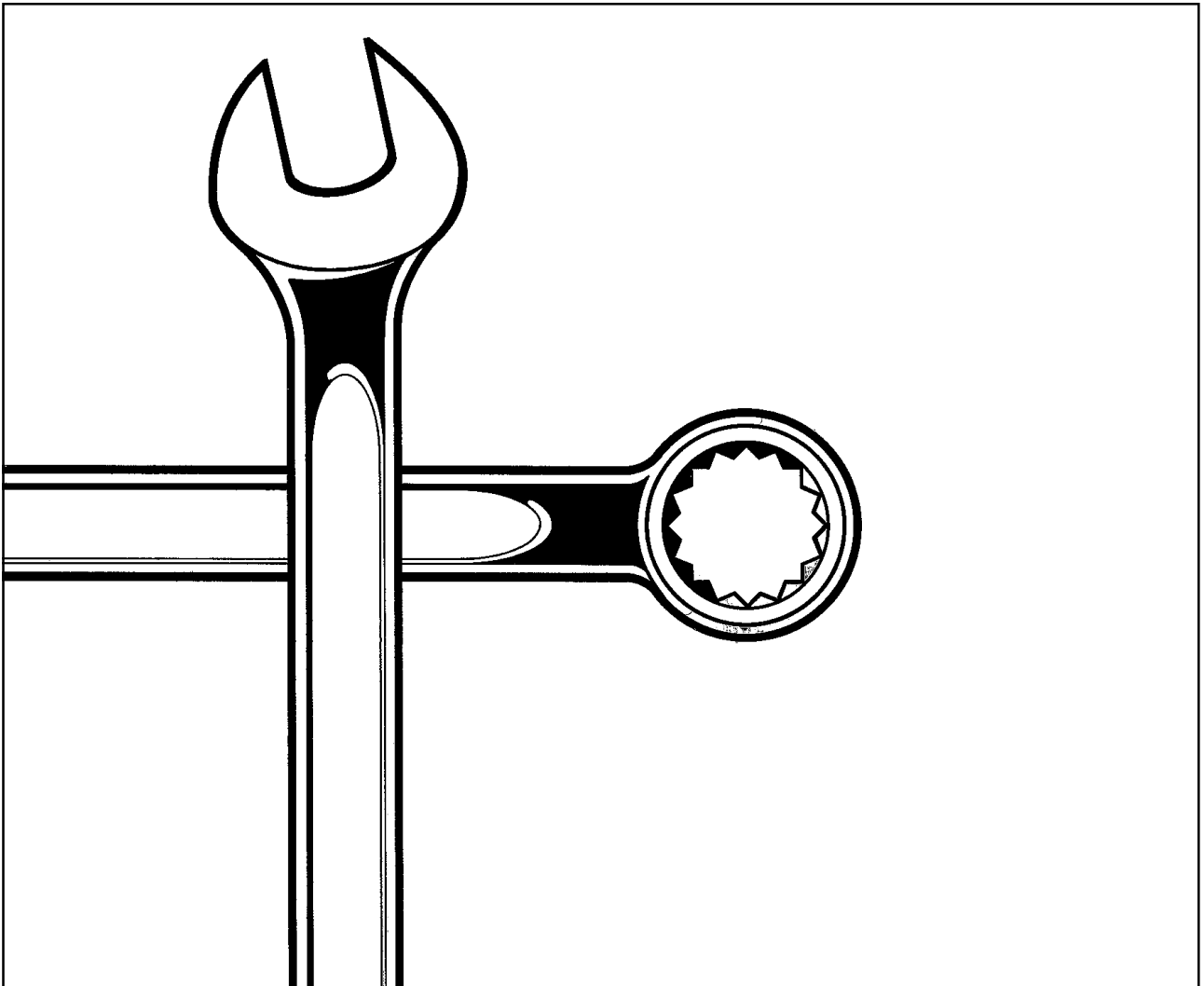


SVEDALA COMPACTION AND PAVING

DYNAPAC CC 232/C WORKSHOP MANUAL FLOW DIVIDER

W1034EN3



SVEDALA

 **DYNAPAC**

Svedala Compaction Equipment AB

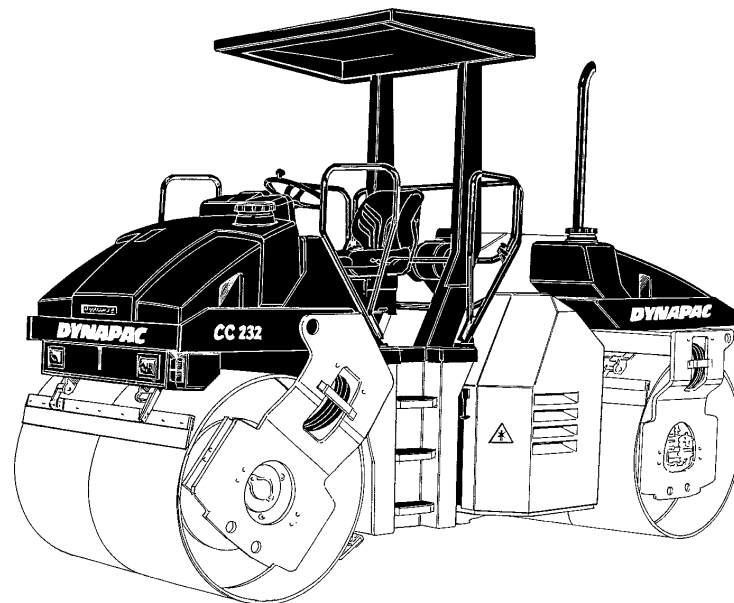
Box 504, SE-371 23 Karlskrona, Sweden
Phone: +46 455 30 60 00, Fax: +46 455 30 60 30

Workshop

CC 232/C

Flow Divider

W-1034-3 EN



Printed in Sweden 9606

We reserve the right to change specifications without notice.

