Service Manual

JS130W, JS145W, JS160W, JS175W

Section 1 - General Information

Section 2 - Care & Safety

Section 3 - Maintenance

Section B - Body & Framework

Section C - Electrics

Section D - Controls

Section E - Hydraulics

Section F - Transmission

Section K - Engine



PREVIEW - YOUFIXTHIS.COM

Publication No.
9803/6590-4



Copyright © 2004 JCB SERVICE. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying or otherwise, without prior permission from JCB SERVICE.

Issued by JCB Technical Publications, JCB Aftermarket Training, Woodseat, Rocester, Staffordshire, ST14 5BW, England. Tel +44 1889 591300 Fax +44 1889 591400

World Class
Customer Support

Download full manual at youfixthis.com

Contents **Page No.**

Introduction
About this Manual 1-1
Identifing Your Machine 1-3

Torque Settings
Zinc Plated Fasteners and Dacromet Fasteners 1-5
Hydraulic Connections 1-9

Service Tools
Numerical List 1-13
Tool Detail Reference 1-16

Service Consumables
Sealing and Retaining Compounds 1-35

Terms and Definitions
Colour Coding 1-37

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Safety Notices

Important Information

T1-042

The Operator Manual

⚠ WARNING

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

INT-1-4-2

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

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

Safety Warnings



This safety alert system identifies important safety messages in this manual. When you see this symbol, be alert, your safety is involved, carefuly read the message that follows, and inform other operators.

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

⚠ DANGER

Denotes an extreme hazard exists. If proper precautions are not taken, it is highly probable that the operator (or others) could be killed or seriously injured.

INT-1-2-1

⚠ WARNING

Denotes a hazard exists. If proper precautions are not taken, the operator (or others) could be killed or seriously injured.

INT-1-2-2

⚠ CAUTION

Denotes a reminder of safety practices. Failure to follow these safety practices could result in injury to the operator (or others) and possible damage to the machine.

INT-1-2-3

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Introduction

About this Manual

Machine Model and Serial Number

This manual provides information for the following model(s) in the JCB machine range:

JCB JS130W from serial number 01060300 to 01060999.

JCB JS145W from serial number 01314300 to 01314599.

JCB JS145W from serial number 01458000 to 01458999.

JCB JS145W from serial number 01613000 to 1613999.

JCB JS160W from serial number 01421600 to 01421799.

JCB JS160W from serial number 01451000 to 01451999.

JCB JS175W from serial number 01505100 to 01505284.

JCB JS175W from serial number 01505286 to 01505499.

Using the Service Manual

T11-004

This publication is designed for the benefit of JCB Distributor Service Engineers who are receiving, or have received, training by JCB Technical Training Department.

These personnel should have a sound knowledge of workshop practice, safety procedures, and general techniques associated with the maintenance and repair of hydraulic earthmoving equipment.

The illustrations in this publication are for guidance only. Where the machines differ, the text and/or the illustration will specify.

General warnings in Section 2 are repeated throughout the manual, as well as specific warnings. Read all safety statements regularly, so you do not forget them.

Renewal of oil seals, gaskets, etc., and any component showing obvious signs of wear or damage is expected as a matter of course. It is expected that components will be cleaned and lubricated where appropriate, and that any opened hose or pipe connections will be blanked to prevent excessive loss of hydraulic fluid and ingress of dirt.

Where a torque setting is given as a single figure it may be varied by plus or minus 3%. Torque figures indicated are for dry threads, hence for lubricated threads may be reduced by one third.

The manufacturer's policy is one of continuous improvement. The right to change the specification of the machine without notice is reserved. No responsibility will be accepted for discrepancies which may occur between specifications of the machine and the descriptions contained in this publication.

Finally, please remember above all else safety must come first!

Section Numbering

T11-005

The manual is compiled in sections, the first three are numbered and contain information as follows:

1 General Information - includes torque settings and service tools.

2 Care and Safety - includes warnings and cautions pertinent to aspects of workshop procedures etc.

3 Maintenance - includes service schedules and recommended lubricants for all the machine.

The remaining sections are alphabetically coded and deal with Dismantling, Overhaul etc. of specific components, for example:

A Attachments

B Body and Framework, etc.

Section contents, technical data, circuit descriptions, operation descriptions etc. are inserted at the beginning of each alphabetically coded section.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Torque Settings

Zinc Plated Fasteners and Dacromet Fasteners

T11-002

Introduction

Some external fasteners on JCB machines are manufactured using an improved type of corrosion resistant finish. This type of finish is called Dacromet and replaces the original Zinc and Yellow Plating used on earlier machines.

The two types of fasteners can be readily identified by colour and part number suffix. ⇒ *Table 1. Fastener Types (1-5)*.

Table 1. Fastener Types

Fastener Type	Colour	Part No. Suffix
Zinc and Yellow	Golden finish	'Z' (e.g. 1315/3712Z)
Dacromet	Mottled silver finish	'D' (e.g. 1315/3712D)

Note: *As the Dacromet fasteners have a lower torque setting than the Zinc and Yellow fasteners, the torque figures used must be relevant to the type of fastener.*

Note: *A Dacromet bolt should not be used in conjunction with a Zinc or Yellow plated nut, as this could change the torque characteristics of the torque setting further. For the same reason, a Dacromet nut should not be used with a Zinc or Yellow plated bolt.*

Note: *All bolts used on JCB machines are high tensile and must not be replaced by bolts of a lesser tensile specification.*

Note: *Dacromet bolts, due to their high corrosion resistance are used in areas where rust could occur. Dacromet bolts are only used for external applications. They are not used in applications such as gearbox or engine joint seams or internal applications.*

Bolts and Screws

Use the following torque setting tables only where no torque setting is specified in the text.

Note: *Dacromet fasteners are lubricated as part of the plating process, do not lubricate.*

Torque settings are given for the following conditions:

Condition 1

- Un-lubricated fasteners
- Zinc fasteners
- Yellow plated fasteners

Condition 2

- Zinc flake (Dacromet) fasteners
- Lubricated zinc and yellow plated fasteners
- Where there is a natural lubrication. For example, cast iron components

Verbus Ripp Bolts

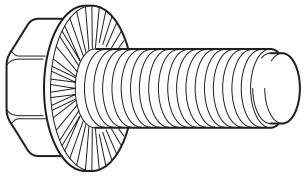


Fig 1.

Torque settings for these bolts are determined by the application. Refer to the relevant procedure for the required settings.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Checking the Coolant Level - 4HK and 6HK Engines

1 Park the machine on solid, level ground.

2 Turn the engine OFF and remove the ignition key.

3 Let the engine cool down.

⚠ WARNING

The cooling system is pressurised when the coolant is hot. When you remove the cap, hot coolant can spray out and burn you. Make sure that the engine is cool before you work on the cooling system.

