Huck-Spin®
Single Tool Controller

Instruction Manual

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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 pneumatic 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...
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 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.
Specifications

**Principle of Operation**

When the tool’s trigger is depressed, the controller starts the tool’s air motor, causing the tool’s thimble to thread on the bolt. As the thimble threads on the bolt, the tool’s actuator rod is pushed rearward, activating the tool’s limit switch one and limit switch two. At this point the controller stops the air motor, and activates the Powerig’s hydraulic valve, causing the piston to move rearward. This will draw the fastener in the anvil, swaging the collar. When the swage pressure is met the valve will deactivate, causing the piston to move forward. This will push the collar out of the anvil. At this point the controller will start the air motor, threading the thimble off the bolt.

- **WEIGHT:** 26 LBS. / 11.7 kg
- **INPUT:** 24 VDC
- **OUTPUT - RIG:** RELAYED
- **OUTPUT - TOOL:** 24 VDC
Preparation for Use

Upon turning on the unit, the controller will display either **Tool Not Selected**, or will display the tool and fastener size which has been selected (EX: TOOL: H552 -5/8). To change settings, the system will require a pin code entry. The default pin code as shipped is F1, F1, F1, F1. This code can be changed to any combination of 4 key strokes, using F1, F2 or F3.

1. Attach hydraulic hoses from Powerig, power supply cable and air supply lines to the top of the controller.

2. Attach the tool by connecting the suspension cable, hydraulic disconnects, air lines and control cable to the underside of the controller.

3. Add tool to controller:
   a) Press menu.
   b) Enter pin code.
   c) Select tool size.
   d) Select fastener size.
   e) Exit to main menu.

4. Check and set powerig pressures:
   a) Press menu.
   b) Enter pin code.
   c) Go to pressure settings (F3).
   d) Go to swage pressure (F2).
   e) Use the left and right arrow keys to select the digit to be changed. Use the up arrow key to make a change to that digit.
   f) Press F4 to accept the change.
   g) Press F4 to go to the main menu.

   2. Timers: (EX: TIMER 3)
   a) Press menu.
   b) Enter pin code.
   c) Go to other (F4).
   d) Go to timer changes (F2).
   e) Select timer to be changed (F3).
   f) Use the left and right arrow keys to select the digit to be changed. Use the up arrow key to make a change to that digit.
   g) Press F4 to accept the change.
   h) Press F4 to go to the main menu.

   3. Counts: (EX: Anvil Count)
   a) Press menu.
   b) Enter pin code.
   c) Go to service tool (F2).
   d) Go to anvil change (F1).
   e) Go to revise counts (F1)
   f) Use the left and right arrow keys to select the digit to be changed. Use the up arrow key to make a change to that digit.
   g) Press F4 to accept the change.
   h) Press menu to go to the main menu.

   4. Zero Thimble Count:
   a) Press menu.
   b) Enter pin code.
   c) Go to service tool (F2).
   d) Go to thimble change (F2).
   e) Press reset to zero (F2)
   f) Press F4 to go to the main menu.

The system is now ready for fastener installation.

5. Install a fastener and check for full swage.

NOTES:
1. *The tool will not operate while in any of the Menu Set up Screens.*
2. *If the tool does not function properly, pressure and timer settings may need to be changed. Please refer to “How to change settings or Trouble Shooting Sections”.*
Maintenance

General

1. The efficiency and life of any equipment depends upon proper maintenance. Regular inspection and correction of minor problems will keep equipment operating efficiently and prevent downtime. The controller should be serviced by personnel who are thoroughly familiar with how it operates.

2. A clean, well lit area should be available for servicing the controller. Special care must be taken to prevent contamination of electronic, pneumatic and hydraulic systems.

3. Proper hand tools, both standard and special, must be available.

4. If Huck Spin tool needs servicing please refer to tool manual.

Daily

1. Check the controller for damage or air/hydraulic leaks, tighten or replace if necessary.

2. Check all electrical cables, hoses and couplings for damage or leaks, tighten or replace if necessary.

3. Bleed the air line to clear it of accumulated dirt or water before connecting air hose to the tool.

4. Check the tool and nose assembly for damage or air/hydraulic leaks, tighten or replace if necessary. Refer to tool manual or nose data sheet.

Weekly

1. Check the Controller, tool and all connecting parts for damage or oil/air leaks, tighten or replace if necessary.

2. Disassemble and clean nose assemblies; then reassemble.

Resetting to Default

Resetting to default P.I.N.

