Poclain 160 C
Hydraulic Excavator

Service Manual

K18-440-34

Reprinted

CASE

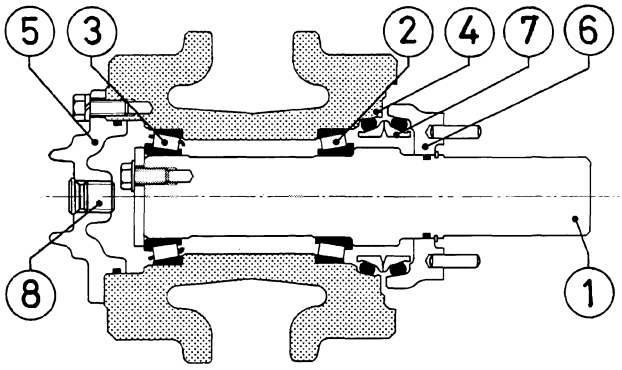
ROLLERS :

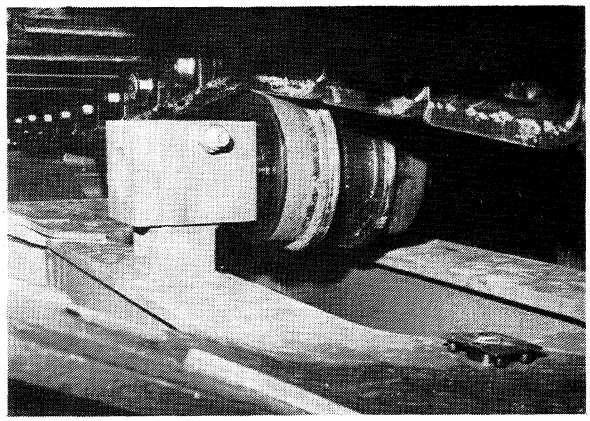
Two rows of bottom rollers guide the tracks and enable them to run smoothly. An upper roller prevents the track from rubbing against the upper part of the side member.
Each roller is lubricated for life.

ROLLERS	UPPER	BOTTOM
TYPE	D7	D7
NUMBER PER TRACK	1	7

UPPER ROLLER

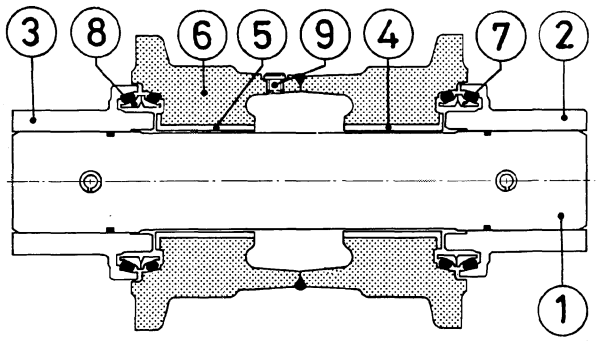
This is equipped with a pin (1) solidly fixed to the top part of the side-member, two conical roller bearings (2 and 3,) a body in moulded steel (4,) and two cover flanges (5 and 6) O-ring seals and a face seal (7) provide tightness.
In the event of a roller leak, the oil can be topped up after first unscrewing the plug (8).

