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OPERATION & MAINTENANCE INSTRUCTIONS

Model **HYDRAULIC POWER PACK BRIGGS & STRATTON**

Type **FOR TH 70 VL**

H90037 / NO 10006

Version : **04/13**

Société des Anciens Etablissements **L.GEISMAR**
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CHAPTER - 1 SAFETY

CHAPTER - 2 PRESENTATION

CHAPTER - 3 TECHNICAL SPECIFICATIONS

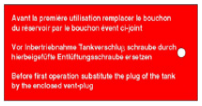
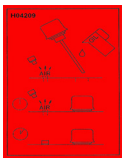
CHAPTER - 4 OPERATING INSTRUCTIONS

CHAPTER - 5 MAINTENANCE

CHAPTER - 6 STORAGE AND RECYCLING

CHAPTER - 7 SPARE PARTS

Marking

COMPANY PLATE ENABLING IDENTIFICATION OF THE PRODUCT	
PLEASE READ THE OPERATING AND MAINTENANCE MANUAL	
IT IS MANDATORY TO WEAR SAFETY SHOES	
IT IS MANDATORY TO WEAR PROTECTIVE GLOVES	
IT IS MANDATORY TO WEAR EAR PROTECTIONS	
IT IS MANDATORY TO WEAR PROTECTIVE GOGGLES	
WARNING: RISK OF INJURY BY CRUSHING	
VENTING	
FILLING AND DRAIN	

Warnings

THE MANUFACTURER WILL ACCEPT NO LIABILITY IN THE FOLLOWING CASES:

- Improper machine use, contrary to the instructions given in the operation and maintenance manual.
- Failure to comply with the periodical checking requirements stipulated by the manufacturer.
- Use by unauthorised persons and/or persons lacking the requisite professional skills.
- Consequences resulting from a misunderstanding of the operation and maintenance manual by the user.
- Failure to comply with the maintenance rules specified herein.
- Modifications or repairs not authorised by the manufacturer
- Use of spare parts whose quality and reliability do not match those of parts supplied by the manufacturer
- Use of lubricants, fuels and consumables different from those recommended in this maintenance manual.
- Exceptional or unforeseeable events.

USE OF THE OPERATION AND MAINTENANCE MANUAL :

- The operation and maintenance manual is intended for heads of operations and staff in charge of servicing the machine as well as all workers having to carry out repairs. Their attention is drawn in particular to the chapters dealing with safety at work.
- The operation and maintenance manual provides the necessary information for correct use of the work equipment as intended by the manufacturer.
- The manual provides operation and maintenance instructions for the work equipment. It does not exempt the staff using the equipment from a proper training.
- The operation and maintenance manual is an integral part of the work equipment. It must be kept until the decommissioning of the machine.
- The operating and maintenance manual must be kept in a safe place inside the control station in order to always be at hand when needed.
- In case of loss or destruction of this manual, the user is bound to order a copy from the manufacturer.
- Users may ask the manufacturer to provide additional information and supplement the operation and maintenance manual in their possession with updates. Once provided, these items will become integral part of the operation and maintenance manual.
- If the work equipment is transferred, the user is requested to inform the manufacturer of the new owner's details.
- The user is required to deliver this operation and maintenance manual with the work equipment to the new owner.

In order to ensure permanent compliance with the legislation in force, the manufacturer reserves the right to make improvements to the work equipment and to the operating and maintenance manual without having to update previous editions.

Non contractual photographs illustrations

Dear customer,

Thank you for purchasing this equipment which has been manufactured by the Geismar group of companies.

We trust your confidence in us is rewarded and that you are completely satisfied with the equipment.

Please pay detailed attention to the recommendations contained in this document.

To ensure this equipment continues to provide satisfaction care should be taken to use and maintain it in accordance with the instructions in this manual.

GEISMAR draws your attention to these essential points:
• Respect the maintenance periods and use the lubricants recommended
• Use only original parts and do not make any modifications

Failure to do so may affect your warranty rights.

Furthermore, modification of the machine without our written authorization could result in the loss of conformity with the relevant standards.

The Group "GEISMAR" reminds you that accuracy in ordering of spare parts will enable prompt supply, and consequently ensure the productivity of your equipment.

Our equipment is designed and manufactured in accordance with the latest advanced techniques, and should provide you with the services that you expect.

We remain fully at your disposal.

Société des Anciens Établissements L. GEISMAR

Chapter 1 – Safety

1 – 1 Foreword

Regulations in force in the country of use take precedence over the guidelines for operation and safety listed herein. It is the responsibility of the person in charge of the equipment to check the accordance between the guidelines and the regulations.

The person in charge of safety on customer's side will supplement these instructions with any guideline he will consider applicable.

Compliance with the Safety Instructions below is necessary to ensure persons and goods' safety during equipment operations. Three pictograms are used to call users' attention.

This symbol signals potentially hazardous conditions that might result in serious or fatal accidents if safety instructions are ignored.

This symbol points out to situations or events that might result in injury if safety instructions are ignored.

This symbol reminds users of safety rules or of hazardous situations that might occur when such rules are broken.

All persons involved in the operation, maintenance, storage or ownership of this equipment are required to read and comply with these Operation & Maintenance Instructions.

A user involved in an accident while infringing on these instructions risks being held liable with regard to the consequences of the accident

This Operation and Safety Instructions Manual is intended for users and persons in charge of the equipment and its maintenance. It might refer to various options of the machine and illustrations included in this handbook may differ from actual details and accessories of your equipment. Basic equipment features may be similar, but the GEISMAR Group reserves the right to make improvements to the equipment.

For additional information on your equipment or this handbook, please contact the GEISMAR Group.

When ordering spare parts, or requesting information or service, please provide equipment reference details, including equipment type, code and serial number.

This information can be found on the nameplate. The nameplate shall be kept in good condition.

1 – 2 Warning

Proper training, skills and tools are mandatory to use, maintain and repair correctly this work equipment. Before any use of the work equipment including its maintenance, it is obligatory to be familiar with its manual of instructions of use and maintenance, with its appendices and with safety regulations in force on the work site.

Strict compliance with the general instructions given by the person in charge of safety on the work site, especially if works are carried out without interruption of the traffic, is mandatory.

Technical documentation and the instructions will usefully come to supplement the knowledge acquired during training courses. Yet they can in no case replace a formal theory and practice training, given in a workmanlike manner.

If the owner does not feel able to ensure correctly the aforementioned training of his personnel, the GEISMAR Group is at its disposal for any assistance about the content of this training.

The training must cover the explanation with the various functions of the material, the instructions of use, maintenance and the safety regulations to be observed, as well as some practical exercises.

1 – 3 General safety instructions

The equipment shall be used under normal operating conditions and it shall be adequately maintained.

We recommend a familiarisation phase with equipment prior to its operational use.

Before starting using this equipment, make sure this can be done in optimal safety conditions.

If you have questions about equipment operation or work tasks, get additional information from qualified personnel.

Never use the equipment for ends other than those it is intended for.

To prevent accidents or injuries, It is compulsory to wear individual protection clothing and equipment in accordance with safety regulations of the work site (refer to chapter "**Markings**")

Keep away from moving parts until the equipment has stopped or reached a safe state.

All moving parts of this equipment entail risks of crushing or shearing

Equipment shall be cleaned on a regular basis, liquid or grease in excess shall be removed.
All safety signs shall be kept clean and readable at all times; missing or illegible sign plates shall immediately be replaced.

STARTUP AND OPERATION/MAINTENANCE/REPAIRS.

Maintenance work must be performed by qualified personnel in control of the safety requirements applying to the operations to carry out.

Establish a program of inspection and record all maintenance operations.

Replace any damaged or worn element.

Never alter the equipment without study and authorization by the manufacturer.

DURING PHASES OF OPERATION

Get to know the work area and its features, restrict admission to personnel directly involved in operation only

Observe the general and particular conditions of safety applicable to the work area and keep a constant safety awareness during all phases of operation.

Get to know rescue plans in the event of incident or accident and safety instructions to follow during all operation phases.

Never disable safety or limiting devices

Check that nobody stands within operating range of the machine.

Do not park the machine on a track section with slope.

The track clearance profile must be large enough for the equipment

The lanes must be in a condition allowing progression of the equipment without risks.

The use of this machine is permitted only when visibility conditions allow for easy sight of the work and operation area

In the absence of contrary notice, this machine is not protected against lightning; it should not be operated under adverse weather conditions.

FOLLOWING A PROLONGED NON- USE OR DURING A PERIODIC CONTROL

Check the tightening and connections of the fasteners.

If a deformation or an abnormal wear is noted, the parts must be replaced.

