

INCREASE SAFETY

with the
Hyteco Earthmoving Crane Valve (HECV)

for
Excavators – Backhoes – Loaders

Easily installed, fully serviceable & high reliability.

Provides hose-burst protection.

Models are available in various ported, size and mounting configurations allowing direct cylinder mounting or can be piped inline.

Also offering full-field installation.



**COMPLIES WITH
ISO 8643**

hyteco

...EXCELLENCE IN FLUID POWER AND CONTROL

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Hyteco HECV Series Valves Setup Procedures

Important Note: These procedures must only be carried out by experienced persons with thorough knowledge of and proven expertise with earthmoving equipment and hydraulic systems.

For reasons of SAFETY it is recommended that ALL adjustments to the Load Lowering, Hose failure Valve be carried out with the bucket rested on the floor.

Unless otherwise requested, the cartridges are preset to 350 bar (relief cartridge) and 10 bar (pilot cartridge, part number 1CPB** or 1CPBD**). The pilot valve will normally require adjustment, but the relief setting of 350 bar is generally suitable for most applications and ensures the maximum protection of the cylinders. Check the maximum pressure of the system and adjust the relief valve if required. Prior to all adjustment ensure pilot line has been fully bled. This can be achieved by operating the joystick to either roll in or lower the respective cylinder and opening the bleed port on the Hose Rupture Valve. In cases where no "BLEED" port is provided, disconnect the pilot hose from the Hose Rupture Valve and running it to a suitable container should suffice.

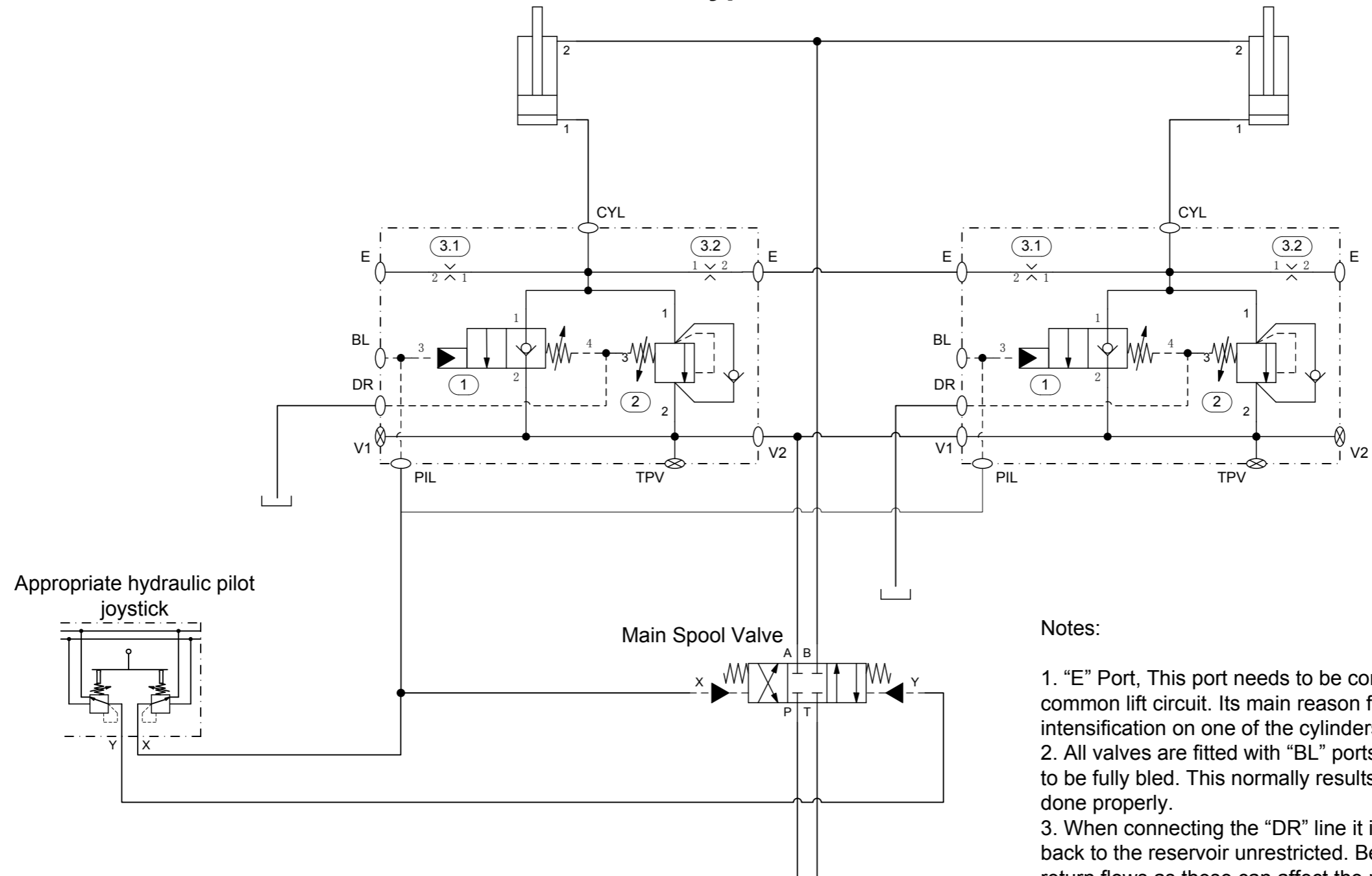
Relief Valve setting: The relief setting of 350 bar has been calculated to meet most systems but can be adjusted to individual requirements. It is advised that the setting be between 10 and 20% higher than the main control valve. To increase setting, screw the adjuster clockwise to increase pressure at a rate of approximately 65 bar per full turn. To decrease setting, screw the adjuster anti-clockwise to decrease pressure at the same rate.