DYNAPAC

Svedala Dynapac Heavy AB

Box 504 • S-371 23 KARLSKRONA • SWEDEN

Telephone +46 455-627 00

Telefax +46 455-627 30

Telex 43041 dynkar s

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Notes

General advice

- Make yourself familiar with the equipment of the machine.
- Only operate the machine if you are completely familiar with the operating and control elements as well as the functioning of the machine.
- Use your safety equipment like helmet, safety shoes and hearing protection.
- Make yourself familiar with your working field.
- Only operate the machine for its intended purpose.

Please observe the guidelines of the machine manufacturer and safety manual, A 281.




Before starting

- Study and understand the operating instructions before starting.
- Check the machine for any serious faults.
- Do not operate the machine with defective instruments, warning lights or control elements.
- All safety devices must be in a secure position.
- Do not carry loose objects or secure them to the machine.
- Keep oily and inflammable material away from the machine.
- Before entering the driver's cab, check if persons or obstacles are in the way of or underneath the machine.
- Be careful when entering the driver's cab, use the steps.
- Adjust your seat before starting.

Start


- When starting, all operating levers must be in "neutral position".
- Only start the machine from the driver's seat.
- Check the indicating instruments after start to ensure that all functions are in order.
- Do not leave the machine unattended when the engine is running.
- When starting with battery connection cables, connect plus to plus and minus to minus.
- Disconnect the earth (negative) first. Connect it last.

Warning

-  Exhaust fumes is dangerous. Ensure sufficient fresh air when starting in closed rooms!

Hydraulic equipment

1. Hydraulic equipment is under high pressure.

-  Fluids (fuel, hydraulic oil) which escape under high pressure can penetrate the skin and cause serious injury.
Therefore immediately consult a doctor if such injury occurs. Serious infection may otherwise be caused.

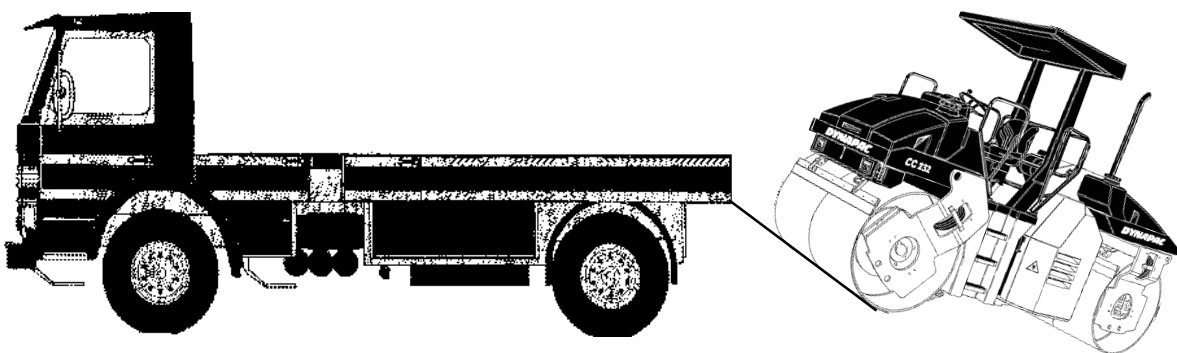
2. When searching for leaks use appropriate means because of the danger of accidents.
3. Before working on hydraulic equipment, de pressurize to zero and lower the working arms of the machine.
4. When working on hydraulic equipment, switch off the engine and secure roller against rolling away (e. g. parking brake)!
5. When connecting hydraulic cylinders and motor, pay attention to correct connection of flexible hydraulic hoses.
6. The resulting functions will be vice versa if the ports are interchanged (e. g. forward or reverse), creating danger of accidents!
7. Check flexible hydraulic hoses regularly and replace them in case of damage or wear! The new hose or pipe must comply with the technical requirements of the machine manufacturer!

Orderly disposal or recycling of oil, fuel and filters!

New roller concept with a new Flow Divider.

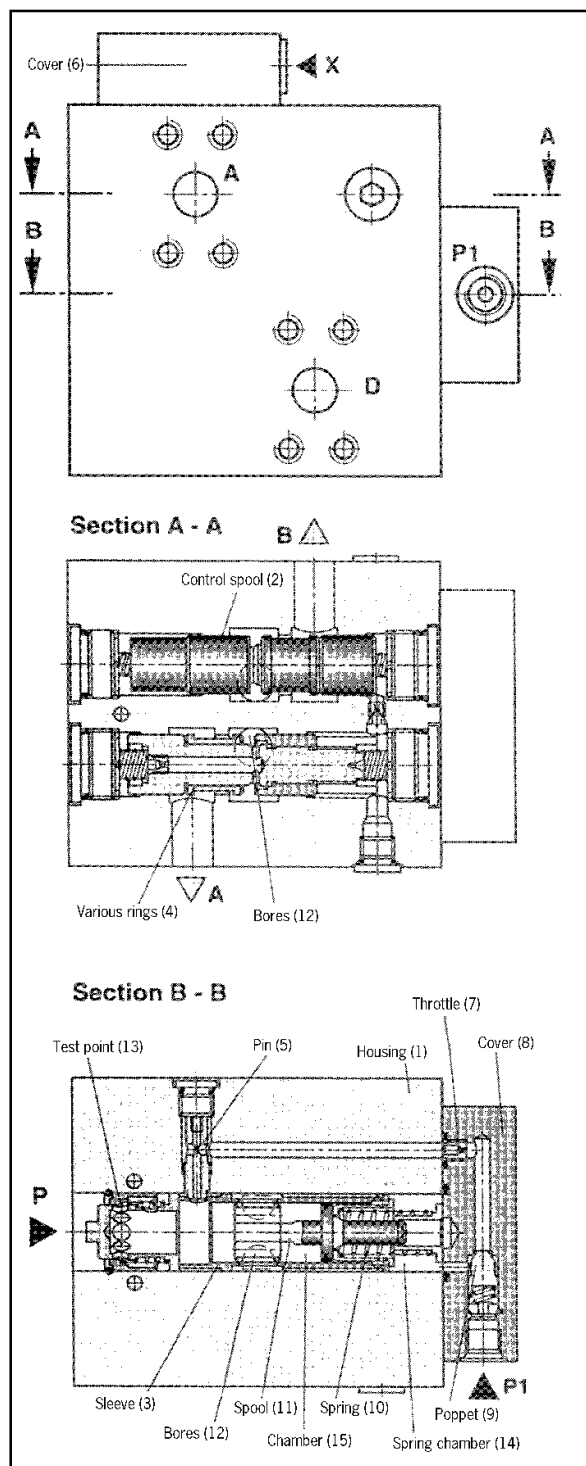
The CC232 and the combi version are an example of Svedala Dynapac's foresight in the roller industry. As an optional feature, the machines can be complemented with a flow divider. This flow divider makes it possible to drive the roller even during very slippery conditions (such as what occur when loading and unloading the roller from a lorry).

