# **LOCOLOC®** #5-H HYDRAULIC SWAGER OPERATOR'S MANUAL





**Swaging Tools** 



# TO ASSEMBLE: TO INSTALL DIE SET:

#### THE #5-H LOCOLOC® HYDRAULIC PRESS AND PUMP HAS BEEN SHIPPED IN TWO CRATES.

#### **CRATE #1: HYDRAULIC PRESS**

#### CRATE #2: TABLE AND PUMP

1. After removing press and pump from the inside of table, turn table upright.

2. Place press on table, lining up four holes on press with four small holes on table. Secure press to table with the included bolts and nuts (FIGURE 1).

| (4) #5-79HS | <sup>1</sup> ⁄ <sub>2</sub> - 20" x 1 <sup>1</sup> ⁄ <sub>2</sub> " Hex Bolts |
|-------------|---|
| (8) #5-81HS | 1/2" Flat Washers   |
| (4) #5-77HS | 1/2" Lock Washers   |
| (4) #5-80HS | 1/2" Nuts   |

#### FIGURE 1

- Slide pump under table to rear of unit with pressure gauge facing forward as you look at front of press.
- Pass hydraulic hose (marked "gauge" and "other hose") through the back of the mounting table.



FIGURE 2

Remove four screws on right side of the upper and lower dies, then slide the dies out. To install, place new dies in die shoe, lining up screw holes with die shoe.

#### DO NOT OPERATE MACHINE WITH DIES REMOVED FROM DIE SHOE.

This will damage the die shoe and may be **<u>hazardous</u>** to your safety.



FIGURE 3

# To re-adjust die set opening for swaging different cable sizes:

- 1. Turn the pump unit on.
- Loosen the 3/8" x 16" allen head bolt that secures the ram return micro switch bracket, and pull upwards. The die shoe will move up until the micro switch is depressed (FIGURE 4).
- 3. FOR OPTIMUM SAFETY, GAP SHOULD ONLY BE SLIGHTLY LARGER THAN THE DIAMETER OF CABLE FITTING BEING SWAGED.
- 4. To set the die set lower, make sure the pump unit is off. Using the 3/4" nut on the back of the die shoe, turn the adjustable nut clockwise on the die shoe, and die will move down. Keep turning until the desired gap is between the die set (FIGURE 5).

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 Loosen the 3/8" X 16" allen head bolt, this secures the ram return micro switch bracket. Push down the bracket until you

hear a faint "click" from the switch.

6. Tighten the allen head bolt back down to hold the micro switch in place. The

wheel of the micro switch should be

is connected to the die shoe.

resting on the small aluminum plate that

# TO CHECK HYDRAULIC OIL LEVEL:

To check hydraulic oil level, remove cap. Oil level should be approx. 2 inches below the frame.



FIGURE 6

To add hydraulic oil remove cap (Figure 6) and fill hydraulic oil.

(Use only Enerpac HF-101 hydraulic oil - part #4-54HS)



## **BEFORE OPERATING:**

- 1. Re-check hydraulic hoses to ensure they are connected to the correct ports and tightened all the way.
- 2. Make sure the ram return micro switch is set correctly. When the die set is open and the ram is in the returned position, the Ram Return Micro Switch must be set in the "off" or "clicked up" position. If the Micro Switch is not set correctly, the ram may continue in the retract mode and damage the unit.

FIGURE 5

## **TO SET PRESSURE:**

# Always make sure the die set is in the die shoe before turning the unit on.

- 1. Plug the machine into a 120 volt 60Hz outlet. The LCD display backlight will be on and in the auto mode. Ram is home.
- Press the green start button to power up the hydraulic pump. Set pressure by the upper switch (left hand). This will be an approximate pressure. You should adjust the pressure via the gauge reading obtained by the gauge mounted on the front of the hydraulic pump unit.
- 3. The die shoe and the die set should be mounted and tightened before the next step.

#### **TO OPERATE:**

- Set pressure. (See Table "A" for correct pressure.) For dependable swaging, we highly recommend using only Locoloc<sup>®</sup> oval and stop sleeves.
- 2. Position sleeve correctly on cable.
- 3. Place assembly into die.
- 4. Depress the foot pedal.

