



Technical Manual 26553
(Revision NEW)
Original Instructions

UG-25⁺ Governor Cable Upgrade Instructions

Field Rework Procedure



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

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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.



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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.

UG-25⁺ Governor Cable Upgrade Instructions

Introduction

NOTICE

To prevent damage to internal connector sockets, do not insert anything other than mating connector into connectors.



Tools Required

Woodward UG-25⁺ Cable Upgrade kit 8923-1760 contains the following parts:

Woodward Item Number	Qty	Description	Style 1	Style 2
188292	2	Screw – Socket Head Cap, #10	x	
1031-1699	2	Screw – M5 X 0.8 X 8 mm Phillips Head		x
1609-585	1	Clamp – 0.438 ID Wire Bundle	x	x
1298-1083	1	Clamp – 0.500 Max Cable Diameter	x	x
1609-7010	3	Strap – 11.4 Inch (29 cm), Black	x	x
1635-1889	1	Boot – UG-25 ⁺ , 2x Cinch Connector	x	x
2001-4034	1	Adhesive – Loctite 242 Capsule	x	x
5417-1258	1	Cable – UG-25 L-Series Connection	x	x
8996-2188	1	Tool – #15 Drill Bit + 3/16" Collar		x
B26553	1	This Manual	x	x

2 N·m torque driver handle with ¼-inch drive socket (part number 8996-2191)



IMPORTANT

Torque driver with socket does not come with the cable upgrade kit and must be ordered separately.

Procedure

The UG-25⁺ governor has two styles of top cover:

- Style 1 top cover has threaded cable clamp bosses (see Figure 1).
- Style 2 top cover has no cable clamp bosses (see Figure 2).

This procedure provides upgrade instructions for both styles of top cover.

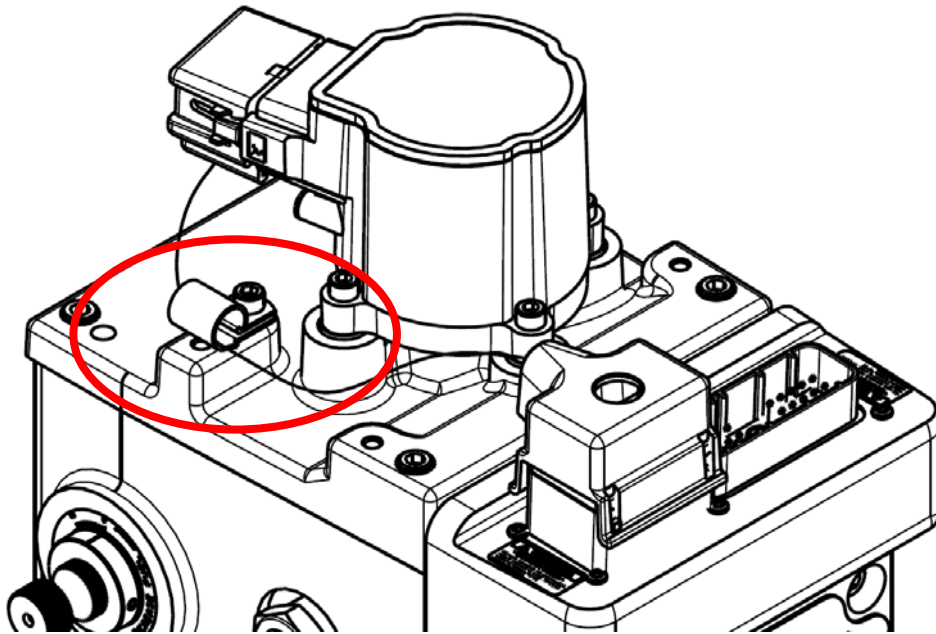


Figure 1. Style 1 Top Cover **with** Boss
(clamp may or may not be present)

IMPORTANT

The 'boss' is a raised area on the cover with a pre-tapped screw hole already present.

