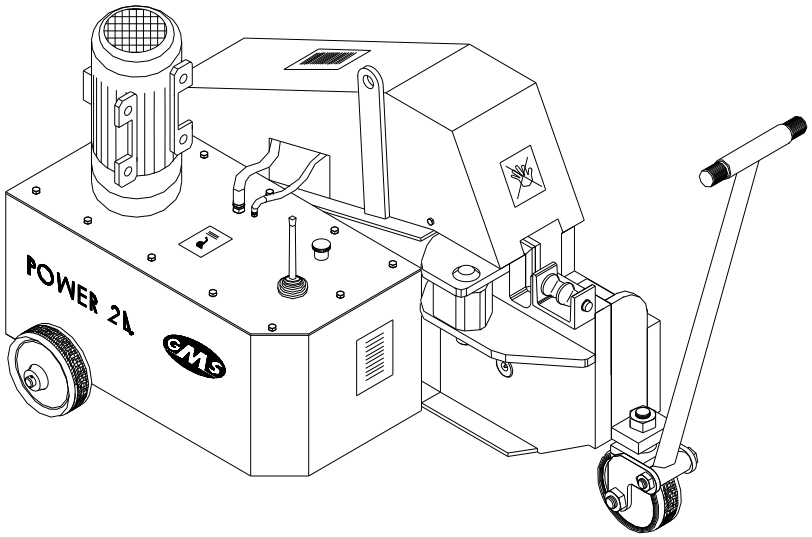
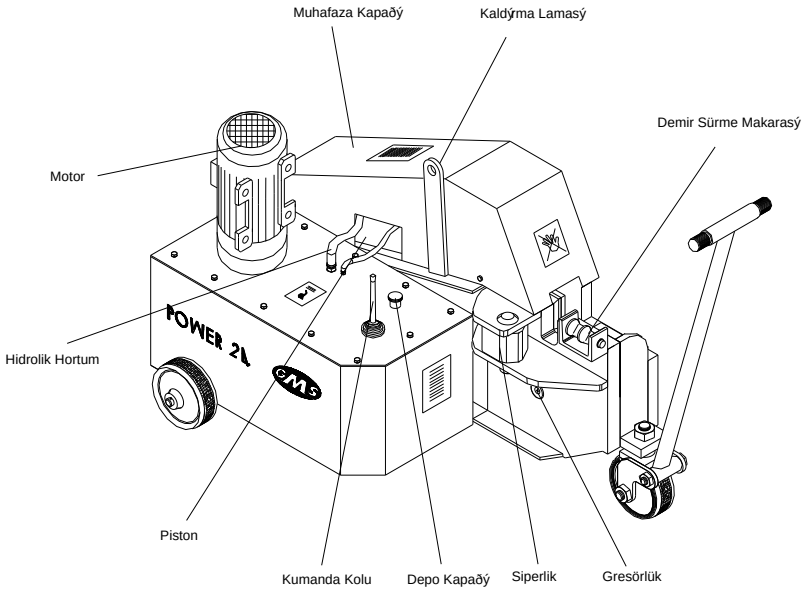
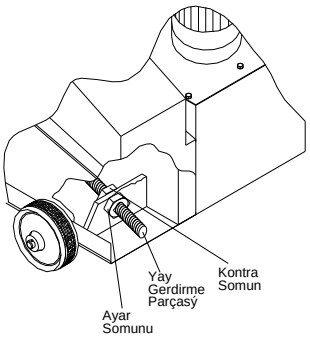
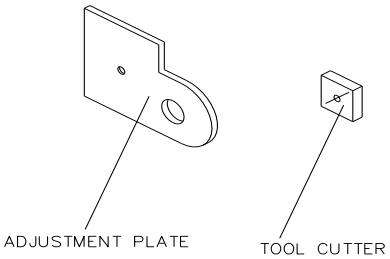


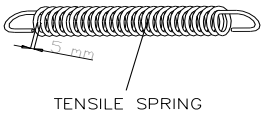
POWER 24 HYDRAULIC CUTTING MACHINE FOR CONSTRUCTION IRON
OPERATING & MAINTENANCE MANUAL

GÖÇMAKSAN









Overview

The POWER 24 Hydraulic Cutting Machine for Construction Iron is designed and manufactured for cutting metallic bar materials. In order to get the best output from POWER 24 locate it in such a position so as to be operated easily, and to provide more efficient work from the Operator. Therefore, the site where the machine will be operated is to be near the storage area of construction iron, and to be covered with a shed, which would be more convenient. We recommend you to locate workbenches in both sides of the machine. The length of each bench is to be the longest length of the material to be bent. By means of support of these benches, the Operator will be able to cut all kind of construction iron without lifting and turning over them, and thus the possibility of more productive work may be obtained from the Operator.

