

# Hydraulic Impact Wrench Type 6 1520 0010

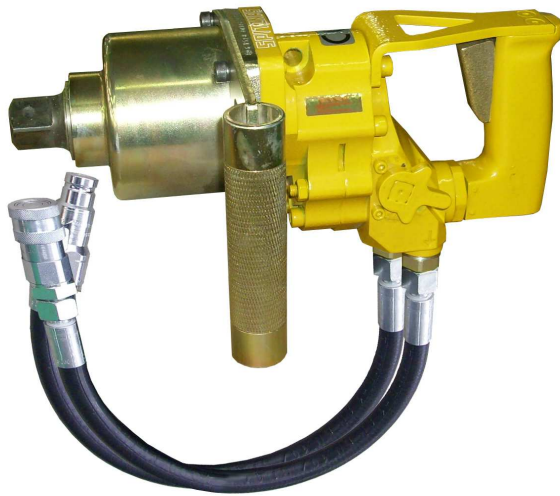


Illustration can differ from the original

## Operation and Maintenance Manual



## TECHNICAL SPECIFICATION

Speed	2200 rpm
For screws up to	M36
Output unit square outside	1"
Locking torque Mt	2500 Nm
Work Torque - adjustable	850 - 2500 Nm
Distance from axle	60 mm
Weight	10.7 kg
Connecting nipple	¾-16UNF-2B
Hose ID	DN-12, DN-16
Supply pressure	90-140 bar
Flow	25-45 l/min
Max. tank pressure	17 bar

The speed value is a guide value only, it depends basically on the work situation, the operating pressure and the accessories applied.

## SAFETY INSTRUCTIONS

**Any hydraulic tool can be dangerous.  
Please follow these simple procedures.  
They are for your protection.**



Wear goggles (chips- risk of injury)



Wear gloves (cutting damages by sharp edged work pieces).



Wear safety shoes.



Wear protective clothing.

Ensure that you maintain a good footing and proper balance at all times.

Protect your eyes and ears, head and hair, hands and feet.

Never work under the influence of alcohol, drugs or stronger medication.

Follow the general current and appropriate Accident Prevention and Safety Procedures.

Plan ahead - lay the work out before starting. Always work in a steady manner. Fatigue leads to carelessness and accidents. Never operate your tool while being under the influence of medication, alcohol, or other drugs.

Keep your work area clean and uncluttered and keep children and unnecessary personnel away from your work area.

Wear proper clothing.

Wear protective clothing, if necessary. Protect your head and hair, eyes and ears, hands, legs and feet.

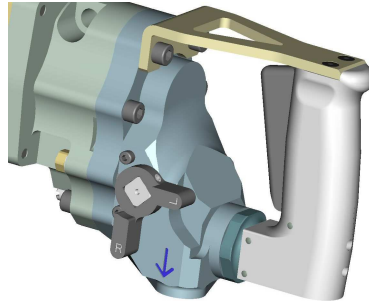
Depressurize the hoses before starting maintenance and retooling.

Switch the machine off before laying it down.

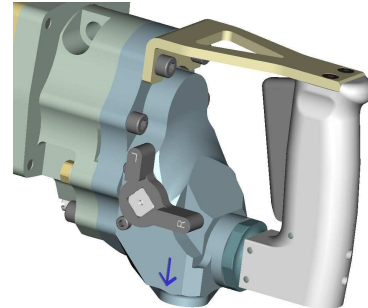
**Attention! Never carry the machine at the hydraulic hoses.**

Change the rotation direction by the switch lever only, do not change the hoses!

Rotation direction right



Rotation direction left



Never change the rotation direction under load!

When starting with cold oil, warm the oil up to 10° C at free speed before working.

## Use

### Intended use

Impact wrenches are designed for the tightening and loosening of screw fittings in a range of performance defined by the manufacturer. Only use the impact wrench in combination with appropriate power socket wrenches. Absolutely avoid the use of normal socket wrenches for hand tools. It is allowed to use appropriate extensions, joints and adapters between square and power socket wrench. Only use the tools for the defined application areas.