The flow divider makes it safe and easy to load and unload the roller from a lorry.



Description of function

This four way flow divider basically comprises housing (1), single land control spool (2), sleeve (3), compression spring (10) and spool (11). Sleeve (3) is held in position in housing (12) by pin (5). Measuring orifices, dependent upon the partial and summation ratios, are built into sleeve (3), which serve to compare the flows downstream and upstream in channels A, B, C and D.



The main flow flows from port P via test point (13) into chamber (15) and moves spool (11) against the preloaded compression spring (10).

Depending on the magnitude of the flow, the opening of the measuring orifice changes and the fluid enters channels A, B, C and D via bores (12). The corrective movement is carried out by the single land control spool (2). Various rings (4) are mounted onto the single land control spool (2) for the automatic switching between the dividing and summation functions.

The differential lock is released or locked by means of controlling poppet (9) situated in cover (8). This poppet connects channel P with spring chamber (14) of spool (11) via throttle (7). The throttle grooves situated on the sleeve (3) connect spring chamber (14) with the working channels.

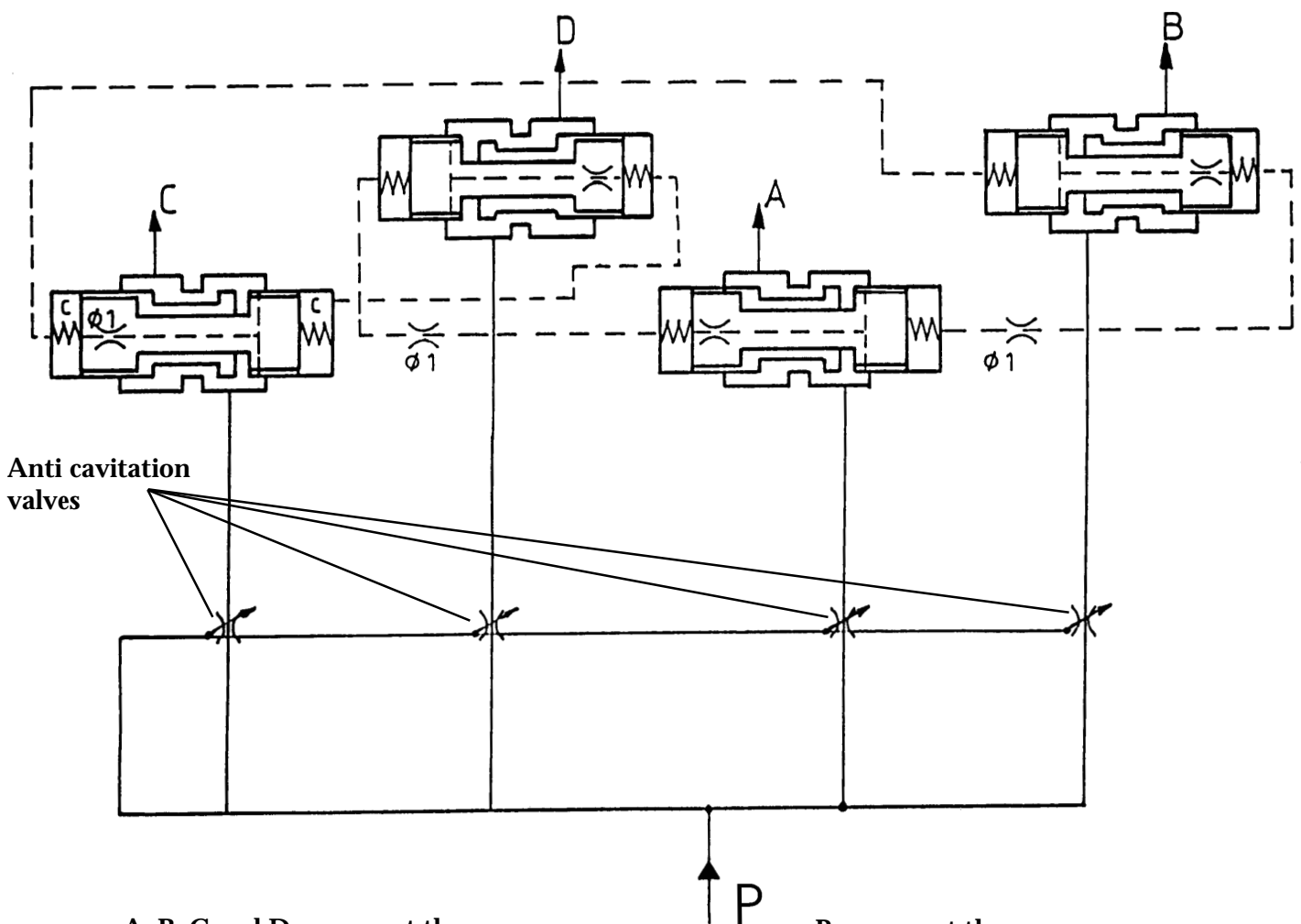
When poppet (9) is closed, the operational mode "free running" is introduced. As the single land control spool (2) only starts to control above a certain pressure difference, the overrunning of the wheels is avoided and the roller remains manoeuvrable.

If the poppet situated in cover (6) are unloaded, the single land control spools (2) move in pairs to opposite end positions. When the roller is moving fast this may lead to lack of fluid resulting in cavitation when driving around corners or to pressure peaks in the system when rapidly changing the direction of travel. For this reason, Svedala Dynapac Heavy supply this flow divider with built-in secondary pressure anti-cavitation valves.