The controller is shipped with a default P.I.N. of F1, F1, F1, F1. If this P.I.N. is changed and lost it is possible to reset the controller to this default pin. To reset to default enter pin code screen from status screen then enter F1, F3, F2, Right Arrow, Left Arrow, Up Arrow. The controller should be reset to its default P.I.N.

Resetting system default settings

The controller is shipped with default settings for pressures, timers and counts. These settings will likely need to be changed for each a particular application. If it is necessary to return to the default settings enter the menu system by entering the P.I.N. From the menu screen enter F4, F4, F3, F4, F4, F4, F2, F3, Left Arrow, Up Arrow and Right Arrow.

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

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Components Drawing 1 of 2

- SUPPLY CABLE
- DISCONNECTING POWER
- TURN OFF POWER BEFORE

- Spin ON to LS1
- Spin ON from LS1 to LS2
- Swage or Snub time (LS2 to Pressure)
- Delay after Hyd. Press. Off to Spin Off
- Start Spin Off to LS1 Open
- Spin On after Snub
- Hold Time
- Spin Off after LS1 Opens

Timer Codes

Error Codes

- Timer 1
- Timer 2
- Timer 3
- Timer 4
- Timer 5
- Timer 6
- Timer 7
- Timer 8

- Trig Rlsd Early
- -TD-1 Timed out
- -TD-2 Timed out
- -TD-3 Time out SN
- -TD-4 Time out SW
- -TD-5 Timed out
- -TD-6 Timed out
- -Check Transducer-
- -Thimble Cnt. Max.-
- -Anvil Cnt. Max.-
- -Trigger released BEFORE swage complete
- -LS1 NOT reached during Spin ON
- -LS2 NOT reached, go to snub
- -Pressure NOT reached during Snub
- -Pressure NOT reached during Swage
- -LS1 not Released during spin Off
- -LS2 not Made after Snub
- -Transducer NOT connected or FAULTY
- -MAX. thimble count has been reached
- -MAX. anvil count has been reached

Figure 1
Connectors on Controller Board Sets 125729, 125872, & 126109

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<th>PIN #</th>
<th>FUNCTION</th>
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<td>(+) PRESSURE TRANSMITTER</td>
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<td>J10</td>
<td>2</td>
<td>(-) PRESSURE TRANSMITTER</td>
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<td>J1</td>
<td>1</td>
<td>-24VDC (GROUND) FROM POWER SUPPLY (125727)</td>
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<td>J1</td>
<td>2</td>
<td>RELAYED CONTROL TO POWER SUPPLY BOX (125727) FOR POWERIG TRIGGER CORD</td>
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<tr>
<td>J1</td>
<td>3</td>
<td>RELAYED CONTROL TO POWER SUPPLY BOX (125727) FOR POWERIG TRIGGER CORD</td>
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<td>4</td>
<td>+24VDC FROM POWER SUPPLY (125727) SWITCHED</td>
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<td>EEPROM IN TOOL (FUTURE USE)</td>
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<td>J2</td>
<td>3</td>
<td>+24VDC TO CONTROLLER FROM N/O TRIGGER</td>
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<tr>
<td>J2</td>
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<td>+24VDC TO CONTROLLER FROM N/O LIMIT SWITCH 2</td>
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<td>J2</td>
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<td>+24VDC (GROUND) TO TOOL (TOOL PLUGGED IN SIGNAL)</td>
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<td>-24VDC (GROUND) TO TOOL (FUTURE USE)</td>
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<td>1</td>
<td>-24VDC (GROUND) TO AIR VALVE CW SOLENOID</td>
</tr>
<tr>
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<td>+24VDC TO AIR VALVE CW SOLENOID</td>
</tr>
<tr>
<td>J4</td>
<td>3</td>
<td>-24VDC (GROUND) TO AIR VALVE CW SOLENOID</td>
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<tr>
<td>J4</td>
<td>4</td>
<td>+24VDC TO AIR VALVE CW SOLENOID</td>
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<tr>
<td>J3</td>
<td>1</td>
<td>-24VDC (GROUND) INDICATOR</td>
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<td>+24VDC INDICATOR</td>
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<tr>
<td>J3</td>
<td>3</td>
<td>-24VDC (GROUND) AUDIO ALARM</td>
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<tr>
<td>J3</td>
<td>4</td>
<td>+24VDC AUDIO ALARM</td>
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<tr>
<td>J3</td>
<td>5</td>
<td>NOT USED +24VDC TO AUX. N/O TRIGGER FOR MANIPULATOR TOOLS</td>
</tr>
<tr>
<td>J3</td>
<td>6</td>
<td>NOT USED +24VDC FROM AUX. N/O TRIGGER FOR MANIPULATOR TOOLS</td>
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</table>

Figure 3

Connectors on Controller Board Sets 125729, 125872, & 126109
1. Location of Ferrites (70) on cable is optional.

