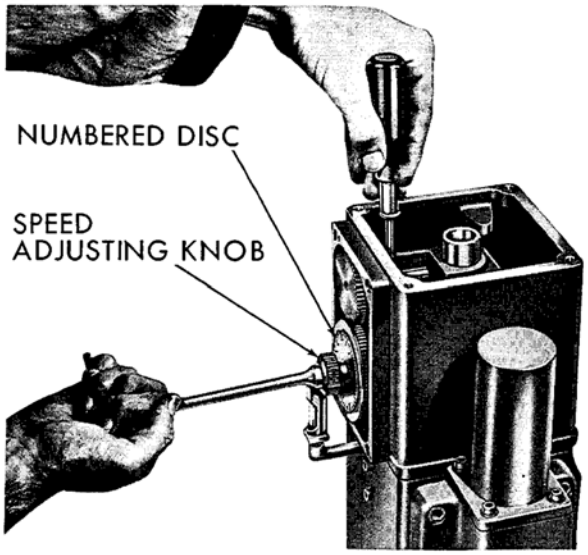


Figure 2-3. Holding Speed Adjusting Shaft

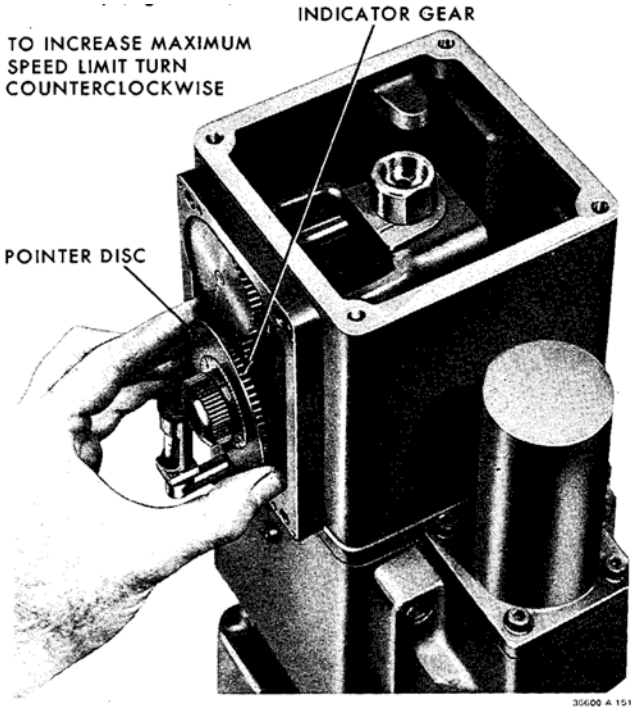


Figure 2-4. Disengagement of Indicator Gear

WARNING

Be prepared to make an emergency shutdown when starting the engine, turbine, or other type of prime mover, to protect against runaway or overspeed with possible personal injury, loss of life, or property damage.

Start the engine and adjust to the desired high speed with the knob. Re-mesh the indicator gear with the high speed stop pin of the indicator gear against the stop pin (24) in the face of the panel. Replace the dial plate to check the pointer reading. If the pointer does not indicate the desired position on the dial plate, pry the pointer disc off and reposition it on the indicator gear.

Check the low speed by turning the speed adjusting knob until it contacts the low speed stop. (On dials calibrated in rpm, an error of 10% between engine speed and pointer reading may be expected at low speed.)

When the desired high and low speeds have been obtained, shut down the engine, remove the elastic stop nut and speed adjusting knob as before. Be sure to hold a screwdriver behind dial shaft when removing elastic stop nut and knob. Reassemble numbered disc, knob, and elastic stop nut. Tighten the nut.

Chapter 3.
Replacement Parts

Replacement Parts Information

When ordering replacement parts, it is essential to include the following information:

- Governor serial number and part number shown on nameplate
- Manual number (this is manual 36614)
- Parts reference number in parts list and description of part or part name

Illustrated Parts Breakdown

The illustrated parts breakdown lists all the replaceable parts for the dial speed setting. The numbers assigned are used as reverence numbers and are not specific Woodward part numbers. Woodward will determine the exact part number for your particular actuator.

