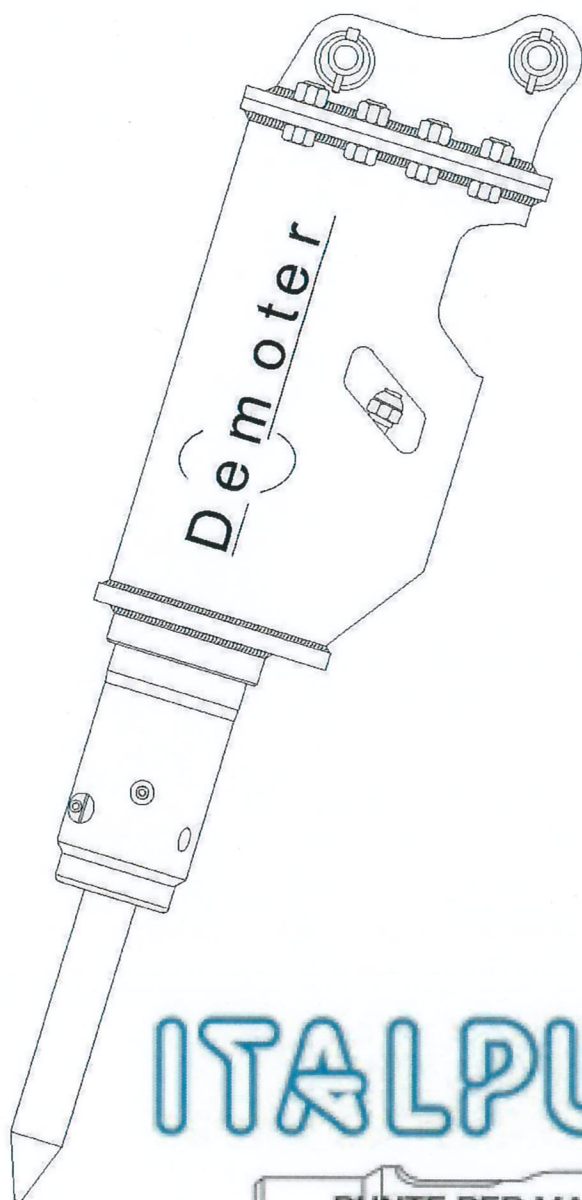


MANUALE DI USO E MANUTENZIONE
OPERATING AND MAINTENANCE MANUAL
MANUEL D'USAGE ET DE ENTRETIENE
BEDIENUNGSANLEITUNG UND WARTUNG
MANUAL DE EMPLEO Y MANUTENCIÓN



DEMOTER
S700

ITALPUNTE® SRL



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THANK YOU FOR CHOOSING OUR PRODUCT

All information, recommendations and instructions that our technicians have considered relevant for the correct use of the hydraulic breaker have been included in this manual.

It also includes the rules for regular servicing, which will enable you to keep the hydraulic breaker perfectly efficient.

We recommend you also to read all its parts before attempting the use of the hammer for the first time.

WARRANTY NOTES:

ITALPUNTE SRL gives no warranty on wearing parts, especially the following:

- Seals and Diaphragms
- Wearing Bushings
- Tie Rods and nuts
- Beat Spacers
- Retaining Pins
- Tools

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1. GENERAL SAFETY INFORMATION

RECOMMENDATIONS FOR USE AND MAINTENANCE

For this manual draft we considered all those operations falling within the usual practice. Keep this manual in good condition and keep it always available near the breaker or in near by place. We urge you not execute any processing, repair or intervention not mentioned in this manual.

HAMMER IDENTIFICATION

The Hydraulic Breaker is identified by its CE plate placed at its side, close to the attachment pins to the excavator. In case of ordering spare parts, or requests for advice on the usage or maintenance, always refer to the type of breaker and Serial Number indicated in the CE plate. It is absolutely forbidden to remove it or to modify the features contained therein. As shown below, the CE plate is applied on ITALPUNTE Hydraulic Breakers to which this manual refers.



2. USAGE NOTES AND SAFETY INSTRUCTIONS

A close and a careful following of all the instructions in this manual will allow a safe and correct use of the hammer.

The hammer shall be used only by persons older than 18 years who has been adequately trained to use it.

