

Dk-Lok[®]

Hydraulic Swaging Unit DHS-2A Setup and Operating Instruction

Manual # DHS-2A Oct. 2003



Dk Tech Corporation
www.dklok.com

Contents

	Language	Page
Safety Issues, Features	English	1
Setup and Operating Instructions	English	2 - 7
Emsamblaje e instrucciones de operación	Español	8 - 13
Vorbereitung und Bedienungsanleitung	Deutsch	14 - 19
설치방법, 작동방법	한국어	20 - 25
Recommended Tubing Wall Thickness for use with DHS-2A unit and DJS Ordering Number	English	26

Dk-Lok®

Hydraulic Swaging Unit

Setup and Operating Instructions



Standard Steel Carrying Case
Ordering No. : - SCC
Example: DHS-2A-SCC



Sturdy Plastic Carrying Case
Ordering No. : - PCC
Example: DHS-2A-PCC

SAFETY ISSUES

You are duly requested to read and understand these Instructions as well as the ENERPAC Instruction Sheet of the Hydraulic Hand Pump before using the DHS-2A. Follow all safety precautions to avoid personal injury or property damage during system operation. Dk Tech cannot be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect product and/or system operation. Contact your authorized Dk-Lok distributor when in doubt as to the safety precautions and operations.



WARNING!

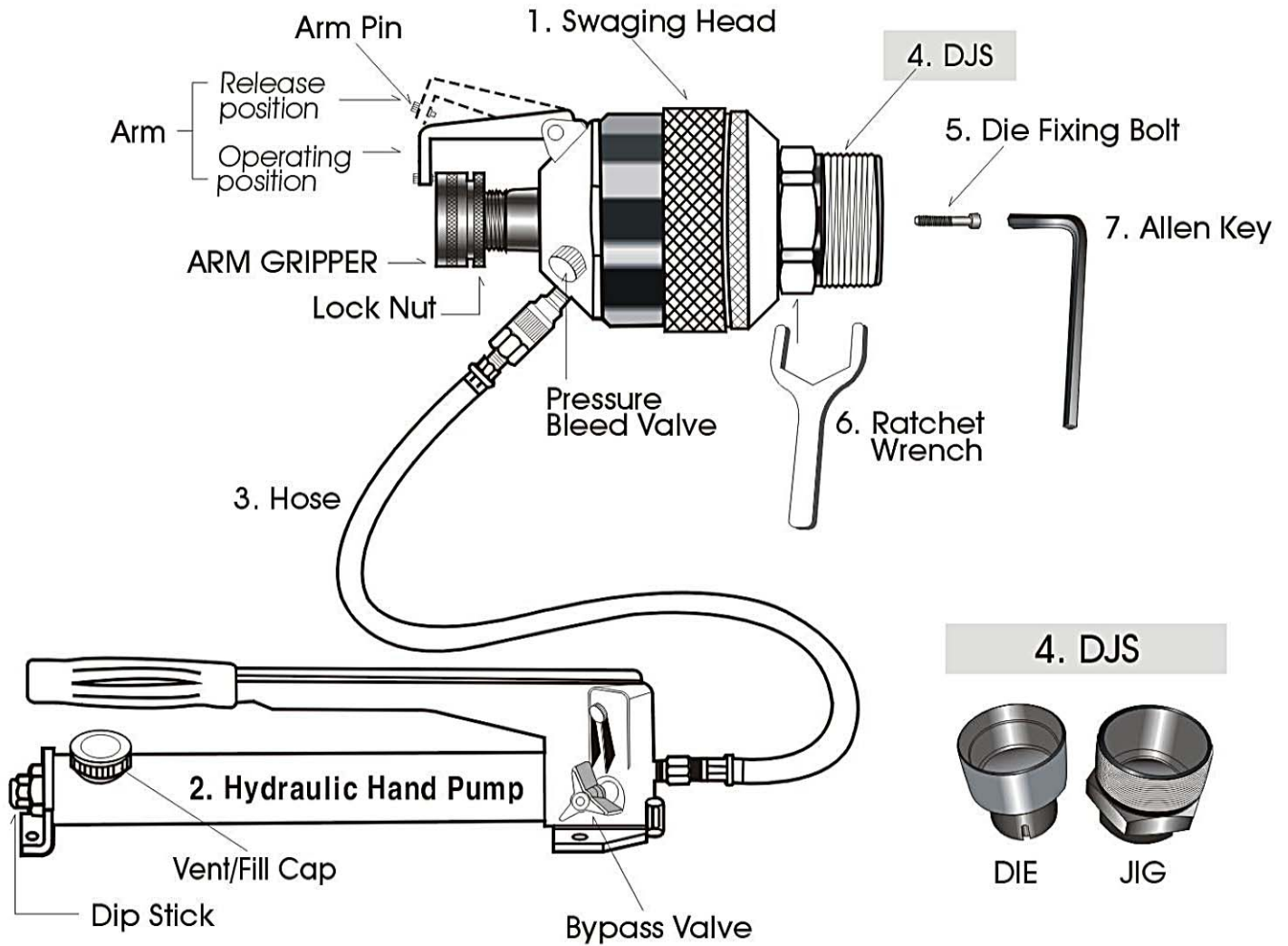
Wear proper personal protective gear when operating or working near the DHS-2A unit.