HANDLING OF FLUIDS

The handling of fluids (fuels, coolants, battery fluids, cleaning fluids, oils, etc…) and their storage has to comply with the regulations in force.

Carefully read the product label (precautions of use and storage).

In any case, these fluids must be sorted by nature in tight containers and clearly marked.

Fluids can be harmful. Avoid any contact with skin or eyes. In case of splatter, rinse copiously the soiled areas with clean water without delay and visit a doctor.

1 – 4 Special safety instructions

1 – 4 – 1 Equipment with a combustion engine

Never start the combustion engine otherwise than with the device provided for this purpose.

Exhaust gases are harmful, avoid exposure to them and always start or use the machine with the combustion engine in a well-ventilated environment.

During fuel refill or fuel handling, the operator must make sure that he operates in optimal safety conditions.

In the event of spillage, clean the tank with dry clean cloths.

Always perform refill of fuel or maintenance liquids with the combustion engine switched off and cold and abide by the label warnings and safety precautions. These operations must be carried out far from any heat source; mobile phones must be switched off. A spark could trigger an explosion and cause grievous bodily harm or death. Fuel splatters or fuel leakage onto electrical components or hot surfaces can lead to fire.

Unless otherwise specified, do not carry out adjustments with the engine running

1 – 4 – 2 Equipment with electrical devices

Personnel intervening on a machine with electrical devices must be trained and authorized. Protection measures must be implemented to ensure optimal safety conditions for their work: marking of the intervention; electric insulation of the equipment, posting safety precautions for works on or close to the machine, supply of individual protection equipment when needed….

OBSERVE FOLLOWING GUIDELINES:

- Never bridge the terminals of the starter or of the batteries. This bypass might disable the emergency shutdown switch and damage electronics or electrical circuitry.
- Keep the switch box from water and humidity (might cause several accidents with harm to persons or material damages).
- Do not bypass open fuses, respect the current limitation
- Periodically check the good state of battery contacts
- Keep batteries away from all heat sources and sparks (danger of explosion or fire).
- Keep the polarity of the electrical circuit. An incorrect connection can seriously damage electronics or electrical circuitry and start a fire.
- When using jump-start cables, always connect the plus-cable (+) onto the plus terminal of the battery and the minus-cable (-) of the auxiliary source onto the engine block so as to avoid any explosion or fire risk.
- Safety devices (emergency switch, circuit breaker…) are positioned on the equipment. Take notice of their positions and check their functional status prior to any use of the equipment.

1 – 4 – 3 Equipment with hydraulic devices

Never deform or hit the high-pressure hydraulic pipes.

Carefully check all hydraulic pipes. Do not use bare hands to look for leaks; use instead a piece of wood or cardboard.

Replace damaged or deformed hydraulic pipes.

Make sure that the hydraulic circuit is free of any residual pressure before disconnecting hydraulic components (danger of whiplash injury or fluid splatters).

1 – 4 – 4 Lifting equipment

TESTS AND CONTROLS

The regulation in force stipulates checks and controls under load when the equipment is brought into service and periodical checks later on.

The persons in charge of intervening onto lifting equipment must be trained and authorized for this type of equipment. Prior to any use of the machine, they have to control

that all checks have been carried out according to the prescriptions given in the Chapter “maintenance”.

The equipment must be controlled and tested under load to guarantee the safety of users and machines.

DURING WORK

Before handling a load, make sure that this operation presents no danger.

Do not start handling a load before the clearance zone (no circulation under the load) has been clearly defined and marked.

Check that the load is correctly and safely strapped, with fixations (cables, ropes …) in accordance with safety norms.

Do not lift heavier loads than the limit given on the WLL plate.

The load should be permanently followed visually by the machine driver; if this is not possible, he shall be assisted by a maneuvering head.

Never leave a hanging load unattended.

Remain permanently aware of the possible consequences of inertia on a hanging load.

2 – 1 General presentation

Manufacturer

Société des Anciens Établissements L. GEISMAR
PO Box 50327
5 rue d'Altkirch
68006 COLMAR CEDEX FRANCE

Name of the equipment:

Model: **HYDRAULIC POWER PACK BRIGGS & STRATTON**
Type: **FOR TH – VL**

2 – 2 General

The Hydraulic Power Pack, equipped with a Briggs & Stratton IC engine, powers the cylinders on TH 70 VL hydraulic rail tensors.

The hydraulic connection is made very easily and quickly using the quick-release couplings fitted to each end of the hoses. The supply pipe on the cylinder base side, to extend the piston rods, is fitted with male half-couplings, the pipe on the cylinder rod side, to retract the piston rods, is fitted with female half-couplings. This prevents any accidental reversal of connections.

Chapter 3 – Technical specifications

3 – 1 General specifications

Manufacturer	**Société des Anciens Établissements L.GEISMAR**
Address	**5, rue d'Altkirch 68000 COLMAR**
Machine	**HYDRAULIC POWER PACK BRIGGS & STRATTON**
Type	**FOR TH 70 VL**
GENERAL SPECIFICATIONS	
Overall height	**531 mm**
Overall width	**433 mm**
Overall length	**860 mm**
Weight	**63 kg**
IC ENGINE	
Make and type	**BRIGGS & STRATTON 850 SERIES**
Number of cylinders	**1**
Characteristics	**4 stroke, petrol**
Torque	**11.5 N/min at 3060 rpm**
Petrol capacity	**1.1 l**
Autonomy fully loaded	**1,7 litres / hour**
Oil capacity	**0.7 / 0.8 l**
Sound level at 1 metre	**LpA = 82 dB (A)**
Sound level at 7 metres	**LpA = 70 dB (A)**
Acoustic pressure at 1 metre	**LWa = 90 dB (A)**
Acoustic pressure at 7 metres	**LWa = 95 dB (A)**

HYDRAULIC	
Flow rate	**1.8l / min**
Thrust pressure for TH 70	**437 bar**
Traction pressure for TH 70	**583 bar**
Double display pressure gauge	**0 to 1,000 bar / 0 to 100 t**
Hydraulic oil	**TOTAL EQUIVIS ZS 32**
Tank capacity	**10 l**

4 – 1 Handling instructions

Before use, we recommend that you read chapters:

1.3 - General safety regulations

1.4 - Particular safety regulations

4 – 2 Composition of the hydraulic pack

The hydraulic pack (fig:1) is composed is composed of the following items:

Fig 1 :

– **1** Heat engine BRIGGS & STRATTON 850 SERIES

– **2** Hydraulic pack

4 – 3 Particularities

The hydraulic circuit is equipped with an eccentric distributor fitted with non-return valves, used to maintain the pressure without any loss. These valves are used to gradually release bars under traction, in total safety, when adjusting the separator.

The pressure can be read at any time in the branch of the circuit which is in use. The graduations on the pressure gauge give the value directly in bar and PSI of traction or thrust.

4 – 4 Installation and operation

4 – 4 – 1 Using your machine for the first time

On delivery of the hydraulic power pack, the hydraulic oil tank filler hole is capped with a sealed stopper (**1**) to prevent any overflow. Before using your machine, you must replace this stopper with the vent stopper (**2**) supplied with the machine (fig:2).

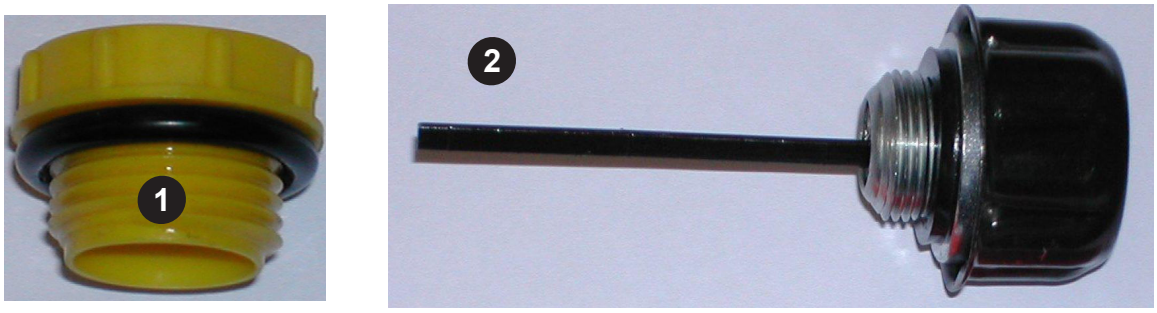
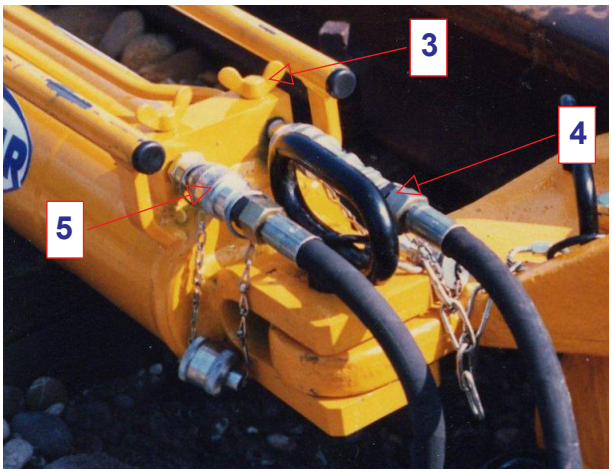


Fig 2 :

4 – 4 – 2 Connection

For problem-free functioning of the system, it is essential for the pump - hose - cylinder connection to be made at "zero pressure" using quick-release connectors. To guarantee this status, you must check that the ball-valve coupling can be pushed (press on it with your thumb).