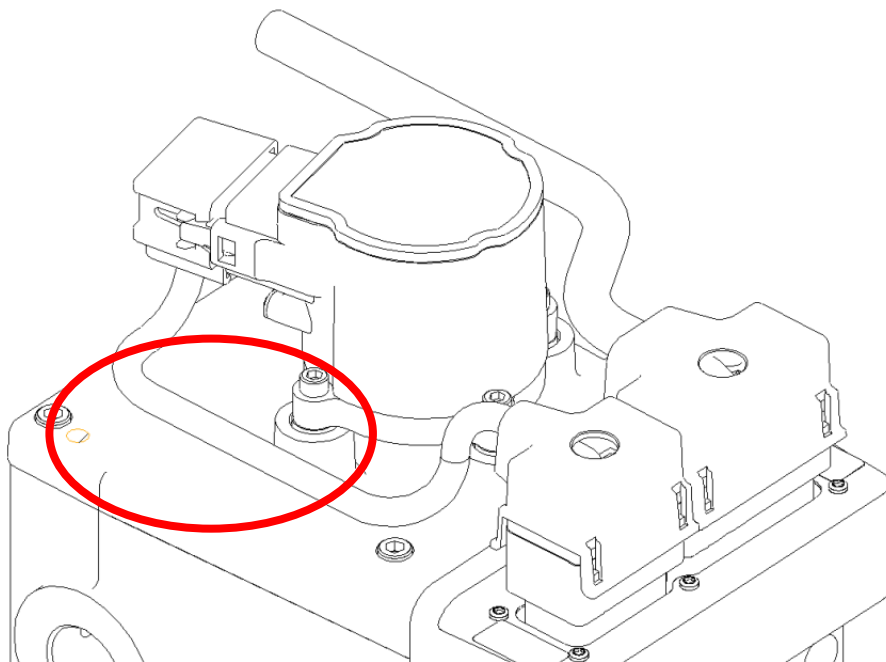
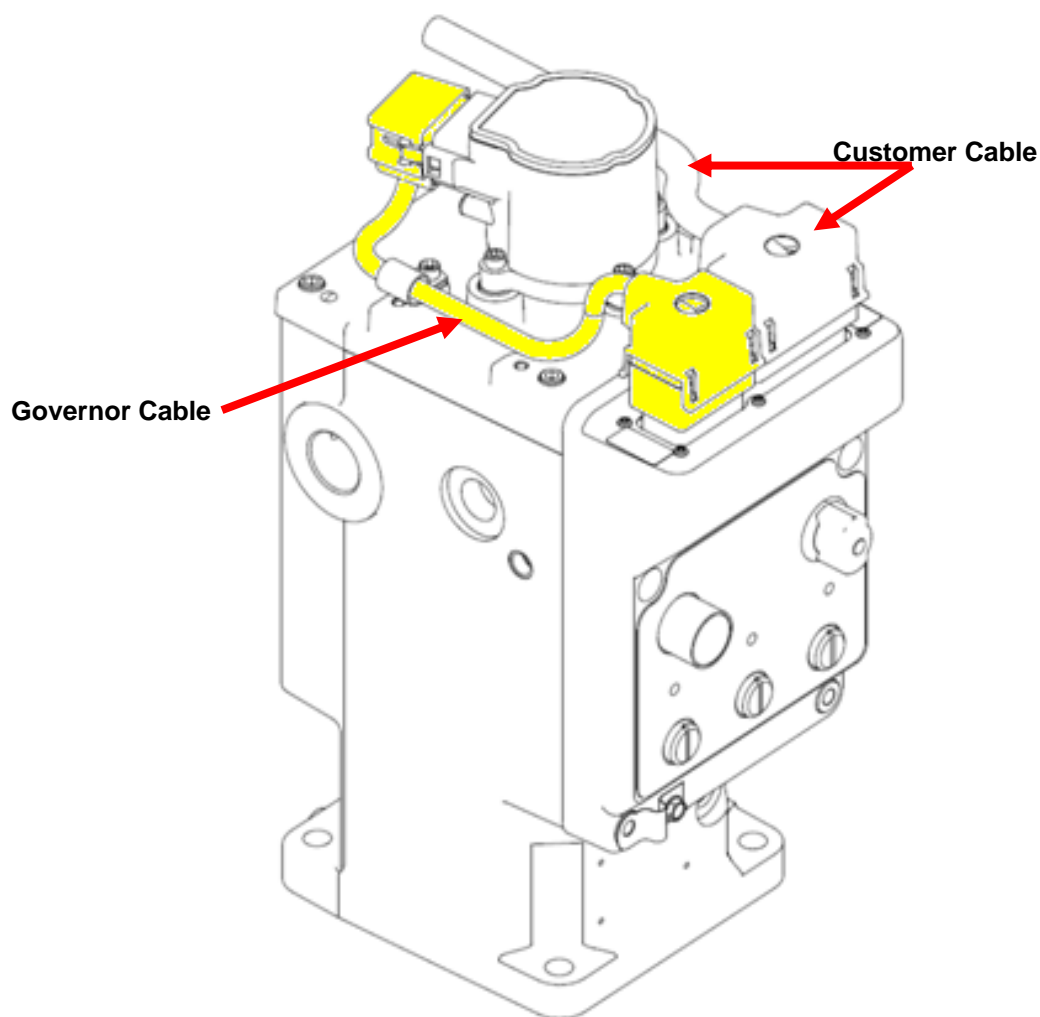


