Disc brakes - CE8L power unit

Spare parts

1 - WEARING PARTS (to store by the customer)

Ref.	Fig.	Designation	Part number	Option	Qty	In-stock priority ■	Element of fixing Tightening torque (Tt)
CA	1	Main check valve	945-42140		2	2	-
CP1 ✱	1	Pressure switch (without cable gland)	049-55254		1	2	Tt = 35 to 38 Nm
EV1	1-3-4-5	EVNO unequipped 70 l/min	945-52810		1	1	Tt = 54 to 66 Nm
		Coil 230V RAC with DIN tap	945-51980		1	1	-
		Coil 110V RAC with DIN tap	945-51970	EVS	1	1	-
		Coil 48V RAC with DIN tap	945-51960	EVS	1	1	-
		Coil 24V RAC with DIN tap	945-51950	EVS	1	1	-
EV2	3-4-5	EVNO unequipped 70 l/min	945-52810	OP1 Y5	1	1	Tt = 54 to 66 Nm
		Coil 230V RAC with DIN tap	945-51980	OP1 Y5	1	1	-
		Coil 110V RAC with DIN tap	945-51970	EVS	1	1	-
		Coil 48V RAC with DIN tap	945-51960	EVS	1	1	-
		Coil 24V RAC with DIN tap	945-51950	EVS	1	1	-
EV3	5	Manual control valve NO	049-10046	OP2	1	1	Tt = 39 to 51 Nm
EV4	5	EVNO unequipped 401 3/4 -16UNF	945-51780	OP3	1	1	Tt = 39 to 51 Nm
		Coil 24V RAC with DIN tap	945-51950	OP3	1	1	-
		Coil 110V RAC with DIN tap	945-51970	EVS	1	1	-
		Coil 48V RAC with DIN tap	945-51960	EVS	1	1	-
		Coil 230V RAC with DIN tap	945-51980	EVS	1	1	-
F	1	Return filter	945-46580		1	1	3 screws M6 / Tt = 10 Nm
LP ✱	1	Main pressure limit valve	049-54649		1	2	Tt = 46 to 51 Nm
LP1 ✱	1	Pressure limit valve of hand pump	049-55453		1	2	Tt = 50 to 59 Nm
12	5	Switch indicating valve position	069-48106	OP4	1	2	2 screws M5 / Tt = 6 Nm
20	5	Switch indicating lowering valve position	069-48106	OP4 + OP2 or OP3	1		

✱ See setting processes in chapter 3

■ Priority order of in-stock maintenance by the Customer : **1** : imperative, **2** : recommended

ATTENTION !

Under guarantee, all intervention on components which are normally set in factory (sealed) must be realized by Stromag-France.

Graphical representation :

Fig.1 : Hydraulic power unit CE8L standard
Fig. 3 : Option OP1
Fig. 4 : Option Y5
Fig. 5 : Options OP1-OP3 and OP4

Non contractual photographs.
Instructions of this manual must be adhered to, to obtain the performance and the safety of operation of the equipment.