Features

- Pre-Swages Dk-Lok Ferrules onto Tubing;
Fractional: 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, and 2 in.
Metric: 12, 14, 15, 16, 18, 20, 22, 25, 28, 30, 32, 38 and 50 mm
- Assures consistent make-up with only about 30% of the manual pull-up torque
- Reduces installation time
- Easy to use by one operator
- Different sizes can be pre-swaged just by replacing Die & Jig
- Portable with wheels on sturdy plastic carrying case



DHS-2A Standard Components



DHS-2A Standard Components and Accessories

1	Swaging Head
2	Hydraulic Hand Pump
3	Hose
4	DJS consisting of DIE and JIG
5	Die Fixing Bolt
6	Ratchet Wrench
7	Allen Key
8	DHS-2A Instructions
9	Enerpac Pump Instruction Sheet

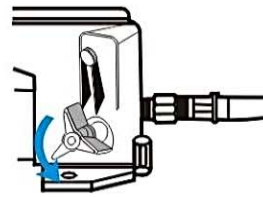
Setup Instructions

1. Check Hydraulic Oil Level Regularly

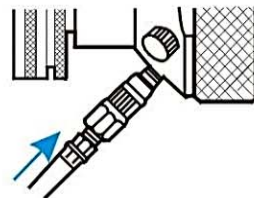
Please refer to "7.1 Adding Oil to the Pump" of the Enerpac Pump Instruction sheet enclosed herewith.

2. Unit setup

1) Open Bypass Valve

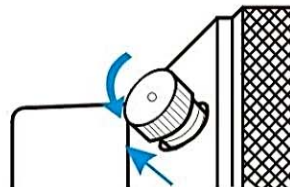


2) Connect Hand Pump to the Swaging Head

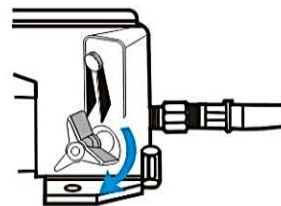


3) Place Swaging Head above Hand Pump

4) Open the Pressure Bleed Valve one turn to bleed air from the Swaging Head

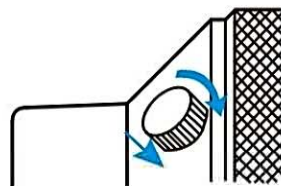


5) Close Bypass Valve



6) Pump Handle until Pump Oil is Free of Air Bubbles. Removing Air from the Hydraulic System will Help the Cylinder Advance and Retract Smoothly.