It is necessary that the responsible for corporate security makes sure that the staff designed to use the hammer has read and understood this manual in all of its parts. Adjustment and maintenance servicing must also be performed by authorized, trained and over the age of 18 years personnel.

It is recommended that those who use this publication for maintenance and repairing must have a basic knowledge of the principles of mechanics and procedures concerning the technique of repairing.

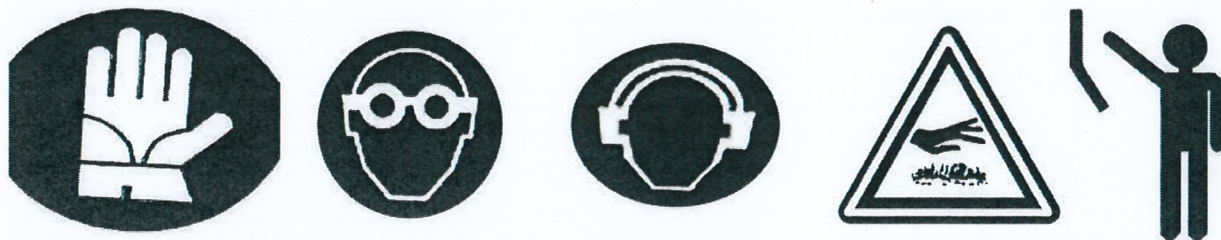
Connect the Hydraulic Breaker only to an excavator with appropriate weight. Do not touch any part while arms are moving.

Make sure that the relief valve of the excavator's hydraulic system is set at 40 bar higher than the working pressure of the breaker specified at page 7.

Every manipulation or removal of security elements can lead to serious accidents. Keep hands away from holes and joints when connecting the breaker to Excavator.

3. PROTECTION DEVICES FOR SAFETY

A set of plates is placed on the back of the hydraulic breaker to draw operator's attention. See figures



4. PERSONAL PROTECTION EQUIPMENT

Always wear safety goggles during the assembly and dismantling of the tool.



Wear protective gloves before removing the centering pins.



Use a head set for hearing protection if the noise level exceeds 90 db



Beware of the burning parts since the breaker can reach high temperatures when operating.



Close the windshield or the protection of the command cabin to protect from rock's splinters.



5. HYDRAULIC BREAKER TECHNICAL SPECIFICATIONS

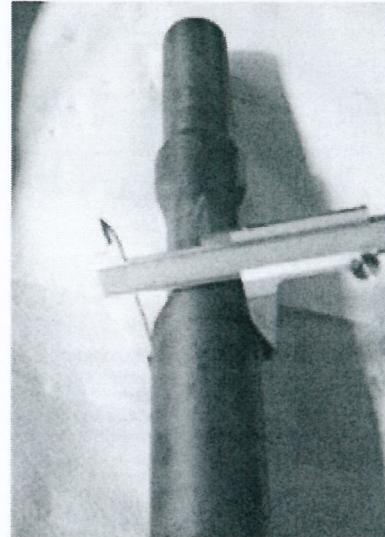
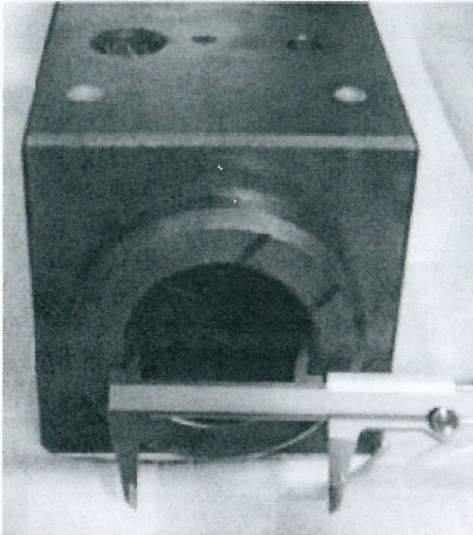
WEIGHT	KG	700
HEIGHT WITH STANDARD TOOL	mm	1900
TOOL DIAMETER	mm	95
STANDARD TOOL LENGTH	mm	800
REQUIRED OIL FLOW	L/Min	70 - 100
BLOWS PER MINUTE	B/Min	600 - 900
HAMMER OPERATING PRESSURE	bar	110 - 170
BLOW IMPACT ENERGY	joule	2000
CARRIER WEIGHT	ton	8 - 16
INTERNAL DIAMETER OF THE FEEDPIPE	mm	3/4
INTERNAL DIAMETER OF THE RETURN PIPE	mm	3/4
MAXIMUM PERMITTED RETURN PRESSURE	bar	25