The hydraulic connection is made very easily and quickly using the quick-release couplings fitted to each end of the hoses (fig:3). The supply pipe on the cylinder base side, to extend the piston rods, is fitted with male half-couplings, the supply pipe on the cylinder rod side, to retract the piston rods, is fitted with female half-couplings. This prevents any accidental reversal of connections.



The couplers are the screw type. Male and female caps protect the hydraulic circuit when the hoses are not connected. Before connection, please remove these protective caps. Coupling requires the male cylindrical part to be inserted in the female part by screwing the knurled ring as far as it will go.

– Drain screw (**3**)

– Quick-release coupler - Feed on rod side (**4**)

– Quick-release coupler - Feed on base (**5**)

Fig 3 :

Never disconnect the couplers under pressure. Screw the hydraulic couplers in as far as they will go.
Protect disconnected hydraulic couplings with their caps.

4 – 5 Controls and commands

4 – 5 – 1 Pressure gauge

The pressure gauge gives the value in bar and PSI of traction or thrust exerted (fig:4).

Pressure in Psi
Pressure in bar

Fig 4 :

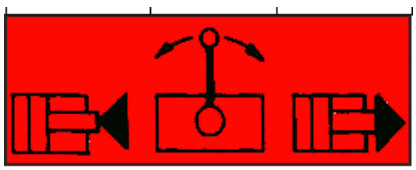
4 – 5 – 2 Distributor

The hydraulic circuit is equipped with an eccentric distributor fitted with non-return valves, used to maintain the pressure without any loss. These valves are used to gradually release bars under traction, in total safety, when adjusting the separator.

The distributor lever is in neutral position by default. An indicator plate shows the direction of thrust or traction (fig: 5)

- Set the lever to the **L**eft for traction.
- Set the lever to the **R**ight for traction.

Fig 5 :



4 – 5 – 3 Start up

After ensuring that the conditions for using the hydraulic power pack are met and respected (check levels, flexible connections, etc.), make sure the distributor lever is in neutral.

Start the engine, let it idle for several moments until the engine speed is stable and the engine temperature is rising (see document provided by the manufacturer in the appendix).

Increase the engine speed under full load.

Set the distributor lever for the work to be done.

The hydraulic power pack is equipped with a petrol engine and must not be started in a non-ventilated area.

If the engine stops or the lever is set to neutral, pressure is maintained in the circuit. Traction force is maintained under loading with not more than 5% loss per hour.
At the end of the job, make sure that the hydraulic pressure is reduced to zero. This facilitates connecting the hydraulic connectors next time. This operation requires the engine to be switched off. Turn the distributor lever 3 or 4 times from left to right to decompress the hydraulic circuit. The pressure is thereby eliminated.

4 – 6 On-site use

For general instructions in using the equipment on site, see the operating manual for **GEISMAR** hydraulic tensors.

GEISMAR cannot be held responsible if the equipment is used for purposes other than those defined in this manual, as defined in paragraph: **WARNING** – *Non-compliant use of the machine with respect to the instructions given in the operating and maintenance manual.*

5 – 1 General maintenance instructions

Before starting operations, the parts which will be in contact with the equipment must be cleaned carefully as well as the neighbouring zones, to prevent impurities from getting into the sensitive mechanisms.

5 – 1 – 1 Rules to apply

- Draw up an inspection schedule and record all maintenance operations
- Replace any suspicious or worn parts
- Never neutralise the prevention or limiting equipment
- Never use the machine as an «earth» for welding operations

5 – 2 General rules

5 – 2 – 1 Preamble

Certain operations to be carried out on a railway work site require the application of safety rules which must be scrupulously adhered to.

Any user who does not adhere to these rules is liable for any damage and accidents that he might cause.

Each element must be examined by a competent person before commissioning, in order to reveal any possible faults. The inspection will mainly be of a visual and functional nature.

IMPORTANT: All these checks are carried out with the engine stopped.

CHECKING MACHINE-WELDED ASSEMBLIES:

- Visually check that there are no external faults, deformations, superficial cracks, areas of wear or corrosion marks.

CHECKING LEVELS:

Engine levels (fig:6)

- Check the petrol level and top up if necessary far from any source of heat (flame, welding, chainsaw). Clean the tank in the event of any overflow (**1**).
- Check the engine oil level using the gauge (**2**) and fill up if necessary (refer to the engine manual).

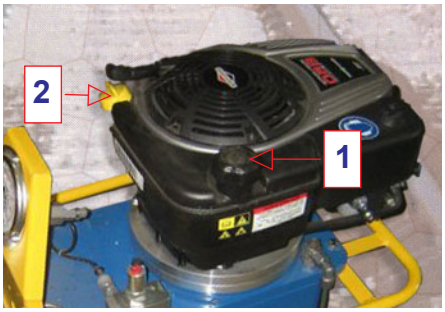


Fig 6 :

Hydraulic oil level (fig:7)

- Check the max. oil level in the hydraulic tank (**3**) when the cylinder rods are retracted.

The level to which the hydraulic tank must be filled is 10 mm above the min. marker of the gauge.

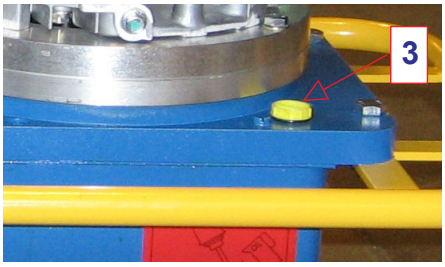


Fig 7 :

CHECKING THE ENGINE

- Follow the manufacturer's recommendations (BRIGGS & STRATTON).
- Check the engine mounting on the flange regularly.

CHECKING THE HYDRAULIC CIRCUIT

- Check seals and the tightness of connections.
- Replace hoses as soon as it is noted that a hose has been cut or torn.
- Check the limiter calibrations monthly.
- Check and clean the suction filter once a year.
- Check the oil level in the tank frequently.
- Check the tightness of the connections and the air-tightness of the conduits inside the tank.
- Partly drain the tank every year to remove the condensate and impurities. Check the oil quality at the same time.
- Systematically change the hydraulic oil every 2 years, after 1,000 hours of use at the most, and clean the tank.

The first fill was done with TOTAL EQUIVIS ZS 32 oil. Tank capacity: 10 litres

- Viscosity at 40°C: 32.3 Cst
- Viscosity index: 160
- Pour point: - 39°C

MOTOR PUMP UNIT

- Remove the IC engine once a year to check the flexible coupling between the pump and the engine.
- At the same time check the installation of ½-couplings and cottering.

These recommendations are not restrictive. Continuous monitoring and well-organised preventive maintenance can only extend the service life of the machines.
It is absolutely essential to record and report all anomalies or degradations observed.

Hydraulic oil is a harmful product. Avoid all skin and eye contact. In the event of spray into the eyes, wash immediately with large quantities of water and consult a doctor.

Chapter 6 – Storage and recycling

6 – 1 General storage instructions

During periods when work equipment is not being used, it is essential to store it so as to maintain its integrity. Badly stored equipment risks being damaged when commissioned. It is therefore important for the staff in charge of storage operations to carry out this storage carefully and to abide by the measures laid down.

6 – 1 – 1 Choice of storage conditions

The choice of storage conditions depends on 2 main factors:

– the storage duration and the storage type ("sheltered" storage : building, closed shed, open shed, canopy, etc...).

6 – 1 – 2 Storage premises

As a general rule, premises intended for storage of work equipment must provide full protection against:

– dusts, exhaust gases, dampness;
– direct sunlight;
– rapid temperature variations.

6 – 1 – 3 Putting into storage

The condition of the work equipment when put to work after storage depends on how well it was prepared and protected before being placed in storage:

Before resuming work after storage, clean the equipment (when cleaning, protect the moving parts with grease).

