SERVICE MANUAL

SKIDSTEER LOADER

135 [T4F], 150T [T4F], 155 [T4F], 175 [T4F], 190T [T4F], 205T [T4F], 210 [T4F], 215 [T4F]

EN - 9813/9750
ISSUE 1 - 05/2017

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

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Foreword

The Operator's Manual

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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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Table 159. Outer Track Rubber (Longitudinal Cracks)

Cause	Remedy
The edges of the rubber track are often deformed largely due to a bumpy ground surface, stones and other objects, which cause intensive stress on the edges resulting in damage. Especially when a machine drives over concrete pavements, this type of damage easily occurs	Operate the machine with care, avoid concrete pavements and big rocks

Table 160. Inner Track Rubber (Tearing/Cuts)

Cause	Remedy
Stones and sharp material can tear the rubber at the edges of the track	The life expectancy of a track is greatly reduced by working on a site where sharp and pointed materials are numerous. Operate the machine with attention to the ground's surface in rough terrain, e.g. demolition sites, rocky ground etc.
Driving close to pavement edges and ridges - causing the edges to be forcefully bent against the track frame	Drive the machine carefully, avoid driving over projections, prevent the track edges from contacting ridges etc.
The track can be used as long as the cuts do not reach the metallic components	When the cracks expose the steel cords, the track must be replaced or repaired

Table 161. Inner Track Rubber (Cracks)

Cause	Remedy
Excessive tension of the rubber	Check the tension regularly
Excessive vibration whilst the machine remains stationary, for example using an auxiliary attachment such as a hammer	Do not let the machine sit too long in the same position when operating in these conditions. Move the machine from time to time so that the pressure of the vibrations is not always felt on the same place of the track
The track can be used as long as the cuts do not reach the metallic components	When the cracks expose the steel cords, the track must be replaced or repaired

Table 162. Miscellaneous (Not Engaging Correctly)

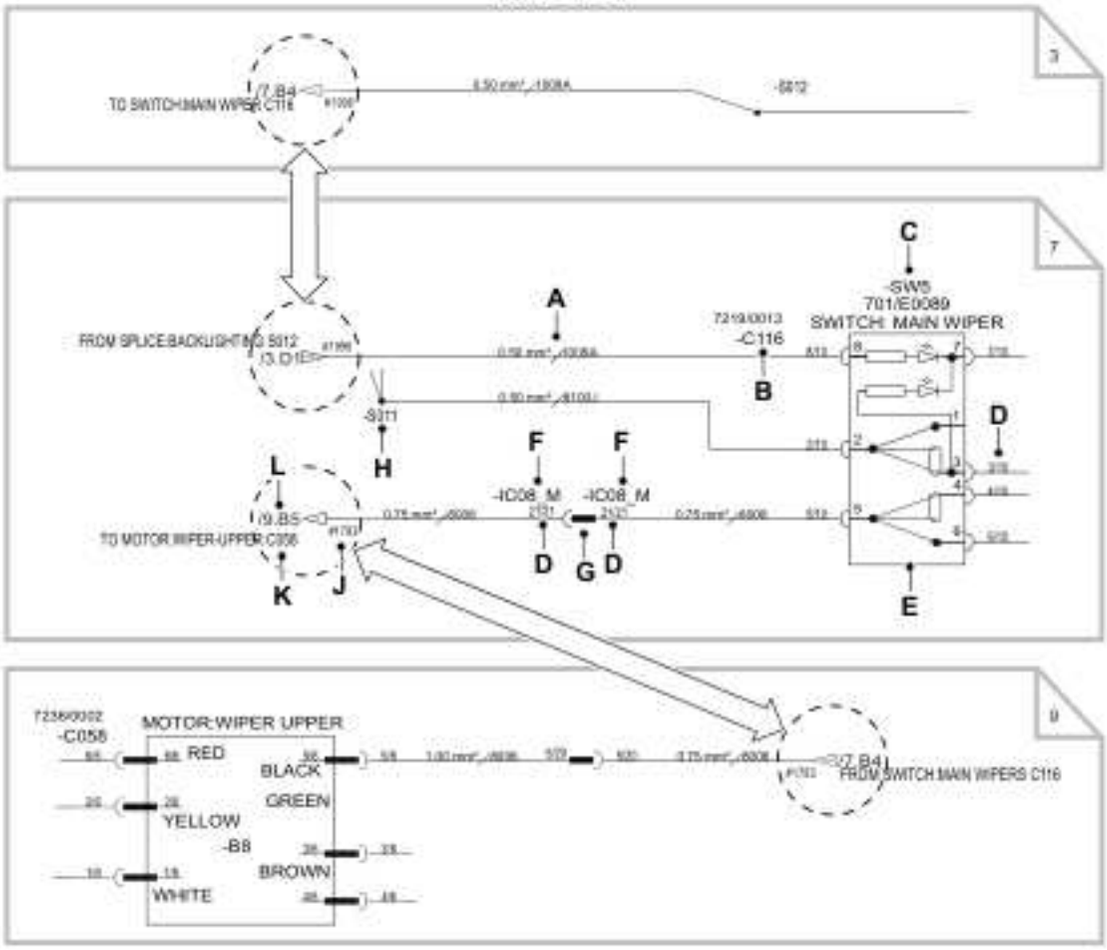
Cause	Remedy
Excessive abrasion of the sprocket teeth	Make sure that the sprocket is genuine JCB. Make sure the sprocket is in good condition
Excessive tension of the track leading to incorrect track pitch	Check the track tension regularly (as recommended in service schedules)

