

F 420AXP.22

use and maintenance

XP DEVICE (EXTRA POWER)

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INDEX

Chapter IV IDENTIFICATION OF THE CRANE MODEL	page 3
V TECHNICAL DATA	page 4
X CONTROLS TO OPERATE THE CRANE - XP/V DEVICE	page 5
XI CONTROLS TO OPERATE THE CRANE - RADIO REMOTE CONTROL - XP/CR DEVICE	page 6
XIV HYDRAULIC AND ELECTRIC SCHEMATICS	page 11
B CAPACITY PLATES	page 13

This supplementary use and maintenance Booklet is an up-dating of the Use and Maintenance manual of the crane F380A. ... supplied with the XP device.

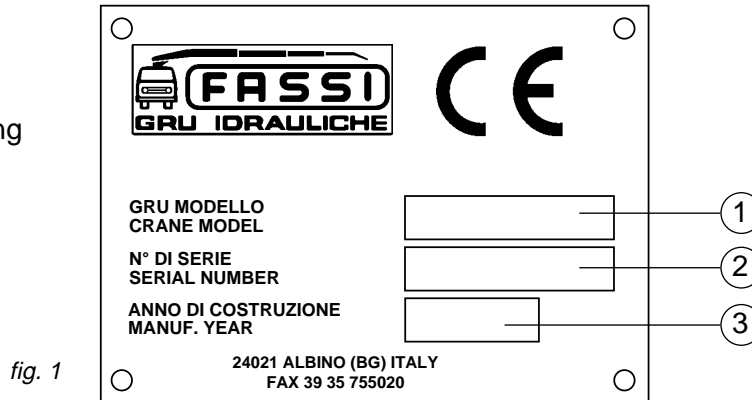
(!) WARNING (!)

Some of the subjects contained are an integration of what reported in the manual; read carefully this supplementary manual paying attention to the chapters or contents of the manual before operating the crane.

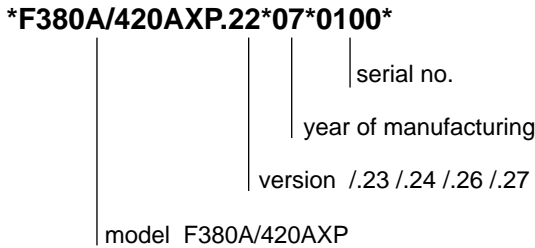
IDENTIFICATION OF THE CRANE MODEL

Essential data for the identification of the crane are given on the plate DE1661 used for the CE mark and fixed to the base. (Fig. 1)

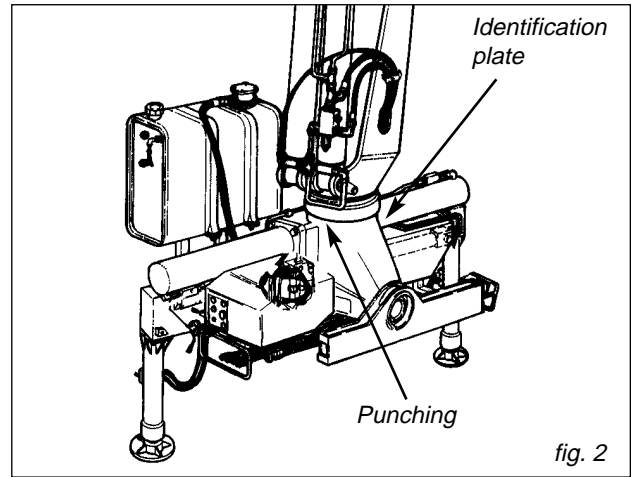
- 1—Crane model
- 2—Serial Number
- 3—Year of manufacturing



The model, the version of the crane, the year of manufacturing and the serial number are stamped on the base (fig. 2) in the following sequence:



(!) UNDER NO CIRCUMSTANCES SHOULD THE DATA MARKED ON THE PLATE AND PUNCHED ON THE BASE BE ALTERED.

