



# User Manual

## SLAG

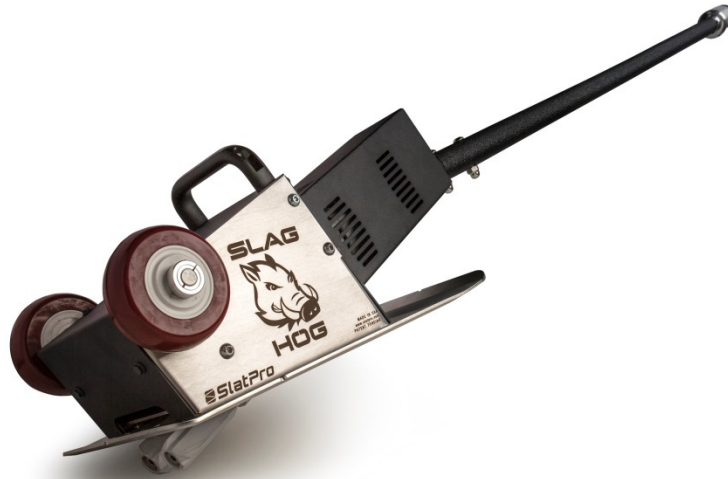


## HOG

**67123 SH3G**

Slag Removal Tool for use on laser cutting machines with  
minimum 1.75" between slats

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## 1. Safety



### 1.1 General Safety Instructions

**ΔWARNING! Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**Save all warnings and instructions for future reference.**

### 1.2 Slaghog Specific Safety Warnings and Instructions

- A. Unplug tool from power before performing maintenance on Slaghog
- B. Use protective equipment. Always wear safety glasses when working with the machine. Protective clothing is recommended such as dust mask, gloves, steel toed non-slip footwear and hearing protection.
- C. Do not expose tool to wet conditions or operate in damp environment
- D. Power cord to be kept clear from working range of machine. Always lead cord away from machine. Do not apply tension to power cord.
- E. Switch tool off immediately if it stalls. Lift cutters out of slats before restarting.

## 2. Supporting Information

### 2.1 Conditions of use

The tool is only to be used for removing the slag from slats on laser cutting machines where the slats create a horizontal plane and the vertical slat sides are cleaned. The slats may be steel, stainless steel or copper. Not to be used in wet areas or outside.



### **WARNING**

### 2.2 Mains Connection

Connect only to single-phase AC voltage as indicated on the rating sticker. Plug-in receptacle to have ground contact with current capacity exceeding the tools rating.

Only plug in when tool switches are off.



### 2.3 Maintenance

The ventilation slots must be kept clear or over-heating may result.

If the supply cord is damaged it must only be replaced by qualified personnel. Only use SlatPro replacement parts when performing repairs or maintenance.

## 2.4 Technical Information

Technical Data			
SlagHog Slag Removal Tool			
	Production code	67123-120V	67123-230V
	Voltage	120V a.c.	230V a.c.
	Current	10 amps	5 amps
	Frequency	50/60hz	
	Weight	47 lb	21.4kg
<b>Noise Information</b>			
Measured values determined according to EN 60745. Typically, the A weighted noise levels of the tool are:			
	Sound pressure level (Uncertainty K=3db(A))	90 db (A)	
	Sound power level (Uncertainty K=3db(A))	101 db (A)	
<b>Wear ear Protectors!</b>			
<b>Vibration information</b>			
Vibration total values (triaxial vector sum) determined according to EN 60745			
Connect only to a single-phase AC current supply and only to mains voltage specified on the rating plate			
	Vibration emission value $a_{h,d}$	4.3 m/s <sup>2</sup>	
	Uncertainty K=	1,5 m/s <sup>2</sup>	

### Warning





The Vibration emission level given in this information sheet has been measured in accordance with a standardized test given in EN 60745 and may be used to compare one tool with another. It may be used for a preliminary assessment of exposure.

The declared vibration emission level represents the main applications of the tool. However, if the tool is used for different applications, with different accessories or poorly maintained, the vibration emission may differ. This may significantly increase the exposure level over the working period.

An estimation of level of exposure to vibration should also take into account the times when the tool is switched off or when it is running but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Identify additional safety measures to protect the operator from the effects of vibrations such as: maintain the tool and the accessories, keep the hands warm, organization of work patterns.

