



**MODEL 30 ROUTER
SELF PROPELLED KIT
INSTALLATION INSTRUCTION MANUAL**

PART NUMBER 31493N
Revision 0

Fill in appropriate fields that apply to this machine

Machine S/N: _____

Engine S/N: _____

Model 30 Router Self Propelled Kit Installation

Revisions

[illegible]



MODEL 30 ROUTER



MODEL 30 SELF PROPELLED ROUTER

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Model 30 Router Self Propelled Kit Installation

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Chapter 1 Introduction

1.0 About This Manual

This manual is supplied with each new Crafcro Self Propelled Router Kit. The manual assists your machine operators in the proper installation of the retrofit kit.

Your Crafcro Router and the Self Propelled Kit are specially made to give excellent service and save maintenance expense. However, as with all specially engineered equipment, you get best results at minimum cost if you:

Operate your machine as instructed in this manual and the machine operations manual.

Maintain your machine regularly as stated in the machine operations manual.

1.1 How to use this manual:

This manual is formatted to start each new chapter on the right page. There may be a blank page on the left page if the previous chapter ends on the right page.

If you are viewing this in a digital format (PDF) the following features are available:

1. The Table of Contents, List of Tables, and List of Figures are all hyperlinks, when left mouse clicked on section, table, or figure you will be sent to that page.
2. The blue highlighted text throughout the manual is a hyperlink, when left mouse clicked you will be sent to that page, table, or figure.
3. The panel to the left in the PDF is a bookmarks panel, if you left mouse click on any section/heading in the bookmarks panel you will be sent to that page.



Model 30 Router Self Propelled Kit Installation

Chapter 1 Introduction

Chapter 2 Safety

2.0 Safety Precautions

For more in-depth safety information, please see Safety Manual (P/N 26221) which comes with the machine. Or contact your nearest authorized CrafcO Distributor which can be found at [How to Purchase – CRAFCO](#).

2.1 General Safety

- CrafcO, Inc. assumes no liability for an accident or injury incurred through improper use of the machine.
- Read this manual thoroughly before kit installation.
- Obey all CAUTION and WARNING signs posted on the machine and included in the kit.
- Make sure an operator fully knows how to operate the machine before using the machine.

2.2 Personal Safety

- Eye and ear protection devices along with a dust mask are required when operating the machine.
- Wear long pants, work gloves and heavy leather boots or shoes.
- When cleaning cracks and joints near moving traffic, always move in a direction away from traffic to protect the operator.
- Never allow fatigued operators to run the machine. Due to the nature of running this machine, the crew leader should rotate operators as they see fit according to their performance.
- Keep hands, feet, and clothing away from all moving parts.

Chapter 2 Safety

2.3 Equipment or Operational Safety

- Do not operate the machine in buildings or work areas that do not have sufficient airflow.
- Always keep a correctly maintained fire extinguisher near the machine and know how to use it.
- Check equipment before every use.
- Do not operate the equipment when fatigued or under the influence of alcohol or drugs.
- Do not modify the equipment.
- Know how to operate the equipment, fully read the manual.
- Avoid the entrance of water into any part of the machine.
- Shut down engine prior to refilling fuel tank.
- Keep hands, feet and clothing away from all moving parts.
- Replace any hoses or belts which show signs of wear, fraying, or splitting. Assure all fittings and joints are tight and no leaks are present.
- Use only approved hoses and replacement parts.
- Tighten all bolts and screws every 100 hours of machine operation.
- Never run engine unless the router is on its wheels.
- Never attempt to make repairs to the equipment when the engine is running.
- Never operate the machine without belt guards in place.
- Never transport the machine with the engine running.
- Never exceed maximum recommended engine RPM.
- Never leave the machine unattended while engine is running.
- Never stand on any part of the machine.
- When cleaning cracks and joints near moving traffic, always move in a direction away from traffic to protect the operator.

Chapter 2 Safety

2.4 California Proposition 65

The state of California currently maintains a list of chemicals that can cause cancer, birth defects or other reproductive harm. Your CrafcO, Inc. equipment comes with the following warnings

2.4.1 All CrafcO Inc. Equipment



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

2647 1N

2.4.2 All CrafcO Inc. Equipment using a gasoline engine



WARNING: Breathing engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.








261 57

Chapter 2 Safety

2.5 Safety Symbols and Notices






Important safety symbols and notices are marked on the machine and in this manual. Failure to comply could result in equipment damage, operational malfunction, serious injury, or death. Please read and comply with all symbols and notices. The table below includes the most commonly used symbols and notices.

Table 2-1 Safety Symbols and Notices

Symbol	Item	Remarks
WARNING	Warning	Refers to possible bodily injury or death.
CAUTION	Caution	Refers to possible equipment damage or operational malfunction.
	Severe Burn Hazard	Hot surfaces can cause severe burns.
	Protective Shoes	Wear hard-soled work shoes.
	Protective Gloves	Wear heat resistant gloves.
	Protective Face or Eye Wear	Wear face shield or safety glasses.
	Hearing Protection	Wear ear plugs or ear muffs.
	Dust Mask	Wear a dust mask when appropriate.
	Body Crush Hazard	Do not stand between trailer and hitch when hooking a trailer mounted Crack-Vac to a truck.

Chapter 2 Safety

Table 2-2 Safety Symbols and Notices (continued)

Symbol	Item	Remark
	Crush Hazard	Keep feet and legs clear.
	Pinch Hazard	Keep hands and feet clear.
	Exhaust Hazard	Avoid breathing engine exhaust.
	High Pressure Fluid Hazard	Do not use hands to search for leaks, use cardboard instead.
	Read Manual	Read and understand operator and safety manuals before operating machine.



Model 30 Router Self Propelled Kit Installation

Chapter 2 Safety

Chapter 3 Warranty Information

3.0 Limited Warranty

CrafcO, Inc. (Manufacturer), or one of its affiliated distributors, will replace for the original purchaser free of charge any parts found upon examination by the Manufacturer, to be defective in material or workmanship. This warranty is for a period **two years** from the invoice date, but excludes engine or components, tires, and battery as these items are subject to warranties issued by their manufacturers.

CrafcO, Inc. shall not be liable for parts that have been damaged by accident, alteration, abuse, improper lubrication/maintenance, normal wear, or other cause beyond our control.

The warranty provided herein extends only to the repair and/or replacement of those components on the equipment covered above and does not cover labor costs. The warranty does not extend to incidental or consequential damages incurred as a result of any defect covered by this warranty.

All transportation and labor costs incurred by the purchaser in submitting or repairing covered components must be borne by the purchaser. CrafcO, Inc. specifically disavows any other representation, warranty, or liability related to the condition or use of the product.

CAUTION

Use of replacement parts other than genuine CrafcO parts may impair the safety or reliability of your equipment and nullifies any warranty.

Chapter 3 Warranty Information

3.1 Warranty Claim Instructions

Crafcro, Inc. warrants parts and machinery purchased through Crafcro or one of its affiliated distributors for two years from the invoice date. Wear items are not covered under the Crafcro, Inc. limited warranty. A wear item is defined as but not limited to: material pumps, sealing tips, tires, etc.

If parts fail to function within two years of invoice date, a return authorization number (RA) must be obtained. If the part was purchased through Crafcro, Inc., please contact Crafcro returns department at [Returns@Crafcro.com](mailto>Returns@Crafcro.com) for an RA number or if purchased through a Crafcro distributor please contact your distributor.

Note: if the part has a serial number associated with it, for example; a machine or electric hose or wand, this must be furnished when requesting the RA number. The customer will be emailed or faxed an RA form with all instructions to return the item to Crafcro, Inc. See example. If the part is found to be within the two year warranty period and has not been abused or modified, a credit will be issued to the customer's account or credit card. The customer may request the part be replaced instead of a credit, if desired.

Note: All engine warranties are covered through the engine manufacturer. If you need information for a distributor in your area please contact us and we will direct you to the closest engine distributor.

All parts returned are tested and evaluated. If the part has been modified in any way without prior consent from a Crafcro, Inc. representative, warranty is void.

Please follow the instructions stated below when calling in a Warranty Claim. Failure to follow these procedures may be cause to void the warranty.

Call your local Crafcro Distributor. If you do not know who your local distributor is, call a Crafcro Customer Service Representative, (Toll Free 1-800-528-8242) for name, location and telephone number.

On contacting the distributor, be prepared to identify the serial number, model number, engine number, engine manufacturer, and the date of purchase if available.

Should the cause of the malfunction be a defective part, the Distributor will advise you of the procedure to follow for a replacement.

The warranty is valid only for parts, which have been supplied or recommended by Crafcro, Inc.

If you have any additional questions regarding warranty repairs and parts, please do not hesitate to call toll free 1-800-528-8242.

For Warranty:

Crafcro, Inc.

25527 South Arizona Avenue, Chandler, AZ
85248

Phone: (480) 655-8333 or (800) 528-8242

Fax: (480) 655-1712

For all other inquires:

Crafcro, Inc.

6165 W Detroit St,
Chandler, AZ 85226

Phone: (602) 276-0406 or (800) 528-8242

Fax: (480) 961-0513

CustomerService@crafcro.com

Chapter 4 Pre-Assembly and Compatibility Check

4.0 Pre-Assembly and Compatibility Check

Before starting the assembly process of the Self Propelled Kit, verify that the Kit is compatible with the model pavement router that it is intended to be installed on. The Self Propelled Kit, part number 31450S, is compatible with the following Crafco routers:

- Model 30 Routers with electric clutch, with either Kohler or Honda engines. Model 30 Routers with Dust Control equipped with either Kohler or Honda engines.
 - 21300 / 21300H
 - 21350 / 21350H

The Self Propelled Kit is *NOT* compatible with Saw-Cut Routers, Model 30 non-clutch routers (21330 / 21330H), or Router models other than the Model 30.

Review the parts list to ensure that all parts were included with this kit. If not all parts were included with this kit, or there are any questions concerning the assembly or compatibility of this kit, contact us to speak to a Crafco customer service representative.

It is recommended that you read through this entire set of instructions before starting the assembly process. These instructions are not meant to be all inclusive, if any problems should arise during the installation of the Self Propelled Kit, please contact Crafco before proceeding. Crafco will not be responsible for improper installation or use of the Self Propelled Kit.



Model 30 Router Self Propelled Kit Installation

Chapter 4 Pre-Assembly and Compatibility Check

Chapter 5 Illustrated Parts List

5.0 Illustrated Parts List

The Illustrated Parts List (IPL) is designed to help technical service or maintenance personnel correctly identify the parts supplied in the Self Propelled Kit. Illustrations are designed to show the general shape and size of a part and the relationship that part has to other parts. The actual size and shape of parts or components may differ or vary from the actual part or component.

The figures and tables reference the part number (PN) to which they apply. The item numbers called out match those on the drawing received with the Self Propelled Kit. The table presents the item numbers and their corresponding PN's in PN ascending order. The item number balloons on the drawing have an upper and lower half. The upper half calls out the item number and the lower half calls out the total quantity of that part in the kit. Item balloons that are attached together represent a set of a fastener, washer(s), and nut.