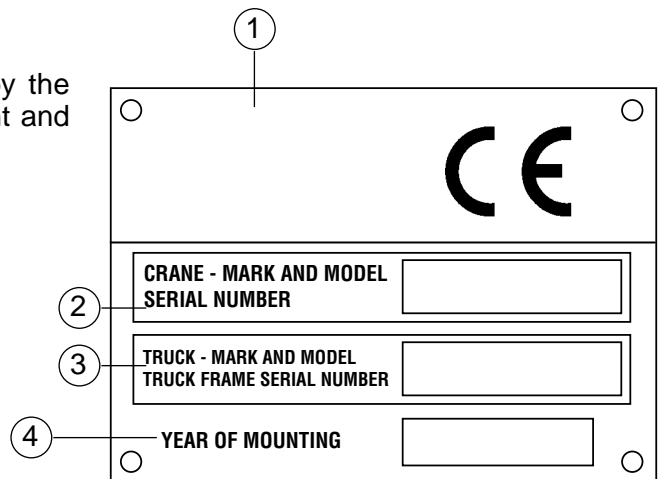


It is essential to give the correct **crane model** and **serial number**, when you contact the Service and Parts Department.

The exact **crane model**, **serial number** and description of **implements** will enable FASSI Service Department to give a rapid and efficient response.

A further metallic plate (fig. 3) fixed to the crane by the installer, quotes the identifying data of the equipment and the final CE mark.

- 1 Name of the installer who applied the final CE mark
- 2 Crane mark, model and serial number
- 3 Vehicle mark, model and chassis number
- 4 Year of mounting



TECHNICAL DATA

The design of this crane has been carried out in respect of DIN 15018 norms, fatigue test classification **H1B3**.

The crane can operate, intermittently, with lifting devices other than the hook. The dimensions and the capacity of the implements must be proportioned with crane performances.

F 420AXP.22

Lifting capacity	Standard reach	Hydraulic extension	Rotation arc	Rotation torque	Working pressure	Pump capacity	Oil tank capacity	Crane weight	Max. working pressure on the outrigger (Φ 210)
40 tm 392,27 kNm	8,00 m	3,75 m	430°	5,33 tm 52,33 kNm	32,5 MPa	50 l/min	180 l	4100 kg	48,5 daN/cm²

CONTROLS TO OPERATE THE CRANE - XP/V DDEVICE

See chapter X of the F380A USE AND MAINTENANCE MANUAL for details of "Controls to operate the crane"

The XP/V device can be supplied on request and can be installed on a crane with Hydrocontrol distributor.

The XP device works on the principle of an increase in the lifting capacity of the crane with a reduction in the dynamic effect achieved with a reduction in the speed of certain movements.

ACTIVATION OF THE XP/V DEVICE

The XP/V device can be activated, by operating a selector with two positions (ON-OFF) by means of a safety key, placed next to each control station (Fig. 4-4a-4b DE2691)

The cranes with dual sides ground controls have two selectors (one for each control station); the third selector is located on the control station upwards, when the crane is equipped with top seat controls (cable remote controls).

On the cranes with top seat distributor controls, the selector is located on the control station upwards.

How to use the XP/V device

See chapter VIII of the USE AND MAINTENANCE MANUAL for details of the lifting moment limiting device.

(!) ATTENTION (!)

The rating plates relevant to the XP device are marked F...XP.

(!) WARNING (!)

It is necessary to release the crane controls (the distributor levers return in neutral position), before operating the selector to engage or disengage the **XP/V** device, because the variations of the operating speeds are considerable and immediate; then carefully operate the controls.

The **XP/V** device can be activated by the crane operator before or during manoeuvres to handle the load.

For example, it can be used:

- to exploit the reduction in the speed when moving a load that must be positioned with precision.
- to exploit the variation in the lifting moment limiting device adjustment parameters to exit from a critical situation when moving the load (yellow light or activation of the lifting moment limiting with the red light and block).

Switching on the XP device after the yellow light has come on

- the light goes off
- insisting with the manoeuvres that increase the lifting moment, you get the yellow and red lights again.