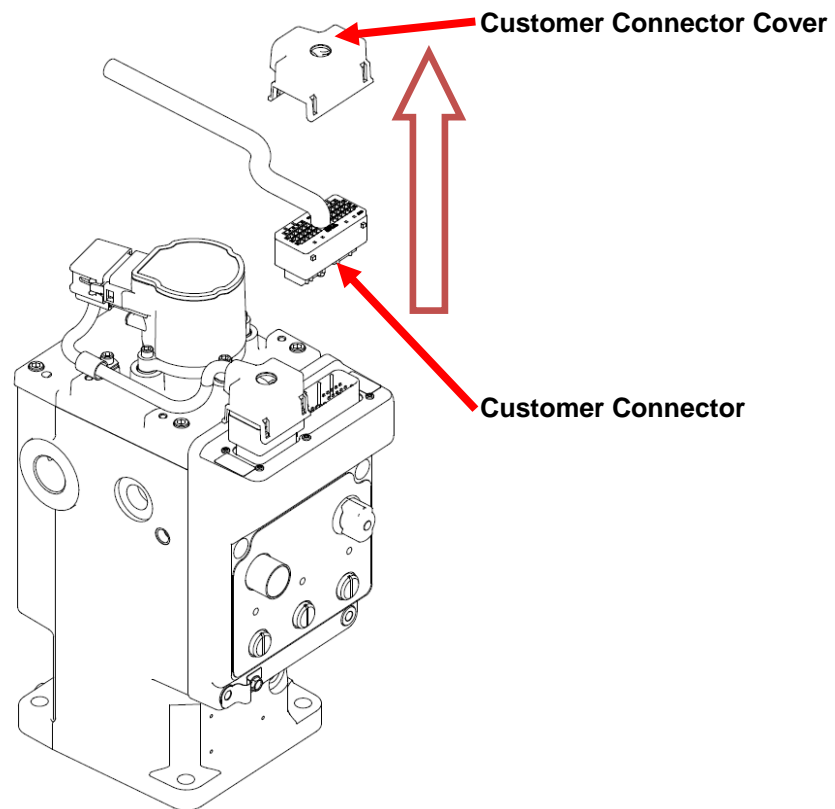
Figure 2. Style 2 Top Cover **without** Boss
(clamp will not be present; top cover flat in location)

Cable Removal Instruction for Style 1 and Style 2

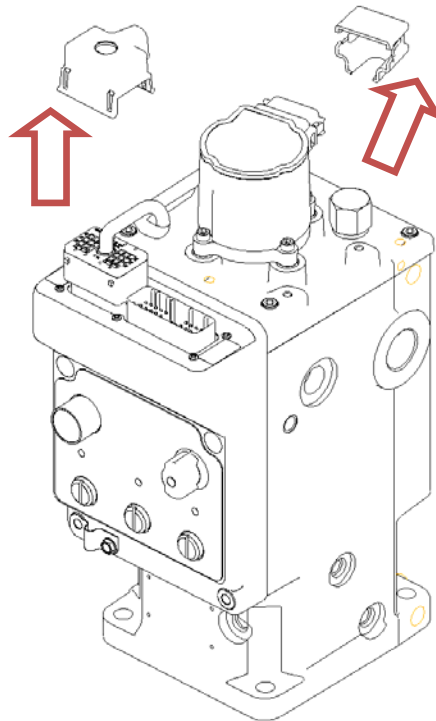
Objective: Upgrade governor cable and route customer cable correctly. Clamp may not be present.



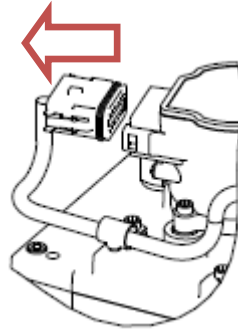
1. Remove customer connector from right. Remove and discard connector cover.