## 2.5 Symbols

	Caution! Warning! Danger!
	Always disconnect the plug from the socket before carrying out any instructions
	Please read the instructions carefully before starting the machine.
	Tool uses protective earth and must be plugged into grounded outlet

## 3. Description

The tool is moved along the slats on the bed of a laser machine to remove slag that accumulates while cutting. Rotary cutting tools ride on each side of the slat to lift and remove the slag. It may be used on steel, copper or hybrid steel/copper slats. When not in use it may be rolled along the floor and stored in the upright position.

## 4. Initial Assembly


The Slag Hog ships in two pieces; power unit and the handle assembly. All fasteners are metric.


- Remove the nuts and button head socket screw from the 1.36" diameter stub on the power unit.
- Slide the handle on the stub with the power out cord of the handle on the same side as the plug in on the power unit.
- Plug the power cord from handle tube into the power unit

### **WARNING**

- Do not plug into power outlet before verifying the switches on the handle and power unit are off; both rocker switches to 0.

## 5. Operation

-  The tool must be plugged into a receptacle with a grounded outlet  
Before plugging into power verify that the two switches are turned off  
Wear work gloves and safety glasses when operating  
Lift onto the cutting machine bed with care

-  **WARNING** Use extreme care near the cutters. Do not touch them unless the tool is unplugged.

## The tool has two on/off switches



**Figure 1**  
Rocker switch on handle end, in off position, acts as circuit breaker reset in case of over-current



**Figure 2**  
Rocker Switch on motor enclosure in off position.

Both switches must be in ON or “I” position to run. Turning either switch OFF (“0” position) stops motor operation.

The upper left picture shows the on/off switch that acts as the circuit breaker when the unit is overworked. If the slats are not straight it is possible for the cutters to grab onto two slats and stall the motor which will trip the breaker. If this occurs wait a minute, reset the breaker switch, and resume operation. When slats have excess slag build up it may cause the circuit breaker to overload. If this happens the operator will need to reduce force used for cleaning slats. If this occurs, reset the breaker, and resume operation.

To begin use, place the tool on the slat bed of the laser machine, center the cutters over a slat, and turn on both switches. Cutter rotation will pull the tool down on the slats. The slats can be cleaned by moving the tool in either direction along the slat.



**Figure 3**

With switches off, plug tool into a power outlet with appropriate current capacity to accept value given on machine label or as shown above in the Technical Data table.



**Figure 4**  
Cutters shown centered on slat

To see the unit in operation, go to Youtube and search for Slaghog. The best video is:  
<https://www.youtube.com/watch?v=PDvEFRREdgg>

The cutter geometry is ideal for most slat/pallet bed configurations. If the fit of the cutters on the slats does not seem correct contact the factory to find out options that are available.

When storing in upright position the unit is unstable and care must be taken to ensure that it does not fall over, which may lead to damage of handle end components. Damage due to dropping, improper handling, or falling over is not covered by warranty.

## 6. Maintenance



**WARNING** Disconnect power by unplugging from outlet before performing any work on the tool

### 6.1 Cutters

The cutters will wear over time and require replacement.

Tools required for replacement

- 6mm L hex wrench
- 6mm male hex socket wrench
- Adjustable open wrench

### Replacement Cutters

- 66106 – 14ga Slats
- 66031 – 11-12ga Slats
- 66105 – 10ga Slats
- 66095 – 7ga Slats
- 66096 – .250" Slats
- 67067 – .11/12ga Deep Slats

Parts required are RH & LH Cutter Set with cap screws. The most common cutters are 66031 SET for 11/12ga slats. Most replacement cutters come with two M8 x 22 cap screws, two washers, and Blue Loctite 242. 67067 Cutter is longer and uses a M8 x 70 cap screw.