Switching on the XP device after the red light has come on

(lifting moment limiting device block)

A) The block continues:

- the crane must be reset by retracting the extension rams (with hydraulic jib, act on the retraction of the jib extension rams).

B) The red light switches off and the yellow lights usually comes on.

- the crane controls are enabled. Insisting with the manoeuvres that increase the lifting moment, you get the yellow and red lights again.

fig. 4

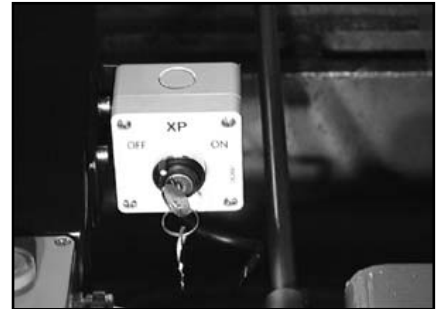
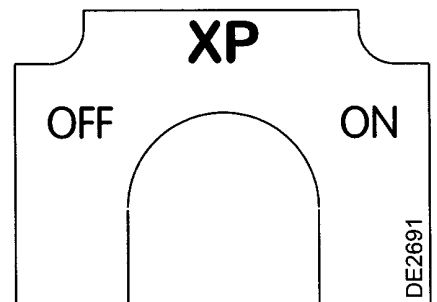


fig. 4a



fig. 4b



CONTROLS TO OPERATE THE CRANE - RADIO REMOTE CONTROL - XP/CR DEVICE

See chapter X of the USE AND MAINTENANCE MANUAL for details of “Controls to operate the crane”

The **XP/CR** device can only be operated from the radio remote control.

This device can be supplied on request and can be installed on the cranes equipped with proportional Danfoss distributor which, keeping the manual control, can be predisposed for the remote control (electric modulus).

The **XP** device works on the principle of an increase in the lifting capacity of the crane with a reduction in the dynamic effect achieved with a reduction in the speed of certain movements.

The cranes supplied with the **XP/CR** device have only one manual control station. They are equipped with HETRONIC radio remote controls and have electric modulus installed on the Danfoss distributor with manual control, a control panel, a visual indicator red/yellow light for the lifting moment limiting device and a locking box of the manual controls.

When using the remote control (radio and cable remote control) to move the crane, the manual controls (distributor levers) need to be protected to avoid the possibility of accidentally operate them. These controls are protected by a locking box which is fitted on the control station and must be closed when active the radio remote control.

HETRONIC RADIO REMOTE CONTROL

(!) WARNING (!)

First read the instructions given in the User’s Manual supplied by the Manufacturer before using the remote control to avoid improper use.

Any hidden danger situation for persons must be audibly alarmed.

When there are serious, imminent and dangerous conditions for persons and things during load handling, operate on the emergency stop button 1, which isolates all crane functions.

The **HETRONIC** radio remote control is supplied complete of key linears (joystick) proportional for the crane and the functions of starting/turning off the motor, the emergency stop system, the start, the warning horn and starting spy system.

Note

The particular configuration of the radio remote control allows to control 6 functions (distributor segment of the crane) through 6 keys. To control a higher number of functions (7 or 8) it is necessary to operate on proper selectors which allows at some keys the order of a double function.

The symbols placed on the side of each control key indicate the operating in relation to their movement.

Activation of the radio remote control on a crane with dual sides ground controls.

- Turn the selector switch (fig. 6-6a) on the Manual-Radio panel to Radio.
- Close the box by taking it from the position of the fig. 7 to the one of the fig. 7a; The microswitch (fig. 7b) will now enable the crane controls.
- Close the latch and remove the key for safety.

