



HHNG5

Push/Pull Throttle Kit Instructions

The following instructions are intended to assist the user in the installation of the Push/Pull Throttle Kit for use on the HHNG5 Ride-On Trowel. Please read all assembly instructions before installing the kit.

REQUIRED TOOLS

- 1/4" Drive Ratchet, 6-Inch Extension, 8mm Socket
- Drill, 7/16 Drill Bit
- Flat Blade Screwdriver
- Phillips Head Screwdriver
- Needle-Nose Pliers
- Hammer
- 11/16 End Wrench (2)
- 4mm Allen Wrench

PARTS

Verify that all parts are accounted for. See Figure 1 and Table 1.

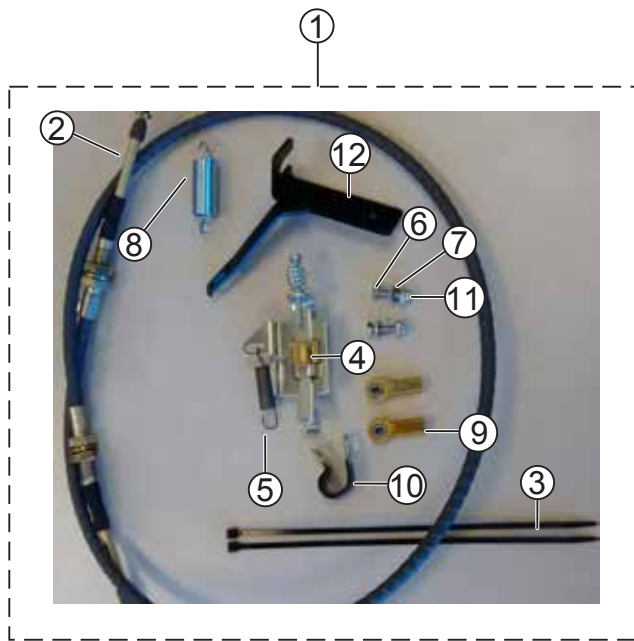


Figure 1. HHNG5 Push/Pull Throttle Kit

Table 1. HHNG5 Push/Pull Throttle Kit (P/N 32524)

Item No.	Part No.	Description	QTY.	Remarks
1	32524	Kit, HHNG5 Push/Pull Throttle	1	Includes items 2-13
2	32510	Cable, Throttle	1	
3	1662	Tie Wrap	2	
4	30083	Slider, Throttle	1	
5	32528	Spring, Ext. .38 OD X 2 L X .38 ZP	1	
6	32527	Screw, HHC 10-32 X 3/4" SS	1	
7	2203	Washer, Flat SAE #10	2	
8	32512	Spring, Ext. .63 OD X 2.25 L X .38 ZP	1	
9	2153	Rod End 10-32	2	
10	8126	P-Clamp 1/2" Loop x .25 Hole	1	
11	32526	Nut, 10-32 FlexLoc	2	
12	32498	Bracket, Cable	1	
13	32548	Instructions, Push/Pull Throttle Kit	1	

WORK SAFELY!

Only a **qualified service technician** with proper training should perform this installation. Follow all shop safety rules when performing this installation.

PREPARATION

1. Make sure trowel is turned off and engine is cool.
2. Place the trowel in an area free of dirt and debris. Make sure it is on secure level ground.

DISASSEMBLY

Battery Cover Removal

1. Remove the 2 wing nuts (Figure 2) that secure the battery hold down bar to the battery cover.
2. Set wing nuts, battery cover and hold down bar aside.