Important Warning!

- Prior to operate the machine read through this Operating & Maintenance Manual, carefully.
- Only the qualified personnel are allowed to operate the machine.

- Disconnect the power prior to make checks, maintenance, lubrication, and/or adjustments.
- Observe all guidelines provided in this Operating & Maintenance Manual.

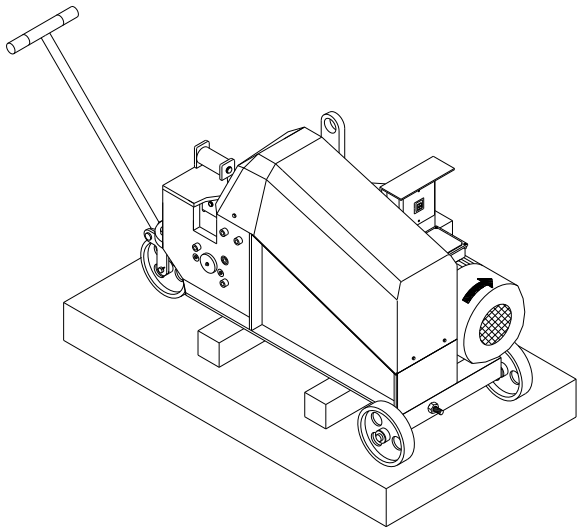
1. SET-UP PROCEDURES

1.1 Level the machine on a flat and sound ground by using the wooden wedges to support it from the bottom so as the wheels will not get in contact with the ground **(Figure 1).**
1.2 Made the power connection by a qualified electrician.

Note: Power Connection
1.3 Plug on the power supply cord of 5x4 mm^2 to the feeding line of main power.
1.4 Grounding is to be made for safety. Do not operate the machine without grounded power.

Grounding Connection: Follow the procedure below:
Connect one end of the ground cable to a copper wire (minimum16 mm) so as to ensure electrical conductivity. The other end of the cable is to be connected to a tube having ability of conductivity dipped sufficiently into the ground (into the damp soil, preferably), or to a copper plate buried under the soil as deeper as possible.

FIGURE 1



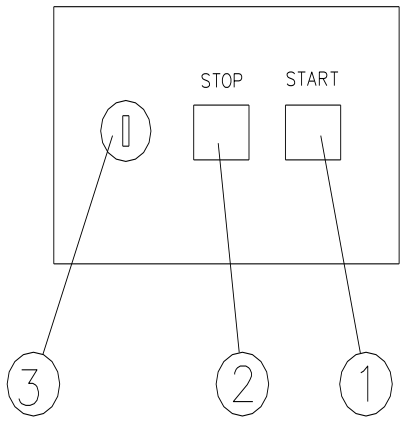
1.2. START UP PROCEDURE

1.2.1 Check and ensure that the machine is installed in accordance with instructions.
1.2.2 Remove any substance between the cutters and the machine, if any.
1.2.3 Keep your hands away the cutters.
1.2.4 Ensure the shield is closed.
1.2.5 Press the "Start" button to operate the machine **(Figure 2).**

Note: Disconnect the power cord if the machine will not be operated for a long time.

Warning! Ensure the direction of rotation of motor is clockwise. The machine cannot make cutting if it is operated with the direction counter clockwise, and the hydraulic pump will be damaged **(Figure 12a).**

FIGURE 2. Control Buttons



2 . TECHNICAL SPECIFICATIONS

Capacity of Cutting

Adet / Piece	Strength of Material		
	45 kg/mm²	65 kg/mm²	85 kg/mm²
1	● Ø 24	● Ø 20	● Ø 16
2	● Ø 14	● Ø 10	● Ø 8
3	● Ø 12	● Ø 6	● Ø 6
1	■ 20	■ 16	■ 12
1	■ 14	■ 12	■ 10
1	▬ 35x10	▬ 30x10	▬ 20x10

- Model : **POWER 24**
- Name : **Hydraulic Cutting Machine for Construction Iron**
- **Dimensions of a Tool Cutter**
  Width : 50 mm
  Length : 50 mm
  Thickness : 15 mm

- Operating Pressure : 60 bar (max)

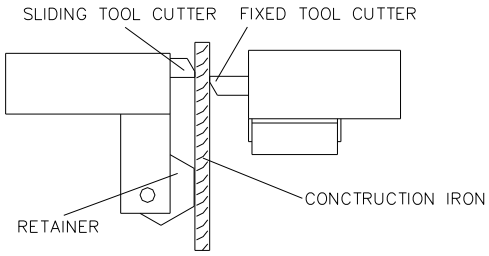
- **Dimensions of Machine**
  Width : 0.51 m
  Length : 1.04 m
  Height : 0.60 m
  Weight : 110 kg
- **Motor Specifications**
  Power : 1.5 kW
  Speed : 1390 rpm
  Voltage : 380 V
  Frequency : 50 Hz

