HVD50 / HVD51

OUTIL DE SERTISSAGE HYDRAULIQUE MANUEL
HAND OPERATED HYDRAULIC CRIMPING TOOLS

MANUEL D'UTILISATION ET D'ENTRETIEN
SERVICE AND OPERATION MANUAL

CEGERS TOOLS

NUX/HVD51/12/14/01

HAND OPERATED HYDRAULIC CRIMPING TOOLS
HVD50 / HVD51

1. GENERAL

This lightweight hand operated hydraulic crimping tool is designed to accommodate hexagonal, circular and indent type dies.

Note: the only difference between these two tools is that the HVD51 is fitted with a hanging shackle.

2. FEATURES

- *Output force: 50 kN.*
- *Adjustable ram stroke: 10 to 15 mm to minimise pumping action.*
- *Narrow head with quick opening for use in confined areas.*
- *180 degrees revolving head for increased flexibility.*
- *Spring-loaded pump handle allows one-handed pumping.*
- *Maximum effort on the pump handle: 29 daN.*
- *Single stage pump circuit.*
- *Built-in by-pass relief valve ensures correct closing force of dies.*
- *Reservoir capacity: about 60 cm^3.*
- *Dimensions: 372 x 130 x 60 mm.*
- *Weight without set of dies: 1,950 kg.*
- *Strong lightweight double shell plastic case.*

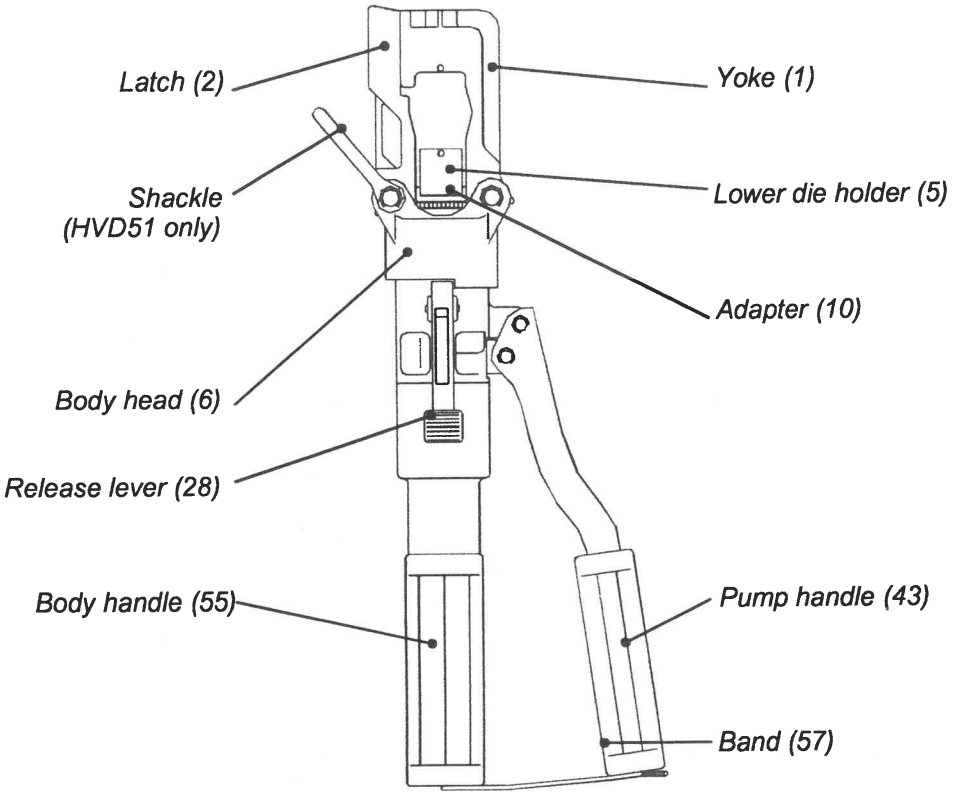
3. SAFETY RULES

- *Do not drop the tool. Dropping the tool may damage the hydraulic circuit.*
- *Never operate the tool without dies and connector in place.*

Select the appropriate dies for the connector to be crimped. Incorrect dies will result in a poor electrical and/or mechanical connection.

- *Do not crimp onto live conductors.*
- *Ensure latch is closed before use.*
- *Always point the tool away from people.*
- *Keep the head and ram clean and free of debris. Solvents can be used to clean the head.*

4. DESCRIPTION OF THE TOOL



5. OPERATING INSTRUCTIONS

5.1. Adjusting the stroke.

- The stroke can be adjusted between 10 and 15 mm.
- To obtain 10 mm stroke, operate the pump handle to move the ram about 6 to 7 mm.
- Turn the adapter (10), under the lower die holder clockwise.
- To obtain 15 mm stroke, repeat the same operation, but turn the adapter counter - clockwise.

5.2. Inserting of the dies.

- Retract the ram by depressing the release lever.
- Open the yoke by lifting out the latch.
- Select the appropriate size dies for the connector. Insert one half of the die into the yoke by pushing it in firmly. The steel ball at the centre of the die will clip into the hole of the yoke, securing this half of die. Attach the other half of die to the lower die holder. Most of the dies have two sizes: select the right grooves.

5.3. Crimping.

- Place the connector with the conductor between the dies, close the yoke and secure the latch.
- Operate the pump handle until a click sound is heard, indicating that the crimp has been completed.
- Press the release lever to retract the ram, which continues to retract until the lever is released.
- Open the yoke and remove the crimped connector.

