

## MCJ - MECHANICAL JACKS

MAINTENANCE MANUAL

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#### INSTRUCTIONS FOR MAINTENANCE AND CHECKS

Read this instruction manual before starting the operations of maintenance and checking.

Any operation of maintenance and checking on mechanical jack installed on the machines must be performed by properly trained staff using suitable accident prevention equipment. These operations must be performed with the machine at a standstill, set in a stable position.



**MAINTENANCE OPERATIONS**. (To be performed every 50 jack working hours or at least twice a year). This operation consists of cleaning the outside of the mechanical jacks, greasing the screw, the internal screw thread and the bearing using the appropriate grease nipples.

**CHECKING OPERATIONS**. (To be performed every 50 jack working hours or at least twice a year). Check that the handles turn easily without clicking or difficulty. Also check that there are no damaged or deformed parts (e.g. cracks or signs of breaking) either in the jack, in the fittings or in the machine moving devices to which the jacks are connected.

#### MECHANICAL JACK OVERHAULING

All overhauling carried out during the warranty period must be done at JACKITUP or at workshops expressly authorized by Orplex Ltd .

This operation is necessary when difficulty of use or damaged components are discovered after checks have been made.

In these conditions, the machine or the equipment cannot be used and it is therefore necessary to dismount the damaged mechanical jack for overhauling. Trained staff must carry out the operations of removing the mechanical jack from the machine and overhauling.

#### Instructions for disassembling the mechanical jack from the machine or equipment

The operation to disassemble the mechanical jack from the machine or equipment must be performed with the machine at a standstill, set in a stable position, with the engine switched off and with the key removed.

Before starting to disassemble use suitable means to securely anchor the parts of the machine or the equipment where the jack is connected, so that these parts cannot move during and after jack disassembly.

When supporting the jack during disassembly, use means suitable for its mass. If the jack is so heavy that it cannot be handled manually in safety, it is necessary to sling it using fabric bands of a suitable capacity, as described in point 7. This operation must be performed in safe conditions.

Check how the jack is fixed to the machine or equipment and go on with disassembly as described depending on the type :

- Jack fixed using screws or nuts; remove them using appropriate wrenches or devices.
- Welded jacks: cut the welding with an angle grinder but make sure that neither the frame of the machine nor the tubular part of the jack is damaged.

#### Instructions for disassembling the mechanical jack

A bench with a vice and a jack support are indispensable for the jack disassembly operations. This support must be adjustable in height and be robust to support the weight of the jack safely. In addition, if the jack is so heavy that it cannot be lifted manually, it must be lifted with a sling, as described in point 7, using means suitable for its mass.

To disassemble, proceed in the following way:

- Fix the outer side of the jack body in the vice and rest the inner part on a support; put some rags between the jack and the vice so as not to damage the paint.
- Using a pin punches take the pin out of the hub of the handle (in some cases the pin is substituted by a screw) and take the handle out of its seat; in case of a reduction gear jack, unscrew all the screws, take the box away, take the pin out of the hub of the handle and take the handle out of the seat.



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- Then remove the inner part; pay attention not to lose the bearing, if there is one.
- Then fix the inner part to the vice and rest the inner part on an adjustable support in order not to damage its surface.

To disassemble the screw it is necessary to check that it does not have a stop-stroke pin; in this case first of all it is necessary to take it out putting the pin at the height of the appropriate inner pipe hole; afterwards unscrew the screw until it completely comes out of the internal screw thread.

In case there is a welded stop-stroke it is not possible to disassemble the inner part.

Completely wash all the components of the mechanical jack, preferably using naphtha, kerosene or another degreasing agent that is not aggressive and blow with compressed air until the pieces are completely clean. Scrupulously check all the components to identify any parts that are worn or damaged. In particular, check the

welding of the footplate, the plate, the screw washer and the inner and outer pipe fittings. Check also that the thread of the screw and the internal screw thread are not too worn or that they show no signs of weakness. If you find components worn to the extent that they can no longer be used, contact **JACKITUP** asking for spare parts (do not replace components with pieces that are not original).

The grease nipples and the bearings must be all replaced with new ones. These are easy to find as they have standardised sizes and profiles. If you experience problems in finding them, contact the **JACKITUP** company.

#### Instructions for re-assembling the mechanical jack

A bench with a vice and a jack support are indispensable for the jack re-assembly operations. This support must be adjustable in height and be robust, to safely support the weight of the jack. In addition, if the jack is so heavy that it cannot be lifted manually, it must be lifted with a sling, as described in point 7, using means suitable for its mass.

To re-assemble it, proceed in the following way: place the outer part in the vice (place rags to protect the paint from possible damage from the vice) and after having greased the screw, screw in the internal screw thread. In case of stop-stroke, re-position the pin on the screw after assembling it.

To assemble the inner part, fix the outer part in the vice, position the bearing or the anti-friction washer in the correct screw and insert the inner part until the screw head is centred with the hole of the upper closing plate of the outer pipe.

For the model with reduction gear, first fix the box to the external pipes by means of screws (or rivets) and then proceed to fixing the handle on.

Position the handle on the head of the screw and block using the pin (or the screw, applying the correct tightening torque as set in the standard tables).

Grease the jack and verify that it functions correctly before re-assembling on the machine or equipment.

#### REPAIR AND SPARE PARTS

For any repair operation and/or the replacement of the various spare parts of the mechanical jack, not due to normal maintenance or overhaul, as indicated in the previous chapters, please contact **JACKITUP**, which will supply or give information on the subject.

#### DISPOSAL

Mechanical jack disposal must be carried out in conformity with the laws in force; therefore, the parts made of metal shall be scrapped while those made of plastic or rubber shall be disposed of in appropriate containers. When possible, grease and oil should be recycled and taken to the obligatory Cooperative used mineral oil deposits.

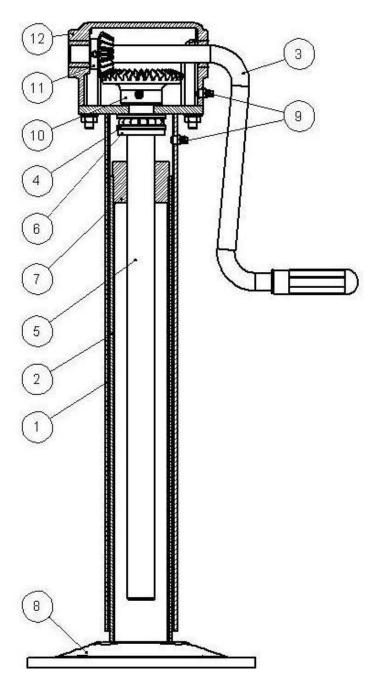


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Diagram of the mechanical jack with reduction gear and lateral crank handle



- 1 OUTER PIPE
- 2 INNER PIPE
- 3 CRANK HANDLE
- 4 BEARING
- 5 SCREW
- 6 WASHER SCREW

- 7 INTERNAL SCREW THREAD
- 8 FOOTPLATE
- 9 GREASE NIPPLE
- 10 CROWN
- 11 PINION
- 12 BOX