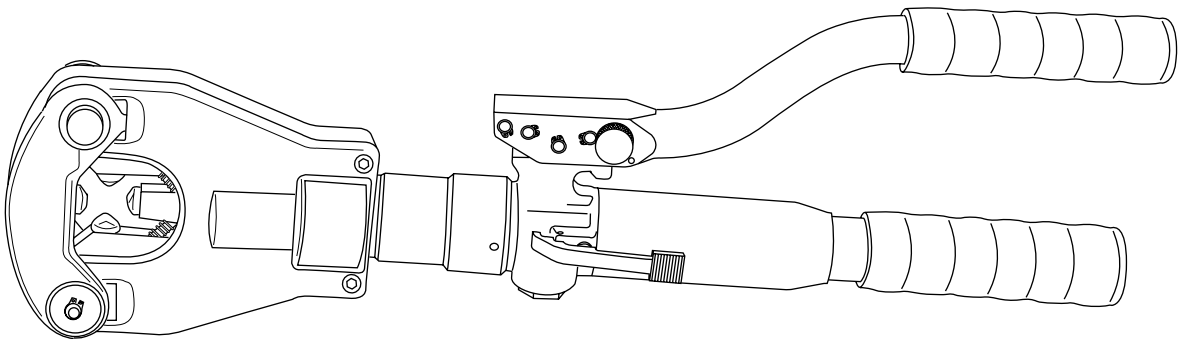


# INSTRUCTION MANUAL

# **ILSCO**



## **IDT-6**

# **Hydraulic Crimping Tool**



**Read and understand** all of the instructions and safety information in this manual before operating or servicing this tool.

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## **Description**

The IDT-6 Hydraulic Crimping Tool is a hand-held, self-contained, dieless crimping tool intended to crimp aluminum and copper connectors onto electrical cable.

## **Safety**

Safety is essential in the use and maintenance of IlSCO tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

## **Purpose of this Manual**

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following IlSCO tool:

    IDT-6 Hydraulic Crimping Tool

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge.

## **Warranty and Service**

ILSCO warrants this tool to the original purchaser for a period of one year from the date of purchase, provided the tool is operated, maintained and used in accordance with ILSCO's written instructions. Ordinary wear and tear, damage from abuse, neglect or alterations are not covered by this warranty. This warranty is null and void if instructions and operating procedures are not followed. Contact ILSCO for all warranty and service issues at 800-776-9775.

Tellus is a registered trademark of Shell Oil Company.

## ***KEEP THIS MANUAL***

**IMPORTANT SAFETY INFORMATION**



**SAFETY  
ALERT  
SYMBOL**

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

**⚠ DANGER**

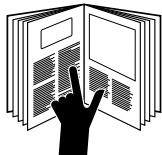
Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

**⚠ WARNING**

Hazards which, if not avoided, **COULD** result in severe injury or death.

**⚠ CAUTION**

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.



**⚠ WARNING**

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning can result in severe injury or death.

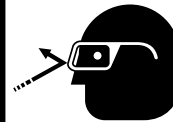


**⚠ WARNING**

Electric shock hazard:

This tool is not insulated. When using this unit on or near energized electrical lines, use proper personal protective equipment.

Failure to observe this warning can result in severe injury or death.



**⚠ WARNING**

Wear eye protection when operating or servicing this tool.

Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.



**⚠ WARNING**

Skin injection hazard:

Oil under pressure easily punctures skin causing serious injury, gangrene, or death. If you are injured by escaping oil, seek medical attention immediately.

- Do not use hands to check for leaks.
- Depressurize the hydraulic system before servicing.

## IMPORTANT SAFETY INFORMATION

### **⚠ WARNING**

An incomplete crimp can cause a fire. Use proper connector and cable combinations.

- Improper combinations can result in an incomplete crimp.
- The handle load will drop suddenly to indicate a completed crimp. If the handle load does not drop suddenly, the crimp is not complete.

Failure to observe these warnings can result in severe injury or death.

### **⚠ WARNING**

Inspect tool before use. Replace any worn or damaged parts. A damaged or improperly assembled tool can break and strike nearby personnel.

Failure to observe this warning can result in severe injury or death.