Battery Cable Disconnection

1. Disconnect the negative battery cable (BLACK) from the battery post (Figure 2).

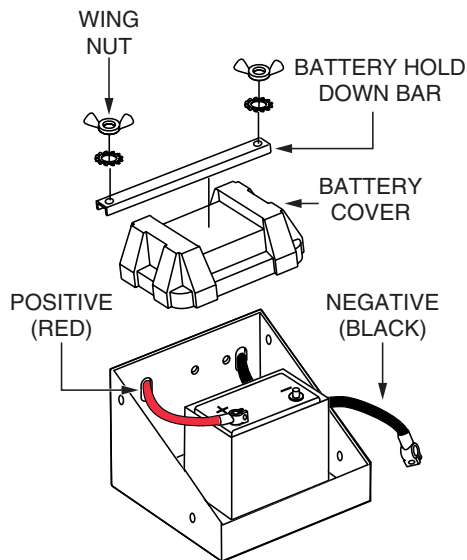


Figure 2. Battery Cover Removal and Cable Disconnection

Front Upper Access Panel Removal

1. Unscrew the 2 thumb screws (Figure 3) located on top of the upper access panel.

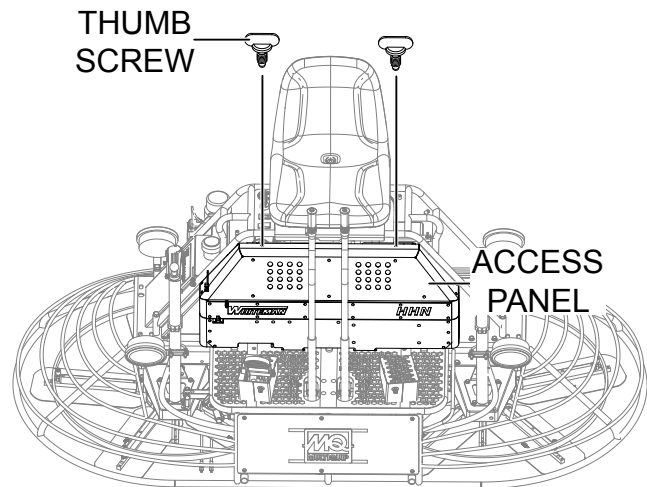


Figure 3. Access Panel Removal

2. Next, lift control access upwards and pull panel slightly forward so that clutch cover retaining screws (Figure 4) can be accessed.

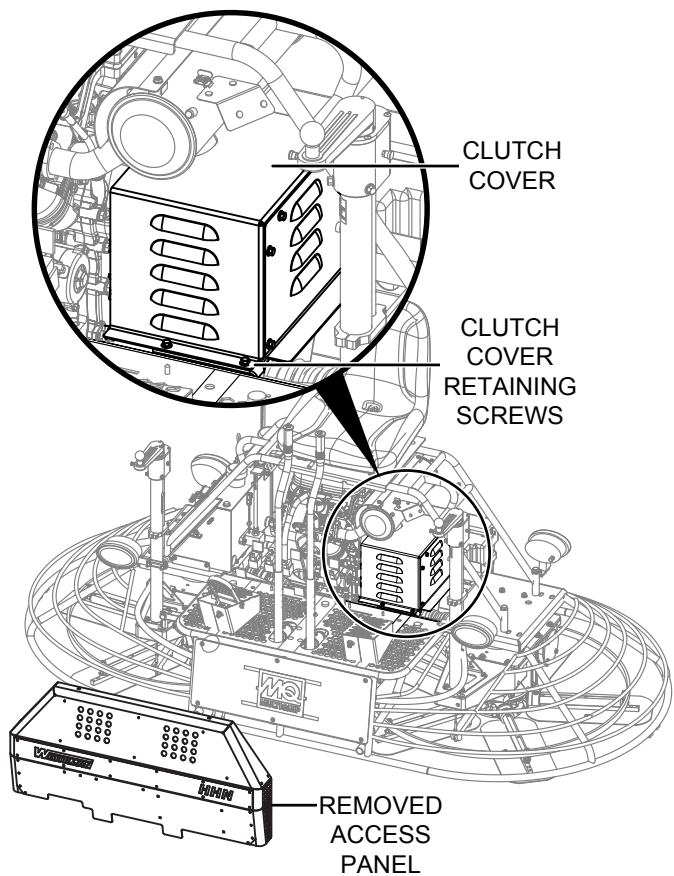


Figure 4. Clutch Cover Retaining Screws

Clutch Cover Removal

1. Remove the P-clamp (Figure 5) securing the choke cable to the belt guard. Set the P-clamp aside in a safe place and move the choke cable out of the way
2. Using a 7/16" wrench, remove the 1/4-20 x 3/4" retaining screws (10) securing the belt guard panels. Set the panels and retaining screws aside in a clean safe place. Figure 5.