Ref. No.	Part Name ..... Quantity
36614-1	5/16”–24x3/4” hex. hd. mach. screw 4
36614-2	5/16” shakeproof lockwasher 4
36614-3	Oil filler cup 1
36614-4	Cover 1
36614-5	Column-cover gasket 1
36614-6	5/16”–24 x 5/8” fil. hd. mach. screw 4
36614-7	5/16” split ring lockwasher.....4
36614-8	Column.....1
36614-9	Panel gasket 1
36614-10	1/4” x 9/16” dowel pin.....2
36614-11	Case-column gasket 1
36614-12	Pinion assembly.....1
36614-13	Spring check pin.....1
36614-14	Speeder plug.....1
36614-15	Dial panel 1
36614-16	Bushing 1
36614-17	Dial shaft assembly.....1
36614-18	Washer.....1
36614-19	Spring.....1
36614-20	Plug.....1
36614-21	Bushing 1
36614-22	Gear shaft assy. 1
36614-23	#10–24 x 1/2” fil. hd. screw 4
36614-24	Stop pin.....1
36614-25	Dowel pin 2
36614-26	Bushing 1
36614-27	Dial plate 1
36614-28	#6–32 x 1/4” rd. hd. screw.....4
36614-29	Stop pin.....2
36614-30	Indicator gear 1
36614-31	Pointer disc 1
36614-32	Numbered disc 1
36614-33	Control knob.....1
36614-34	1/4–20 elastic stop nut 1

