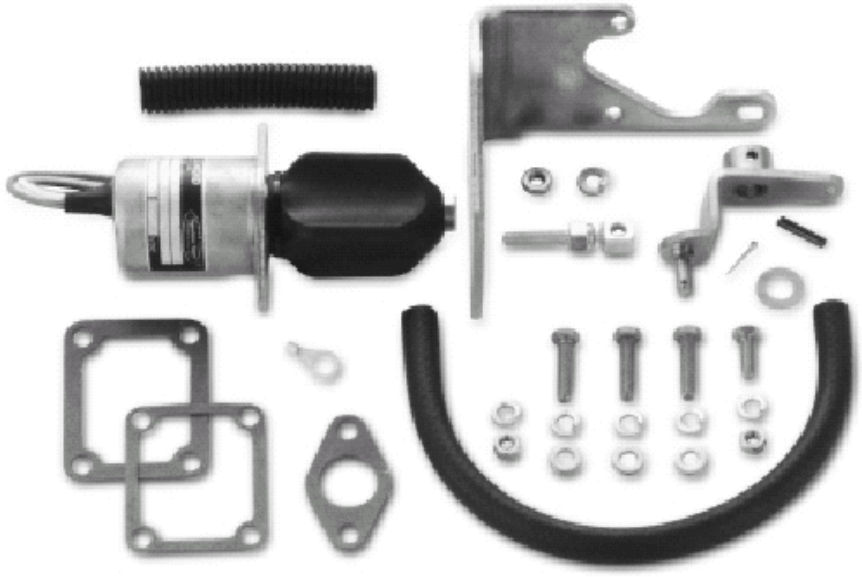
WOODWARD

Service Manual



Kubota Kit 3A
Engine Shutdown System
for 70mm & 82mm Series Engines
with 1751 & 1751ES Solenoids

Manual 36709

(Replaces SE-3019 Rev B
& SE-5289 Rev A)

IMPORTANT

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.

DEFINITIONS

- **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

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.

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.

This publication may have been revised or updated since this copy was produced. To verify that you have the latest revision, be sure to check the Woodward website:

www.woodward.com/pubs/current.pdf

The revision level is shown at the bottom of the front cover after the publication number. The latest version of most publications is available at:

www.woodward.com/publications

If your publication is not there, please contact your customer service representative to get the latest copy.

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.

NOTICE

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.

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*.

Revisions—Text changes are indicated by a black line alongside the text.

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Electrostatic Discharge Awareness

All electronic equipment is static-sensitive, some components more than others. To protect these components from static damage, you must take special precautions to minimize or eliminate electrostatic discharges.

Follow these precautions when working with or near the control.

1. Before doing maintenance on the electronic control, discharge the static electricity on your body to ground by touching and holding a grounded metal object (pipes, cabinets, equipment, etc.).

2. 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.

3. Keep plastic, vinyl, and Styrofoam materials (such as plastic or Styrofoam cups, cup holders, cigarette packages, cellophane wrappers, vinyl books or folders, plastic bottles, and plastic ash trays) away from the control, the modules, and the work area as much as possible.

4. 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.

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*.

Chapter 1.
General Information

Description

The Woodward Kubota Shutdown Kit 3A is designed for Kubota 70mm and 82mm series engines. It contains the properly suited solenoid and return spring as well as all mounting hardware for attachment to the governor housing. It is also available as a hardware kit without the solenoid.

The solenoid included in the kit is either the 1751ES externally switched (3 wire) solenoid or the 1751 internally switched solenoid. The solenoid is sized according to deration for hot temperature and low voltage. Hold coil is designed for continuous duty operation under the most severe temperature and vibration conditions.

PART NO.	SOLENOID MODEL	VOLTAGE
SA-4259-12	1751	12 Vdc
SA-4260-12	1751ES	12 Vdc
SA-4260-24	1751ES	24 Vdc
SA-4264 (hardware only)	—	—

Kit Components

REF NO.	DESCRIPTION	QTY.
1	Flex Guard Conduit	1
2	Mounting Bracket	1
3	Solenoid	1
4	M6 x 1 Hex Nut	3
5	M6 Flatwasher	3
6	Lever Assembly	1
7	In-line Swivel	1
8	Cotter Pin	1
9	Roll Pin	1
10	1/4 Lockwasher	1
11	82mm Gasket	1
12	70mm Gasket	1
13	Transfer Pump Gasket	1
14	Ring Terminal Connector	1
15	M6 x 16mm Screw	3
16	M6 x 25mm Screw	3
17	1/4-28 Hex Jam Nut	1
18	M6 Split Lockwasher	6
19	Fuel Hose	1