A technical inspection should be carried out to uncover any possible anomalies.

6 – 2 Decommissioning - Disassembly - Disposal

When work equipment presents a state of aging that may cause risks, there is a requirement for the user to ensure the disposal of this equipment, namely: putting out of work.

Decommissioning or disposal requires to remove used fluids which will be given to a relevant department.

IMPORTANT In addition to those listed in the instruction manual, some precautions must be taken into account when decommissioning this work equipment to avoid any risk during dismantling and transport, and to minimize a possible environmental impact of its sub-parts or products.

The equipment must be disposed of by an approved body complying with the local standards in force for recovery of waste.

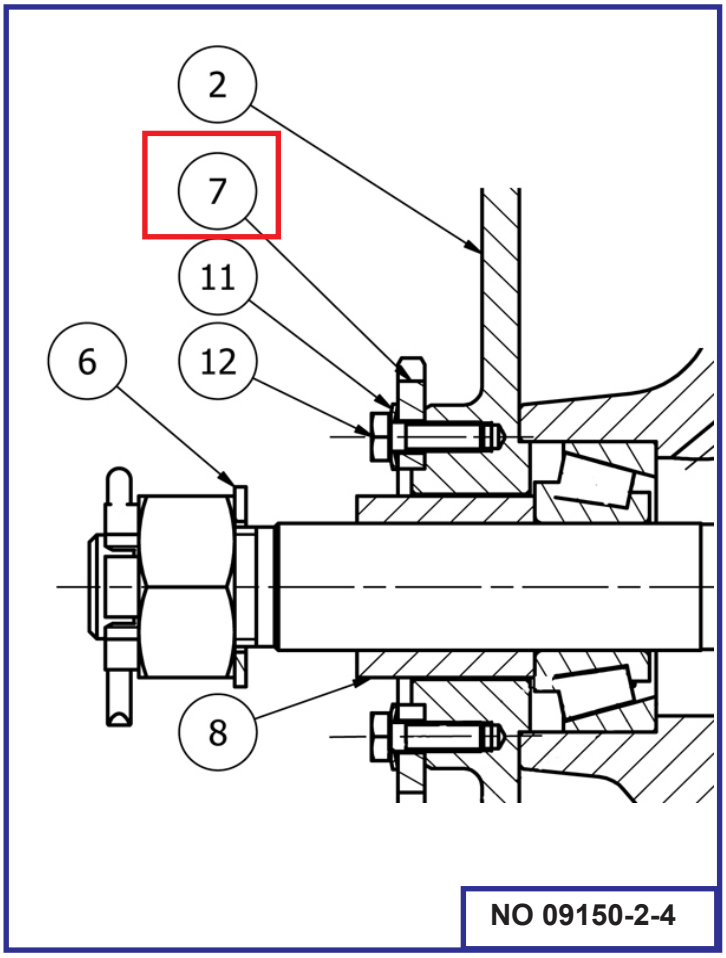
7 – 1 Foreword

The spare parts catalogue includes all the components of the machine. The latter is considered as an assembly broken down into sub-assemblies, which are themselves broken down into individual spare parts.

You can consult it and go directly to the plate N° for the part which interests you. This plate consists of a list of parts with a drawing.

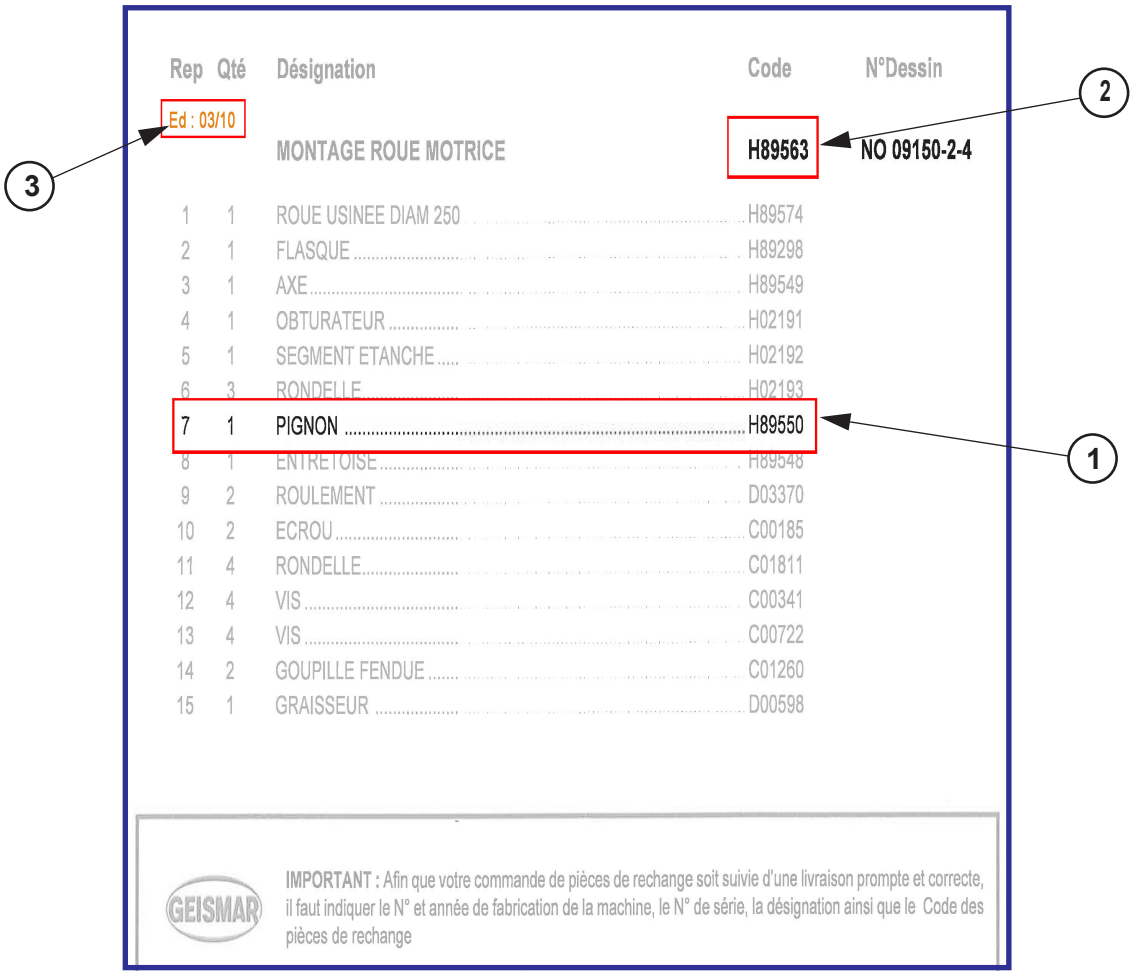
IN THIS EXAMPLE

We want to replace the: ***pinion ref. 7*** in assembly **NO 09150-2-4**



You will find the **Code** for this pinion in the parts list for this plate (here **NO 09150-2-4)**. Simply note the indications on your part replacement request form.

EXAMPLE FOR ORDERING A SPARE PART



Designation and Code for part (1): Pinion code H89550
Plate code (**2**) : Assembly H89563
Review date (**3**) : 03/10

7 – 2 After Sales Service Details

Tel: **+ 33 (0) 3 89 80 41 90**
Fax: **+ 33 (0) 3 89 80 42 28**
E-mail: **sav@geismar.com**