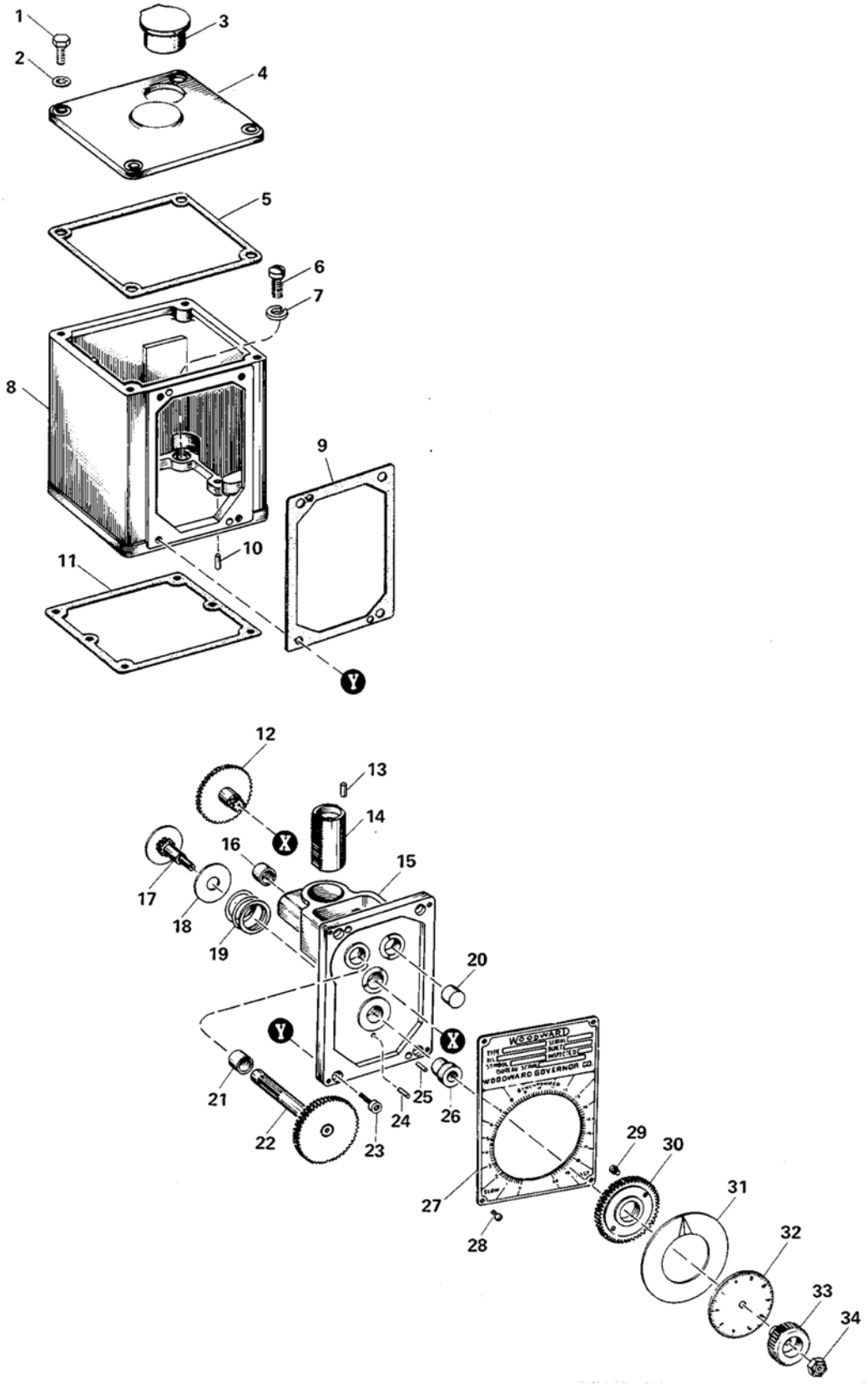


Figure 3-1. Exploded View, PG Dial Speed Setting

Chapter 4.
Product Support and Service Options

Product Support Options

If you are experiencing problems with the installation, or unsatisfactory performance of a Woodward product, the following options are available:

1. Consult the troubleshooting guide in the manual.
2. Contact the **OE Manufacturer or Packager** of your system.
3. Contact the **Woodward Business Partner** serving your area.
4. Contact Woodward technical assistance via email (**EngineHelpDesk@Woodward.com**) with detailed information on the product, application, and symptoms. Your email will be forwarded to an appropriate expert on the product and application to respond by telephone or return email.
5. If the issue cannot be resolved, you can select a further course of action to pursue based on the available services listed in this chapter.

OEM or Packager Support: Many Woodward controls and control devices are installed into the equipment system and programmed by an Original Equipment Manufacturer (OEM) or Equipment Packager at their factory. In some cases, the programming is password-protected by the OEM or packager, and they are the best source for product service and support. Warranty service for Woodward products shipped with an equipment system should also be handled through the OEM or Packager. Please review your equipment system documentation for details.

Woodward Business Partner Support: Woodward works with and supports a global network of independent business partners whose mission is to serve the users of Woodward controls, as described here:

- A **Full-Service Distributor** has the primary responsibility for sales, service, system integration solutions, technical desk support, and aftermarket marketing of standard Woodward products within a specific geographic area and market segment.
- An **Authorized Independent Service Facility (AISF)** provides authorized service that includes repairs, repair parts, and warranty service on Woodward's behalf. Service (not new unit sales) is an AISF's primary mission.
- A **Recognized Engine Retrofitter (RER)** is an independent company that does retrofits and upgrades on reciprocating gas engines and dual-fuel conversions, and can provide the full line of Woodward systems and components for the retrofits and overhauls, emission compliance upgrades, long term service contracts, emergency repairs, etc.

A current list of Woodward Business Partners is available at **www.woodward.com/directory**.

Product Service Options

Depending on the type of product, the following options for servicing Woodward products may be available through your local Full-Service Distributor or the OEM or Packager of the equipment system.

- Replacement/Exchange (24-hour service)
- Flat Rate Repair
- Flat Rate Remanufacture

Replacement/Exchange: Replacement/Exchange is a premium program designed for the user who is in need of immediate service. It allows you to request and receive a like-new replacement unit in minimum time (usually within 24 hours of the request), providing a suitable unit is available at the time of the request, thereby minimizing costly downtime.