3. APPARATUS AND TOOLS SUPPLIED WITH THE MACHINE

- Allen Key 10 mm 1 ea

- Grease Pump 500 cm^3 1ea
- Spare Tool Cutter 50x50x15 2 ea

Proper Cutting Forms
FIGURE 3



PROPER CUTTING

FIGURE 4 The fixing form of multiple material

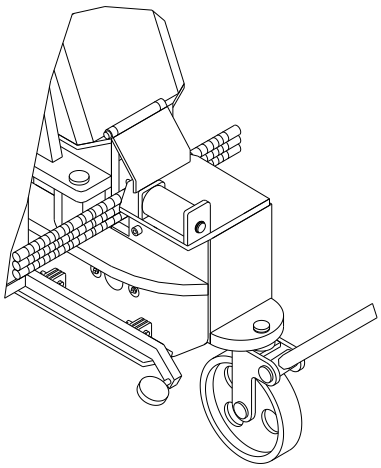
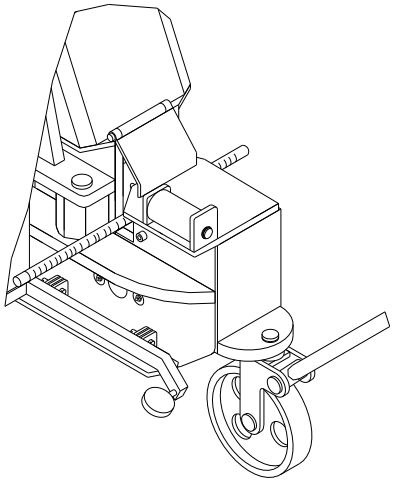


FIGURE 5 The fixing form of single material



WARNING! Always keep the shield closed during operating the machine.

Improper Cutting Forms

FIGURE 6 The inclined fixing

FIGURE 7 The fixing without a retainer

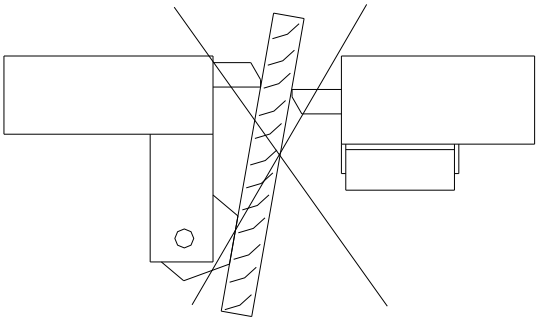


FIGURE 8 The fixing form of multiple material without a retainer

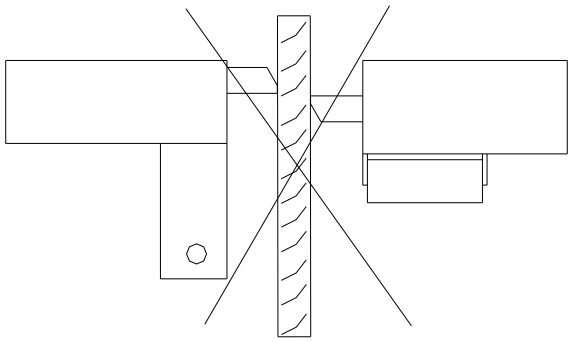
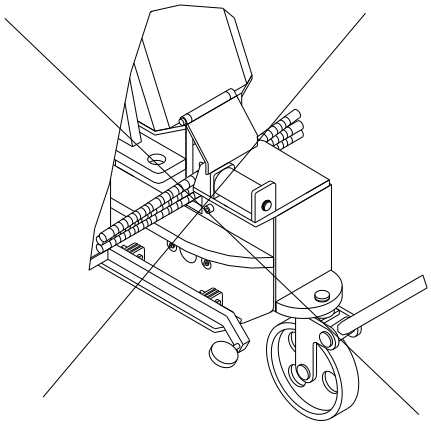