9-3-3-1_2

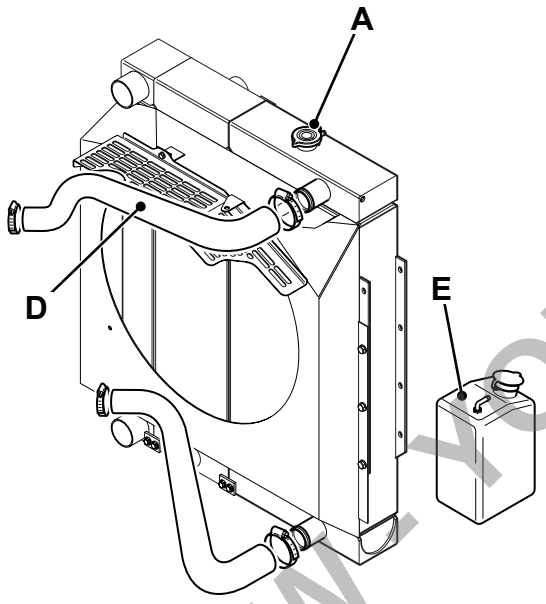


Fig 34.

4 Carefully release the radiator cap **A** to release system pressure.

5 Remove the radiator cap **A**.

6 Check the radiator is full of coolant to the top of the filler neck.

If the level is low:

a Switch the ignition ON and switch the cab heater onto hot and full blower speed.

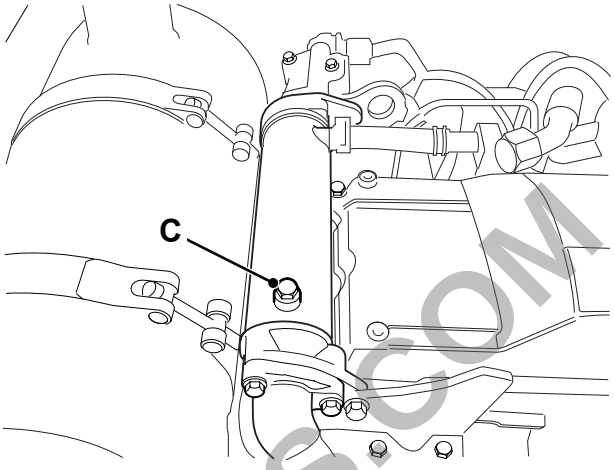


Fig 35.

b Open the EGR cooler plug **C** to bleed air from the system.

c Top up the radiator with coolant to the top of the filler neck.

Note: *Manipulate the top radiator hose **D** to make sure there are no air locks in the system.* ⇨ *Fig 34. (3-55)*.

d Close the EGR cooler plug.

Note: *Torque tighten the EGR cooler plug to 25Nm.*

e Fit the radiator cap.

7 Check the level in the expansion bottle **E**. ⇨ *Fig 34. (3-55)*.

The level must be at the FULL mark.

If the level is low:

a Top-up the expansion bottle **E** with coolant.

8 Start the engine.

9 Turn the slew lock ON.

10 Operate the machine until the coolant temperature reaches 90°C leaving the cab heater and fan at maximum.

Coolant temperature can be checked as follows:

PREVIEW. YOUFIXTHIS.COM

Download full manual at youfixthis.com

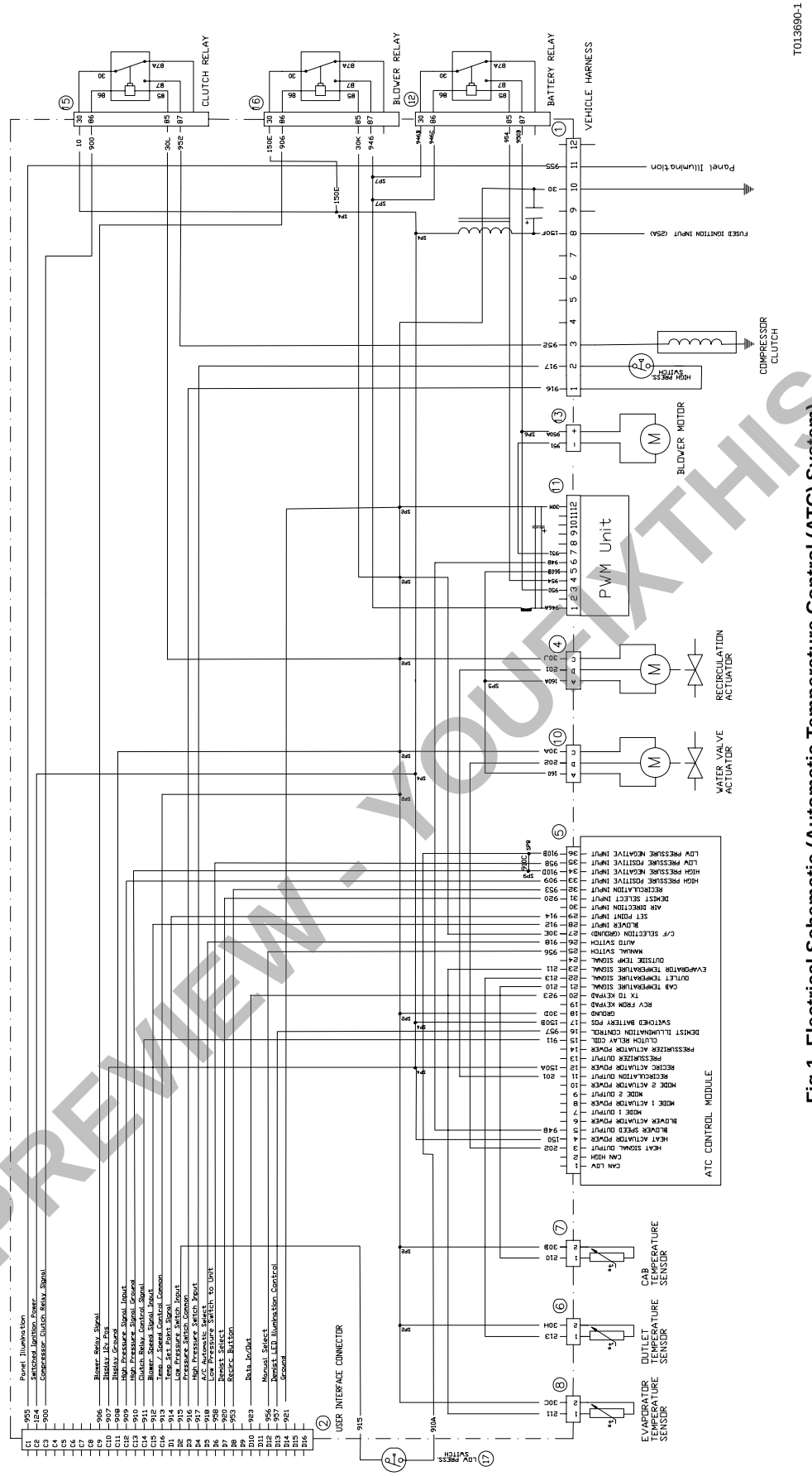


Fig 1. Electrical Schematic (Automatic Temperature Control (ATC) System)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