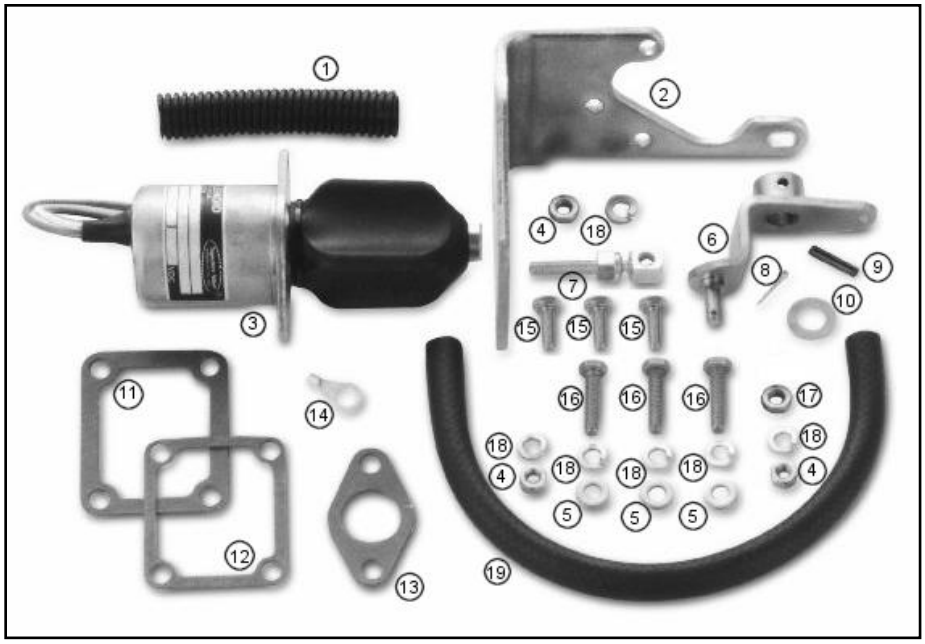

Figure 1. Kit Components

Chapter 2.
Installation

NOTICE

Before removing old parts or installing new ones, ensure that the engine is turned off and the battery is disconnected. Always use proper tools for the installation.

Shutoff Lever Installation

Refer to **Figure 2a**.

1. Remove the four hex head bolts (3) from the injection pump cover plate (1) located on the back of the pump. The oil dipstick tube will also become detached.
2. Remove run/stop lever (2) by punching out roll pin (4). Do not remove shaft from injection pump cover.
3. Remove original gasket (5) and disconnect torsion spring (6). It is not necessary to remove spring from shaft.
4. Discard lever, original gasket, and three of the four hex head bolts.

Refer to **Figure 2b**.

5. Attach new shutoff lever (7) to injection pump cover plate using new roll pin (8) and shim washer.

NOTICE

A shim washer and instruction tag are included with the lever. Only certain engine models require the shim washer. Install or discard shim washer as explained on the instruction tag.

6. Fasten injection pump cover plate assembly to engine using new gasket (9) and the retained hex head bolt (3). Note proper location of hex head bolt in the upper right hand hole location on the cover plate. *Do not tighten bolt at this time.*