### Improper use

Working without personal protection equipment

## Danger Zones

Operational condition ----- Life phase	Normal function	Malfunction	Improper use	Expected use
Transport	Transport of the machine in an inoperable condition	Drop of the machine	Transport of the machine in an operable condition	unknown
Operation	Machine only works with actuated valve	Machine runs without actuated control device	Valve is blocked in actuated condition	unknown
	Machine moves the tool	Tool blocks	unknown	unknown
Maintenance	Filter at hydr. assembly	Breakdown of the machine	unknown	unknown

## OPERATION INSTRUCTIONS

### Feeding unit

In order to get maximum performance, the hydraulic unit should deliver 40 litres/ min. The unit has to be equipped with a safety valve (setting: max. 145 bar).

Hydraulic medium	Hydraulic oil HM32,HL46 (Viscosity 20-43cSt, min. 13 cSt)
Supply pressure	140 bar
Flow	25-45 l/min
Operating pressure (oil)	from 35°C to 60 °C
Screen	ISO class 18/13

The following inner diameters of hose are recommended:

- 12 mm, hoses up to 15 m length
- 16 mm, hoses up to 30 m length

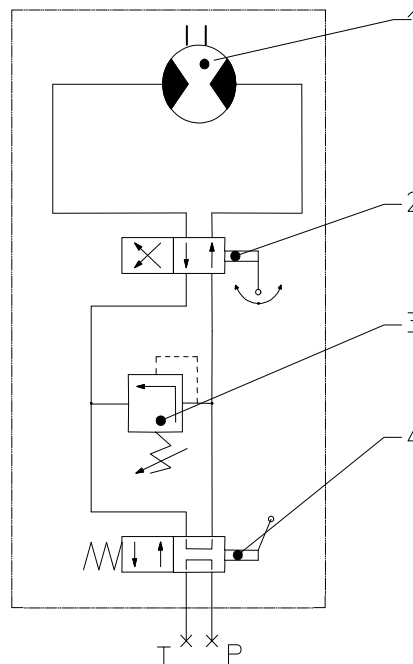
### Attention:

**If the pressure supply has a bigger pressure or output, both sizes have to be reduced by a reducing valve, otherwise the machine will be damaged.**

**The appropriate valves can be supplied on request.**

### Connection Diagram

1. Motor
2. Switch valve right – left
3. DBV – torque reduction
4. Switch valve



### Attention:

**If the hose connections are mixed-up: Machine can be destructed.**

### Hydraulic supply

The impact wrench can be run with oil. When feeding the impact wrench from the system, mind the machine not to be run with a bigger pressure than specified.  
Use pressure reducing valves, otherwise the machine will be damaged or destructed.

A minimum volume flow of 25 l/min is required to obtain the specified performance data. The pressure oil supply should be equipped with a pressure limiting valve, if the maximum pressure exceeds 140 bar.

Hydraulic Fluid	Hydraulic Oil
DBV Valve Adjustment	14 MPa
Minimum volume flow	Min. 25 l/min
Oil temperature	35°C÷80 °C
Oil filtering	ISO-purity degree 18/13