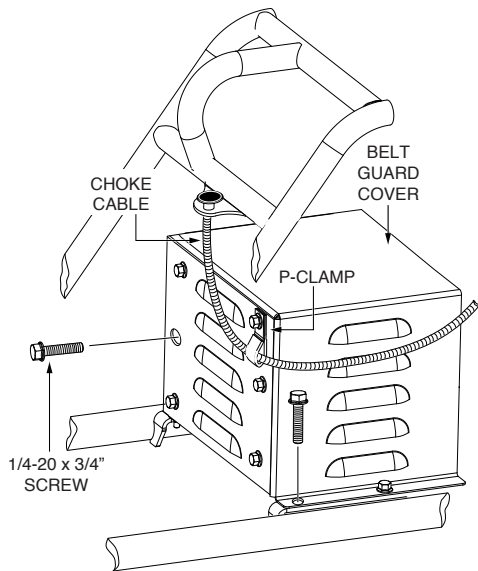


Figure 5. Clutch Cover Removal

Disconnecting Throttle Cable

NOTICE

Before disconnecting any throttle components from the control bracket, please observe (mark) the orientation of the throttle return and governor springs.

1. Remove air filter cover for unobstructed access to the throttle control bracket components.
2. Using a phillips head screwdriver, remove the throttle cable wire attached to the brass hex standoff (Figure 6).

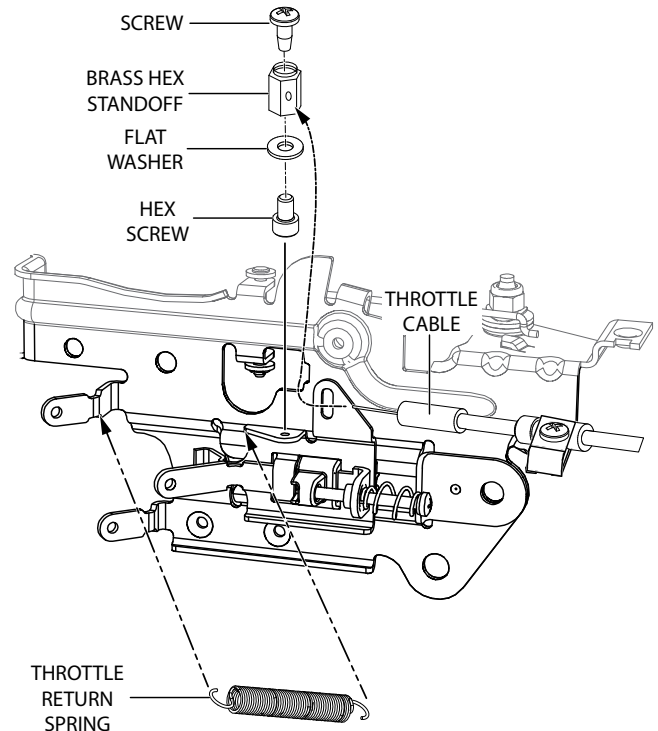


Figure 6. Throttle Cable Removal (Brass Hex Standoff)

- Next, pull the throttle cable wire from the hole opening on the brass hex standoff.
- Remove the brass hex standoff.
- Once the throttle cable wire has been pulled free from the brass hex standoff, loosen the throttle mount screw (Figure 7) that is attached to throttle cable clamp at the other end of control bracket.

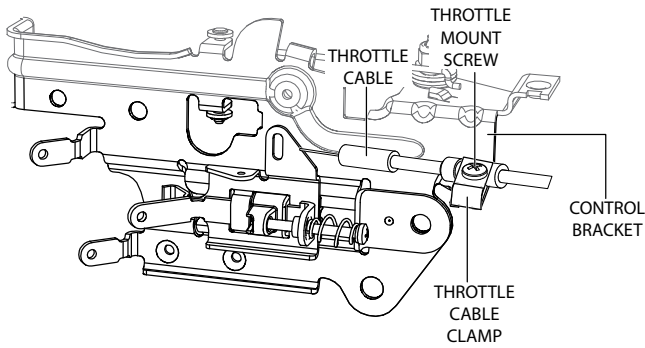


Figure 7. Throttle Cable Removal (Cable Clamp)

- Remove the throttle cable from the control bracket.