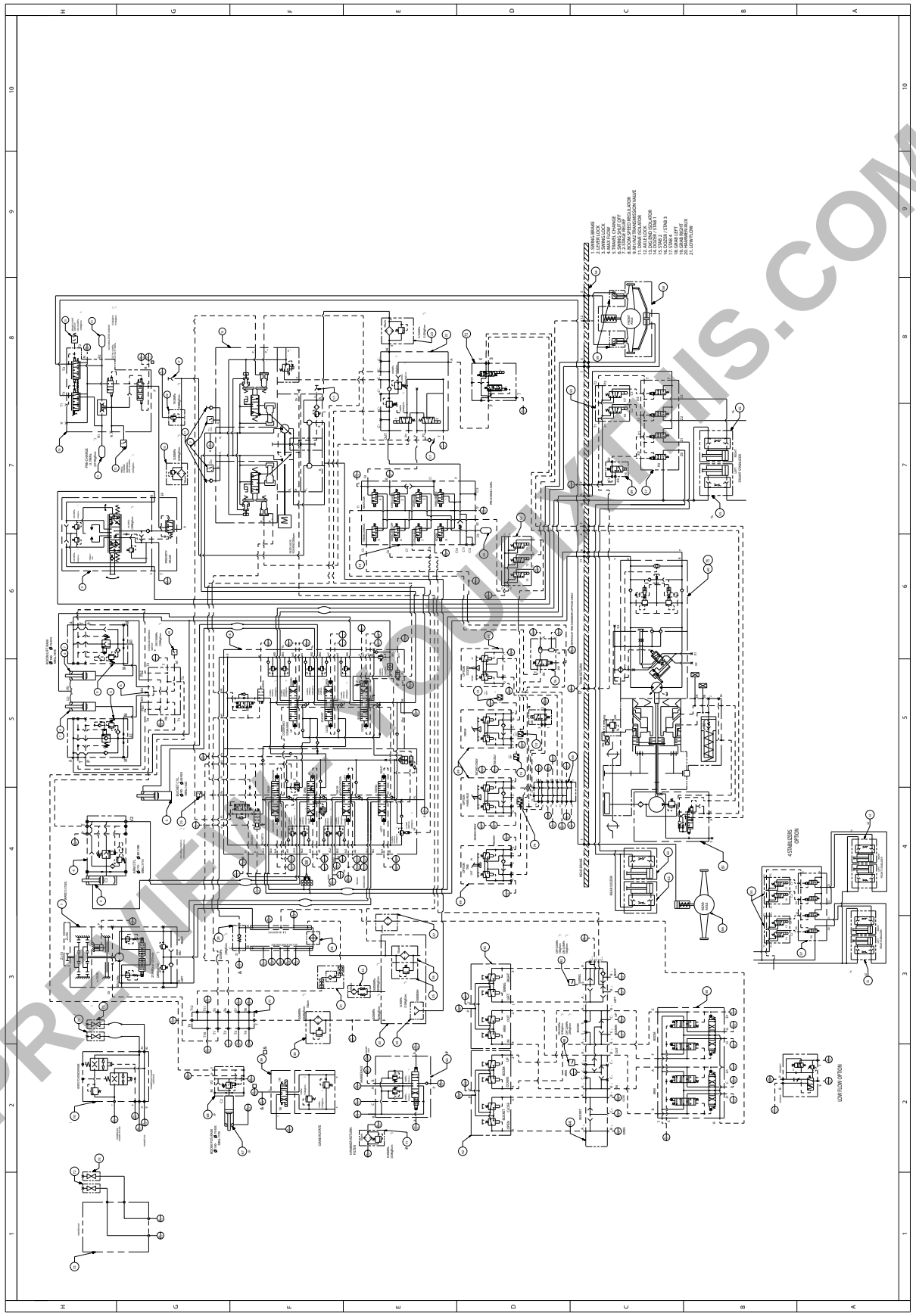


Fig 3. 331/63758 issue 2

PREVIEW ONLY
YOUFIXTHIS.COM

Download full manual at youfixthis.com

Engine Error Codes

TK-001

Engine `NO RESTART'. If this message appears the engine will continue to run to allow the machines to be moved to a position of safety where the machine can be repaired. Once the engine is stopped it will not restart until the repair as been carried out.

If the message `LOW POWER' displays the engine power is reduced to 60% power to protect the engine.

Table 1.

Use for identification the repair part			**Engine fault LED**	**Caution LED**	**Buzzer ON (1.5 sec)**	**Error Code Display (eg. ENG P0335)**	**Message Displayed**
DTC	Diagnostic Monitoring Item (Malfunction Title)	Condition for Setting DTC					
P0087	Fuel rail pressure is too low (Fuel leak)	Actual rail pressure < Minimum target rail pressure at actual rail pressure is 15MPa or more	✓		✓	✓	LOW POWER
P0088	Common rail pressure (1st stage)	Rail pressure is over 185MPa	✓		✓	✓	LOW POWER
P0088	Common rail pressure (2nd stage)	Common rail pressure failure (1st. Stage) is occurred and the rail pressure is over 190MPa.	✓		✓	✓	LOW POWER
P0089	Common rail pressure (excessive pressure for pump)	DUTY for SCV is 40% or more. Or Actual rail press -Target rail press >40MPa~ then target fuel flow is 90mm 3/st or less.	✓		✓	✓	LOW POWER
P0090	Fuel pressure regulator control circuit	SCV driving current > 2400mA or 50mA < SCV driving current, or Target current - Actual current >1000 mA	✓		✓	✓	LOW POWER
P0107	Air pressure sensor (low voltage)	The voltage of air pressure temperature sensor falls below 0.099V.	✓			✓	
P0108	Air pressure sensor (high voltage)	The voltage of air pressure temperature sensor exceeds 4.85V.	✓			✓	
P0112	Intake air temperature circuit (low voltage)	The voltage of intake temperature sensor falls below 0.099V.	✓			✓	
P0113	Intake air temperature circuit (high voltage)	The voltage of intake temperature sensor exceeds 4.85V.	✓			✓	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Daily Checking

It is vital to check certain machine functions and components daily to ensure that the machine can be operated safely and efficiently.

1 Prepare the machine. ⇨ *Prepare the Machine for Maintenance (3-25)*

2 Visual check. Check the machine for the following:

- **a** Oil, fuel and coolant leakage.
- **b** Broken or loose fasteners.
- **c** Wire breakage, short circuit of cables and terminal anchorage.
- **d** Oil cleanliness.
- **e** Dust accumulation.
- **f** Structures for damage.