Sketch of Function

Flow Divider

Flow divider.
Simplified sketch of
the flow divider.



A, B, C and D, represent the power outputs from the flowdivider. Each power output is connected with one propulsion motor.

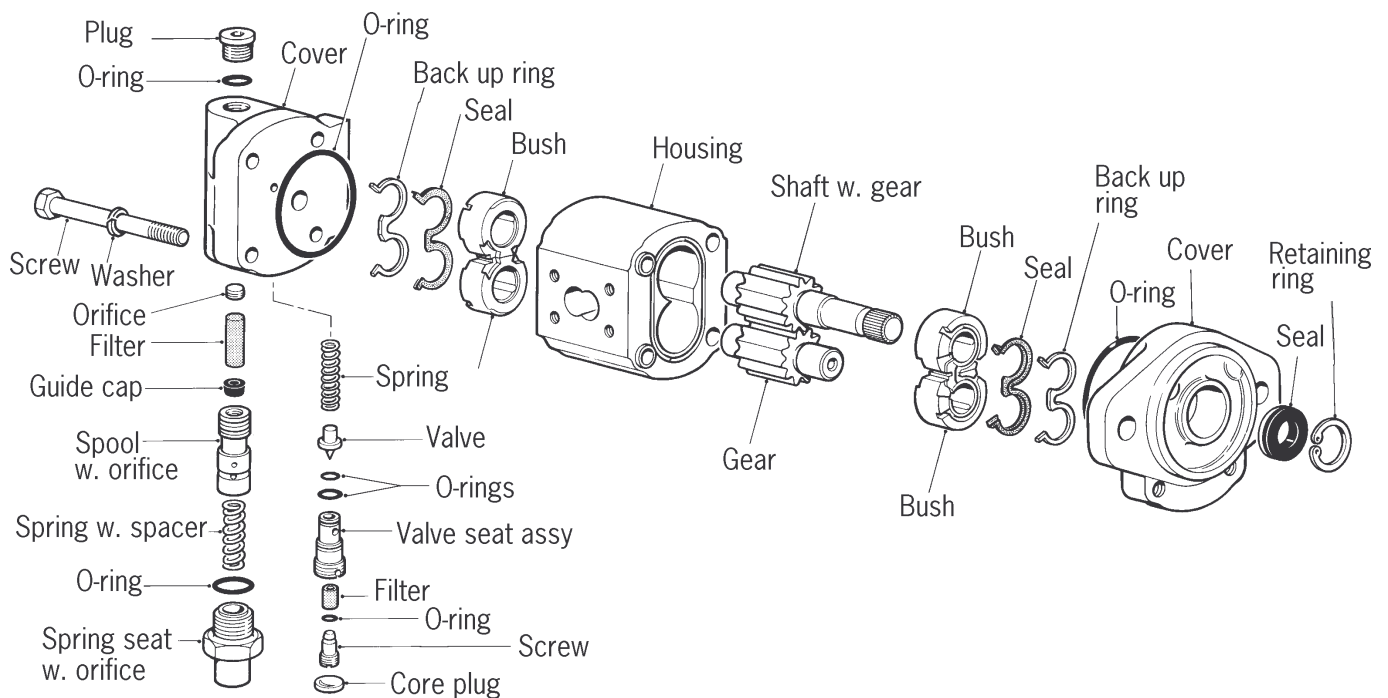
P, represent the power input to the flowdivider. The power input is connected to the power output on the propulsion pump.

When the roller is being used backwards, the oil will go in the opposite direction compared to sketch above.

Flow Divider

Charge & Steering Pump

Charge and steering Pump. Exploded and schematic



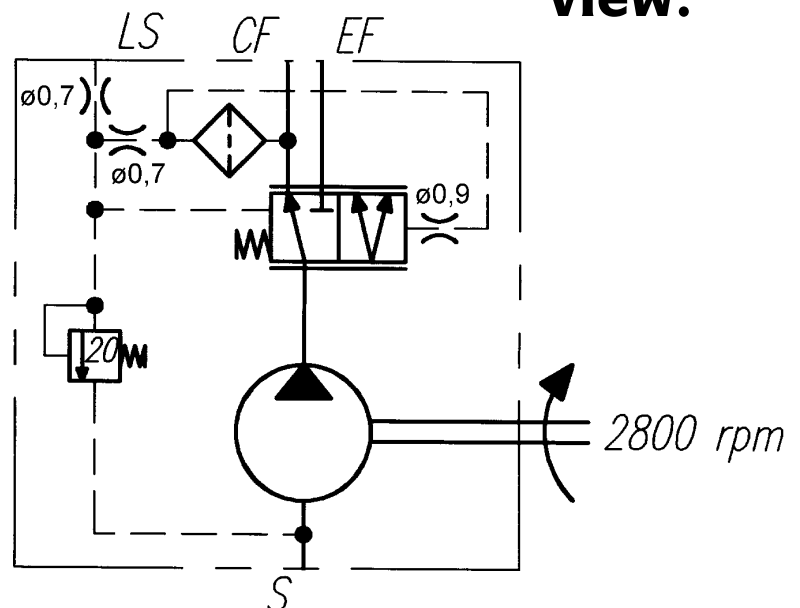
view.

LS is connected to the load sensing line from the off-set steering valve.

CF is connected to the steering unit and to the off-set steering valve, as steering pressure.

EF is connected to the oil cooler fan motor and after that to the main pump as charge pressure.