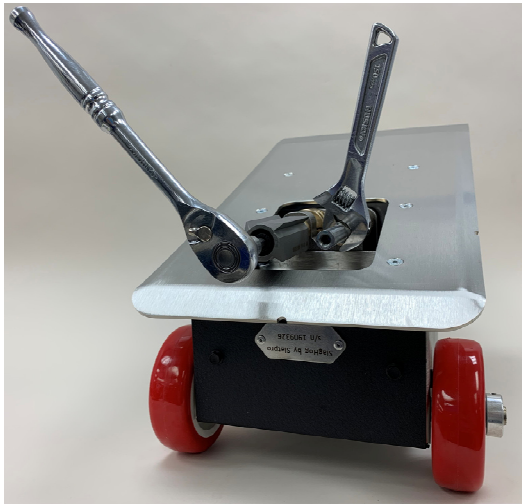
Place the tool on its back with the cutters up.

Place the wrenches as shown and remove the right cutter cap screw with counterclockwise rotation. Remove the right cutter. The cutter may be tight on the shaft and will require light tapping with a hammer to remove.



**Figure 5**

Place adjustable wrench on flats of right shaft and remove left cutter with counterclockwise rotation.



**Figure 6**

Slide the new right hand and the left-hand cutters so that the flats between the shaft are facing the base plate as shown. The cutters rotate so that the slag chips are pulled up toward the base plate. The cutters must be installed as shown.

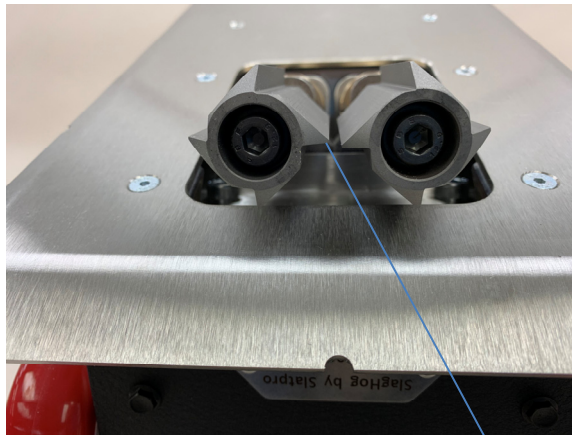


Figure 7

Flat side of cutters towards base plate

Apply Loctite 242 to the cap screw threads. With washers in place, thread then tighten cap screws into shaft ends using the male hex socket wrench and L hex wrench approach.

### Cutter Wear

Even though cutters are made from hardened tool steel they do wear and will need to be replaced. When slag removal gets worse it may be time to replace cutters. The best way to determine if they are worn is to measure the distance between cutter tips. The below picture shows the proper gap for new 11-gauge cutters.



Figure 8 Measuring Cutter Gap

When the gap has increased by .050 it is time to replace cutters.

Slat		Max Gap
gauge	Thick(inch)	
14	0.074	0.124
12	0.104	0.154
11	0.119	0.169
10	0.135	0.185
7	0.179	0.229

Table 1 Max Gap for Cutter Replacement

### Other Wear

If the measured gap is less than the slat thickness, the Cutter Support Plates may have worn from hammering action after repeated use. This condition will overwork the motor and cause short brush life and may damage the motor. Call SlatPro for further advice on this problem.





## 6.2 Motor Brushes

If the tool has less torque while in use, it is likely that the brushes need replacement.

Parts Required: **Qty 1 of 67179SET Brush Kit for SH3**

There are access holes to brushes in top and bottom of Motor Enclosure

Unthread and remove Brush Caps from motor

Remove old brushes and install new and thread caps back in place

## 6.3 Other maintenance

All other repairs require qualified personnel to perform. In this case, the factory or distributor should be contacted for further instructions.

## Slaghog Troubleshooting Guide

Problem	Probable Cause	Solution
The machine is not cleaning well.	Cutter gap is too large or too small. <i>See Figure 8 and Max gap table.</i>	If measured gap is smaller than slat thickness, send unit in for a rebuild/repair. This could mean that cutter support plates are worn or there has been a bearing failure.
		If the gap is too big, replace the cutters.
	Cutters are installed incorrectly. <i>See figure 7</i>	Check to see if the cutters may have been installed backwards. Install the cutters correctly.
The machine is not starting.	The switch in the handle end box has failed.	Replace the switch. See parts list for proper part number.
	The switch in the motor enclosure has failed.	If you replace the switch in the handle end box and the unit is still not starting, replace the switch on top of motor enclosure.
	Issue with wiring.	Refer to repair manual, verify all wires are properly connected.
	Motor has malfunctioned	Check to see if brushes have worn. If worn, replace brushes.
If brushes are not worn, replace the motor.		
Sparks are coming from inside motor	Motor has malfunctioned or brushes are worn.	Check to see if brushes have worn. If worn, replace brushes.
		If brushes are not worn, replace the motor.
Burning smell and sparks coming from inside motor enclosure	Motor has malfunctioned.	Replace the motor.
Grinding sound while running, or cutters not rotating	Broken gears in gear housing	Check and replace gears and motor.