Table 163. Miscellaneous (Detracking)

Cause	Remedy
Low track tension	Check the tension regularly
The rollers are worn out and the track is not correctly guided	Check the rollers and running gear components in accordance with the recommended service intervals
Sharp bends (shearing stress)	Drive carefully on hard surfaces like concrete, asphalt etc.
Machine working following a hillside which weathers or is soft	Make sure that the ground is firm when working along a hillside and drive carefully

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Figure 788.



A Wire size (area) and number
B Device harness connector code
C Device description
D Connector pin number (wire location / total)
E Device internal schematic
F Harness inter-connector codes
G Harness inter-connector symbol
H Splice code and symbol
J Destination reference number
K Destination (harness connector code)
L Destination (diagram sheet and grid)

To help locate a wire destination from other diagram sheets use the grid reference. This identifies the applicable location zone on the sheet in a similar way to a map reference.

Due to space limitations, the grid is sometimes omitted.

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Technical Data

For: 135 [T4F], 150T [T4F], 155 [T4F], 175 [T4F], KDI 1903 TCR Elec Engine, KDI 2504 TCR Elec Engine ..... Page 75-6
For: 190T [T4F], 205T [T4F], 210 [T4F], 215 [T4F], KDI 1903 TCR Elec Engine, KDI 2504 TCR Elec Engine ..... Page 75-6

(For: 135 [T4F], 150T [T4F], 155 [T4F], 175 [T4F], KDI 1903 TCR Elec Engine, KDI 2504 TCR Elec Engine)

JCB recommend that you use the JCB lubricants shown as they have been verified by JCB for use on JCB machines. However, you could use other lubricants that are equivalent to the JCB standards and quality or offer the same machine component protection.

Table 290. Machines with JCB Diesel Engine by Kohler

Item	Capacity	Fluid/Lubricant	JCB Part Number	Container Size(1)	Specification
Fuel Tank	98L (radial lift), 92L (vertical lift)	Diesel Oil			
Engine (Oil)	Min5.5L Max7.4L	JCB Engine Oil EP 5W40	4001/2705	20L	API CJ4, ACEA E6-E9, Low SAPS
Engine (Coolant)	10L	JCB Antifreeze HP	4006/1120	20L	ASTM D3306, ASTM D4985, ASTM D6210, SAE J1034, BS6580 (1992), AFNOR NF R15-601
Hydraulics System	System:43.5L Tank:26L	JCB Extreme Performance Hydraulic Fluid 46 (climates between -20°C (-4°F) and 46°C (115°F)	4002/2900	200L	
		JCB Bio Hydraulic Fluid 46 (if required)	4002/2603	200L	
Chain Cases	19L	JCB Engine Oil EP 15W40	4001/1805	20L	
Grease Points		JCB HP Grease or JCB Special MPL EP Grease	4003/2017	24 x 0.4kg cartridges	

(1) For information about the different container sizes that are available (and their part numbers), contact your JCB dealer.

(For: 190T [T4F], 205T [T4F], 210 [T4F], 215 [T4F], KDI 1903 TCR Elec Engine, KDI 2504 TCR Elec Engine)

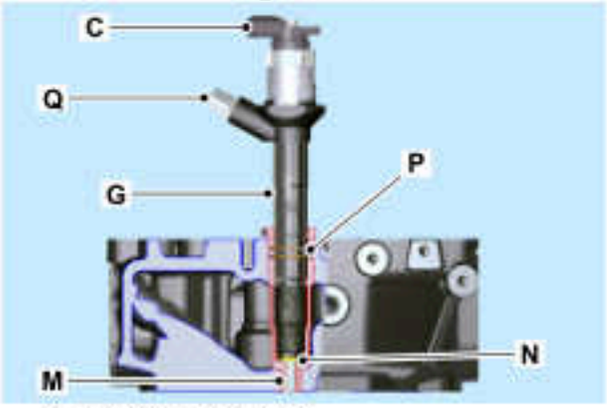
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Table 291. Machines with JCB Diesel Engine by Kohler

Item	Capacity	Fluid/Lubricant	JCB Part Number	Container Size(1)	Specification
Fuel Tank	92L	Diesel Oil			
Engine (Oil)	Min7.8L Max10.2L	JCB Engine Oil EP 5W40	4001/2705	20L	API CJ4, ACEA E6-E9, Low SAPS

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Figure 435.