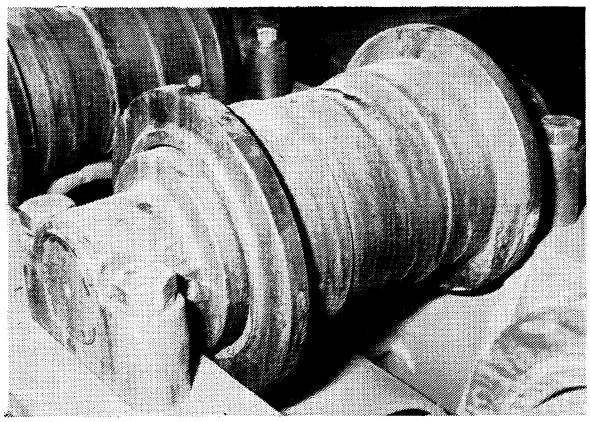


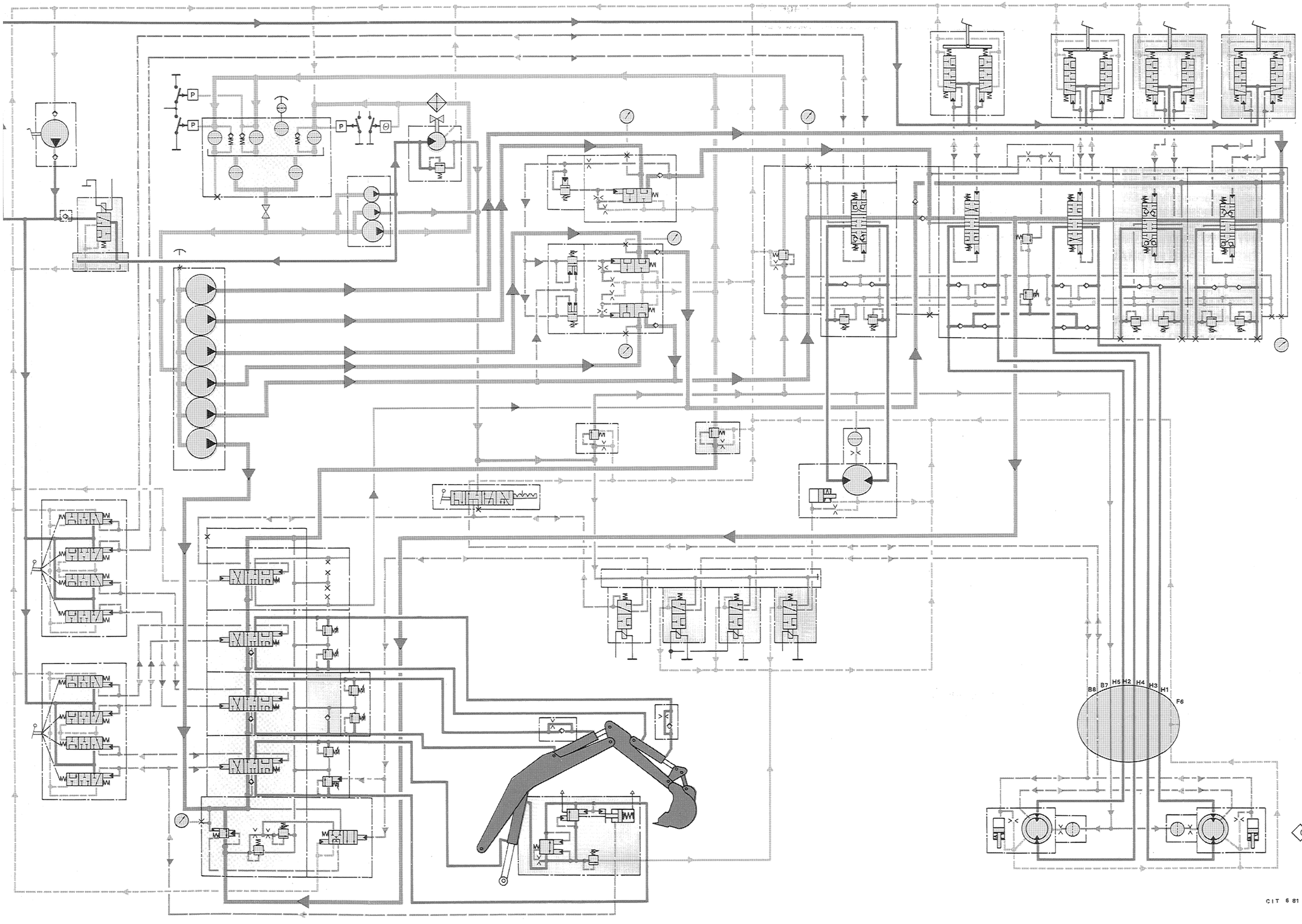


BOTTOM ROLLER

This consists of a pin (1), two fixed bearings (2 and 3,) solidly fixed to the lower part of the side-member, two bronze bearing bushes (4 and 5,) and a body (6) in moulded steel. Two face seals (7 and 8) provide tightness. In the event of a roller leak, the oil can be topped up after first unscrewing the plug (9).