5.1 TIGHTENING TORQUES FOR SCREW CONNECTIONS

CODE	DESCRIPTION	TORQUE Kgm
C000103	Bracket bolt	15
P045015	Side Bolt	30

5.2 CHUCK HOUSING AND TOOL WEAR MONITORING

ORIGINAL TOOL DIAMETER	mm	95
MINIMUM REQUIRED TOOL DIAMETER	mm	93
ORIGINAL CHUCK HOUSING DIAMETER	mm	95,5
MAXIMUM ACCEPTABLE CHUCK HOUSING DIAMETER	mm	98



5.3 OPERATING PRESSURES

OIL

FLOW	PRESSURE
75 LIT./MIN	150 bar

**LOW PRESSURE: (IN THE CHUCK HOUSING) 8 bar
Use Nitrogen (N₂) with 99,8% degree of purity**

6. HYDRAULIC CONNECTIONS TO EXCAVATOR

The hydraulic connection of the breaker to excavator is made by rubber hoses.

Such hoses are connected by one end to the excavator using taps or quick $\frac{3}{4}$ " couplings for IN and OUT oil flow and by the other end to the hydraulic breaker with a 1" thread both for IN and OUT oil flow.

The hose is connected to the breaker using nipples.

The delivery flow joint is indicated by an "P" inscription and the back flow is indicated by an "T" inscription. Such descriptions are marked near the connections joints.

On all the models manufactured by us, there is a plate showing the CE marking in compliance with the manufacturing principles dictated by the European Norm 2000

7. REQUIRED OPERATIONS AND CHECKS

Before mounting the tool, it is important to sprinkle the chuck bushing with molybdenum disulfide grease (MoS₂) recommended by us.

Before starting the hydraulic breaker, the tool should be brought into contact with the material to be broken then you need to apply pressure on the hammer with the excavator's arm so that the breaker is armed and ready to start.

The front of the excavator can be raised by a few centimeters from the ground so that its weight rests completely on the tool.

Before engaging the starting device of the breaker, close the windshield or the splinterguard of the command cabin. This allows you to protect against rock fragments that can be blown during the functioning of the breaker.

Ensure that the staff outside the cabin of the excavator is distant at least 20m from working area.

7.1 INSPECTIONS

- Monitoring of screw connections in the breaker subject to stress caused by its vibrations.
- Retaining Pin Integrity Checking.
- Rubber Hoses Checking.
- Checking of any possible oil leakage along the tool.
- Tie Rods Integrity Checking.
- Checking of loose angle of the tool in its housing.
- Tool wear Checking. In case that it is worn beyond the permitted limits, it must be replaced.
- Checking of the diameter of the wear bushings, where provided, according to the allowed diameters.
- Checking of the integrity of the housing.