Chapter 5 Illustrated Parts List

5.1 Model 30 Self Propelled Kit, 31450S, Parts List

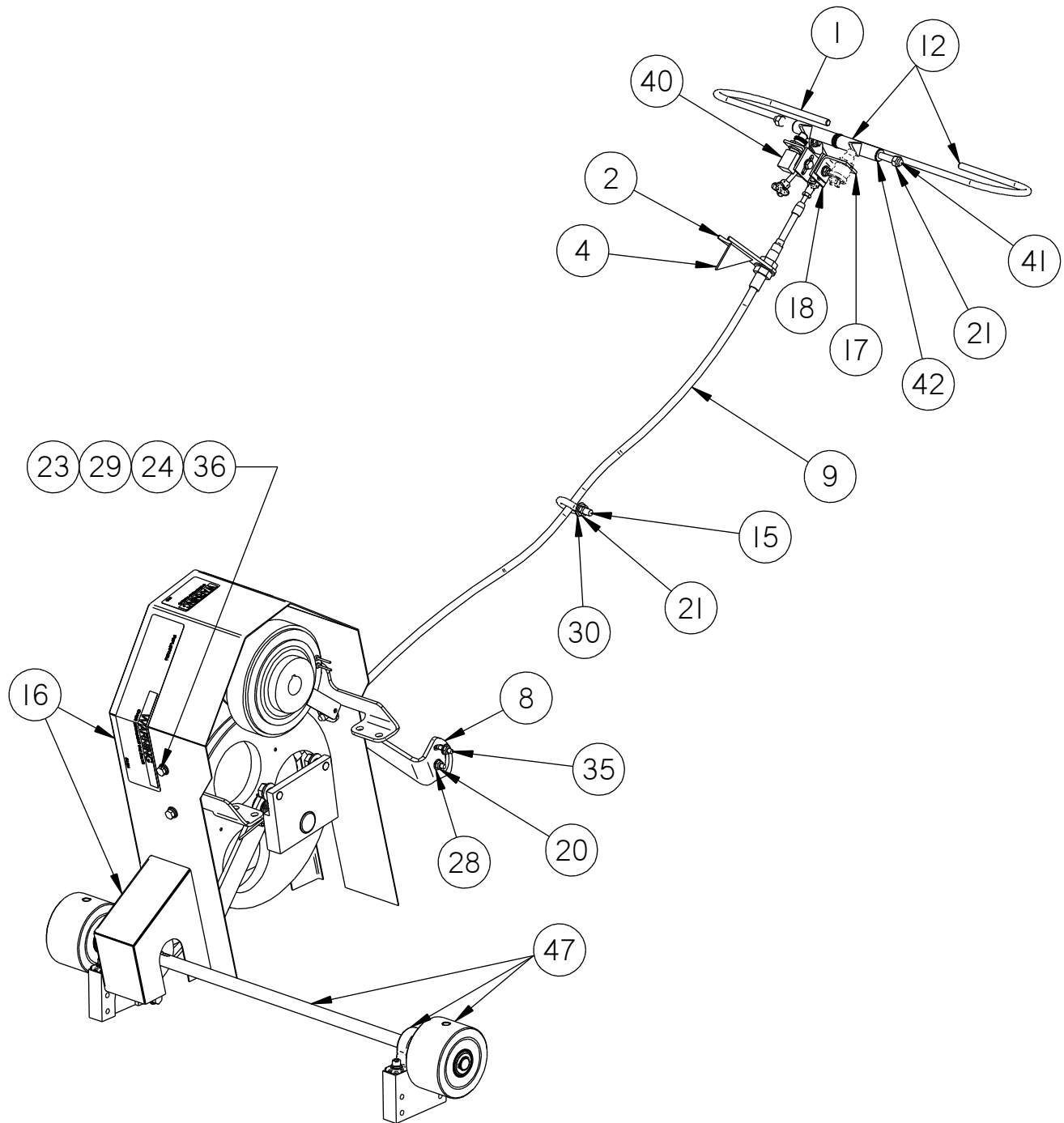


Figure 5-1 Self Propelled Kit

Chapter 5 Illustrated Parts List

Table 5-1 Self Propelled Kit Parts List (1 of 2)

ITEM	PART NO.	DESCRIPTION	QTY.
1	20772N	CONTROL HANDLE ASSY SP ROUTER	1
2	20774N	BRACKET, UPPER CABLE SUPPORT	1
3	20775N	PIVOT ASSY CONTROL CABLE	1
4	20776N	GUSSET UPPER CABLE SUPPORT	1
5	20779N	THUMB SCREW 1/4-20 X 2-1/2" L	1
6	20782N	THUMB NUT 1/4"-20 LOW PROFILE	1
7	20783N	CLEVIS ROD END SP ROUTER	1
8	20784N	BRACKET CABLE SUPPORT	1
9	20785N	CONTROL CABLE SP ROUTER	1
10	20786N	CLEVIS DRIVE END	1
11	20860	SP CLUTCH ASSY	1
12	20871	CLUTCH HANDLE ASSY	1
13	20882P	SP ROUTER GUARD RIGHT MTG BRK PAINTED	1
14	20883P	SP ROUTER GUARD LEFT MGT BRKT PAINTED	1
15	20894	BOLT, 3/4" EYE W NUT, 3/8"-16X7/8", ZINC	1
16	20895P	BELT GUARD SELF PROPELLED, PAINTED	1
17	20926	CLUTCH SWITCH HOLDER	2
18	20932	CLUTCH SWITCH ADJUST PLATE	2
19	24034	TERMINAL 14-16 #8 LOCK (Not Shown)	2
20	28536	NUT, TOP LOCK, 1/4"-20, ZINC	5
21	28538	NUT, TOP LOCK, 3/8"-16, ZINC	3
22	28569	5/8-32 EXTRA FINE HEX NUT	1
23	28607	RIVET NUT, 5/16"-18, GRIP - .027-150	4
24	28646	WASHER, SPLIT LOCK, 5/16", ZINC	4
25	28647	WASHER, SPLIT LOCK, 3/8", ZINC	4
26	28648	WASHER, SPLIT LOCK, 7/16", ZINC	1
27	28649	WASHER, SPLIT LOCK, 1/2", ZINC	2

Chapter 5 Illustrated Parts List

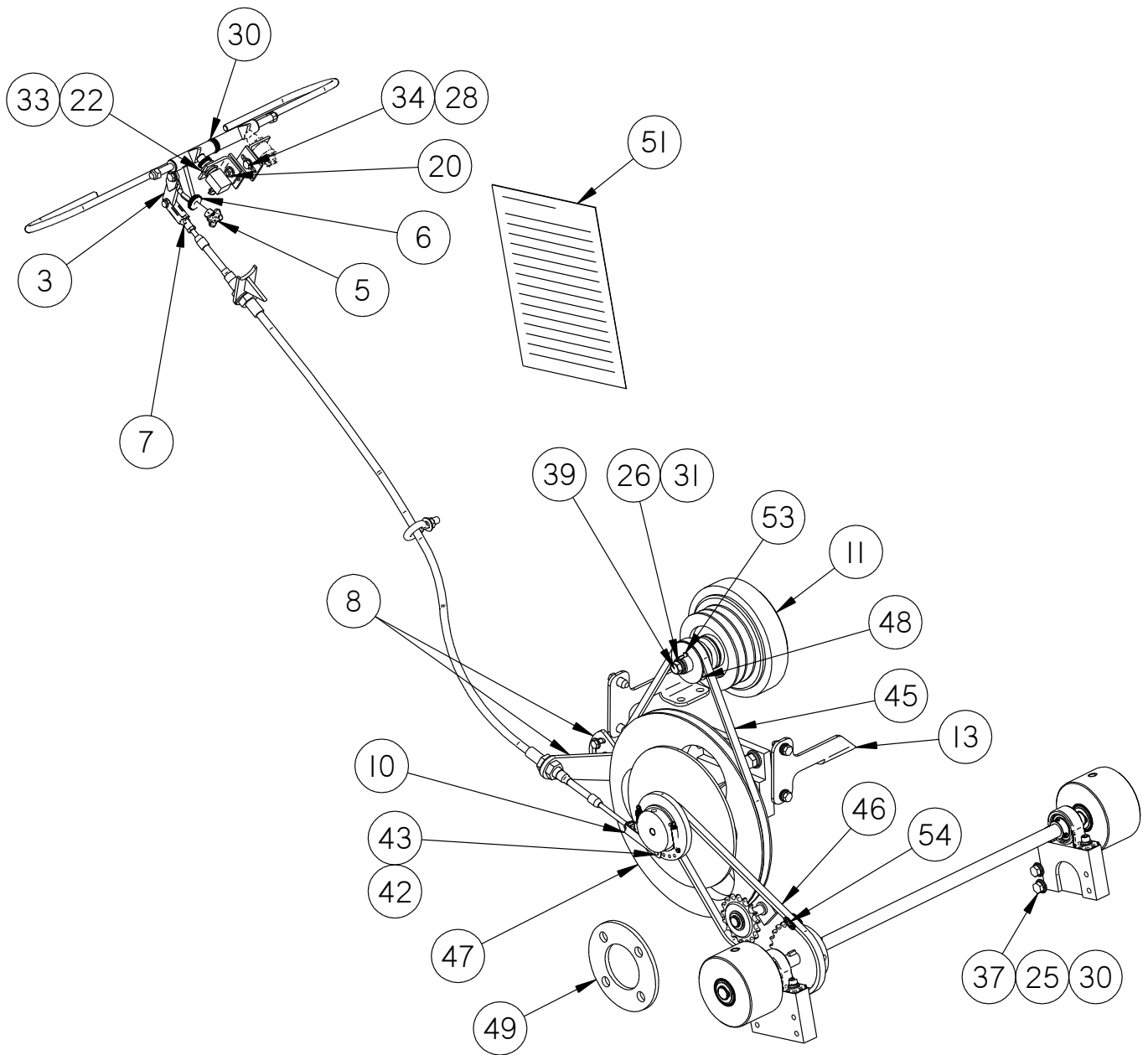


Figure 5-2 Self Propelled Kit (Belt Guard not shown)

Chapter 5 Illustrated Parts List

Table 5-2 Self Propelled Kit Parts List (2 of 2)

ITEM	PART NO.	DESCRIPTION	QTY.
28	28670	WASHER, SAE FLAT, 1/4", ZINC	10
29	28671	WASHER, SAE FLAT, 5/16", ZINC	4
30	28672	WASHER, SAE FLAT, 3/8", ZINC	8
31	28673	WASHER, SAE FLAT, 7/16", ZINC	1
32	28674	WASHER, SAE FLAT, 1/2", ZINC	2
33	28685	WASHER, INT TOOTH, 5/8", STEEL, ZINC	2
34	28701	BOLT, HEX, 1/4"-20 X 3/4", GR5, ZINC	2
35	28702	BOLT, HEX, 1/4"-20 X 1", GR5, ZINC	3
36	28716	BOLT, HEX, 5/16"-18 X 1", GR5, ZINC	4
37	28734	BOLT, HEX, 3/8"-16 X 1-3/4", GR5, ZINC	4
38	28760	BOLT, HEX, 1/2"-13 X 1", GR5, ZINC	2
39	28906	BOLT, HEX, 7/16-20 X 3 1/2" UNF, GR8, YZ	1
40	31339	SWITCH/ROUTER W/O ELE CLUTCH	1
41	31452	PIVOT PIN-ROUTER HANDLE	1
42	31458	FLANGED BEARING ROUTER HANDLE	4
43	31471	STANDARD CLEVIS PIN	1
44	31472	COTTER PIN 3/32 X 0.75 LG	1
45	31478	BELT AX-43 ROUTE	1
46	31479	DRIVE CHAIN-ROUTER	1
47	31480	SELF-PROPELLED MECHANISIM (broken up into 31480-20 and 31480-21 assemblies)	1
48	31482	CAST IRON FINSHD BORE V-BLT PLY	1
49	31483	WHEEL SPACER-SELF PROPELD RTR	1
50	31486	POWER WIRE-SWITCH ROUTER (Not Shown)	1
51	31493N	INSTAL INSTR. SELF PROPELLED KIT, MODEL 30	1
52	32523	QUICK CONNECT 10-12 (Not Shown)	2
53	37032	BRUSH SHAFT KEY 1/4" X 1 1/8"	1
54	50436	CONNECTING LINK #40	1
55	51614	TERMINAL, .250-14 GA. PUSH-ON (Not Shown)	4