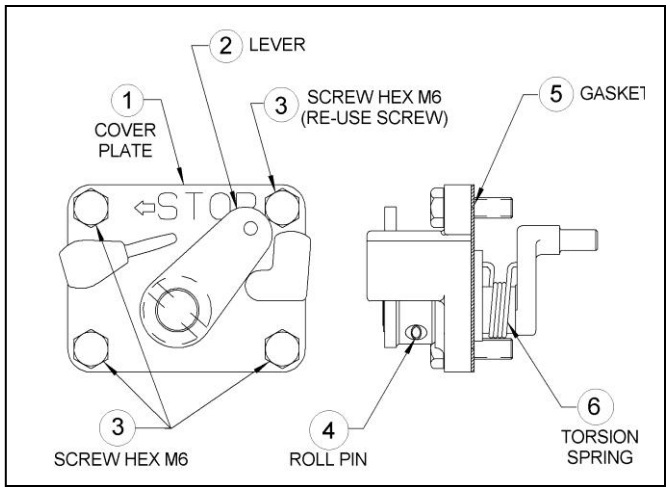

Figure 2a. Disassembly of Kubota Engine Parts

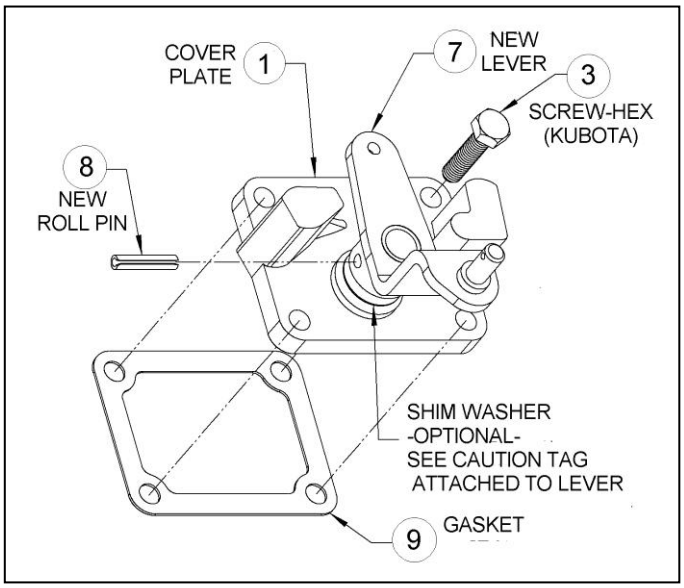

Figure 2b. Installation of Woodward Shutoff Lever

Bracket Installation

INTERNALLY SWITCHED SOLENOID / Refer to Figure 3.

EXTERNALLY SWITCHED SOLENOID / Refer to Figure 4.

1. Attach mounting bracket (3) to the injection pump cover plate using the retained Kubota hex head bolt, three hex head bolts (7), lockwashers (9), and flatwashers (11). Tighten all four bolts.
2. Attach the oil dipstick tube to the bracket using bolt, washer, and nut supplied with kit.

Parts List for Figures 3 & 4

REF NO.	DESCRIPTION	QTY.
1	Solenoid Assembly	1
2	Lever Assembly w/Shim Washer	1
3	Mounting Bracket	1
4	In-line Swivel/Ball Joint	1
5	1/4-28 Hex Jam Nut	1
6	1/4 Split Lockwasher	1
7	M6 x 1-25mm Hex Screw	3
8	M6 x 1-16mm Hex Screw	2
9	M6 Lockwasher	5
10	M6 Hex Nut	2
11	M6 Flatwasher	3
12	Cotter Pin	1

Internally Switched Solenoid Installation

WARNING

The solenoid must be installed with the boot cable tie clamp facing down and away from bracket. If the solenoid is installed 180° backwards, the boot cable tie clamp will interfere with the mounting bracket.

