Service Manual

JS 100 Series Tracked Excavators T4i

Section 1 - General Information

Section 2 - Operator's Manual

Section B - Body and Framework

Section C - Electrics

Section E - Hydraulics

Section F - Transmission

Section J - Track & Running Gear

Section K - Engine



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Cab Structure

Direct Glazing

TB-002_4

The following procedures explain how to correctly remove and install panes of glass that are directly bonded to the cab frame apertures. When carrying out the procedures, relevant safety precautions must be taken.

1 Always wear safety glasses during both removal and replacement.

2 Use protective gloves - heavy duty leather gauntlet type gloves when cutting out the broken glass; 'non-slip' type gloves when handling/moving panes of glass; surgical type gloves when using the polyurethane adhesives.

3 Wear protective overalls.

4 Do not smoke - the activators and primers used in the procedures are highly flammable.

5 Do not attempt to handle or move panes of glass unless you are using glass lifters.

Several special tools are required to successfully complete the removal and replacement procedures. Reference is made to the tools in the text. The majority of these tools can be obtained locally and the remainder from JCB Service (see ***Service Tools***).

The work must only be carried out in a dry, frost free environment. A protective canopy may be required or the machine/frame must be moved to a sheltered area. In damp or wet conditions, hinged doors and window frames can be removed from the machine and taken to a more suitable (dry) environment.

Glass should not be replaced at temperatures below 5°C (41°F).

⚠ WARNING

Laminated glass must be handled with extra care to prevent breakage. Wherever possible, store and handle it in a vertical attitude. When placing or lifting the glass in a horizontal attitude it must be supported over its whole area, not just at the edges.

BF-1-8_1

Removing the Broken Glass and Old Sealant

⚠ WARNING

Always wear safety glasses when removing or installing screen glass. Never use a power operated knife when removing the sealant around a toughened glass screen. The action of the knife could cause particles of glass to be thrown with sufficient force to cause serious injury, even when safety glasses are being worn. Use only hand operated tools when working with toughened glass.

BF-2-3_1

1 Position the machine on level ground and apply the parking brake. Stop the engine. Put protective covers over the cab seat and control pedestals.

2 If a laminated pane breaks it will stay in one piece even though the glass is cracked. A toughened pane will shatter and fall apart. The method of removal of the glass depends upon which type it is.

- **a** Laminated glass - leave installed until the old sealant has been cut away, after which it will be possible to lift the broken screen away from its frame housing in one piece.
- **b** Toughened glass - remove as much of the shattered glass as possible prior to cutting out the old sealant.

3 Cut out the old sealant, leaving approximately 1 to 2 mm on the cab frame. There are several tools and techniques for doing this:

- **a** Pneumatic Knife. ⇨ *Fig 11. (B-25)*. This provides one of the easiest methods of removing the sealant around laminated glass. The tool, powered by compressed air, should be sourced locally.

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Proportional Pressure Reducing Valve

Table 3.

	JS115-JS190
Maximum primary pressure	39 bar (529 lb/in²)
Maximum back pressure (allowable pressure)	10 bar (145 lb/in²)
Secondary pressure setting range	0 - 40 bar (0 - 580 lb/in²)
Maximum flow rate	10 l/min (2.2 UK gal/min)
Electrical specifications	
1. Rated current	700 mA
2. Coil resistance (at 20 °C)	17.5 +/-0.7 W
3. Recommended fluctuation of proportional solenoid current	80 Hz, 22 mA

Slew Motor/Gearbox

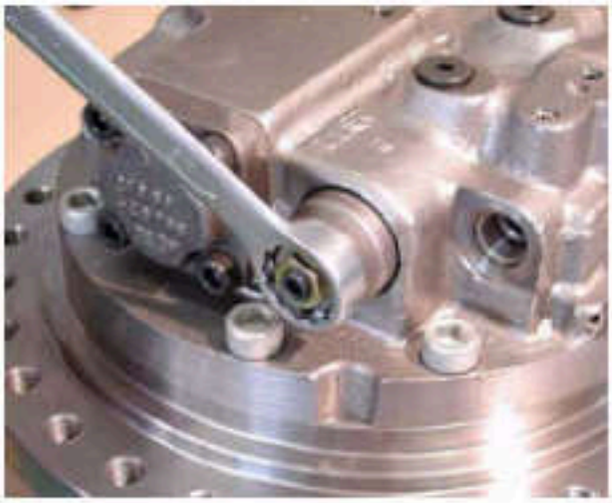
Table 4.