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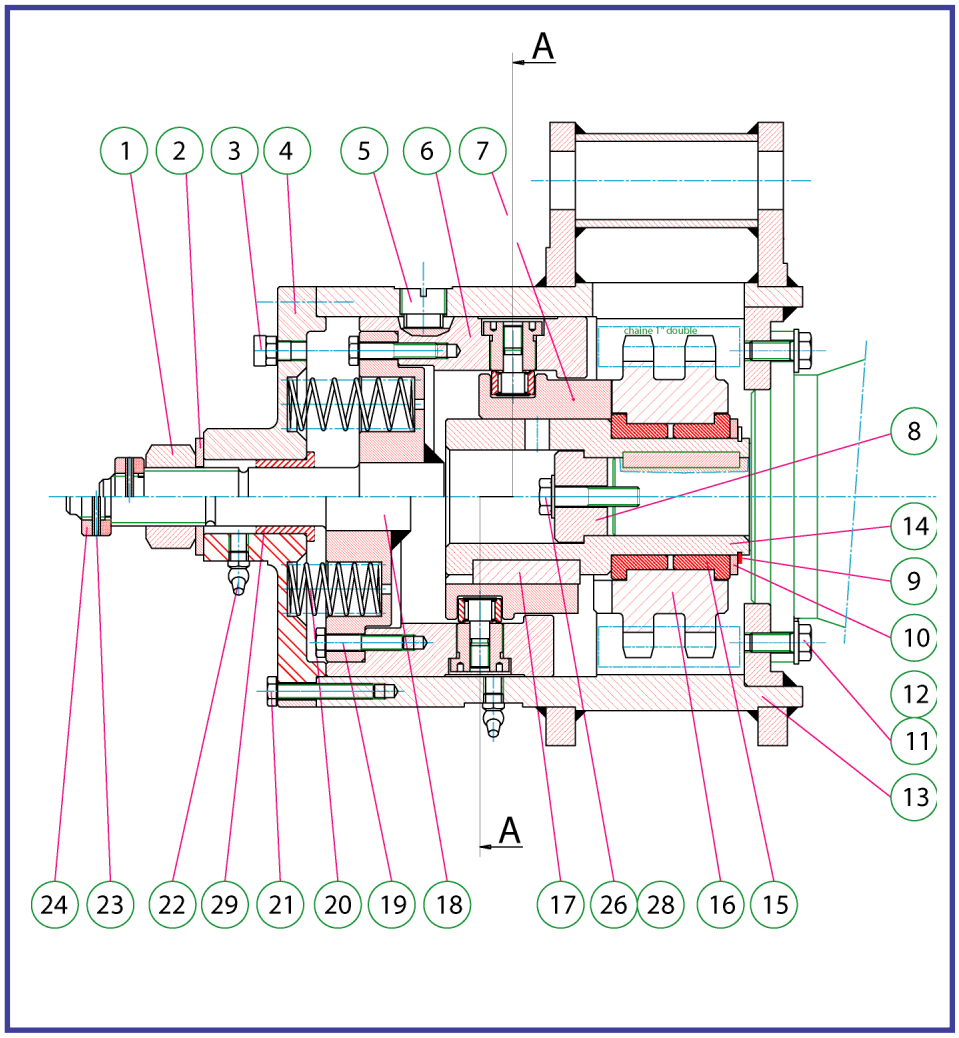
Tél : +33 (0) 3 89 80 41 90 - Fax : 33 (0) 3 89 80 42 28
E-mail : sav@geismar.com

SPARE PARTS CATALOG



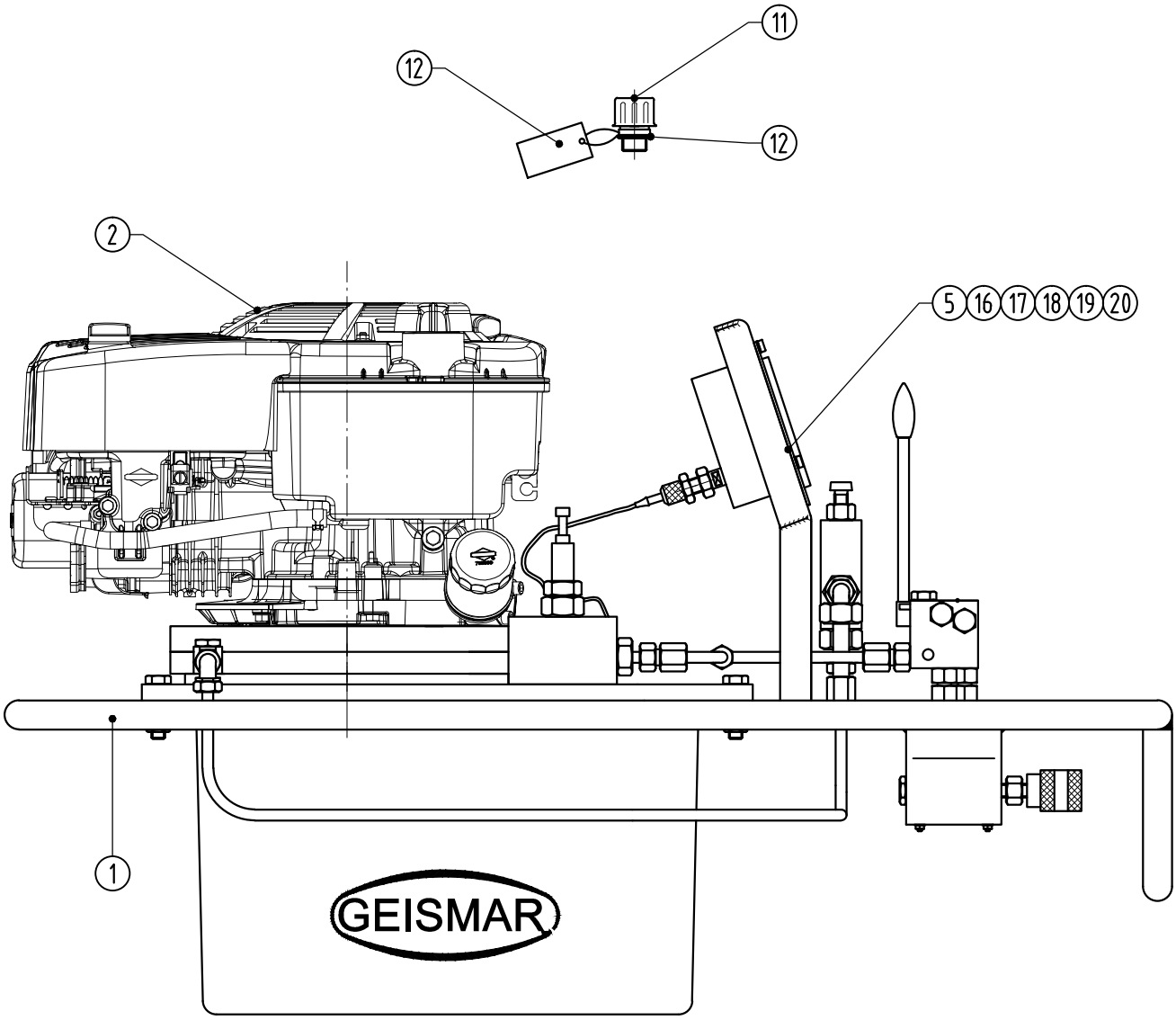
Model HYDRAULIC POWER PACK BRIGGS & STRATTON

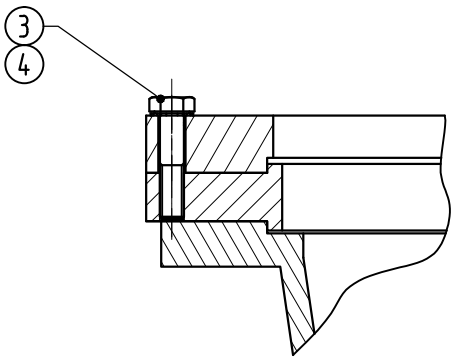
Type FOR TH 70 VL

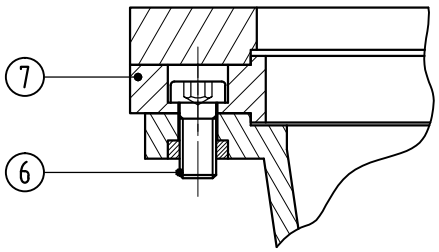
H90037 / NO 10006 **Version:** 04/13

Item	Qty	Description	Code	Drawing
ED 04/13				
		HYDRAULIC POWER PACK WITH ENGINE	**H90037**	**NO 10006**
1	1	HYDRAULIC POWER PACK - WITHOUT ENGINE -	H57507	NO 98222-1
2	1	THERMIC ENGINE ASSEMBLY	H90036	NO 10006-2
3	3	SCREW	C00343	
4	3	WASHER	C01811	
5	1	PICTOGRAM «EAR PROTECTION»	D12311	
6	4	SCREW	C00688	
7	1	SPACER	H50311	
11	1	PLUG	D12513	
12	1	O-RING	D03740	
13	1	INSTRUCTION PLATE «REPLACE PLUG»	H02726	
14	1	HYDRAULIC CIRCUIT	H57511	NO 99250
16	1	PICTOGRAM «SAFETY SHOES»	D17924	
17	1	PICTOGRAM «READ MANUAL»	D19337	
18	1	PICTOGRAM «SAFETY GLOVES»	D15127	
19	1	PICTOGRAM «SAFETY GOGGLES»	D12937	
20	1	SIGNAL PANEL «RISK OF CRUSHING»	D18186	