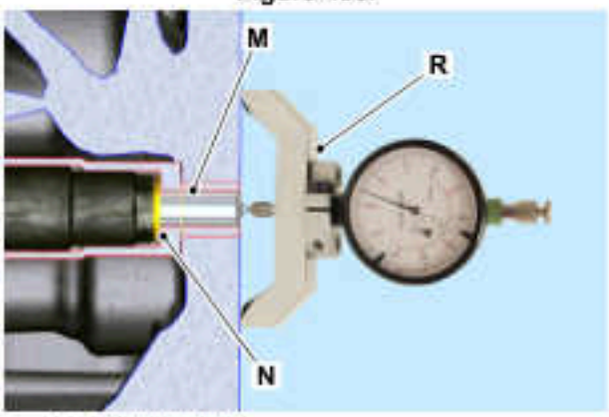


C Electrical connector
G Electronic injector
M Injector sleeve
N Gasket
P Gasket
Q High pressure pipe inlet

6. Make sure that you clamp the sleeve to the correct torque value.
7. Make sure that you put the injector into the sleeve.
8. Make sure that the injector is installed in the correct orientation, with the bleed-off port facing the right hand side (exhaust manifold) of the engine.
9. Make sure that you use a dial gauge to check that the projection of the electronic injector sleeve must be in the specified range.

   Length/Dimension/Distance: 1.68–2.42mm
   Special Tool: Tool for protrusion of pistons, injectors and glow plugs (Qty.: 1)

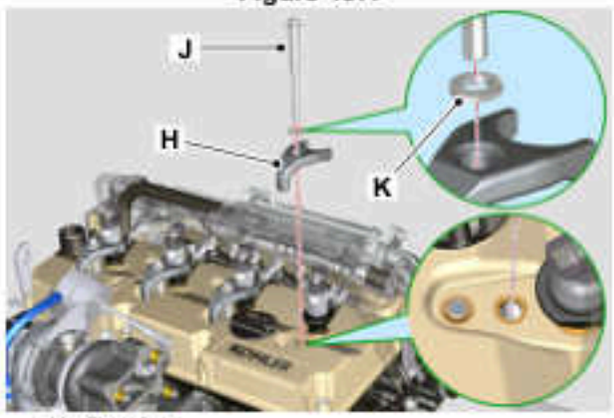
Figure 436.



M Injector sleeve
N Gasket
R Dial gauge

10. Install the rocker arm pin fixing screw.
11. Position the electronic injector fixing bracket and secure it with a screw and washer.

Figure 437.



H Bracket
J Screw
K Washer

12. Tighten the injector fixing bracket screw to the correct torque value.
13. Attach the fuel return pipe fitting to the injector head.
14. Connect the electrical connector.

Note: If the injector projection does not fall into the specified range then replace the gasket, on the base of the injector sleeve and repeat the inspection.

After Installation

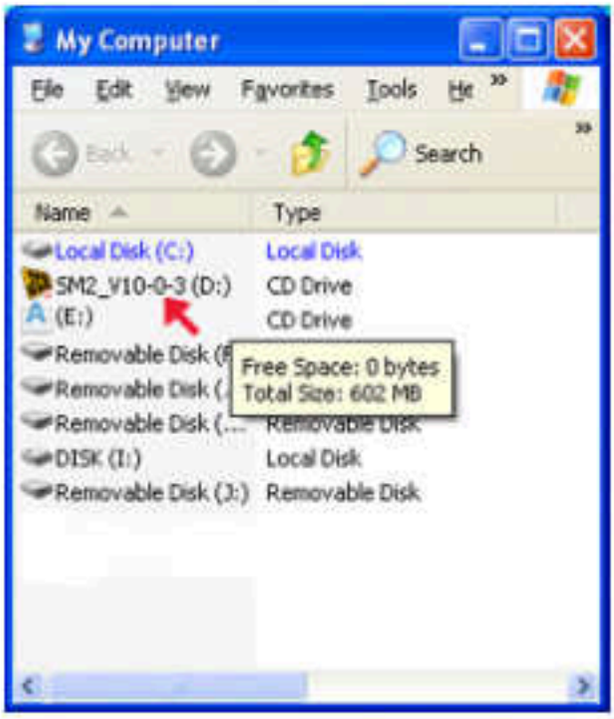
1. Replace the rocker cover. Refer to (PIL 15-42).
2. Renew the high pressure fuel pipes. Refer to (PIL 18-96).
3. Start the engine and check for fuel leaks.

Table 108. Torque Values

Item	Nm
M	30
J	20

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Figure 938.



4. Select and open the "Setup.exe" application.
5. A new window "JCB Servicemaster Setup" will appear on the screen.
   5.1. Click the "Install V10.0.3" option to start the setup application. Refer to Figure 939.

Figure 939.



6. A new window "Select Setup Language" will appear on the screen. Refer to Figure 940.
   6.1. Use the drop down option to select the suitable language.
   6.2. Click the "OK" option to confirm selected language.

Figure 940.



7. A warning message window will appear on the screen. Refer to Figure 941.
   7.1. Click the "OK" option.

Figure 941.



8. A new window "JCB Servicemaster Installation Wizard" will appear on the screen. Refer to Figure 942.
   8.1. Click the "Next" option to proceed.

Figure 942.



9. Put "User Name" and "Organization" details into the "Customer Registration" screen. Refer to Figure 943.
   9.1. Click the "Next" option when you inserted details.

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