## **SLAGHOG WARRANTY**

Subject to the exclusions described below, all Slaghog products ("Products") as manufactured by Slatpro LLC are warranted to be free from defects in materials and workmanship under normal use and service for 12 months after the ship date to the purchaser. Unless otherwise set forth in a quotation or agreed to by Slatpro in writing, Product warranty only applies to the first using purchaser. Warranty is not transferable beyond the first using purchaser and is limited to new Products sold by Slatpro or through authorized representatives and channel partners.

**EXCLUSIVE REMEDY.** In the event that Slatpro determines that a Product contains a defect in materials or workmanship, then Slatpro, in its sole discretion, will (a) repair the Product, (b) replace the Product with new or rebuilt (c) refund the purchase price of the Product. THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REMEDY OF REPAIR, REPLACEMENT OR REFUND IS BUYER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. IN NO EVENT SHALL SLATPRO'S LIABILITY UNDER THIS WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT GIVING RISE TO THE WARRANTY CLAIM. All Products which are repaired or replaced shall be warranted only for the unexpired portion of the original warranty period.

**EXCLUSIONS.** This warranty does not cover (a) any failures which are not attributable to defects in materials or workmanship, including without limitation, failures caused by accidents, inadequate maintenance, misuse, unauthorized modifications or repairs, improper storage, and normal wear and tear, (b) any consumable parts or accessories, such as cutter blades, are designed to wear over time or through use of the product, (c) Excessive use which is contributed from overuse, recommended use is for 1 cleaner to service 1-3 machines under normal use conditions. Recommended cleaning interval of once per week if production levels equal 2 shifts.

**WARRANTY RETURNS.** No Products shall be returned without prior authorization from Slatpro. Buyer shall prepay all shipping charges for the return of Products to Slatpro designated service location.

**LIMITATION OF LIABILITY.** IN NO EVENT SHALL SLATPRO BE LIABLE FOR ANY INCIDENTAL DAMAGES, CONSEQUENTIAL DAMAGES, SPECIAL DAMAGES, INDIRECT DAMAGES, LOSS OF PROFITS, LOSS OF REVENUES, OR LOSS OF USE, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. SLAPRO'S LIABILITY FOR DAMAGES ARISING OUT OF OR RELATED TO ANY ORDER IS LIMITED TO THE ORDER PRICE FOR THE SPECIFIC PRODUCT THAT GIVES RISE TO THE CLAIM. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THESE LIMITATIONS AND EXCLUSIONS SHALL APPLY REGARDLESS OF WHETHER LIABILITY ARISES FROM BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE), BY OPERATION OR LAW, OR OTHERWISE.

Effective Date: October 15, 2020

# EC Declaration of Conformity

## Object of the Declaration

Product Slaghog Tool used for removing slag from laser machine slats  
Model/Type 67123-230V & 67123-230VG Slaghog Standard SH3  
67182-230V & 67182-230VG Slaghog Narrow NSH3

Manufacturer Slatpro  
Address 4757 Mustang Circle, Mounds View, MN 55112, U.S.A.

This Declaration is issued under the sole responsibility of the manufacturer

*The object of the declaration described above is in conformity of the relevant union harmonization legislation*

2011/65/EU

2006/42/EC

2014/30/EU

*Conformity is shown by compliance with the applicable requirements of the following documents:*

### Reference & Date:

EN 60745-1:2009 + A11:2010

EN 55014-1:2017/A11:2020

EN 55014-2:1997/A1:2001,A2:2008

EN 61000-3-2:2014

EN 61000-3-3:2013

EN 50581:2012

Signed for on Behalf of Slatpro LLC  
Place of issue: Mounds View, MN, USA  
Date of Issue 22nd April 2021  
Name: Eric Chalmers  
Position: President of Slatpro LLC

Signature:





## Slag Hog Assembly

**P/N: 67123-120VG or -230VG**

Model SH3G

sheet 1 of 2

Item	Qty	Part No.	Description
The following items are for the drive portion of the assembly			
1	1	67121	Input Shaft
2	2	66034	Cutter Shaft
3	2	66135	Idler Shaft
4	1	67077	Driven Idler Shaft
5	2	66083	Thrust Spacer
6	4	66041	Gear Support Plate
7	2	66040	Cutter Support Plate
8	15	66115	Needle Bearing .62 ID
9	4	67007	Needle Bearing .62 ID Closed End
10	1	67167	Ball Bearing .62IDx1.38ODx.344W
11	1	67168	Seal .62IDx1.12ODx,12W
12	2	NI	Clamp Collar 9520T8
13	4	67058	Input Shaft Spacer
14	8	66081	Idler Shaft Washer
15	4	66054	Pivot Washer
16	4	66048	Spur Gear 14T
17	2	66049	Spur Gear 16T
18	1	66058	Gear Box
19	1	66042	Pivot End Plate Cutter Side
20	1	67119	Gear Housing
21	1	66044-RH	Top Gear Support RH
22	1	66044-LH	Top Gear Support LH
23	2	66025	Spring Guide Male
24	2	66051	Spring Guide Female
25	2	66126	Die Spring
26	6	NI	Thrust Washer .625ID x 1"OD x .125 Thk
27	7	67274	Machine Key
28	2	NI	Dowel Pin, Pull-out 97175A390
29	1	66039	Chip Deflector
30	2	66053	Spacer, Cutter
31	1	67155	Gear 93T
32	1	67156	Gear Shaft 20T
33	1	67157	Gear 82T
34	1	67159	Filler Gear Housing
35	2	67166	Bearing 10 IDx26 ODx8mm W
36	1	67120	Motor Mount Plate
37	1	NI	Oring -047 9452K312



## Slag Hog Assembly

**P/N: 67123-120VG or -230VG**

Model SH3G

Item	Qty	Part No.	Description	sheet 2 of 2
The following items are for the housing portion of the assembly				
40	1	67114	Side Plate Set	
41	1	67164	Base Plate	
42	1	67118	Motor -120VG or -230VG	
43	REF	67179	Carbon Brush Set for Motor (Not Shown)	
44	1	67184	Grease Seal Adapter	
45	1	67206	Grease Seal	
47	1	67112	Motor Enclosure	
48	1	67116	Top Cover	
49	1	67115	Wire Access Cover	
50	2	66117	Wheel	
51	1	NI	Clamp Collar 6157K14	
52	1	NI	Shaft .5 dia x 10.38 1255T17	
53	1	66116	Handle	
54	1	67063	On/Off Switch 15A	
55	1	67065	Receptacle	
56	1	NI	Ground Wire 2196k42	

The following items are for the fasteners

70	2	NI	Flat Hd Phillips Mach Scr M3x8 92010A118
71	8	NI	Socket Head Cap Screw M4x14 91290A150
73	21	NI	Vib Resist Hex Hd Flange M5x12 92820A215
74	9	NI	Hex Hd Flange M5x20 98093A320
75	4	NI	Socket Head Cap Screw M5x14 91290A230
76	1	NI	Button Hd SCS M6x12 91239A318
78	2	NI	Socket Head Cap Screw M6x25 90128A265
79	4	NI	Button-Head SCS M8x16 91306A677
80	14	NI	Socket Head Cap Screw M8x25 90128A275
81	7	NI	Nylock Flanged Nut M6x1 99908A101
82	2	NI	Nylock Nut M10x1.5 90576A118
83	2	NI	Button Hd SCS M10x55 SST 92095A426