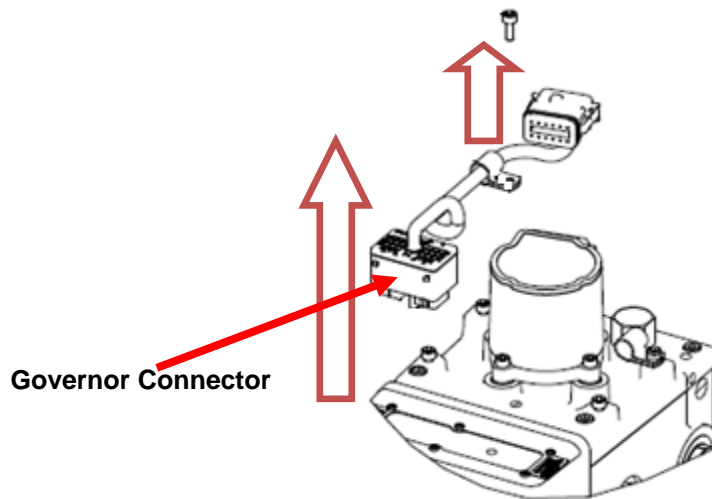
2. Remove and discard connector covers from governor cable.



3. Remove connector from L-Series by squeezing the two tabs on the side of the connector.

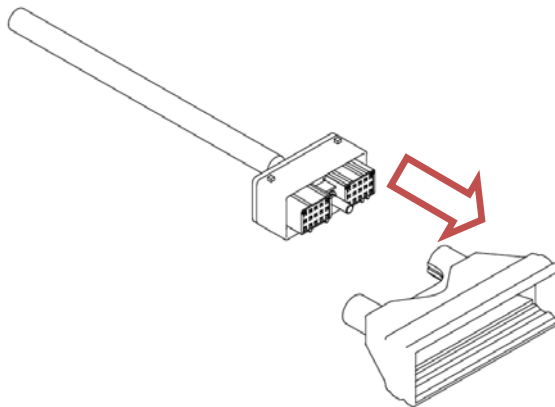


4. Remove governor connector. Remove clamp and screw if present. Discard cable, clamp, and screw.

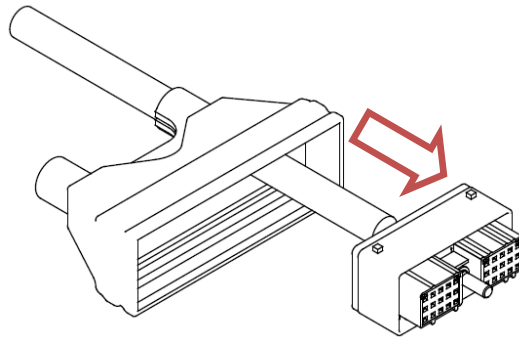


Boot Installation on Cable 5417-1258, Style 1 and Style 2

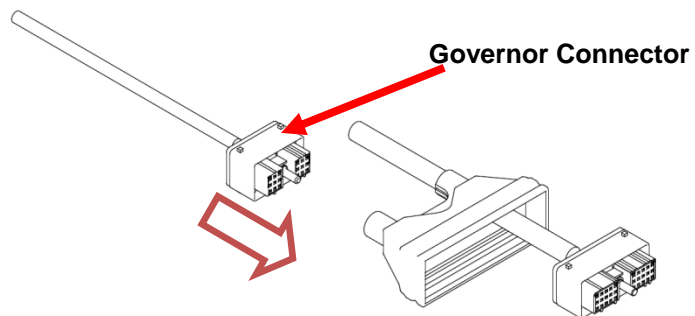
1. Install customer cable connector through top of boot.



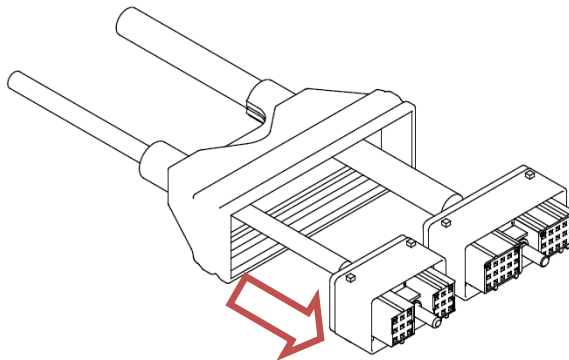
2. Pull customer connector through boot so governor connector will fit into boot slot.