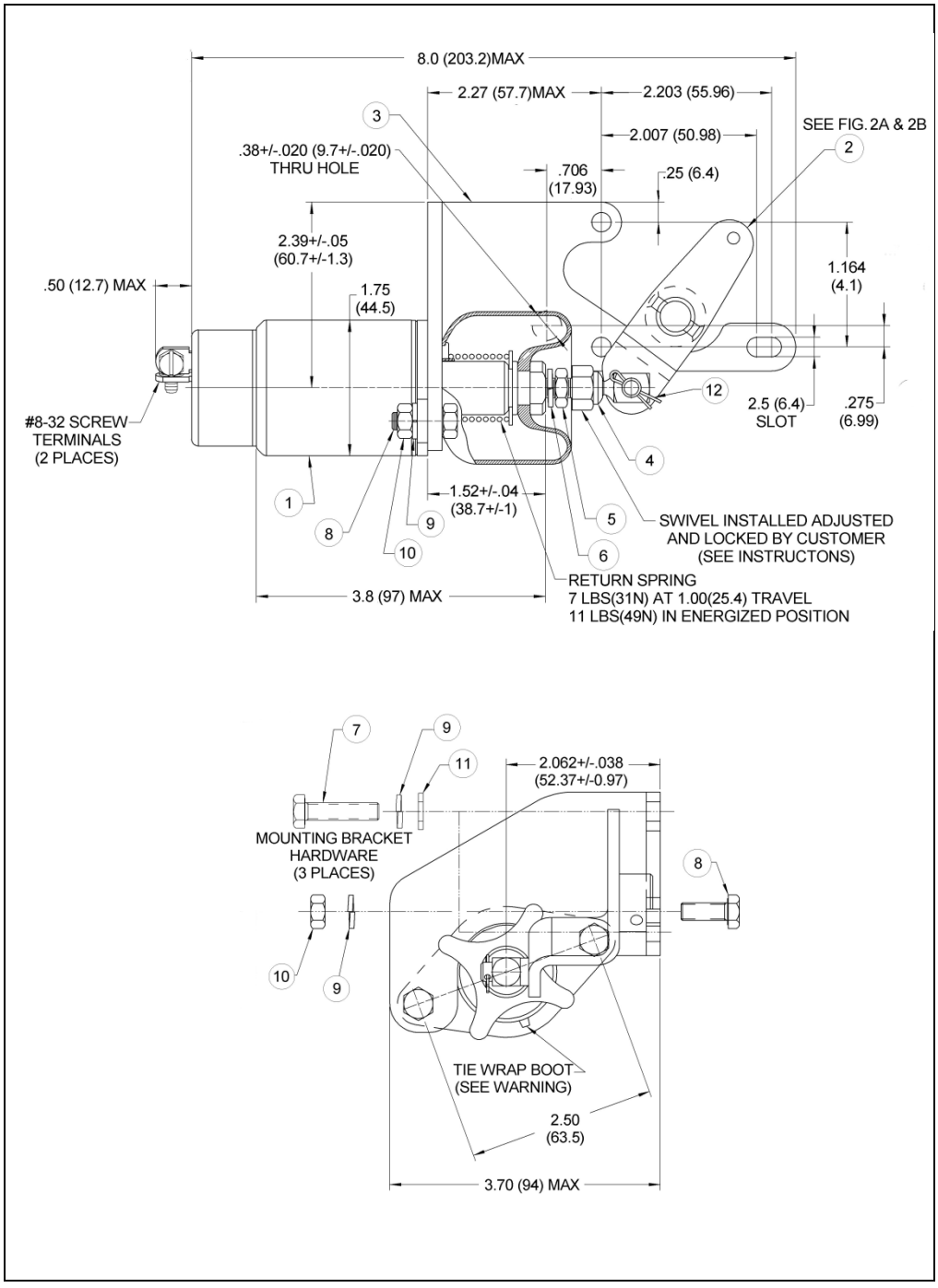

Figure 3. Installation with 1751 Internally Switched Solenoid

Externally Switched Solenoid Installation

⚠WARNING

The solenoid must be installed with the boot cable tie clamp facing down and away from bracket. If the solenoid is installed 180° backwards, the boot cable tie clamp will interfere with the mounting bracket.