⚠ WARNING

The cooling system is pressurised when the coolant is hot. When you remove the cap, hot coolant can spray out and burn you. Make sure that the engine is cool before you work on the cooling system.

9-3-3-1_2

- **g** Coolant level check and refilling. ⇨ *Engine (3-48)*.

3 Checks after initial start-up.

- **a** Engine oil is checked automatically. Check monitor display at start up for possible warning.
- **b** Operation of horn and gauges.
- **c** Ease of engine starting, abnormal noise and exhaust gas colour.
- **d** Oil, fuel and coolant leakage.

4 Fuel level check and refilling. refer to ***Operation Section, Refueling the Machine***.

⚠ WARNING

Do not remove the hydraulic tank filler cap or cover plate when the engine is running. The hydraulic system is under pressure. You or others could be injured. First stop the engine and then release the pressure.

8-3-4-4

5 Hydraulic oil level check and refilling. ⇨ *Checking the Fluid Level (3-75)*, ⇨ *Topping-up Fluid Level (3-76)*.

6 Check the mounting bolts of the fuel and hydraulic oil tanks for looseness and for fuel and hydraulic oil leakage.

7 Check the mounting bolts of the electrical parts and battery terminals for looseness and wire breakage.

8 Boom/Dipper

Check the high pressure hoses/joints and the hydraulic rams for oil leakage.

9 Accumulator - Check charge

- **a** Extend dipper and raise boom.
- **b** Apply engine shutdown.
- **c** Operate boom down function.
- **d** Ensure boom lowers to the ground under its own weight.

10 Bucket and Linkage.

- **a** Check the bucket teeth and side cutter for looseness, wear and breakage.
- **b** Check the lubrication of the linkage **L** and surrounding parts. Check to see if the bucket side play is within allowable range. ⇨ *Checking/ Adjusting For Side Play (3-93)*.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Fluids, Lubricants and Capacities

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.

JS130W-160W and Variants

Table 5.

Item	Capacity	Lubricant	JCB Part No.	Container Size(1)
ENGINE	15 litres (3.3 UK gal) (4 US gal)	JCB Engine Oil HP 15W40 -15°C to +40°C (5°F to 104°F)	4001/1505	20 Litres
		JCB Engine Oil HP 10W30 -30°C to +30°C (-22°F to 86°F)	4001/1705	20 Litres
COOLING SYSTEM	21 litres (4.6 UK gal) (5.5 US gal)	JCB HP Coolant ⇨ *Coolant Mixtures (3-21)*	4006/1120	20 Litres
SLEW GEARBOX	2.2 litres (0.5 UK gal) (0.6 US gal)	JCB HD90 Gear Oil	4000/0301	5 Litres
			4000/0305	20 Litres
HYDRAULIC SYSTEM	124 litres (27.3 UK gal) (32.8 US gal)	JCB Hydraulic Fluid HP32 -20°C to +15°C (-4°F to 59°F)	4002/1024	200 Litres
		JCB Hydraulic Fluid HP46 -10°C to +30°C (14°F to 86°F)	4002/0803	
		JCB Hydraulic Fluid HP68 0°C to +40°C (32°F to 104°F)	4002/0701	
SLEW RING		JCB Special HP Grease	4003/2017	400g
- BEARING	--			
- GEAR TEETH	11 kg (24.25 lb)		4003/2006	12.5kg
DRIVESHAFTS	--			
ALL OTHER GREASE POINTS	--			
FUEL TANK	253 litres (55.6 UK gal) (66.8 US gal)	⇨ *Fuel (3-21)*		
FRONT/REAR AXLE		JCB Gear Oil HP Plus	4000/0305	20 Litres
- DIFFERENTIAL	12.14 litres (2.7 UK gal) (3.2 US gal)			
- HUB (x2)	2 litres (0.4 UK gal) (0.5 US gal)			
DRIVE GEARBOX	2.5 litres (0.55 UK gal) (0.66 US gal)	JCB Engine Oil HP 15W40 -15°C to +40°C (5°F to 104°F)	4001/1501	5 Litres

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

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Service Schedules

Introduction

T3-036_3

⚠ WARNING

Maintenance must be done only by suitably qualified and competent persons.

Before doing any maintenance make sure the machine is safe, it should be correctly parked on level ground.

To prevent anyone starting the engine, remove the starter key. Disconnect the battery when you are not using electrical power. If you do not take these precautions you could be killed or injured.

8-3-1-1

A badly maintained machine is a danger to the operator and the people working around him. Make sure that the regular maintenance and lubrication jobs listed in the service schedules are done to keep the machine in a safe and efficient working condition.

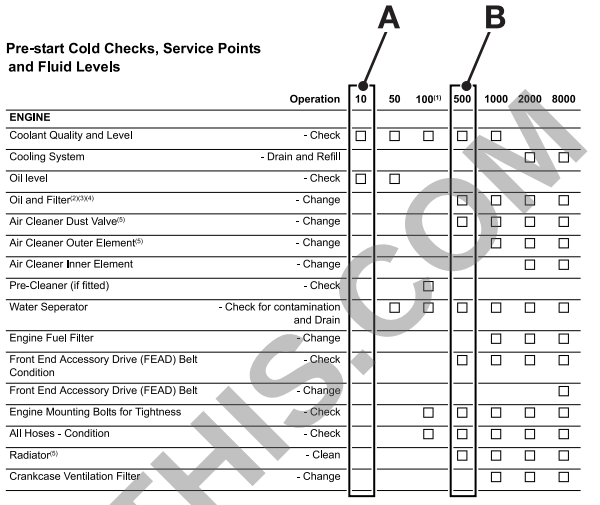
Apart from the daily jobs, the schedules are based on machine running hours. Keep a regular check on the hourmeter readings to correctly gauge service intervals. When there is no hourmeter fitted, use the calendar equivalents to determine the service intervals. Refer to ***Calendar Equivalents***. Do not use a machine which is due for a service. Make sure any defects found during the regular maintenance checks are rectified immediately.

How to Use the Service Schedules

T3-012_3

In the example shown, **A** shows all service requirements to be carried out every 10 hours and **B** shows the requirements to be carried out every 500 hours.

Important: *Services should be carried out at either the hourly interval or calendar interval, whichever occurs first. Refer to* ***Calendar Equivalents****.*



795390-1

Calendar Equivalents

Every 10 Hours	=	Daily
Every 50 Hours	=	Weekly
Every 250 Hours	=	Monthly
Every 500 Hours	=	Three Months
Every 1000 Hours	=	Six Months
Every 2000 Hours	=	1 Year
Every 4000 Hours	=	2 Years
Every 5000 Hours	=	2 Years Six Months

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

⚠ WARNING

Feeling Unwell

Do not attempt to operate the machine if you are feeling unwell. By doing so you could be a danger to yourself and those you work with.