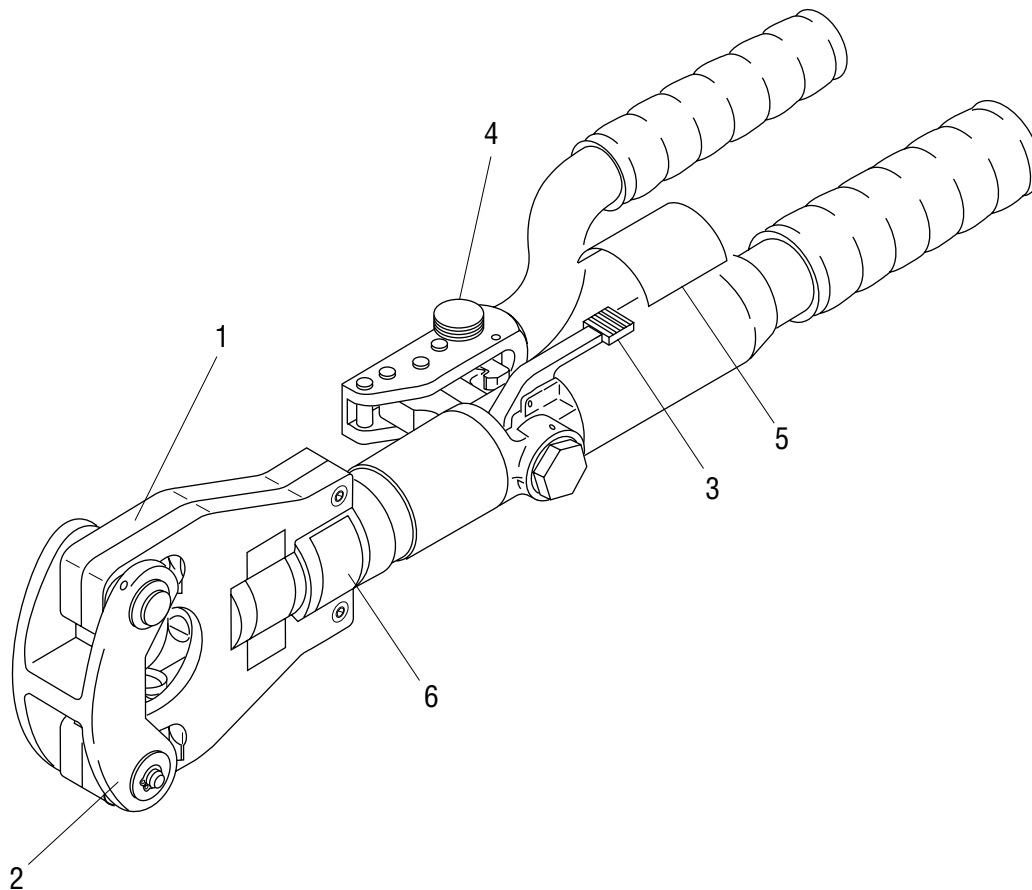
### **⚠ CAUTION**

- This tool is intended for two-handed operation. Maintain a firm grip on both handles during operation. Using this tool in any other manner can result in injury or property damage.
- Do not operate the tool without a connector in place. Damage to the ram or crimping tool head can result.
- Do not perform any service or maintenance other than as described in this manual. Injury or damage to the tool may result.

Failure to observe these precautions can result in injury and property damage.

*Note: Keep all decals clean and legible, and replace when necessary.*

## Identification



### IDT-6

- |                  |                   |
|------------------|-------------------|
| 1. Crimping Head | 4. Handle Release |
| 2. Flip Top      | 5. Decal          |
| 3. Release Lever | 6. Decal          |

## Specifications


### Crimping Tool

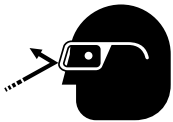
Length .....	535 mm (21.06")
Width .....	191 mm (7.5")
Height .....	63.5 mm (2.5")
Mass/Weight .....	4.1 kg (9 lb)
Hydraulic Oil .....	150 ml (0.3 pints) of Shell Tellus® T15


### Crimping Capacities

Crimping Range .....	#6 to 750 Kcmil (Al and Cu)
Crimping Force .....	55 kN (6.2 tons)