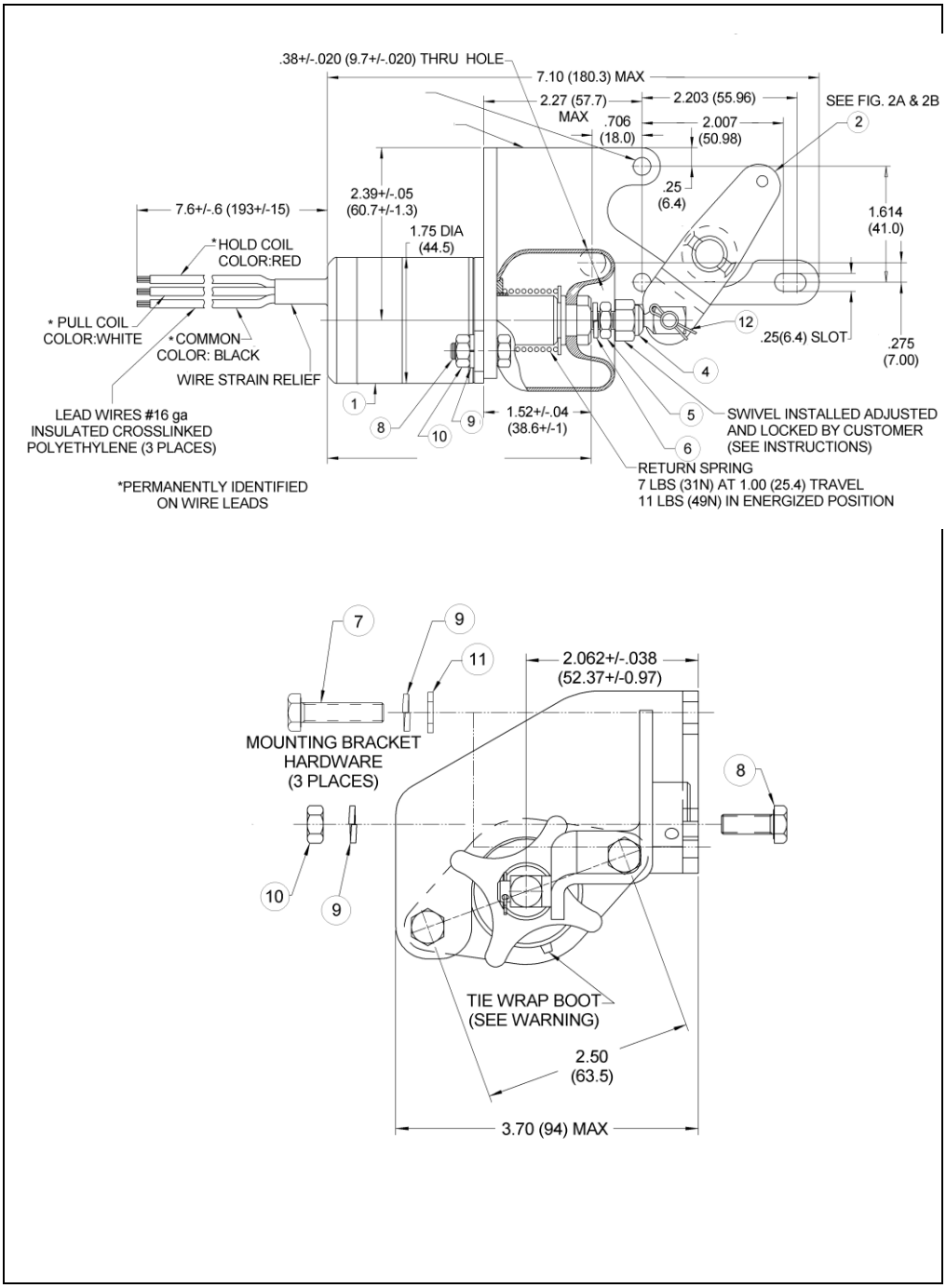

Figure 4. Installation with 1751ES Externally Switched Solenoid

Fuel Hose Interference Procedure

NOTICE

The Kubota fuel transfer pump inlet/outlet tubes and the Kubota fuel hose may interfere with the Woodward bracket on some engines. If there is no interference, install bracket and proceed to "Solenoid Installation & Adjustment" section. If there is interference, continue with Steps 1 or 2, depending on your engine model.

1. Follow these instructions for the following engine models:

   Two-Cylinder Engine Models "Z"

   Z600 & ZH600

   Three-Cylinder Engine Models "D"

   D650-B, D750-B, D850-B, D950-B, D1102-B, D1302-B, D1402-B, D1403-B, D1503-B, D1703-B

1.1 The fuel hose between the transfer pump outlet and the injection pump inlet banjo fitting must be routed *inside* the solenoid mounting bracket as shown in **Figure 5**. You should be able to use the existing Kubota fuel hose already on the engine. If not, a replacement hose is supplied in the kit.

1.2 Slide the protective nylon conduit supplied with the kit over fuel hose to position shown in **Figure 5**. This will protect the hose where it rubs on the inside of the bracket. Cut the conduit to a size that will cover the length of the hose.

NOTICE

Routing of the fuel hoses may vary depending on engine models or equipment manufacturers. See Kubota manuals or OEM manuals for proper routing of hoses between tank, transfer pump, filters, and injection pump.

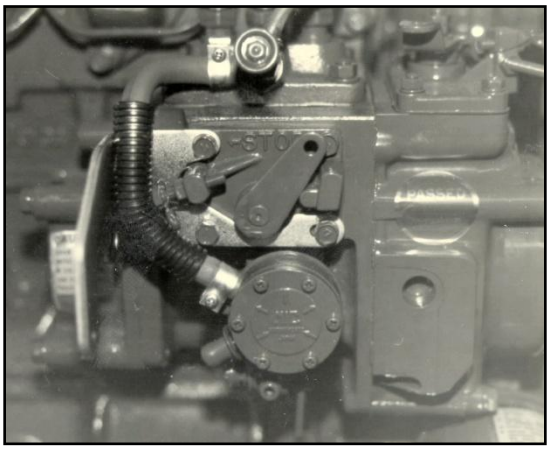

Figure 5. Fuel Hose Routed Inside Mounting Bracket

2. Follow these instructions for the following engine models:

   Four-Cylinder Engine Models “V”

   V1000-B, V1100-B, V1200-B, V1502-B, V1702-B, V1902-B, V1903-B, V2203-B, VH1100-B, VT1502-B

   Five-Cylinder Engine Models “F”

   F-2803-B

   Six-Cylinder Engine Models “S”

   S2200-B, S2600-B, S2800-B

   On the 4-, 5-, and 6-cylinder engines, the outlet tube on the fuel transfer pump interferes more severely than on the 3-cylinder engines discussed above. Although the pump outlet tube does not touch the Woodward bracket, it is so close that the fuel hose cannot be installed. Therefore, it is necessary to rotate or reposition the fuel transfer pump inlet/outlet tubes and re-route the fuel hose.

   Follow Steps 2.1–2.4 to remedy interference condition for pumps with *removable* cover. Follow Steps 2.6–2.11 for pumps *with non-removable cover*.

NOTICE

Routing of the fuel hoses may vary depending on engine models or equipment manufacturers. See Kubota manuals or OEM manuals for proper routing of hoses between tank, transfer pump, filters, and injection pump.

2.1 Use the following instructions to rotate or reposition fuel transfer pump inlet/outlet tubes and re-route the fuel hose on pumps with *removable* covers.

2.2 Remove fuel hose from between fuel pump outlet tube and injection pump banjo fitting. Discard hose but retain hose clamps.