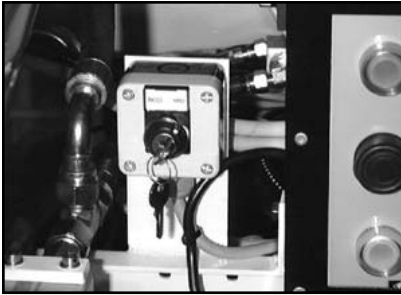


fig. 6



fig. 6a

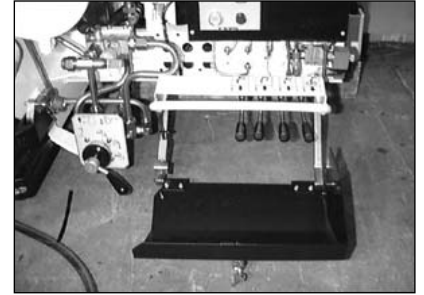


fig. 7

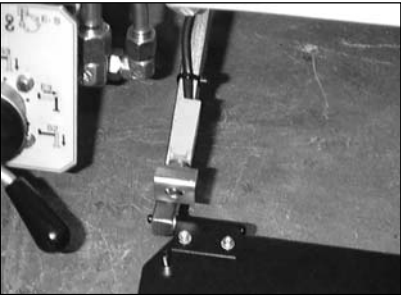


fig. 7b



fig. 7a

Activation of the radio remote control on a crane with top seat controls.

- Turn the selector switch (fig. 8) on the Manual-Radio panel to Radio.
- Close the box by taking it from the position of the fig. 9 to the one of the fig. 9d; The box is composed of two mobil parts, bring the lower part from the position of the fig. 9a to the one of the fig. 9b and overturn the upper part. The microswitch (fig. 9c) will now enable the crane controls.
- Close the latch and remove the key for safety.

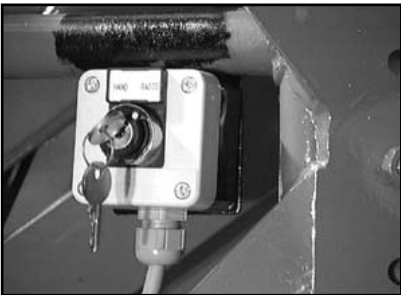


fig. 8

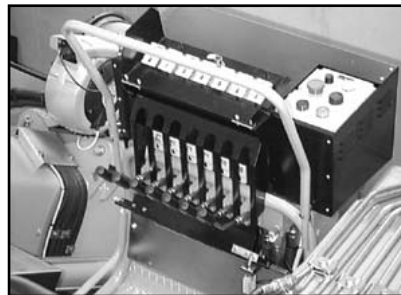


fig. 9

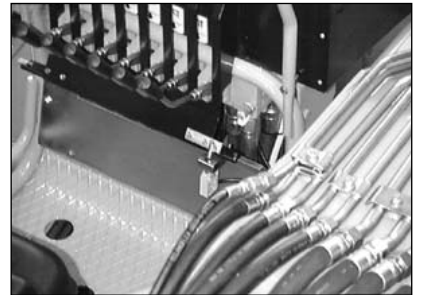


fig. 9a

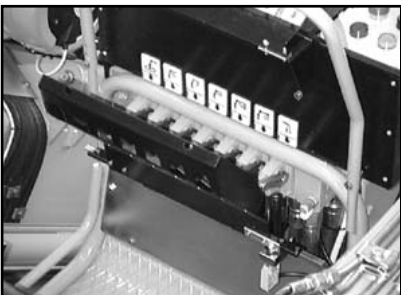


fig. 9b



fig. 9c



fig. 9d

NOTE

Microswitch check that the box have in fact been closed. When the selector switch on the Manual-Radio panel is turned to Radio, it enables the remote control (crane active) when the box is closed; otherwise it stops all movement (crane not active) for as long as the box remains open.

Radio and cable remote control

The **HETRONIC** radio remote control is easily transformable in radio and cable remote control using a connection cable, which allows the crane controls in case of unloaded battery or presence of interference on the transmission by radio or particular applications where it is necessary the cable control because the transmission by radio is forbidden.

Activation of the radio and cable remote control

Crane with dual sides ground controls

- Connect by cable the console to the power-pack.

Crane with top seat control

- When operating with personnel basket connect by cable the console to the power-pack.
- When operating on ground level connect the connector of the delay cable to the power-pack and by cable the console to the connector on the crane base.