## Operation

	<b>⚠ WARNING</b>
	<p>Electric shock hazard:</p> <p>This tool is not insulated. When using this unit on or near energized electrical lines, use proper personal protective equipment.</p> <p>Failure to observe this warning can result in severe injury or death.</p>

	<b>⚠ WARNING</b>
	<p>Wear eye protection when operating or servicing this tool.</p> <p>Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.</p>

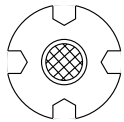
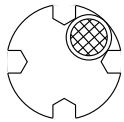
	<b>⚠ WARNING</b>
	<p>Skin injection hazard:</p> <p>Oil under pressure easily punctures skin causing serious injury, gangrene, or death. If you are injured by escaping oil, seek medical attention immediately.</p> <ul style="list-style-type: none"> <li>• Do not use hands to check for leaks.</li> <li>• Depressurize the hydraulic system before servicing.</li> </ul>

<b>⚠ WARNING</b>
<p>An incomplete crimp can cause a fire. Use proper connector and cable combinations.</p> <ul style="list-style-type: none"> <li>• Improper combinations can result in an incomplete crimp.</li> <li>• The handle load will drop suddenly to indicate a completed crimp. If the handle load does not drop suddenly, the crimp is not complete.</li> </ul> <p>Failure to observe these warnings can result in severe injury or death.</p>

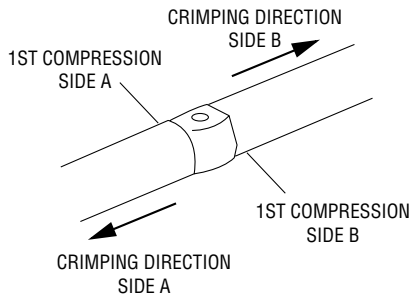
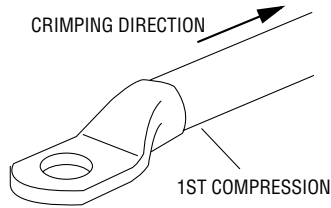
1. Follow the instructions in the IlSCO stuffer sheet for appropriate cable strip length and surface preparation.
2. Insert cable fully into connector.
3. Pull the latch pin and open the latch. Insert the connector with cable into the crimping head. Close the latch and push the pin completely into the latch.

<b>⚠ CAUTION</b>
<p>Do not operate the crimping tool unless the latch is completely closed and secured with the latch pin.</p> <p>Failure to observe this precaution can result in injury and property damage.</p>

4. Center the connector between the nibs.

 <p style="text-align: center;"><b>RIGHT</b></p>  <p style="text-align: center;"><b>WRONG</b></p>	<b>IMPORTANT</b>
	<p>Small connectors may become wedged between the nibs of the tool. Center the connector between the four nibs before crimping.</p> <p>Failure to observe this precaution can cause property damage.</p>

## Operation (cont'd)



- Using the sequence illustrated here, pump the handles to advance the nibs. Continue to pump until the pressure relief valve activates.

*Note: Pressure relief occurs at approximately 55 kN (6.2 tons) and is indicated by an audible "pop".*

- After achieving pressure relief, the ram automatically returns to the start position and the nibs retract.
- Complete the number of crimps specified in the IlSCO stuffer sheet.

## Periodic Pressure Relief Valve Check

Test the crimping tool periodically to ensure that the pressure relief valve activates at the proper pressure.

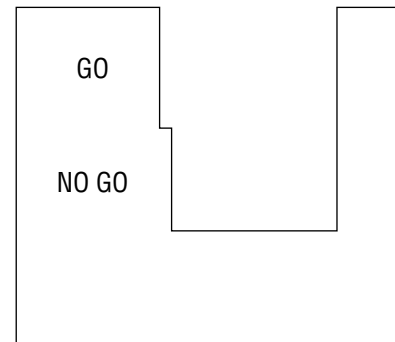
### Testing the Crimping Tool

- Center a test slug between the nibs.
- Close the latch and push the pin completely into the latch.