Chapter 5 Illustrated Parts List

5.2 Further Model 30 Router Illustrations

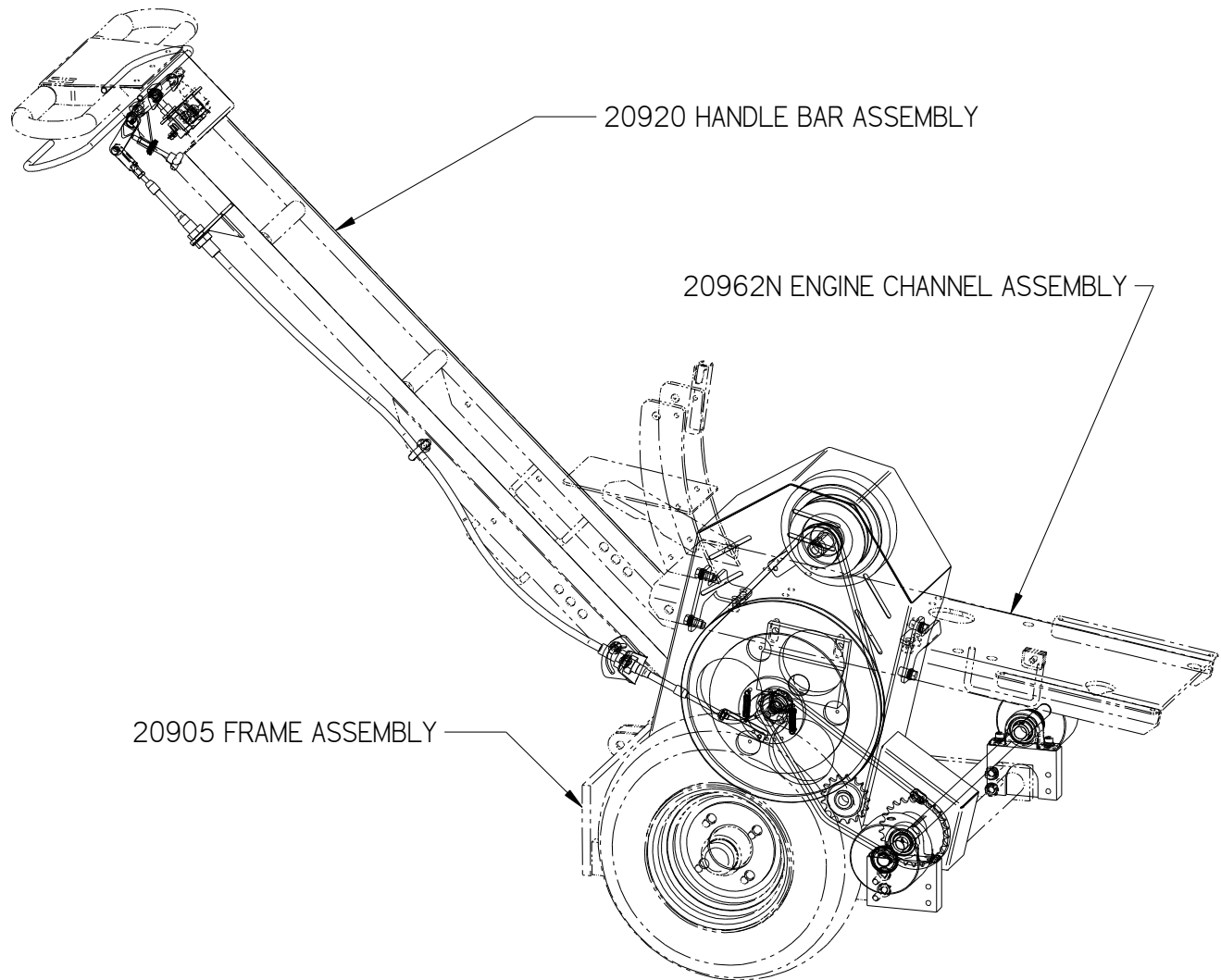


Figure 5-3 Self Propelled Kit on Model 30 Router Handlebar and Frame

Chapter 5 Illustrated Parts List



Figure 5-4 Self Propelled Drive Shaft Assembly, 31480-21



Figure 5-5 Self Propelled Flywheel Assembly, 31480-20

Chapter 5 Illustrated Parts List

5.3 Ordering Crafco Parts

Crafco distributors and Crafco Pavement Preservation Supply Centers are strategically located throughout the United States. Parts can be ordered from your local Crafco distributor or directly from Crafco, Inc. if a distributor is not available in your area.

When ordering parts, give the following information:

- Part Number
- Machine Model
- Serial Number

Write, call, or Fax Crafco, Inc. at the following:

Crafco, Inc. Headquarters

6165 W Detroit St.

Chandler, AZ 85226

Phone: (602) 276-0406

Toll Free: (800) 528-8242

Fax: (480) 961-0513


Visit our website at www.crafco.com

Chapter 6 Installation Instructions

6.0 Installation Instructions

6.1 Parts Removal

Table 6-1 Parts Removal Instructions

Step	Action
	WARNING
	Put on protective clothing, gloves, hard-soled shoes, and face shield or safety glasses when operating or working on this machine.
1	Turn the fuel valve on the gas tank to the off position. Open the battery box and disconnect the negative battery cable.
2	Remove the existing belt cover by removing the (4) bolts holding the cover to the engine channel. (Use 9/16" wrench/socket). Keep the removed bolts and washers for reinstallation of new belt cover. See Figure 6-1
3	To remove the main cutter drive belts, loosen the $\frac{3}{4}$ " jam nuts on the belt tensioner that goes through the engine channel. See Figure 6-1

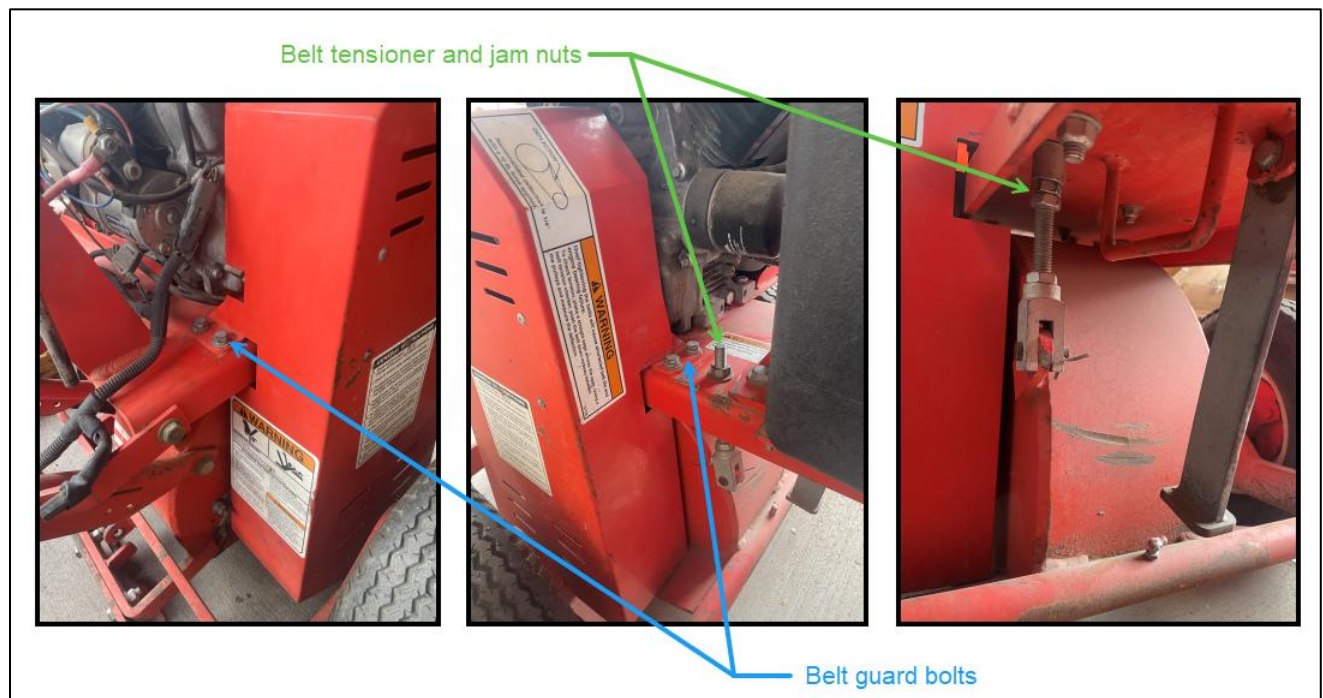


Figure 6-1 Belt Guard Bolts and Belt Tensioner Locations

Chapter 6 Installation Instructions

Table 6-2 Parts Removal Instructions (continued)

Step	Action
4	With belt guard removed, and belt tensioner loosened, remove the main cutter drive belts from clutch pulley. It may be helpful to put pressure on the belts in the direction away from the router while turning them, the belt will then derail itself from the pulley.
5	Unplug the clutch electrical connector. The connectors can be pulled apart by hand. See Figure 5-2 .
6	Remove the 7/16-20 clutch bolt and the outer retaining washer using a 5/8 socket. Note: The bolt is installed with thread locker. It may need to be heated slightly to free up the thread locker. The clutch and engine need to be prevented from turning to remove the bolt. Use of an impact wrench will make loosening the bolt easier.
7	Remove the clutch by pulling straight off engine drive shaft. Keep shaft key and inner clutch retaining washer (inner retaining washer on Kohler engine equipped routers only).