	JS115-JS145	JS160-190
Type	Fixed displacement piston motor	Fixed displacement piston motor
Suction capacity	87.3 cm³/rev (5.33 in³/rev)	87.3 cm³/rev (5.33 in³/rev)
Working pressure maximum	279 bar (4052 lbf/in²)	279 bar (4052 lbf/in²)
Work flow	137 l/min (30.13 gal/min)	137 l/min (30.13 gal/min)
Set pressure relief	279 bar (4046 lb in²)	289 bar (4191 lb in²)
Reduction gears	Planetary gears with 2 gear reduction	Planetary gears with 2 gear reduction
Reduction gear ratio	17.03: 1	24.73: 1
Motor max. speed	-	-
Brake torque	294 Nm	490 Nm
Brake pressure release		
Min.	30 kgf/cm² (426 lbf/in²)	20 bar(290 lbf/in²)
Max.	50 bar (725 lb/in²)	40 bar (580 lb/in²)
Gearbox max. output torque	4160Nm	8560Nm
Gearbox max. output speed	-	-
Dry weight	99 kg (218 lb)	220 kg (485 lb)

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Disassembly Of The Relief Valve Assembly

8 Unscrew the relief valve (45) from the base plate (60).



P017190

Fig 104.

9 Take out the free piston from the relief valve (45)



P017200

Fig 105.

10 Remove the O-ring seal (42) and the backup rings (41) from their seats in the free piston.



P017210

Fig 106.

11 Remove the O-ring seal (44) from relief valve (45) Repeat the same steps for the 2nd relief valve disassembly (45).



P017220

Fig 107.

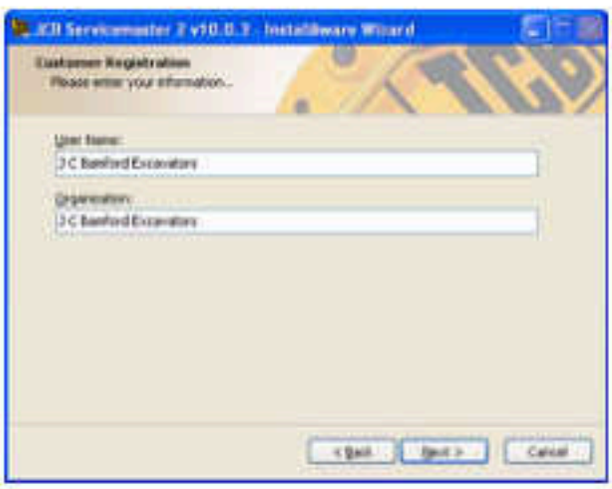
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T040310-5

Fig 7.

6 The next screen requires you to put in your username and organization. Once inserted, click next.



T040310-6

Fig 8.

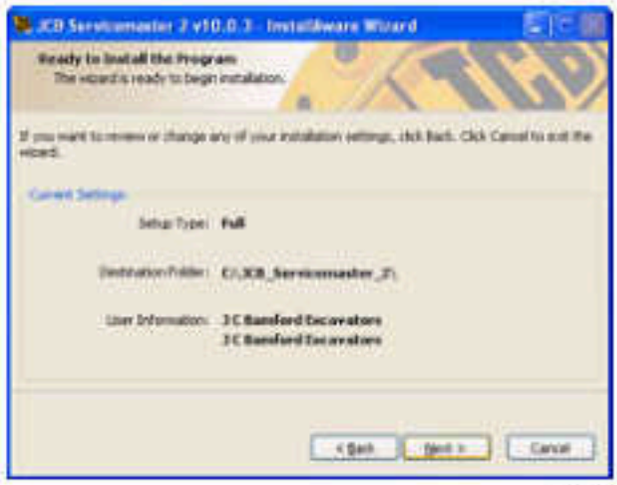
7 On the next screen, please choose "Complete" to do the full install to your laptop.



T040310-7

Fig 9.

8 The next screen shows you where ServiceMaster will be installed to on your computer. Click next to begin the install.



T040310-7

Fig 10.

9 During the install you may get a number of errors indicating language files for TransLink haven't been found. Please click Ignore, these files will be installed later via WebUpdate.

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