8-1-2-4

⚠ WARNING

Mobile Phones

Switch off your mobile phone before entering an area with a potentially explosive atmosphere. Sparks in such an area could cause an explosion or fire resulting in death or serious injury.

Switch off and do not use your mobile phone when refuelling the machine.

INT-3-3-9

⚠ WARNING

Lifting Equipment

You can be injured if you use incorrect or faulty lifting equipment. You must identify the weight of the item to be lifted then choose lifting equipment that is strong enough and suitable for the job. Make sure that lifting equipment is in good condition and complies with all local regulations.

INT-1-3-7_2

⚠ WARNING

Raised Equipment

Never walk or work under raised equipment unless it is supported by a mechanical device. Equipment which is supported only by a hydraulic device can drop and injure you if the hydraulic system fails or if the control is operated (even with the engine stopped).

Make sure that no-one goes near the machine while you install or remove the mechanical device.

13-2-3-7_3

⚠ WARNING

Raised Machine

NEVER position yourself or any part of your body under a raised machine which is not properly supported. If the machine moves unexpectedly you could become trapped and suffer serious injury or be killed.

INT-3-3-7_1

⚠ DANGER

Lightning

Lightning can kill you. Do not use the machine if there is lightning in your area.

5-1-1-2

⚠ WARNING

Machine Modifications

This machine is manufactured in compliance with legislative and other requirements. It should not be altered in any way which could affect or invalidate any of these requirements. For advice consult your JCB Distributor.

INT-1-3-10_2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

JS200W and Variants

Table 7.

Item	Capacity	Fluid/Lubricant	JCB Part No.	Container Size(1)
ENGINE	24.5 litres (5.4 UK gal) (6.5 US gal)	JCB Engine Oil HP 15W40 -15°C to +40°C (5°F to 104°F)	4001/1505	20 Litres
		JCB Engine Oil HP 10W30 -30°C to +30°C (-22°F to 86°F)	4001/1705	20 Litres
COOLING SYSTEM	33.3 litres (7.3 UK gal) (8.8 US gal)	JCB HP Coolant ⇨ *Coolant Mixtures (🗋 3-21)*	4006/1120	20 Litres
SLEW GEARBOX	5 litres (1.1 UK gal)(1.3 US gal)	JCB HD90 Gear Oil	4000/0301	5 Litres
			4000/0305	20 Litres
HYDRAULIC SYSTEM	200 litres (44.0 UK gal) (52.8 US gal)	JCB Hydraulic Fluid HP32 -20°C to +15°C (-4°F to 59°F)	4002/1024	200 Litres
		JCB Hydraulic Fluid HP46 -10°C to +30°C (14°F to 86°F)	4002/0803	
		JCB Hydraulic Fluid HP68 0°C to +40°C (32°F to 104°F)	4002/0701	
SLEW RING		JCB Special HP Grease	4003/2017	400g
- BEARING	--			
- GEAR TEETH	17 kg (37.5 lb)		4003/2006	12.5kg
DRIVESHAFTS	--			
ALL OTHER GREASE POINTS	--			
FUEL TANK	343 litres (75.4 UK gal) (90.6 US gal)	⇨ *Fuel (🗋 3-21)*		
- FRONT DIFFERENTIAL (Std)	9.6 litres (2.1 UK gal) (2.5 US gal)	JCB Gear Oil HP Plus	4000/0305	20 Litres
- FRONT DIFFERENTIAL (Wide)	11 litres (2.4 UK gal) (2.9 US gal)			
- REAR DIFFERENTIAL (Std)	13.2 litres (2.9 UK gal) (3.5 US gal)			
- REAR DIFFERENTIAL (Wide)	14.5 litres (3.2 UK gal) (3.8 US gal)			
- FRONT/REAR HUB (each)	2.5 litres (0.55UK gal) (0.66 US gal)			
DRIVE GEARBOX	3.0 litres (0.66 UK gal) (0.79 US gal)	JCB Engine Oil HP 15W40 -15°C to +40°C (5°F to 104°F)	4001/1501	5 Litres

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

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Monitor Display - Fault Messages

Note: *For further information refer to Monitor Panel,* *⇒ Monitor Panel (3-63)*.

Table 26. Water and Hydraulic oil temperature

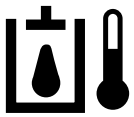
Message	Cause	Remedy
WATER TEMP   HYD TEMP	Water leakage	Repair
	Belt elongation, soiled with oil	Clean or replace
	Defective radiator	Repair or replace(1)
	Broken fan	Replace(1)
	Improper anti-freeze mixture	Replace
	Defective thermostat	Replace(1)
	Defective water pump	Replace(1)
	Dirty oil cooler (clogged)	Clean
	Dirty radiator (clogged)	Clean
	Defective dust protection net (clogged)	Clean
	Defective monitor	Replace(1)

Table 27. Low oil pressure

Message	Cause	Remedy
OIL PRESS 	Low Engine oil	Refill
	Oil leakage at connections	Repair
	Defective engine oil pressure sensor	Replace(1)
	Engine oil viscosity low	Replace with oil of viscosity matching the temperature
	Defective engine oil pump	Adjust, clean, replace(1)
	Defective monitor	Replace(1)

Table 28. Air filter

Message	Cause	Remedy
AIR FILTER 	Air filter element clogged	Clean, replace
	Intake system clogged, foreign matter inside.	Clean

Table 29. Low fuel

Message	Cause	Remedy
LOW FUEL	Fuel low	Refill
	Defective sensor	Replace(1)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Item	Part Number	Description	Location
42	20/925675	Refuel pump	Toolbox
43	215/11950	Lower wiper	Under the cab.
44	700/26700	Beacon	Centre section.
45	714/04999	Air con compressor	Front of engine.
46	30/926997	Air con binary switch	On air-conditioning condenser in the radiator bay.
47	717/20152	Horn	Between the boom rams.
48	JHN0160	Washer bottle	Toolbox.
49	716/30260	Pre-heat relay	In the left hand compartment under the battery relay.
50	716/30129	Temperature sensor	In the hydraulic pump suction tube.
51	701/80328	Overheat switch	In the hydraulic pump suction tube.
52	716/30142	Fuel level sensor	In Left hand side of fuel tank.
53	331/13929	Coolant level switch	In the expansion bottle in the radiator bay.
54	JNH0070	Air filter clog switch	In the air induction tube.
55	701/80192	Overload pressure switch	Back of the manifold between the boom ram feet.
56	701/80372	Pilot switch, auto mode	On manifold under cab.
57	701/80371	Pilot switch, auto boost	Lower front of main valve block.
58	701/60000	Switch (radio mute)	On Right hand console.
59	701/60031	Switch (heated seat)	On Right hand console.
60	40/910552	Heated seat	Cab.
61	JRJ0343	Direction control valve	In right hand compartment.
62	25/221009	Valve, solenoid	In right hand compartment.
63	25/222435	Priority valve (w/cutter)	In right hand compartment.
64	701/60032	Switch Body	
66	701/80223	Switch	
67	721/11632	Harness	
68	721/12243	Harness	
69	721/11632	Harness Ham/Aux Merged	
70	721/12318	Harness Main	
71	721/12566	Wheeled Harness	
72	721/12059	Harness Cab	
74	JHR0174	Relay	
75	721/12060	Harness Cab	
76	700/50156	Headlamp (UK spec)	
	700/50155	Headlamp (UK spec)	
77	700/80072	ECU	
78	701/80545	LH Console Switch Panel	
79	716/12243	Harness Low Flow	
80	716/30259	Sensor Barometric	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

