



Instruction Manual

HUCK® SwageForward™

HSSFT-M10

HSSFT-M12

HSSFT-M16

Hydraulic Installation Tools



Table of Contents

Declaration of Conformity	2
Safety Instructions	4-5
Principle of Operation	6
Specifications	7
Preparation for Use	8
Maintenance	8-9
Operating Instructions	10
Adjustment Instructions	11
Optional Equipment	11
Components Drawings and Parts Lists	12-18
Wiring Diagram and Schematic as Shipped	19
Special Wiring Instructions	20-23



HUCK IS FOREVER.™

Makers of Huck®, Marson®, Recoil®
Brand Fasteners, Tools & Accessories

July 1, 2026
HK1071



Declaration of Conformity

Manufacturer:

Huck International, LLC, Industrial Products Group, 1 Corporate Drive, Kingston, NY, 12401, USA

Description of Machinery:

Models HS52 and HSSFT-M## family of hydraulic installation tools and specials based on their design (e.g. PR####).

Relevant provisions complied with:

Council Directive related to Machinery (2006/42/EC)

Supply of Machinery (Safety) Regulations 2008

British Standard related to hand held, non-electric power tools (ISO 11148-2:2011)

Representatives:

UK: Paul Carson, Huck International, Ltd. Unit C Stafford Park 7, Telford Shropshire TF3 3BQ, England, United Kingdom

EU: Lutz Baumann, Hildesheim Operations, Fairchild Fasteners Europe - VSD GmbH, Steven 3, 31135, Hildesheim, Germany

Authorized Signature/date:

I, the undersigned, do hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature: _____

Full Name: Nicholas Gougoutris

Position: Engineering Manager

Location: Huck International, LLC d/b/a Howmet Fastening Systems
Kingston, New York, USA

Date: 11/22/2021 (November, 22, 2021)

UK
CA
CE



Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: **80** dB (reference 1 pW) Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: **69** dB (reference 20 µPa) Uncertainty, KpA: 3 dB

C-weighted peak emission sound pressure level, LpC, peak: **97** dB (reference 20 µPa) Uncertainty, KpC: 3 dB

Values determined according to noise test code ISO 3744. The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.

Declared vibration emission values in accordance with EN 12096

Measured Vibrations emission value, a: **.21** m/s²

Uncertainty, K: **.20** m/s²

Values measured and determined according to ISO 28662-1, ISO 5349-2, and EN 1033

Test data to support the above information is on file at:
Howmet Fastening Systems, Kingston Operations, Kingston, NY, USA.



DANGER - IMPORTANT

DO NOT EXCEED HOSE MINIMUM BEND RADIUS

Failure to heed the warnings below could lead to a damaged hose, damaged tool, damaged property, personal injury, or death.

- This high pressure hose is not to be used other than assembled in a genuine HUCK tool or hose assembly or used as a replacement for the hose of a genuine HUCK tool or hose assembly.
- Improper use of this product can cause **property damage, personal injury, and death**, including but not limited to **electrocution, fluid injection** or **loss of limb** caused by **high pressure leak, dangerously whipping hose** or contact with suddenly moving or falling objects.
- Do not exceed rated working pressure (**700 bar/10150 psi**) or minimum bend radius (see chart below). Do not use in temperatures less than **-40°C (-40°F)** or greater than **+100°C (+212°F)**. Do not exceed fluid working temperature of **+70°C (+158°F)**.
- Do not use if the hose is kinked, abraded, cut, bulged, or leaking. Do not attempt to repair the hose.
- Do not carry tool by hoses.
- Refer to a HUCK hydraulic tool manual for hose inspection and maintenance intervals.
- Store hose assemblies in a clean dry area.

Hose Type	Minimum Bend Radius	
126107 Series	2.76 Inches	70 mm
118944 and 124881 Series	2.17 Inches	55 mm
HA and HPH Series	1.97 Inches	50 mm



Safety Instructions

GLOSSARY OF TERMS AND SYMBOLS:



-Product complies with requirements set forth by the relevant UK and European directives.



-Read manual prior to using this equipment.



-Eye protection is required while using this equipment.



-Hearing protection is required while using this equipment.

Notes: are reminders of required procedures.

Bold, Italic type, and underline: emphasize a specific instruction.



WARNINGS: Must be understood to avoid severe personal injury.



CAUTIONS: Show conditions that will damage equipment or structure.

I. GENERAL SAFETY RULES:

1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the assembly power tool.
5. Do not modify this assembly power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use assembly power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Read MSDS Specifications before servicing the tool. MSDS specifications are available from the product manufacturer or your Huck representative.
11. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tooling damage or personal injury.
12. Never remove any safety guards or pintail deflectors.
13. Never install a fastener in free air. Personal injury from fastener ejecting may occur.
14. Where applicable, always clear spent pintail out of nose assembly before installing the next fastener.

15. Check clearance between trigger and work piece to ensure there is no pinch point when tool is activated. Remote triggers are available for hydraulic tooling if pinch point is unavoidable.
16. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle or to bend or pry the tool. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency, eliminating downtime, and preventing an accident which may cause severe personal injury.
17. Never place hands between nose assembly and work piece. Keep hands clear from front of tool.
18. Tools with ejector rods should never be cycled with out nose assembly installed.
19. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet for correct positioning.

II. PROJECTILE HAZARDS:

1. Risk of whipping compressed air hose if tool is pneudraulic or pneumatic.
2. Disconnect the assembly power tool from energy source when changing inserted tools or accessories.
3. Be aware that failure of the workpiece, accessories, or the inserted tool itself can generate high velocity projectiles.
4. Always wear impact resistant eye protection during tool operation. The grade of protection required should be assessed for each use.
5. The risk of others should also be assessed at this time.
6. Ensure that the workpiece is securely fixed.
7. Check that the means of protection from ejection of fastener or pintail is in place and operative.
8. There is possibility of forcible ejection of pintails or spent mandrels from front of tool.

III. OPERATING HAZARDS:

1. Use of tool can expose the operator's hands to hazards including: crushing, impacts, cuts, abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly and be ready to counteract normal or sudden movements with both hands available.
4. Maintain a balanced body position and secure footing.
5. Release trigger or stop start device in case of interruption of energy supply.
6. Use only fluids and lubricants recommended by the manufacturer.
7. Avoid unsuitable postures, as it is likely for these not to allow counteracting of normal or unexpected tool movement.
8. If the assembly power tool is fixed to a suspension device, make sure that fixation is secure.
9. Beware of the risk of crushing or pinching if nose equipment is not fitted.

Continued on next page...



Safety Instructions (continued)

IV. REPETITIVE MOTION HAZARDS:

1. When using assembly power tool, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
2. When using tool, the operator should adopt a comfortable posture while maintaining a secure footing and avoid awkward or off balanced postures.
3. The operator should change posture during extended tasks to help avoid discomfort and fatigue.
4. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warnings should not be ignored. The operator should tell the employer and consult a qualified health professional.

V. ACCESSORIES HAZARDS:

1. Disconnect tool from energy supply before changing inserted tool or accessory.
2. Use only sizes and types of accessories and consumables that are recommended. Do not use other types or sizes of accessories or consumables.

VI. WORKPLACE HAZARDS:

1. Be aware of slippery surfaces caused by use of the tool and of trip hazards caused by the air line or hydraulic hose.
2. Proceed with caution while in unfamiliar surroundings; there could be hidden hazards such as electricity or other utility lines.
3. The assembly power tool is not intended for use in potentially explosive environments.
4. Tool is not insulated against contact with electrical power.
5. Ensure there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

VII. NOISE HAZARDS:

1. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems such as tinnitus, therefore risk assessment and the implementation of proper controls is essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpiece from 'ringing'.
3. Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations.
4. Operate and maintain tool as recommended in the instruction handbook to prevent an unnecessary increase in the noise level.
5. Select, maintain and replace the consumable / inserted tool as recommended to prevent an unnecessary increase in noise.
6. If the power tool has a silencer, always ensure that it

is in place and in good working order when the tool is being operated.

VIII. VIBRATION HAZARDS:

1. Exposure to vibration can cause disabling damage to the nerves and blood supply to the hands and arms.
2. Wear warm clothing when working in cold conditions and keep hands warm and dry.
3. If numbness, tingling, pain or whitening of the skin in the fingers or hands, stop using the tool, tell your employer and consult a physician.
4. Support the weight of the tool in a stand, tensioner or



WARNINGS:

Do not exceed maximum pull or return settings on tool.

Be sure all hose connections are tight. All tool hoses must be connected.

balancer in order to have a lighter grip on the tool.

X. HYDRAULIC TOOL SAFETY INSTRUCTIONS:

1. Carry out a daily check for damaged or worn hoses or hydraulic connections and replace if necessary.
2. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.
3. Ensure that couplings are clean and correctly engaged before operation.
4. Use only clean oil and filling equipment.
5. Power units require a free flow of air for cooling purposes and should therefore be positioned in a well ventilated area free from hazardous fumes.
6. Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
7. Be sure all hose connections are tight.
8. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.