The use of the cable of prolongs it is necessary to operate with the same procedure of connection.

Turn the selector switch on the **Manual - Radio** panel to **Radio**.

(!) ATTENTION (!)

To restore the radio remote control it is necessary to disconnect the cable from the console and the power-pack.

Turn the selector switch on the **Manual - Radio** panel to **Manual** to manually control the crane.

(!) WARNING (!)

At the end of the work, after folding the crane into the rest condition and before restarting, it is recommended to place the control locking boxes in closed position.

SCANRECO RADIO REMOTE CONTROL

(!) WARNING (!)

First read the instructions given in the **User's Manual** supplied by the **Manufacturer** before using the remote control to avoid improper use.

Any hidden danger situation for persons must be audibly alarmed.

When there are serious, imminent and dangerous conditions for persons and things during load handling, operate on the emergency stop button 1, which isolates all crane functions.

The **SCANRECO** radio remote control is supplied complete of key linears (joystick) proportional for the crane and the functions of starting/turning off the motor, the emergency stop system, the start, the warning horn and starting spy system. The symbols placed on the side of each control key indicate the operating in relation to their movement.

Activation of the radio remote control on a crane with dual sides ground controls.

- Turn the selector switch (fig. 10) on the **Manual - Off - Radio** panel to **Radio**.
- Close the box by taking it from the position of the fig. 11 to the one of the fig. 11a
- Close the latch and remove the key for safety.



fig. 10

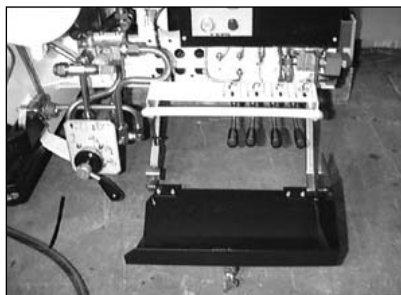


fig. 11

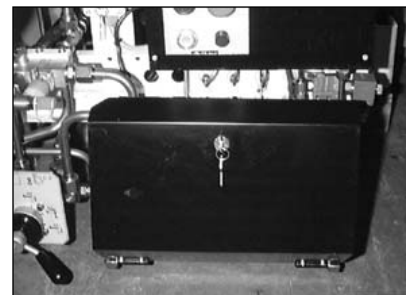


fig. 11a

Activation of the radio remote control on a crane with top seat controls.

- Turn the selector switch (fig. 12) on the **Manual - Off - Radio** panel to **Radio**.
- Close the box by taking it from the position of the fig. 13 to the one of the fig. 13b. The box is composed of two mobil parts, bring the lower part from the position of the fig. 13 to the one of the fig. 13a and overturn the upper part.
- Close the latch and remove the key for safety.



fig. 12

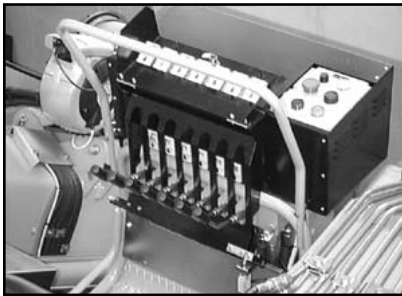


fig. 13

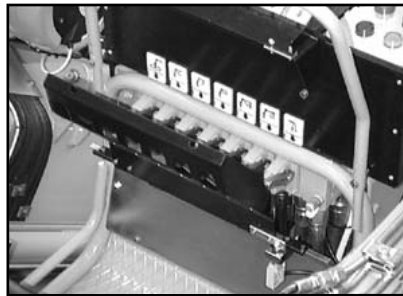


fig. 13a

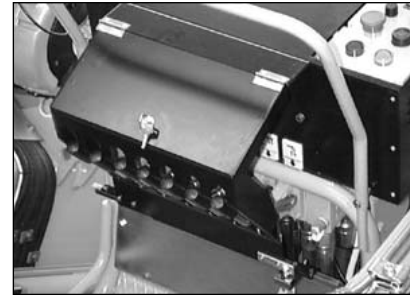


fig. 13b

Radio and cable remote control

The **SCANRECO** radio remote control is easily transformable in radio and cable remote control using a connection cable (supplied on request), which allows the crane controls in case of unloaded battery or presence of interference on the transmission by radio or particular applications where it is necessary the cable control because the transmission by radio is forbidden.