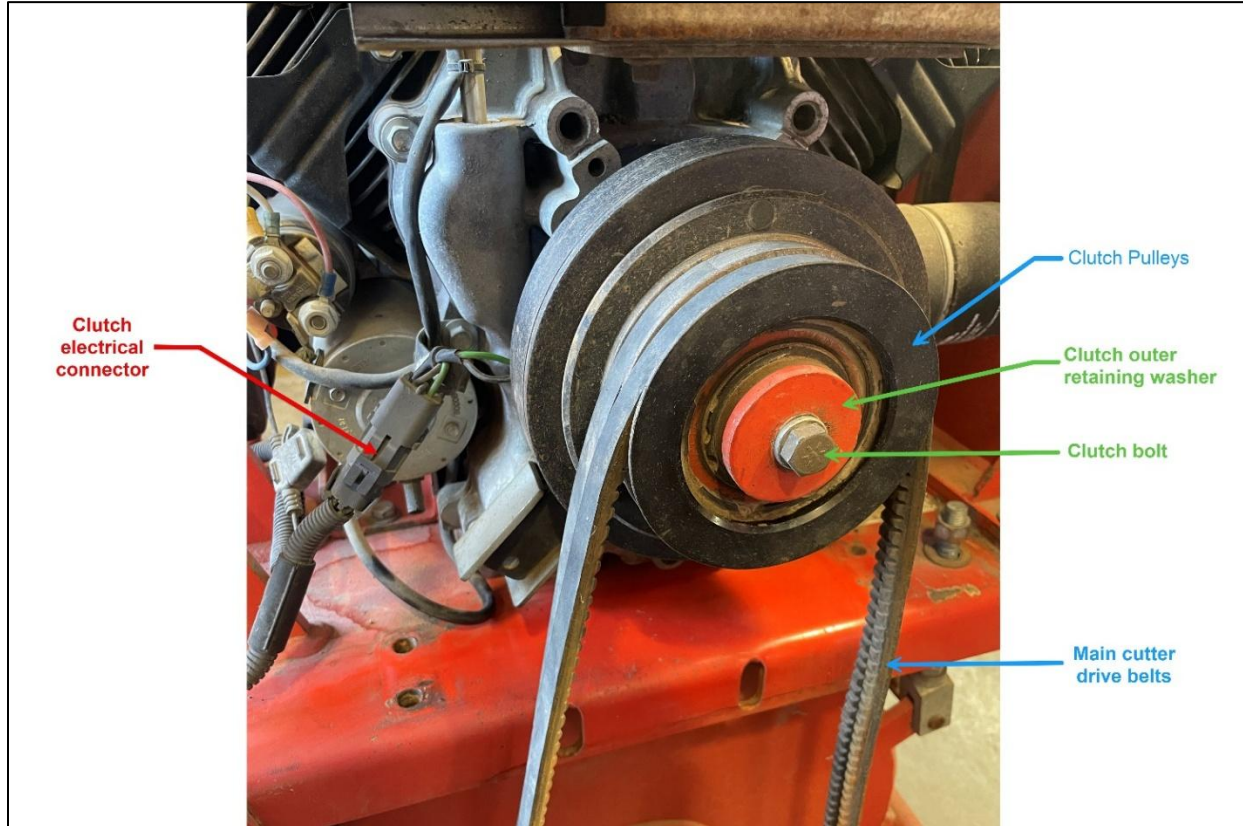


Figure 6-2 Model 30 Router Clutch and Drive Belt Assembly

Chapter 6 Installation Instructions

Table 6-3 Parts Removal Instructions (continued)

Step	Action
8	Remove the belt side wheel. It may be easier to remove both wheels and set the router on a set of wooden blocks. See Figure 6-3 . The router will need to be secured to prevent it from falling over and injuring personnel. The router weighs approximately 650 lbs.
9	Remove the existing clutch switch holder bracket from underneath the handle assembly using 7/16" socket and wrench. See Figure 6-4 . Ensure the clutch switch does not become damaged.
10	Cut away heat shrink around the wires connected to the clutch switch and actuator switch. Disconnect the wires from both switches. Cut off the yellow and red jumper wires from the main yellow and red wires. Keep jumper wires. Remove the terminals from the remaining wire ends.
11	Remove outer wire loom from wires and handlebar hole Using electrical tape or similar, attach 3 ft. of welding wire, baling wire, or similar to the group of electrical wire ends. Pull the wire harness from the bottom of the handlebar 2 feet into the handlebars. This will ensure the wires will not melt inside the handlebar when welding upper self propelled cable bracket to the handlebar.
12	Remove existing clutch engagement handle by cutting the mounting bar that interfaces with the handlebars. See Figure 6-4 .
13	Cut off the switch mounting adjustment plate from the underside of the switch cover plate. See Figure 6-4 .



Figure 6-3 Router on Blocks, Wheels Removed

Chapter 6 Installation Instructions

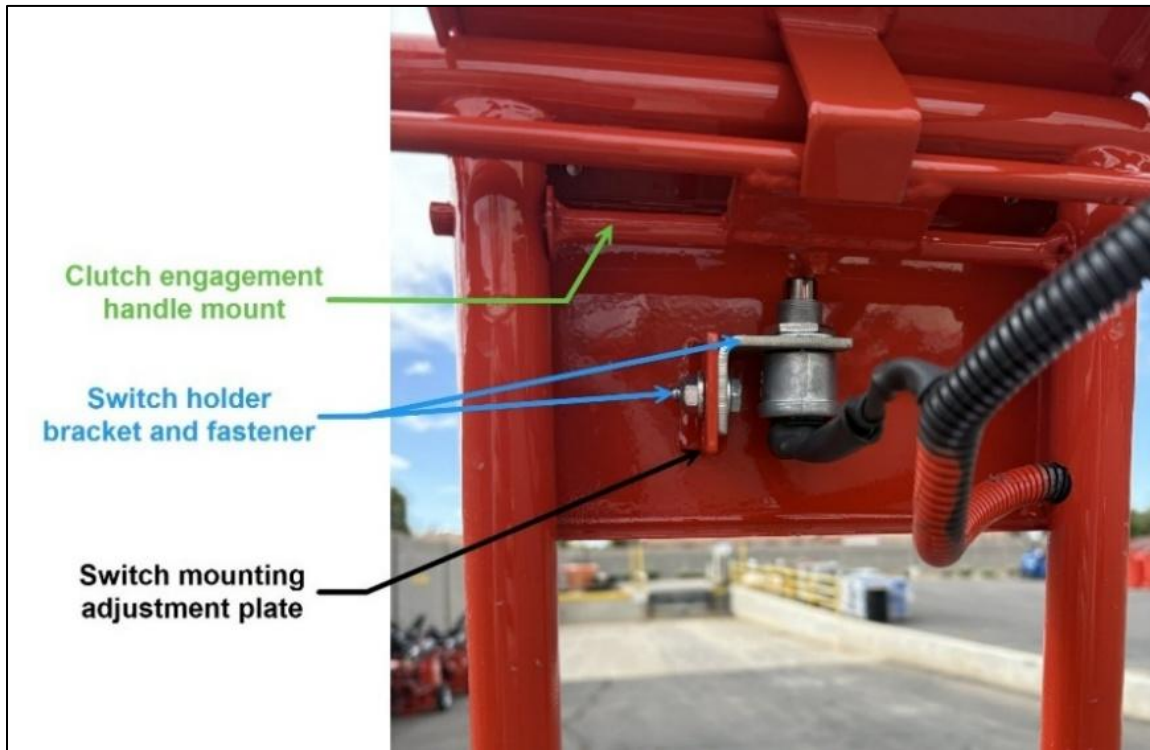


Figure 6-4 Non SP-Router Clutch Engagement Handle and Switch



Model 30 Router Self Propelled Kit Installation

Chapter 6 Installation Instructions

Chapter 6 Installation Instructions

6.2 Welded Parts Installation

There are 4 parts that must be welded to the Model 30 router as part of installation of the Self Propelled Kit. The welded parts are the upper cable support bracket and gusset, and the switch plates, items 2, 4, and quantity two of item 18 from [Table 5-1](#) and [Table 5-2](#).

Table 6-4 Welded Parts Installation

Step	Action
1	Remove paint on the belt side of router handlebars around the area where the upper cable support bracket, item 2 of Table 5-1 , will be welded. See Figure 6-5 .
2	Remove paint on bottom of switch cover plate around the area where the two new switch mounting adjustment plates will be welded. See Figure 6-5 .
3	Weld quantity two of item 18, part number 20932, clutch switch adjust plate, to the bottom of the switch cover as shown in Figure 6-5 . Plates should be 1-1/8" apart, 3/4" up from the lower surface of the switch cover and approximately centered in the switch cover from side to side. Also see Figure 6-6 of welds on production assembly before paint.
4	Weld items 2 and 4 to the handlebar, and to each other as shown in Figure 6-5 . Bracket should be 8-5/8" from the bent handlebar and angled at 68° from the cross bar. Also see Figure 6-7 of welds on production assembly before paint.
5	After the welds have cooled down, paint brackets, welds, and areas where paint was removed.