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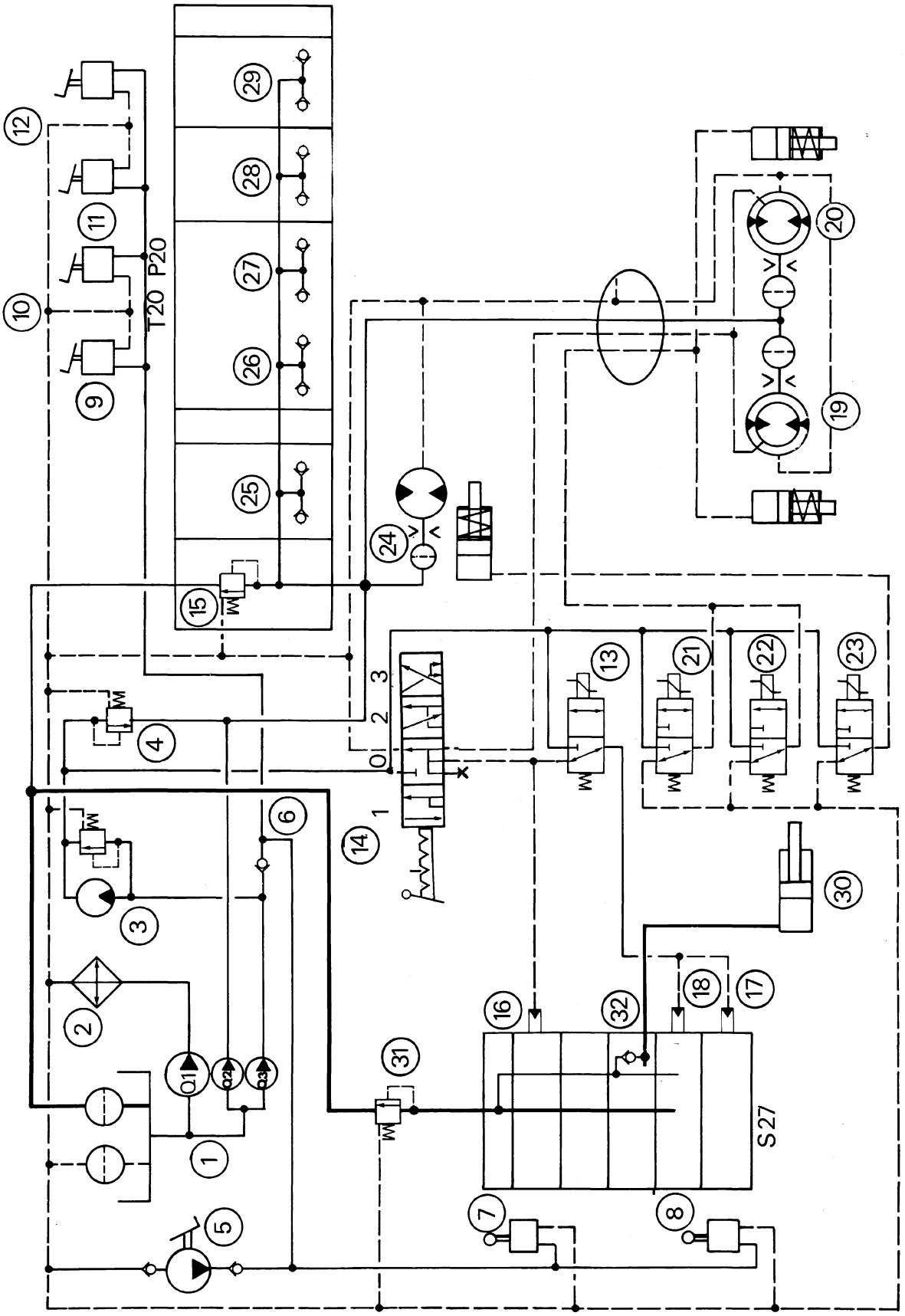
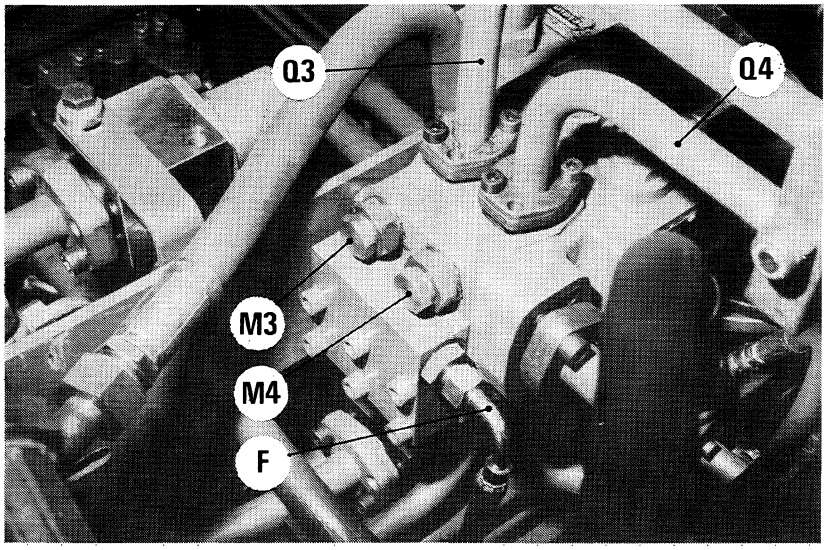