FIGURE 9 The fixing form of single material without a retainer



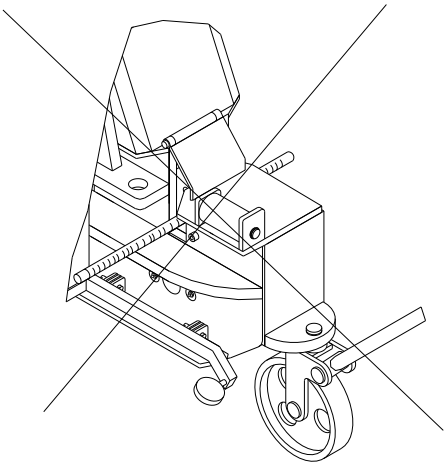
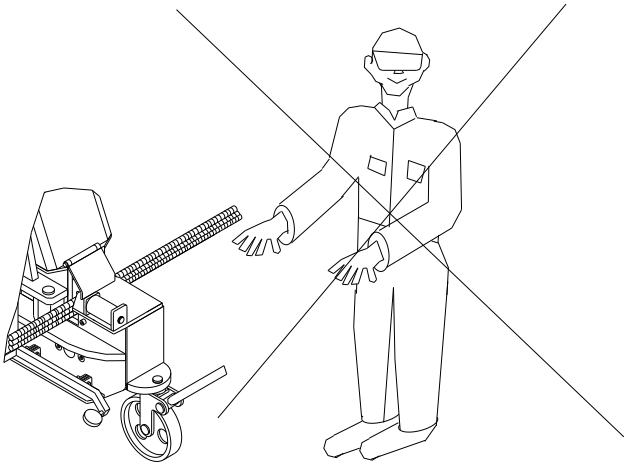


FIGURE 10



4. GUIDELINES FOR SAFETY, AND EFFICIENT USE

▼ Always keep the shield closed during cutting on the machine **(Figure 4 and 5).**
▼ Disconnect power prior to change the cutters, and to make checks, maintenance, lubrication, and/or adjustments.
▼ Do not allow the people standing in front of the machine during cutting process. Keep those

out of the machine (**Figure10).**

▼ Keep your hands and/or arms away from the tool cutters while the machine is operating.

▼ Remove all foreign materials such as hammers, adzes, measuring tapes, callipers, levers and/or similar construction tools among the cutting apparatus.

▼ Do not operate the machine if it is wet.

▼ Do not try to make cutting using the measurements, dimensions or quantities other than those specified in the nameplate.

▼ Support and fix the construction iron material to be cut between the tool cutters and a retainer. Do not try to make cutting other than that of specified **(Figures 3, 4 and 5).**

▼ Do not cut materials improperly.

▼ In multiple cutting, put the construction iron material one over another in number specified in the nameplate, and place them between the tool cutters, and support and fix them by means of the retainer. Do not try to make cutting other than that of specified **(Figures 4).**

€ Do not operate the machine if the power panel lid is opened.

€ Do not attempt to change the thermal current field adjustment made by manufacturer **(Figure 12).**

€ Do not operate the machine without grounded power.

▼ Do not operate the machine if the hood and/or shield are opened.

▼ Do not allow the machine to be operated by those other than the qualified operators.

Φ Do not operate the machine without hydraulic oil.

▼ Do not allow removing the warning labels stuck onto the machine.

▼ Do not allow to use the spare parts and apparatus other than the genuine ones manufactured by the Göçmaksan.

▼ Do not allow cutting with blunt and cracked tool cutters.

▼ Do not use pressurised air to clean the machine.

▼ Do not attempt to tense or change the spring whilst the cutter-carrier is up position.

€ Do not operate the motor at the reverse direction indicated with the arrow (clockwise) on the motor **(Figure 12a).**

▼ Do not make cutting in improper forms in the machine **(Figure 6, 7, 8 and 9).**

5. WARRANTY

The producer will only accept the warranty and responsibility subject to the following terms and conditions:

▼ Observe all protective precautions.

▼ Observe the warning signs.

Φ Do not operate the machine without hydraulic oil. Use the hydraulic oil no. 37.

€ Do not operate the machine without grounded power.

▼ Do not replace failure parts and apparatus other than the genuine ones manufactured by the Göçmaksan.

▼ n multiple cutting, put the construction iron material one over another in number specified in the nameplate, and place them between the tool cutters, and support and fix them by means of the retainer **(Figure 4).**

▼ Observe the instructions specified in the safety guidelines.

▼ Observe the guidelines for safety, and efficient use **(Figure 6, 7, 8, 9 and 10).**

▼ Observe the instructions for installation.

▼ Operate the machine by qualified operators.

▼ Observe the measurements, dimensions and the quality of material specified in the nameplate.

▼ Use always the machine in conformance with it's production purposes.

€ The power connection is to be made by a qualified electrician.

€ Ensure the direction of rotation of motor is clockwise **(Figure 12a).**

▼ Observe the conditions for loading, transportation, and unloading of the machine.

▼ Do not allow the machine to be operated if any of its parts is disassembled.

€ Do not change the motor.
▼ Observe the instructions for proper service and maintenance.
▼ Do not allow the machine to be operated without a retainer.
Φ Always change the hydraulic oil in time.