Chapter 6 Installation Instructions

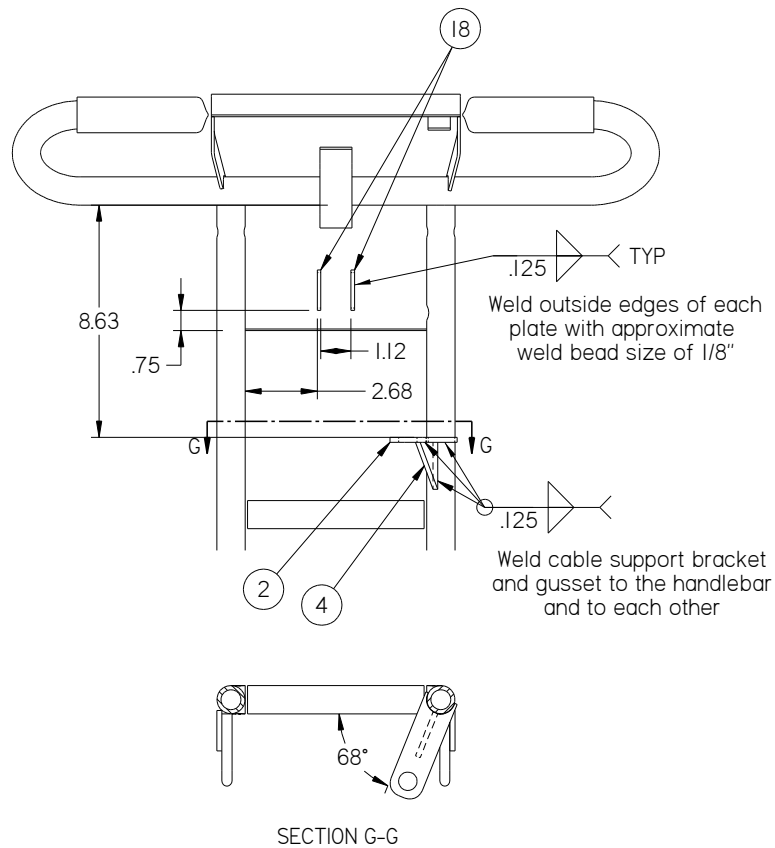


Figure 6-5 Welded Parts Diagram

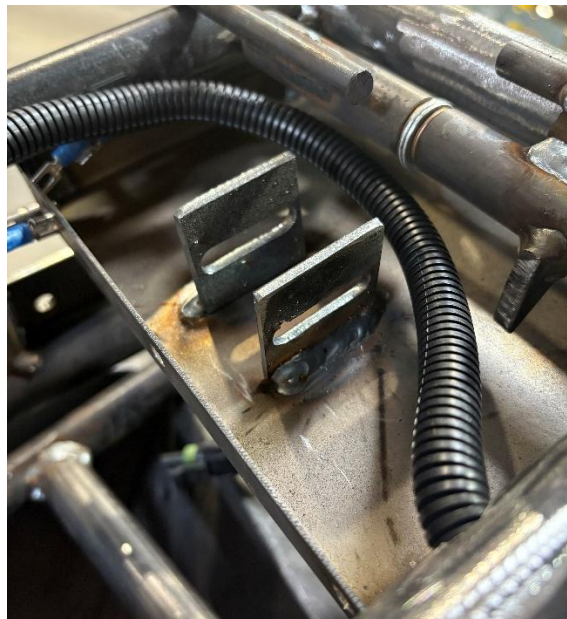


Figure 6-6 Clutch Switch Adjust Plate Welds

Chapter 6 Installation Instructions

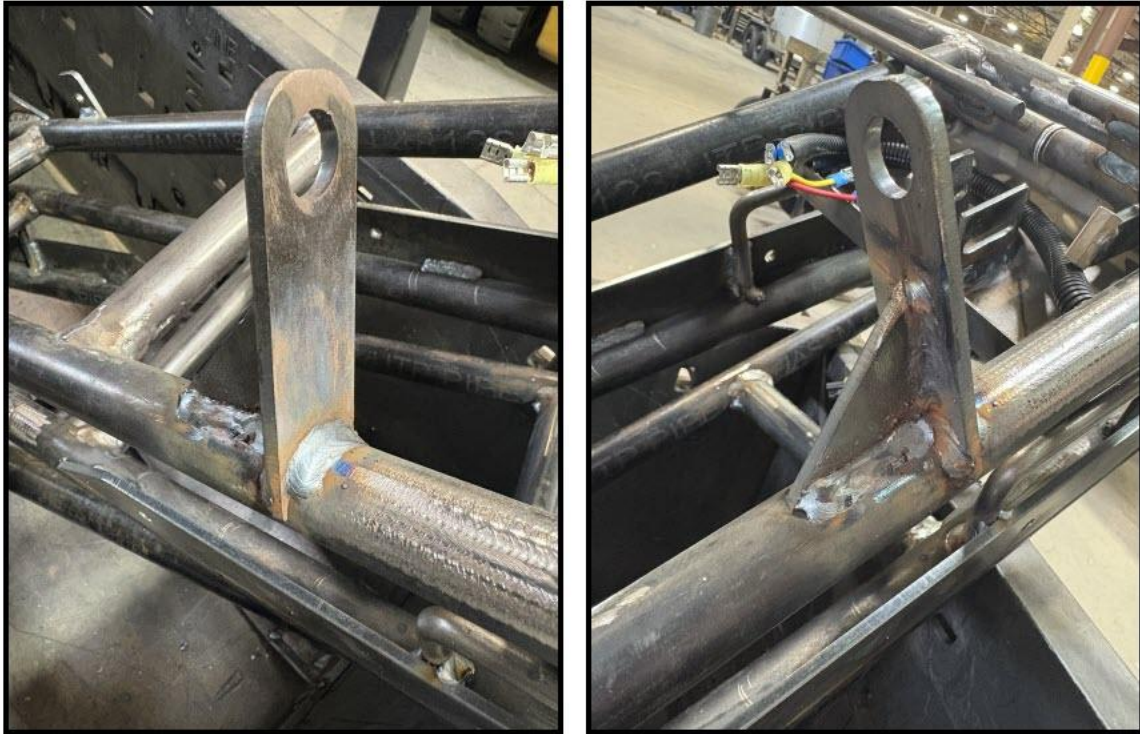


Figure 6-7 Cable Bracket and Gusset Welds

Chapter 6 Installation Instructions

6.3 Handlebar Parts Installation

Table 6-5 Handlebar Parts Installation

Step	Action
1	Assemble new switch levers onto handlebar assembly as shown in Figure 6-8 . Item numbers in the figure correspond to Table 5-1 and Table 5-2 .
	Note: Items 1 and 12 are not the same. Item 1 includes parts that will later help achieve the correct tension on the self propelled control cable.
	Note: Item 29 washer is meant to space the levers, items 1 and 12. A quantity of one to 3 washers should be installed. Ensure you include the correct amount before installing nuts, item 21, on the ends of the rod, item 41.

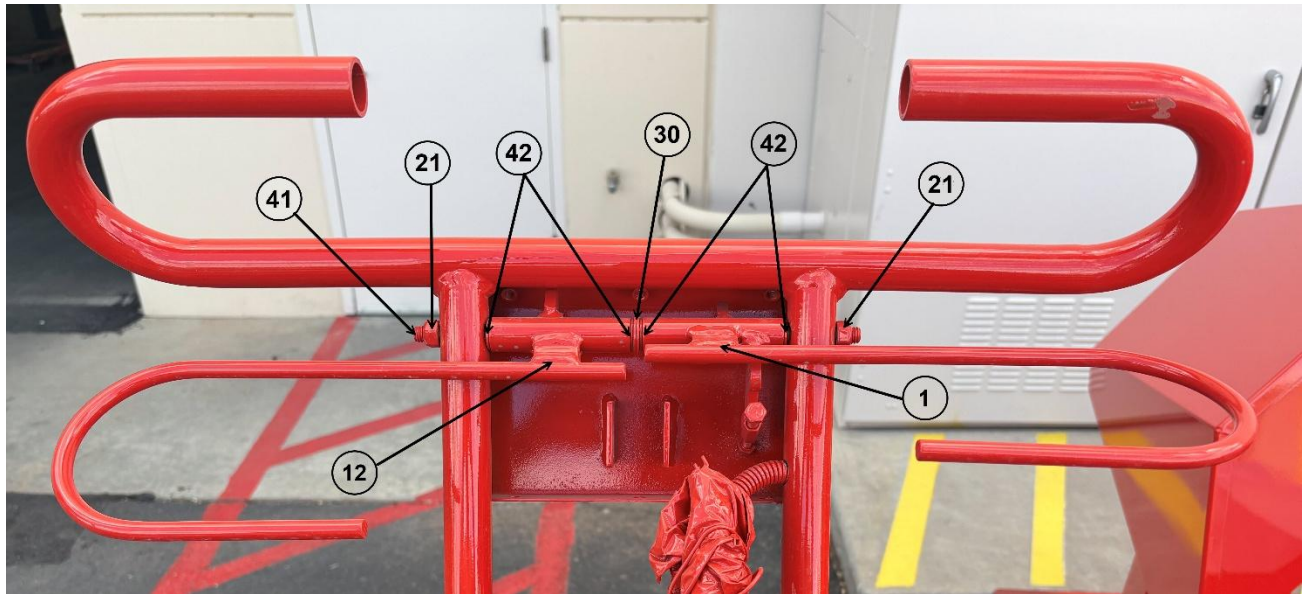


Figure 6-8 Handlebar and Lever Assembly

Chapter 6 Installation Instructions

Table 6-6 Handlebar Parts Installation (continued)

Step	Action
2	Install thumb nut, item 5, onto thumb screw, item 6. The nut direction is not important.
3	Install thumb screw, item 6, into threaded hex tube of item 1 with the nut and knobbed handle on the forward side of the hex tube. See Figure 6-9 .
4	Install pivot assembly, item 3, onto item 1 as shown in Figure 6-9 . Use one bolt, item 35, two washers, item 28, and one nut, item 20.

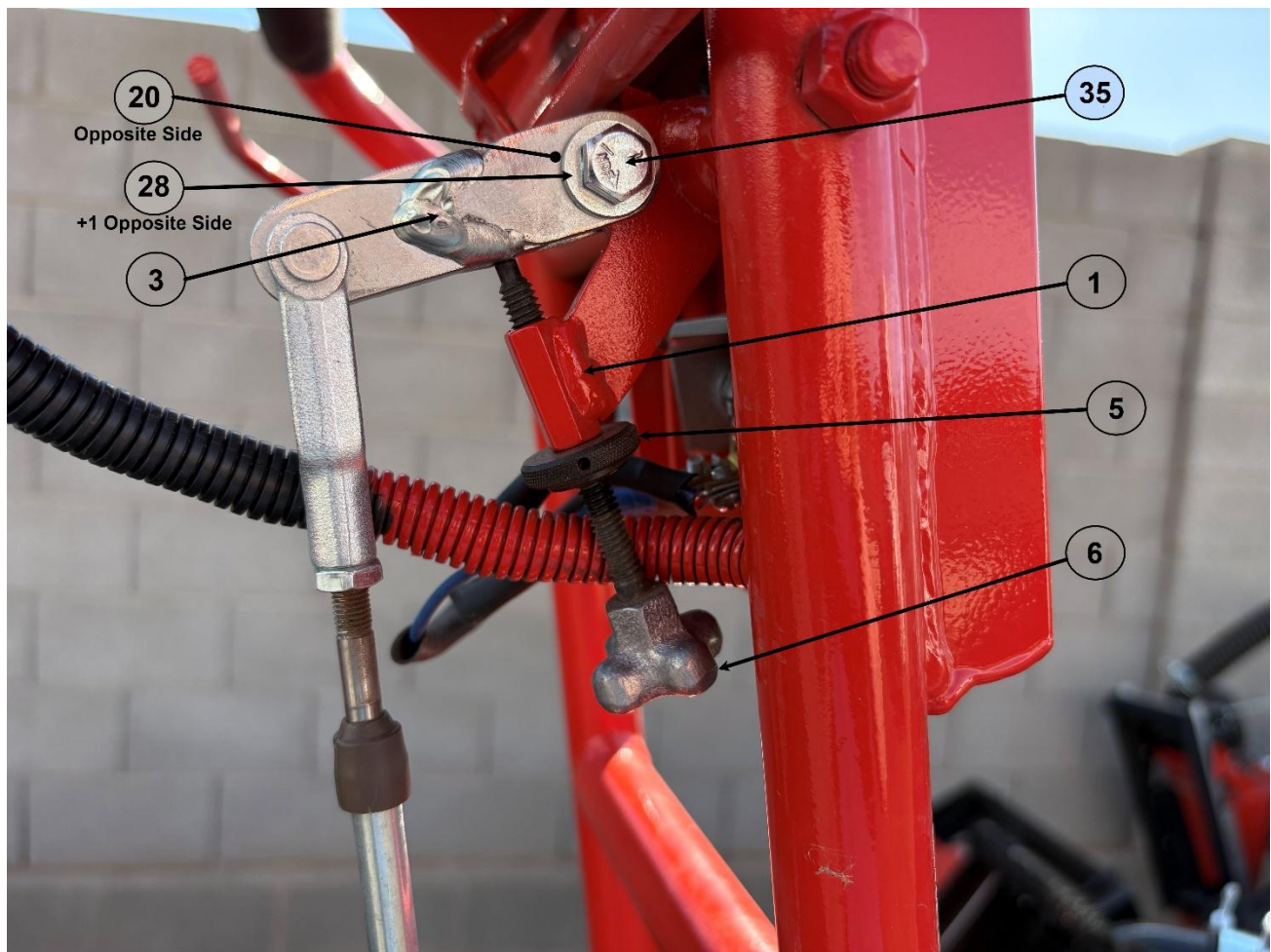


Figure 6-9 Thumb Screw and Cable Pivot Assembly

Chapter 6 Installation Instructions

Table 6-7 Handlebar Parts Installation (continued)

Step	Action
5	Pull the handlebar wires back through the top hole. Attach terminals, items 19, 52, and 55 to the wire ends and re-attach the removed jumper wires. Re-connect the wires to the actuator switch as shown in Figure 6-10 and Figure 6-11 .
6	Install the clutch switch, PN 31338, that was removed in step 9 of Table 6-3 into the new bracket, item 17. Insert switch until it contacts the bracket, install toothed washer, item 33 on top of bracket with teeth facing up to contact the nut. See Figure 6-12 . Note: You may re-use the bracket that was removed. You may also re-use the toothed washer if it was not removed previously. A new bracket and toothed washer are included in the kit, but the nut must be re-used.
7	Disconnect the green wire from the clutch switch and connect it to one of the terminals on the self-propelled switch, item 40. Connect one end of the power wire, item 50, to the remaining terminal of the clutch switch, and connect the other end to the remaining terminal of the self-propelled switch. See Figure 6-12
8	Install the self-propelled switch, item 40, into the bracket, item 17, with the nut included with the switch underneath the bracket. Install the toothed washer, item 33, on top of bracket with teeth facing up to contact the nut, item 22. See Figure 6-12 .
9	Install the switches and brackets onto the mounting tables underneath the switch cover on the handlebars using items 20, 28, and 34 as shown in Figure 6-12 .