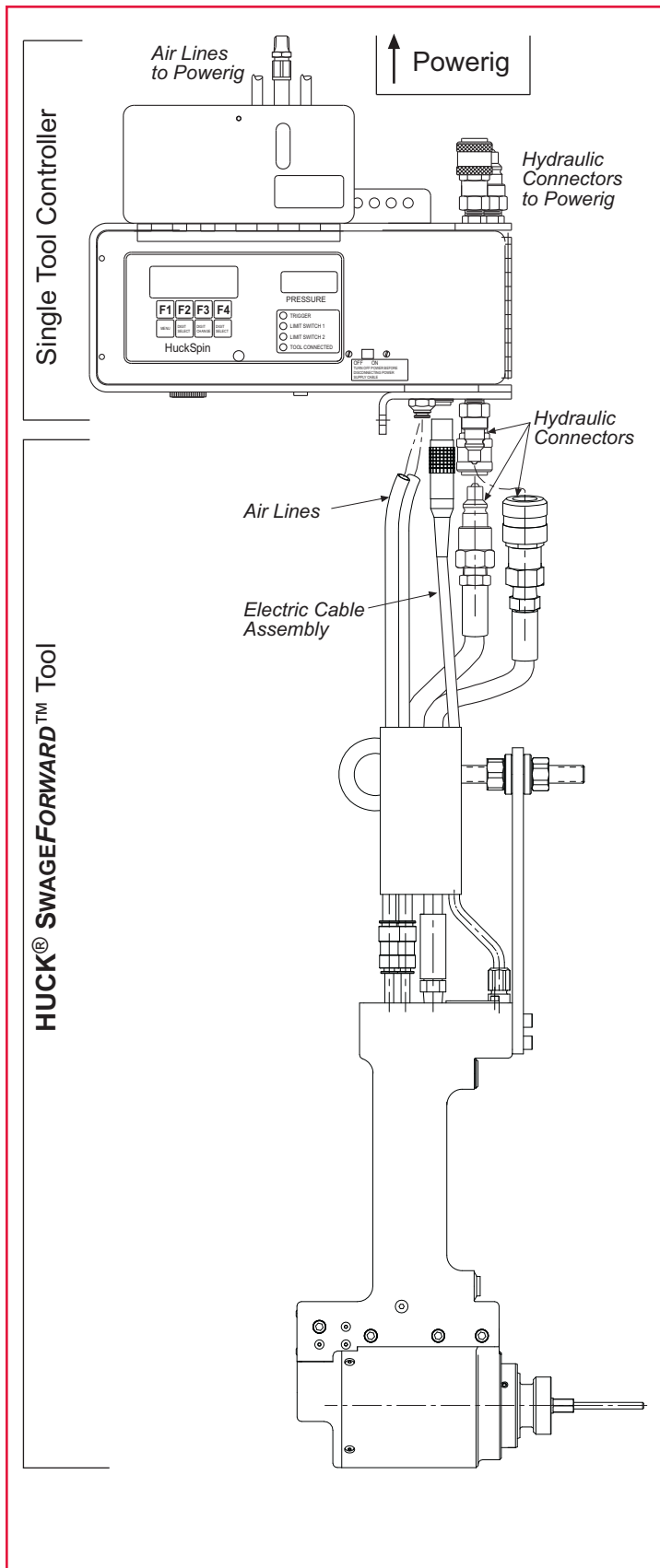
Principle of Operation

HUCK® SWAGEFORWARD™ connected to Single Tool Controller 125725

INSTALLATION SEQUENCE

1. Operator positions Huck-Spin collar onto mating Huck-Spin pin threads by hand.
2. Huck-Spin tool thimble threads onto fastener. The air motor turns on and, if only Limit Switch 1 is reached, a snub routine begins in which the collar is partly swaged, then the thimble spins on further until Limit Switch 2 is closed.
3. At full pressure, tool swages collar.
4. After the swage, the anvil is ejected off the collar, and the thimble spins off the fastener. This results in all tool components returning to their home positions.
5. Tool is ready to install the next Huck-Spin fastener.

For installation set-up procedures and pressure settings, see **SET-UP PROCEDURE FOR OPTIMAL TOOL LIFE** on page 10.





Specifications

MAX INLET PRESSURE: 7400 psi (510 bar)

MAX RETURN PRESSURE: 3200 psi (221 bar)

PULL CAPACITY:

HSSFT-M10: 7110 lbs @ 6000 psi
(31.6 kN @ 414 bar)

HSSFT-M12: 14,160 lbs @ 6000 psi
(63 kN @ 414 bar)

HSSFT-M16: 22,266 lbs @ 6000 psi
(99 kN @ 414 bar)

RETURN CAPACITY:

HSSFT-M10: 2544 lbs @ 4000 psi
(11.3 kN @ 276 bar)

HSSFT-M12: 4880 lbs @ 4000 psi
(21.7 kN @ 276 bar)

HSSFT-M16: 8220 lbs @ 4000 psi
(36.6 kN @ 276 bar)

MAX OPERATING TEMP: 125° F (51.7° C)

MAX FLOW RATE: 2 gpm (7.6 l/m)

POWER SOURCE: Huck POWERIG® Hydraulic Unit

HOSE KITS: Use only genuine HUCK Hose Kits rated @ 10,000 psi (689.5 bar) working pressure.

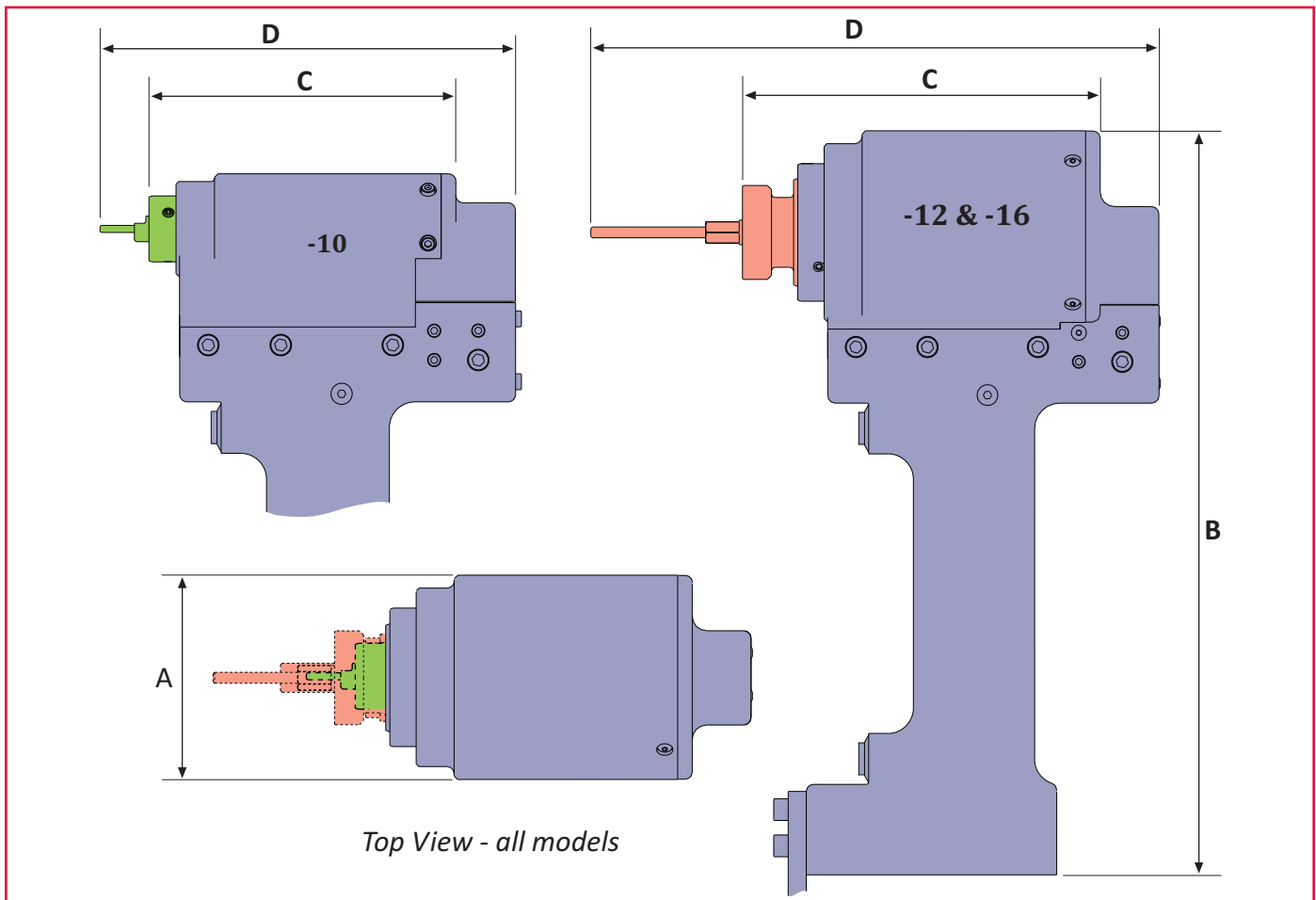
HYDRAULIC FLUID: Hydraulic fluid shall meet DEXRON® III, DEXRON VI, MERCON®, Allison C-4 or equivalent Automatic Transmission Fluid (ATF) specifications. Fire-resistant fluid may be used if it is an ester-based fluid such as Quintolubric® HFD or equivalent. Water-based fluid shall NOT be used as serious damage to equipment will occur.

DEXRON is a registered trademark of General Motors Corp.

MERCON is a registered trademark of Ford Motor Corp.

Quintolubric is a registered trademark of Quaker Chemical Corp.

MODEL	A Inches (cm)	B Inches (cm)	C Inches (cm)	D Inches (cm)	WEIGHT Pounds (kg)	STROKE Inches (cm)
HSSFT-M10	1.9 (4.8)	12.7 (32.4)	5.2 (13.3)	7.1 (18.0)	18.0 (8.2)	1.4 (3.5)
HSSFT-M12	2.8 (7.0)	13.2 (33.5)	6.2 (15.7)	11.4 (28.8)	18.0 (8.2)	1.5 (3.8)
HSSFT-M16	3.5 (8.9)	13.6 (34.4)	6.2 (15.8)	10.0 (25.4)	23.0 (10.4)	1.5 (3.8)





Preparation for Use

Use a Huck POWERIG® Hydraulic Unit, or equivalent, that has been suitably prepared for operation.



WARNING: Correct PULL and RETURN pressures are required for operator's safety and for the installation tool's function. Huck Pressure Gauge T-124883CE is available for checking pressures. See SPECIFICATIONS and the gauge's instruction manual. Failure to verify pressures may result in severe personal injury.

1. Turn OFF the hydraulic unit and then disconnect power supply from Single Tool Controller. Connect tool's hoses to Single Tool Controller.



WARNING: Connect the tool's hydraulic hoses to the Single Tool Controller before connecting electrical cable assembly to unit.

If not connected in this order, and if disconnected in the reverse order, severe personal injury may occur.

2. Connect tool's Electric Cable Assembly to the hydraulic unit.
3. Connect the hydraulic unit to the Single Tool Controller. Turn ON the unit. Press the trigger a few times to cycle tool and to circulate hydraulic fluid. Turn OFF the unit.
4. Disconnect the tool's Electric Cable Assembly from hydraulic unit; disconnect unit from power supply. Select the correct nose assembly for the fastener to be installed. Attach the nose assembly to the tool.
5. Re-connect the hydraulic unit to the Single Tool Controller. Reconnect the tool's Electric Cable Assembly to the unit. Check the operation of nose assembly; install fasteners in a test plate of correct thickness with proper size holes. Inspect installed fasteners.