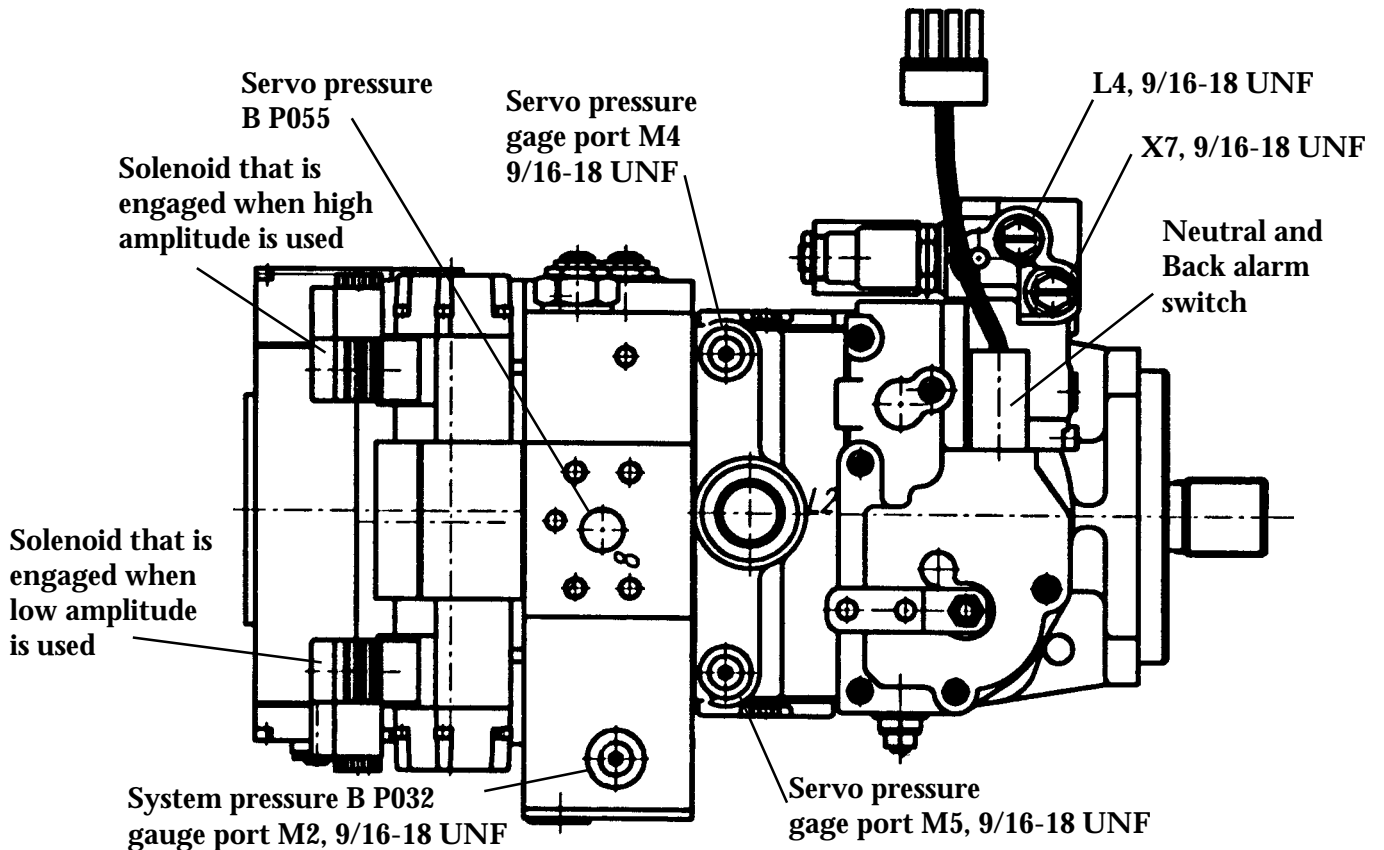
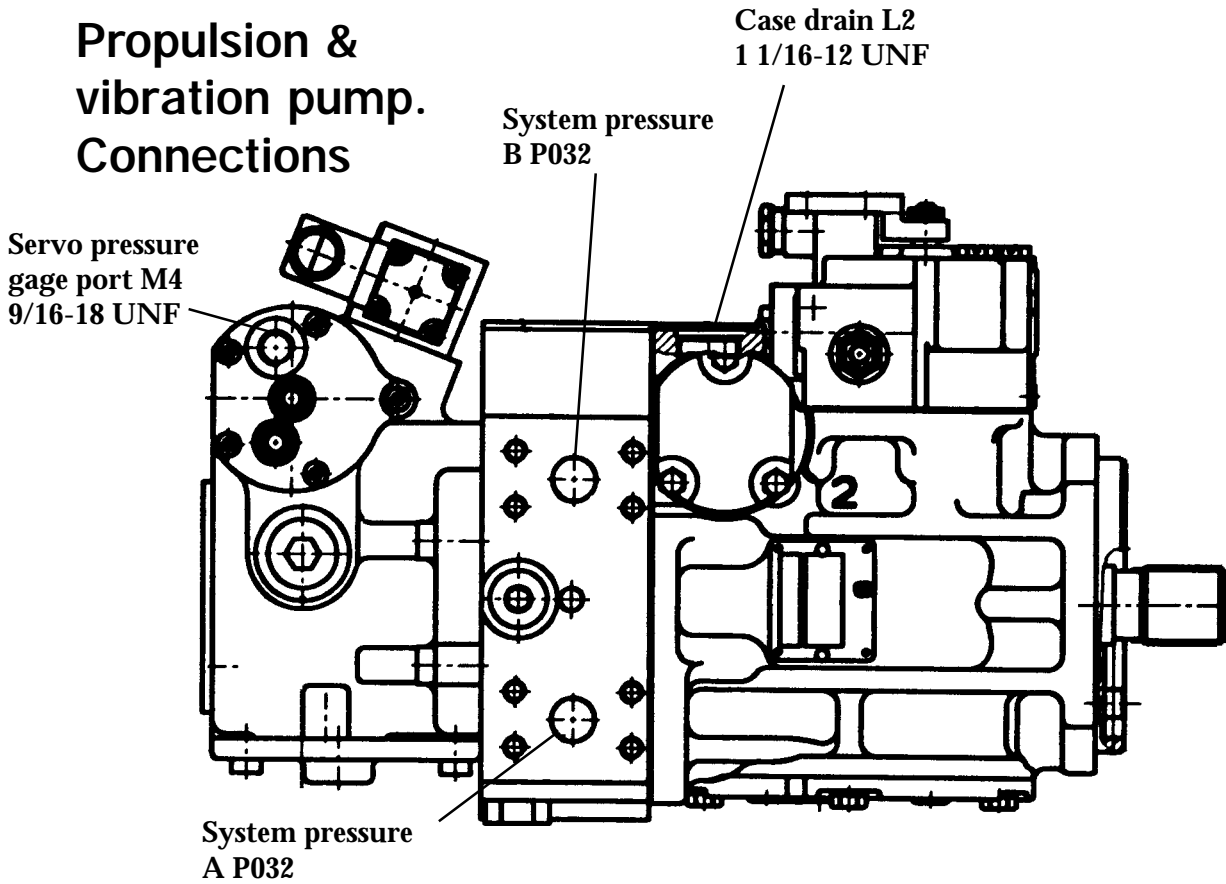
S is connected to the tank.