7) Close Pressure Bleed Valve by Finger Tight

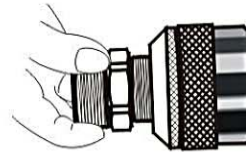


3. Swaging Head Setup

1) Select DJS



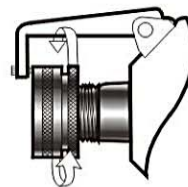
2) Hand tighten DJS into the Swaging Head and Tighten Completely with a Ratchet Wrench



3) Lock out the DJS screwing die-fixing bolt onto the Swaging Head with the Allen Key

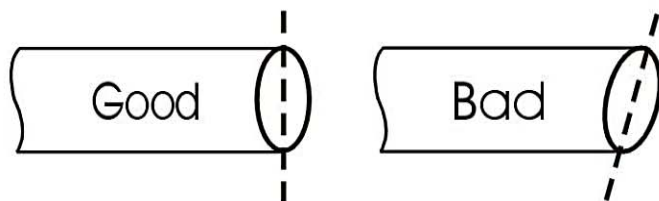


4) Turn Arm Gripper until the Arm Pin is Held Tight and Lock up Arm Gripper with Lock Nut



4. Tube Preparation

1) Cut Tubing Squarely:



2) Deburr ID and OD

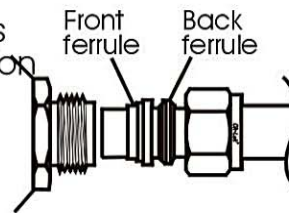
Operating Instructions

5. Operation

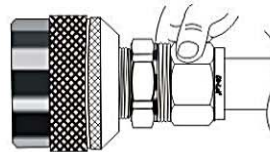
- 1) Place Swaging Head Arm in an Upward Position



- 2) Put the Dk-Lok Nut and Ferrules on the Tubing in right Orientation and Sequence.



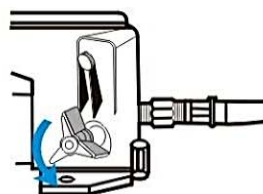
- 3) Hand-Tighten Nut onto the DJS making sure that the Tubing is bottomed out.



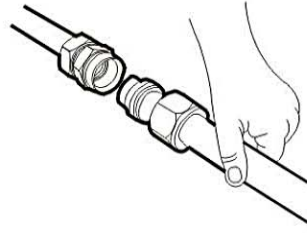
- 4) Pump slowly keeping the Tubing Bottomed until the Arm releases



- 5) Open the Bypass Valve by Pressing the Arm Gently Downwards to its Re-Operating Position, and unthread the Nut and Remove the Pre-Swaged Assembly



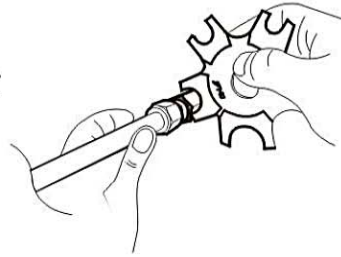
- 6) Hand tighten the Pre-Swaged Assembly into the Fitting Body. While holding the body steady with a back-up wrench, tighten the nut until a sharp rise in torque is felt and then snug slightly.



Gauging Instructions

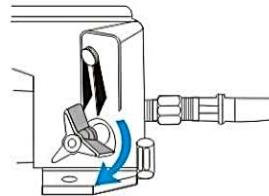
Apply Dk-Lok no-go Gap Gauge (DIG-) between the Nut and Body Hex.

- When the DIG does not enter the gap, the fitting is sufficiently tightened.
- When the DIG enters the gap, the fitting is required to tighten additionally.