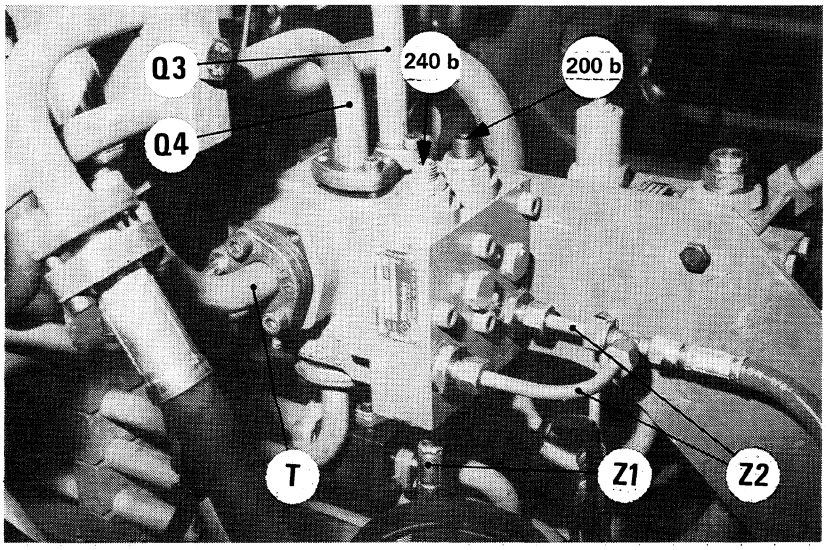
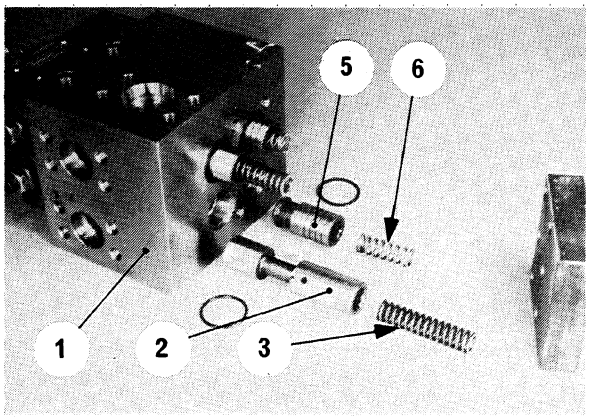
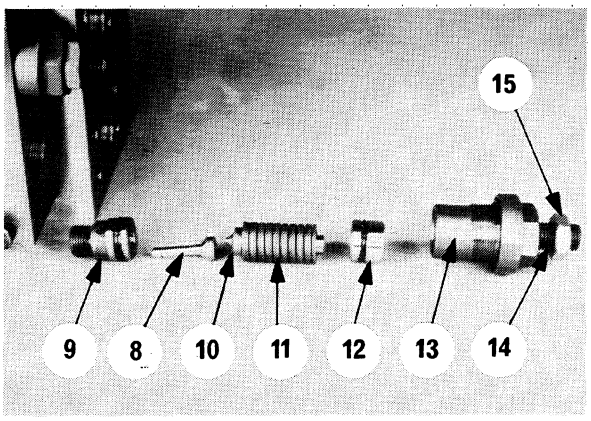