Disc brakes - CE8L power unit

Spare parts

2 - SPARE PARTS

Ref.	Fig.	Designation	Part number	Option	Qty	Element of fixing Tightening torque (Tt)
AC	1-2	Coupling motor / gear pump	945-46430		1	1 screw M4 / Tt = 2,9 Nm ✱✱
BR1	1	Breather port	945-37810		1	Tt = 12 Nm
		Tight plug VSTI	049-10026	SID	1	Tt = 80 Nm
BV	1	Plug 1/4"G ED	049-51165		1	Tt = 30 Nm
		Draining valve 2-ways 1/4"	049-10069	RV	1	Tt = 35 Nm
CR	1	Suction strainer	945-42150		1	Tt = 80 Nm
JC	1	O ring D113,97 x 2,62	049-10231		1	
LD	5	Flow limiter	947-52780	OP2 OP3	1	-
LD1	1	Flow limiter	049-10007	STD only	1	Tt = 39 to 51 Nm
M	1-2	Motor 3CV IP55 230/400 V 3 phases	945-46421		1	4 screws M6 / Tt = 10 Nm
		Motor 2,2kW 1500tr 400V with PTC sensor	947-57571	MS	1	4 screws M6 / Tt = 10 Nm
		Motor 500 V 50 Hz 3 phases	947-53981	MS	1	4 screws M6 / Tt = 10 Nm
NV	1	Oil level sight glasses of reservoir	945-12120		2	Tt = 12 Nm
		Pyrex oil level sight glasses	049-10025	SID	2	
P1	1	Gear pump	049-54644		1	2 screws M8 / Tt = 25 Nm
P2	1	Hand pump 5,8 cm^3	947-51121		1	2 screws M8 / Tt = 25 Nm
PP	1	Drain port	049-10021		1	-
R1	3-4-5	2-ways control valve	049-10013	OP1 Y5	1	-
		Padlock	099-41510		1	-
		Support of switch	947-54030	OP4	1	2 screws M4 / Tt = 2,9 Nm
		Stop for switch	947-58860	OP4	1	2 screws M4 / Tt = 2,9 Nm
R2	5	2-ways control valve 1/4" - Lowering	049-10069		1	-
		Padlock	099-41510	OP2 OP3	1	-
		Support o padlock	947-57980		1	-
		Support of switch	947-54030	OP4	1	2 screws M4 / Tt = 2,9 Nm
		Stop for switch	947-54040	OP4	1	2 screws M4 / Tt = 2,9 Nm
TH1	4	Thermostat	069-04108	Y5	1	Tt = 10 Nm
VP	4	Proportional limit valve	049-10005	Y5	1	4 screws M5 / Tt = 6 Nm
1G	1	Manometer	049-54661		1	Tt = 35 Nm
15	1	O ring D15,6 x 1,78	049-54839		1	-
18	1	O ring D14 x 1,78	049-10012		2	2 screws M8 / Tt = 25 Nm
19	3-5	Seal of interface between manifold blocks	049-48743	OP1 OP2 OP3	2	2 screws M8 / Tt = 25 Nm
	4		049-10012	Y5	2	2 screws M8 / Tt = 25 Nm
40	1	Electrical power unit	Consult us	K1 or K2	1	4 screws M6 / Tt = 10 Nm
50	1	Lever of hand pump	947-57760		1	-
70	1	Protecting cover CE8L standard	947-51130	STD only	1	4 screws M6 / Tt = 10 Nm
71	3-5	Protecting cover for option	947-51780	OP1 OP2 OP3	1	3 screws M6 / Tt = 10 Nm
72	5	Protecting cover for option	947-51180	Y5	1	3 screws M6 / Tt = 10 Nm

Tightening torque : - on hydraulic connections G1/4"→ 35 Nm, G1/2"→ 90 Nm, G1"→ 310 Nm
- on screw : according to standard NFE 25-030 or VDI 2230

✱✱ Dimension of mounting - screw stuck with strong thread-locker (see fig.2)