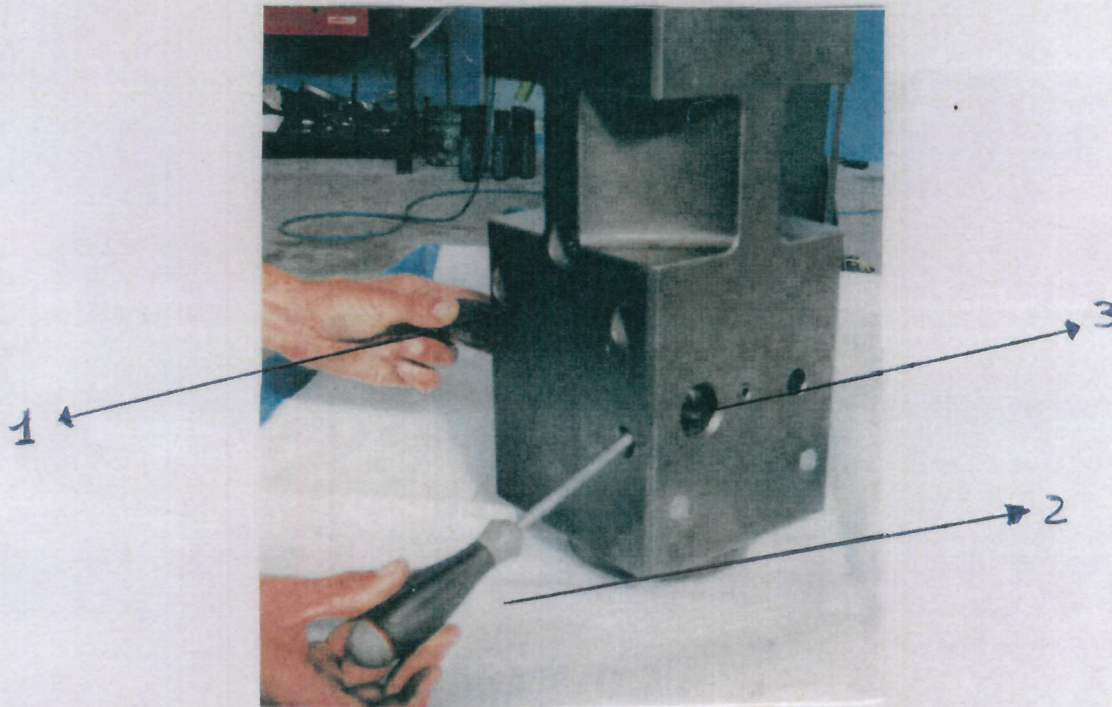
7.2 TOOL REMOVAL

Follow these steps to remove the tool: remove the pin (2) from its housing with a pin punch (1) until the exit hole of the retaining pin is completely cleared.

Then push the retaining pin at the opposite side (3) until it is completely pulled out.

At that stage you can slide out the tool.

Follow these steps to place the tool: anoint the chuck bushing with grease, insert the tool, then insert the two retaining pins and press them until the latch snaps. At this point the tool is locked.



8. STROKES FREQUENCY ADJUSTMENT (picture at page 14)

Adjust the amount of oil we have recommended (25 to 30 lit/min) using a flow meter and the excavator's accelerator or some valve fitted on it.

If there is no flow meter, while the excavator is started, using a pressure gauge mounted on its supply line, reach more or less the pressure recommended by us (100bar) by accelerating or adjusting the oil pressure valve of the excavator (if any).

WARNING: check that the relief valve of the excavator's hydraulic system is always set at least 40 bar higher than the recommended pressure.

9. NOISE LEVEL (Accordingg to the Directive 2000/14)

According to the surveys of the sound level measurements, Hydraulic Breaker's noisiness results to be:

LWA measurement:

db(A) 123.6

LWA secured:

