



# SERVICE MANUAL

WHEELED EXCAVATOR  
**JCB HYDRADIG 110W**

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This manual contains original instructions, verified by the manufacturer (or their authorized representative).

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## Foreword

### The Operator's Manual

**⚠**  
You and others can be killed or seriously injured if you operate or maintain the machine without first studying the Operator's Manual. You must understand and follow the instructions in the Operator's Manual. If you do not understand anything, ask your employer or JCB dealer to explain it.

Do not operate the machine without an Operator's Manual, or if there is anything on the machine you do not understand.

Treat the Operator's Manual as part of the machine. Keep it clean and in good condition. Replace the Operator's Manual immediately if it is lost, damaged or becomes unreadable.

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## 06 - Safety Warnings

### Introduction

In this manual and on the product, there are safety notices. Each notice starts with a signal word. The signal word meanings are given below.

The signal word 'DANGER' indicates a hazardous situation which, if not avoided, will result in death or serious injury.

The signal word 'WARNING' indicates a hazardous situation which, if not avoided, could result in death or serious injury.

The signal word 'CAUTION' indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

The signal word 'Notice' indicates a hazardous situation which, if not avoided, could result in product damage.

The safety alert system (shown) also helps to identify important safety messages in this manual and on the product. When you see this symbol, be alert, your safety is involved, carefully read the message that follows, and inform other operators.

**Figure 1. The safety alert system**



## Health and Safety

▲ **WARNING** The stability of the machine can be reduced when you use the excavator without stabilisers. Before using the excavator make sure the stabilisers and the loader shovel are set on stable ground.

**WARNING** You must be sitting in the driving seat when operating the stabiliser controls.

Do not operate the stabilisers from outside the machine. Otherwise you could be crushed when the machine moves.

The stabilisers must be down when you use the excavator, or the machine will rock violently. Each stabiliser has its own control lever and can be operated independently.

Lower each stabiliser to level the machine and take the weight off of the rear tyres. The loader shovel should be used along with the stabilisers to level and steady the machine.

**WARNING** Bystanders could be crushed and obstacles could be damaged if they are beneath the stabilisers while they are being lowered. Before lowering the stabilisers, make sure any bystanders are clear of the machine. Also make sure that there are no obstacles beneath the stabilisers.

**Notice:** Before you extend the boom make sure that the stabiliser legs are deployed to the ground and the weight of the machine is supported.

## Clean

Make sure that Stabiliser cavities are kept clean, they can become clogged when operating in soft/wet ground conditions. Remove and clean away all debris that may have built up.

## 03 - Quick Release Coupling

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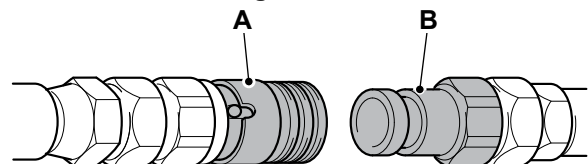
## Introduction

The flat face quick release couplings allow the operator to remove and install attachments swiftly and efficiently. Generally, your machine pipework will have female couplings installed, and the optional attachment hoses will have male couplings installed.

The quick release couplings will be trouble free and relatively easy to connect and disconnect, if they are kept clean and used correctly. The recommendations listed below must always apply when using flat face quick release couplings.

Read the correct connecting and releasing procedures before you install or remove any optional attachment connected with quick release couplings.

**Figure 670.**



- A** Female coupling
- B** Male coupling

## Essential Do's

- Before connecting or removing any hydraulic hose, the residual hydraulic pressure trapped in the service hose line must be vented. Make sure the hose service line has been vented before connecting or removing the hoses.
- Always wipe the two mating faces clean before connecting.
- Use caps and plugs when the couplings are disconnected.
- Always align the external locking ball (if used) with the notch in the locking sleeve and then pull the locking sleeve back fully to disconnect.
- If a coupling sticks, first check that pressure has been released. Make sure the locking ball and notch in the locking sleeve are aligned, pull back the sleeve and twist the couplings apart. Sticking is normally caused by dirt in the coupling or physical damage due to abuse.
- Connect and disconnect the new couplings two or three times to work the PTFE seals. Sometimes a new coupling will stick if the seal has not been worked.
- When connecting the couplings, only apply the spanner or grips to the hexagon and nowhere else.
- Avoid damage to the coupling faces. Burrs and scratches cause damage to the seals and cause leaks. They can also impede connection and disconnection of the couplings.

- Periodically lubricate the internal locking balls on the female half of the coupling with silicone grease.

**Essential Don'ts**

- Never try to reconnect using a damaged half coupling as this will destroy the seals in the mating half and necessitate replacement of both halves.
- Do not leave the coupling where it may be run over by a machine or otherwise crushed, this will distort the sleeve and prevent connection and disconnection.
- Never try to turn the sleeve when the coupling is disconnected as this will cause the locking ball to jam under the locking sleeve and damage the coupling.
- Never try to strip the coupling down, there are no user serviceable parts. If the coupling is damaged it must be replaced with a new one.
- Never hit the centre poppet of the coupling to try and release the locked in pressure. This can cause irreparable damage to the coupling and serious injury.
- When connecting the couplings, never clamp on the sleeve of the female or nose of the male, this will cause distortion and/or damage.
- Never subject the couplings to external forces, especially side load. This can decrease the life of the coupling or cause failure.
- Never allow the torsional forces transmitted from the hoses to unscrew/screw together the couplings.
- Never use a coupling as a plug.
- Do not connect and disconnect with pressure in the line unless the coupling type is specifically designed to do so.

**Disconnect and Connect**

Some attachments are hydraulically powered. The following procedures show how to connect and disconnect the hydraulic hoses safely.

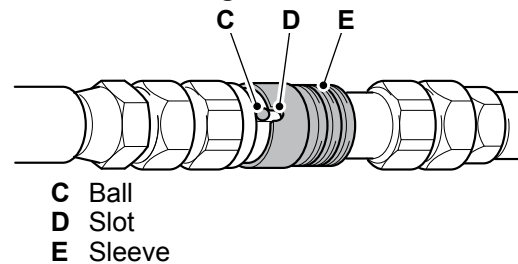
**Connect**

1. Make the machine safe, refer to (PIL 01-03).
2. Remove any residual hydraulic pressure trapped in the service line hose. Refer to Discharge the hydraulic system (PIL 30-00).
3. Wipe the two faces of the male and female couplings and make sure they are clean.
4. Make sure that ball in the female coupling is located in one of its slots.
5. Connect the male coupling into the female coupling.
6. Where applicable, rotate the sleeve half a turn and make sure that the locking ball does not align with the slot.

**Disconnect**

1. Make the machine safe, refer to (PIL 01-03).
2. Remove any residual hydraulic pressure trapped in the service line hose. Refer to Discharge the hydraulic system (PIL 30-00).
3. Where applicable, align the slot with ball.
4. Pull back the sleeve to release the coupling.

**Figure 671.**



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