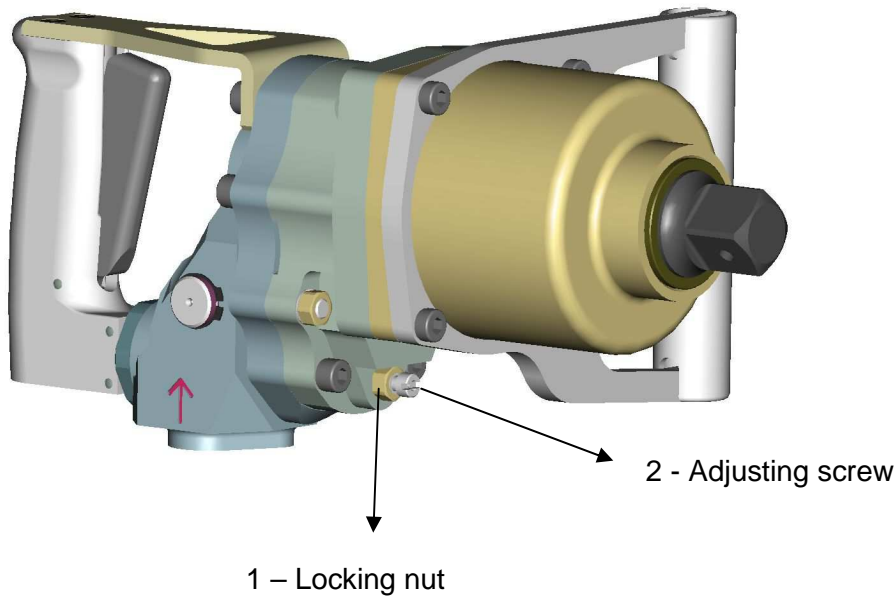
**Recall the safety instructions!**

## MAINTENANCE INSTRUCTIONS

Only thorough maintenance ensures constant performance, reduces wear and tear and need of spare parts and avoids rising of the maintenance costs and a reduced lifetime.

- The cleanness of the oil.
- Appropriate dirt protection of the lines and connections of the impact wrench.
- Always clean the impact wrench after using and seal it with light oil for protecting it against corrosion.

The torque can be adjusted by the adjusting screw. The torque depends on the flow of oil and the adjustment of the adjusting screw. In order to obtain a maximum torque, the locking nut (1) has to be loosened and the adjusting screw (2) has to be screwed in up to the stop. Tighten locking nut.



**Attention:**

- You must not screw out the adjusting screw (2)!
- Only execute adjustments of the torque when the hoses are disconnected.
- We assume no liability for incorrect use or operation!
- The impact wrench is supplied with maximum setting!

## Maintenance of Hydraulic Tools

Only proper maintenance can ensure constant performance, reduction in wear and thus, a decrease in operating costs and an increase in service life.

Our hydraulic tools are equipped for an operating pressure of up to 100 bar. Regulator setting for a lower operating pressure is possible.

The tools should not run empty, because this results in heat and higher wear of the output section and the tool holder.

The hydraulic oil should be clean. This is ensured by professional equipment. Clean the connecting parts before connecting the hydraulic hoses.

For an economic use of the hydraulic tools the required sizes of pipe, fittings and hoses have to be adjusted.

Proper greasing of the gear and the tool heads is a must.

See the operation manual on this.

After finishing the work the tools have to be cleaned and protected against corrosion. Visible grease nipples are provided for regular lubrication of the gears with a grease gun, or the gearboxes have a long term greasing.

Note the following for grease lubrication: Every 60 hours of operation check striking mechanism, friction bearings and antifriction bearings; if necessary, grease them. Every 300 hours of operation grease the gears and antifriction bearings anew. In the case of impact wrenches, use a grease gun to grease the anvil guide before beginning daily work, or every 6-8 hours.

All inner parts of the drive (tool holder) must be lubricated before storing for longer periods of time in order to prevent rusting. It is recommended to check the vanes and bearings at regular intervals.

Store tools in dry rooms only.