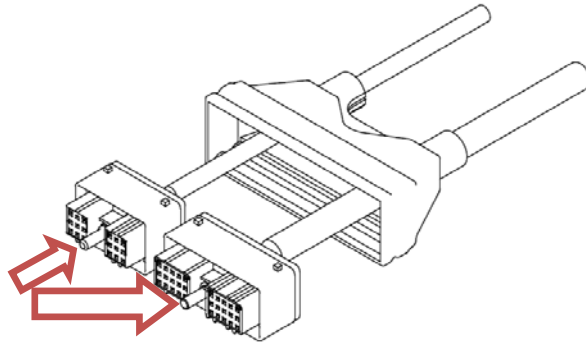
3. Install governor connector through the top of the boot.



4. Pull governor cable through boot for installation.

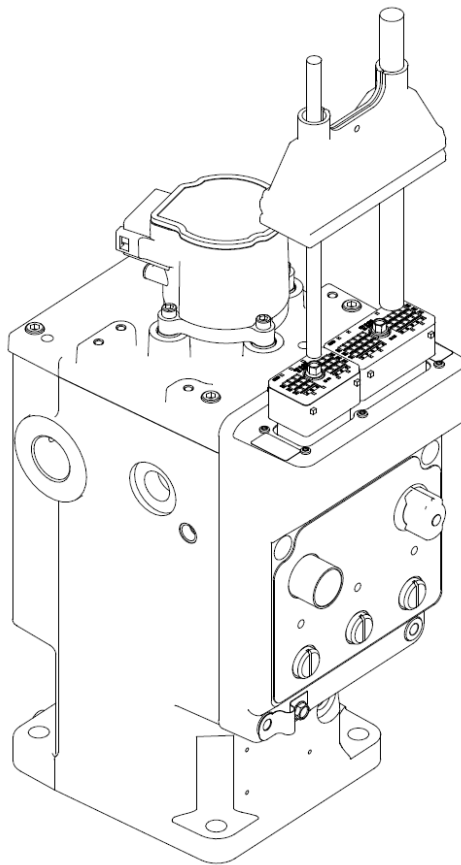


5. Apply Loctite thread lock to each screw for connectors.

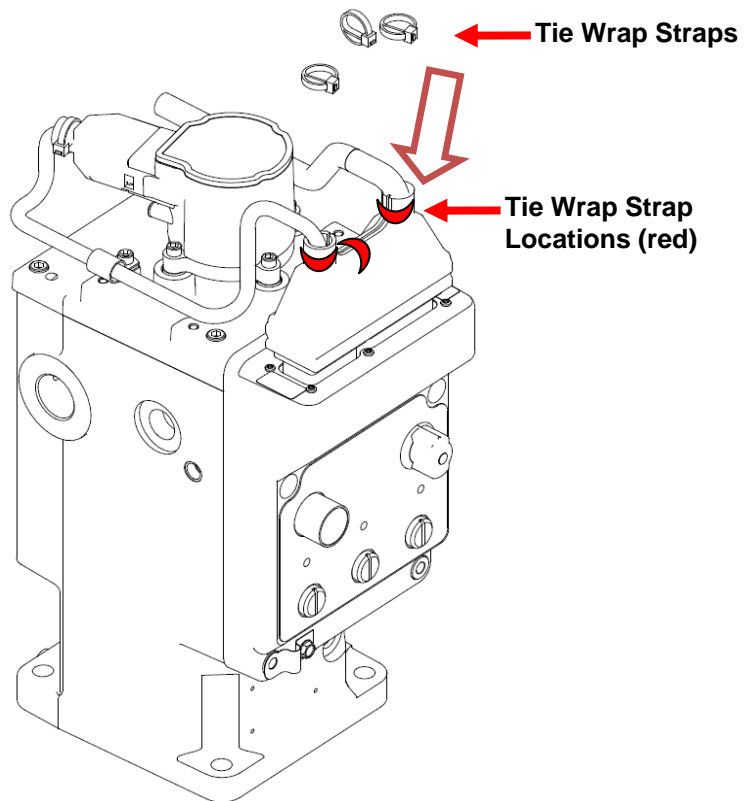


Final Cable Installation, Style 1 (skip to next section for Style 2)