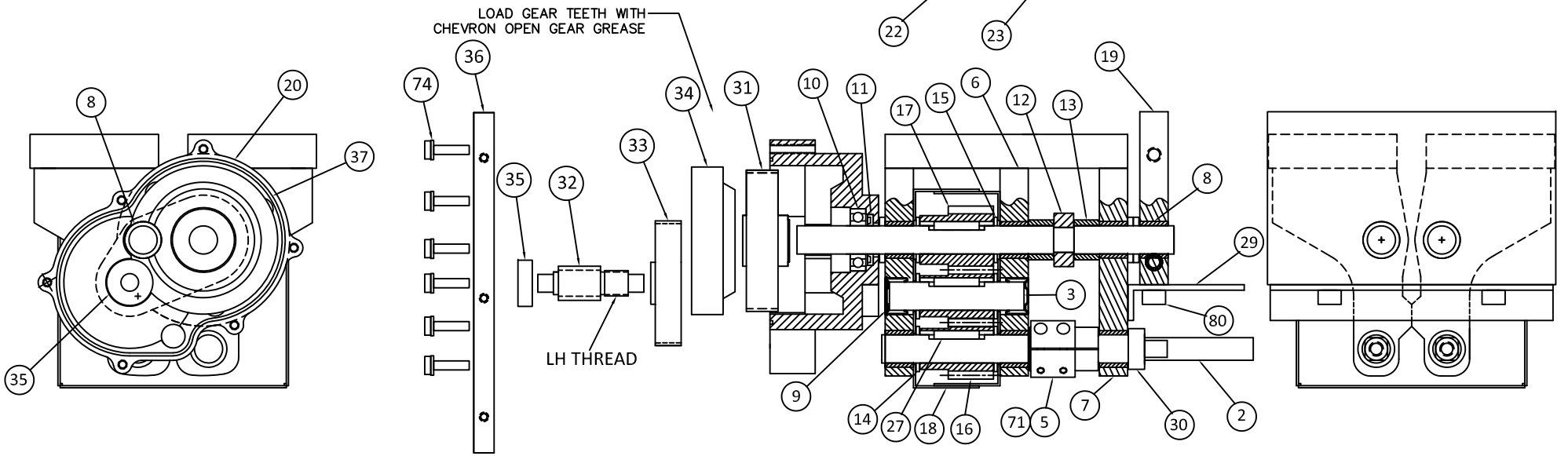
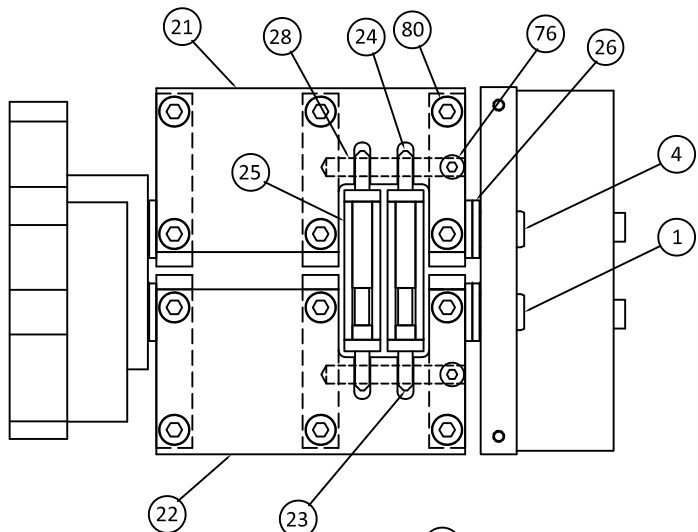
85 1 67171 Foam Packaging SH3

See 67173 for handle tube options

NI means non-inventory item


Slag Hog Cutter Sets	Screws x2	Washers x2
66106 SET Cutters for 14ga Slats	M8x22 SHCS	98029A044
66031 SET Cutters for 11 & 12ga Slats	91290A428	
66105 SET Cutters for 10ga Slats		
66095 SET Cutters for 7ga - 3/16" Slats		
66096 SET Cutters for 1/4" Slats		
67067 SET Long Cutter for 11ga Deep Slats	M8x65 SHCS	91290A458

Use Loctite 242 on screw threads when installing cutters  
See 67173 for handle tube options



### Drive Assembly

Unless noted Blue Loctite 242 on all fasteners except nylock nuts  
Sold as 67123-120VG OR 67123-230VG