6. PROTECTIVE PRECAUTIONS

6.1 Protective Cloths

- Protective helmets
- Goggles
- Boots with steel heads.
- Gloves

Use the above protective material if you work on the machine. In case of not use these protective materials note that there is always a risk of injury such as hand-cut and/or hand-caught.

6.2. Working Garments

Note that the following are the things and garments **not convenient** to wear against the risk of injury and caught during working with the machine: long hairs, dresses with long arms, identity disks or jewellery, long working aprons etc.

7. TRANSPORTING

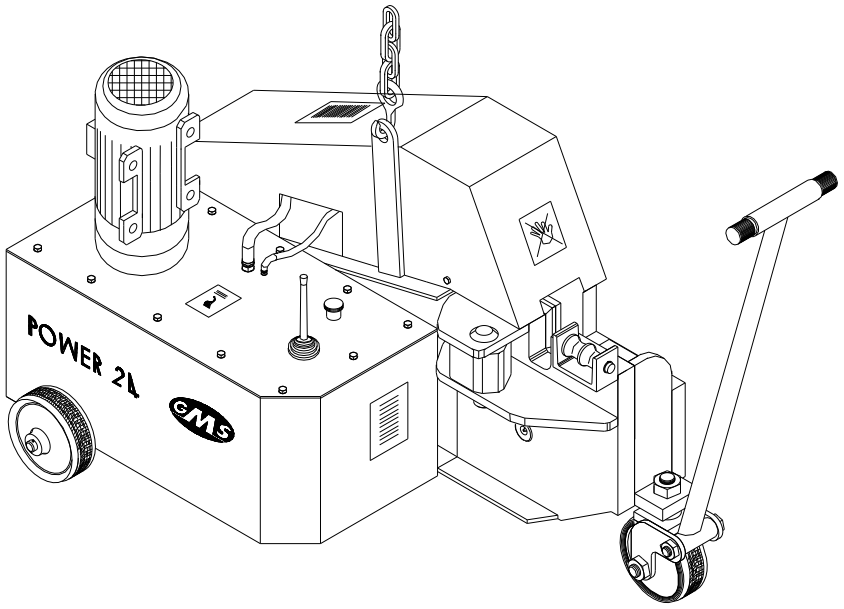
Utilize a forklift and/or a mobile, or a bridge-crane for transporting and lifting the machine. Use forklifts only if the machine is in a container. Put the machine in a container using wooden wedges under its wheels so as they do not touch on the bottom of a container, or locate it in a container with its wheels disassembled. Use steel ropes, chains and/or polyester tackle-block for lifting the machine. Use the opening for the crane hook on the bracket for lifting the machine. Employ experienced or specialized people or subcontractors for lifting purposes **(Figure 11).**

Warning!
Move the machine without causing any vibration. Do not transport it in wet conditions.
Please forward to the producer a report for the parts lost or damaged during transportation.

- Take maximum capacities of transportation and lifting machinery and equipment into your consideration.
- Take the centre of gravity of the machine into consideration during lifting it.

Note: Observe all instructions written on the warning labels

FIGURE 11



8. CHECKS AND ADJUSTMENTS

FIGURE 12

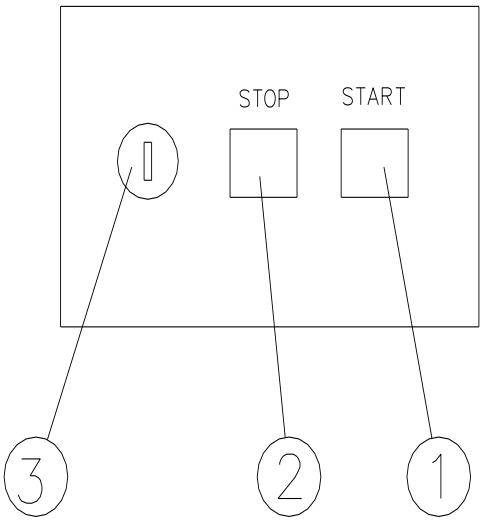
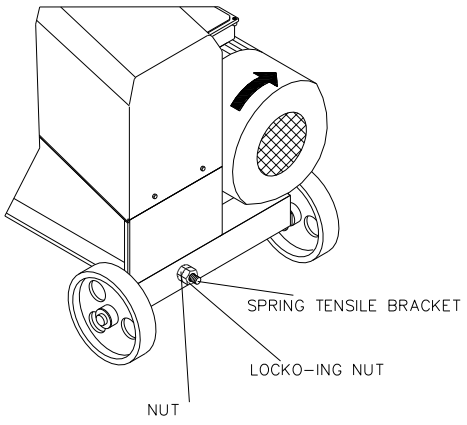


FIGURE 12a



ITEM	BUTTON	FUNCTION
1	START	Operates the motor by means of current application.
2	STOP	Stops the operation of the machine by means of disconnecting the power.
3	CURRENT ADJUSTMENT FIELD OF MOTOR	Adjusted by its manufacturer as 10 A. Do not try to change the adjustment.