Activation of the radio and cable remote control

- Connect by cable the console to the power-pack.

The selector of the **Manual - Off - Radio** panel is turned to the **Radio** position.

(!) ATTENTION (!)

To restore the radio remote control it is sufficient to disconnect the cable ..

It is necessary to turn the selector switch of the **Manual - Off - Radio** panel on the **Manual** position to go back to the manual control of the crane.

(!) ATTENTION (!)

The **OFF** central position of the selector is a safety position because it doesn't activate the distributor. When there are serious malfunctions turning the selector switch on **Off** and closing the exclusion tap of the limiting device allow to operate the crane in a emergency condition. See chapter VIII of the USE AND MAINTENANCE MANUAL for details of the lifting moment limiting device.

After such emergency operations and prior to re-use of the crane, you must immediately go to FASSI authorised Center for testing the structure and re-sealing of the devices.

(!) WARNING (!)

At the end of the work, after folding the crane into the rest condition and before restarting, it is recommended to place the control locking boxes in closed position.

ACTIVATION OF THE XP DEVICE from the radio remote control**Hetronic radio remote control**

You operate on the SLOW/FAST selector ( - ) (fig. 14) placed on the console of the radio remote control on the SLOW position ().

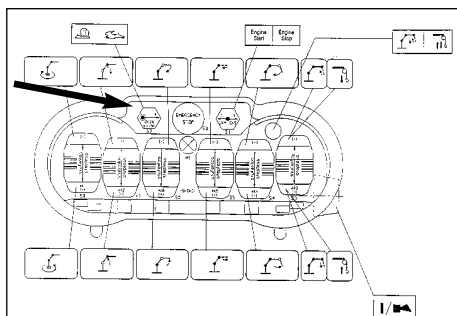


fig. 14

Scanreco radio remote control

You operate on the XP/ON-XP/OFF selector (fig. 15) on the XP/ON position. With the selector set on this position you have the electric signals of the strokes of the console control keys, they come modified and interpreted from the electric controllers of the crane distributor segment which limits the strokes obtaining the reduction of the speed movements of the crane.

See chapter VIII of the USE AND MAINTENANCE MANUAL for details of the lifting moment limiting device.

(!) WARNING (!)

The capacity plates relevant to the XP device are marked F...XP.

(!) WARNING (!)**When the XP device is active, remember that:**

- The crane rotates with a decreased speed, without increasing the rotation capacity (the maximum load that the crane can rotate remains unchanged).
- The Extension and Retraction of the extension rams and, if fitted, the Up/Down stroke of the winch and
- The Extension and Retraction of the hydraulic jib are all possible without any reduction in speed (they produce negligible dynamic effect).
- On cranes with a lifting moment limiting device for double working zones, manoeuvres within the "unstable" area are slower without any increase in the lifting capacity.



fig. 15

VISUAL INDICATOR YELLOW / RED LIGHT

On the radio remote control it is not possible to repeat the visual signals of intervention of the lifting moment limiting device, placed on the control panels next to each control station. The crane is furnished of visual indicator signals of repetition, which has to be located in a visible position, on the crane structure or on the truck (fig. 16), indicates with:

- yellow light, 90% of the capacity (lifting moment) has been reached
- red light, the activation value of the lifting moment limiting device has been reached.



fig. 16

How to use the XP device

The XP device can be activated by the crane operator before or during manoeuvres to handle the load.

For example, it can be used:

- to exploit the reduction in the speed when moving a load that must be positioned with precision.
- to exploit the variation in the lifting moment limiting device adjustment parameters to exit from a critical situation when moving the load (yellow light or activation of the lifting moment limiting with the red light and block).