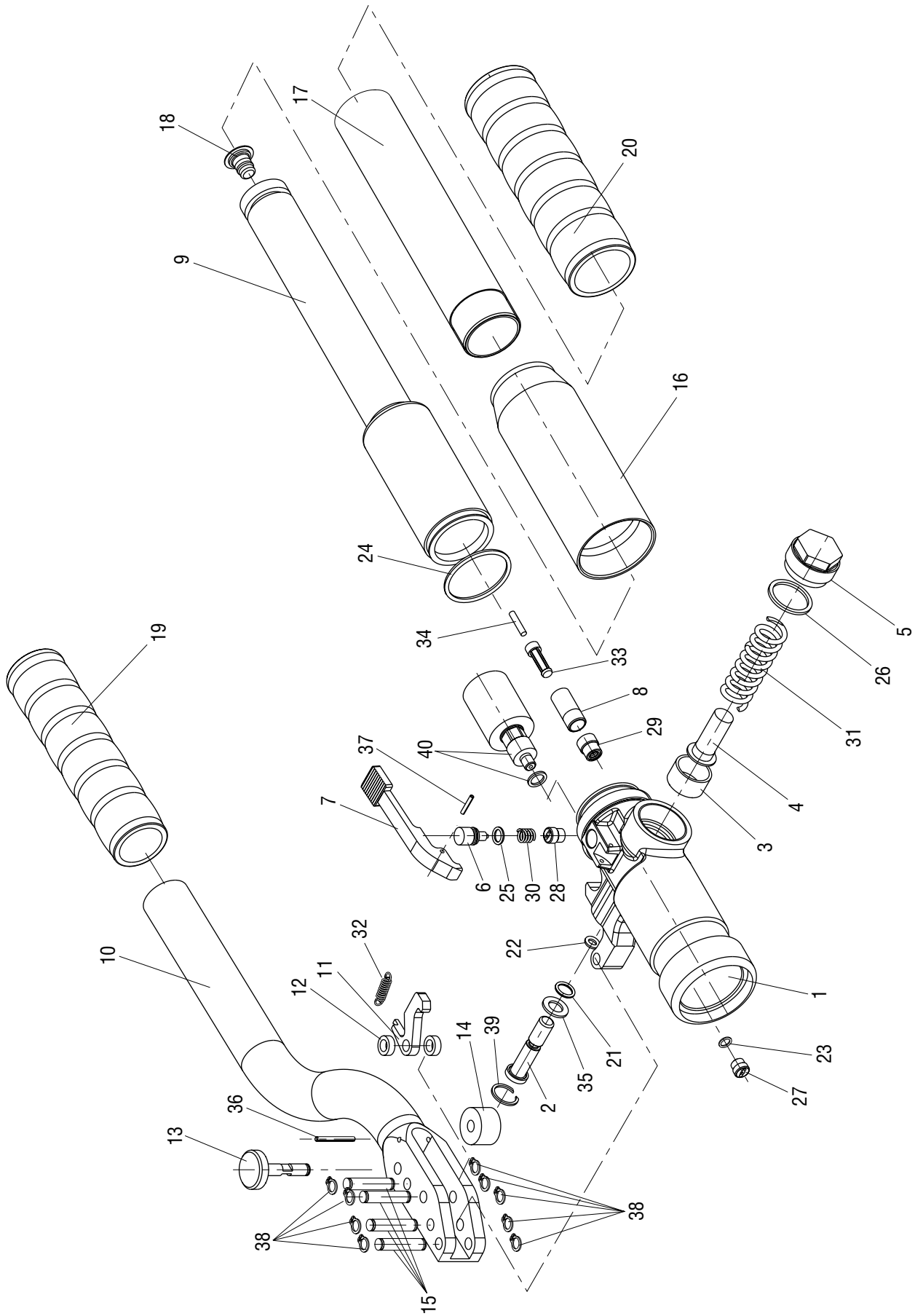
### ⚠ CAUTION

Do not operate the crimping tool unless the latch is completely closed and secured with the latch pin. Failure to observe this precaution can result in injury and property damage.

- Pump the handle to advance the nibs. Continue pumping until the pressure relief valve activates.
- After achieving pressure relief, the ram automatically returns to the start position and the nibs retract.
- Evaluate the test slug as follows:
  - If the test slug does not fit into the GO slot, the pressure relief valve is set too high. Send the crimping tool to IlSCO.
  - If the test slug fits into the GO slot, the pressure relief valve is set correctly.
  - If the test slug fits into the NO GO slot, the pressure relief valve is set too low. Send the crimping tool to IlSCO.