Grease to be used:

In general: SAE 5 W to SAE 10

For impact wrenches without gear only SAE 5 W

For saw chain greasing on chain saws:

Machine oil with adhesive additive, viscosity:

c ST 49-55' (6,5-7,5 E)/ 50°C

<b>GREASE (free of acids and resins)</b>	<b>Multi-purpose greases for antifriction and friction bearings and gears</b>	<b>Special greases for high-speed miter gears</b>
Designation in accord. with DIN 51502	K L 2 k 2	G 000 h 00
Consistency class (DIN 51818)	Lithium	Sodium
Saponification type	185 °C	145°C
Dripping point	265 to 295	400 bis 410
Worked penetration	-25°C to + 125°C	-25°C bis + 100°C
Temperature range		

**For the operation of the hydraulic motor we recommend high-class hydraulic oil, e. g. HLP 46, depending on the case of operation (temperature).**



### Spare Parts

Only original SPITZNAS spare parts may be used. There is no warranty for damages and liability is disclaimed, if non-original spare parts and accessories are used.

### Troubleshooting

	Problem	Cause	Remedy
a	Machine doesn't start	No connection to hydraulic oil  Hoses inverted  Gearbox blocks  Low oil pressure or low displacement	Connecting and opening of the hydraulic line  Connect hoses correctly  Disassemble gearbox, clean, replace worn parts  Check the feeding unit, which provides the oil
b	Machine turns too slowly	Operation pressure too low  Gearbox tarnished	Increase operation pressure to 140 bar (at the machine)  Disassemble gearbox, clean, replace worn parts
c	Gearbox makes strong noise	Gearing rattling, Ball bearings defective	Disassemble gearbox, clean, replace worn parts



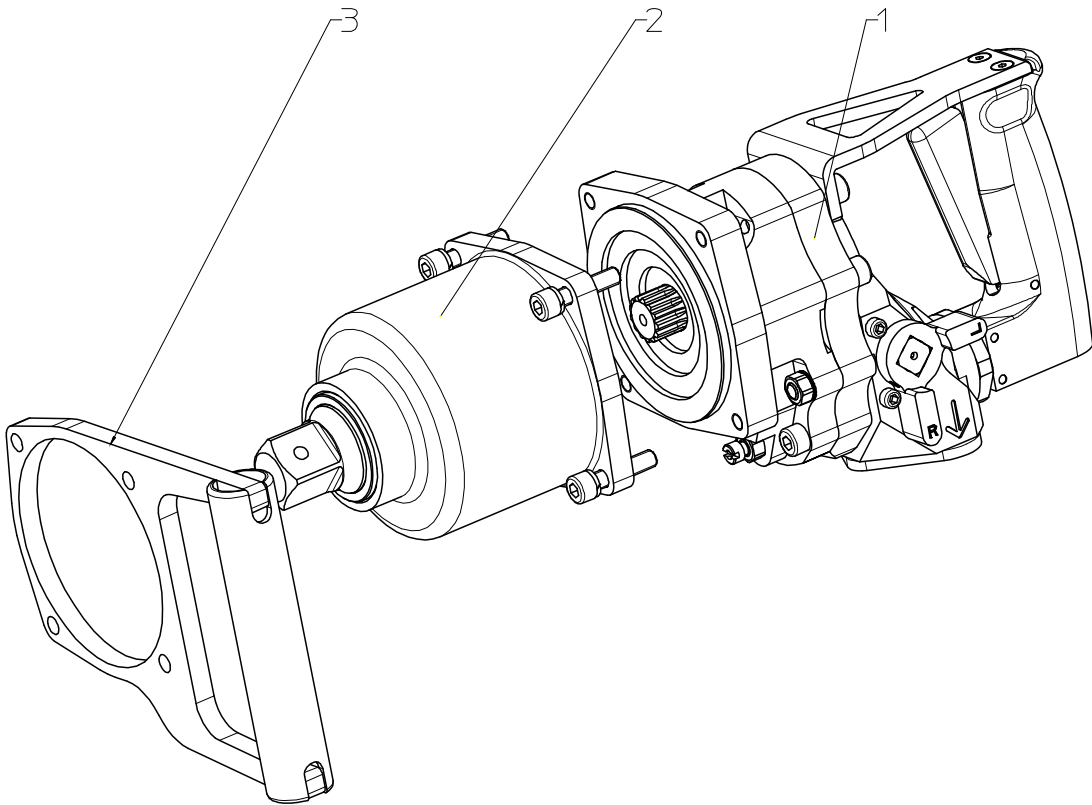
### Spare Parts List

Description:

**Hydraulic Impact Wrench**

Part and drawing number::

**6 1520 0010**



## Spare Parts List

Description:

Part and drawing number:

**Hydraulic Motor**

**6 1520 1000**

Item	Qty.	Description	Part and drawing no.	Remarks
1	1	Motor housing, Assy.	6 1520 1910	with item 2 and 3
2	1	Arresting bushing	6 1520 1140	
3	1	Bushing	9 1029 7400	
4	1	Motor cover, Assy.	6 1520 1930	with item 5,6 and 7
5	1	Control sleeve	6 1512 3010	
6	1	Bushing	9 1029 7400	
7	2	Pin screw	9 1130 5050	
8	1	Spline shaft	6 1520 1030	
9	1	Gear pinion	6 1520 1020	
10	1	Bushing	9 1029 7500	
11	1	Running axle	6 1520 1130	
12	1	Cylinder pin	9 1631 0420	
13	1	O-Ring	9 1921 5070	
14	1	Supporting ring	9 1919 0230	
15	1	O-Ring	9 1921 5080	
16	1	Control bushing	6 1512 3050	
17	1	Valve-Seat	6 1520 3060	
18	1	Piston	6 1512 3080	
19	1	Connection screw	6 1520 3120	
20	1	O-Ring	9 1901 4100	
21	1	O-Ring	9 1921 5060	
22	1	Pressure rod	6 1520 3110	
23	1	Guide	6 1512 3090	
24	1	Pressure spring	9 1803 4650	
25	1	Pressure spring	9 1803 4660	
26	1	Adjusting spring	6 1520 1080	
27	1	Hexagonal nut	9 1203 0050	
28	1	O-Ring	9 1921 5060	
29	1	Locking screw	9 1174 0010	
30	1	Rotary slide	6 1520 3320	
32	2	O-Ring	9 1901 3040	
33	1	Snap ring	9 1702 0120	
34	1	Lever RH-LH	6 1520 1090	
35	1	Tensioning sleeve	9 1630 0340	
36	1	Adapter sleeve	9 1630 0450	
37	2	Socket head screw	9 1110 3010	