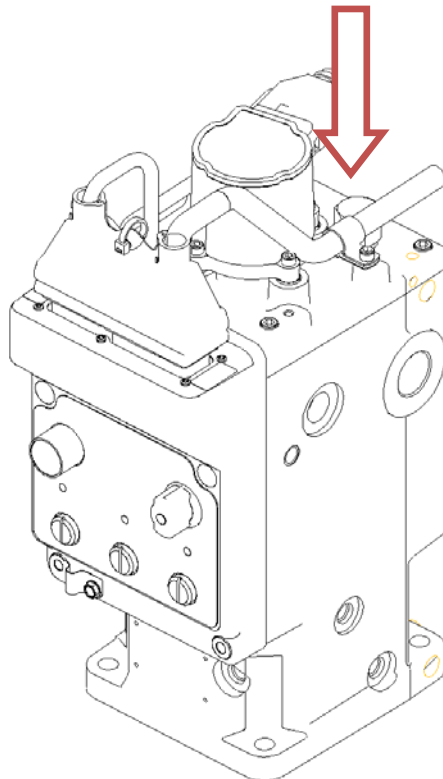
1. Install connectors to user interface header. Torque screws to 2 N·m with supplied driver.



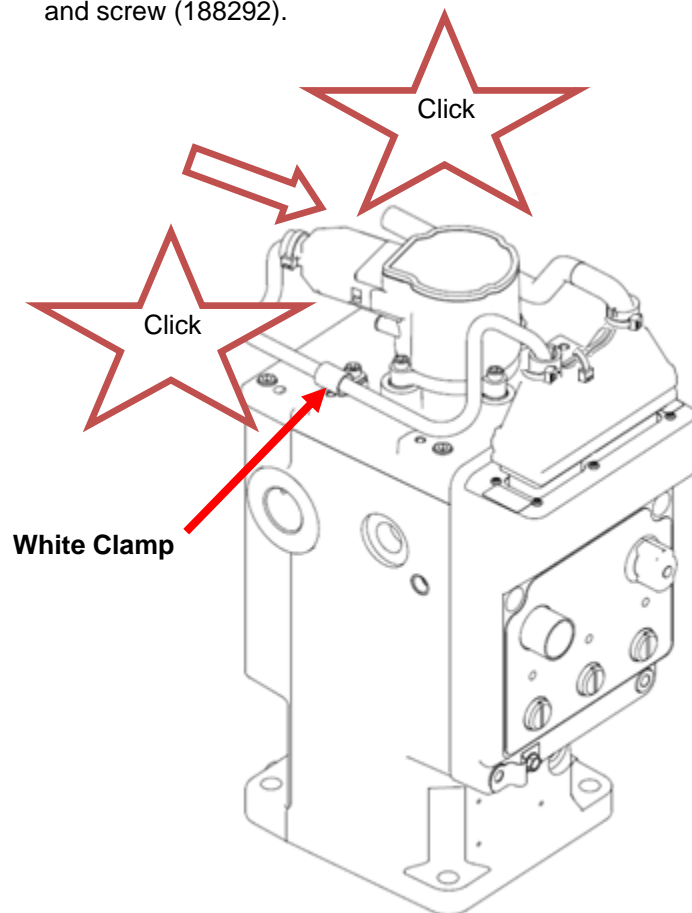
2. Install 3 tie wrap straps on top of boot in indicated locations. Middle tie goes through existing holes in boot.