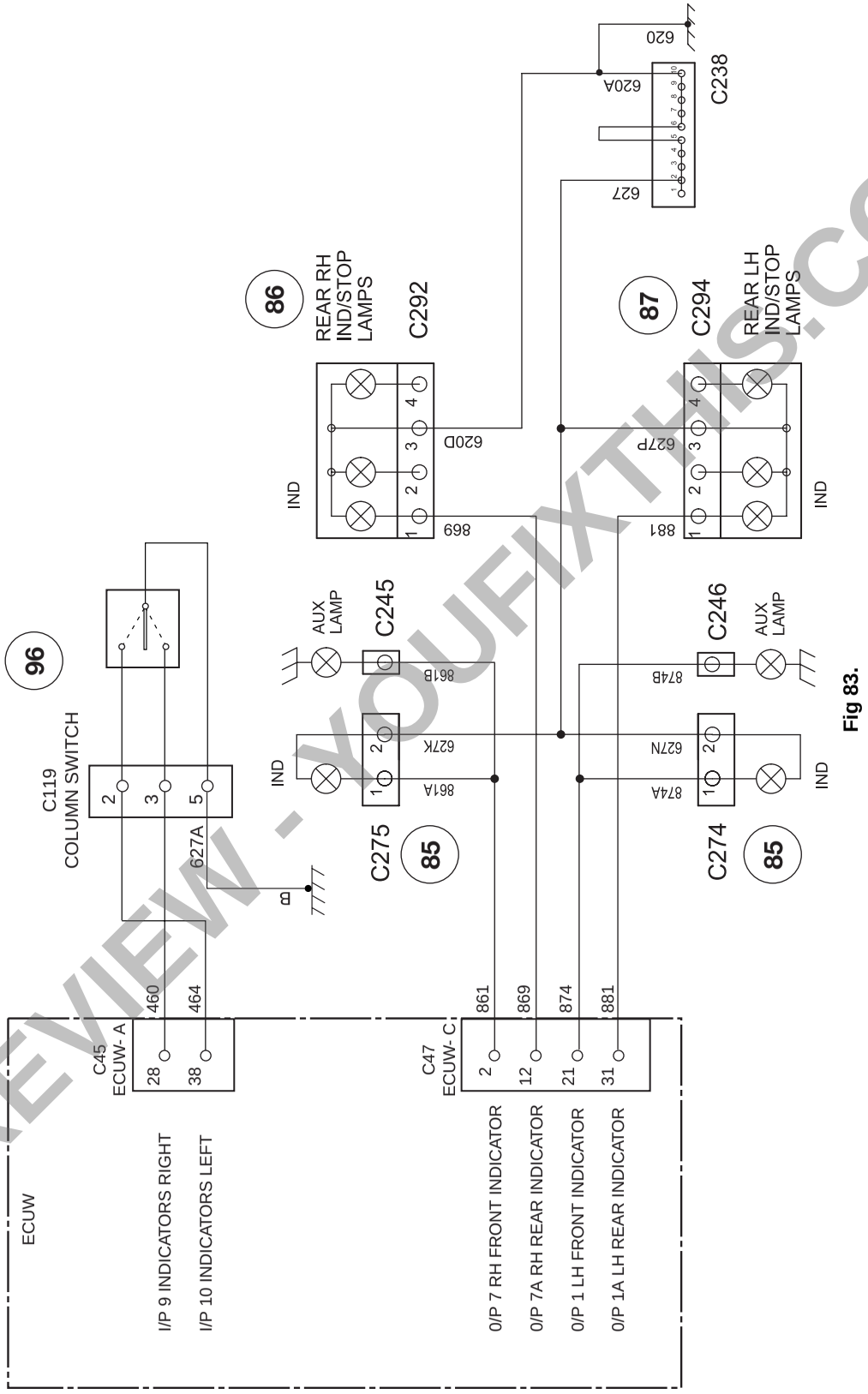


Fig 83.

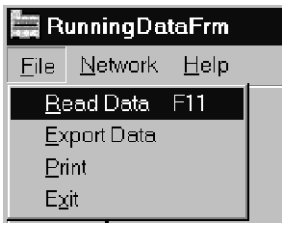
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Downloading the Running Data

1 Select and open the running data form from the HPDLog applications main menu bar.

2 Using the menu options on the running data form now open, select the Read function, alternatively use the F11 key.



6_18A

Fig 46.

Exporting Data

The running data form may be exported to a string delimited text file for importing into another Windows based application.

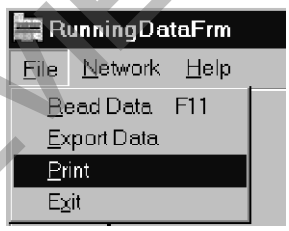


6_18B

Fig 47.

Printing Reports

The running data form can be printed out as a document suitable for distribution or fax purposes.



6_16C

Fig 48.

User Input

Zoom: The operator can use the left mouse button to drag on an area of the graph, this are will be zoomed in when the left button is released. To do this the user places the mouse pointer to the upper left part of the area of the graphic which is to be zoomed in, press and hold down the left mouse button and drag the cursor over the area to be highlighted. Keep dragging the mouse until you reach the bottom right of the target area and release the left mouse button. The selected are will then be zoomed into.

Service History

The Service history tool is an application designed to retrieve and display Service history records stored by AMS. Simple functionality makes the tool ideal for quick referencing of stored data, additionally import, export and printing facilities make information exchange between service and JCB service departments very easy.