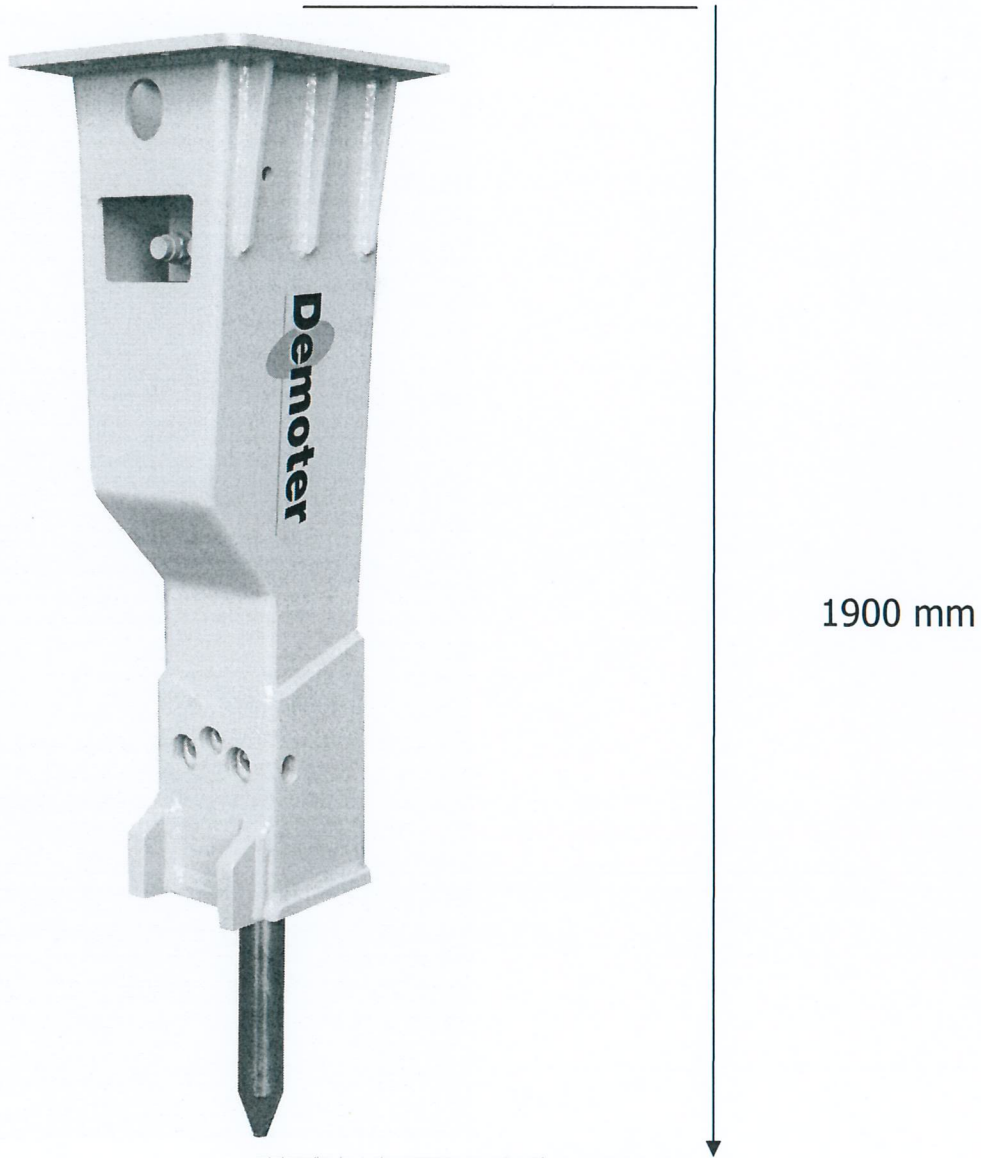
db(A) 127

10. SERVICING

- Lubricate the tool regularly once every two hours with 2 or 3 pumpings of greaser.
- Inspect the tool every 50 hours.
- Check that both the diameters of the tool and of the chuck housing correspond to those previously indicated (page 8)
- Make sure that on the surface of the retaining pins there are no bulges that may affect the outgoing of the tool from the breaker. Should this occur, remove the exceeding material by grinding.
- Check the bolt tightening during the first 50 working hours. After this period a monthly monitoring is sufficient.
- Use nitrogen gas (N) with 99,8% purity.
- Before removing the breaker's back head, make sure that the nitrogen pressure (page 8) has completely drained away through the nitrogen valve which is under the oil feeding holes on the back head.

11. OVERALL DIMENSIONS

See the dimensions shown in the drawing

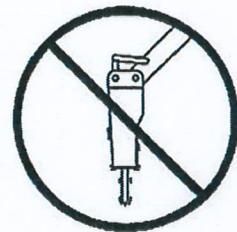


12. CORRECT USE

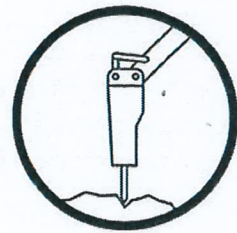
Engage the Block. Avoid to rest on a surface which can make your breaker slide while engaging the block. If this happens, there may be damaging shocks to both the excavator and breaker.



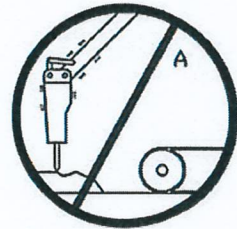
Blank Firing. Special care has to be taken not to carry out blank firing. A blank firing may cause Tie Rods' breaking. These are parts which keep together the various components of the breaker. Furthermore it may cause Retaining Pins' and Tools' breaking. Thus you have to disconnect the power supply to hammer at the exact moment of rock breaking.



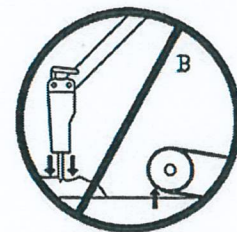
Correct Position. The breaker can work at any angle. However it is important that the boost is always given along the axis of the tool of the breaker.