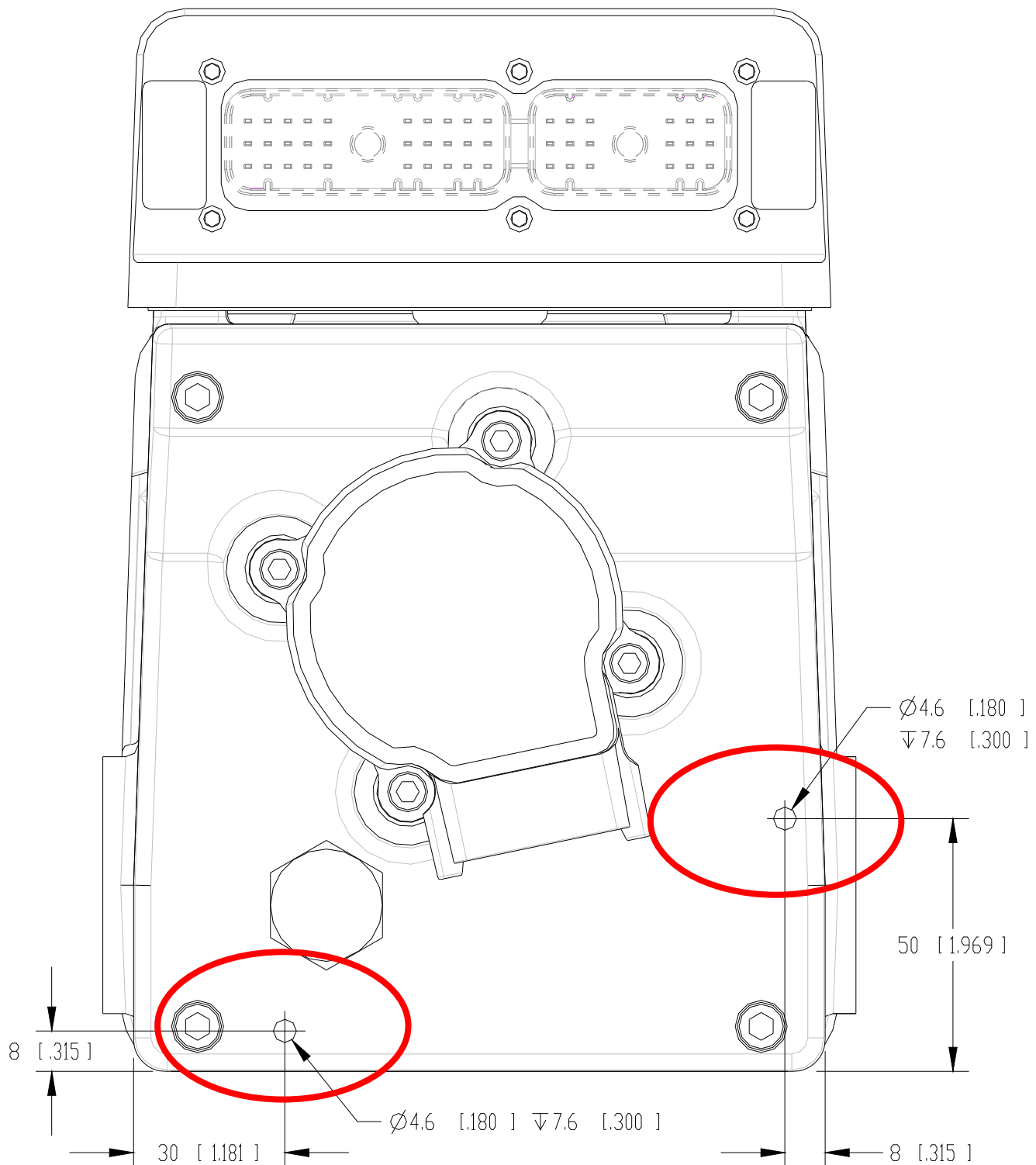
3. Install red clamp (1298-1083) onto customer cable and tighten screw (188292).



4. Install L-series connector into connector. Ensure that connector fully seats and you hear 2 “clicks” as connector locks. Install white clamp (1609-585) and screw (188292).



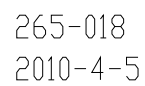
Final Cable Installation, Style 2



DRILL HOLES WITH TOOL# 8996-2188
ALL DIMENSIONS: MM [INCH]