6. Re-operation

- 1) Close Bypass Valve



- 2) Maintain Swaging Head Arm in an Upward Position



- 3) Follow the instructions **5. Operation** 2) through 6)

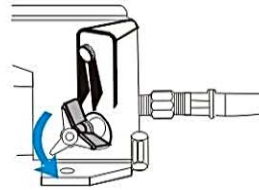
Trouble Shooting

1. If Tubing is difficult to remove from DHS-2A after Pre-Swaging, Gently Rock the Tubing Back and Forth to remove it
2. If the unit Fails to Swage sufficiently, check the Oil level first, then follow the instructions **3. Swaging Head setup** 2) through 4)
3. If oil is leaking from the swaging head, return the unit to your authorized Dk-Lok distributor

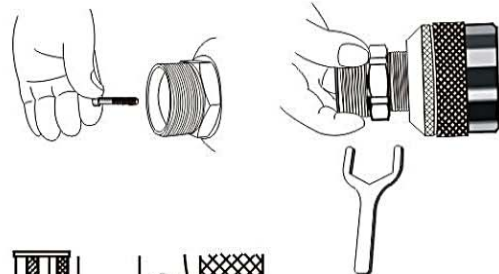
STORAGE INSTRUCTION

7. Dismantle Unit and Store

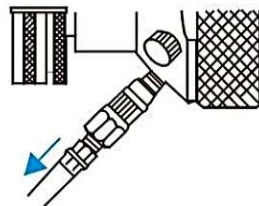
- 1) Open Bypass Valve



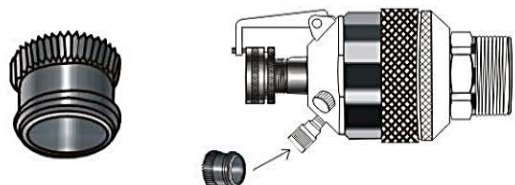
- 2) Unscrew the Die fixing bolt, and remove the DJS with the Ratchet Wrench



- 3) Disconnect Pump from the Swaging Head



- 4) Plug up the Female Quick Coupler on the Swaging Head



- 5) Clean all Components & Accessories

- 6) Keep all of the components & accessories in the supplied DHS-2A Case

- 7) Lay the case horizontally down whenever possible

Recommended Tubing Wall Thickness for use with DHS-2A unit and DJS Ordering Number

For Dk-Lok OD (in.)	S316 Seamless Tubing Wall Thickness		DJS Ordering Number
	Min. (in.)	Max. (in.)	
1/2	0.049	0.083	DJS-8
5/8	0.065	0.095	DJS-10
3/4	0.065	0.109	DJS-12
1	0.083	0.120	DJS-16
1-1/4	0.083	0.156	DJS-20
1-1/2	0.095	0.188	DJS-24
2	0.109	0.188	DJS-32

For Dk-Lok OD (mm)	S316 Seamless Tubing Wall Thickness		DJS Ordering Number
	Min. (mm)	Max.(mm)	
12	1.2	2.0	DJS-12M
14	1.5	2.2	DJS-14M
15	1.5	2.2	DJS-15M
16	1.5	2.2	DJS-16M
18	1.5	2.5	DJS-18M
20	1.8	2.8	DJS-20M
22	1.8	2.8	DJS-22M
25	2.2	3.0	DJS-25M
28	2.5	3.5	DJS-28M
30	2.5	3.5	DJS-30M
32	2.8	4.0	DJS-32M
38	3.0	4.5	DJS-38M

Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe performance. Product function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the sole responsibility of the system designer and user.

Product Warranty

Dk Tech hereby warrants to the purchaser of this Product that the components of the product shall be free from defects in material and workmanship for twelve months from the date of purchase. Manufacturer shall be liable only if the product is used as specified in the current catalog and written instructions.

The purchaser's remedies shall be limited to replacement and installation of any parts that fail through a defect in material or workmanship.

MANUFACTURER SPECIFICALLY DISAVOWS ANY OTHER REPRESENTATION, EXPRESS OR IMPLIED, WARRANTY, OR LIABILITY RELATING TO THE CONDITION PURCHASE, OR ANY THIRD PARTY, FOR ANY DIRECT OR INDIRECT CONSEQUENTIAL OR INCIDENTAL DAMAGES.