The correct pressure (A). An insufficient pressure would cause vibrations to the machine and breaker's energy would not be completely released on the boulder.



The correct pressure (B). With an excessive pressure, resulting in jacking up the tracks or the wheels, the machine would fall forwards when rock breaks with damaging consequences for itself and for the breaker.



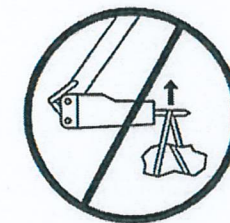
Do not insist on the same point. Do not beat on the same point for more than 30 consecutive seconds; if you can not break within this time period, change the position into parallel trying to break a smaller section. Doing so will prevent the overheating of the tool and of the whole breaker by induction



Do not move rocks. Do not use breaker's tool to move big boulders or apparently broken rocks



Never lift loads. Never use the breaker as a hook for lifting loads, it is out of safety standard.



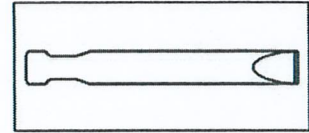
Underwater Use. Do not use the breaker for underwater work because, for syringe effect, water will be sucked into the impact chamber of the breaker and, at every stroke, it would cause a shock wave able to damage the seals. Furthermore there would be the risk of corrosion and oxidation (rust) of the lower part of the piston.



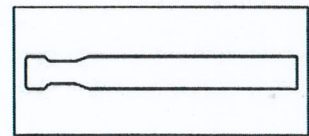
Please note: We can provide the kit for specific underwater operation on demand.

13. TYPES OF TOOLS

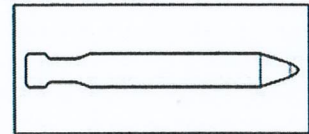
Chisel Tool. This tool is suitable for all kind of earth moving or narrow section excavations on all types of rock.



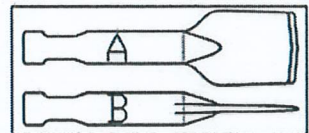
Blunt Tool. This tool is suitable for boulder's breaking or for various reinforced concrete demolitions



Moil Point Tool. Suitable for all reinforced concrete structure demolition. It is also suitable for medium hardness



Asphalt Cutter or Spade Tool. Available as parallel asphalt cutter (B) suitable for roadworks. As transversal cutter (A) suitable for wood or compact frozen soil.