T20 P20
S27


Q3
Q4
M3
M4
F


Q3
240 b
200 b
Q4
T
Z1
Z2

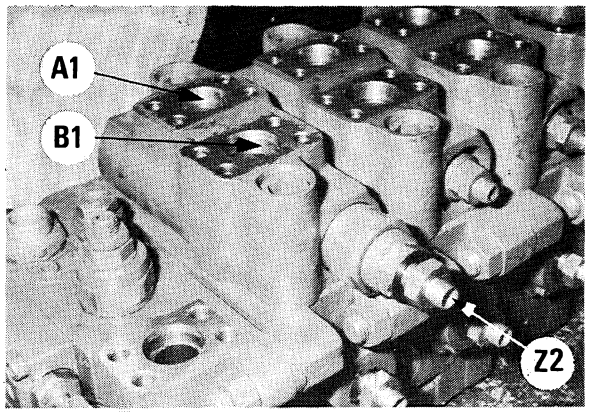

5
6
1
2
3


15
9
8
10
11
12
13
14

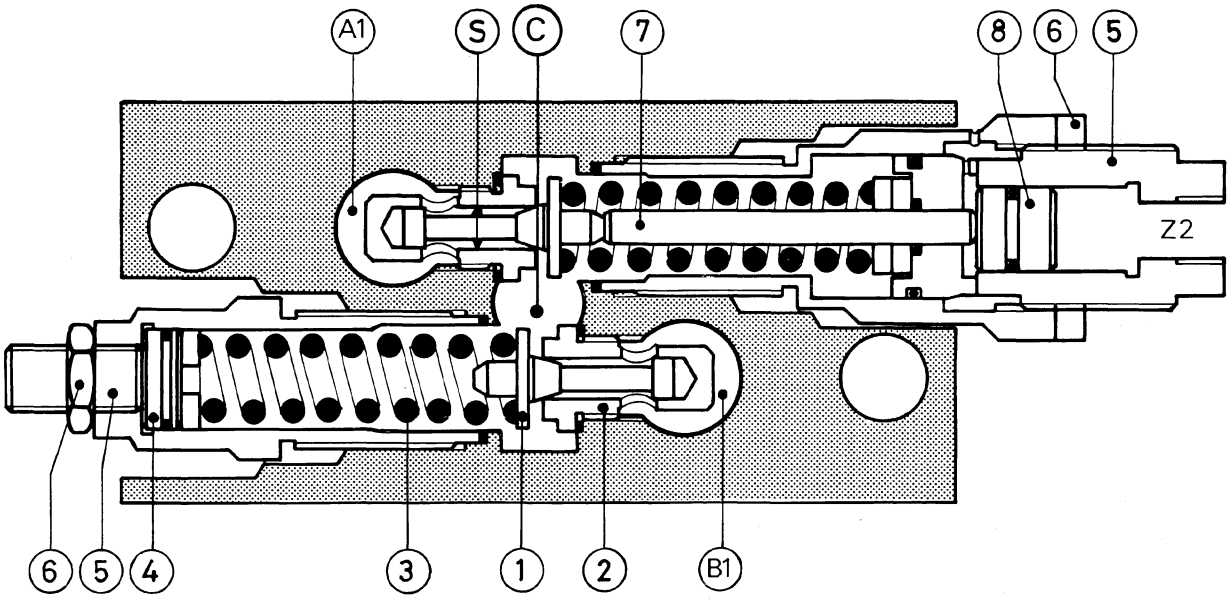
SAFETY VALVE

Each attachment control valve has a safety block which protects the receivers from excess pressures. This block