265-017
2010-4-5

Hole Locations for Drilling 2 holes into Top Cover for Clamps

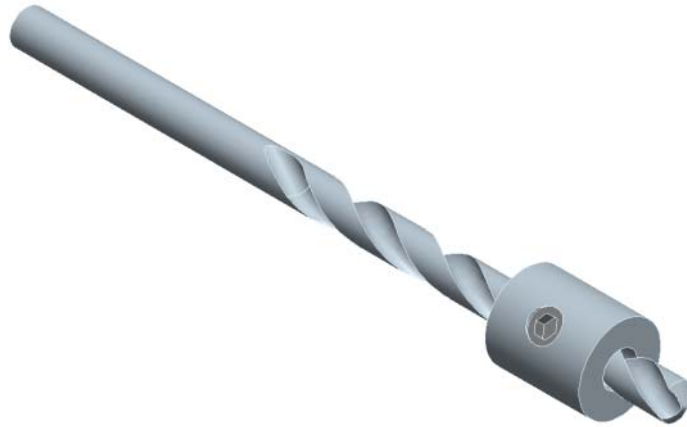


Clamps in Place on Top Cover

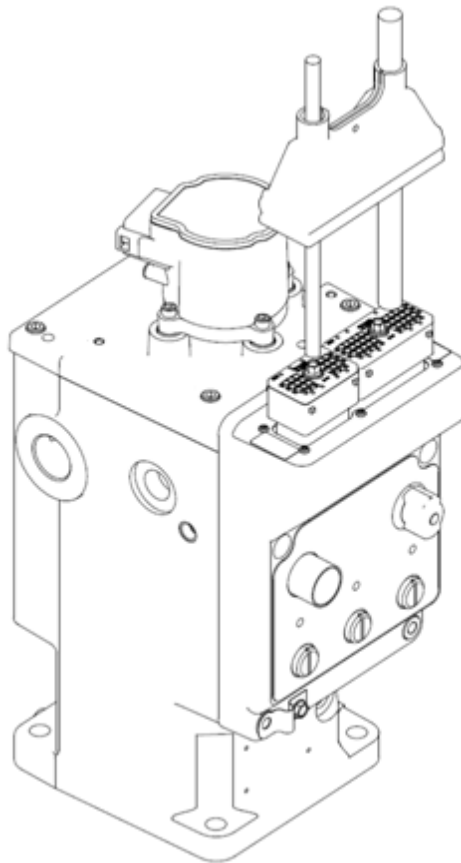
1. Drill both holes to drill stop on top cover per hole locations shown on page 10.

NOTICE

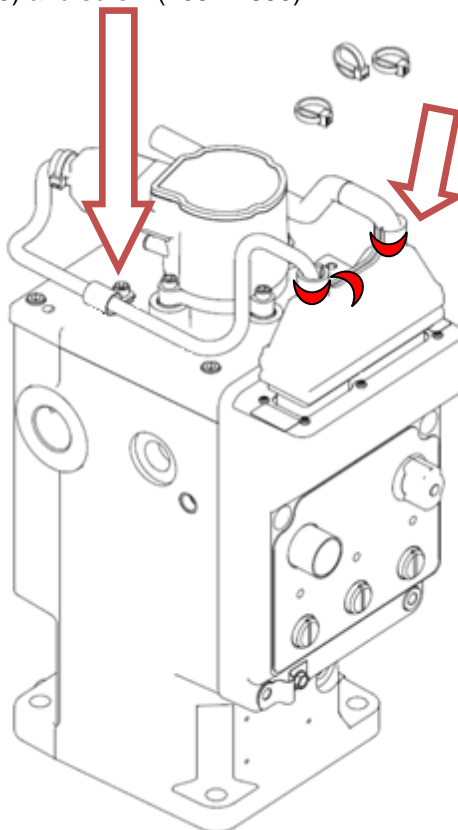
Do not drill through the cover into the interior of the governor.



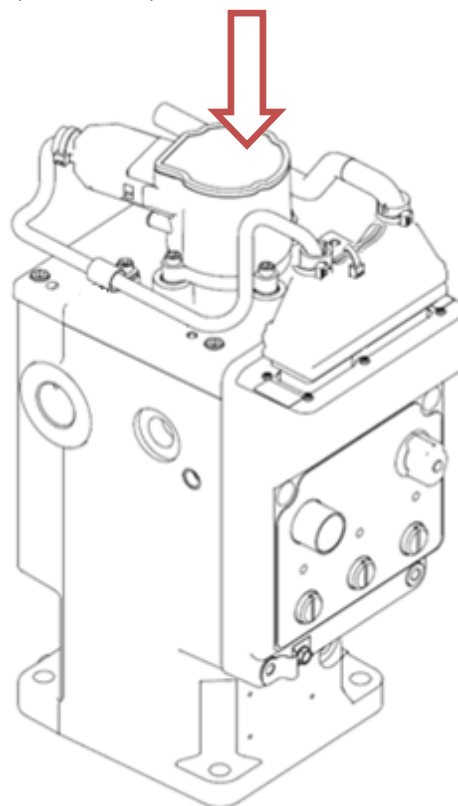
2. Install connectors to user interface header. Torque screws to 2 N·m with supplied driver.



3. Install tie wrap straps on top of boot in indicated locations. Install white clamp (1609-585) and screw (1031-1699).



4. Install red clamp (1298-1083) onto customer cable and screw (1031-1699).



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Please reference publication **26553.**



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