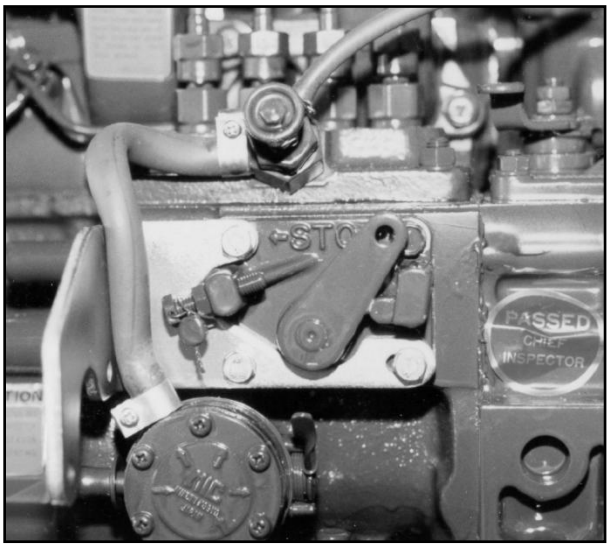

Figure 6. Fuel Pump Outlet Tube and Hose Interference with Solenoid Mounting Bracket

2.3 Remove the six screws from fuel pump face and rotate face plate 60° counterclockwise to position shown in **Figure 7.**

2.4 Refasten face plate to fuel pump securely with existing gasket and six screws.

2.5 Attach new, longer hose provided with the kit between fuel pump outlet port and injection pump inlet port. Cut hose length as necessary. Secure firmly with existing hose clamps. See **Figure 7.**

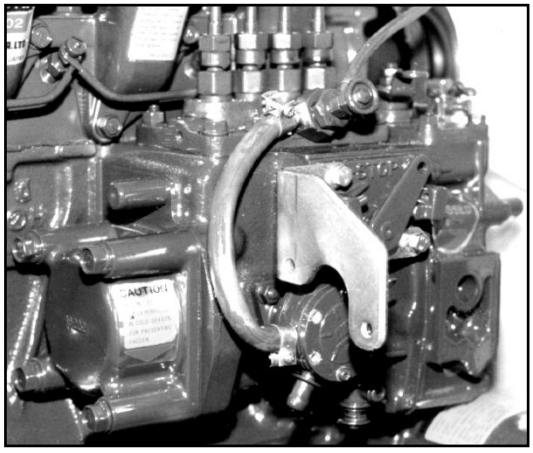

Figure 7. Rotation of Face Plate

2.6 Use the following instructions to rotate or reposition fuel transfer pump inlet/outlet tubes and re-route the fuel hose on pumps with *non-removable* covers. Refer to **Figure 8.**

NOTICE

On some engine models, the fuel transfer pump may be positioned differently than shown in Figure 8, resulting in no interference with the solenoid mounting bracket. If there is no interference, install bracket and proceed to "Solenoid Installation & Adjustment" section.

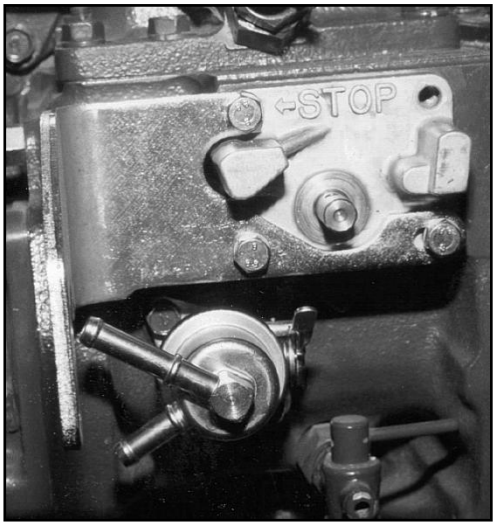

Figure 8. Interference with Solenoid Mounting Bracket on Pump with Non-Removable Cover

2.7 Remove fuel hose located between fuel pump outlet tube and injection pump inlet banjo fitting. Discard hose but retain hose clamps.

2.8 Remove the two cap screws that hold transfer pump to engine. Remove pump, discard original gasket.

2.9 Rotate pump 180°, attach new gasket, and re-install on engine with original cap screws. The fuel inlet/outlet tubes are now positioned as shown in **Figure 9**.

2.10 Loosen injection pump fuel inlet banjo fitting and rotate toward front of engine as shown in **Figure 9.**

2.11 Attach new, longer hose provided with the kit between transfer pump outlet tube and injection pump fuel inlet banjo fitting. Secure firmly with existing hose clamps. Slide protective nylon conduit supplied with kit over hose with slit facing away from contact with the engine. The conduit will protect the hose where it rubs on the engine.