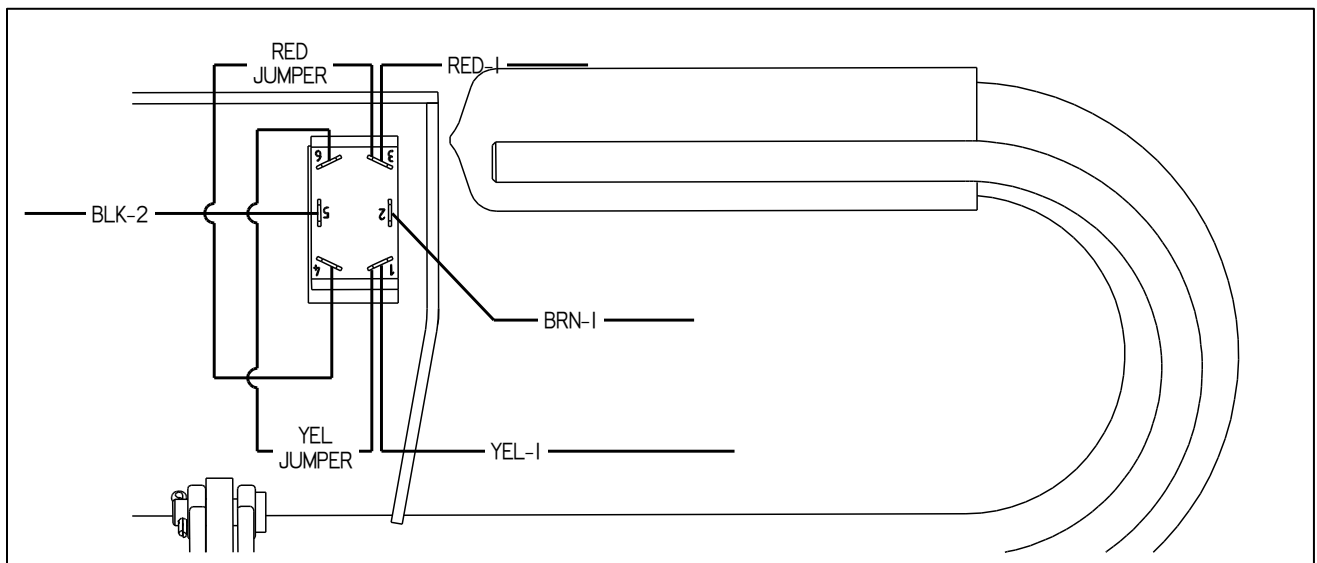


Figure 6-10 Actuator Switch Wiring

Chapter 6 Installation Instructions

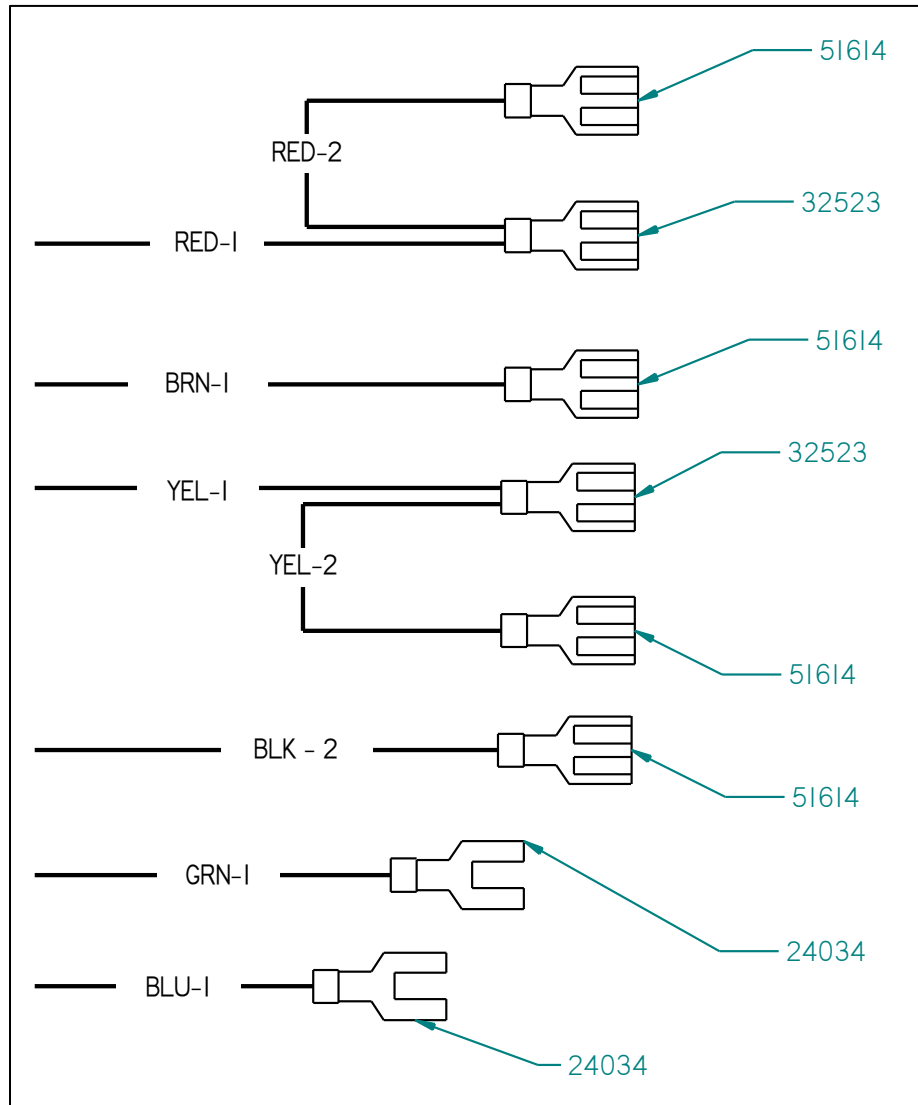


Figure 6-11 Actuator Switch Wiring Terminals

Chapter 6 Installation Instructions

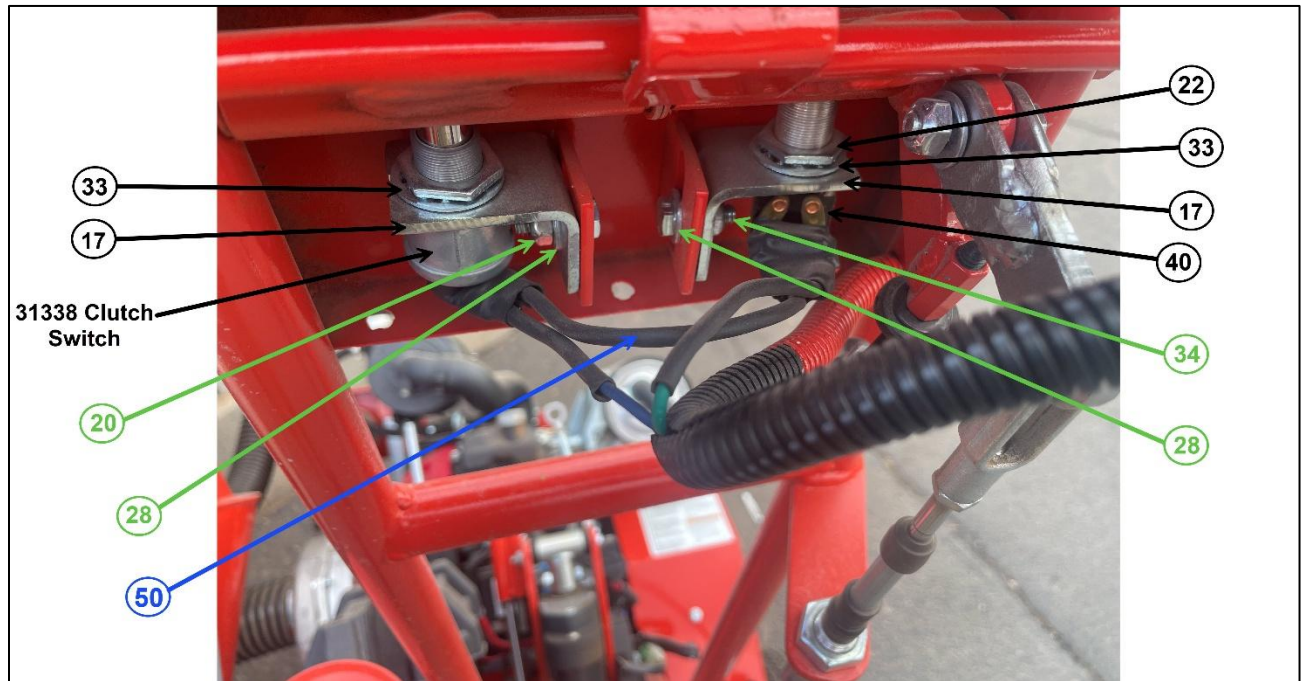


Figure 6-12 Switch Installation

Chapter 6 Installation Instructions

6.4 Self Propelled Mechanism Installation

Table 6-8 Self Propelled Mechanism Installation

Step	Action
1	Install self propelled clutch assembly, part number 20860 item 11 from Table 5-1 , using existing router clutch shaft key on the engine shaft. See Figure 6-13
	Ensure retaining tab is fit into retaining strip mounted on engine.
	Ensure the clutch pulleys are aligned with the main cutter head pulley using a framing square or other straight edge. If the pulleys are out of alignment, move the cutter head pulley in or out.
2	Install new V-Belt pulley, item 48 from Table 5-2 , onto stub shaft of clutch assembly using new shaft key, item 53. See Figure 6-13
3	Bolt in new clutch and V-Belt pulley to engine shaft with flat washer, lock washer, and bolt, items 26, 31, and 39. Apply red Loctite to bolt threads and torque to 58 ft-lbs. See Figure 6-13 and Figure 6-17
4	Connect new clutch electrical connector to the same connector that was unplugged in step 5 of Table 6-2 . See also Figure 6-2