H90037







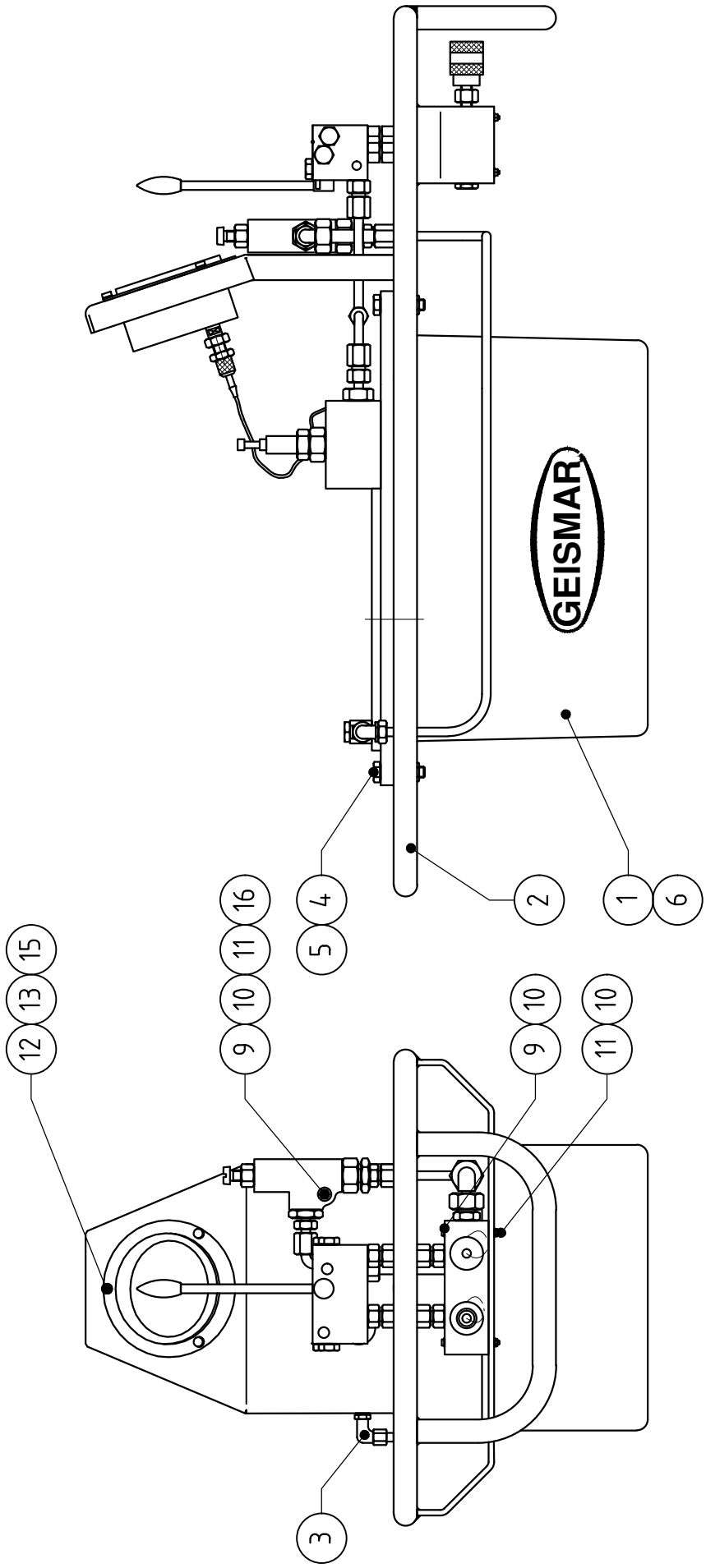
GEISMAR COLMAR

Folio: –

NO 10006

Item	Qty	Description	Code	Drawing
ED 01/13				
		HYDRAULIC POWER PACK WITHOUT ENGINE	**H57507**	**NO 98222-1**
1	1	BARE POWER PACK	D04263	NO 86154-1
2	1	FRAME	H55852	
3	1	PIPING	H57509	NO 99248
4	4	SCREW	C00358	
5	4	NUT	C00143	
6	1	INSTRUCTION PLATE «FILLING AND DRAIN»	H04209	
9	3	SCREW	C00515	
10	6	WASHER	C01035	
11	3	NUT	C00141	
12	3	SCREW	C01980	
13	3	NUT	C00139	
15	6	WASHER	C01033	
16	1	HYDRAULIC PIPE	H83663	

H57507

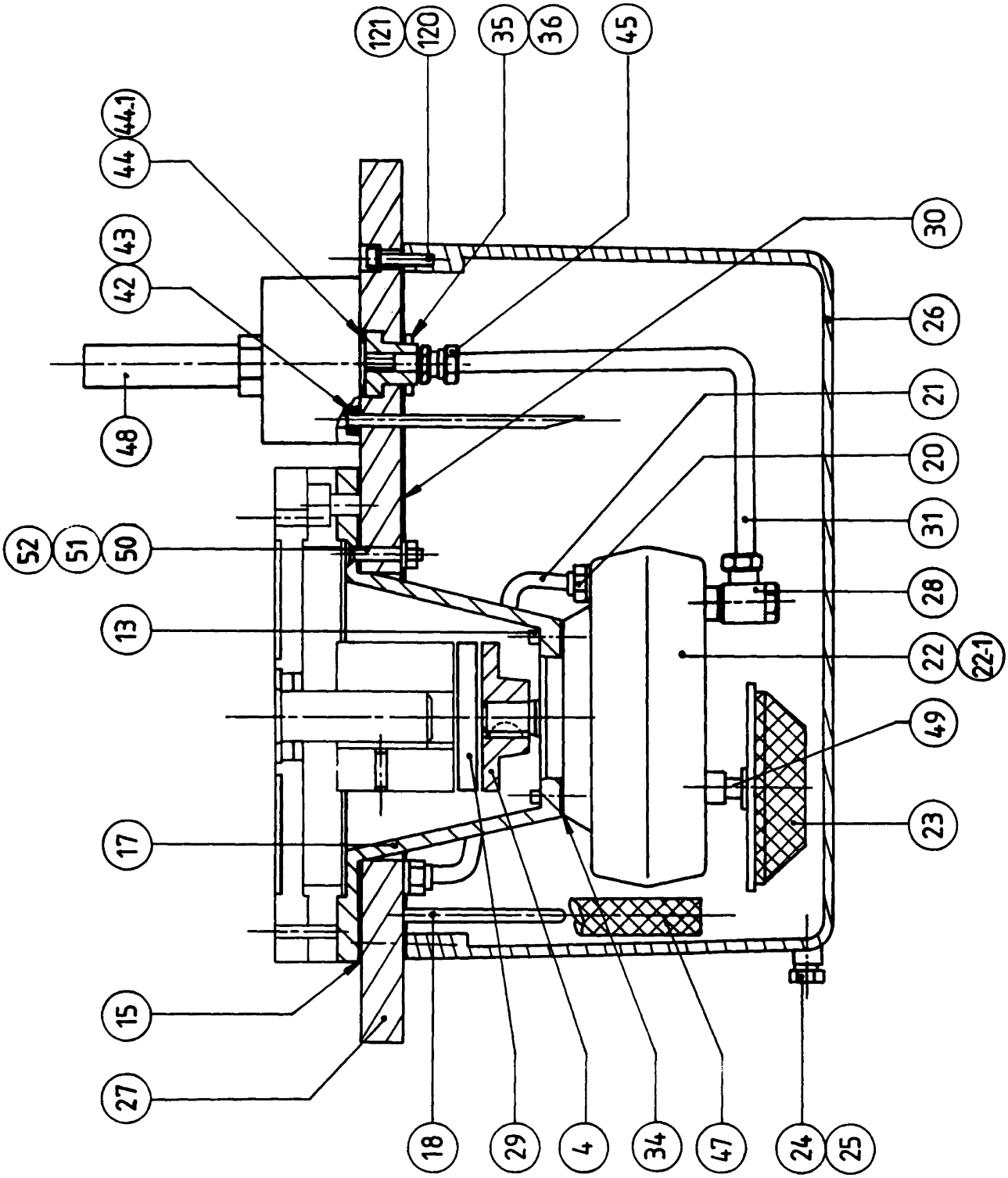


GEISMAR COLMAR

Folio: NO 98222-1

Item	Qty	Description	Code	Drawing
ED 01/13				
		BARE POWER PACK	**D04263**	**NO 86154-1**
4	1	COUPLING	H50314	
13	4	SCREW	C00690	
15	1	LANTERN SEAL	D04682	
17	1	LANTERN	D04688	
18	1	FILLING CAP	D04679	
20	2	MALE STUD COUPLING	D04700	
21	1	FLEXIBLE HOSE	D04707	
22	1	PUMP	D02761	
22-1	1	POCHETTE DE JOINTS	D12882	
23	1	STRAINER	D01340	
24	1	DRAIN PLUG	C01467	
25	1	COPPER SEAL	D04698	
26	1	TANK	D15982	
27	1	TOP PLATE	D04675	
28	1	COUPLING	D00036	
29	1	COUPLING FLECTOR	D05160	
30	1	SEAL	D04687	
31	1	HYDRAULIC PIPE	D04701	
34	1	LANTERN / PUMP SEAL	D04683	
35	1	SOCKET WITH NUT	86154-1-35	
36	1	COPPER SEAL	C02261	
42	1	RETURN PIPE	D04702	
43	2	SEAL	D04681	
44	1	SEAL	D04680	
44-1	1	SEAL	D04685	
45	1	COUPLING	D00168	
47	1	STRAINER	D01341	
48	1	PRESSURE RELIEF VALVE	D09338	
48-1	1	SET OF SEALS	D17493	
49	1	SUCTION PIPE	D04703	
50	4	SCREW	C00725	
51	4	NUT	C00120	
52	4	WASHER	C01037	
120	8	SCREW	D15983	
121	8	WASHER	D15979 + D15980	