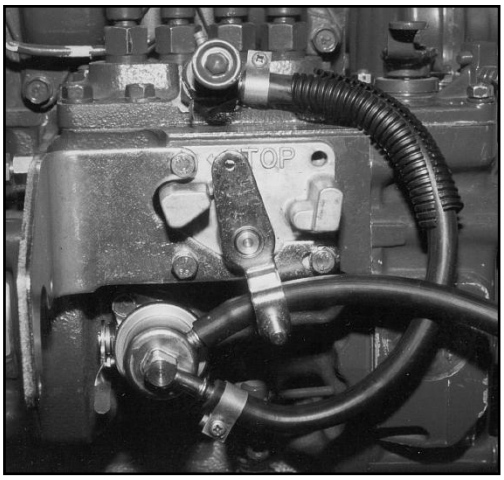

Figure 9. Re-positioned Fuel Inlet/Outlet Tubes

NOTICE

When installing fuel hose from the fuel tank to the fuel inlet tube on the transfer pump, be sure to position the hose so that it does not rub on the shutoff lever.

Engines with Radiator Support Bracket

Some engines are equipped with a radiator and radiator support bracket attached to the fuel injection cover plate upon which the Woodward bracket also mounts. In such cases, use longer cap screws and washers to mount radiator bracket.

(a) Route fuel hoses as shown in **Figure 10** if the transfer pump with non-removable cover interferes with the bracket.

(b) Route fuel hoses to the rear of the engine as shown in **Figure 5** or **Figure 7** if the transfer pump has a removable cover.

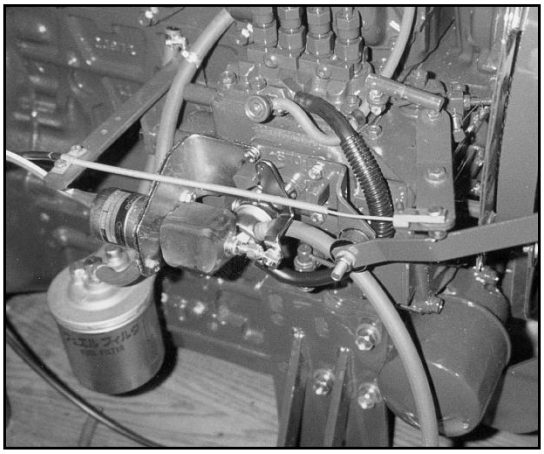

Figure 10. Engine with Radiator Support Bracket

Solenoid Installation & Adjustment

INTERNALLY SWITCHED SOLENOID / Refer to Figure 3.

EXTERNALLY SWITCHED SOLENOID / Refer to Figure 4.

⚠WARNING

The solenoid must be installed with the boot cable tie clamp facing down and away from bracket. If the solenoid is installed 180° backwards, the boot cable tie clamp will interfere with the mounting bracket.

1. Holding the solenoid (1), slide the square end of the swivel (4) onto the pin on the lever (2) and then swing the solenoid into position on the bracket (3). Fasten solenoid with remaining bolts (8), lockwashers (9), and nuts (10). Insert cotter pin (12) into pin on lever. Open ears on cotter pin to hold in place.
2. Energize solenoid to make final adjustment of swivel. Use a power supply with 1A or greater, or use a battery. Use extreme caution with cables, clips, etc.

⚠WARNING

INTERNALLY SWITCHED SOLENOIDS (Switch Cap with Terminals)

Attach power to terminals. Plunger must be allowed to fully pull in and bottom to switch OFF high current pull coil. If plunger is restricted, solenoid may overheat and be damaged. If the plunger has pulled in and fully bottomed, only the low current hold coil is ON and the solenoid may be energized continuously for this adjustment.

⚠WARNING

EXTERNALLY SWITCHED SOLENOIDS (3 Lead Wires)

Attach power to the red (hold) and black (common) wires. This is the low current hold in coil and may be energized continuously during this adjustment. Push the plunger in by hand until it magnetically holds in. Do not energize the white (pull) wire at this time.

3. With solenoid still energized, adjust lever arm to within 1/16” of the full run position by rotating the threaded end of swivel. When the adjustment is made, lock swivel in place with 1/4-28 jam nut (5) and lockwasher (6).

NOTICE

To lock swivel in place, the 1/4-28 jam nut should be secured against the solenoid plunger.

4. With the solenoid de-energized, move the lever manually to check that everything moves freely. *If not*, review all of the steps above and realign until linkage moves freely.

Solenoid Wiring

Wire solenoid to system using wiring instructions provided with solenoid. If solenoid is wired to starter motor, use the ring terminal connector supplied with the kit.