Propulsion & Vibration Pump

Flow Divider

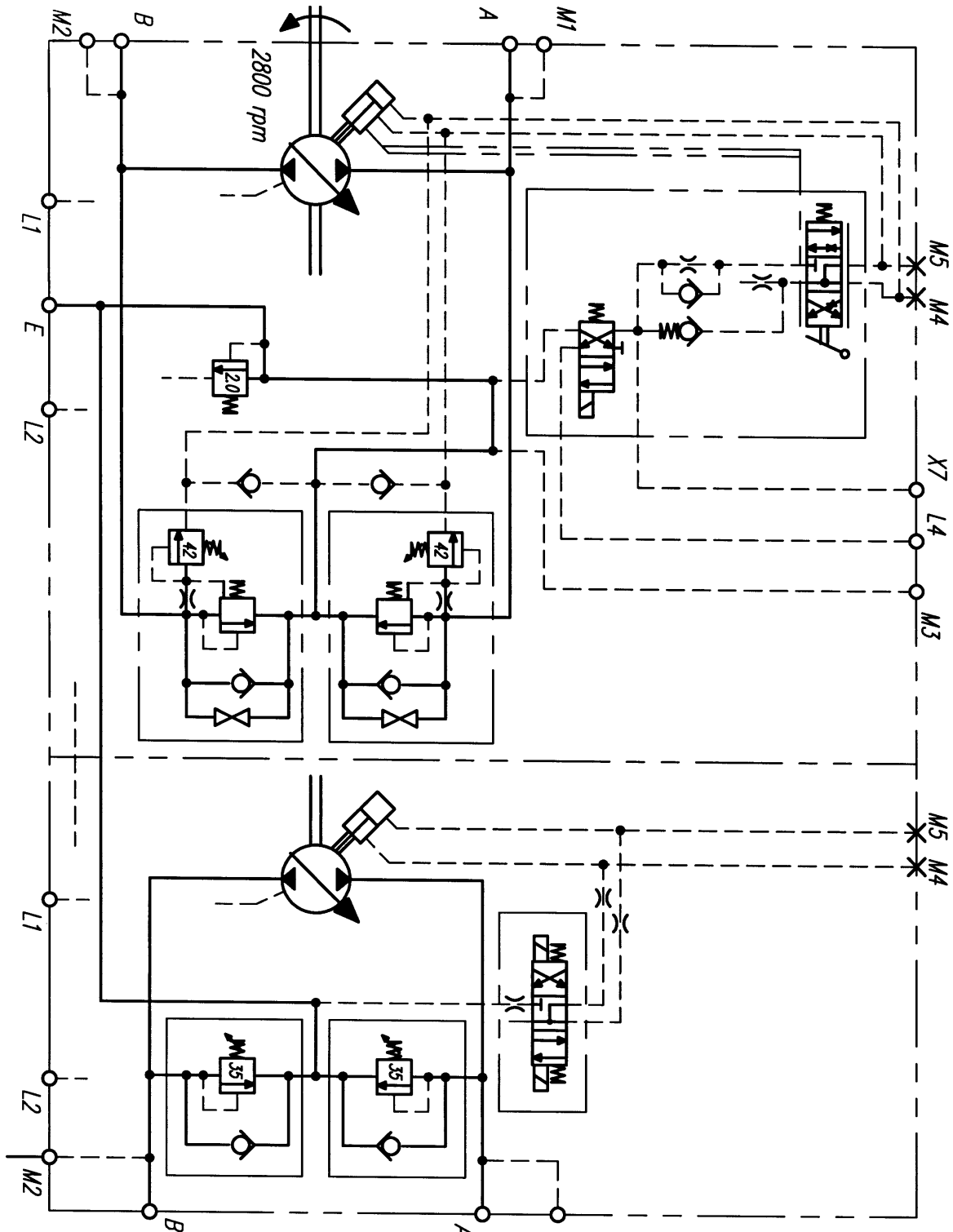
Propulsion & vibration pump. Connections