If fasteners do not pass inspection, investigate all possible causes.

Threadmate is a registered trademark of Parker Intangibles LLC.

Loctite is a registered trademark of Henkel Corporation, U.S.A.

Slit-Tite is a registered trademark of LA-CO Industries, Inc.

Maintenance



CAUTIONS:

Keep foreign matter out of the hydraulic system. Keep separated parts away from dirty work surfaces.

Dirt and debris in hydraulic fluid causes valve failures in tool and POWERIG®.

GOOD SERVICE PRACTICES

Individual parts must be handled carefully and examined for damage or wear. Replace parts where required. Always replace O-rings and Back-up Rings when tool is disassembled for any reason. See applicable Service Kit.

- The efficiency and life of your tool depends on proper



WARNING: Inspect tool for damage or wear before each use. Do not operate if damaged or worn, as severe personal injury may occur.

maintenance. Using the manual will help give a clear understanding of the tool and basic maintenance procedures. Please read this section completely before proceeding with maintenance and repair. Use proper hand tools in a clean and well-lighted area. Only standard hand tools are required in most cases. Where a special tool is required, the description and part number are given.

- While clamping tool or parts in a vise, and when parts require force, use suitable soft materials to cushion impact. For example, using a half-inch brass drift,

wood block and vise with soft jaws greatly reduces possibility of damaging tool. Remove components in a straight line without bending, cocking or undue force. Reassemble tool with the same care.

SEALANTS, LUBRICANTS, HYDRAULIC FLUID & SERVICE KITS

- Rub SLIC-TITE TEFLON thread compound, or equivalent, on pipe threads to prevent leaks and for ease of assembly. **CAUTION: Do not use TEFLON tape on pipe threads.** Particles of shredded tape cause hydraulic unit valve failure. (SLIC-TITE in stick form, 503237).
- Smear LUBRIPLATE 130AA, or equivalent, on O-rings and mating surfaces to prevent damaging O-rings on rough or sharp surfaces. Also, increases ease of assembly. (LUBRIPLATE in a tube, 502723).
- Each Service Kit contains perishable parts for your specific tool. As foreseeable use may indicate, keep extra kits (O-rings, Back-up Rings, other standard items) and tool parts in stock. When stock is depleted, you can get kit items from any regular retailer of these items. See kit parts list for: O-ring size (AS568-number); material; durometer. For kit parts lists and related information, see General Notes.

continued...



Maintenance (continued)

PREVENTIVE MAINTENANCE

SYSTEM INSPECTION

Operating efficiency of the tool is directly related to the performance of the complete system, including the tool with nose assembly, hydraulic hoses, trigger switch and control cord, and POWERIG Hydraulic Unit. Therefore, an effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

- Inspect tool and nose assembly for external damage.
- Verify that hydraulic hose fittings, couplings, and electrical connections are secure.
- Inspect hydraulic hoses for damage and deterioration. Do not use hoses to carry tool. Replace hoses if damaged.
- Observe tool, hoses, and hydraulic unit during operation to detect abnormal heating, leaks, or vibration.

POWERIG MAINTENANCE

Maintenance instructions and repair procedures are in the appropriate POWERIG Instruction Manual.

TOOL MAINTENANCE

Whenever disassembled and also at regular intervals (depending on severity and length of use), replace all seals, wipers, and back-up rings in tool. Service Kits, hoses, and extra parts should be kept in stock. Inspect cylinder bore, pistons, and piston rods for scored surfaces and excessive wear or damage. Replace as necessary. **Always replace seals, wipers, and back-up rings, and always grease gears whenever the tool is disassembled for any reason.**

NOSE ASSEMBLY MAINTENANCE

Clean nose assembly often. Dip in mineral spirits or similar solvent to clean jaws and wash away metal chips and debris. At regular intervals, as experience shows, disassemble nose and use a sharp "pick" to remove imbedded particles from grooves of jaws.

Tool Stickers

All HSSFT tools ship with a Sticker (P/N **590512-2**) identifying important SAFETY and WARNING information. If the sticker becomes worn, damaged, or is missing, a new sticker must be ordered and placed in a conspicuous location on the tool.



Assembly of NPTF Threaded Components

AIR FITTINGS

- 1) Apply TEFLON® stick to male threads which do not have pre-applied sealant per manufacturer's recommendations. (Proceed to All Fittings step 2)

HYDRAULIC FITTINGS

- 1) Apply Threadmate™ to male and female threads which do not have pre-applied sealant per manufacturer's recommendations. (Proceed to All Fittings step 2)

ALL FITTINGS:

- 2) Tighten to finger-tight condition.
- 3) Wrench tighten to 2-3 turns past finger-tight condition.
- 4) Final thread engagement can be checked (optional) by measuring the dimension from the flange of male fitting to the end of the thread before assembly and subtracting the distance under the flange after assembly.

THREAD SIZE	FINAL THREAD ENGAGEMENT AT FULL MAKE-UP
1/8-27 NPTF	.235 inch (.59 cm)
1/4-18 NPTF	.339 inch (.86 cm)
3/8-18 NPTF	.351 inch (.89 cm)



Operating Instructions

The following procedure is intended to improve tool life by using the minimum required pressure to obtain proper fastener installations. This procedure starts the pressures and timers low, and works up to the level where proper installations are obtained. To determine if the fasteners are properly installed, use the appropriate Huck HG gauge, or refer to the Huck website for inspection criteria.

1. Connect Tool, Single Tool Controller, Power Supply, Hoses, and POWERIG.
2. Install Nose Assembly on tool.
3. Turn on Controller.
4. Turn on POWERIG.
5. Warm up the POWERIG and tool system using the Hydraulic Warmup feature on the STC.
6. Enter the menu system on the STC and add the appropriate size tool and fastener.
7. Determine Pull and Return pressures for POWERIG from Table 1. These values are for Low Swage Anvils. Use only Low Swage Anvils for optimal tool life.
8. Set Pull and Return pressures on POWERIG using Huck Gauge T-124833CE.
9. Thread a fastener and collar into thimble until Limit Switch 2 light comes on. Put enough washers on the fastener to ensure it is in proper grip.
10. Enter the menu system on the STC, go to Measure Rig Pressure. Press and hold F1 to activate POWERIG. Record pressure reading on STC.
11. Enter the menu system on the STC, go to Pressure Settings, then Swage Pressure. Adjust the Swage Pressure to be 200-300 psi below the POWERIG pressure measured in step 10.
12. Install several fasteners in washers, in proper grip.
13.
 - a) If the fasteners are properly installed and the flanges of the collar are not heavily "ringed" the system is ready for use.
 - b) If the fasteners are heavily "ringed", start at step 8 lowering the pressure by 100 psi on the controller and rig.
 - c) If the collar is not completely swaged, continue at step 14.
14. Enter the menu system on the STC, go to Timer

Change, go to Change Timer 7. This is the timer that holds the POWERIG on after the swage pressure setting is reached. The default is 00.0 seconds. Change the timer to 00.1 seconds.

15. Install several more fasteners and inspect the swage.
16.
 - a) If the fastener is properly installed, set-up is complete.
 - b) If the fastener is still not completely swaged add an additional 0.1 second to Timer 7.
17. Install several more fasteners and inspect the swage.
18.
 - a) If the fastener is properly installed, set-up is complete.
 - b) If the fastener is still not completely swaged, repeat step 14 up to 0.9 seconds.
 - c) If after adding 0.9 seconds of hold time the fasteners are not properly swaged, follow step 19.
19. If the fasteners are not completely swaged, start at step 8 raising the pressure by 100 psi on both the controller and rig.
20.
 - a) If the fastener is properly installed, set-up is complete.
 - b) If the fastener is still not completely swaged start procedure at step 14.

These pressures are for Low Swage Anvils, which can be identified by a step on the inside bore. Previous designs of anvils have a straight bore without any steps and will require higher pressures.

These pressure values are a starting point for setting the POWERIG. Many factors will cause pressures to be higher or lower, including tool condition, hose length, oil temperature, and fasteners being installed.

Fastener Size	Tool	PULL Pressure psi (bar)	RETURN Pressure psi (bar)	Controller Pressure psi (bar)
10mm	HSSFT-M10	6000 (275.9)	4000 (275.8)	5800 (399.9)
12mm	HSSFT-M12, S	4800 (330.9)	4000 (275.8)	4600 (317.2)
1/2"	HSSFT-M12, S	6800 (468.8)	6000 (275.9)	6600 (455.1)
14mm	HSSFT-M16, S	4600 (317.2)	4000 (275.8)	4400 (303.4)
5/8" & 16mm	HSSFT-M16, S	6800 (468.8)	4800 (330.9)	6600 (455.1)



Adjustment Instructions

BACKLASH ADJUSTMENT

(see Figure 1 below)