Throttle/Governor Springs

- Using needle nose pliers, disconnect one end of the governor spring as shown in Figure 8.
- Using needle nose pliers, disconnect one end of the throttle return spring from the slide body bracket arm as shown in Figure 8. The throttle return spring will be replaced with a new throttle return spring (P/N 32528).

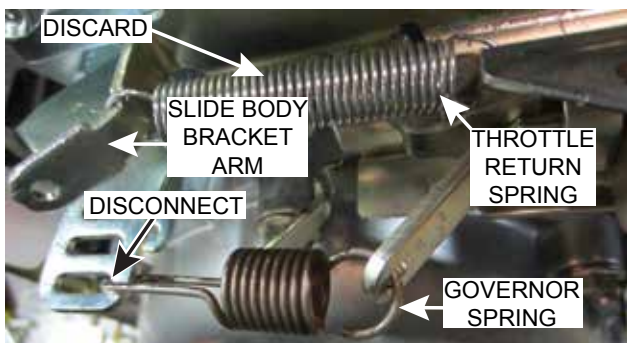


Figure 8. Throttle/Governor Spring Disconnection

Throttle Stop Bracket/Slide Body

- Using a 1/4" drive ratchet, 6-inch extension and a 8 mm socket, loosen the throttle stop bracket retaining screw (Figure 9) enough to allow the slide body bracket to be removed. **DO NOT** remove retaining screw.

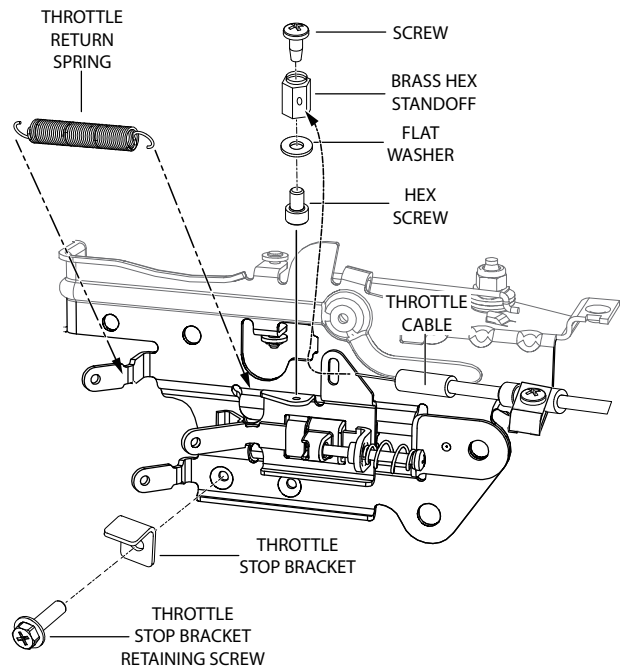


Figure 9. Throttle Stop Bracket

- Using gentle pressure, remove (slide forward) the **brass slide body** (P/N 30083) from the slide body bracket as shown in Figure 10.

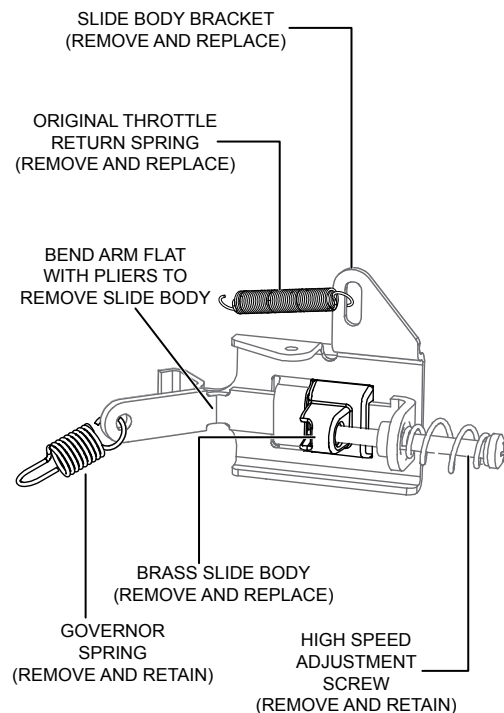


Figure 10. Slide Body Removal

- Remove existing governor spring from slide body bracket and set aside. It will be used later. Discard the existing slide body (brass) and throttle return spring (if not already removed).