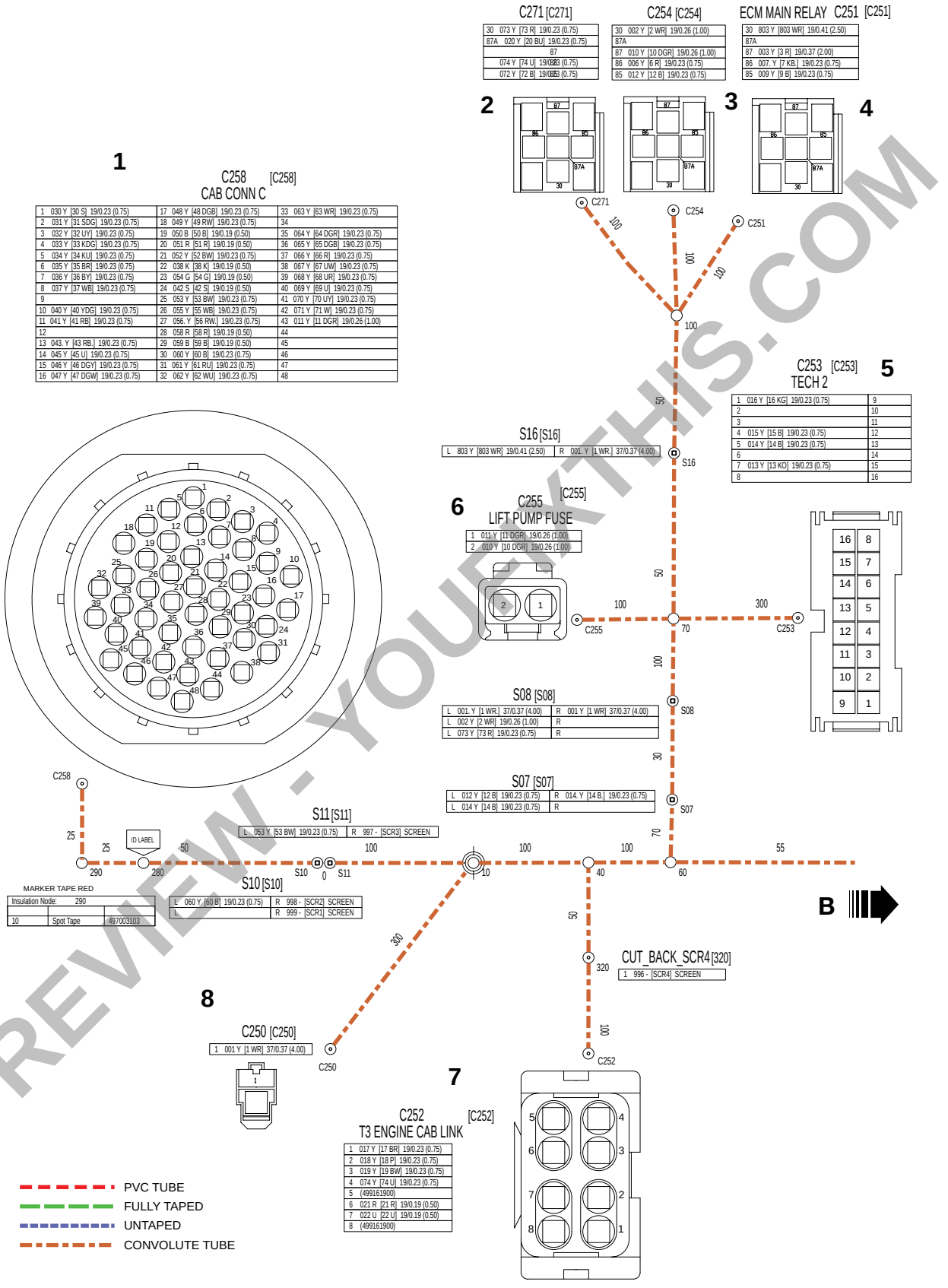
Several forms of service history events are recorded by the EMS module,

Scheduled Service Events	Where at pre-defined intervals the Service LED on the EMS display is triggered and the service indicator is acknowledged by the operator. These events are generally for must do service operations as specified in the service manual.
Unscheduled Service Events	Are those events that may develop due to changes to the specification of the machine or the repair of some system function, system or component. These unscheduled events are 'added' to the EMS list of service history events by the service engineer responsible for the service.

This application is responsible for reading, writing, printing, import, export and control of the service history records taken from any HP vehicle.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



T003850-1

Fig 47. Engine Harness `A'

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Monoboom Hammer/Aux Hydraulics

Components

⇒ *Fig 15. (E-49)* for Schematic

1 Main Control Valve

2 Solenoid

3 Valve: Change Over

4 Pilot Manifold

5 Drive Pedal

6 Valve Control

Hose Colour

BL	Blue
BR	Brown
CL	Colourless
G	Green
GR	Grey
LB	Light Blue
O	Orange
P	Pink
R	Red
V	Violet
W	White
Y	Yellow
LG	Light Green
DG	Dark Green

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Regulator

Regulator Dismantling and Assembly

the working environment must be clean and the workbench covered with a cloth or rubber sheet to prevent damage to the components.

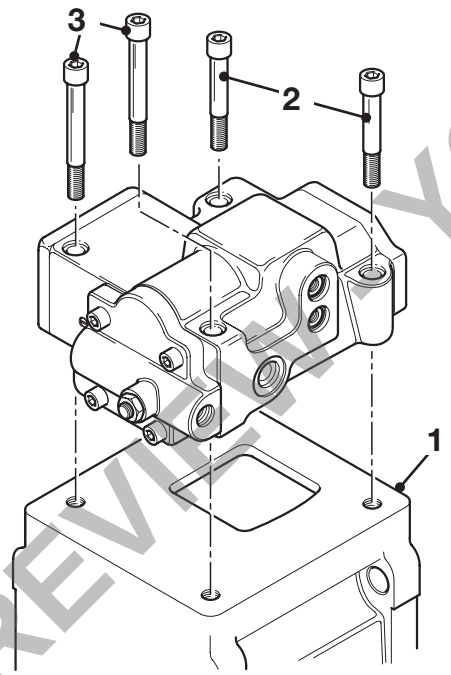
The item numbers called up in the following procedures correspond with those in the exploded view, ⇨ *Fig 22. (E-132)*.

Dismantling

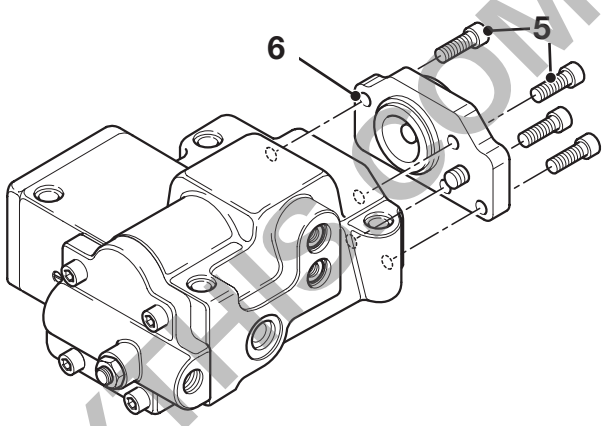
Before dismantling, remove dust, rust, etc. using clean hydraulic oil.