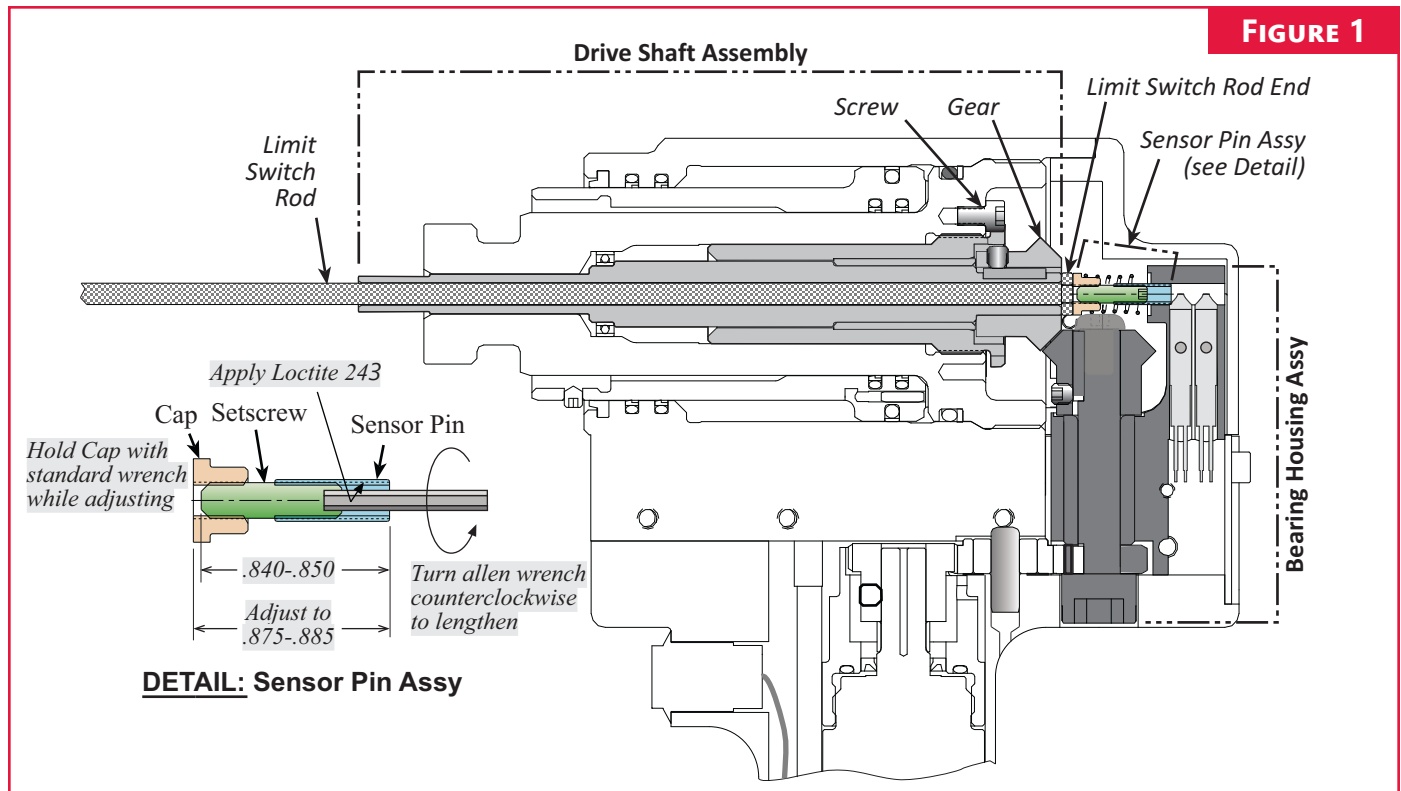
1. Turn Drive Shaft Assembly to the full IN position, and back out until Gears mesh freely with Gears on Bearing Housing Assembly.
2. Turn Drive Shaft Assembly in until nearest timing mark aligns with Screw hole.
3. Install screw. A minimal amount of play with freely turning gears indicates correct adjustment.

LIMIT SWITCH ADJUSTMENT

(see Figure 1 below)

1. Install Nose Assembly with correct Actuator Rod, and connect Tool to Controller.
2. Thread a Fastener in the Thimble until it bottoms. The LS2 light should be on both the Controller and the Tool Sensor. If not, hold Cap of Sensor Pin Assy and insert allen wrench in the other end. (See Figure 1 Detail.) Turn the wrench counterclockwise to lengthen the Sensor Pin Assembly the required distance to reach LS2.

FIGURE 1



OPTIONAL EQUIPMENT

TOOL KIT

HSSFT-M10

- **128340-M10**

Contains:

- Spanner (End Cap/Drive Shaft) - 127955-M10
- Piston Insertion Tool - 128334-M10
- Piston Assembly Tool - 128335-M10

HSSFT-M12 & 12S

- **128340-M12**

Contains:

- Spanner (End Cap/Drive Shaft) - 127955-M12
- Piston Insertion Tool - 128334-M12
- Piston Assembly Tool - 128335-M12

HSSFT-M16 & 16S

- **128340**

Contains:

- Spanner (End Cap/Drive Shaft) - 127955
- Piston Insertion Tool - 128334
- Piston Assembly Tool - 128335

SEAL KIT (includes O-rings, Back-up Rings, etc.)

HSSFT-M10

- **127660-M10**

HSSFT-M12 & 12S

- **127660-M12**

HSSFT-M16 & 16S

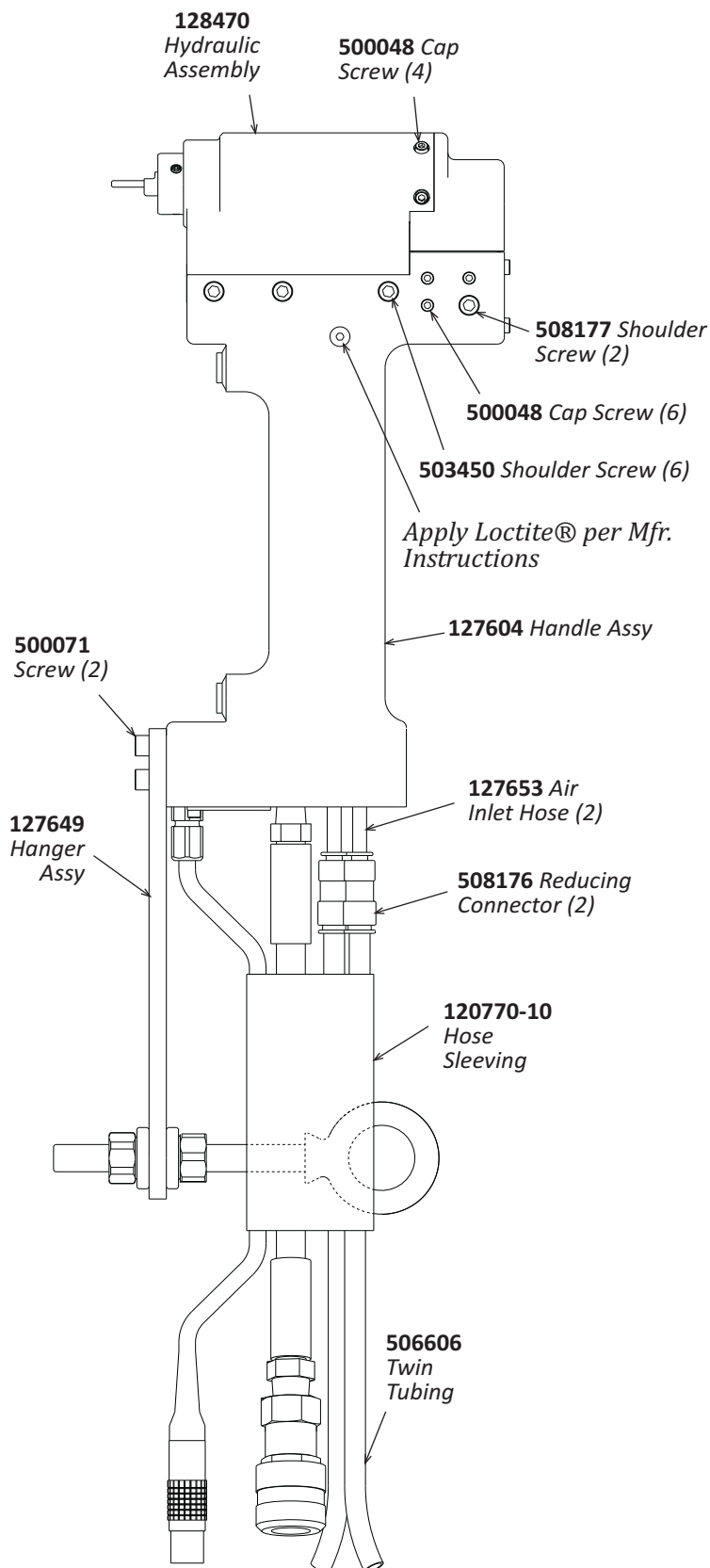
- **127660**

GREASE (for bearings and gears)

For all tool models, use MPG 2 Grease (available independently)