#### Keep fingers away from swaging area.

- Press will automatically cycle. Ram will come down until it reaches the pressure set on the LCD display, then the ram will return to the retracted position, ready for another cycle.
- To turn unit off, press the red stop button. To restart, press the green start button. If some time has gone by, depress the foot switch then press the start button again. This allows the unit to shut-down safely.



**NOTE:** Dies need not to be fully closed to achieve correct swage dimension. In fact, some dies are designed to maintain gap while under pressure. 5/16", 3/8", 7/16", and 1/2" sleeves require two "hits" to crimp. Half the sleeve length is swaged per "hit."

## MAINTENANCE:

- Change hydraulic oil every 2000 hours (approximately 6 months) and more frequently if it is being operated in dusty environments. <u>USE ONLY</u> ENERPAC HF-101 HYDRAULIC OIL (PART NUMBER #4-54HS).
- 2. Periodically check hydraulic oil. It must be kept at a level of 2 inches below the frame.
- To control excess leakage, tape all joints with Teflon tape. DO NOT USE LIQUID PIPE SEALANT. It can damage the unit and will void warranty.

#### TROUBLE SHOOTING TIPS:

- 1. **Problem:** Operation seems erratic. **Solution:** Check all electrical connection.
- 2. **Problem:** Hydraulic system is leaking. (A small amount of oil residue is common). **Solution:** Try simply tightening the fittings. (Careful not to over-tighten)

## WARNINGS:

- The Locoloc<sup>®</sup> #5-H Hydraulic is designed for steady operation up to a maximum of 6 hours per day.
- 2. It is the responsibility of the customer to comply with all applicable health and safety regulations.
- 3. Only operate with 110 V AC fused for 30 AMP overload protection.
- 4. The high pressure of this unit (60,000 PSF) imposes certain conditions which, if ignored, can be dangerous:
  - All fittings, hoses, gauges, etc., must be proven for 10,000 PSI (60,000 PSF) operation.
  - Use only Enerpac hydraulic oil. Most hydraulic oils are designed for low PSI systems.

#### TO MEASURE BREAKING STRENGTH:

When a loop or splice is properly swaged, Locoloc<sup>®</sup> copper and aluminum oval sleeves are capable of supporting a greater load than the rated breaking strength of the flexable construction metal cable to which they are attached. Locoloc® stop sleeves are capable of holding only 1/3 to 1/2 of the rated breaking strength of the cable.ratedratebreaking strength of the cable to which they are attached.

### **CAUTION:**

# Always use a five to one safety factor when designing cable assemblies.

If the strength of the cable is 2,000 lbs. (1/8" 7X19 galvanized aircraft cable) then the maximum load to which the cable or the assembly is subject should never exceed 400 lbs. When an oval sleeve or other fitting capable of holding the rated breaking strength of the cable is used as a termination. When a stop sleeve is used this safety factor should be increased to 10 to 1.

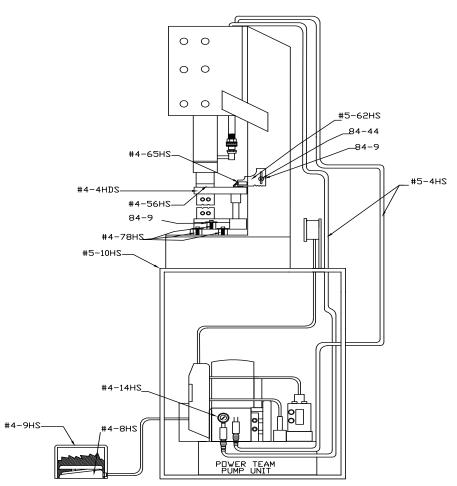
#### TABLE A Suggested starting gauge pressure