New Slide Body Installation

- Remove the new slide body (P/N 30083 Brass) and new throttle return spring (P/N 32528) from the kit.

NOTICE

Make sure to use the new slide body (P/N 30083) provided in the kit when replacing the old slide body. Continuing to use the old slide body may cause damage to the trowel.

- If not attached, connect new throttle return spring (Figure 11) through hole opening on slide body bracket.

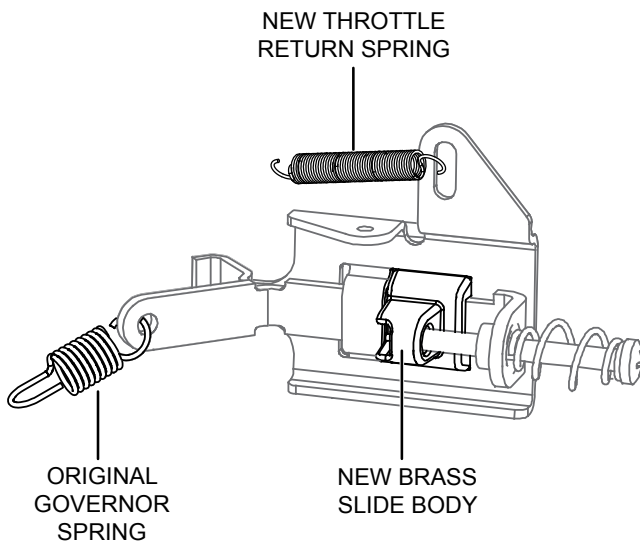


Figure 11. New Slide Body (Brass)

- Attach existing governor spring (Figure 12) onto slide body bracket arm.
- Install slide body (slide forward) onto slide body control bracket.
- Using a 1/4" drive ratchet, 6-inch extension and a 8 mm socket, reposition throttle stop bracket back to its original position. Tighten retaining screw securely.

- Using needle nose pliers, attach the free ends of the governor and throttle return springs to the slide body control bracket as shown in Figure 12.

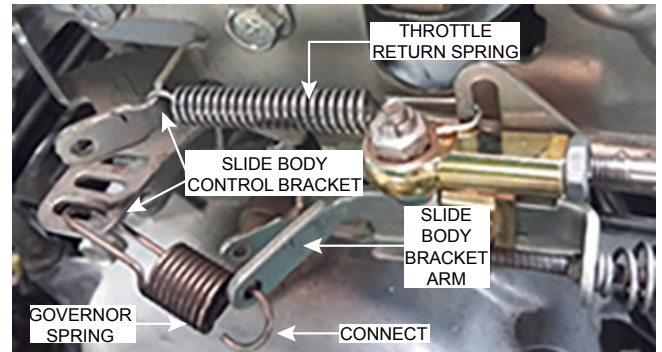


Figure 12. Throttle/Governor Spring Reconnection
Throttle Control Bracket Installation

- Using a wrench and socket, remove and set aside the lower left screw and washer from the engine nameplate on the clutch and muffler side of the engine as shown in Figure 13.
- Place the throttle control bracket downward arm where the screw and washer were as shown in Figure 13.
- Reinstall the screw and washer to secure the throttle control bracket to the engine as shown in Figure 13.