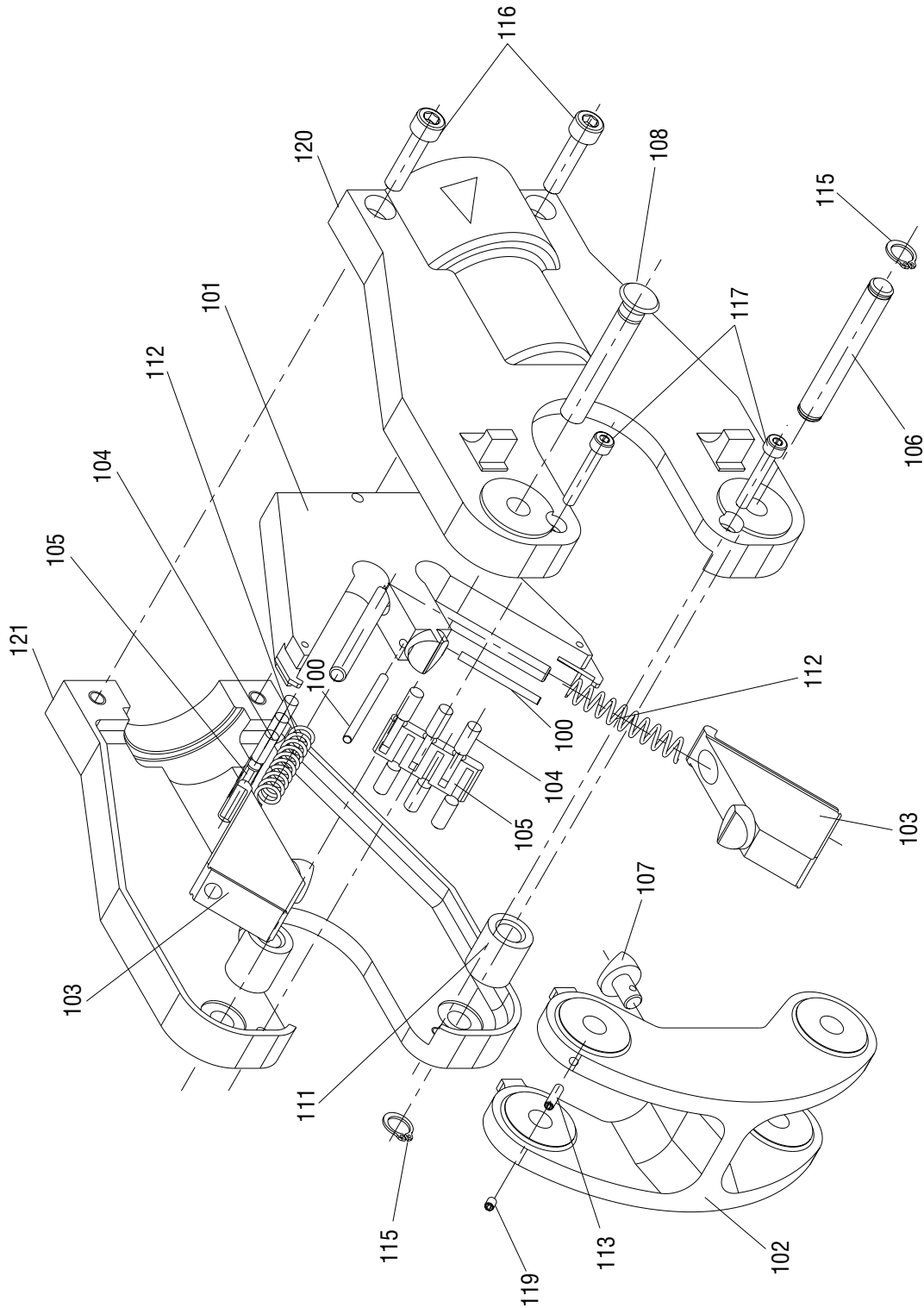


## Illustration

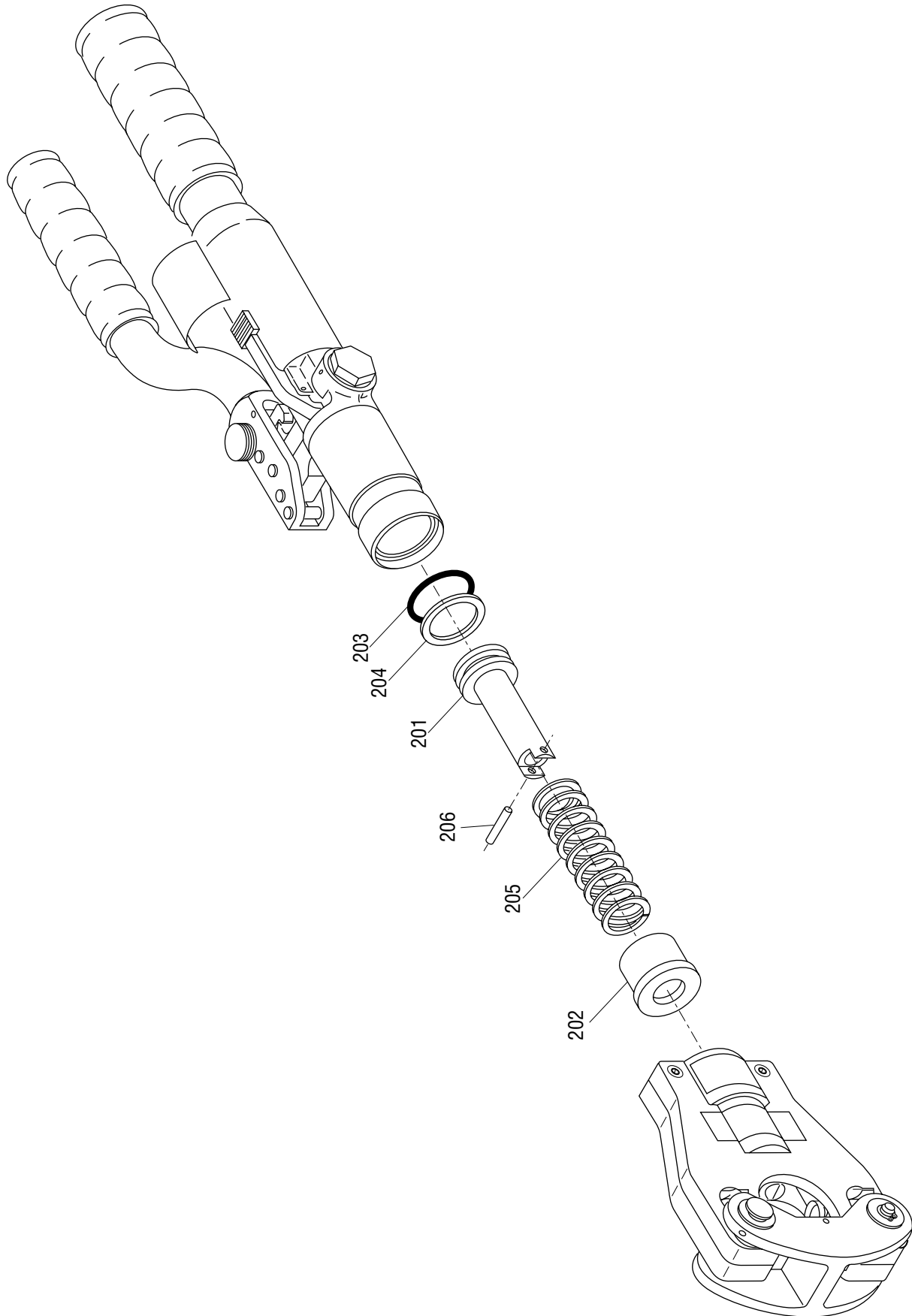




Illustration



**Illustration**



**Parts List**

Key	Part No.	Description	Qty
1	500 6384.7	Pump body .....	1
2	500 6345.6	Pump piston .....	1
3	500 6346.4	Sleeve .....	1
4	500 6348.0	Ram .....	1
5	500 6349.9	Screw plug .....	1
6	500 6354.5	Release pin .....	1
7	500 6355.3	Release lever .....	1
8	500 5882.7	Filter adapter .....	1
9	500 6344.8	Reservoir .....	1
10	500 6356.1	Pump handle .....	1
11	500 6357.0	Handle lock .....	1
12	500 6358.8	Spacer .....	2
13	500 6360.0	Release knob .....	1
14	500 6361.8	Roller .....	1
15	500 6364.2	Handle pin .....	4
16	500 6365.0	Handle tube .....	1
17	500 6366.9	Small handle tube .....	1
18	500 5878.9	Reservoir plug .....	1
19	500 6342.1	Grip, 25 mm .....	1
20	500 6343.0	Grip, 32 mm .....	1
21*	500 6368.5	O-ring .....	1
22*	500 6369.3	O-ring .....	1
23*	500 4143.6	O-ring .....	1
24*	500 5886.0	O-ring .....	1
25*	500 6370.7	O-ring .....	1
26*	500 6371.5	Copper washer .....	1
27	500 4144.4	Threaded bushing .....	1
28	500 4145.2	Threaded bushing .....	1