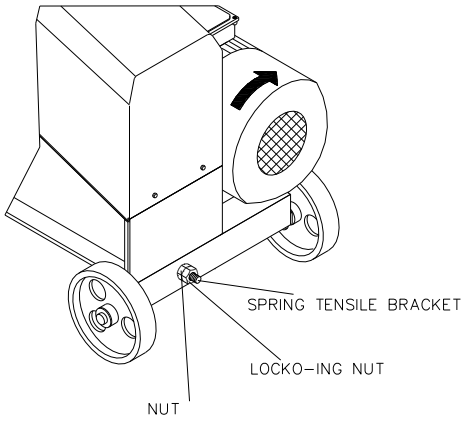
8.1 Adjustment of thermal current field: It is adjusted by its manufacturer as 10 A for 4 kW motor with 1.430 rpm. Do not change this adjustment **(Figure 12 and 12a).**
The motor circuit breaker is installed onto the machine to de-energize the motor in order the machine not to be damaged if it takes excessive current. Press the "Start" button for re-starting the machine in case of circuit breaking. Under no circumstances the circuit breaker is dismantled.

8.2 Adjustment of tensile spring: The normal length of tensile spring may be prolonged during working, or its tensile adjustment may be out of order during replacement. In these cases, springs cannot tense, or can tense slowly, the cutter-carriers. On the other hand, springs may be broken if tension is too much. Do the adjustment in complying with the following figure and instructions. The gap after tightening between each winding pitch is to be 5 mm **(Figure 13).**

Disassemble and assemble the tensile spring from or to the machine

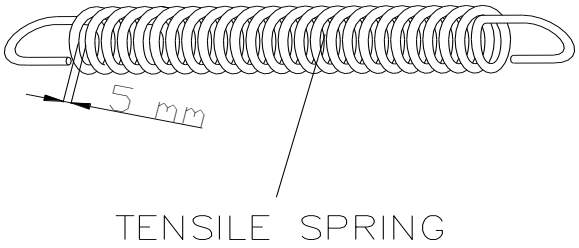
1. Loosen the locking bolt on the spring tensile bracket at the backside of the machine, and remove the lower end of the spring from the bracket, and the upper end from the hydraulic assembly.
2. Insert one end of a new spring onto the hydraulic assembly, attach the other end to the spring tightening bracket and turn the nut by a suitable spanner to tense the spring, and then tighten the locking nut to complete the adjustment **(Figure 13).**

Note: In order to make a tensile adjustment loosen the locking nut first, tighten the springs until the gap between two winding pitch is 5 mm **(Figure 13a),** and then tighten the locking not again.
FIGURE 13



Warning! Do not try to make a tensile adjustment or replacement of spring whilst the cutter-carrier is tilted position.

FIGURE 13a

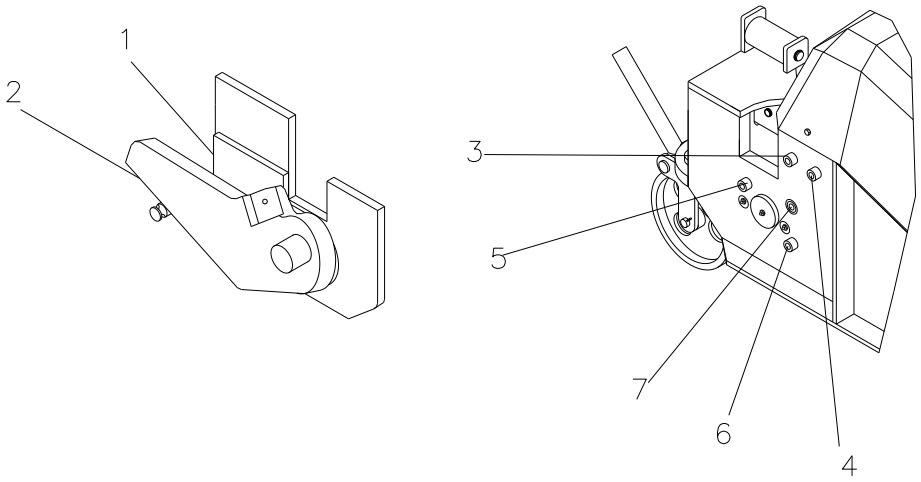


8.3 Adjustment of Clearance of Cutter-carrier: The clearance of the tool cutter-carrier may be increased in the course of time. This situation may create danger by causing the machine be forced and misused, and the tool cutters be broken. If the adjustment is too tight the springs cannot tense the cutter-carriers, and cause to collide the tool cutters with each other. Therefore, make the adjustment carefully. The clearance between the tool cutters is to be 0.5 mm.