2. This assembly must use Controller Board Set part number 126109 (Item 13 in Parts List).

Notes:

- Trigger released BEFORE swage complete
- LS1 NOT reached during Spin ON
- LS2 NOT reached, go to snub
- Pressure NOT reached during Snub
- Pressure NOT reached during Swage
- LS1 not Released during spin Off
- LS2 not Made after Snub
- Transducer NOT connected or FAULTY
- MAX. thimble count has been reached
- MAX. anvil count has been reached

Trig Rlsd Early
- TD-1 Timed out
- TD-2 Timed out
- TD-3 Time out SN
- TD-4 Time out SW
- TD-5 Timed out
- TD-6 Timed out
- Check Transducer-
- Thimble Cnt. Max.-
- Anvil Cnt. Max.-

Timer Codes

- Spin ON to LS1
- Spin ON from LS1 to LS2
- Swage or Snub time (LS2 to Pressure)
- Delay after Hyd. Press. Off to Spin Off
- Start Spin Off to LS1 Open
- Spin On after Snub
- Hold Time
- Spin Off after LS1 Opens

Error Codes

- Pull 8400 PSI
- 580 Bar
- Return 6500 PSI
- 448 Bar

Figure 5
Troubleshooting

Always check out the simplest possible cause of a malfunction first. For example, an air hose not connected. Then proceed logically, eliminating each possible cause until the cause is located. Where possible, substitute known good parts for suspected bad parts. Use this Troubleshooting section as an aid in locating and correcting the malfunction.

1. Controller fails to power up.
   a) Outlet circuit breaker turned off.
   b) Power supply not plugged in.
   c) Switch on controller not is turned on.
   d) Cable between controller and power supply not connected properly.

2. Tool fails to operate when trigger is depressed.
   a) Controller power not plugged in or turned on. (Screen should be illuminated).
   b) Tool is not plugged in properly to the controller. Check all connections.
   c) Bad trigger. If trigger indicator light fails to come on, check continuity of trigger switch.
   d) Air not plugged into manifold. (Check only if trigger indicator light comes on when switch is depressed).

3. Tool spins off when trigger is pressed.
   a) Limit switch is out of adjustment (only if limit switch 1 indicator is on).
   b) Reversed air lines (only if limit switch 1 is not on).

4. Tool spins on pin but does not swage.
   a) Powering is not on or plugged in.
   b) Electrical control cord is not connected properly.
   c) Hydraulic hoses are not connected properly. (Check disconnects.)

5. Incomplete swage.
   a) Improper powering pressure setting. (See Preparation for Use)
   b) Improper controller pressure setting. (See Preparation for Use How to change settings)

Error Codes

- Trigger released before swage is complete
- LS1 Not reached during Spin ON
- LS2 Not reached, go to Snub
- Pressure Not reached during Snub
- Pressure Not reached during Swage
- LS1 not Released during Spin Off
- LS2 not Made after Snub
- Transducer not connected or faulty
- Max. thimble count has been reached
- Max. anvil count has been reached

Timer Codes

- Spin ON to LS1
- Spin ON from LS1 to LS2
- Swage or Snub time (LS2 to Pressure)
- Delay after Hyd. Press. Off to Spin Off
- Start Spin Off to LS1 Open
- Spin On after Snub
- Alarm On time or Hold Time*
- Spin Off after LS1 Opens

*Dependent on revision of program.

Timer and Error Codes

WIRE BOTH CONNECTORS AS INDICATED:

1. WHITE
2. RED
3. GREEN
4. BLACK

VIEW FROM REAR OF PLUG

• Hydraulic Hose Assembly
  125772HS = 5.5 FT
  125926-12 = 12 FT
  125926-26 = 26 FT
  125926-38 = 38 FT
  125926-52 = 52 FT

• Power Supplies
  125727 One tool Supply
  125727-2 Two Tool Supply

CABLE ASSEMBLY P/N

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<th>ITEM</th>
<th>PART#</th>
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<td>Cable</td>
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<td>507457</td>
<td>Plug</td>
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<td>Socket</td>
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<td>6</td>
<td>507459</td>
<td>Clamp</td>
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