D04263

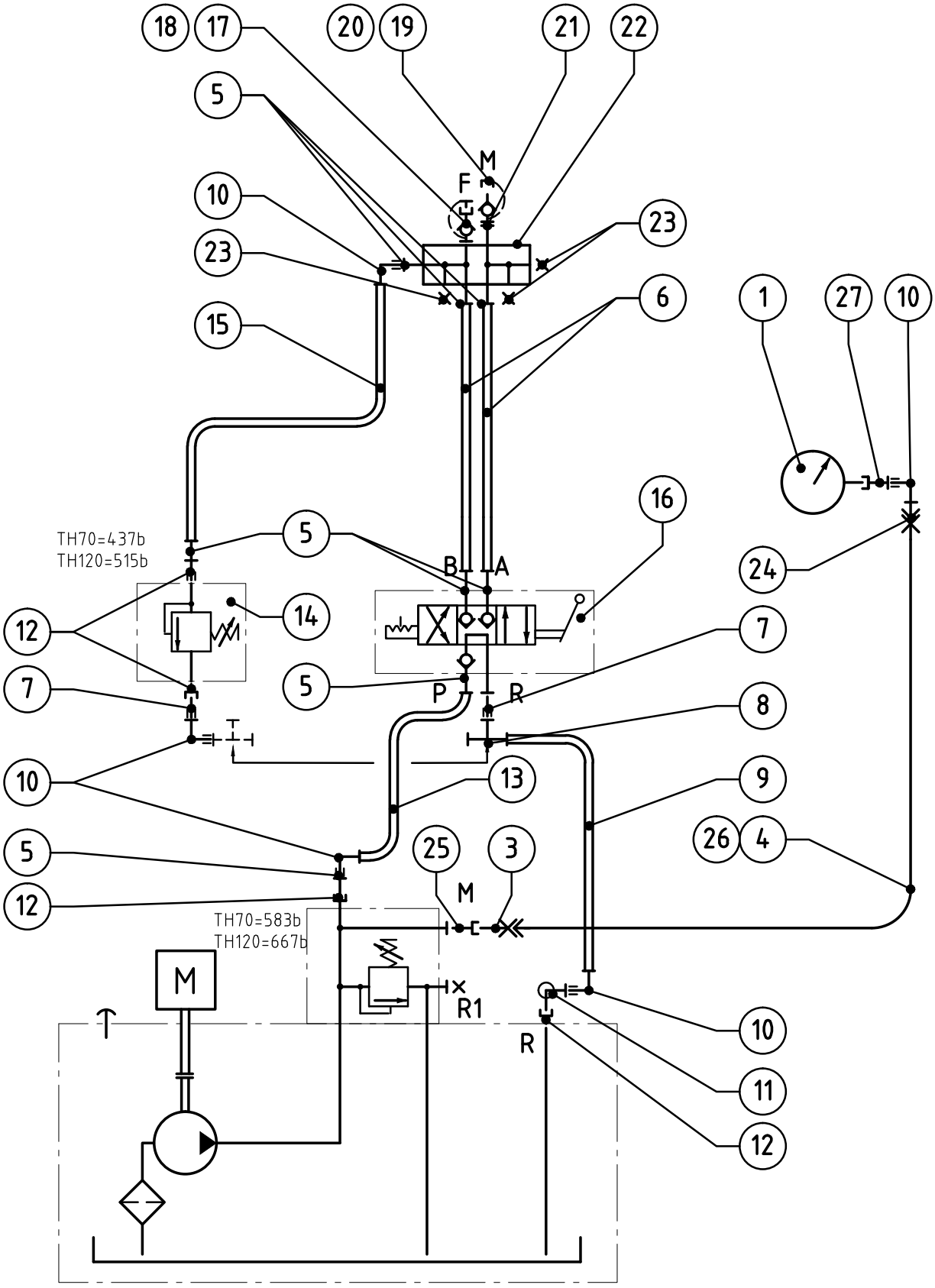


GEISMAR COLMAR

Folio: NO86154-1

Item	Qty	Description	Code	Drawing
ED 07/12				
		PIPING	**H57509**	**NO 99248**
1	1	MANOMETER	D03585	
3	1	COUPLING	D00419	
4	1	FLEXIBLE HOSE	D00669	
5	8	MALE STUD COUPLING	D00168	
6	2	HYDRAULIC PIPE	H56845	
7	2	ORIENTATION COUPLING	D00056	
8	1	EQUAL TEE COUPLING	D00297	
9	1	HYDRAULIC PIPE	H56846	
10	5	ADJUSTABLE MALE STUD ELBOW	D00112	
11	2	ORIENTABLE COUPLING	D00036	
12	4	THREADED REDUCING COUPLING	D00246	
13	1	HYDRAULIC PIPE	H56847	
14	1	PRESSURE RELIEF VALVE	D01817	
15	1	HYDRAULIC PIPE	H56848	
16	1	CONTROL VALVE	D14843	
17	1	PLUG	D00486	
18	1	FEMALE HALF COUPLING	D00472	
19	1	CAP	D00492	
20	1	MALE HALF COUPLING	D00470	
21	1	ADAPTER	D00438	
22	1	BLOCK	H55902	
23	3	OBTURATION SCREW	D00360	
24	1	COUPLING	D18866	
25	1	THREADED REDUCING COUPLING	D13934	
26	2	COLLAR	E00322	
27	1	MANOMETER COUPLING	D00233	