This option allows you to call your Full-Service Distributor in the event of an unexpected outage, or in advance of a scheduled outage, to request a replacement control unit. If the unit is available at the time of the call, it can usually be shipped out within 24 hours. You replace your field control unit with the like-new replacement and return the field unit to the Full-Service Distributor.

Flat Rate Repair: Flat Rate Repair is available for many of the standard mechanical products and some of the electronic products in the field. This program offers you repair service for your products with the advantage of knowing in advance what the cost will be.

Flat Rate Remanufacture: Flat Rate Remanufacture is very similar to the Flat Rate Repair option, with the exception that the unit will be returned to you in "like-new" condition. This option is applicable to mechanical products only.

Returning Equipment for Repair

If a control (or any part of an electronic control) is to be returned for repair, please contact your Full-Service Distributor in advance to obtain Return Authorization and shipping instructions.

When shipping the item(s), attach a tag with the following information:
- return number;
- name and location where the control is installed;
- name and phone number of contact person;
- complete Woodward part number(s) and serial number(s);
- description of the problem;
- instructions describing the desired type of repair.

Packing a Control

Use the following materials when returning a complete control:
- protective caps on any connectors;
- antistatic protective bags on all electronic modules;
- packing materials that will not damage the surface of the unit;
- at least 100 mm (4 inches) of tightly packed, industry-approved packing material;
- a packing carton with double walls;
- a strong tape around the outside of the carton for increased strength.

NOTICE

To prevent damage to electronic components caused by improper handling, read and observe the precautions in Woodward manual 82715, *Guide for Handling and Protection of Electronic Controls, Printed Circuit Boards, and Modules*.

Replacement Parts

When ordering replacement parts for controls, include the following information:
- the part number(s) (XXXX-XXXX) that is on the enclosure nameplate;
- the unit serial number, which is also on the nameplate.

Engineering Services

Woodward's Full-Service Distributors offer various Engineering Services for our products. For these services, you can contact the Distributor by telephone or by email.

- Technical Support
- Product Training
- Field Service

Technical Support is available from your equipment system supplier, your local Full-Service Distributor, or from many of Woodward's worldwide locations, depending upon the product and application. This service can assist you with technical questions or problem solving during the normal business hours of the Woodward location you contact.

Product Training is available as standard classes at many Distributor locations. Customized classes are also available, which can be tailored to your needs and held at one of our Distributor locations or at your site. This training, conducted by experienced personnel, will assure that you will be able to maintain system reliability and availability.

Field Service engineering on-site support is available, depending on the product and location, from one of our Full-Service Distributors. The field engineers are experienced both on Woodward products as well as on much of the non-Woodward equipment with which our products interface.

For information on these services, please contact one of the Full-Service Distributors listed at **www.woodward.com/directory**.

Contacting Woodward's Support Organization

For the name of your nearest Woodward Full-Service Distributor or service facility, please consult our worldwide directory published at **www.woodward.com/directory**.

You can also contact the Woodward Customer Service Department at one of the following Woodward facilities to obtain the address and phone number of the nearest facility at which you can obtain information and service.

Products Used In Electrical Power Systems

Facility	Phone Number
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany:	
Kempen	+49 (0) 21 52 14 51
Stuttgart	+49 (711) 78954-510
India	+91 (129) 4097100
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
Poland	+48 12 295 13 00
United States	+1 (970) 482-5811

Products Used In Engine Systems

Facility	Phone Number
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany	+49 (711) 78954-510
India	+91 (129) 4097100
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
The Netherlands	+31 (23) 5661111
United States	+1 (970) 482-5811

Products Used In Industrial Turbomachinery Systems

Facility	Phone Number
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
India	+91 (129) 4097100
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
The Netherlands	+31 (23) 5661111
Poland	+48 12 295 13 00
United States	+1 (970) 482-5811

For the most current product support and contact information, please visit our website directory at **www.woodward.com/directory**.