29	500 5885.1	Threaded bushing .....	1
30	500 6372.3	Spring, compression .....	1
31	500 6373.1	Spring, compression .....	1
32	500 6374.0	Spring, extension .....	1
33*	500 5880.0	Filter .....	1
34	500 5898.3	Magnet .....	1
35	500 6375.8	Washer .....	1
36	500 6376.6	Roll pin .....	1
37*	500 6377.4	Roll pin .....	1
38*	500 5876.2	Retaining ring .....	9
39*	500 6335.9	Retaining ring .....	1
40	500 6331.6	Pressure adj cartridge (includes items 41–49) .....	1
41	500 6378.2	Cartridge body .....	1
42	500 5863.0	Valve seat .....	1
43	500 5864.9	Plunger .....	1
44	500 6379.0	Needle valve .....	1
45	500 6380.4	Press adj screw .....	1
46	500 5894.0	Spring .....	1
47	500 5869.0	O-ring .....	1
48	500 5862.2	Seal .....	2
49	500 5860.6	Washer .....	2

## Parts List (cont'd)

Key	Part No.	Description	Qty
	500 1722.5	Quad point flip-top head assembly (includes items 100–121)	
100	500 1727.6	Pin, spring.....	2
101	500 1723.3	Cam yoke assembly .....	1
102	500 6117.8	Latch .....	1
103	500 6127.5	Moving side jaw .....	2
104	500 6089.8	Roller bearings .....	12
105	500 6088.0	Bearing retainers .....	2
106	500 6121.6	Latch mounting pin .....	1