has two safety valves, (one for each power-supply).

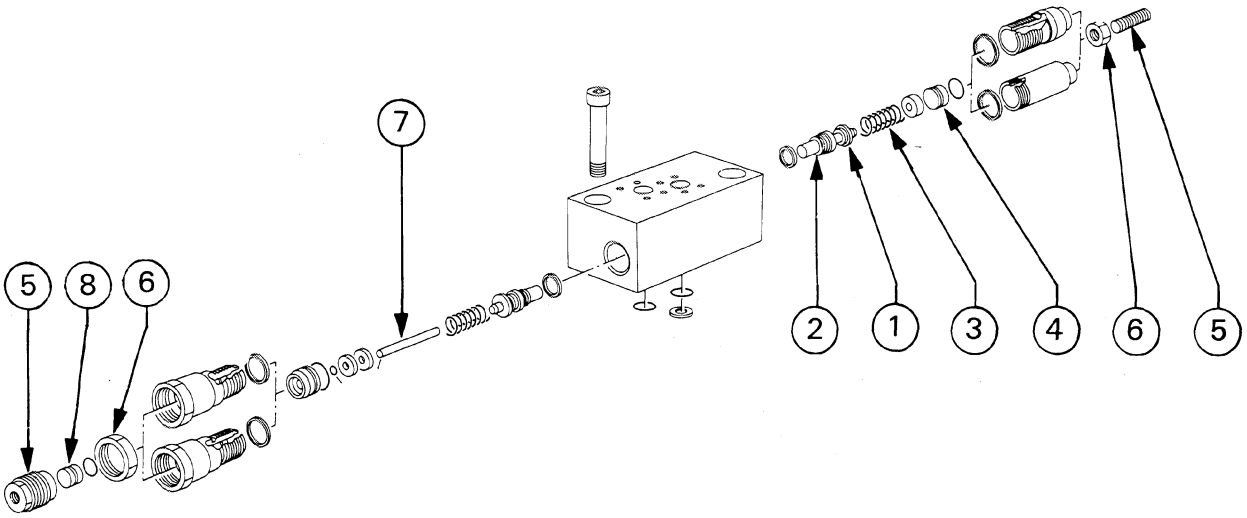
The safety block which regulates the boom cylinders has a valve which can be overset on the large chamber side of the rams called the HEAVY LIFT valve; it operates in just the same way as the other valves.