Non contractual photographs.
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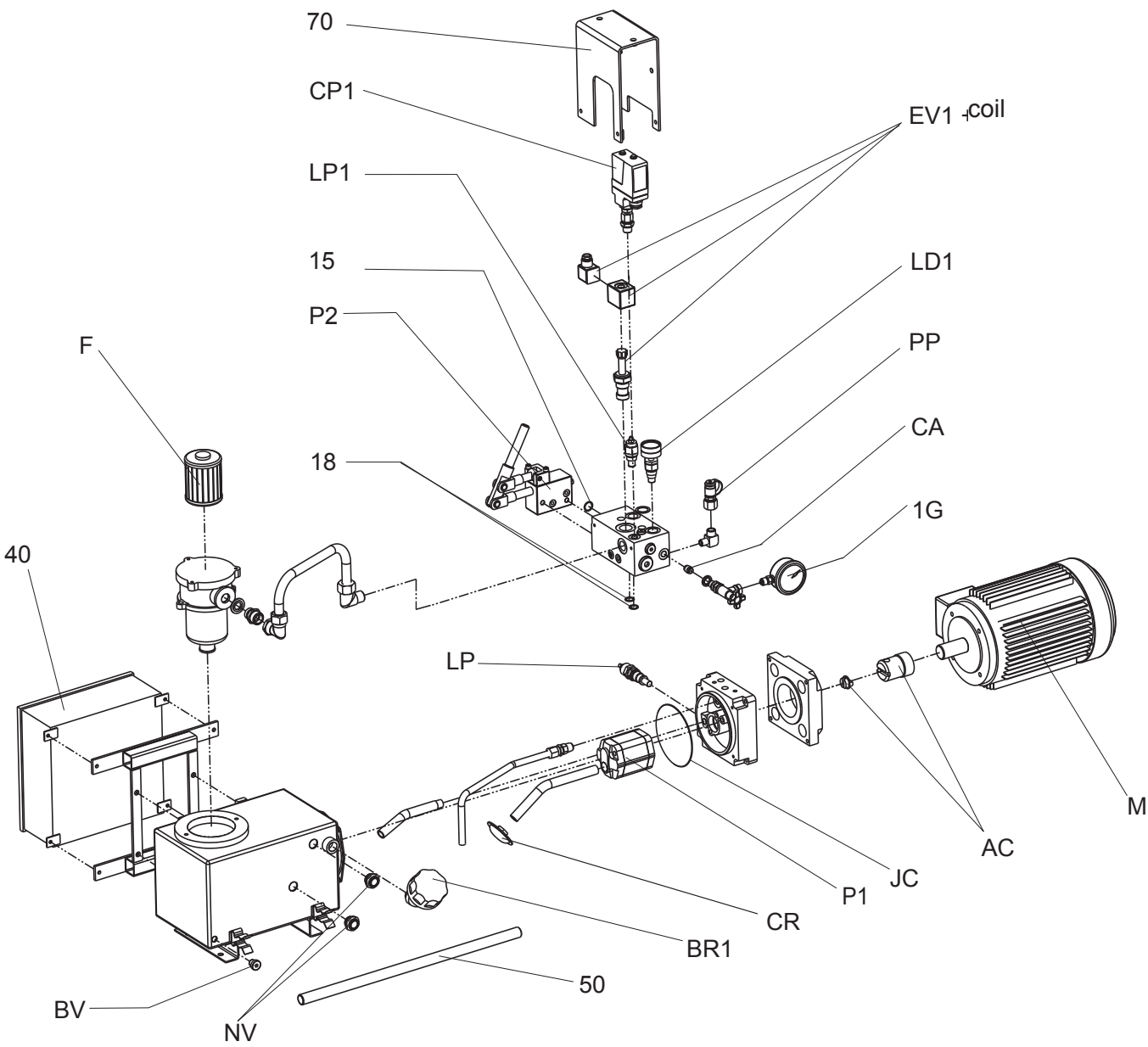
Disc brakes - CE8L power unit

Spare parts

Fig. 1 - **Power unit CE8L standard**



Non contractual photographs.
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Disc brakes - CE8L power unit

Spare parts

Fig. 2

Dimension for mounting the coupling (AC) on the motor (M)
(en mm)