THIRD ANGLE PROJECTION 

**DO NOT SCALE**

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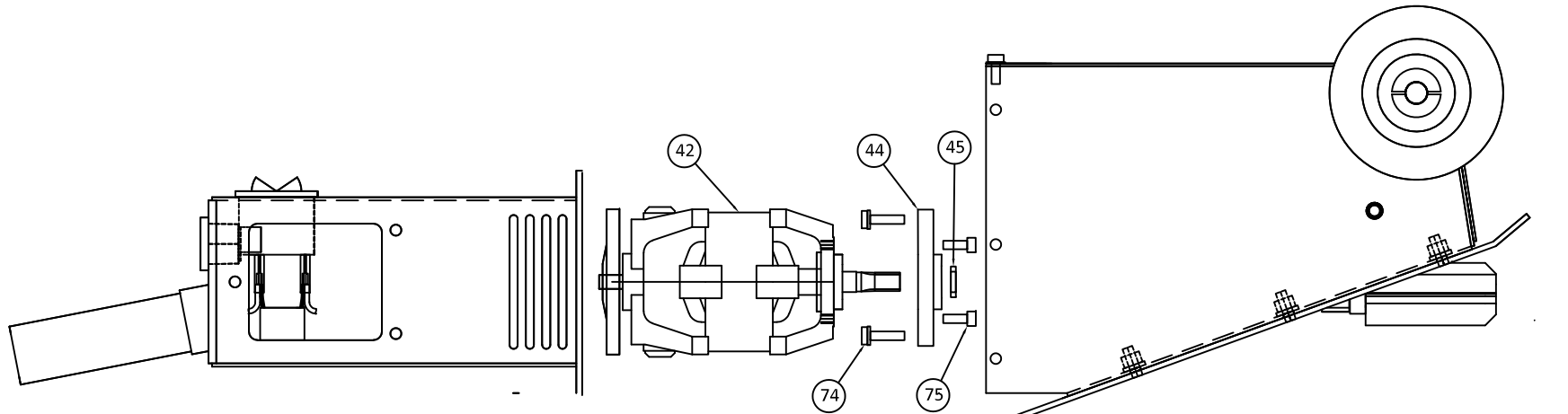
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SHEET 1 OF 2

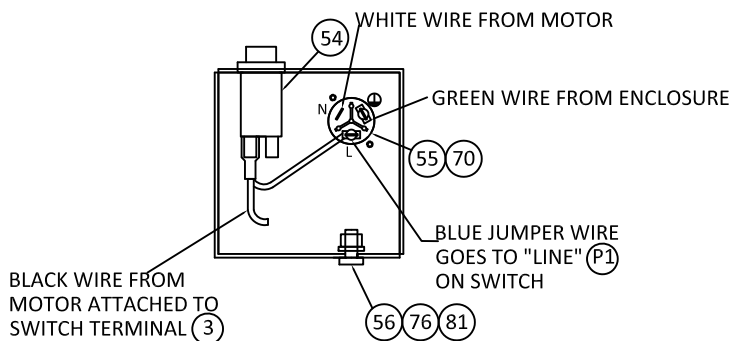
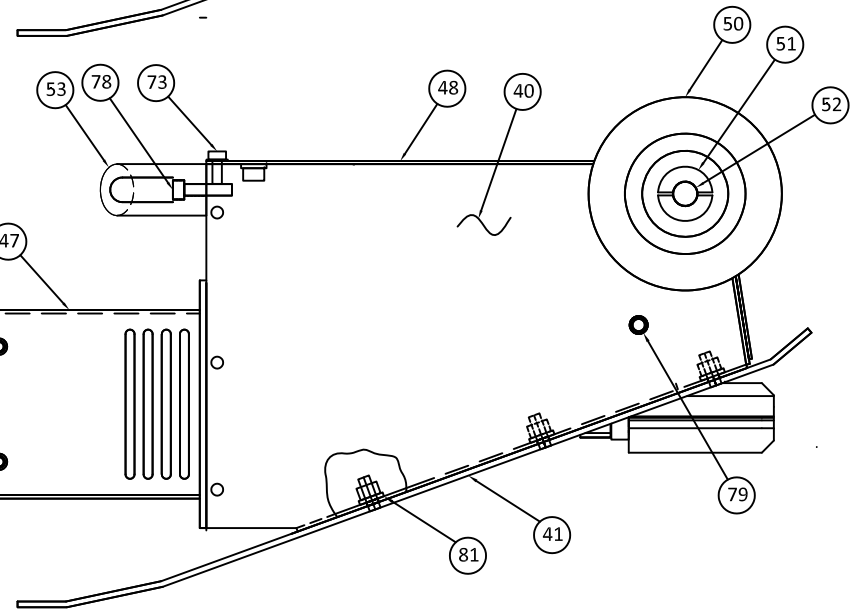
67123