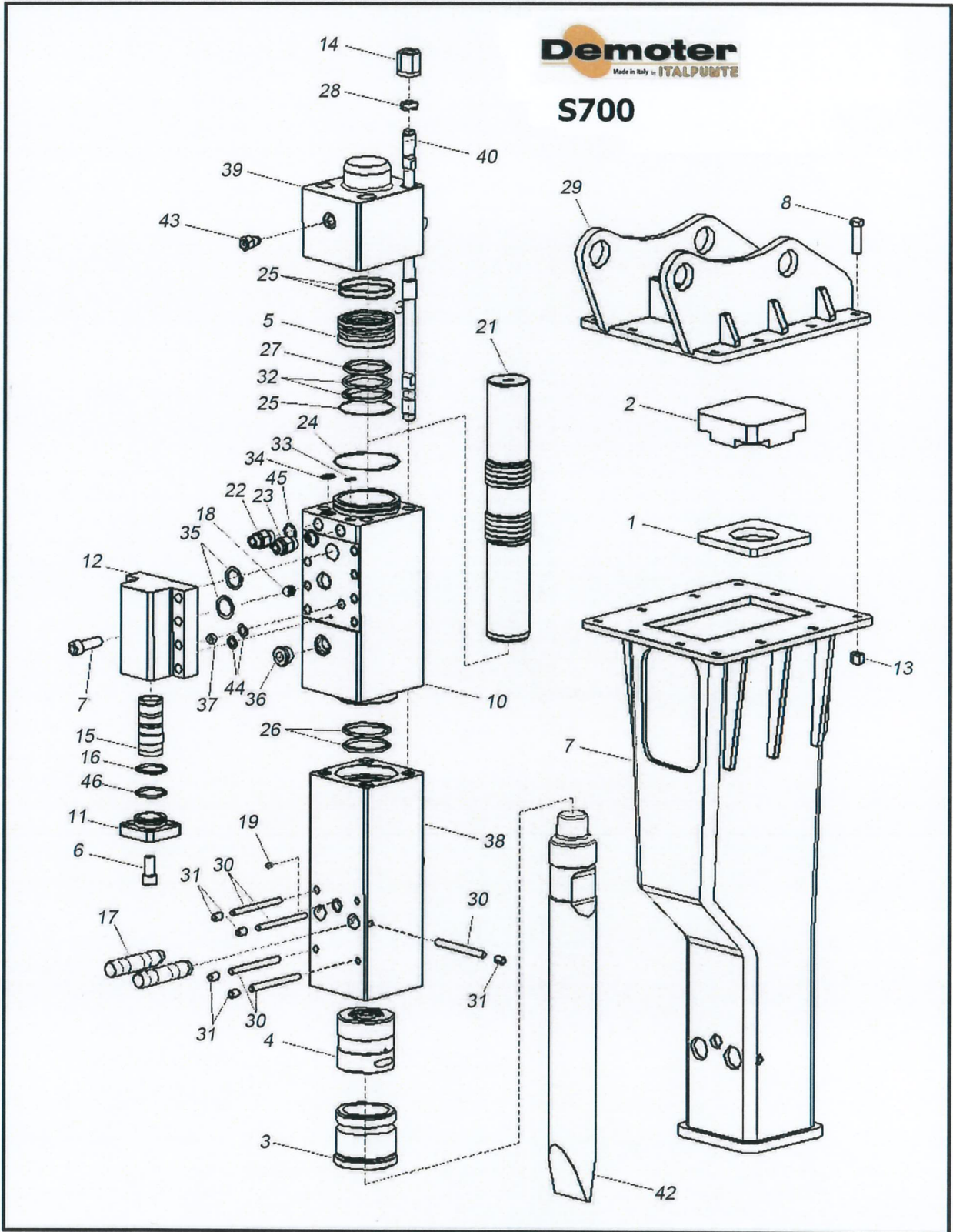


14. SOLUTIONS TO KEY PROBLEMS

HERE BELOW IS A LIST OF THE MAIN PROBLEMS THAT COULD OCCUR DURING THE BREAKER'S OPERATION WITH THEIR CAUSES' IDENTIFICATION AND REMEDIES TO BE CARRIED OUT.

PROBLEM	CAUSE	SOLUTION	EXECUTION
THE BREAKER DOES NOT START	Blocked Tool	Remove and replace the tool	Operator Workshop
	Defect in the Rubber Hoses with quick couplings (no oil flow)	Check the hoses, repair or replace couplings	Operator
	Defect in the control valve of the excavator's hammer plant	Check that the relief of hammer's plant reacts after 200 bar	Workshop
	Hydraulic oil is low in excavator's tank	Restore the oil level	Operator
	Breaker's failure	Disassemble the breaker and check it	Workshop
LACK OF STROKE POWER			
	Low nitrogen pressure in the back head (unloaded)	Check and restore the pressure in the back head	Operator
	Nitrogen accumulator high pressure (unloaded)	Check accumulator's diaphragm	Workshop
	Low hydraulic oil flow	Restore the proper oil flow, check the working pressure	Workshop
	High oil temperature in the tank	Check the oil level in the tank and the cooling circuit	Operator
	Low oil pressure	Check that the setting of the relief valve of the breaker is at least 200 bar	Workshop
LOW SPEED WITH HIGH ENERGY STROKE			
	Tool locked in the chuck housing	Try to slide out the tool	Operator
	Breaker partly blocked	Piston or other dynamic element partly damaged	Workshop
LOSS OF OIL FROM THE TOOL	Worn cylinder seals	Dismount the breaker and replace all gaskets	Workshop
LOSS OF OIL FROM BP-HP CONNECTORS	Couplings not tightened	Tighten the connections	Workshop
LOSS OF OIL BETWEEN BACK HEAD AND CYLINDER	Side bolts not well tightened or broken	Tighten or replace the Tie-Rods	Workshop
TOO HIGH OPERATING TEMPERATURE	There is more oil arriving than expected	Reset the proper oil flow	Operator Workshop
	The atmospheric temperature is too high	Install an additional heat exchanger	Workshop
	Low oil level in excavator's tank	Restore oil level in the tank	Operator