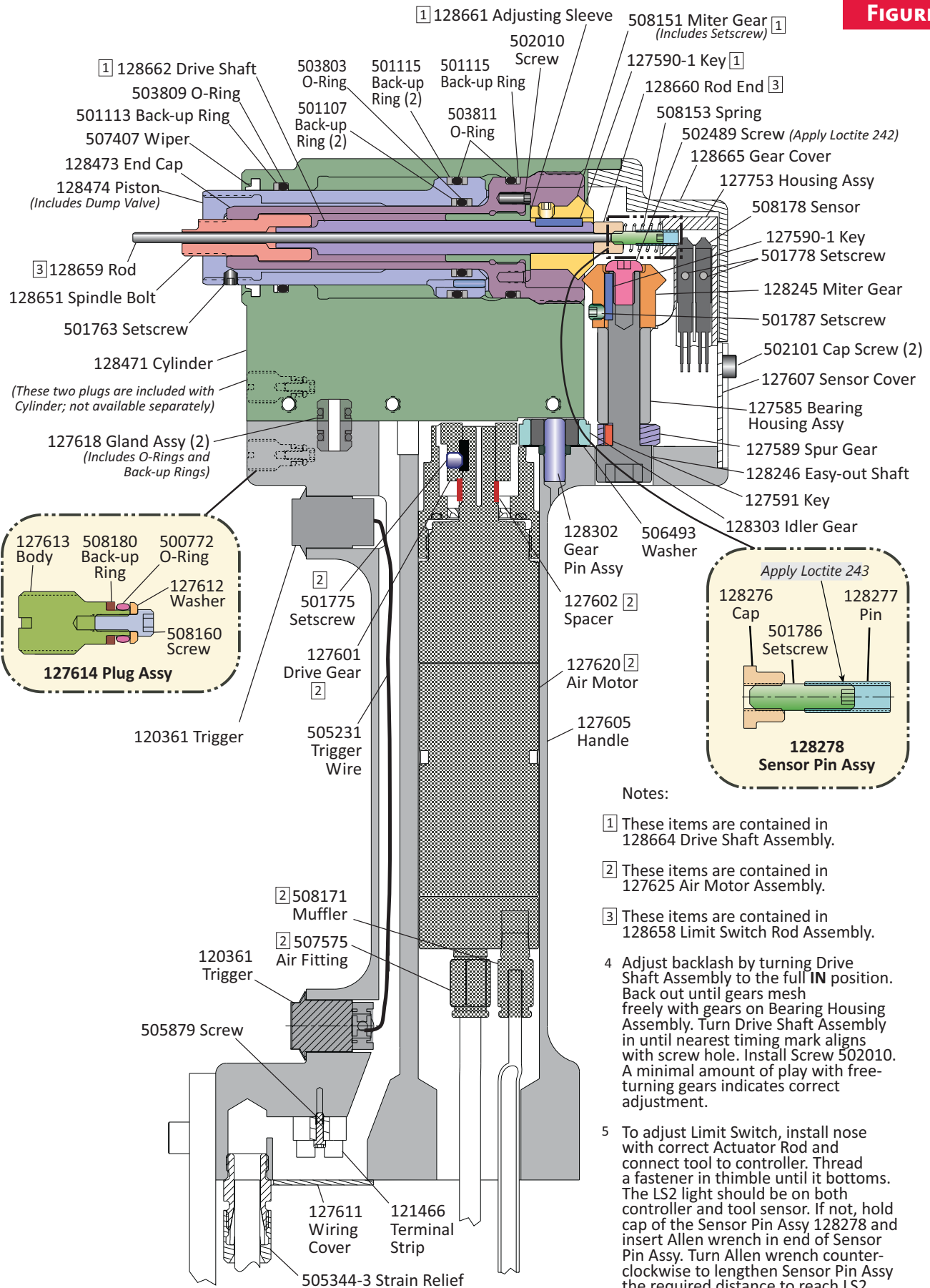


HSSFT-M10 Components (Figures 2 & 3)

FIGURE 2

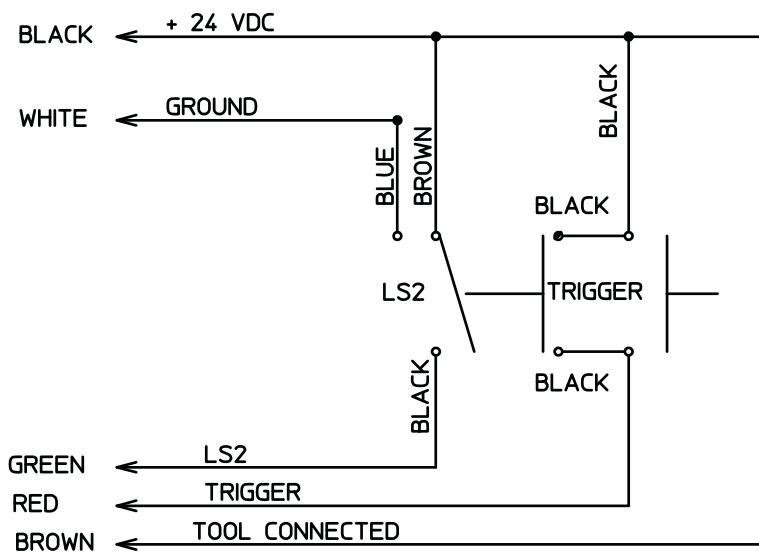
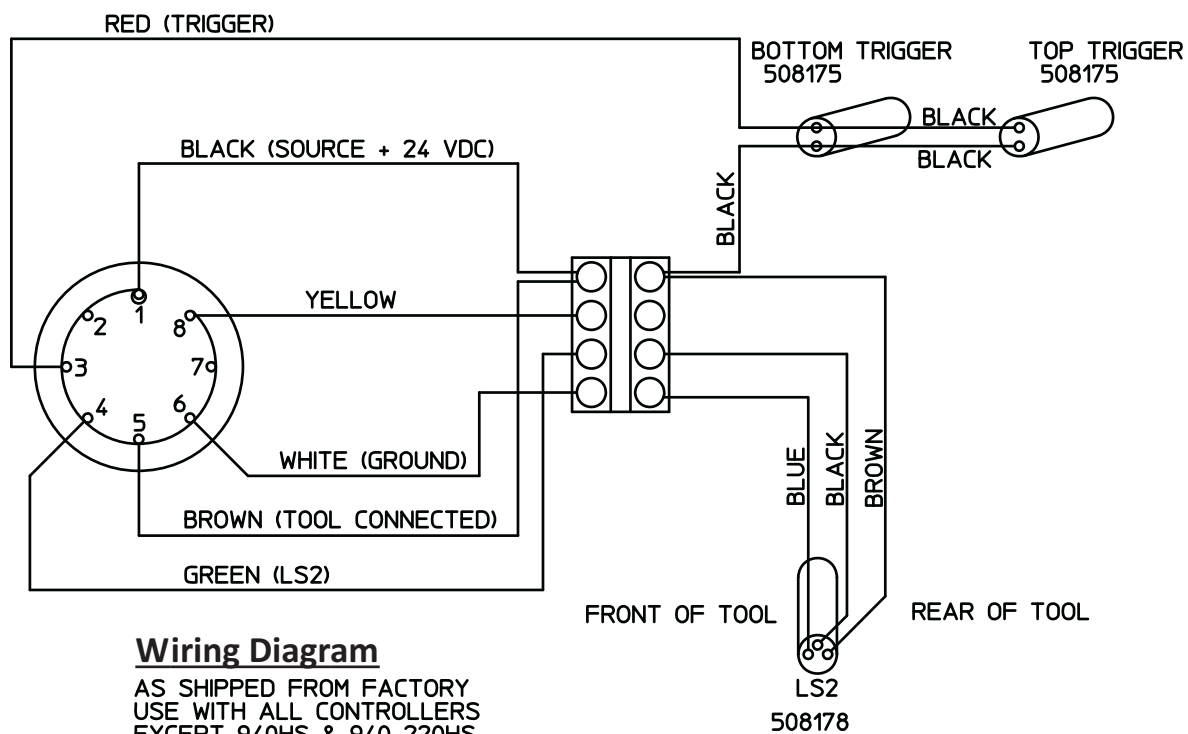


HSSFT-M10 Components (Figures 2 & 3)

FIGURE 3



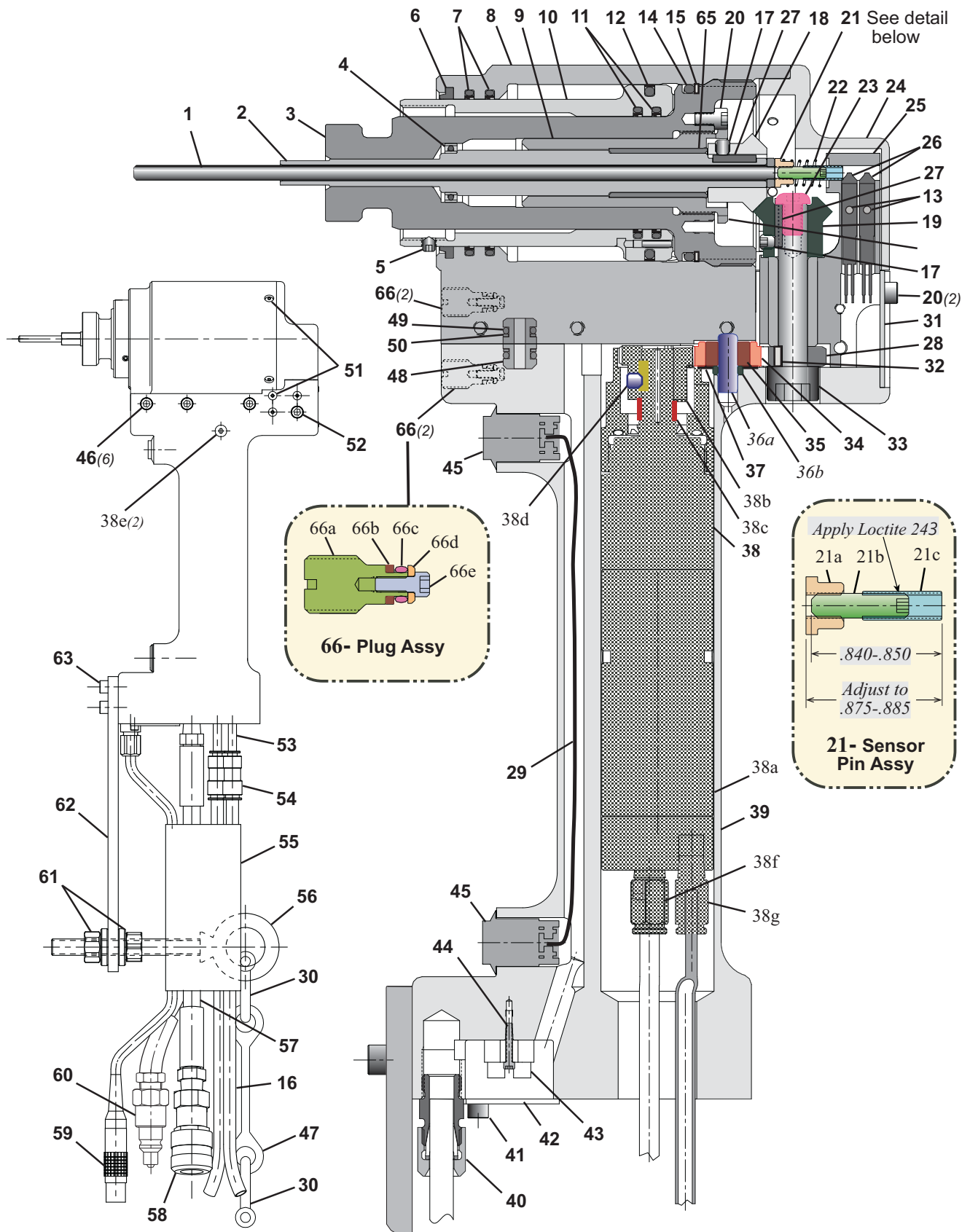
Wiring Diagram & Schematic for HSSFT-M10