Switching on the XP device after the yellow light has come on

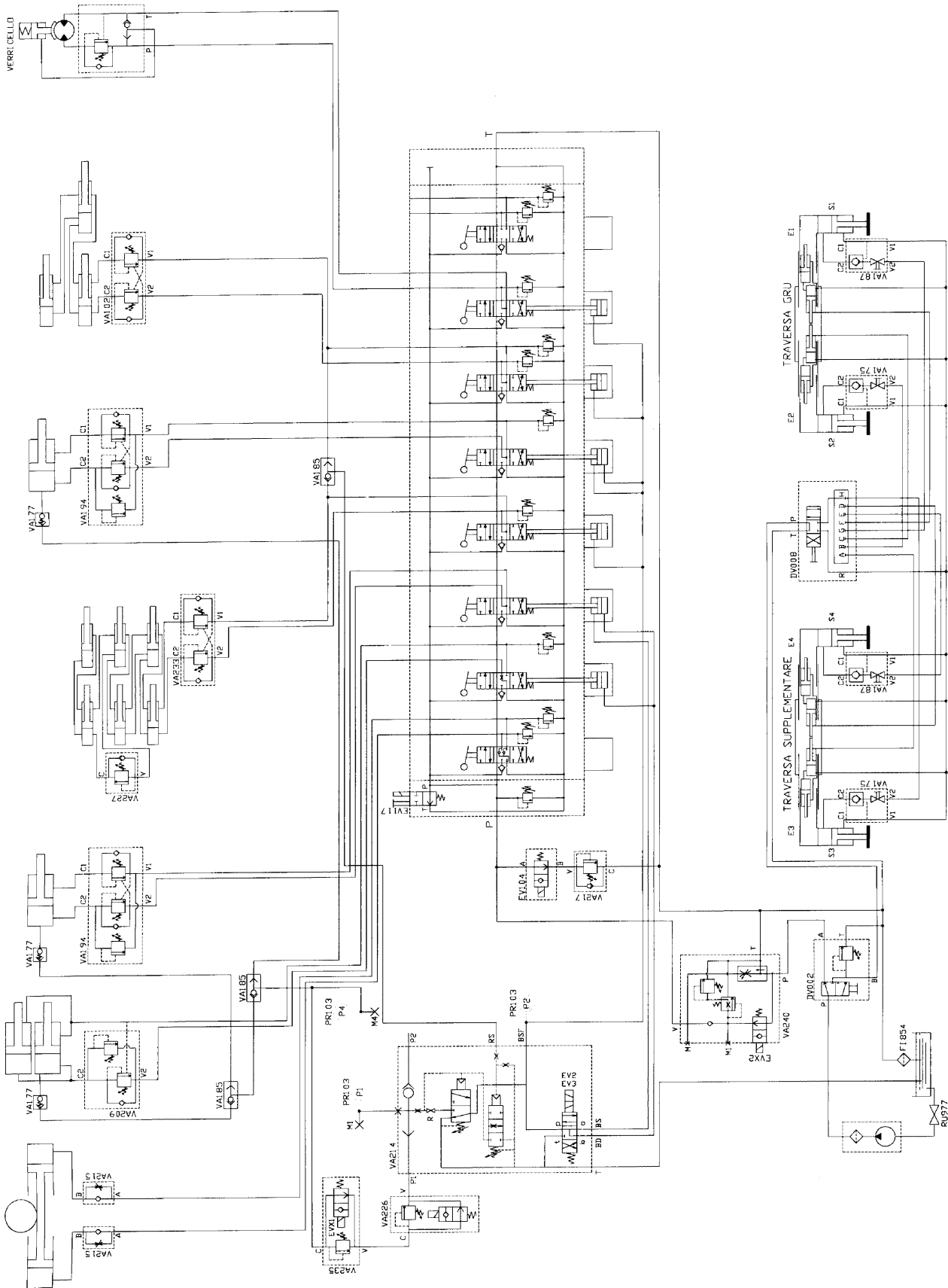
- the light goes off
- insisting with the manoeuvres that increase the lifting moment, you get the yellow and red lights again.