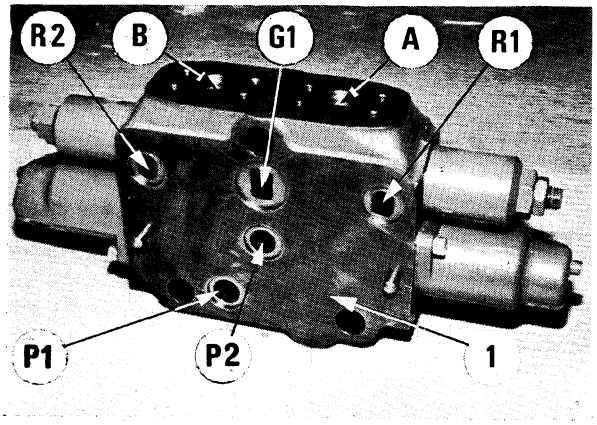
DESCRIPTION



Each valve assembly comprises a rod-type valve (1) held against its seat (2) by a spring (3); adjusting screw (5) presses against sealing plug (4) and is held in position by nut (6).
The valve, which can be overset, is also equipped with pushrod (7) and a piston (8) which receives the oversetting pressure at (Z2).



P20 CONTROL VALVE



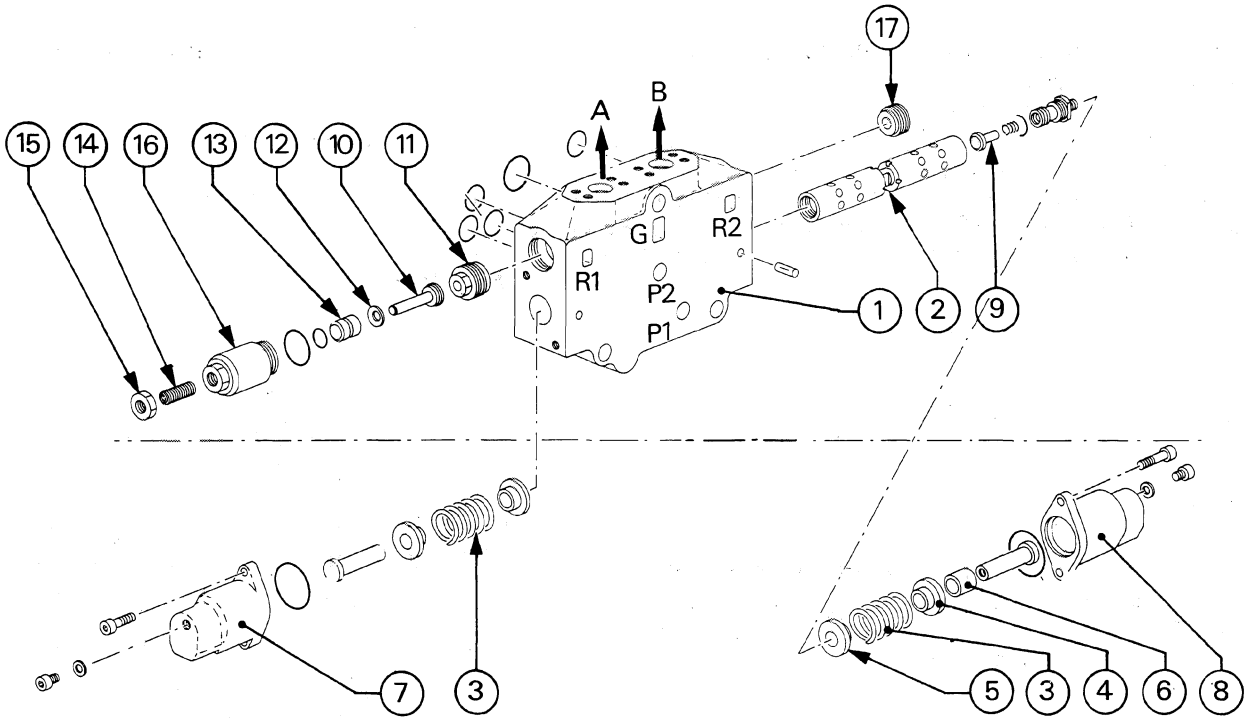
These parallel-type control valves (1) control SWING and OPTION functions.

Each control valve carries out several functions, as follows :

– **The feed assembly,** comprising :
A three-position spool (2), held in neutral position by two springs (3).
Front (4) and rear (5) stops and a spacer (6) limit the spool (2) stroke.
Front (7) and rear (8) caps collect internal leaks and ensure piloting of the spool at ZA and ZB.
Two non-return valves (9) located in the spool.