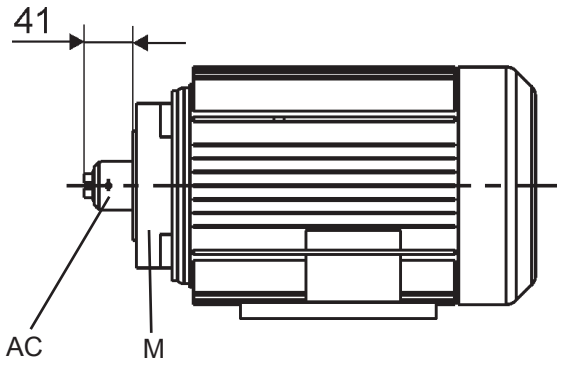
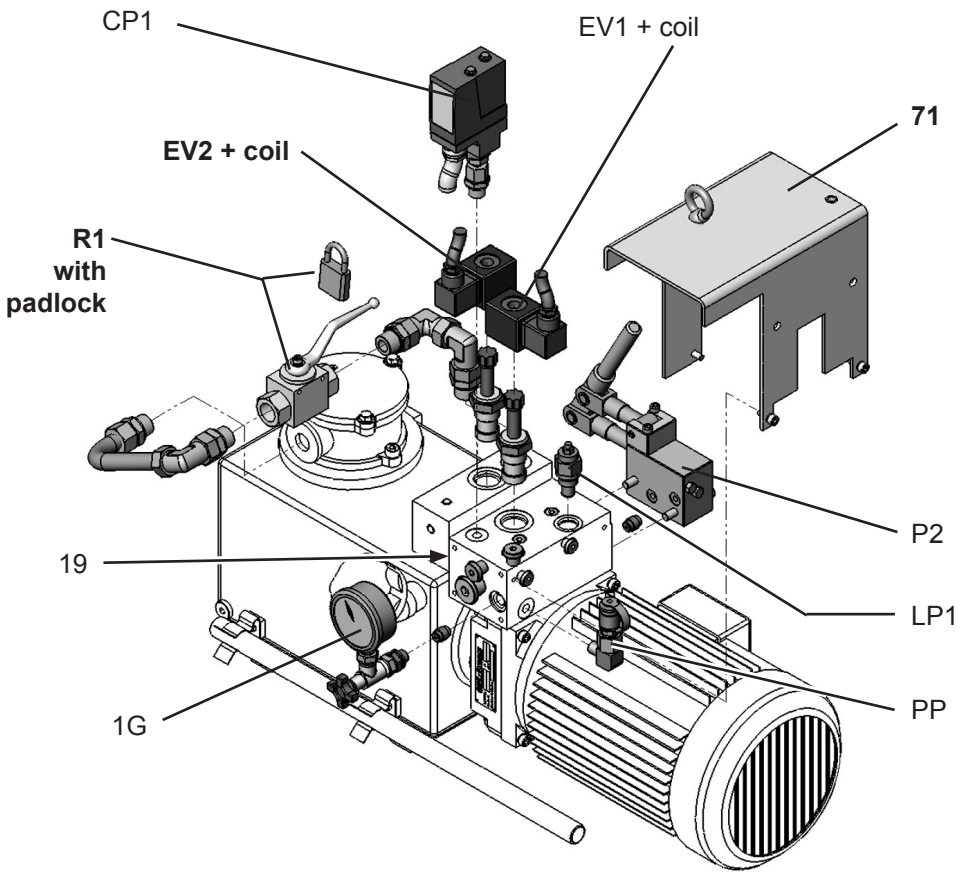