FIGURE 4




HSSFT-M12 & HSSFT-M12S Components

FIGURE 5





HSSFT-M12 & HSSFT-M12S Parts Lists

ITEM	DESCRIPTION	HSSFT-M12	HSSFT-M12S	QTY.	ITEM	DESCRIPTION	HSSFT-M12	HSSFT-M12S	QTY.
1	Limit Switch Assembly	127995		1	39	Handle	127605		1
2 ^{1,3}	Drive Shaft	127868		1	40	Strain Relief	505344-3		1
3	End Cap	127866		1	41	Socket Head Cap Screw	500047		2
4 ^{1,3}	Bearing	508149		1	42	Wiring Cover	127611		1
5	Set Screw	501763		3	43	Terminal Strip	121466		1
6	Wiper Seal	506174		1	44	Socket Head Cap Screw	505879		1
7	Step Seal	508156		2	45	Trigger	508175		2
8	Cylinder Assembly	127887		1	46	Shoulder Screw	503450		6
9 ¹	Bearing Holder	127869		1	47	Suspension Cable	n/a	127856	1
10	Piston & Valve Assembly	127890		1	48	Gland Assy	127618		2
11	Step Seal	508204		2	49	O-Ring	507648		4
12	GLYD Ring	508205		1	50	Back-up Ring	501082		4
13 ²	Flat Point Set Screw	501778		2	51	Socket Head Screw	500048		10
14	O-Ring	504632		1	52	Shoulder Screw	508177		8
15	Back-up Ring	501153		1	53	Air Inlet Hose	127653		4
16	Twin Tubing 3/8	506606		1	54	Reducing Connector	508176		4
17 ^{1,2}	Set Screw	501816		2	55	Hose Slewing	120770-10	120770-9	1
18 ^{1,3}	Miter Gear	508151		1	56	Eyebolt	508174		1
19 ^{2,3}	Miter Gear	128245		1	57	Hydraulic Hose	126107-5	126107-6	2
20	Cap Screw 8-32 x .25	502101		3	58	Hydraulic Coupling, F	110439		1
21 ²	Sensor Pin Assy contains:	128278		1	59	Electric Cable Assembly	127650	127650S	1
21a	Sensor Pin Cap	128276		1	60	Hydraulic Coupling, M	110438		1
21b	Set screw	501786		1	61	Hex Nut w/ Swivel Flange	508173		2
21c	Sensor Pin	128277		1	62	Hanger Plate	127610		1
22 ²	Spring	508153		1	63	Socket Head Cap Screw	500071		2
23 ²	Cap Screw	502489		1	64				
24	Gear Cover	127894		1	65 ^{1,3}	Bearing	508200		1
25 ²	Sensor/Gear Housing Assy	127753		1	66	Plug Assy contains:	127614		4
26	Electrical Sensor	508178		2	66a	Plug Body	127613		1
27 ^{1,2}	Key	127590-1		2	66b	Back-up Ring	508180		1
28 ^{2,3}	Spur Gear, modified	127589		1	66c	O-Ring	500772		1
29	Black Trigger Wire	505231		2 ft.	66d	Plug Washer	127612		1
30	Shackle	n/a	507040	2	66e	Cap Screw	508160		1
31	Sensor Cover	127607		1					
32 ²	Key	127591		1					
33 ²	Easyout Shaft	128246		1					
34 ³	Idler Gear	128303		1					
35 ³	Bearing	128301		1					
36	Gear Pin Assy contains:	128302		1					
36a	Dowel Pin	501363		1					
36b	Bushing	128305		1					
37	Washer	506493		1					
38	Air Motor Assy contains:	127625		1					
38a	Air Motor modified	127620		1					
38b	Drive Gear	127601		1					
38c	Spacer	127602		1					
38d	Set Screw	501775		1					
38e	Cap Screw	502483		2					
38f	Air Fitting	507575		2					
38g	Muffler	508171		1					

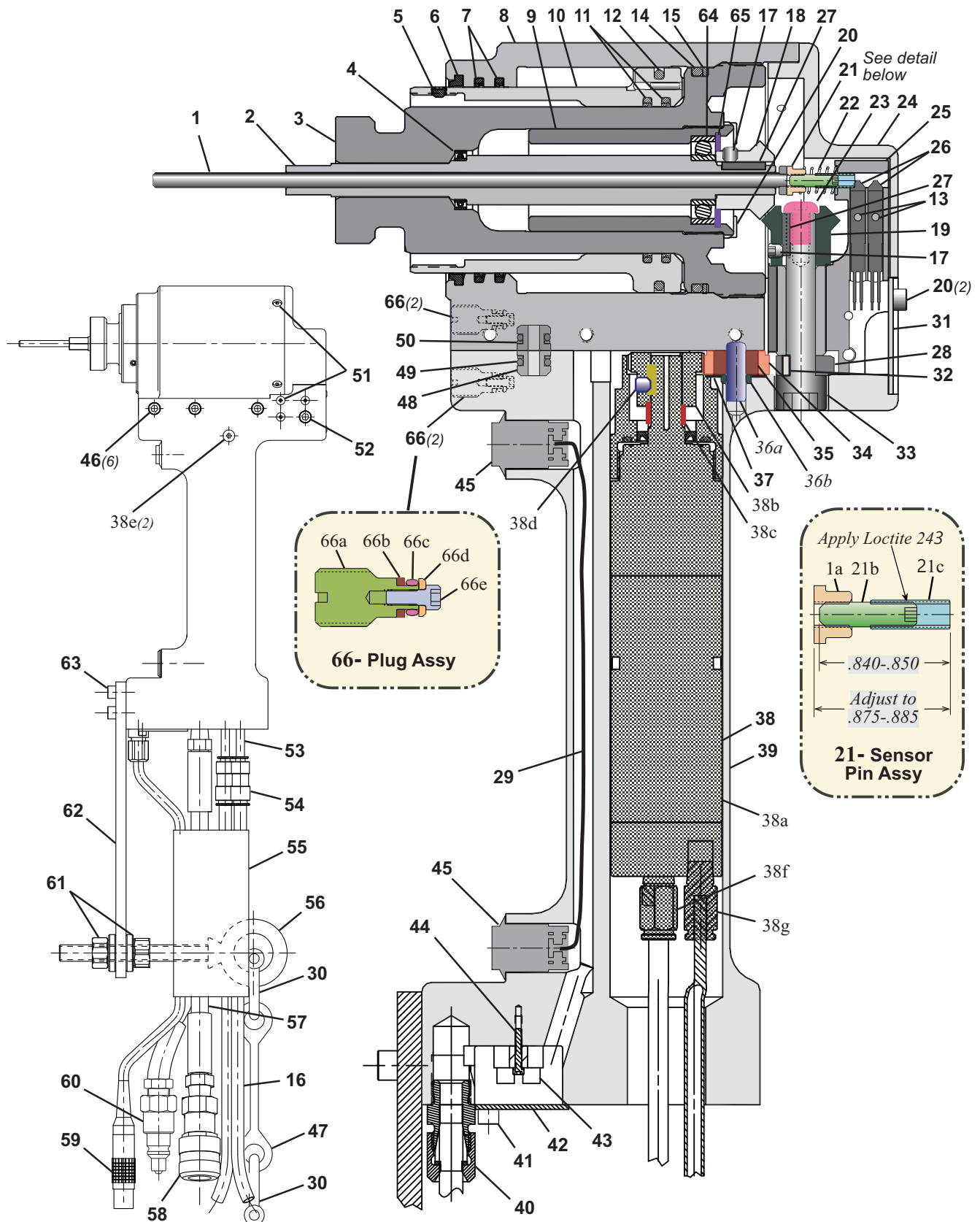
NOTES:

1. Drive Shaft Assembly (P/N **127872**) is available for purchase. It contains Item numbers 2, 4, 9, 17, 18, 27, & 65.
2. Bearing Housing Assembly (P/N **127585**) is available for purchase. It contains Item numbers 13, 17, 19, 21-23, 25, 27, 28, 32, & 33.
3. Apply a small amount of Grease (MPG 2 Grease) to all Gears and Bearings.



HSSFT-M16 & HSSFT-M16S Components

FIGURE 10





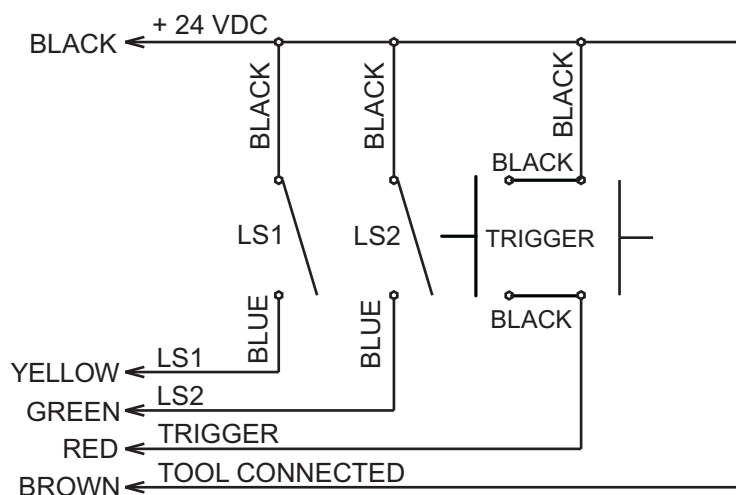
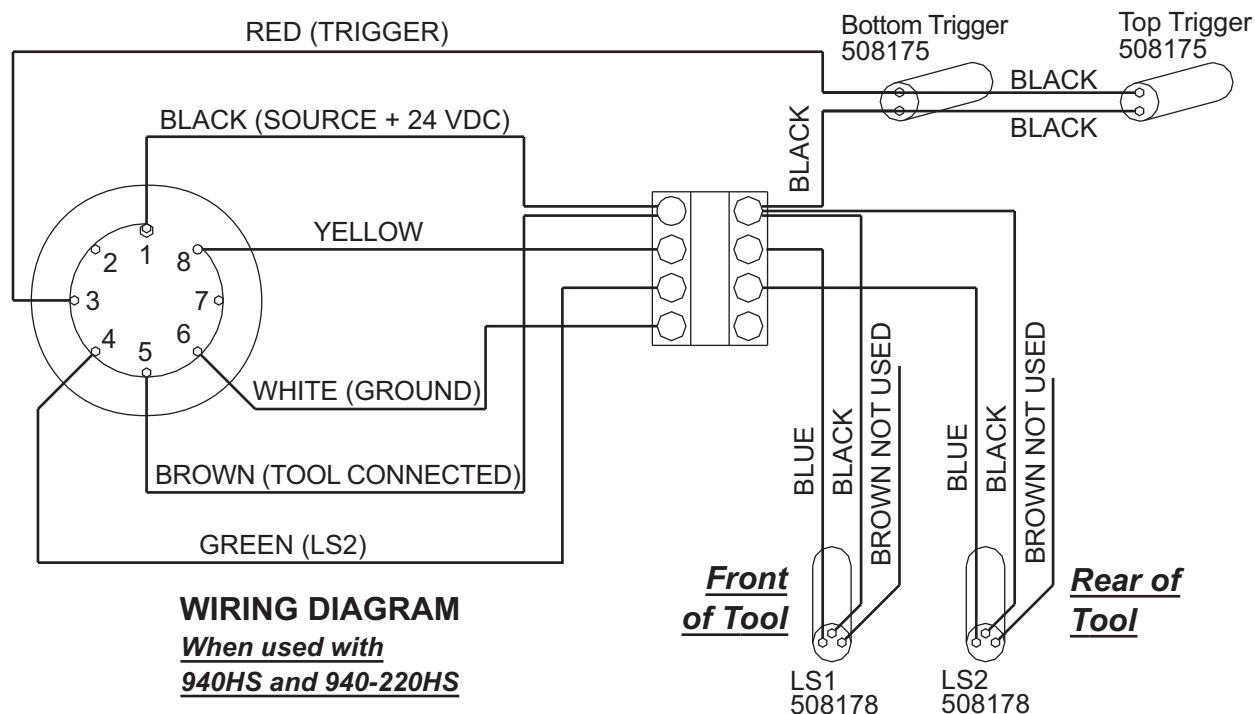
HSSFT-M16 & HSSFT-M16S Parts Lists