| Sleeve size | Description                    | Pressure*(Gauge) | Dies      |
|-------------|--------------------------------|------------------|-----------|
| 3/64        | Copper oval and stop sleeves   | 200 lbs.         | 3/64 Dies |
| 1/16        | Copper oval and stop sleeves   | 250 lbs.         | 1/16 Dies |
| 3/32        | Aluminum oval and stop sleeves | 300 lbs.         | 3/32 Dies |
| 3/32        | Copper oval and stop sleeves   | 450 lbs.         | 3/32 Dies |
| 1/8         | Aluminum oval and stop sleeves | 2,000 lbs.       | 1/8 Dies  |
| 1/8         | Copper oval and stop sleeves   | 2,500 lbs.       | 1/8 Dies  |
| 5/32        | Aluminum oval sleeves          | 2,700 lbs.       | 5/32 Dies |
| 5/32        | Aluminum stop sleeves          | 2,700 lbs.       | 1/8 Dies  |
| 5/32        | Copper oval sleeves            | 3,000 lbs.       | 5/32 Dies |
| 5/32        | Copper stop sleeves            | 3.000 lbs.       | 1/8 Dies  |
| 3/16        | Aluminum oval sleeves          | 4,000 lbs.       | 3/16 Dies |
| 3/16        | Aluminum stop sleeves          | 4,000 lbs.       | 1/8 Dies  |
| 3/16        | Copper oval sleeves            | 4,500 lbs.       | 3/16 Dies |
| 3/16        | Copper stop sleeves            | 4,500 lbs.       | 1/8 Dies  |
| 7/32        | Aluminum oval sleeves          | 5,000 lbs.       | 7/32 Dies |
| 7/32        | Aluminum stop sleeves          | 5,000 lbs.       | 1/8 Dies  |
| 7/32        | Copper oval sleeves            | 5,000 lbs.       | 7/32 Dies |
| 7/32        | Copper stop sleeves            | 5,000 lbs.       | 1/8 Dies  |
| 1/4         | Aluminum oval and stop sleeves | 5,000 lbs.       | 1/4 Dies  |
| 1/4         | Copper oval and stop sleeves   | 5,500 lbs.       | 1/4 Dies  |
| 9/32        | Aluminum oval sleeve           | 5,500 lbs.       | 9/32 Dies |
| 9/32        | Copper oval sleeves            | 5,500 lbs.       | 9/32 Dies |
| 9/32        | Copper oval stop sleeves       | 5,500 lbs.       | 1/4 Dies  |
| 5/16        | Aluminum oval sleeve           | 5,500 lbs.       | 5/16 Dies |
| 5/16        | Copper oval sleeves            | 5,800 lbs.       | 5/16 Dies |
| 5/16        | Copper stop sleeves            | 5,800 lbs.       | 1/4 Dies  |
| 3/8         | Aluminum oval sleeve           | 6,000 lbs.       | 3/8 Dies  |
| 3/8         | Copper oval sleeves            | 6,500 lbs.       | 3/8 Dies  |
| 3/8         | Copper stop sleeves            | 6,500 lbs.       | 1/4 Dies  |
| 7/16        | Aluminum oval sleeve           | 6,500 lbs.       | 7/16 Dies |
| 7/16        | Copper oval sleeve             | 6,500 lbs.       | 7/16 Dies |
| 1/2         | Aluminum oval sleeve           | 6,500 lbs.       | 1/2 Dies  |
| 1/2         | Copper oval sleeve             | 6,500 lbs.       | 1/2 Dies  |

\* 5/16, 7/16, 1/2 and 3/8" sleeves require two compressions. Each compression will swage 1/2 the length of the sleeve.



# **#5 Hydraulic Swager**



| QTY | PART#   | DESCRIPTION                                |
|-----|---------|--|
| 2   | #5-4HS  | 10 FT HOSE                                 |
| 1   | #4-4HDS | DIE SHOE ASSEMBLY                          |
| 1   | #4-65HS | LIMIT SWITCH                               |
| 1   | #4-8HS  | FOOT SWITCH                                |
| 1   | #4-9HS  | FOOT SWITCH GUARD                          |
| 1   | #5-10HS | MOUNTING TABLE                             |
| 1   | #4-14HS | PRESSURE GAUGE                             |
| 1   | #5-62HS | RAM RETURN BRACKET<br>(MICRO SWITCH MOUNT) |
| 4   | #4-78HS | 3/8-16 X 2" HEX SOCKET<br>ALLEN CAP SCREW  |
| 1   | #4-56HS | SADDLE                                     |
| 3   | 84-9    | 3/8" FLAT WASHER                           |
| 1   | 84-44   | 3/8-16 X 1" SOCKET HEAD<br>BOLT            |

## **HOW TO VIDEO**



https://www.youtube.com/watch?v=0n0HDZ6yWNc



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