Technical Assistance

If you need to contact technical assistance, you will need to provide the following information. Please write it down here before contacting the Engine OEM, the Packager, a Woodward Business Partner, or the Woodward factory:

General

Your Name _____

Site Location _____

Phone Number _____

Fax Number

Prime Mover Information

Manufacturer _____

Engine Model Number _____

Number of Cylinders _____

Type of Fuel (gas, gaseous, diesel, dual-fuel, etc.) _____

Power Output Rating _____

Application (power generation, marine, etc.)

Control/Governor Information

Control/Governor #1

Woodward Part Number & Rev. Letter _____

Control Description or Governor Type _____

Serial Number

Control/Governor #2

Woodward Part Number & Rev. Letter _____

Control Description or Governor Type _____

Serial Number

Control/Governor #3

Woodward Part Number & Rev. Letter _____

Control Description or Governor Type _____

Serial Number

Symptoms

Description _____

_____

If you have an electronic or programmable control, please have the adjustment setting positions or the menu settings written down and with you at the time of the call.

Revision History

Changes in Revision E—

- Updated Machinery Directive
- Updated Declaration of Incorporation

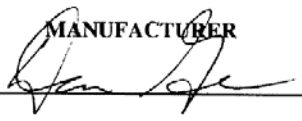
Declarations

DECLARATION OF CONFORMITY
According to EN 45014

Manufacturer's Name:	WOODWARD GOVERNOR COMPANY (WGC) Industrial Controls Group
Manufacturer's Address:	1000 E. Drake Rd. Fort Collins, CO, USA, 80525
Model Names/Numbers:	PG Dial Governors with CE Marking 8577-XXX
Conformance to Directive:	94/9/EC Council Directive of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres
Markings:	II 2G c II X
Applicable Standards:	EN13463-1: Non-electrical equipment for potentially explosive atmospheres – Part 1: Basic method and requirements. EN13463-5: Non-electrical equipment for use in potentially explosive atmospheres - Protection by constructional safety "c"

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

MANUFACTURER

Signature 

Dan Gear
Full Name

Engineering Manager
Position

WIC, Fort Collins, CO, USA
Place

10/10/06
Date

Woodward Governor Company
Industrial Controls Group
Colorado, USA

ICG-1183
00334-04-EU-02-02

DECLARATION OF INCORPORATION
Of Partly Completed Machinery
2006/42/EC

Manufacturer's Name:	WOODWARD, INC.
Manufacturer's Address:	1000 E. Drake Rd. Fort Collins, CO, USA, 80525 — 3800 N. Wilson Ave. Loveland, CO, USA 80538
Model Names:	Dial Type Speed Setting PG Governors with the following options: All PG Dial governor base internal options, Speed Adjusting Motor, Overspeed Trip Test Device, Differential Servomotor, Speed Droop mechanism, Back Pressure Controller, Heat Exchangers- Integral and Remote, Solenoid Operated Shutdown, Pressure Actuated Shutdown.
This product complies, where applicable, with the following Essential Requirements of Annex I:	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7

The relevant technical documentation is compiled in accordance with part B of Annex VII. Woodward shall transmit relevant information if required by a reasoned request by the national authorities. The method of transmittal shall be agreed upon by the applicable parties.

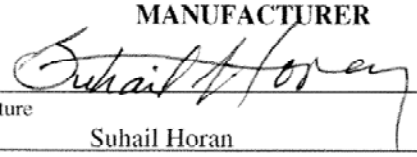
The person authorized to compile the technical documentation:

Name: Ralf Friedrich, Group Director, Quality, EPS
Address: Woodward GmbH, Handwerkstraße 29, 70565 Stuttgart, Germany

This product must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this Directive, where appropriate.

The undersigned hereby declares, on behalf of Woodward Governor Company of Loveland and Fort Collins, Colorado that the above referenced product is in conformity with Directive 2006/42/EC as partly completed machinery:

MANUFACTURER



Signature

Suhail Horan
Full Name

Quality Manager
Position

WGC, Fort Collins, CO, USA
Place

30-Nov-2012
Date

5-09-1182 (REV. 10) 00366-04-EU-02-01, rev D, 30-Nov-2012

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