Adjustment process (Figure 14)

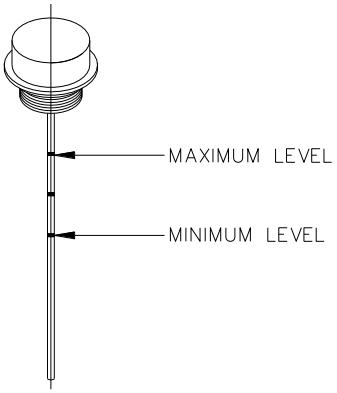
a) Loosen the bolt (7).
b) Loosen the locking nut first and then the nuts (3), (4), (5) and (6) to adjust the clearance to be 0.5 mm. (Note that the bolts (3), (4), (5) and (6) are to get in touch with the adjustment plate). Refer to Figure 15b for the gap between the cutters.
c) Tighten the bolt (7) by supporting the adjustment plate against the bolts (3), (4), (5) and (6) (Figure 15c).
d) Tighten the locking nut.

FIGURE 14



8.4 Oil Level Check: The oil level in the tank may be decreased due to evaporation and possible leakages in the course of working time. In such cases, check first the oil level indicator on the oil dipstick attached to the oil filler cap. The oil dipstick has two indication lines: maximum and minimum. The oil level is to be between these two lines (Figure 15).
Note: The capacity of the oil tank is 18 litres, and the number for the hydraulic oil to be used is 37.

FIGURE 15



8.5 Replacement of cutters: Dismantle first the stationary tool cutter whilst the machine is off. Start the machine, pull the control lever back and hold it in pulled-back position until the hydraulic cylinder rises and the head of the bolt fixing the sliding tool cutter is appeared, and then press the stop button, dismantle and replace the old sliding tool cutter when the machine is off and release the control lever going back to its position. Do the same processes in reverse, and assemble the stationary tool cutter.

9. MAINTENANCE AND LUBRICATION

Note that the proper maintenance is very important in order to prolong the service life of the machine, and to ensure the bending works in safety. We recommend the users are to establish a reliable system to control and maintain the machine. Please refer to the following instructions if you need. Use 18 litres of hydraulic oil no 37 in the hydraulic tank.

9.1 Daily Maintenance

- Use the protective cover against rain should the machine be operated in the open air.
- Use a brush to clean the tool cutters.
- Check the edges of tool cutters. Replace if broken and/or distorted.

9.2 Weekly Maintenance

- Use grease nipples for weekly greasing. Replace if broken.
- Check the tightness of tool cutters' bolts.

9.3 Monthly Maintenance

- Dismantle and clean the tool cutter carrier.
- Check and tighten all bolts and nuts of the machine.
- Lubricate all movable parts of the machine.
- Check the level of hydraulic oil.

9.4 Biannual Maintenance

- Dismantle and clean the tool cutter carrier.
- Check the hose and nose records of the hydraulic system.

9.5 Annual Maintenance

- Clean the oil filter in the oil tank.
- Check the housing if any welding crack or bent exists.

Warning! The period of use for the hydraulic oil no. 37 is 1000 hours. Change the oil at the end of this period. Otherwise, you may cause the hydraulic pump be damaged.

Warning! Change the oil at the end of the 6-month period despite it is preserved against dust, water, dirt etc within the hydraulic oil tank if the machine is stored without operation. In case of exceeding this period, no problem may be seen but make a test the oil first before use.