NOTICE

EXTERNALLY SWITCHED SOLENOIDS
For detailed wiring and installation instructions refer to Manual 36542 Externally Switched Dual Coil Solenoid Wiring Guide available on www.woodward.com**.**

INTERNALLY SWITCHED SOLENOIDS
For detailed wiring and installation instructions refer to Manual 36575 Internally Switched Dual Coil Solenoid Wiring Guide available on www.woodward.com.

Checking the Installation

NOTICE

For detailed troubleshooting information on the solenoid refer to Manual 36541 *Solenoid Troubleshooting Guide* available on www.woodward.com.

Start and stop the engine to check for proper operation of the shutdown system.

Chapter 3.
Service Options

Product Service Options

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

- Consult the troubleshooting guide in the manual.
- Contact the manufacturer or packager of your system.
- Contact the Woodward Full Service Distributor serving your area.
- Contact Woodward technical assistance (see "How to Contact Woodward" later in this chapter) and discuss your problem. In many cases, your problem can be resolved over the phone. If not, you can select which course of action to pursue based on the available services listed in this chapter.

OEM and 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 **Recognized Turbine Retrofitter (RTR)** is an independent company that does both steam and gas turbine control retrofits and upgrades globally, and can provide the full line of Woodward systems and components for the retrofits and overhauls, long term service contracts, emergency repairs, etc.

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

Woodward Factory Servicing Options

The following factory options for servicing Woodward products are available through your local Full-Service Distributor or the OEM or Packager of the equipment system, based on the standard Woodward Product and Service Warranty (5-01-1205) that is in effect at the time the product is originally shipped from Woodward or a service is performed:

- 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 is a flat-rate program and includes the full standard Woodward product warranty (Woodward Product and Service Warranty 5-01-1205).

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.

Charges for the Replacement/Exchange service are based on a flat rate plus shipping expenses. You are invoiced the flat rate replacement/exchange charge plus a core charge at the time the replacement unit is shipped. If the core (field unit) is returned within 60 days, a credit for the core charge will be issued.

Flat Rate Repair: Flat Rate Repair is available for the majority of standard 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. All repair work carries the standard Woodward service warranty (Woodward Product and Service Warranty 5-01-1205) on replaced parts and labor.

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 and carry with it the full standard Woodward product warranty (Woodward Product and Service Warranty 5-01-1205). 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 offers various Engineering Services for our products. For these services, you can contact us by telephone, by email, or through the Woodward website.

- 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. Emergency assistance is also available during non-business hours by phoning Woodward and stating the urgency of your problem.

Product Training is available as standard classes at many of our worldwide locations. We also offer customized classes, which can be tailored to your needs and can be held at one of our 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 many of our worldwide locations or 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 us via telephone, email us, or use our website and reference **www.woodward.com/support**, and then ***Customer Support***.

How to Contact Woodward

For assistance, call one of the following Woodward facilities to obtain the address and phone number of the facility nearest your location where you will be able to get information and service.

Electrical Power Systems

Facility	Phone Number
Australia	+61 (2) 9758 2322
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany:	
Kempen	+49 (0) 21 52 14 51
Stuttgart	+49 (711) 78954-0
India	+91 (129) 4097100
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
Poland	+48 12 618 92 00
United States	+1 (970) 482-5811

Engine Systems

Facility	Phone Number
Australia	+61 (2) 9758 2322
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany:	
Stuttgart	+49 (711) 78954-0
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

Turbine Systems

Facility	Phone Number
Australia	+61 (2) 9758 2322
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
United States	+1 (970) 482-5811

You can also contact the Woodward Customer Service Department or consult our worldwide directory on Woodward's website (**www.woodward.com/support**) for the name of your nearest Woodward distributor or service facility.

For the most current product support and contact information, please refer to the latest version of publication **51337** at **www.woodward.com/publications**.

Technical Assistance

If you need to telephone for technical assistance, you will need to provide the following information. Please write it down here before phoning:

General

Your Name_____
Site Location_____
Phone Number_____
Fax Number_____

Prime Mover Information

Engine/Turbine Model Number_____
Manufacturer_____
Number of Cylinders (if applicable)_____
Type of Fuel (gas, gaseous, steam, etc)_____
Rating_____
Application_____

Control/Governor Information

Please list all Woodward governors, actuators, and electronic controls in your system:

Woodward Part Number and Revision Letter _____
Control Description or Governor Type _____
Serial Number _____

Woodward Part Number and Revision Letter _____
Control Description or Governor Type _____
Serial Number _____

Woodward Part Number and Revision Letter _____
Control Description or Governor Type _____
Serial Number _____

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.

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

Please reference publication 36709.

WOODWARD

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Email and Website—www.woodward.com

**Woodward has company-owned plants, subsidiaries, and branches,
as well as authorized distributors and other authorized service and sales facilities throughout the world.**

Complete address / phone / fax / email information for all locations is available on our website.

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