Flow Divider

Propulsion & Vibration Pump

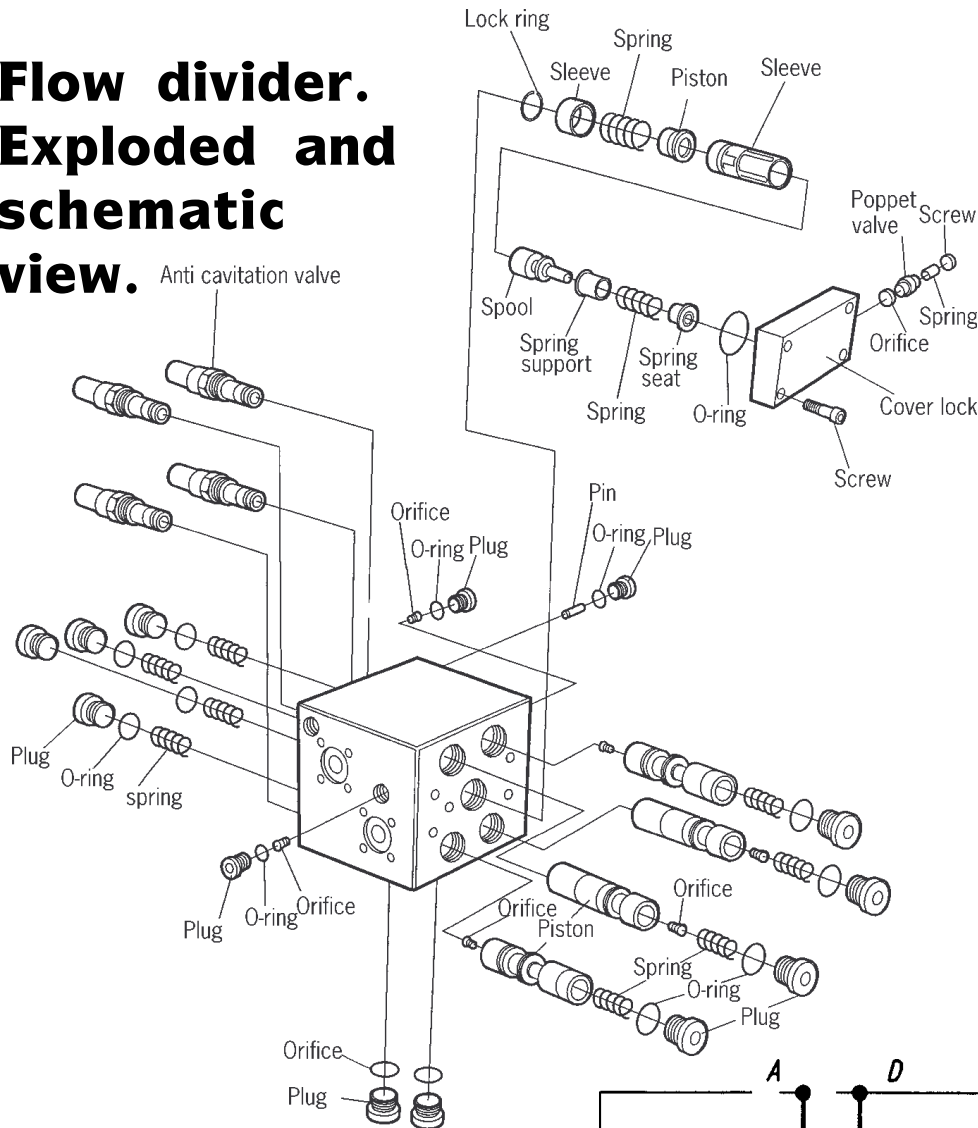
Propulsion & vibration pump.
Schematic



Flow Divider Valve

Flow Divider

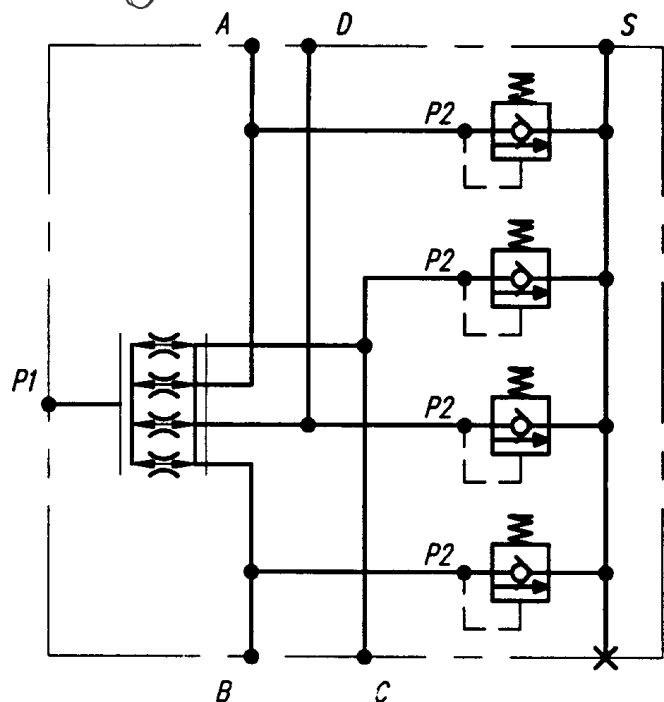
Flow divider. Exploded and schematic view.



S, is connected with the charge pressure line on the main pump.

P1, represent the power input to the flowdivider. The power input is connected to the power output on the propulsion pump.

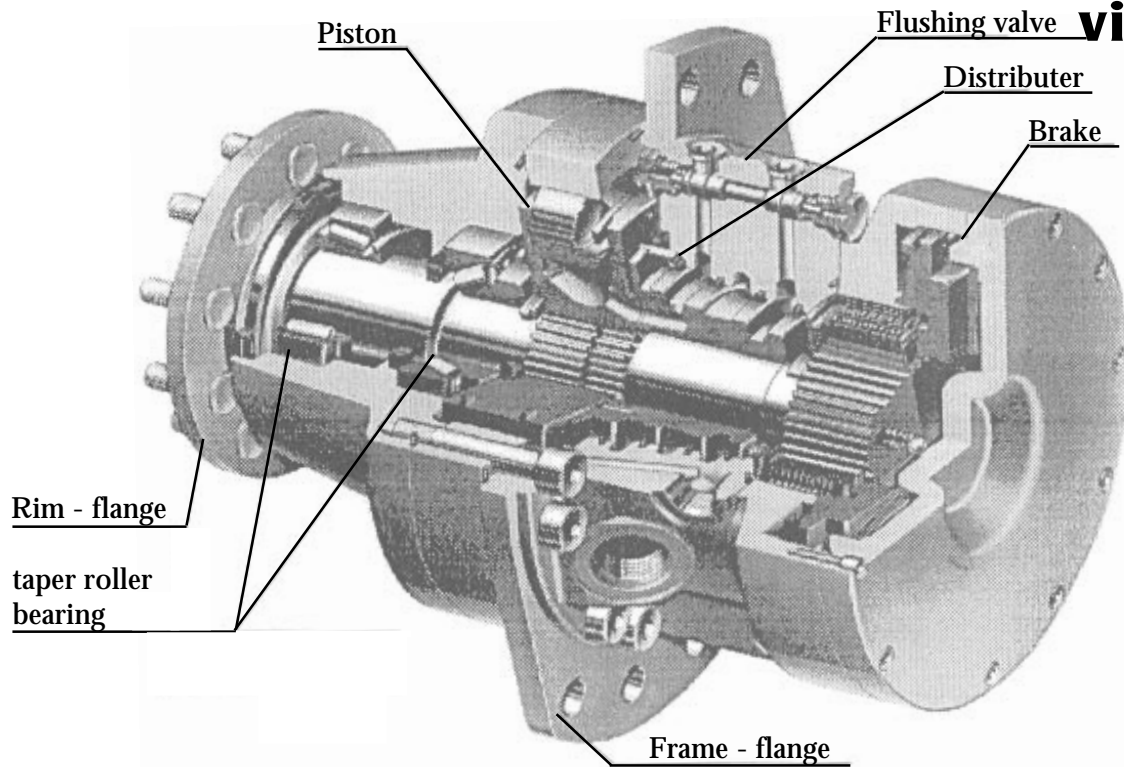
When the roller is being used in the backward direction, the oil will go in the opposite direction compared to statement above.