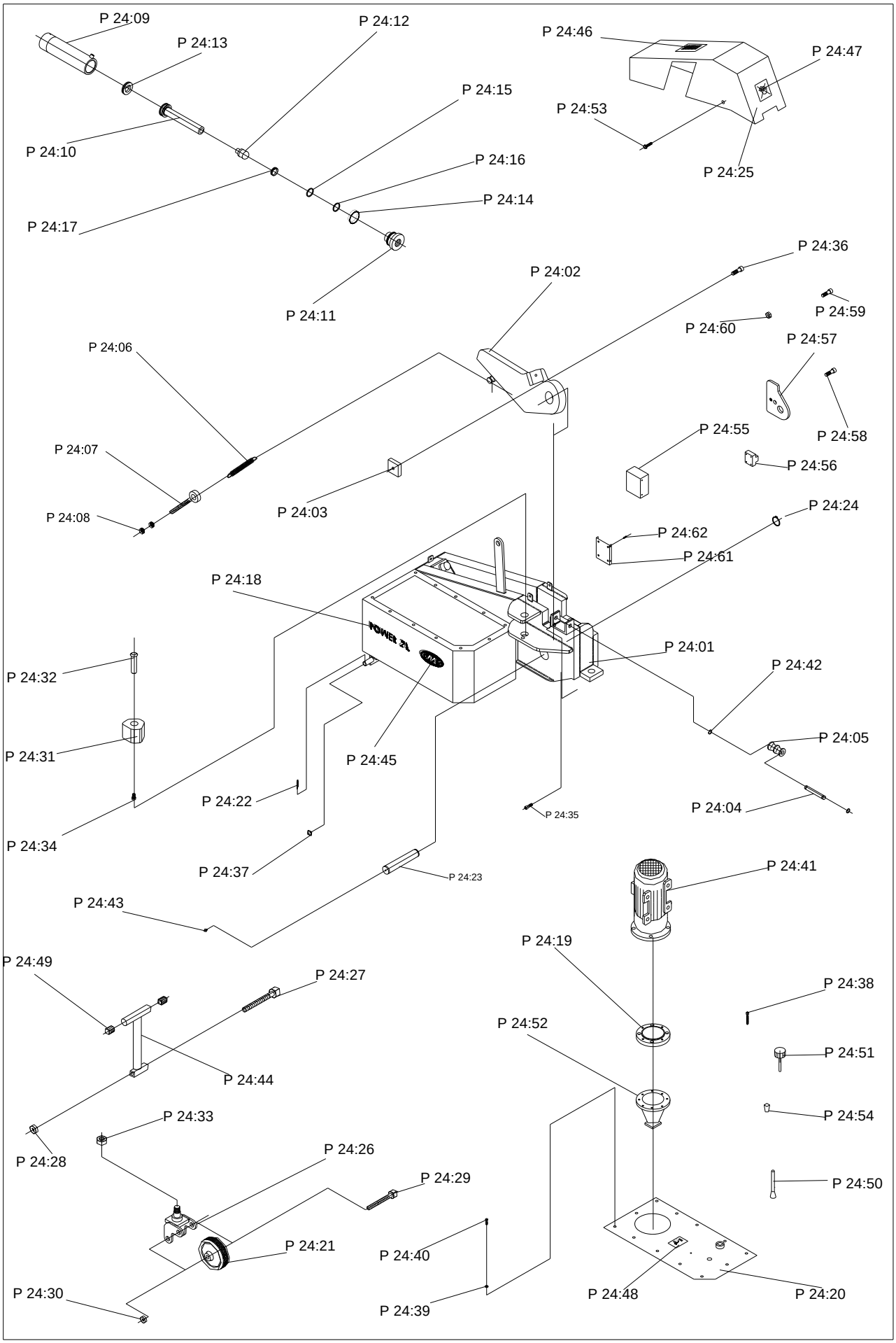
10. TROUBLESHOOTING

Refer to the Troubleshooting Chart below for the failures, errors and/or troubles, which may be take place during utilization of the machine.

Warning! Disconnect first the power by turning the main switch to the (0) position in case of a need to open the lid of power panel for troubleshooting. Do not allow the people other than a qualified electrician to make a check and/or a repair in the power panel.

NO	SYMPTOM	POSSIBLE CAUSE	SOLUTION
1.	Fuse switch cut-out very often	1. Motor and installation have a short circuit. 2. The adjustment of thermal current field is low. 3. Motor protection switch or its contact points are out of order. 4. Motor has a short circuit.	1. Check if there is a short circuit. 2. Check the adjustment of thermal circuit field. Make it to 10 A if it is low. 3. Check the switch. Replace if it is out of order. 4. Disconnect the power and check if any short circuit exits.
2.	Machinery fails to operate.	1. Cable connections are broken. 2. Power supply is interrupted and/or one of the phases is short.	1. Check the cable connections. 2. Check the fuses in the power panel.
3.	Machinery fails to cut	1. Strength and dimension of material are not complied with those required. 2.No oil exists in the oil tank. 3.Rotation of motor is reverse. 4. Pomp or control is defected. 5. Oil leakage from hoses or connections in the hydraulic oil tank. 6. Hydraulic oil is deteriorated.	1. Check the material in accordance with the data in the nameplate. 2. Check the oil level in the tank. 3. Check the direction of rotation is on the direction of arrow (clockwise). 4. Check the pump and control. 5. Check if any leakage in the oil tank. 6. Check the lubricating quality of the oil.

NO	SYMPTOM	POSSIBLE CAUSE	SOLUTION
4.	Machinery brakes the bolt of tool cutter very often	1.The bearings of tool cutters are worn out. 2. The tool cutters are collide each other during cutting process.	1. Check the bearings of the tool cutters. 2. Check if the tool cutters collide or not.
5.	Machinery brakes the spring very often	1.The tension is high	1.Check the tension of spring.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