Fig. 3 - **Power unit CE8L - Option OP1**



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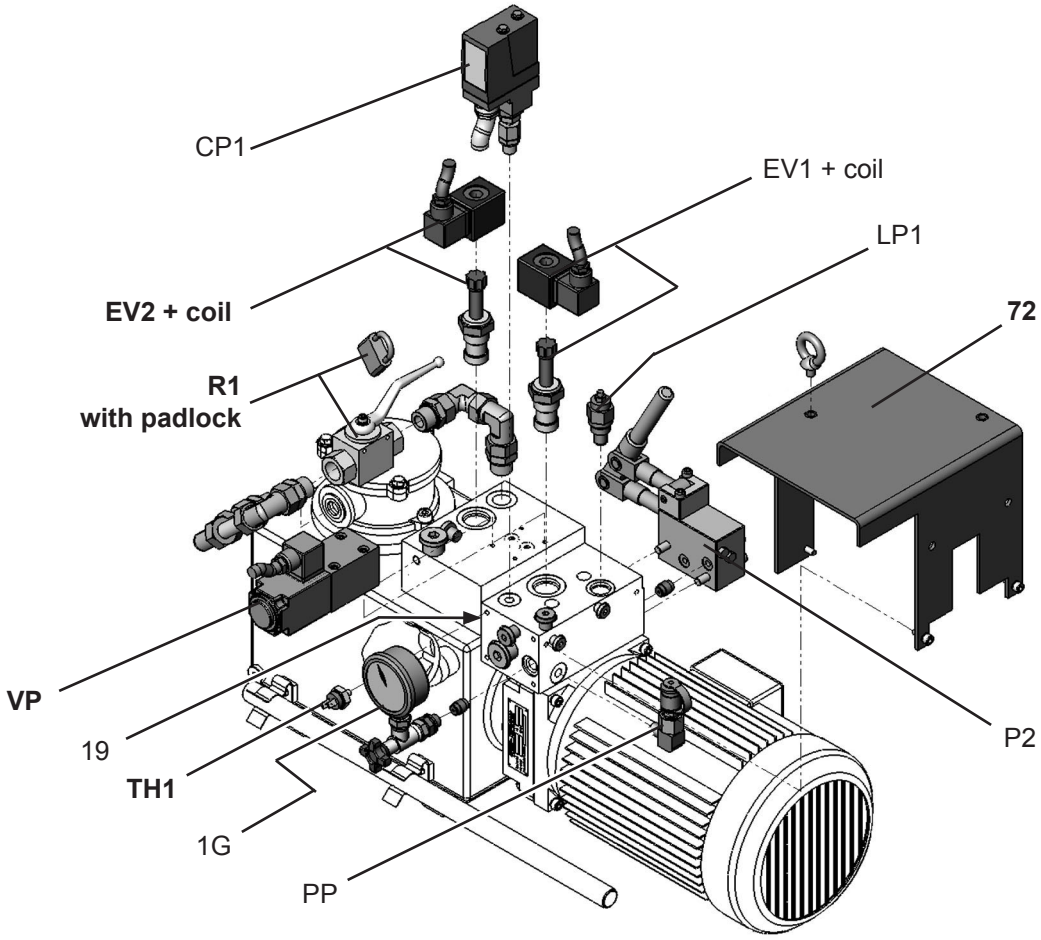
Disc brakes - CE8L power unit

Spare parts

Fig. 4 - **Power unit CE8L - Option Y5**



Non contractual photographs.
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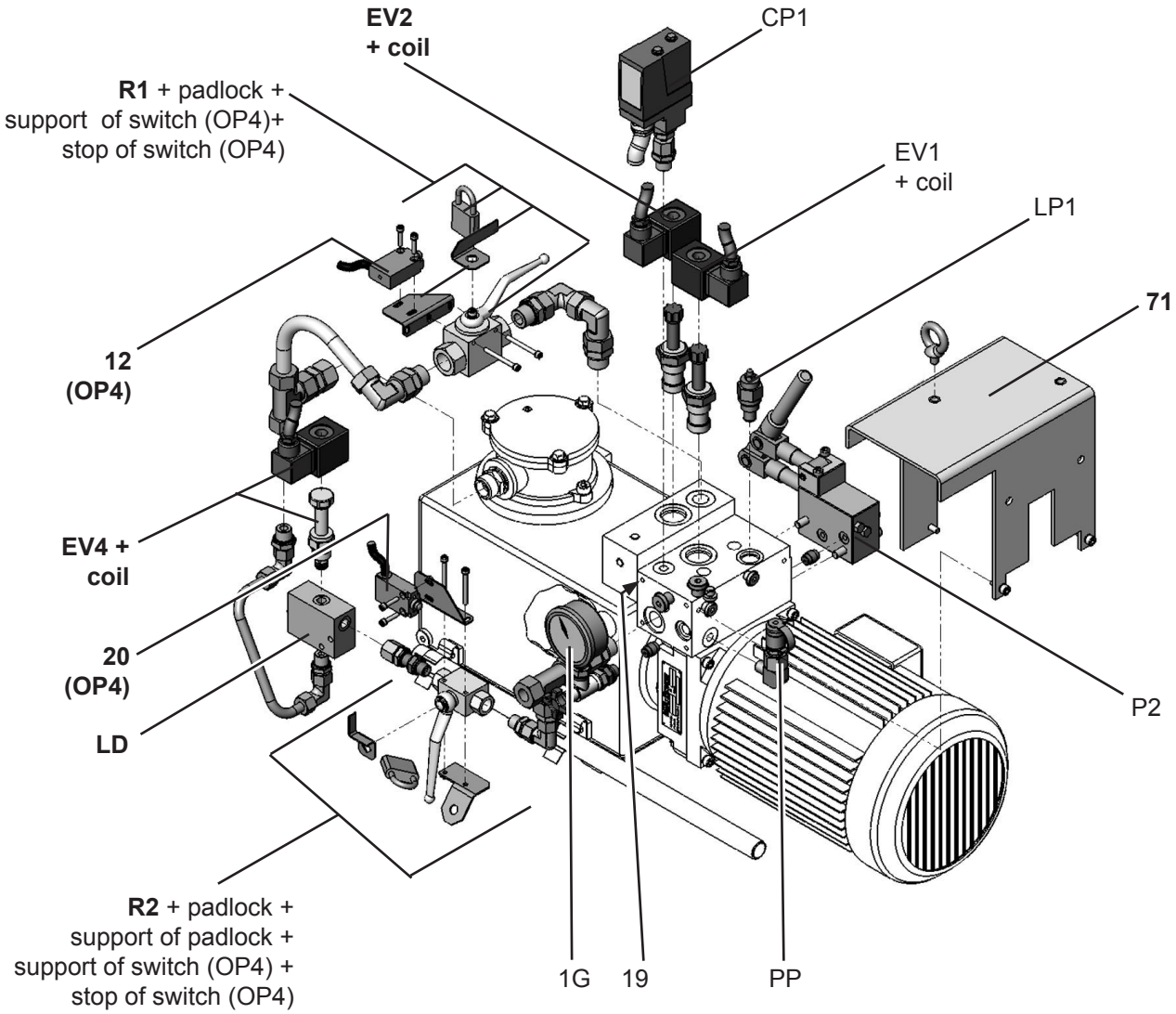
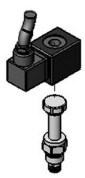
Disc brakes - CE8L power unit