– **Safety is ensured** by two direct-acting valves
Each valve assembly consists of a valve (10) held flat against its seat (11) by a stack of elastic washers (12)
Plug (13) ensures tightness of the assembly and compresses the washers.
An adjusting screw (14) is secured in position by locknut (15)
Each valve assembly is housed in a cap (16)

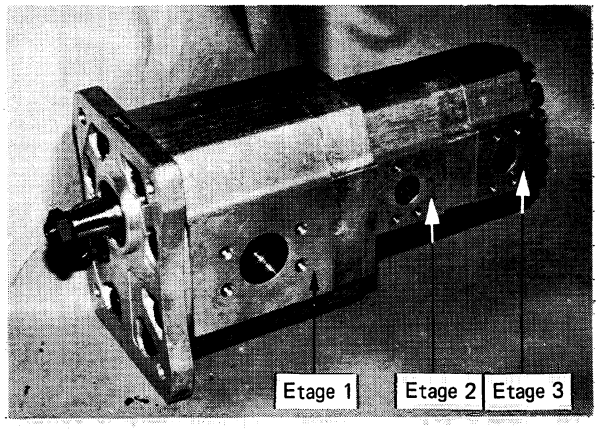
– **Forcible feed** is ensured by the counterpressure valve housed in the inlet block and by two non-return valves (17) (one for each power-supply) held flat against their seats (18) by springs (19).

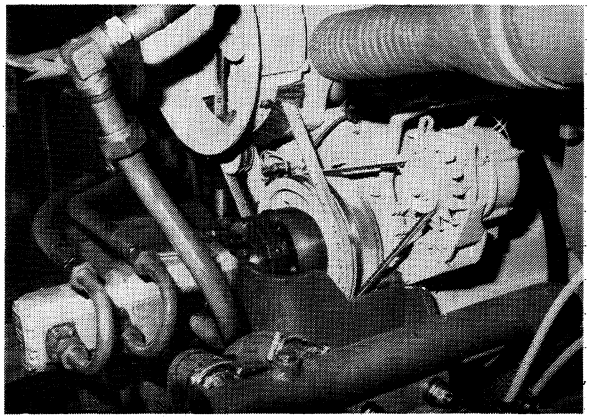


GEAR-TYPE-PUMP

Operation : see components, file n°. 1)

This pump is driven by belts, and delivers three flows.





CHARACTERISTICS

Displacement : Stage 1	50 cm3
Stage 2	15 cm3
Stage 3	12 cm3
Working speed	2300 rpm
Maximum speed	3000 rpm
Theoretical flow at	2300 rpm
Stage 1	115 L/min.
Stage 2	34.5 L/min.
Stage 3	27.6 L/min.
Working pressure	88 bars
Maximum pressure	200 bars
Rotational direction (viewed from end of shaft)	clkw

(The rotational direction is usually indicated by an arrow on the front flange)

Weight ..... 9 kg

– **Stage 1 :**

A drive pinion (1) and a driven pinion (2) are guided and imbedded between two supports (3) and (4). This assembly is housed in a body (5) with the ends sealed off by a front flange (6) equipped with a sealing ring (7) and an intermediate flange (8).

– **Stage 2 :**

Drive pinion (9) is rigidly locked with drive pinion (1) by means of splines, and drives the driven pinion (10). Both pinions are guided and imbedded between two supports (11) and (12). This assembly is housed in a body (13) with the ends sealed off by two intermediate flanges (8) and (14).

– **Stage 3 :**

An internally splined bush (15) is connected to the drive pinion (16) which drives a driven pinion (17). Both pinions are guided and imbedded between two supports (18) and (19). This assembly is housed in a body (20) with the ends sealed off by an intermediate flange (14) and a rear flange (21).

O-rings (22) ensure tightness between each stage of the pump.