ITEM	DESCRIPTION	HSSFT-M16	HSSFT-M16S	QTY.	ITEM	DESCRIPTION	HSSFT-M16	HSSFT-M16S	QTY.
1	Limit Switch Assembly	127577		1	39	Handle	127605		1
2 ¹	Drive Shaft	127593		1	40	Strain Relief	505344-3		1
3	End Cap	127569		1	41	Socket Head Cap Screw	500047		2
4 ^{1,3}	Bearing	508149		1	42	Wiring Cover	127611		1
5	Set Screw	501763		3	43	Terminal Strip	121466		1
6	Wiper Seal	505907		1	44	Socket Head Cap Screw	505879		1
7	Step Seal	508157		2	45	Trigger	508175		2
8	Cylinder Assembly	127583		1	46	Shoulder Screw	503450		6
9 ¹	Bearing Holder	127594		1	47	Suspension Cable	-----	127856	1
10	Piston & Valve Assembly	127579		1	48	Gland Assy	127618		2
11	Step Seal	508156		2	49	O-Ring	507648		4
12	GLYD Ring	508158		1	50	Back-up Ring	501082		4
13 ²	Flat Point Set Screw	501778		2	51	Socket Head Screw	500048		10
14	O-Ring	504637		1	52	Shoulder Screw	508177		8
15	Back-up Ring	501158		1	53	Air Inlet Hose	127653		4
16	Twin Tubing 3/8	506606		1	54	Reducing Connector	508176		4
17 ^{1,2}	Set Screw	501816		2	55	Hose Slewing	120770-10	120770-9	1
18 ^{1,3}	Miter Gear	508151		1	56	Eyebolt	508174		1
19 ^{2,3}	Miter Gear	128245		1	57	Hydraulic Hose	126107-5	126107-6	2
20	Cap Screw 8-32 x .25	502101		3	58	Hydraulic Coupling, F	110439		1
21 ²	Sensor Pin Assy contains:	128278		1	59	Electric Cable Assembly	127650	127650S	1
21a	Sensor Pin Cap	128276		1	60	Hydraulic Coupling, M	110438		1
21b	Setscrew	501786		1	61	Hex Nut w/ Swivel Flange	508173		2
21c	Sensor Pin	128277		1	62	Hanger Plate	127610		1
22 ²	Spring	508153		1	63	Socket Head Cap Screw	500071		2
23 ²	Cap Screw	502489		1	64 ^{1,3}	Bearing	508150		1
24	Gear Cover	127609		1	65 ¹	Retaining Ring	500945		1
25 ²	Sensor/Gear Housing Assy	127753		1	66	Plug Assy contains:	127614		4
26	Electrical Sensor	508178		2	66a	Plug Body	127613		1
27 ^{1,2}	Key	127590-1		2	66b	Back-up Ring	508180		1
28 ^{2,3}	Spur Gear, modified	127589		1	66c	O-Ring	500772		1
29	Black Trigger Wire	505231		2 ft.	66d	Plug Washer	127612		1
30	Shackle	-----	507040	2	66e	Cap Screw	508160		1
31	Sensor Cover	127607		1	NOTES: 1. Drive Shaft Assembly (P/N 127592) is available for purchase. It contains Item numbers 2, 4, 9, 17, 18, 27, 64, & 65. 2. Bearing Housing Assembly (P/N 127585) is available for purchase. It contains Item numbers 13, 17, 19, 21-23, 25, 27, 28, 32, & 33. 3. Apply a small amount of Grease (MPG 2 Grease) to all Gears and Bearings.				
32 ²	Key	127591		1					
33 ²	Easyout Shaft	128246		1					
34 ³	Idle Gear	128303		1					
35 ³	Bearing	128301		1					
36	Gear Pin Assy contains:	128302		1					
36a	Dowel Pin	501363		1					
36b	Bushing	128305		1					
37	Washer	506493		1					
38	Air Motor Assy contains:	127625		1					
38a	Air Motor modified	127620		1					
38b	Drive Gear	127601		1					
38c	Spacer	127602		1					
38d	Set Screw	501775		1					
38e	Cap Screw	502483		2					
38f	Air Fitting	507575		2					
38g	Muffler	508171		1					



Special Wiring Instructions

When using the **HUCK® SWAGEFORWARD™** tool with a 940HS or 940-220HS POWERIG, be sure the wiring diagram and schematic are set up according to the wiring diagram and wiring schematic below.

FIGURE 8


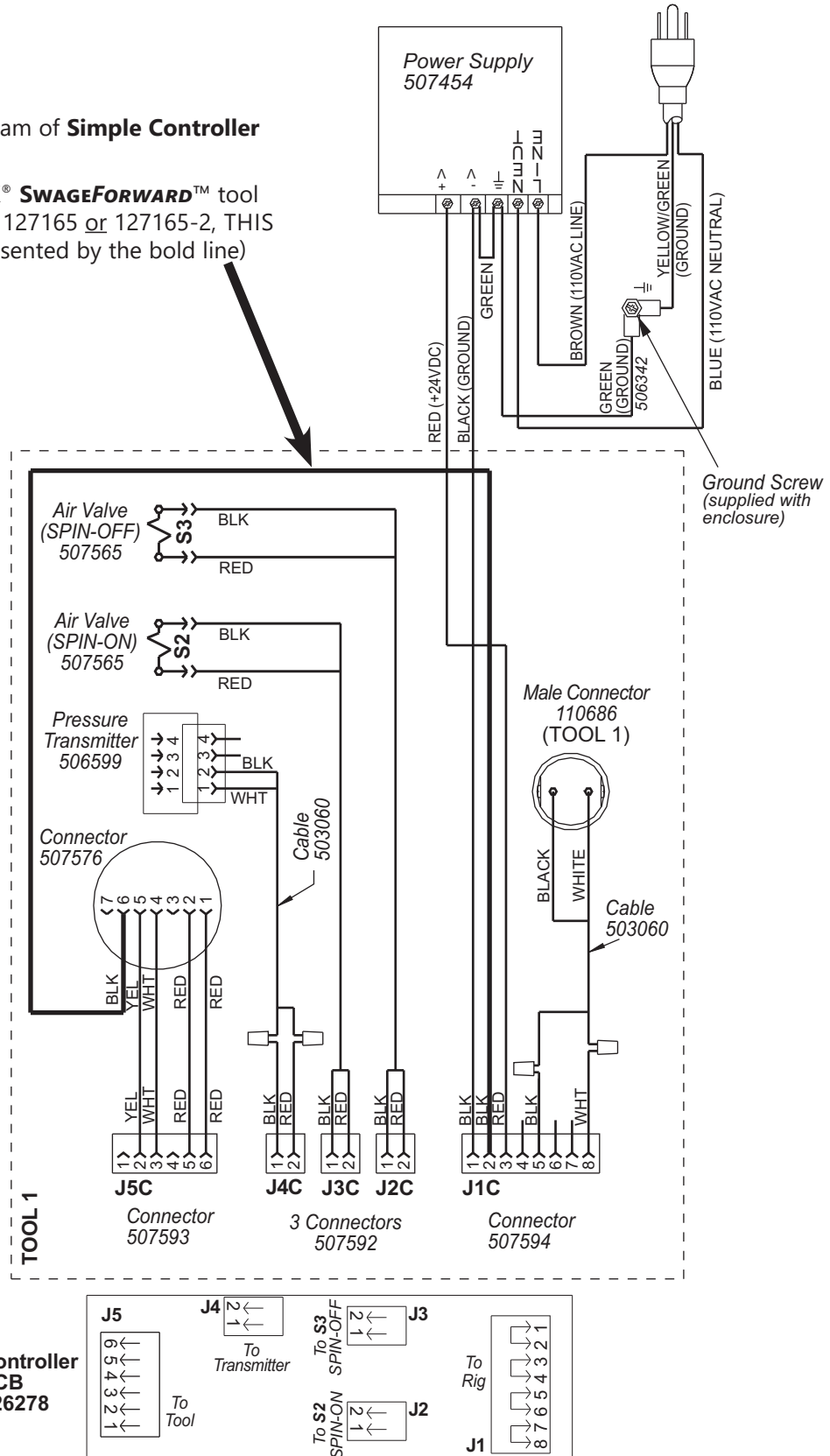


Special Wiring Instructions (continued)

FIGURE 9

This is the wiring diagram of **Simple Controller 127165** or **127165-2**.

When using the **HUCK® SWAGEFORWARD™** tool with Simple Controller 127165 or 127165-2, **THIS GROUND WIRE** (represented by the bold line) **MUST BE ADDED**.