Spare parts

Fig. 5 - **Power unit CE8L - options OP1-OP3 and OP4**



For option OP2 :

EV4  is replaced by EV3 : Manual control valve 

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Disc brakes - CE8L power unit

Spare parts

3 - SETTING PROCEDURES of LP, LP1 and CP1

The components setting is perfomed when components are fitted on the hydraulic power unit.
The output (P) can be closed or connected to the brake.
The required setting values are indicated in the table 1 of the "Installation and maintenance" leaflet quoted below.

3-1 Pressure limit switch CP1 (fig.6)

1) Depressurize the hydraulic unit by making a braking order (opening of the contact (KF) on option : K1 and K2 electrical power unit)
2) On the pressure limit switch, the maximum pressure is set by acting on the GREEN screw to obtain a pressure of about 20 Bar read on the GREEN index (differential ecart relative to the minimum pressure).
3) On the pressure limit switch, the minimum pressure is approached by acting on the RED screw to obtain the required value read on the RED index.
4) Check that the flow limiter (LD1) (CE8L standard) or the control valve (R1) (CE8L-OP1 and CE8L-Y5) is in open position.
5) Connect a pressure meter on (PP), or read the pressure on the manometer (1G) after opening the valve (1Q) (less accurate measurement).
6) Start up the hydraulic power unit by cancelling the braking order (closing of (KF)), (EV1) (and (EV2) : option OP1) must close and the motor must start up.

DANGER !

This operation involves the brakes opening.
Use the other brakes of the installation (service brakes) to make safe the operation.

7) Adjustment of the minimum pressure (pressure of restart) :
Lower slowly the circuit pressure (lower the pressure by making a leakage on the purge screw of the brake or by a connection on the drain port (PP)) in order to read the pressure to which the hydraulic unit restarts, if necessary adjust the position of the red index.
8) Repeat these 2 last operations until having the required pressure value (see table 1 of "Installation and maintenance" leaflet).
9) Depressurize the circuit by making a braking order (opening of (KF)).
10) To return to normal operation :
- put (LD1) (CE8L standard) or (R1) (CE8L-OP1 and CE8L-Y5) in open position, lock (R1) with its padlock and in case of option OP2 or OP3, put the control valve (R2) in closed position, lock it with its padlock.
- close the valve (1Q) of the manometer and purge the installation.