15. SPARE PARTS



ITALPUNTE		DEMOTER S 700		2014
ITEM	CODE	DESCRIPTION	Q.TY	
1	P070038	Ammortizzatore inferiore <i>Lower shock absorber</i>	1	
2	P070036	Ammortizzatore superiore <i>Upper shock absorber</i>	1	
3	P045007	Boccola porta utensile <i>Lower bushing</i>	1	
4	P045008	Boccola superiore <i>Upper bushing</i>	1	
5	P070011	Boccola porta guarnizioni <i>Cover bushing</i>	1	
6	C000675	Bullone coperchio distributore <i>Distributor cover bolt</i>	4	
7	C000674	Bullone corpo distributore <i>Distributor box bolt</i>	8	
8	C000301	Bullone sella <i>Mounting bracket bolt M16x60</i>	12	
9	C000640	Carcassa <i>Housing</i>	1	
10	P070002	Cilindro <i>Cylinder</i>	1	
11	P045014	Coperchio Distributore <i>Distributor cover</i>	1	
12	P045004	Corpo Distributore <i>Distributor box</i>	1	
13	C000260	Dado bullone sella M16 <i>Nut for mounting bracket M16</i>	12	
14	P070016	Dado tirante <i>Nut for side bolt</i>	4	
15	P045012	Distributore <i>Distributor</i>	1	
16	C000809	O.R. coperchio distributore <i>O-Ring distributor cover</i>	1	
17	P045020	Fermautensile <i>Retainer pin</i>	2	
18	C000004	Helicoil corpo distributore 3/4" <i>Helicoil distributor 3/4"</i>	8	
19	C000009	Ingrassatore 1/4 <i>Grease nipple 1/4</i>	1	
20	P070021	Kit guarnizioni <i>Seal kit</i>	-	
21	P070010	Pistone <i>Piston</i>	1	
22	L000056	Nipple di mandata M3/4"+M3/4" strozzato Ø7 <i>Nipple "IN" M3/4"+M3/4" throttled Ø7</i>	1	
23	L000057	Nipple di ritorno M3/4"+M3/4" foro passante Ø15 <i>Nipple "OUT" M3/4"+M3/4" passing hole Ø15</i>	1	
24	C000665	O.R. Cilindro <i>O-Ring back head (cylinder)</i>	1	
25	C000666	O.R. portaguarnizioni <i>O-Ring for seal holder</i>	3	
26	C000574	Paraolio cilindro <i>Lip seal cylinder</i>	2	
27	C000591	Quadring <i>Quadring</i>	1	
28	P045058	Rondella tirante <i>Side bolt washer</i>	4	
29	P030091	Sella <i>Mounting bracket</i>	1	

ITALPUNTE		DEMOTER S 700		2014
ITEM	CODE	DESCRIPTION	Q.TY	
30	L000055	Spina cilindrica fermaboccola e fermautensile Ø13x140 <i>Pin Ø13x140</i>	5	
31	L000061	Tappo nylon Ø16x15 <i>Nylon plug Ø16x15</i>	5	
32	C000587	Stepseal <i>Steapseal</i>	2	
33	C000274	Stircomatic Ø23 <i>Stircomatic Ø23</i>	1	
34	C000054	Stircomatic Ø30 <i>Stircomatic Ø30</i>	1	
35	C000189	Stircomatic Ø48 <i>Stircomatic Ø48</i>	2	
36	C000676	Tappo cilindro 1"G ISO 228 <i>Cylinder plug 1"G ISO 228</i>	1	
37	L000058	Tappo corpo distributore strozzato M20x1,5 h11 Ø5,5 <i>Distributor box plug M20x1,5 h11 Ø5,5</i>	1	
38	P070003	Testata inferiore <i>Chuck housing</i>	1	
39	P070001	Testata superiore <i>Back head</i>	1	
40	P070015	Tirante <i>Tie rod</i>	4	
41	P045019	Utensile a cono <i>Moil point</i>	-	
42	P045018	Utensile a scalpello <i>Chisel</i>	1	
43	C000042	Valvola azoto completa <i>Complete nitrogen valve</i>	1	
44	C000267	Stircomatic Ø27 <i>Stircomatic Ø27</i>	2	
45	C000661	Rondella Bonded 3/4"G <i>Bonded washer 3/4"G</i>	2	
46	C000810	Back-up coperchio distributore <i>Back-up distributor cover</i>	1	