Pilot Cartridge setting: To successfully set the pilot cartridge pressure, two 400 bar and one 50 bar gauges need to be used. On the Hose Rupture Valve, connect one 400 bar gauge to the "E" port where provided (or the cylinder port if no "E" port) and the other 400 bar gauge in the valve inlet line "V", and connect the 50 bar gauge in the pilot line "P". The procedure can be related to both the Arm cylinder and the Boom cylinders but for the ease of explanation, the following procedure is for Boom cylinders only.

- 1) Fully swing out the Arm cylinder. Raise Boom to full extension and at the end of its stroke record the pressure in the valve and cylinder gauges.
- 2) To check setting, slowly move joystick to lower Boom. When the gauge in the valve line starts to fall, it is a signal that the main control valve has started to open, at this point note the setting in the pilot line, typically 8 bar.
- 3) Continue to slowly operate the joystick and note the reading in the pilot line when the gauge in the cylinder line starts to fall. This indicates the setting of the pilot cartridge (1CPB(D), typically 10 bar.

It is recommended that the Pilot Cartridge should dwell between 1.5 and 2 bar behind the Main Control Valve. If the pilot valve is set too low, pressure at "E" falls before "V" - adjust pilot valve clockwise. If the difference between 2 and 3 above is greater than 2 bar - adjust the pilot valve anti-clockwise.

Typical Installation



Notes:

1. "E" Port, This port needs to be connected when using two valves on a common lift circuit. Its main reason for being fitted is to prevent intensification on one of the cylinders.
2. All valves are fitted with "BL" ports which are the bleed ports and need to be fully bled. This normally results in a delayed response if this is not done properly.
3. When connecting the "DR" line it is imperative that this line is directed back to the reservoir unrestricted. Be careful of joining into lines with high return flows as these can affect the performance of the valve.
4. If the correct size valve is fitted and adjusted properly then the performance of the machine will not be affected at all. In most cases the upward travel is never restricted and all problems are associated with downwards travel. Bear in mind that the spool metering is controlled by this valve during slow speed lowering only. During high speed lowering our valve will not affect performance if adjusted correctly.

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REVISIONS					
ZONE	REV	DESCRIPTION	DATE	APPROVED	

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Typical HECV Schematic and Installation

SIZE	FSCM NO	DWG NO	REV
SCALE 1:1		SHEET	1 OF 1