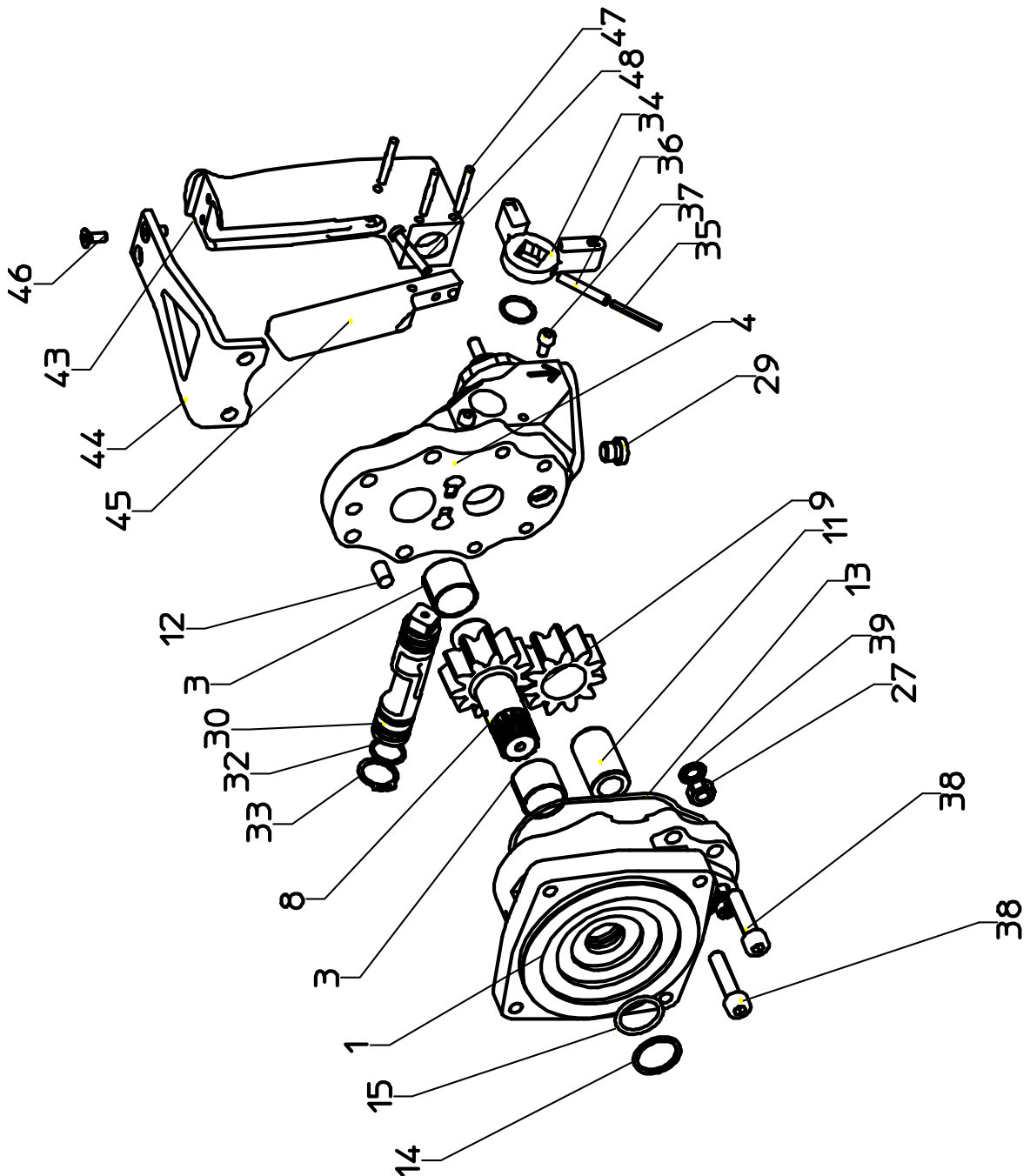
### Spare Parts List

Description:

Hydraulic Motor

Part and drawing number:

6 1520 1000



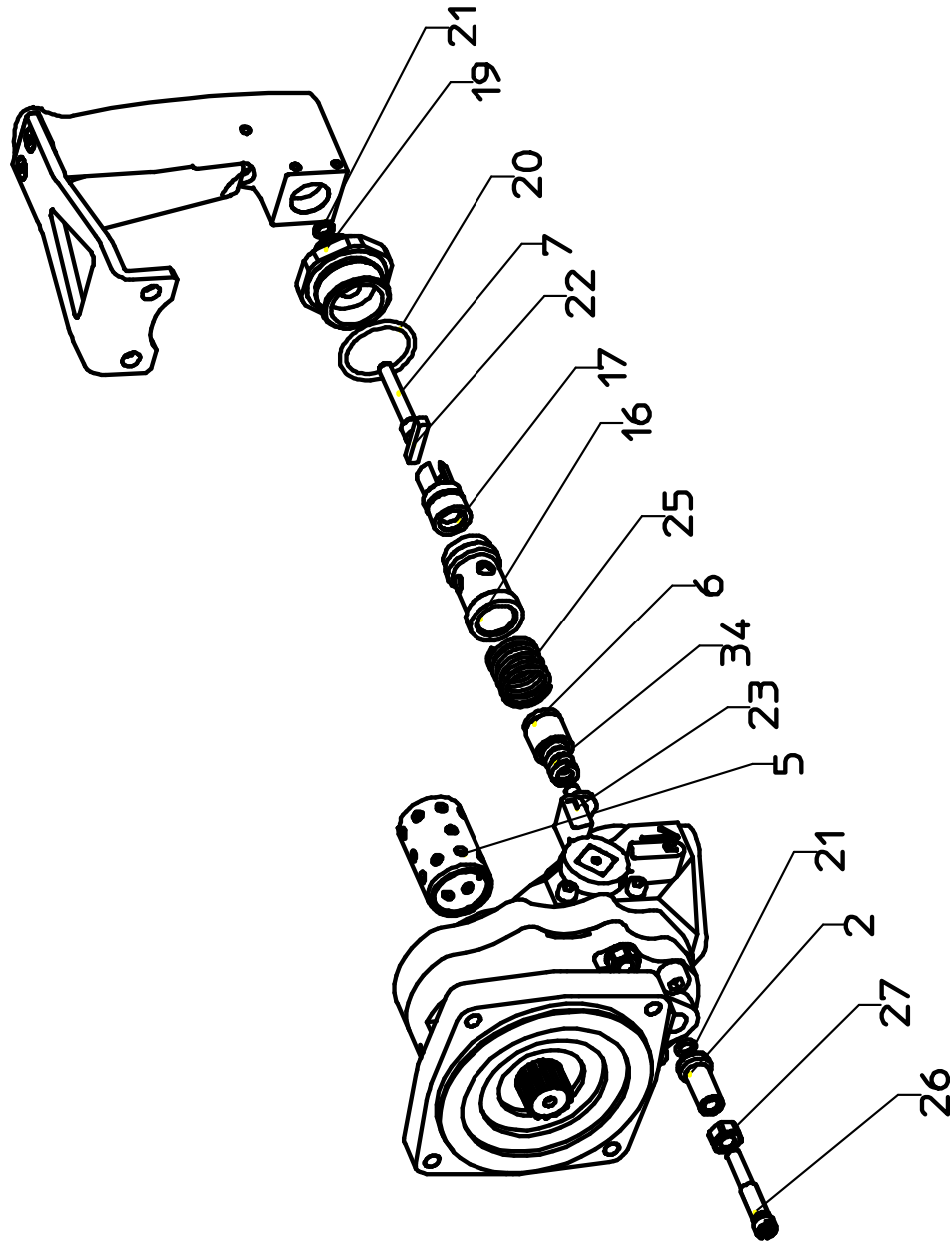
### Spare Parts List

Description:

Hydraulic Motor

Part and drawing number:

6 1520 1000







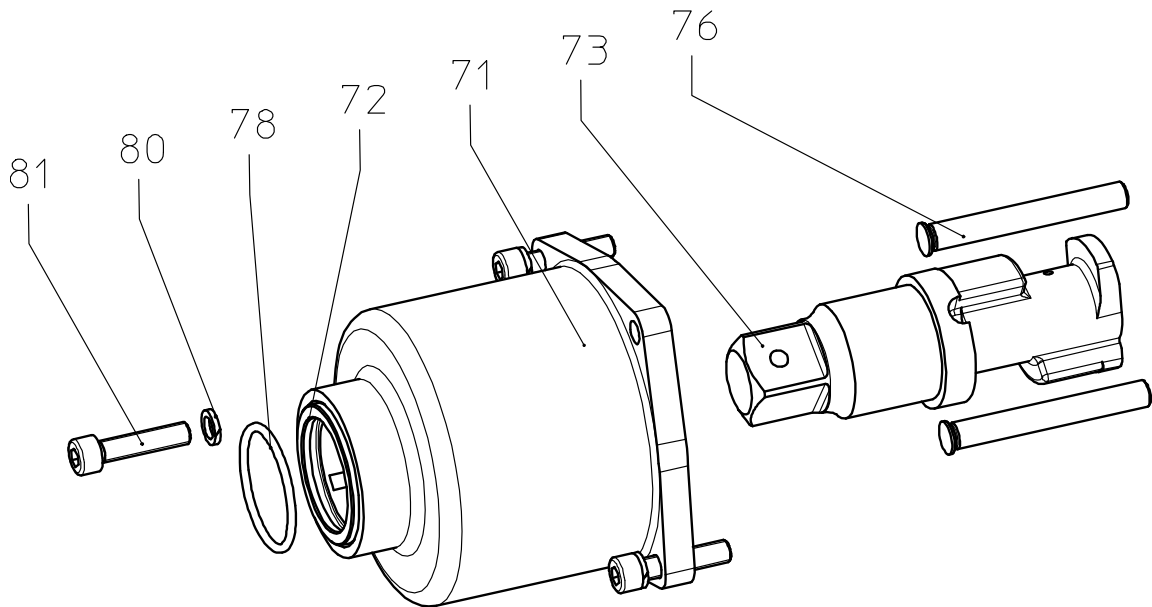
### Spare Parts List

Description:

**Impact Mechanism, Assy.**

Part and drawing number:

**6 1520 4500**



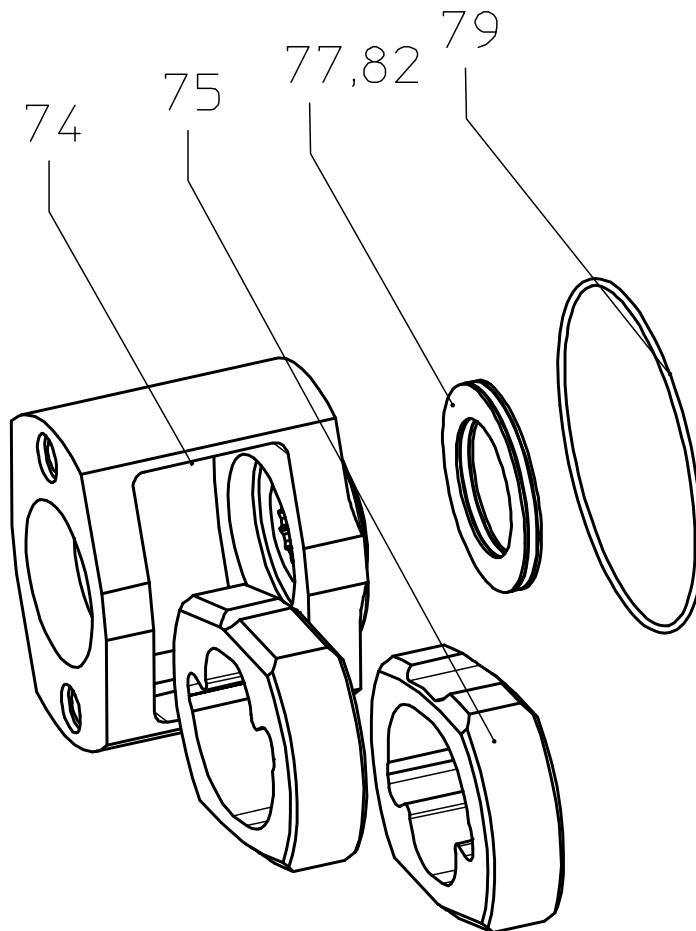
### Spare Parts List

Description:

**Impact Mechanism, Assy.**

Part and drawing number:

**6 1520 4500**



**Declaration of Conformity**  
as defined in the European Union Machine Directive 2006/42/ EC  
for usable machines

We, the company

**SPITZNAS Maschinenfabrik GmbH, Fellerstraße 4, 42555 Velbert– Langenberg,**

declare that the following product

**Description: Hydraulic Impact Wrench**

**Model : 6 1520 0010**

complies with the provisions of the European Union Machine Directive 2006/42/ EC  
and conforms to the following standards or standardized documents:

**DIN EN ISO 12100**  
**DIN 24063**