

ÉPREUVE ORALE SPÉCIFIQUE « SECTION EUROPÉENNE »
LANGUE : ANGLAIS
SESSION 2024

**BACCALAURÉAT PROFESSIONNEL - SPÉCIALITÉ Maintenance des
Matériels Option B Véhicules de construction et manutention**
SUJET N°2

Durée de l'épreuve: 40 minutes

- Préparation	- 20 minutes
- Phase 1 : Présentation de la situation proposée ci-dessous	- 10 minutes
- Phase 2 : Entretien sur les activités et travaux effectués dans la discipline non linguistique durant l'année de terminale	- 10 minutes

SITUATION :

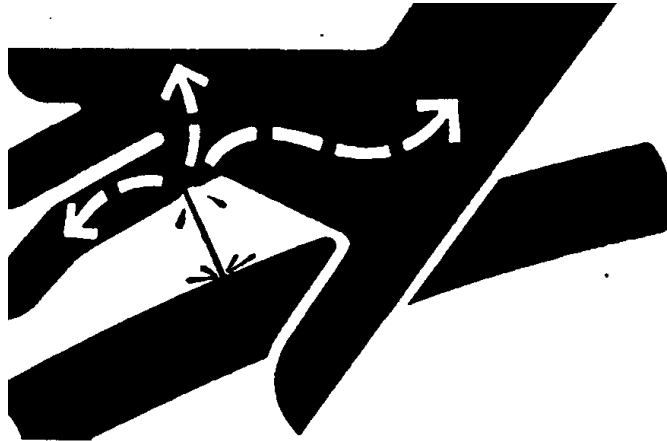
During your work placement in a garage, you are working on a vehicle. A student from Erasmus mobility program comes for his/her intership. Your manager asks you to be his/her tutor.

Present yourself and explain how to test and set a relief valve. Don't forget to present the risks with oil leaks and pressure.

⚠ WARNING

Fine jets of hydraulic fluid at high pressure can penetrate the skin. Do not use your fingers to check for hydraulic fluid leaks. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic fluid. If hydraulic fluid penetrates your skin, get medical help immediately.

INT-3-1-10/1



Source : JCB 3 CX 4 CX Service manual and <https://www.ausmed.com/cpd/articles/high-pressure-injection-injury>

DOCUMENT 2: Main and auxiliary relief valve

Loader Valve - Pressure Testing

Main Relief Valve (M.R.V.)

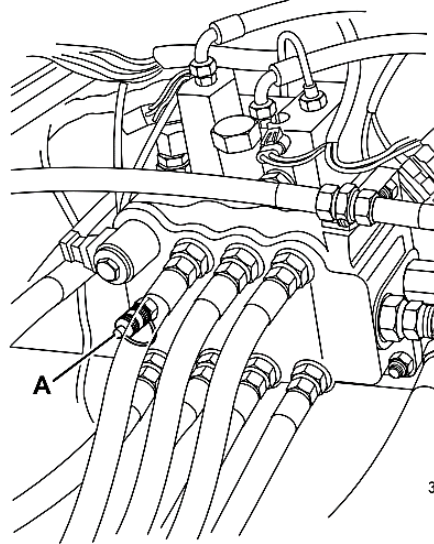
Make sure that the hydraulic oil is at working temperature, i.e. 50°C (122°F).

Lower the backhoe bucket and loader shovel to rest on the ground; stop the engine; operate the control levers to vent residual hydraulic pressure.

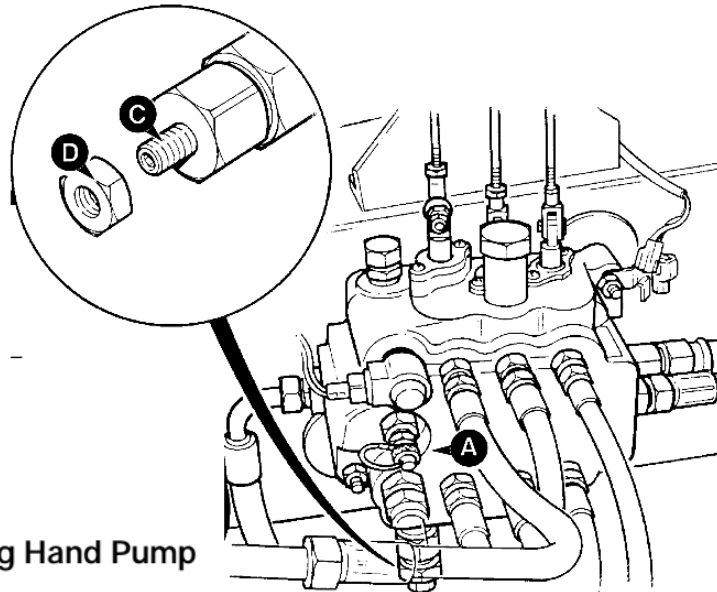
- 1 Connect a 0 - 400 bar (0 - 6000 lbf/in²) pressure gauge to pressure test connector **A** on the loader valve, (refer to **Service Tools**).
- 2 With the engine running at 1500 revs/min, check M.R.V. pressure by raising or lowering the loader arms until the rams are fully open or closed and noting the maximum gauge reading. **CAUTION:** Do not select 'float'. The maximum pressure should be as stated in Technical Data.

Note: The rams must be 'held' open or closed when reading gauge.

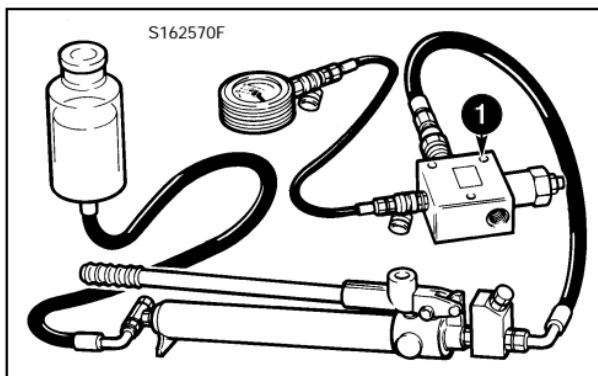
- 3 If the pressure is incorrect, loosen locknut **D** and adjust screw **C**. Turn it clockwise to increase pressure and anti-clockwise to decrease the pressure. When the pressure is correct, tighten the locknut and check the pressure again. Adjust as required.



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Auxiliary Relief Valves - Using Hand Pump



Source : JCB 3 CX 4 CX service manual

To pressure test and re-set the auxiliary relief valves (A.R.V.'s), service kit 892/00309 must be used.

Connect a hydraulic hand pump to port 'P' (pump) of the test block 1. Make sure that the hand pump is filled with JCB Hydraulic fluid.

Raise the pressure at the valve inlet using the hydraulic hand pump, when the A.R.V. 'cracks' and oil escapes from the port marked 'T' the pressure gauge will indicate the A.R.V. setting.