Switching on the XP device after the red light has come on (lifting moment limiting device block)

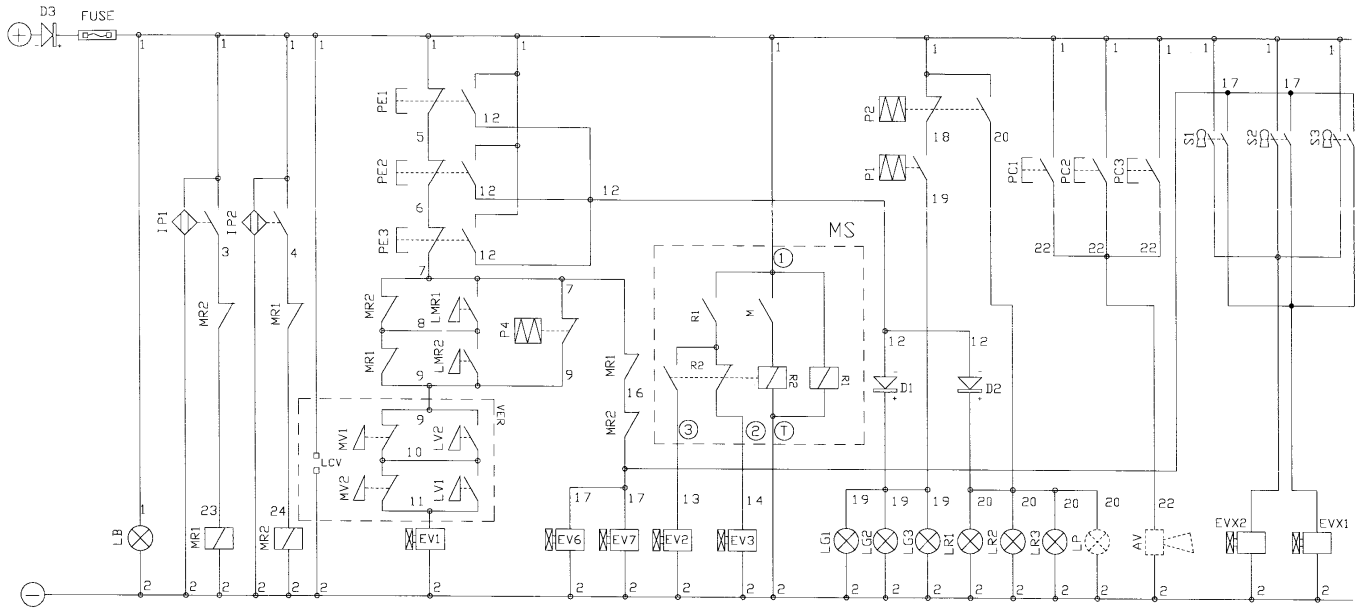
- A) The block continues:
 - the crane must be reset by retracting the extension rams (with hydraulic jib, act on the retraction of the jib extension rams).
- B) The red light switches off and the yellow lights usually comes on.
 - the crane controls are enabled. Insisting with the manoeuvres that increase the lifting moment, you get the yellow and red lights again.

HYDRAULIC AND ELECTRIC SCHEMATICS

Hydraulic schematic for crane - HCD4 distributor - dual sides ground controls - lifting moment limiting device "intelligent type" - XP with flow/pressure regulator valve



Electric schematic for crane type 2 - XP version with HCD4 and flow/pressure regulator valve - two working zones



CODE **DESCRIPTION**

- S1 ON/OFF XP KEY SELECTOR 1° CONTROL STATION
- S2 ON/OFF XP KEY SELECTOR 2° CONTROL STATION
- S3 ON/OFF XP KEY SELECTOR 3° CONTROL STATION
- EVX1 ELECTROVALVE FOR INCREMENT OF THE LIMITING DEVICE PRESSURE
- EVX2 ELECTROVALVE FOR INCREMENT OF BY PASS AND CAPACITY REDUCTION