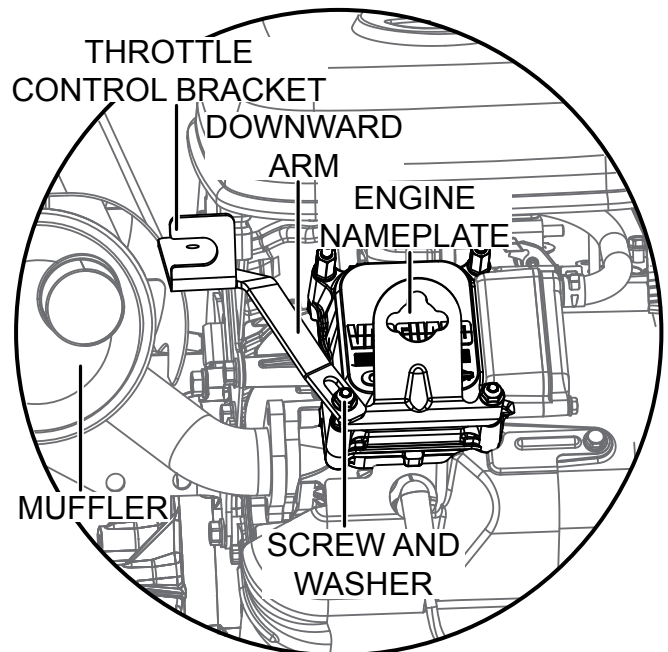


Figure 13. Throttle Control Bracket Engine Securing

- Remove the throttle mount screw securing the throttle cable clamp. The clamp cover will not be used further.
- Place the throttle control bracket straight arm where the throttle mount screw was located as shown in Figure 14.
- Insert the throttle mount screw through the throttle control bracket (P/N 32498) as shown in Figure 14. Throttle mount screw was used on previous assembly as shown in Figure 7.

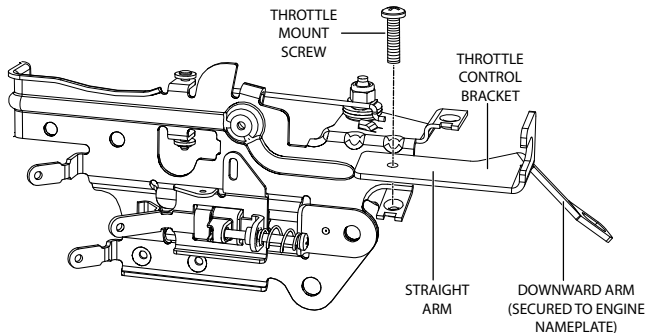


Figure 14. Throttle Stop Bracket and Throttle Mount Screw Installation

Throttle Cable Clamp/Throttle Cable Installation

- On the new throttle cable (P/N 32510), adjust the inner and out flat washers and nuts an adequate distance from each other on the threaded end of the throttle cable.
- Insert the threaded portion of the throttle cable into the cable slot on the throttle control support bracket as shown in Figure 15.
- Using two wrenches, tighten the inner and outer flat washers and nuts against the throttle control support bracket as shown in Figure 15.

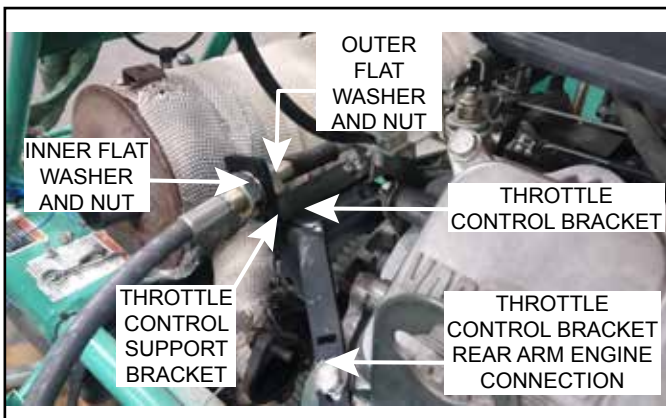


Figure 15. Throttle Installation and Securing

Rod End/Throttle Cable Installation

- Install the rod end completely on the cable, and tighten the jam nut as shown in Figure 16.
- Insert a 10-32 flat washer and 10-32 x 3/8" screw up through the bottom of the rod end.
- While holding the flat washer and screw, place a 10-32" flexloc nut over the threaded end of the 10-32 x 3/8" screw to secure the rod end to the slide body bracket.
- Using a wrench, tighten the nut on the throttle cable to be flush with the rod end.