Flow Divider

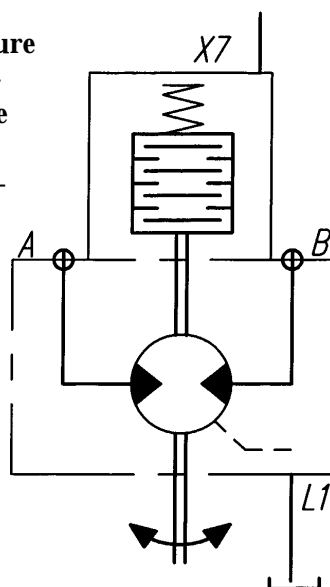
Propulsion Motor

Propulsion motor. Exploded and schematic view.



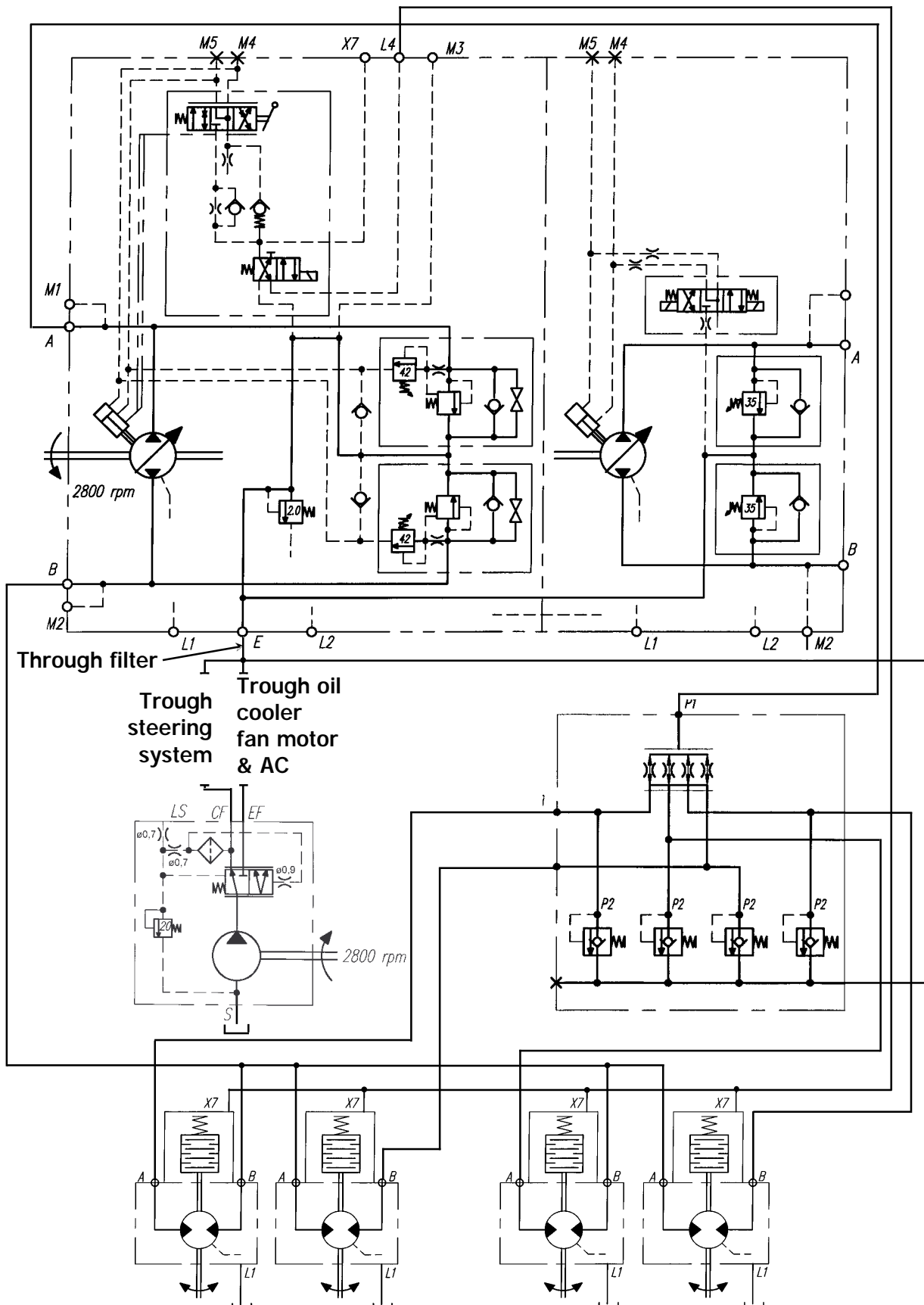
Picture shows the motor type used for propulsion of rubber wheels on CC 222C and CC 232C

A and B are high and low pressure lines going to and from the motors. Wich of A and B that is the high pressure line, depends on wich direction the roller is moving. X7 is a leakage line.



Flow Divider System Schematic

Flow Divider



Flow Divider

Location of Hydraulic Components