107	500 6118.6	Latch nib .....	1
108	500 6124.0	Lock pin .....	1
111	500 6116.0	Side jaw roller .....	2
112	500 6091.0	Spring, compression .....	2
113	500 6096.1	Ball screw .....	1
115	500 6122.4	Snap ring .....	2
116	500 6100.3	Socket head cap screw .....	2
117	500 6103.8	Socket head cap screw .....	2
119	500 8366.0	Set screw .....	1
120	500 1726.8	Head cover (LH) .....	1
121	500 1725.0	Head cover (RH).....	1
200	500 1467.6	Steel case.....	1
201	500 6381.2	Piston .....	1
202	500 6382.0	Sleeve .....	1
203	500 4192.4	O-ring, piston.....	1
204	500 4194.0	Backup ring, piston.....	1
205	500 5839.8	Spring, compression .....	1
206	500 6340.5	Dowel pin, 4 x 20 mm .....	1
	500 1457.9	Decal, ID.....	1
	500 1476.5	Decal, case.....	1
	500 6214.0	Decal, pinch hazard.....	1
<b>Kits</b>			
	500 6129.1	Bearing/retainer kit (includes items 104 and 105)	
	500 6395.2	Seal kit (includes items marked with an asterisk)	
	500 6309.0	Test gage	
	500 6308.1	10 test slugs	
	500 6130.5	10 slugs with 10,000 psi gage	
	500 6126.7	Head cover set	



**U.S. TECHNICAL SUPPORT**  
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