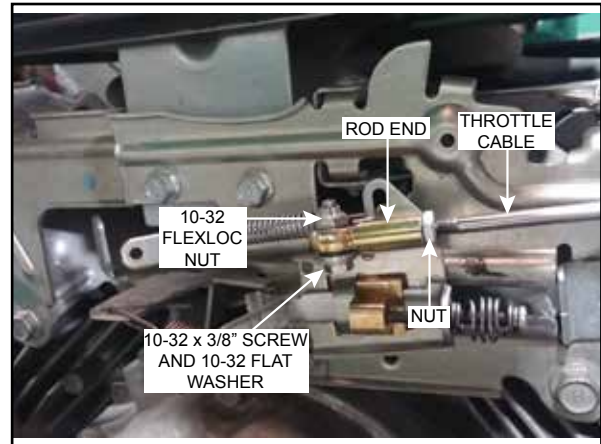


Figure 16. Throttle Cable/Rod End Installation

- Using an antiseize lubricant, lubricate both ends of the push/pull throttle cable. Pull the wiper back and lubricate inside boot as shown in Figure 17.

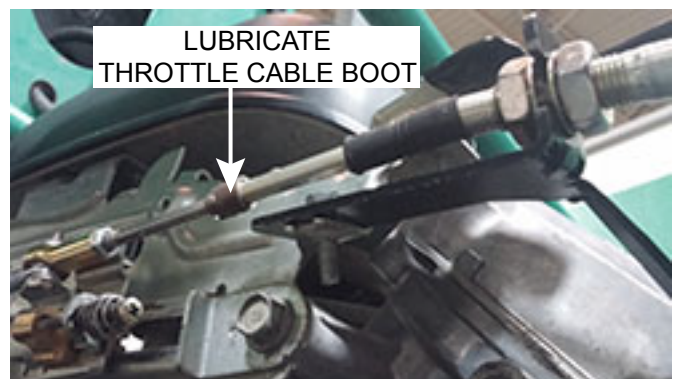


Figure 17. Throttle Cable Boot Lubrication

- Reinstall the clutch cover. Secure clutch cover to the frame using retaining screws (4). Tighten screws securely.
- Reinstall upper access panel. Secure panel to frame with thumb screws (2). Tighten securely.
- Reinstall air cleaner cover.

Throttle Side Foot Riser Removal

1. Remove the 5/16-18 x 1" nuts (2) and 5/16-18 washers (2) that secure the foot riser to platform. These nuts are located on the underside of the foot platform.
2. Lay foot riser on its side.
3. Unhook throttle wire (Figure 18) from the foot pedal linkage and throttle standoff.
4. Remove the throttle standoff (Figure 18) attached to the foot pedal linkage. The throttle standoff will not be used anymore.
5. Remove the spring (Figure 18) attached to the foot pedal linkage.



Figure 18. Throttle Wire Removal

6. At the rear of the foot riser, loosen the cable adjustment fitting ring (Figure 19) and remove the existing throttle cable and adjuster from the trowel and discard.

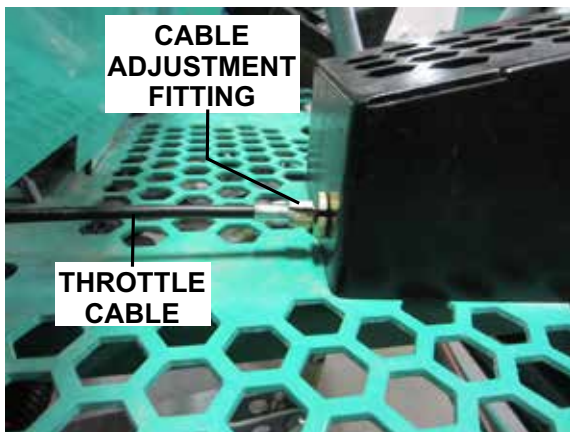


Figure 19. Throttle Cable Removal

7. Route the new throttle cable around the back side of the engine and slide the cable underneath the opening at the bottom of lower access panel.
8. Using a 7/16" drill bit, drill out the existing lock nut hole as shown in Figure 20. Make sure to remove all burrs from drilled hole.
9. Next, continue to route throttle cable and throttle wire through the cable adjustment fitting (Figure 19) located at the rear of the foot riser. A small jam nut, large jam nut, and washer will need to be removed.