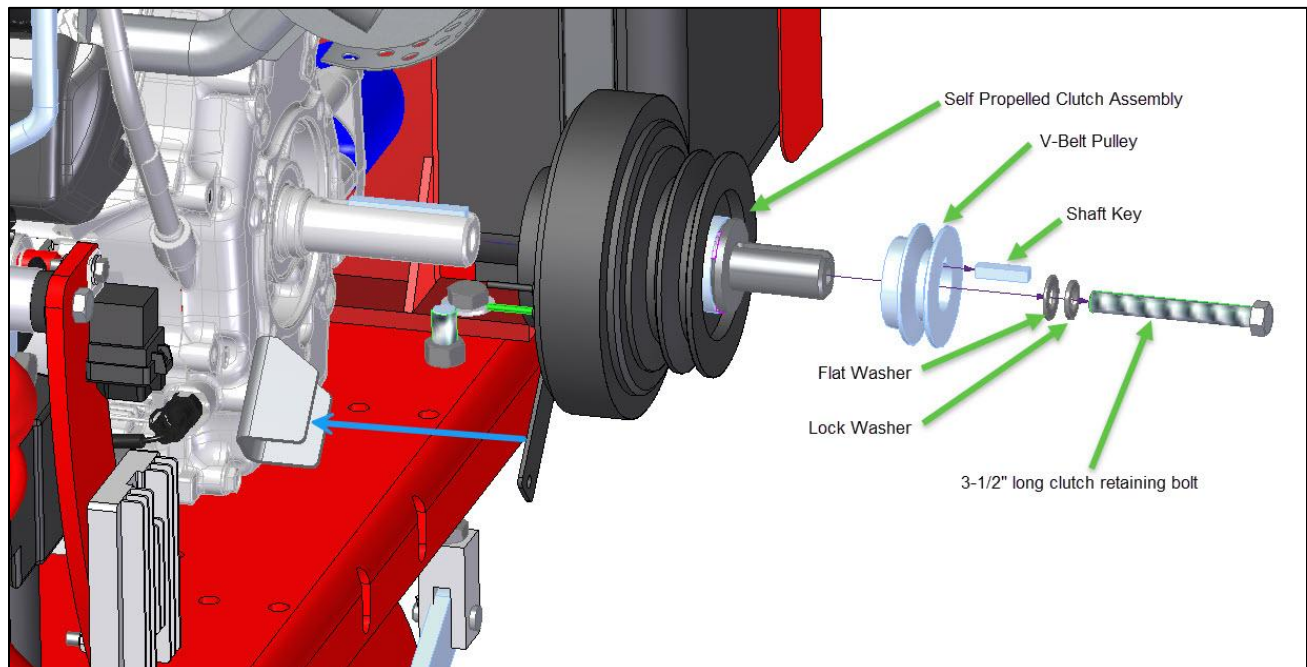
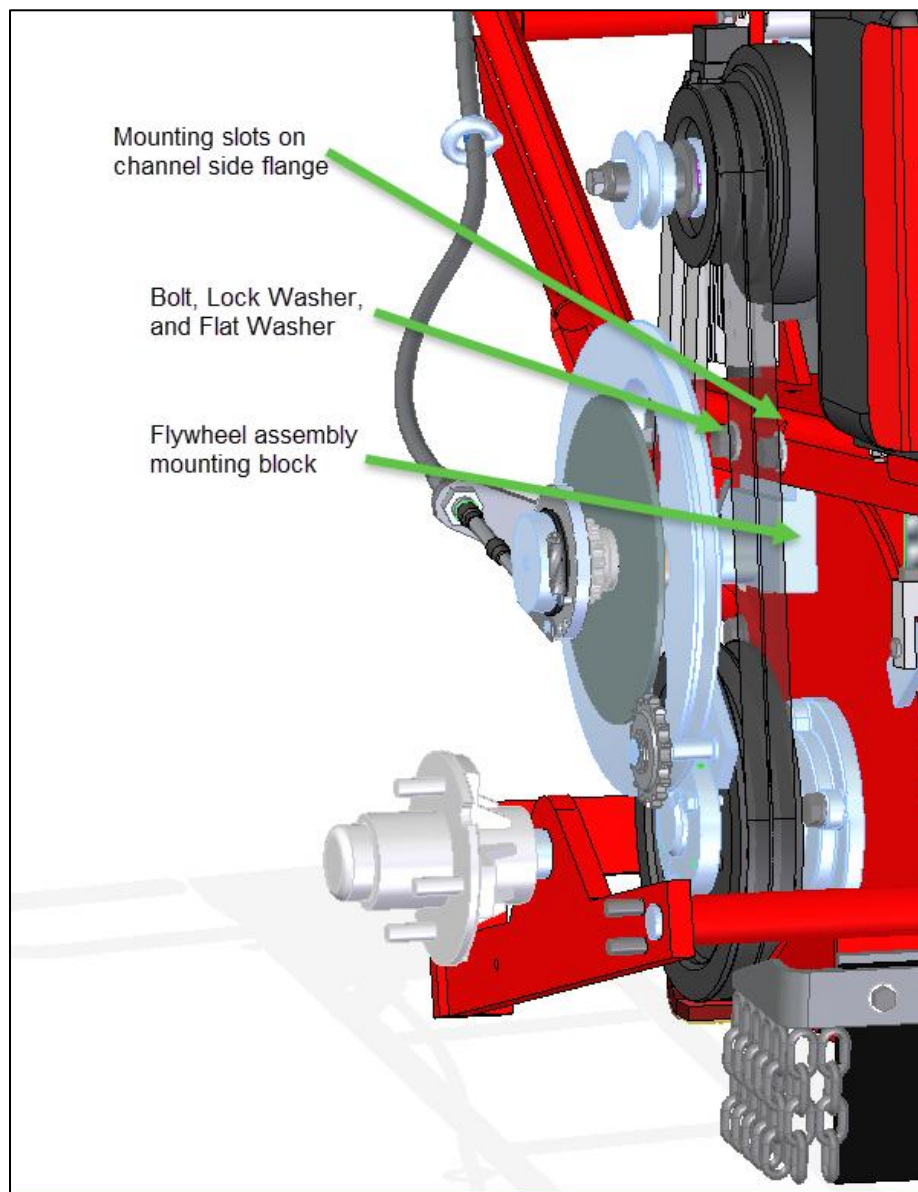


Figure 6-13 Self Propelled Clutch Assembly, Exploded View

Chapter 6 Installation Instructions

Table 6-9 Self Propelled Mechanism Installation (continued)

Step	Action
5	Re-install two main router belts onto the new clutch assembly.
6	Install self propelled flywheel assembly, half of item 47, onto router frame channel, with reduced thickness side of mounting block inside the channel. Attach with bolt, lock washer, and flat washer, items 27, 32, and 38, through the slots in the side flange of engine channel. Leave bolts loose to install belt. See Figure 6-14

**Figure 6-14 Self Propelled Flywheel Assembly**

Chapter 6 Installation Instructions

Table 6-10 Self Propelled Mechanism Installation (continued)

Step	Action
7	Install self propelled drive shaft assembly onto router lower frame assembly with mounting blocks on the outside of the router frame rails. Install with bolt, lock washer, and flat washer, items 25, 30, and 37. See Figure 6-15
8	Install self propelled drive belt, item 45, from upper clutch pulley to large pulley on flywheel assembly. See Figure 6-15
9	Install drive chain, item 46, between flywheel assembly and drive shaft assembly using connecting link, item 54. See Figure 6-15

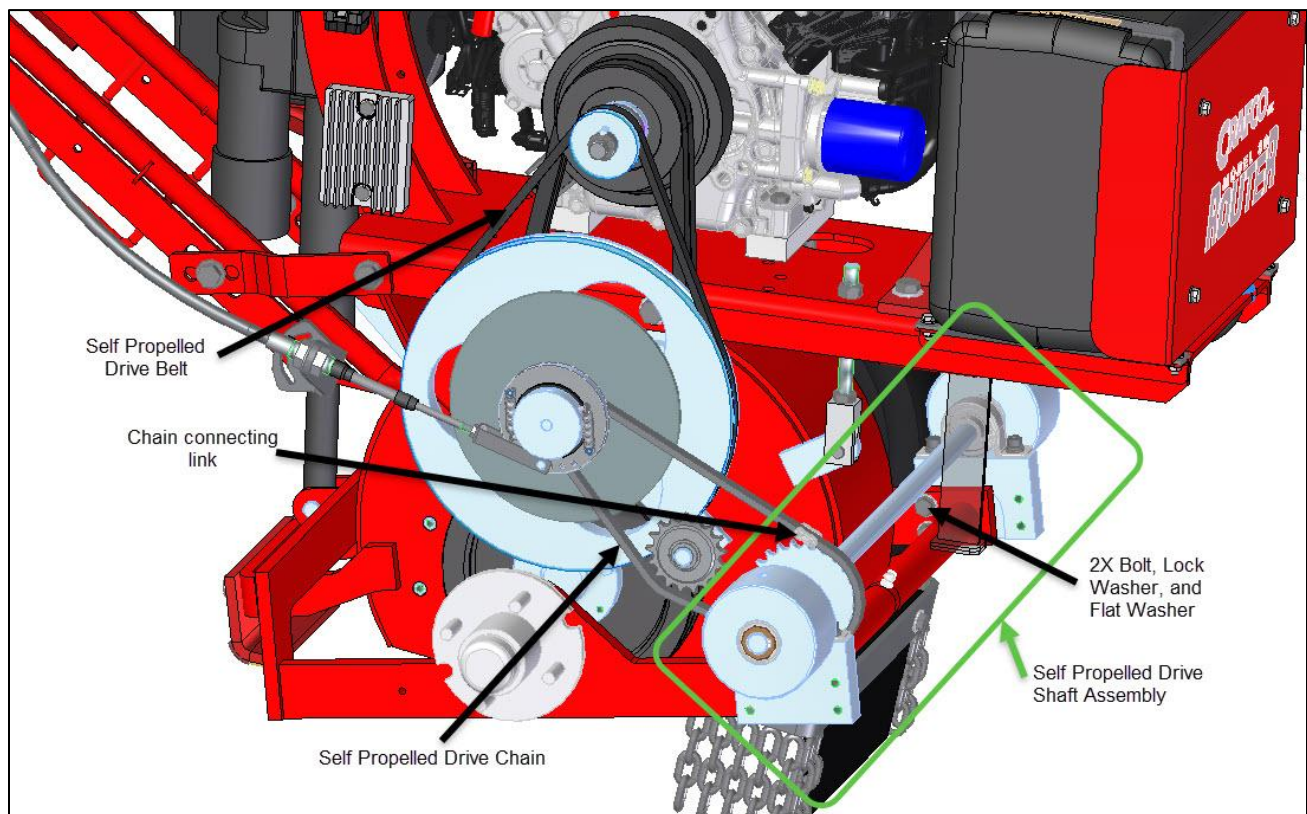
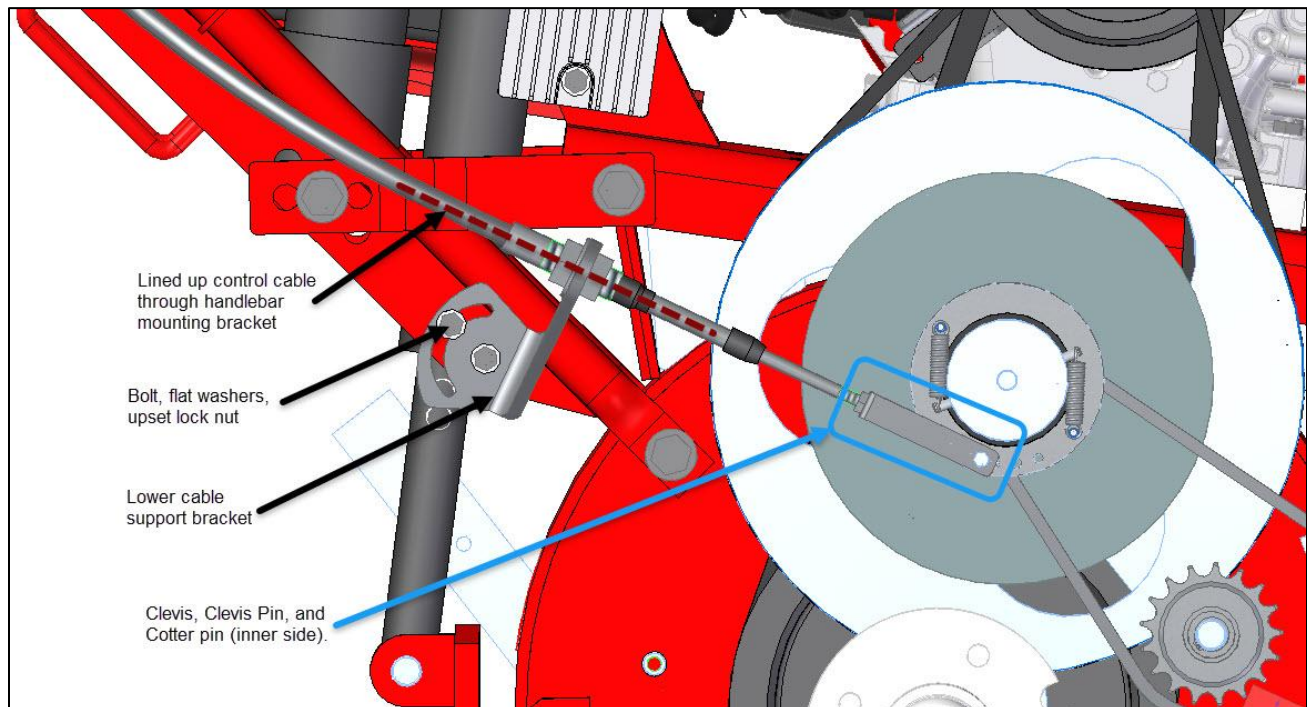


Figure 6-15 Self Propelled Drive Shaft Assembly and Drive Chain

Chapter 6 Installation Instructions

Table 6-11 Self Propelled Mechanism Installation (continued)

10	Set self propelled belt tension by adjusting location of flywheel assembly mounting block in frame channel. Correct belt tension is set when a 1/8" belt deflection is achieved while applying a 5 lb. force.
11	Set main router drive belt tension by adjusting the 3/4" jam nuts on the belt tensioner that goes through the engine channel. Correct belt tension is set when a 1/4" belt deflection is achieved while applying a 10 lb. force.
12	Loosely attach lower cable support bracket, item 8, to lower holes of handlebar gusset using 2 bolts and lock nuts, and 4 flat washers, items 20, 28, and 35.
13	Connect self propelled control cable, item 9, through lower support bracket, and then to the flywheel assembly using drive end clevis, item 10, clevis pin, item 43, and cotter pin, item 44. See Figure 6-16
14	Align control cable through support bracket and tighten bracket bolts to handlebars.
15	Adjust cable tension using jam nuts at cable supports and cable pivot assembly under handlebars.