6. MAINTENANCE

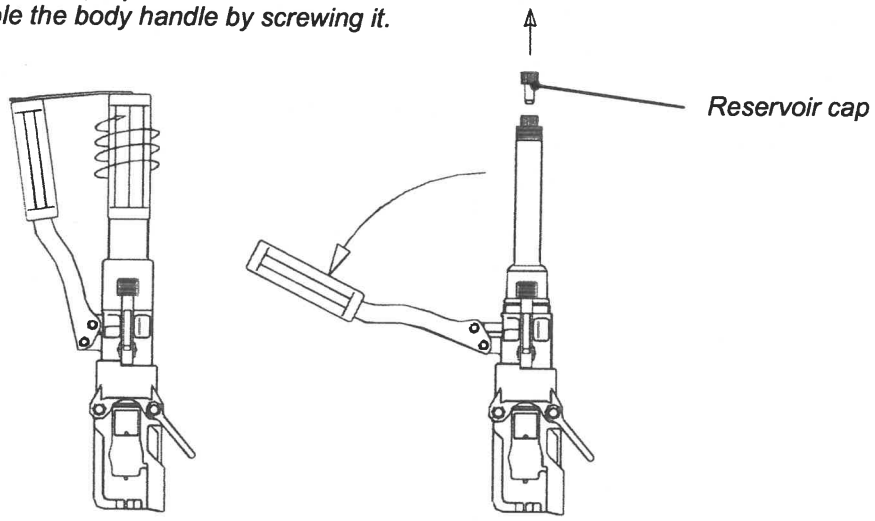
6.1. Preventive maintenance.

• Keep the tool clean and free from dirt or metal particles, especially around the head, dies and ram of the tool. To ensure the proper functioning of the latch, keep the locking mechanism clean.
When the tool is used in wet surroundings, the tool must be dried and wiped with an oily cloth. Wipe the tool once more with a dry cloth to remove excess oil before placing it in its case.
• Check the oil level periodically and use clean oil as recommended. Never mix different brands or types of oil as this way results in the deterioration of the oil seals.

6.2. Replenishing of oil.

It is recommended to change oil every two years or each year depending on the frequency of the use of the tool.

• Release pressure by pressing the release lever.
• Remove the body handle assembly by unscrewing it.
• Place the tool head downwards and hold it an upright position.
• Pump the handle several times and release the pressure: this will clear any air bubbles trapped in the hydraulic system.
• Holding the pump handle in the closed position, remove the reservoir cap (53) with care as air bubbles may remain in the end of oil reservoir.
• Replenish oil (TOTAL EQUIVIS XV32) and replace the cap.
• Check the oil reservoir for holes by squeezing reservoir lightly with fingers. If any leakage is detected, replace the reservoir.
• Reassemble the body handle by screwing it.



6.3. Verification of output force.

6.3.1. Checking

• It is recommended to periodically check the output force of the tool, using the hydraulic dynamometer DY5060.
• The output force should be between 48 and 52 kN, adjust if necessary.

6.3.2. Adjustment

Normally, no adjustment is necessary before 10 000 crimps.

• For this adjustment, the hydraulic dynamometer DY5060 is required.

• Remove the body handle and place the tool head downwards and hold it in a vertical position.
• Remove the reservoir cap and remove some oil from the reservoir.
• Insert a special long and clean N°4 Hex wrench into the reservoir to screw or unscrew the M8 screw on the valve cartridge (N°46). Turning the M8 screw clockwise increases the hydraulic pressure and the tool output. Turning it counter-clockwise decreases them.
Note: The thread of the M8 screw is treated with Nylock to prevent it from coming loose.
• After the adjustment, replenish the reservoir and re-assemble the tool.

7. TROUBLE SHOOTINGS

7.1. The ram does not advance at all.

• Hydraulic oil is depleted in the reservoir: replenish oil.
• Air is trapped in the hydraulic circuit. Point the tool downwards and move the pump handle to expel the air bubble into the oil reservoir and refill with oil. Repeat this operation until air bubble is completely removed.
• Dirt or a particle is logged between the ball and the ball-seat (N°22). Remove dirt or particle and re-dress the seat. Placing a new ball on the seat and lightly tapping it once does this. Replace the tapped ball with a new one and re-assemble the unit.
• Release valve stem (N°27) is distorted or jammed: file off the jammed portion or replace with a new stem.

7.2. The ram advances, but very slowly.

• Dirt particle or debris is lodged in the filter assembly (N°50): clean it.

7.3. The ram moves up and down, but does not advance.

• Larger dirt particle or debris is lodged in the exhaust valve (N°20) where the ball (N°22) is seated. Remove dirt or particle and re-dress the seat. Placing a new ball on the seat and lightly tapping it once does this. Replace the tapped ball with a new one and re-assemble the unit.

7.4. Erratic ram movement.

• Air is trapped in the hydraulic circuit. Point the tool downwards and activate the pump handle to expel the air bubble into the oil reservoir and top-up with oil. Repeat this operation until air bubble is completely removed.

7.5. Incomplete crimp.

• The high-pressure relief valve has worked.
Check that the correct dies have been used for the connector.
Check the adjustment of the high-pressure relief valve (see paragraph 6.3).
• The high-pressure relief valve has not worked.
The tool has to be returned for repairs. All ball seats have to be tapped and the balls changed, and all O-rings and seals have to be replaced.

7.6. Oil leakage.

• The seals (o-rings and back-up rings) must be replaced.
• The oil reservoir is damaged and has to be replaced.
Return tool for repairs.

8. GUARANTEE

This tool is manufactured and controlled with the greatest of care and is guaranteed for 12 months, from date of purchase.

The guarantee implies free replacement of any defective part during normal use, but excludes any damage due to misuse, shock and/or faulty maintenance. This guarantee will automatically be cancelled when the tool is dismantled, or if any modification has been made or attempted.

The application of the guarantee does not imply liability for any damage, and, in no case, will it give rise to any compensation.