Figure 20. 7/16" Expanded Drill Lock Nut

10. Locate and remove the second rod end (P/N 2153), 10-32 x 3/8" screw (P/N 32527), 10-32 flat washer (P/N 2203), and 10-32 flexloc nut (P/N 32526) from the kit.
11. Insert throttle wire through the hole opening in foot riser. Using needle nose pliers, pull throttle wire until there is no slack in the cable wire.
12. Using an antiseize lubricant, lubricate both ends of the push/pull throttle cable. Pull the wiper back and lubricate inside boot as shown in Figure 21.



Figure 21. Foot Pedal Cable Assembly

13. Install the rod end on the throttle cable completely. Then set the jam nut.

14. Install the rod end, screw, washer, and nuts where the throttle standoff used to be on the foot pedal linkage as shown in Figure 22.
15. Attach the new spring (P/N 32512).

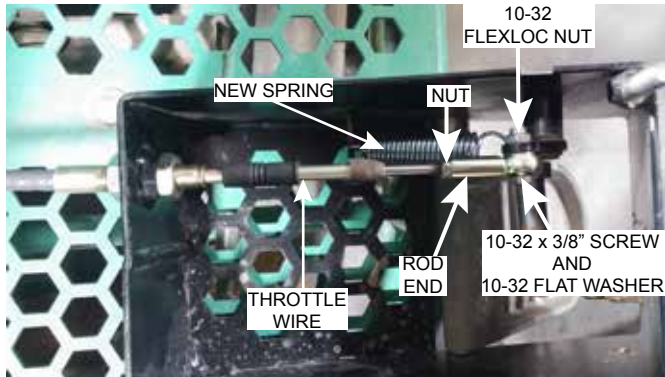


Figure 22. Foot Riser Connections

16. To secure the throttle cable to the foot riser, tighten the cable adjustment fitting nuts securely. Reference Figure 19.
17. Place foot riser back in the upright position and secure to foot platform using the retaining screws (2).
18. Locate and remove the P-clamp (P/N 8126) from the kit. P-clamp the throttle cable and attach to fan guard as shown in Figure 23.

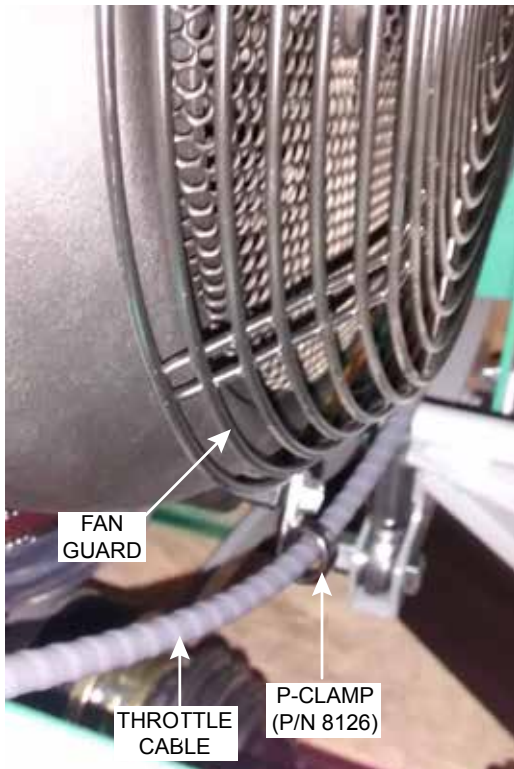


Figure 23. Securing Throttle Cable

High Speed Throttle Adjustment Setting

This final step is intended to adjust and set the throttle cable with the engine operating at full speed. This adjustment is made at the **HIGH** speed adjustment screw (Figure 24).

1. With engine at full operating speed (pressing down on throttle pedal), engine RPMs should not exceed 3800 RPM \pm 20 RPM's.
2. If engine speed exceeds 3800 RPM \pm 20 RPMs, adjust **HIGH** speed adjustment screw until operating speed is set to 3800 RPM \pm 20 RPMs. This can be accomplished by using a strobe light or clip-on tachometer.



Figure 24. High Speed Adjustment Screw



HHNG5

Throttle Push/Pull Kit Instructions

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

UNITED STATES

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