**Figure 6-16 Control Cable Drive End**

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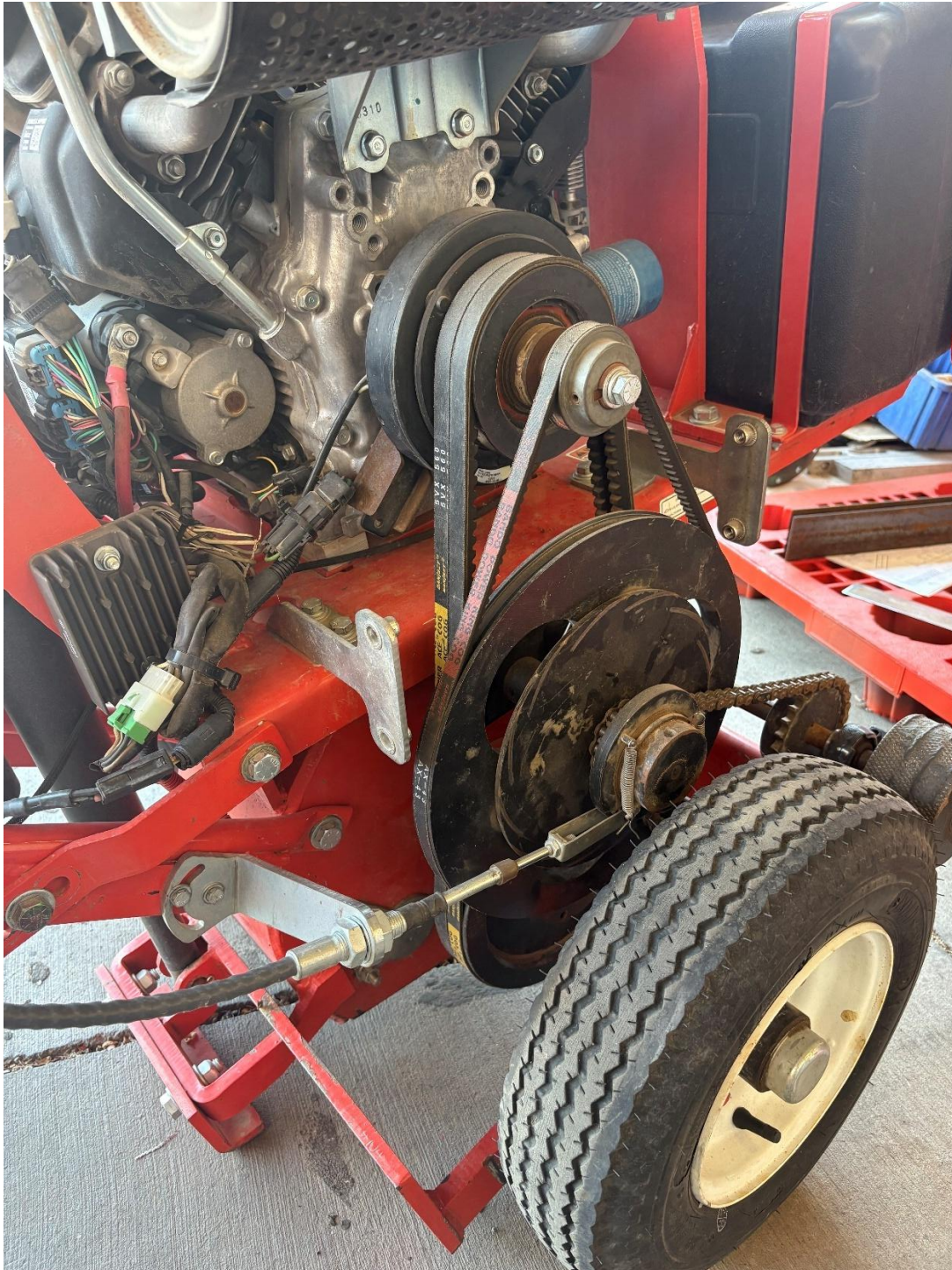


Figure 6-17 Installed Self Propelled System and Belt Guard Brackets

Chapter 6 Installation Instructions

6.5 Re-Installations

Table 6-12 Re-Installations

1	Install wheel spacer, item 49, onto drive side wheel hub. See Figure 6-18
2	Install new belt cover mounting brackets, items 13 and 14, using the removed mounting bracket hardware. See Figure 6-18
3	Remove router serial number tag from old belt guard and install onto new self propelled belt guard with included rivets. See Figure 6-18
4	Install new belt guard, item 16, using two bolts, lock washers, and flat washers, items 24, 29, and 36, on each side of the cover, mating with threaded inserts on the cover mounting brackets. See Figure 6-18
5	Re-install drive side wheel and tire, deflate to install behind self propelled drive wheel if needed. Re-inflate tire to 45 psi (310 kpa).

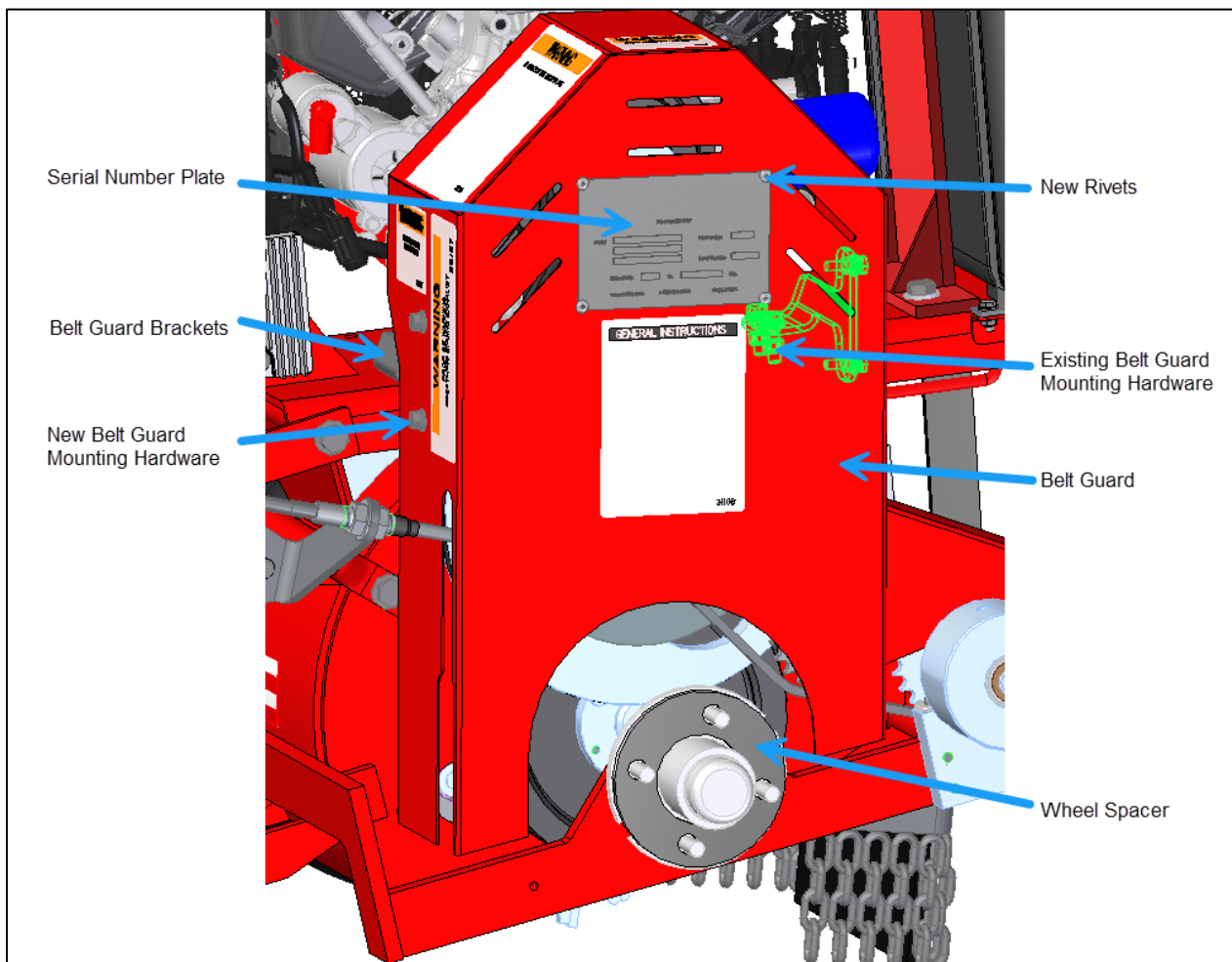



Figure 6-18 Self Propelled Belt Guard and Wheel Spacer

Chapter 6 Installation Instructions

6.6 Post Installation Inspection

After assembly of the Self Propelled Router Kit, inspect the entire router. Make sure that all parts are properly installed. Make sure all nuts and bolts are in place and are properly tightened. Make sure all wiring and hoses are connected. Check fuel and engine oil levels and add if necessary. Connect battery cables and turn the fuel valve on the gas tank to the on position. Perform inspections and clutch break in per [Table 6-13](#).

Table 6-13 Post Installation Inspections.

	WARNING
	<p>The safe operation of this machine is the operator's responsibility.</p> <p>Use extreme care when operating this machine; safety is the result of being careful and paying attention to details.</p> <p>Always put on protective clothing, long pants, gloves, hard-soled shoes, safety glasses, dust mask, and ear protection. Tighten all bolts, nuts, and screws every 100 hours.</p>
1	Start the engine and run at low idle for a few minutes. Listen for any abnormal sounds or machine vibration such as excessive vibration in handlebar, gas tank, air cleaner, or router moving on skid plate.
2	Make sure the actuator is in its full upright position. At low idle engage the clutch 20 times from a complete stop of the cutter head.
3	Increase engine to full throttle, make sure engine does not go above 3750 RPM's, and adjust if necessary. Listen for any abnormal sounds or machine vibration.
4	At full throttle engage the clutch 10 times from a complete stop of the cutter head.
5	Hold machine in an operating and transportable position. Engage the self propelled mechanism by pulling up on the newly installed handlebar lever actuator. The self propelled mechanism should start pulling the machine and operator forward while the lever is engaged. If the lever actuator is too loose or too tight shut down the machine and adjust cable tension as needed.



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