Fig. 6

RED screw
Setting of
minimum pressure

GREEN screw
Setting of
maximum pressure

RED index
Reading of
minimum pressure = restart pressure

GREEN index
Reading of differential ecart
relative to minimum pressure

Non contractual photographs.
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Disc brakes - CE8L power unit

Spare parts

3-2 Pressure limit valve LP (fig.7)

1) Depressurize the hydraulic unit by making a braking order (opening of the contact (KF) on option K1 and K2 electrical power unit)
2) Unscrew completely the nut (2), and the screw (1) (fig.7) of (LP).
3) Check that the flow limiter (LD1) (CE8L standard) or the control valve (R1) (CE8L-OP1 and CE8L-Y5) is in open position and the pressure limit switch (CP1) is not in operation (not electrically connected).
4) Connect a pressure meter on (PP), or read the pressure on the manometer (1G) after opening the valve (1Q) (less accurate measurement).
5) Start up the hydraulic power unit by cancelling the braking order, (EV1) (and (EV2) : option OP1) must close and the motor must start up.

DANGER !

This operation involves the brakes opening.
Use the other brakes of the installation (service brakes) to make safe the operation.

6) Screw (1) of (LP) until having the required pressure value (read on the pressure meter or (1G)).
7) Tighten the nut (2) of (LP).
8) Depressurize the hydraulic unit by making a braking order (opening of the contact (KF)).
9) Check the setting by restarting the hydraulic unit and adjust if necessary, then depressurize the hydraulic unit.
10) To return to normal operation :
    - put (LD1) (CE8L standard) or (R1) (CE8L-OP1 et CE8L-Y5) in open position, lock (R1) with its padlock and in case of option OP2 or OP3, put the control valve (R2) in closed position, lock it with its padlock.
    - close the valve (1Q) of the manometer and purge the installation

3-3 Pressure limit switch of the hand pump LP1 (fig.7)

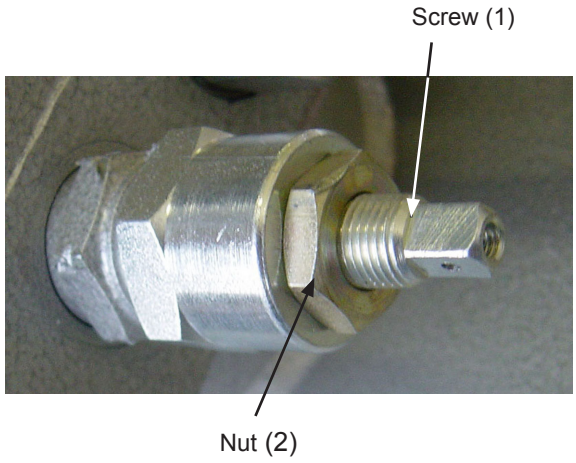
1) Depressurize the hydraulic unit by making a braking order (opening of the contact (KF) on option K1 and K2 electrical power unit)
2) Unscrew completely the nut (2), and the screw (1) (fig.7) of (LP1).
3) Check that the flow limiter (LD1) is in close position (control valve (R1) for CE8L-OP1 and CE8L-Y5) and (R2) in close position in case of option OP2 or OP3.
4) Connect the pressure meter on the output (P) of the manifold block, or use the pressure reading on the manometer (1G) after opening the valve (1Q) (less accurate measurement).
5) Pressurize the circuit by means of the hand pump (P2).

DANGER !

This operation involves the brakes opening.
Use the other brakes of the installation (service brakes) to make safe the operation.

6) Screw (1) of (LP1), by actuating of the hand pump, until having the required pressure value (read on the pressure meter or (1G).
7) Tighten the nut (2) of (LP1).
8) Depressurize the circuit by opening the valve (R1/LD1) or (R2).
9) To return to normal operation :
    - put (LD1) (CE8L standard) or (R1) (CE8L-OP1 and CE8L-Y5) in open position, lock (R1) with its padlock and in case of option OP2 or OP3, put the control valve (R2) in closed position, lock it with its padlock.
    - close the valve (1Q) of the manometer and purge the installation.

Fig. 7 - Pressure limit valve (LP or LP1)



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