Special Wiring Instructions (continued)

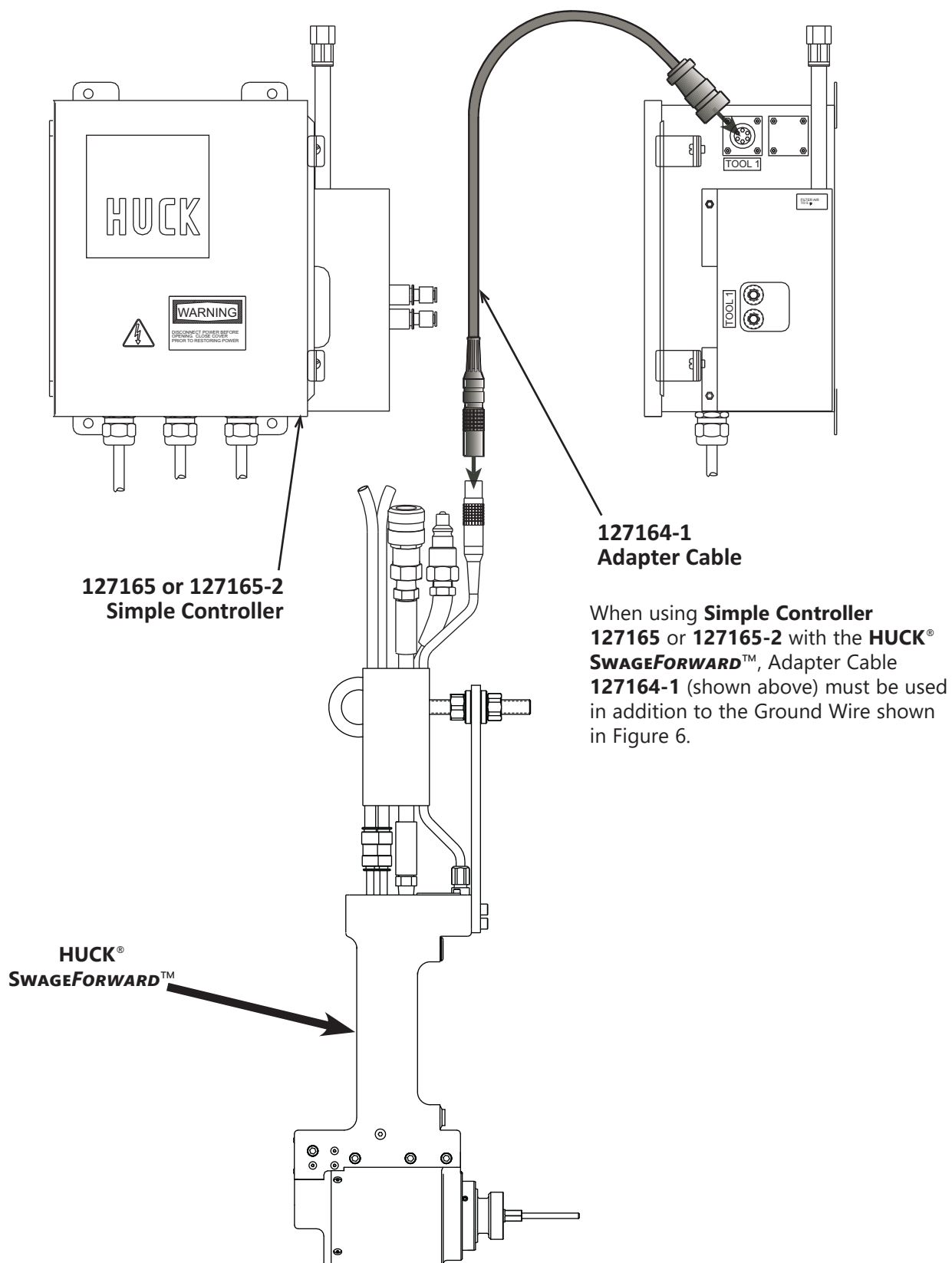
FIGURE 10

FIGURE 11

If using a Controller with Serial Number 381 through 444, the **wire must be moved** from J2-2 and Pin 2 on the LEMO connector to J2-6 and PIN 6 on the LEMO, as shown.



||||||| ***This wire must be moved...***

_____ ...to this location.



Notes



Limited Warranties

Limited Lifetime Warranty on BobTail® Tools:

Huck International, Inc. warrants to the original purchaser that its BobTail® installation tools manufactured after 12/1/2016 shall be free from defects in materials and workmanship for its **useful lifetime**. This warranty does not cover special order / non-standard products, or part failure due to normal wear, tool abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

Two Year Limited Warranty on Installation Tools:

Huck International, Inc. warrants that its installation tools and Powerigs® manufactured after 12/1/2016 shall be free from defects in materials and workmanship for a period of two years from date of purchase by the end user. This warranty does not cover special order / non-standard products, or part failure due to normal wear, tool abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

90 Day Limited Warranty on Nose Assemblies and Accessories:

Huck International, Inc. warrants that its nose assemblies and accessories shall be free from defects in materials and workmanship for a period of 90 days from date of purchase by the end user. This warranty does not cover special clearance noses, or special order / non-standard product, or part failure due to normal wear, abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

Useful lifetime is defined as the period over which the product is expected to last physically, up to the point when replacement is required due to either normal in-service wear, or as part of a complete overhaul. Determination is made on a case-by case basis upon return of parts to Huck International, Inc. for evaluation.

Tooling, Part(s) and Other Items not manufactured by Huck:

HUCK makes no warranty with respect to the tooling, part(s), or other items manufactured by third parties. HUCK expressly disclaims any warranty expressed or implied, as to the condition, design, operation, merchantability, or fitness for use of any tool, part(s), or other items thereof not manufactured by HUCK. HUCK shall not be liable for any loss or damage, directly or indirectly, arising from the use of such tooling, part(s), or other items or breach of warranty or for any claim for incidental or consequential damages.

Huck shall not be liable for any loss or damage resulting from delays or non-fulfillment of orders owing to strikes, fires, accidents, transportation companies or for any reason or reasons beyond the control of the Huck or its suppliers.

Huck Installation Equipment:

Huck International, Inc. reserves the right to make changes in specifications and design and to discontinue models without notice.

Huck Installation Equipment should be serviced by trained service technicians only.

Always give the serial number of the equipment when corresponding or ordering service parts.

Complete repair facilities are maintained by Huck International, Inc. Please contact one of the offices listed below.

Eastern

One Corporate Drive Kingston, New York 12401-0250
Telephone (845) 331-7300 FAX (845) 334-7333

Outside USA and Canada

Contact your nearest Huck International location (see reverse).

In addition to the above repair facilities, there are Authorized Tool Service Centers (ATSC's) located throughout the United States. These service centers offer repair services, spare parts, Service Parts Kits, Service Tool Kits and Nose Assemblies. Please contact your Huck Representative or the nearest Huck International location (see reverse) for the ATSC in your area.



Howmet Inc. (NYSE: HWM) creates breakthrough products that shape industries. Working in close partnership with our customers, we solve complex engineering challenges to transform the way we fly, drive, build and power.

Through the ingenuity of our people and cutting-edge advanced manufacturing, we deliver these products at a quality and efficiency that ensures customer success and shareholder value.

Howmet Fastening Systems Tooling Support Locations

INDUSTRIAL NORTH AMERICA

Kingston Operations

1 Corporate Drive
Kingston, NY 12401
Tel: +1-800-278-4825
Fax: +1-845-334-7333
hfs.sales.kingston@Howmet.com

IDG

7101 Imperial Drive
Waco, TX 76712
Tel: +1-800-826-2884 Fax:
+1-800-573-2645
idgsales@Howmet.com

Waco Operations

PO Box 8117
8001 Imperial Drive
Waco, TX 76714-8117
Tel: +1-800-388-4825
Fax: +1-800-798-4825
huck.waco@Howmet.com

INDUSTRIAL GLOBAL

Tokyo Operations (Japan and Korea)

1013 Hibiya U-1 Bldg.
Uchisaiwai-cho 1-1-7
Chiyoda-ku, Tokyo
100-0011 Japan
Tel: +81-3-3539-6594
Fax: +81-3-3539-6585

Melbourne Operations

1508 Centre Road
Clayton, Victoria
Australia 3168
Tel: +613-8545-3333
Fax: +613-8545-3390
hfsmel.sales@Howmet.com

Suzhou Operations

58 Yinsheng Road,
SIP Suzhou, Jiangsu
215126 China
Tel: +86-512-62863800-8888

Telford Operations

Unit C, Stafford Park 7
Telford, Shropshire
England TF3 3BQ
Tel: +44-(0)-1952-290011
Fax: +44-(0)-1952-207701
THIsales@howmet.com

AEROSPACE NORTH AMERICA

Kingston Operations

1 Corporate Drive
Kingston, NY 12401
Tel: +1-800-278-4825
Fax: +1-845-334-7333
hfs.sales.kingston@Howmet.com

Simi Valley Operations

3990A Heritage Oak Court
Simi Valley, CA 93063
Tel: +1-805-527-3600
Fax: +1-805-527-0900
www.hfs-simivalley.com
SMV.HFSSales@Howmet.com

AEROSPACE GLOBAL

Aichach Operations

Robert-Bosch Str. 4
Aichach 86551
Germany
Tel: +49-8251-8757-0
AICSalesDL@Howmet.com

Cergy Operations

15 Rue du Petit Albi
F-95611 Cergy Pontoise
France
Tel: +33-1-34-33-98-00
Fax: +33-1-34-33-97-77

Hong Kong Operations

88 Hing Fat Street, 27th Floor
Causeway Bay
Hong Kong, China
Tel: +852-2864-2012
HKSSalesDL@howmet.com



© 2026 Howmet Aerospace, Inc.
**Howmet Fastening Systems
Kingston Operations**
1 Corporate Drive, Kingston, NY 12401
Tel: 800-431-3091 • Fax: 845-334-7333
www.hfsindustrial.com/us



Huck provides technical assistance regarding the use and application of Huck fasteners and tooling. **NOTICE:** The information contained in this publication is only for general guidance with regard to properties of the products shown and/or the means for selecting such products, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in Huck's written quotations, acknowledgments, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.