H57509

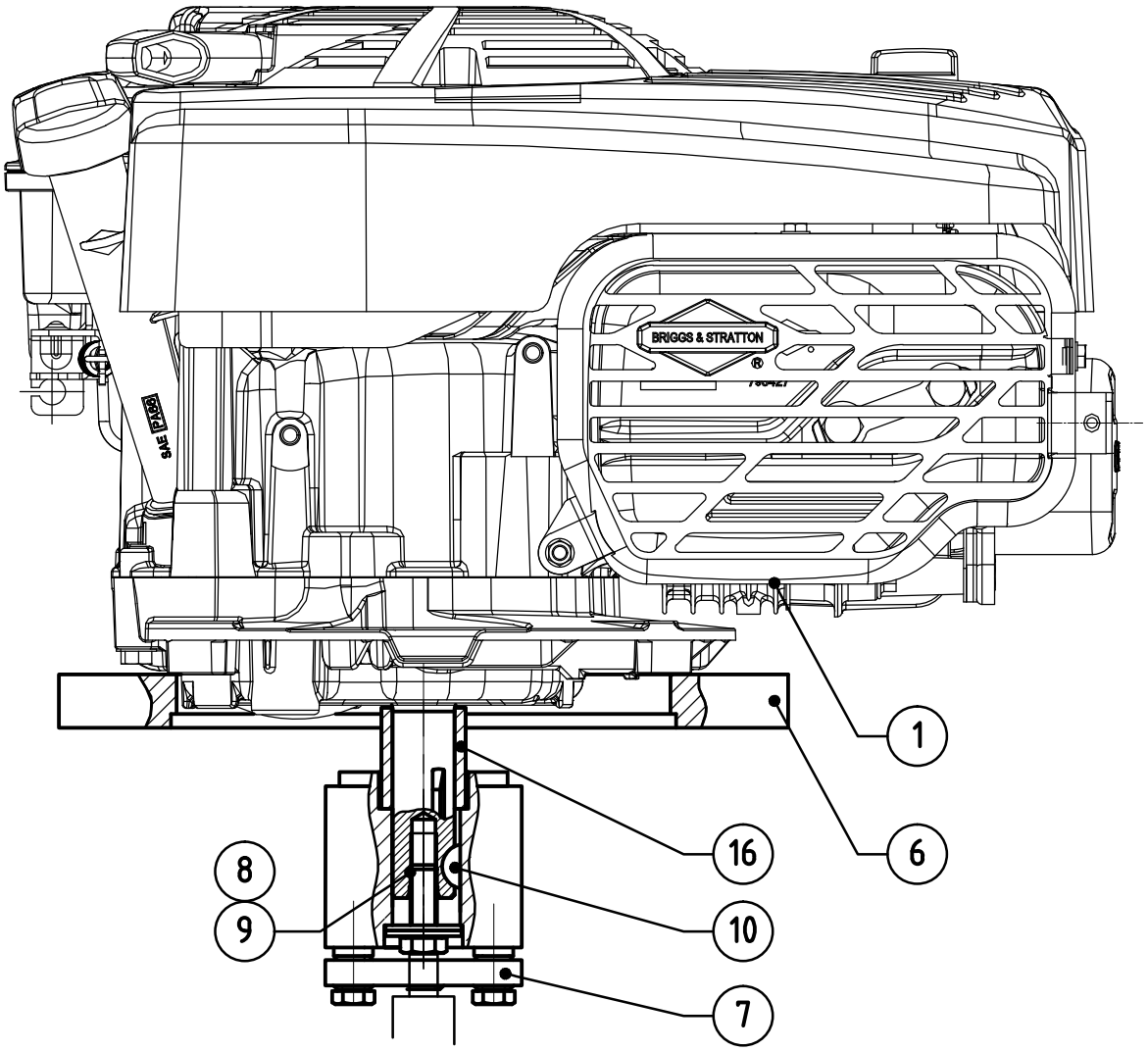


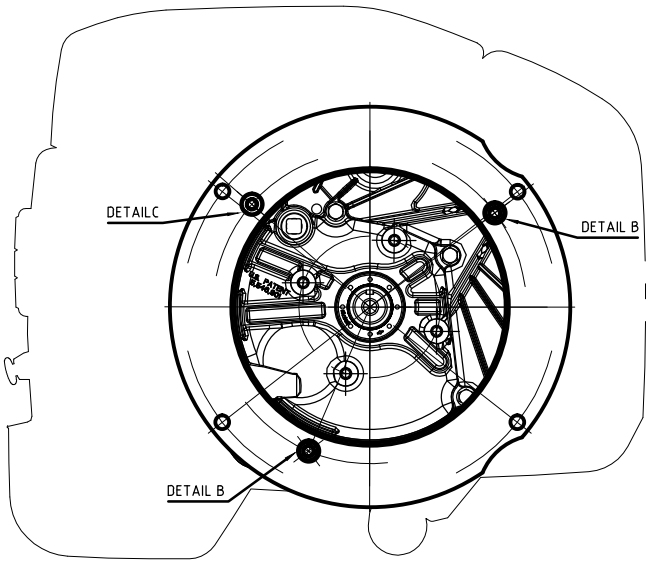
GEISMAR COLMAR

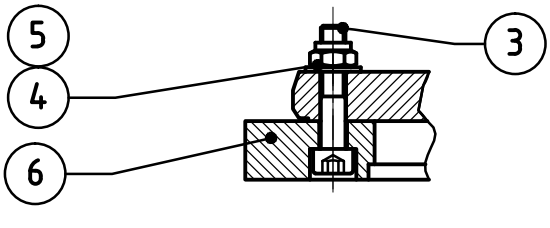
Folio: NO99248

Item	Qty	Description	Code	Drawing
ÉD : 04/12				
		ENGINE FITTING	**H90036**	**NO 10006-2**
1	1	B & S ENGINE, 850 SERIES	D19125	
2	1	SCREW	C00528	
3	2	SCREW	C00523	
4	3	WASHER	C01036	
5	3	HEXAGON NUT	C00142	
6	1	FLANGE	H50317	
7	1	COUPLING	H50314	
8	2	WASHER	C01054	
9	1	SCREW	C02241	
10	1	DISC KEY	C01456	
16	1	SPACER	H55616	

H90036







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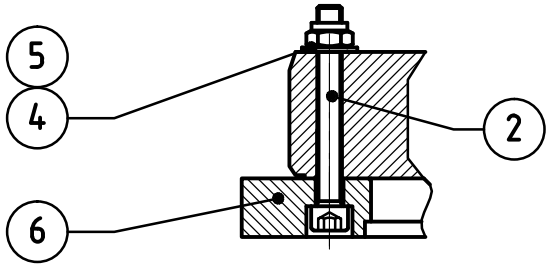


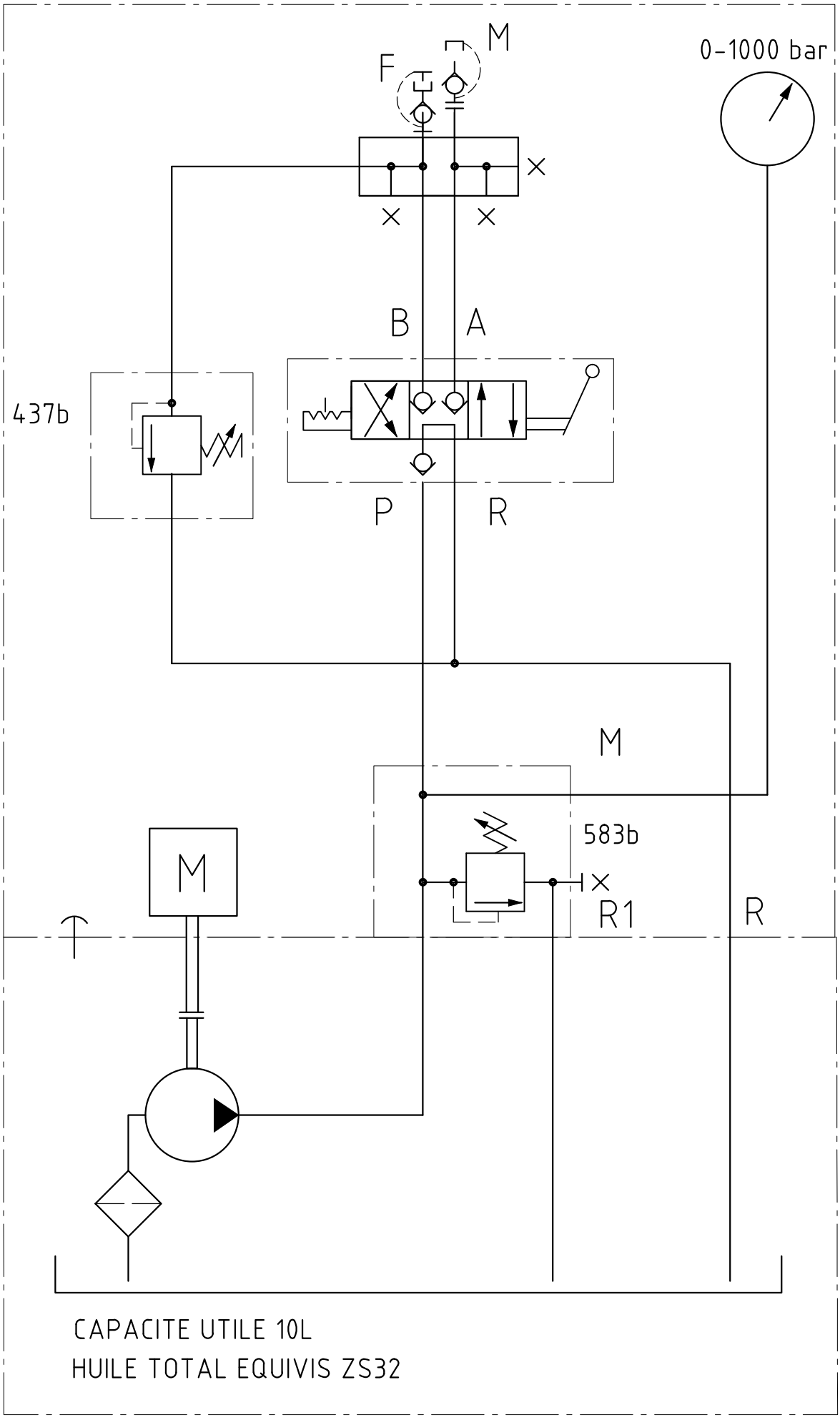
B

GEISMAR
COLMAR

NO | 10006-2

Item	Qty	Description	Code	Drawing
ED 01/13				
		HYDRAULIC CIRCUIT	**H57511**	**NO 99250**

H57511



CAPACITE UTILE 10L

HUILE TOTAL EQUIVIS ZS32

GEISMAR COLMAR

Folio: _

NO 99250