TITLE

Slag Hog Assembly SH3G




Bottom View of Switch (54)



Section A-A

SECURE MOTOR WIRES TO MOTOR ENCLOSURE ON FAR SIDE WITH CABLE TIE .19 X .05 X 7.5 70215K63

THIRD ANGLE PROJECTION 

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SHEET 2 OF 2

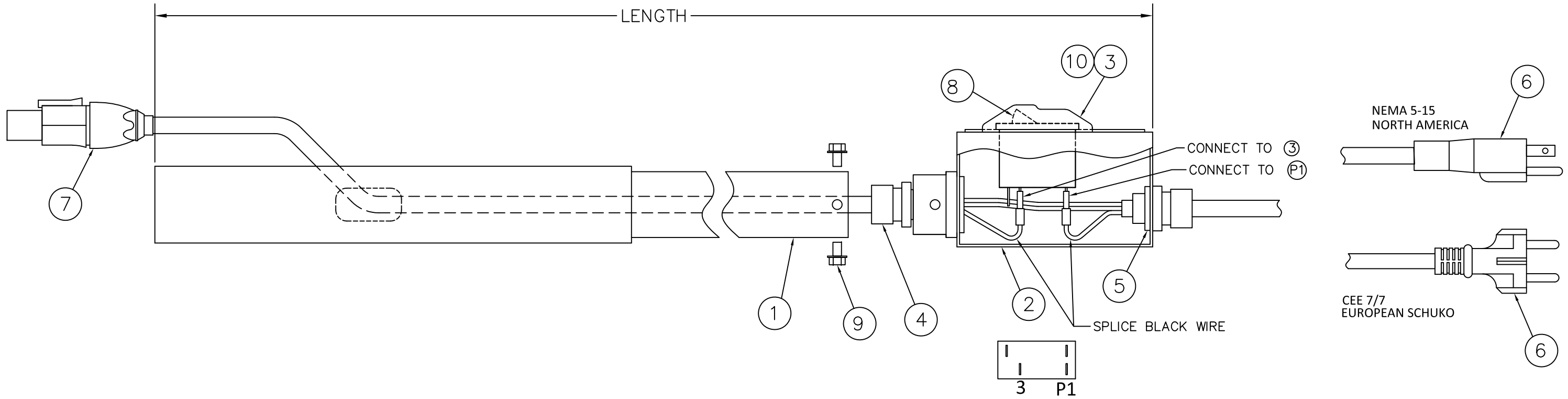
67123

TITLE

Slag Hog Assembly SH3G



ITEM	QTY	PN	DESCRIPTION	ASSY#	DESCRIPTION	TUBE PN	CORD PN	SWITCH PN
1	1	SEE TAB	HANDLE TUBE	67173-S-120V	STD LENGTH(63-3/4) FOR 120V	66060	66121	67170 (10A)
2	1	67059	HANDLE END BOX	67173-L-120V	LONG LENGTH(76-1/4) FOR 120V	66094	66121	67170 (10A)
3	1	67060	COVER HANDLE END	67173-S-230V	STD LENGTH(63-3/4) FOR 230V	66060	67176	67090 (5A)
4	1	NI	CORD GRIP 7529k322	67173-L-230V	LONG LENGTH(76-1/4) FOR 230V	66094	67176	67090 (5A)
5	1	NI	3/8 FIXTURE NUT					
6	1	SEE TAB	CORD/PLUG					
7	1	67066	PLUG END					
8	1	SEE TAB	ON/OFF SWITCH					
9	4	NI	Hex Hd Flange M5x12					
10	2	NI	Button Hd SCS M5x12					



THIRD ANGLE PROJECTION 			TITLE
DO NOT SCALE	SHEET 1	67173	Tube Handle Assembly
<small>ALL DATA AND INFORMATION ON THIS DOCUMENT IS FOR THE SOLE USE OF SLATPRO AND/OR IT'S LICENSEES, AND MAY NOT BE USED WITHOUT PERMISSION.</small>	OF 2		SH3