Retain all washers, snap rings etc. for later re-use. O-rings should be renewed.

1 If not already done, separate the regulator **1** from the pump casing by removing socket head screws **2** and **3** (2 off each). Do not lose the large O-ring **4**.

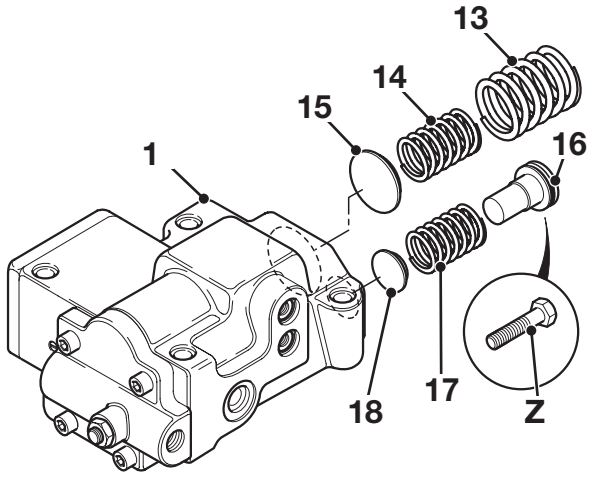


2 Remove the four socket head screws **5** and lift off cover **6** complete with adjusters **7/8**, adjusting screw **9**, two locking nuts **10**, mounting nut **11** and adjusting ring **12**. Do not interfere with the settings of any of these components as this could alter the pre-set flow settings.



3 From regulator body **1**, withdraw outer spring **13**, inner spring **14** and spring seat **15**. Also withdraw adjusting ring **16** (see Note 1), pilot spring **17** and spring seat **18**.

Note: *1 Use an M4 screw **Z** attached to the end of adjusting ring **16** to facilitate its easy removal.*



4 Remove socket head screws **19** and **20** and lift off pilot cover **21**. Take out set spring **22**.

PREVIEW ONLY YOUFIXTHIS.COM

Download full manual at youfixthis.com

5 Remove the seal **11** and nylon ring **12** from the axle **10**.

Note: *Do not reuse items **8, 9, 11** and **12** .*

6 Remove the 'O'-rings **13**, and packing rings **14** from the rotor **15**.

Note: *Do not reuse 'O'-rings and the packing rings.*

Assembly

Inspect the parts for signs of wear, pitting, scratching, discolouration etc. Polish out scratches using a fine grade oil stone.

Before assembly, thoroughly clean all parts using a suitable solvent: Do NOT use solvents on 'O'-rings, backup rings and seals.

Fit new 'O'-rings, backup rings and seals.

Lubricate all 'O'-rings, backup rings and seals, with clean hydraulic fluid before fitting.

1 Clean the rotor **15** with cleaning fluid or compressed air.

After cleaning, check to see if there are any scratches or roughness on the inner side of the rotor or grooves.

2 Check the number of packing rings and 'O'-rings. Coat with Vaseline and install in the order below.

a Set one packing ring in each groove starting from the 2nd groove from the top.

b Set the 'O'-ring in the top groove.

3 After installing the 'O'-ring, packing rings and packing, check with a mirror to see if they are installed correctly.

After checking, coat with grease then check once more for any protrusion, twisting, etc.

4 Install the seal **12** and nylon ring **11** on the axle **10** and grease adequately. Take care to prevent contamination of the grease by water or dirt.

5 Install the axle **10** to the rotor **15**.

Note: *Set the seal **12** so that it will not be cut or scratched.*

6 Install a new seal **9** to housing **7** and feed electrical cable through the axle **10**.

7 Install the nylon ring **8** and secure housing **7** using washers and bolts **6**.

Note: *Torque tighten bolts to 70Nm (51lbf ft).*

8 Install anti-rotation bracket **5** using screws **4**.

9 Install gland nut **1** and seal **2**, fit connectors **3**.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Steer Stall System Pressure

1 Connect a 0 - 400 bar (0-6000 lbf/in^2) pressure gauge to the test point **TP1**.

2 Disconnect and plug hose **B** from the steer line filter **A**.

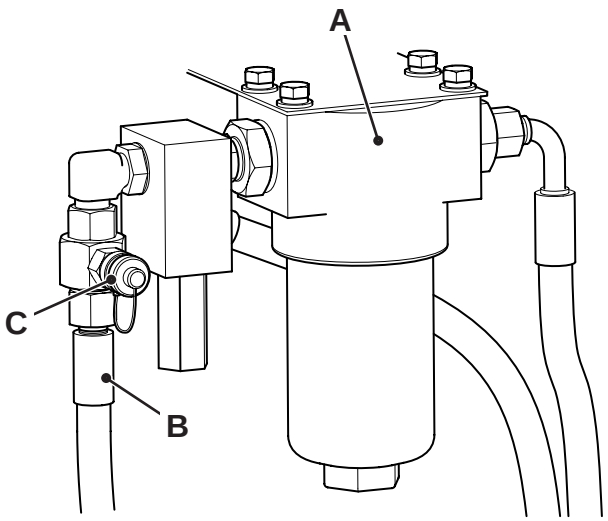


Fig 28.

3 Cap off the open port on the relief valve.

4 Start the engine, lower the gate lock lever and run the engine at minimum no-load speed in the E mode.

5 The pressure gauge reading should be compared to the technical data at the start of the section. If it is outside the limits, adjust steering circuit relif valve **C**.

6 Repeat the operation until the reading is correct.

7 With the engine running at maximum rpm in E mode, turn the steering wheel to it's limit and hold in this position. The gauge should read 185 bar +/- 10% (2683 lbf/in^2). No adjustment is possible.

8 Repeat the operation until the reading is correct.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



Fig 32.

32 Remove the retaining ring and remove the bearing from the internal gear.



Fig 33.

33 Remove the axial needle cage with both thrust washers.



Fig 34.

34 Remove the bolts securing the shim. Remove the shim.

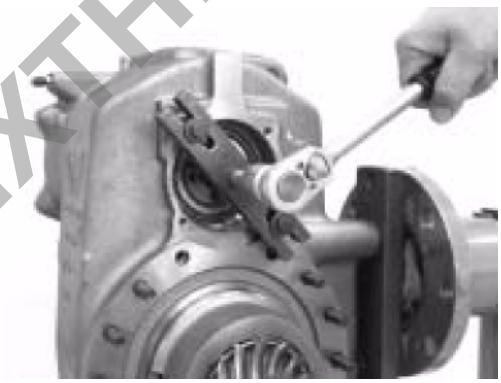


Fig 35.

35 Hold still the output flange.

36 Carefully press the planet carrier out of the roller bearing.

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 24 of 977 pages

The full manual includes:

- All 977 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

JCB JS130W, JS145W, JS160W, JS175W, 4HK, 6HK, 4JJ Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual