CONTENTS

INTRODUCTION Page

About this Handbook 3

The JCB Fastrac
Identification of Machine Components 4

Safety First - Yours and Other People's 6

Safety Check List
General Safety 7
Operating Safety 8
Maintenance Safety 9

Identifying Your Machine
Machine Identification Plate 11
Typical Vehicle Identification No. (VIN) 11
Unit Identification 11

Safety Decals 12

OPERATION

Introduction 21

Before Entering the Cab 21

Entering and Leaving the Cab 23

Doors and Windows 23

Cab Layout and Controls 24

Instrument Cluster
Warnings (Visual only) 26
Warnings (Audible/Visual) 27
Instruments 27
Programming 29
System Error Codes 37
Wheel Slip 38

Switches and Instruments 39

Heater and Air Conditioning Controls 42

Seats 43

Seat Belt 45

Before Starting the Engine 47

Starting the Engine 48

Jump-Starting the Engine 49

Preparing for Travel
Testing the Parking Brake 51
Before Travelling On Public Roads 51

Getting the Machine Moving 51

Travelling
General Precautions 52
Utilisation of Gears 53
4 Wheel Drive and Differential Lock 59
Automatic Differential Lock 59
Field speed Control 60
Anti-lock Braking System (ABS) (if fitted) 61

Four Wheel Steering
Introduction 62
Steer Mode Selection 63
Two-wheel Steer Mode (2WS) 63
Crab Steer Mode 63
Proportional Steer Mode 64
True Tracking Mode 64
Delay Mode 65
JCB Headland Management System 66

Stopping and Parking the Machine 67

Using the Machine and Site Safety 68

Electronic Linkage Control 69

Area Cut-out System (optional) 72

Rear 3 - Point Linkage
Mechanical Connections and Adjustment 73

Front 3 - Point Linkage (optional)
Mechanical Connections and Adjustment 76

External Hydraulics
Control Layout 77
Lever Locking 77
Variable Flow Spool Operation 78
Fixed Flow Spool Operation 79
Front 3-point Linkage Operation 80
Connecting Equipment 80
Priority Flow Service 81
Quick Release Couplings 82

Drawbars and Hitches
Pick-up Hitch 84
Clevis Drawbar 85

Connecting Trailer Brakes 86

Independent Power Take-Off (PTO)
Introduction 87
Fitting the Rear PTO Output Shaft 88
Attaching Equipment to Rear PTO 88
Checking the Implement Driveshaft Length 89
Rear PTO Operation 90
Attaching Equipment to Front PTO (Dual Output) 91
Attaching Equipment to Front PTO (Single Output) 92
Front PTO Operation 93
PTO Static Guards 94

Automatic Trailer Coupling 95

Operating in High Temperatures 96

Operating in Low Temperatures 97

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

WARNING

Study This Handbook Before Starting The Machine

You must understand and follow the instructions in this handbook. You must observe all relevant laws and regulations. If you are unsure about anything, ask your JCB distributor or employer. **Do not guess**, you or others could be killed or seriously injured.

INT-1-1-1

In this handbook and on the machine there are safety notices. Each notice starts with a signal word. The meanings of the signal words 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

CAB LAYOUT AND CONTROLS (continued)

7 Parking Brake Lever

Use this lever to engage the parking brake before leaving the machine. With the parking brake engaged, an indicator on the instrument panel will light (see ***Stopping and Parking the machine***).

To release, see ***Getting the Machine Moving***.

⚠ DANGER

Leaving the machine in gear will not prevent it running away. Do not leave the driving seat under any circumstances unless the parking brake is on.
13-2-1-10

⚠ CAUTION

The parking brake must not be used to slow the machine from travelling speed, except in an emergency, otherwise the efficiency of the brake will be reduced. Whenever the parking brake has been used in an emergency, always renew both brake pads.
4-2-1-1/2

8 Speed Gearbox Selector Lever

To select a gear, depress the clutch pedal and move the lever as shown on the shift pattern decal. In neutral the lever will spring to the 3-4 position on the gate.

Autoshift control, manual or automatic, is achieved through the buttons on top of the lever.

(For utilisation, see ***Travelling***)

9 Autoshift Controls

Duplicates the controls on speed gearbox selector lever **8**.

10 JCB Selectronic Range and Reverse Selector

(For utilisation, see ***Travelling***).

11 Four Wheel Drive and Differential Lock Selector

This control has three positions:

A Two wheel drive (2WD) without differential lock.

B Four wheel drive (4WD) without differential lock.

C Four wheel drive (4WD) with differential lock.

(For utilisation, see ***Travelling***)

12 R.H. Column Mounted Switch (see ***Switches and Instruments***).

13 Instrument Cluster

14 Starter Switch (see ***Starting the Engine*** and ***Stopping and Parking the Machine***).

15 Auxiliary Electric Power Socket

16 Area Cut-out Signal Socket
Input for area cut-out signal (optional) from rear attachment.

17 Rear Power Take-off (PTO)

18 PTO Speed Selector (see ***Independent Power Take-off***)

19 Cigar Lighter

Push knob until it latches. **Do not hold the knob in the depressed position.** The knob will spring back to its stowed position when ready to use. Remove the lighter by pulling the knob then apply the hot end to the cigar/cigarette.

Note: *The lighter socket must not be used for any accessory that requires more the 10 amps.*

20 Ashtray

21 Electronic Linkage

22 Electronic Linkage Lift/Lower Switch

23 External Hydraulics

24 Flow Controls (see ***External Hydraulics***)

25 Wheel Slip Enable Switch

26 Auxiliary Electric Power Supplies

Note: *Refer to the electrical schematic on the supply box switch decal for details of the power supplies described below.*

The twin outlet power supply box shown is standard and provides 25 amp fused battery supplies from the pair of terminal posts and the appropriate pair of pins in the 3-way connector. An ignition controlled 5 amp fused supply is provided from the 3rd pin and the common earth.

An optional triple outlet box (not shown) is also available. In addition to the supplies provided by the twin unit a further 25 amp fused battery supply and a relay switched ignition controlled 25 amp fused supply are available

The following controls are optional according to machine specification

27 Front Power Take-off (PTO)

28 Pick-up Hitch or Automatic Trailer Coupling

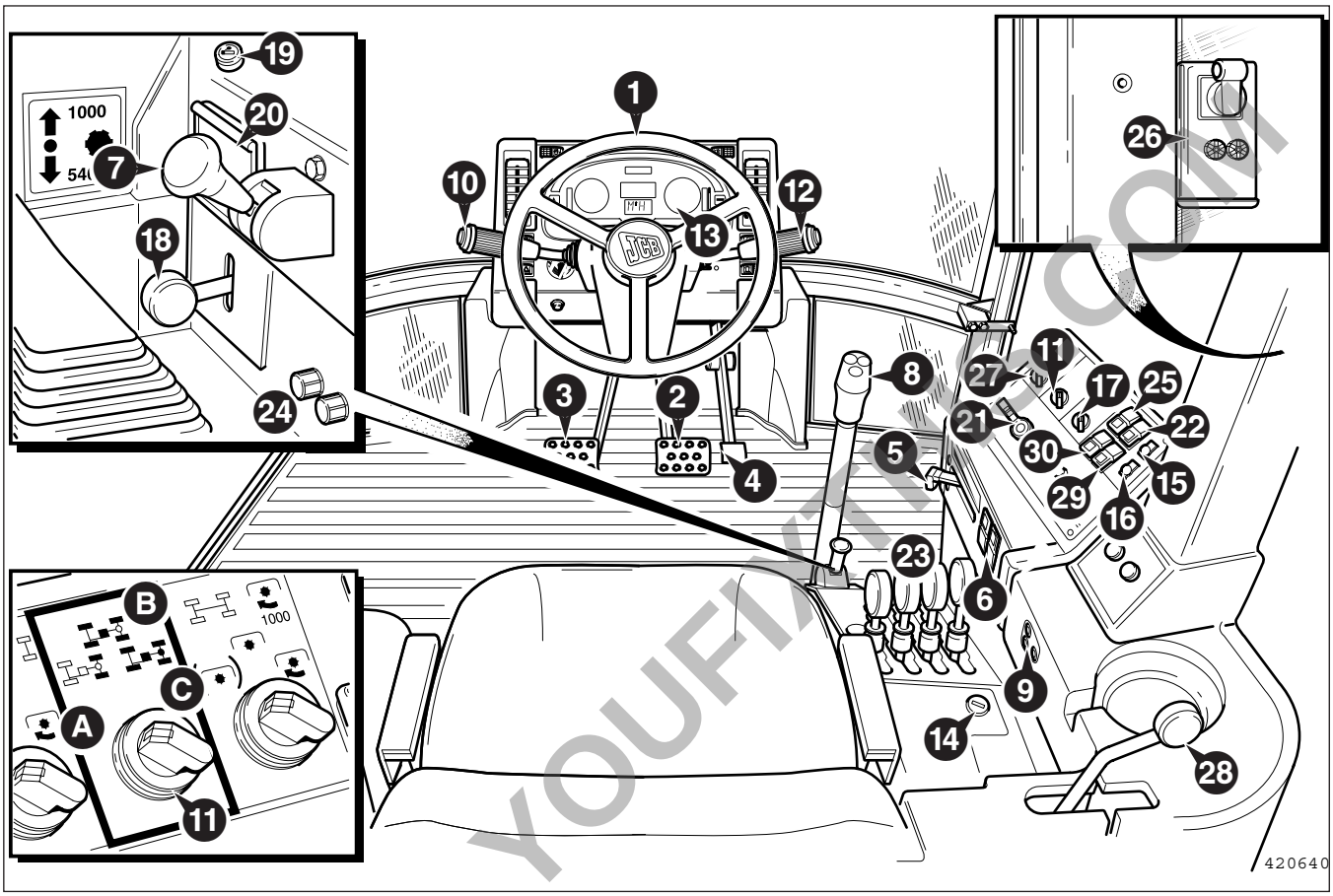
29 Area Cut-out

30 Automatic Differential Lock

See ***Contents Page***

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

CAB LAYOUT AND CONTROLS



Controls

1 Steering Wheel

2 Brake Pedal

Push down on the brake pedal to slow or stop the machine. The stop lights should operate when the brake pedal is applied. Do not operate the machine unless both stop lights work correctly.

3 Clutch Pedal

Depress the pedal to disengage the clutch during gear selection. Release pedal slowly. The clutch pedal must be depressed before the engine can be started.

Note: Do not rest your foot on either the clutch or brake pedal unless you are using these controls. Otherwise increased component wear may result. A buzzer will sound if you keep your foot on the clutch pedal for too long.

4 Accelerator Pedal

Gently depress the pedal to increase engine speed. Release to reduce the speed.

5 Hand Throttle Lever

Push lever away from you to increase engine speed or pull towards you to decrease engine speed. The position of the handle will determine the engine speed unless the accelerator pedal is depressed to give a greater speed than the setting of the hand throttle.

6 Field Speed Controls

(For utilisation, see ***Travelling***)

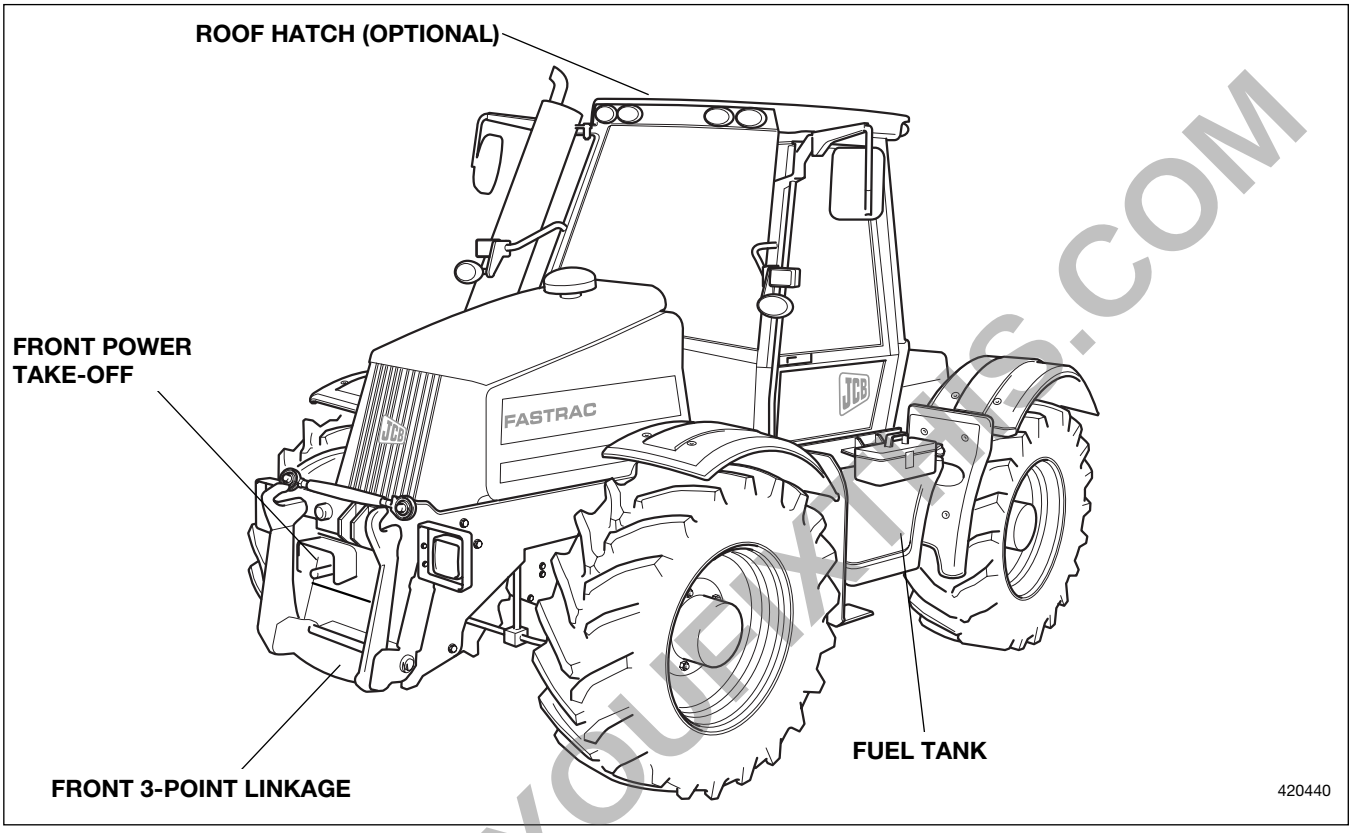
⚠ WARNING

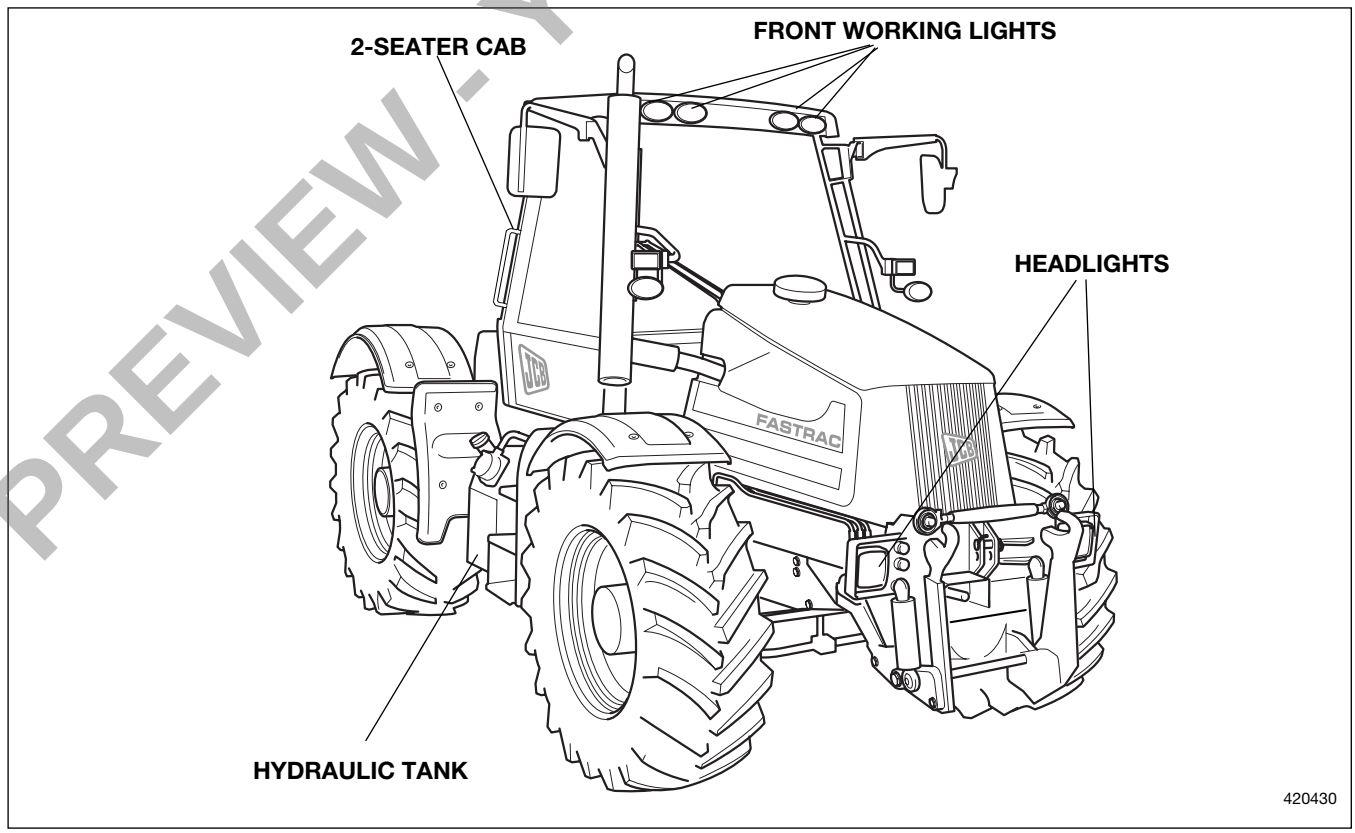
When driving the machine on the road, use the accelerator pedal and not the hand throttle or Field Speed Control to control the engine speed. Always set the hand throttle to 'idle' and disable the Field Speed Control before road use.

0096

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

THE JCB FASTRAC





PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SERVICE SCHEDULES

Apart from the daily jobs, the schedules are based on machine running hours. Consult the hourmeter section of the Engine/PTO Data Display (see item 28, ***Instrument Cluster*** to establish when a service is due). Do not use a machine which is due for a service. Make sure any defects found during the regular maintenance checks are rectified immediately.

⚠ 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 firm level ground.

To prevent anyone starting the engine, remove the starter key. Disconnect the battery and chock the wheels when you are working beneath the machine.

If you do not take these precautions you could be killed or injured.

9-3-1-1

Every 10 Operating Hours or Daily whichever occurs first

Clean

1 Machine generally.

Drain

2 Hydraulic coupling drain reservoir (if fitted).
3 Fuel filter.
4 Trailer air tank.

Check (Engine Stopped)

5 Generally for damage.
6 Engine oil level and condition.
7 Check radiator and coolers for blockage and clean if required.
8 Engine coolant level and condition.
9 Fuel system for leaks and contamination.
10 Air cleaner and air inlet hose condition and security.
11 Fan belt condition.
12 Crankcase Breather Condition.
13 Hydraulic fluid level.
14 Hydraulic system for leaks.
15 Machine generally for oil leaks (axles, engine, transmission).
16 Gearbox oil level.
17 Tightness of wheel nuts.
18 Windscreen washer level.
19 Tyre pressures and condition.
20 Security of front weights (if fitted).
21 Seat belt condition and security .
22 Brake fluid levels.

Check (Engine Running)

23 Instrument readings and warning lights.
24 Operation of all electrical equipment.
25 Exhaust for excessive smoke.
26 Operation of clutch and footbrakes.
27 Operation of steering.
28 Operation of transmission.

Every 10 Operating Hours or Daily whichever occurs first (continued)

29 Operation of 3-point linkage
30 Operation of front linkage (optional equipment).
31 Parking brake operation.
32 Throttle and stop controls.

Every 50 Operating Hours or Weekly whichever occurs first

Do the Daily jobs plus:

Clean

1 Air filter dust valve.

Check (Engine Stopped)

2 Air conditioning compressor drive belt.
3 Front PTO transfer gearbox oil level (optional equipment).
4 Brake pad condition.
5 Cab air filter (clean if required).
6 Propshaft security.

Grease

7 Rear PTO drive shaft splines and universal joints.
8 Rear PTO drive shaft bearings.
9 Rear axle propshaft.
10 Front axle propshaft.
11 Front PTO drive shaft (if fitted).
12 Rear anti-roll bar joints.
13 Rear hydraulic lift cross-shaft.
14 Rear hydraulic lift ram pivots.
15 Front agricultural 3 point linkage cross shaft (if fitted).
16 Front agricultural 3 point linkage lift ram pivots (if fitted).
17 Steering swivels.
18 Steering column universal joints.
19 Suspension cylinder pivots.
20 3-point linkage lift rods and top link.
21 Automatic trailer coupling (if fitted).

Note: *It is essential that drive shaft and propshaft joints are lubricated as specified.*

Every 250 Operating Hours or 3 Monthly whichever occurs first

Do the Daily and 50 Hour jobs plus:

Change

1 Engine oil and filter.†
2 Cab air filter (heavy duty carbon type only).

† Applies only if recommended oil is not available (see ***Fluids, Lubricants, Capacities and Specifications***). As an alternative to the recommended oil the following (or similar) should be used:

a -10°C to +50°C (14°F to 122°F) JCB Super Multigrade 15W/40 (SAE 15W/40, API CF4/SG).
b -15°C to +40°C (5°F to 104°F) JCB Super Multigrade 10W/30 (SAE 10W/30, API CF4/SG).

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

INTRODUCTION

The aim of this part of the handbook is to guide the operator step-by-step through the task of learning how to operate the machine efficiently and safely. Read the OPERATION section through from beginning to end.

Pay particular attention to all safety notices. They are there to warn you of possible danger. Do not just read them; think about what they mean. Understand the dangers and how to avoid them.

Before starting the machine, sit in the driver's seat and familiarise yourself with the layout of the cab. Use your handbook to identify each control lever, switch, gauge, button and pedal. Do not guess. If there is anything you do not understand, ask your JCB Distributor. He will be pleased to advise you.

When you have learned where the driving controls are and what they do, practise using them. Practise driving the machine in a safe open space, clear of other people and any obstructions. Get to know the 'feel' of the machine and its controls. Attach implements only when you have learned to drive the machine confidently and safely. When travelling on the road for the first time, do not attach implements. First get to know the 'high speed feel' of the steering and brakes.

If your Fastrac is equipped with the ABS braking system, take time to become familiar with the feel of the machine before commencing work, even if you have had experience of ABS on a different vehicle. Refer to **ABS Braking System (if fitted)**.

The operator must always be aware of events happening outside the cab as well as inside the cab. Safety must always be the most important feature when operating the JCB.

Finally, do not rush the job of learning, make sure you fully understand everything in the OPERATION section. Take your time and work efficiently and safely.

Remember

BE CAREFUL
BE ALERT
BE SAFE

BEFORE ENTERING THE CAB

The following checks should be made each time you return to the machine after leaving it for any period of time. We advise you also to stop the machine occasionally during long work sessions and do the checks again.

All these checks concern the serviceability of the machine. Some concern your safety. Get your service engineer to check and correct any defects.

⚠ WARNING

Walking or working under raised equipment can be hazardous. You could be crushed in the event of a hydraulic failure.

Lower all equipment before doing these checks. If you are new to this machine, get an experienced operator to lower them for you.

If there is nobody to help you, study this handbook until you have learned how to lower equipment. Also make sure that the parking brake is engaged before doing these checks.

13-2-1-1/1

1 Check the cab structure

Inspect the ROPS structure for damage. Make sure all its securing bolts are fitted. Get your JCB distributor to carry out a regular safety inspection and check that securing bolts are correctly tightened.

2 Check for Cleanliness

a Clean the windows, light lenses and rear view mirrors.

b Remove dirt and debris, especially from around the hydraulic linkages, steering pivots, brake discs and radiator.

c Make sure the cab steps and handholds are clean and dry.

d Clean all safety decals. Renew any that are missing or cannot be read.

3 Check for Damage

a Inspect the machine generally for signs of damaged or missing parts.

b Make sure that all pivot pins on the front and rear linkage are secured correctly in place.

c Inspect the windows for cracks and damage. Glass splinters could blind you.

d Check for oil, fuel and coolant leakages underneath the machine.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

REAR 3-POINT LINKAGE
MECHANICAL CONNECTIONS & ADJUSTMENT

Linkage Type

The three-point linkage supplied is either Category 2 or Category 3 with hook type link ends.

Implement Attachment

Plain balls **C** and those with guide cones **D** are available to suit the variety of implement hitch pins.

The hooks **A** and **B** on the lower links engage from underneath onto balls **C** or **D** which have previously been fitted to the implement hitch pins.

Note: *It may be found easier to lock open the latches **E** as at **X** whilst hitching takes place. Always ensure that the latches are snapped shut as at **Y** before using the implement.*

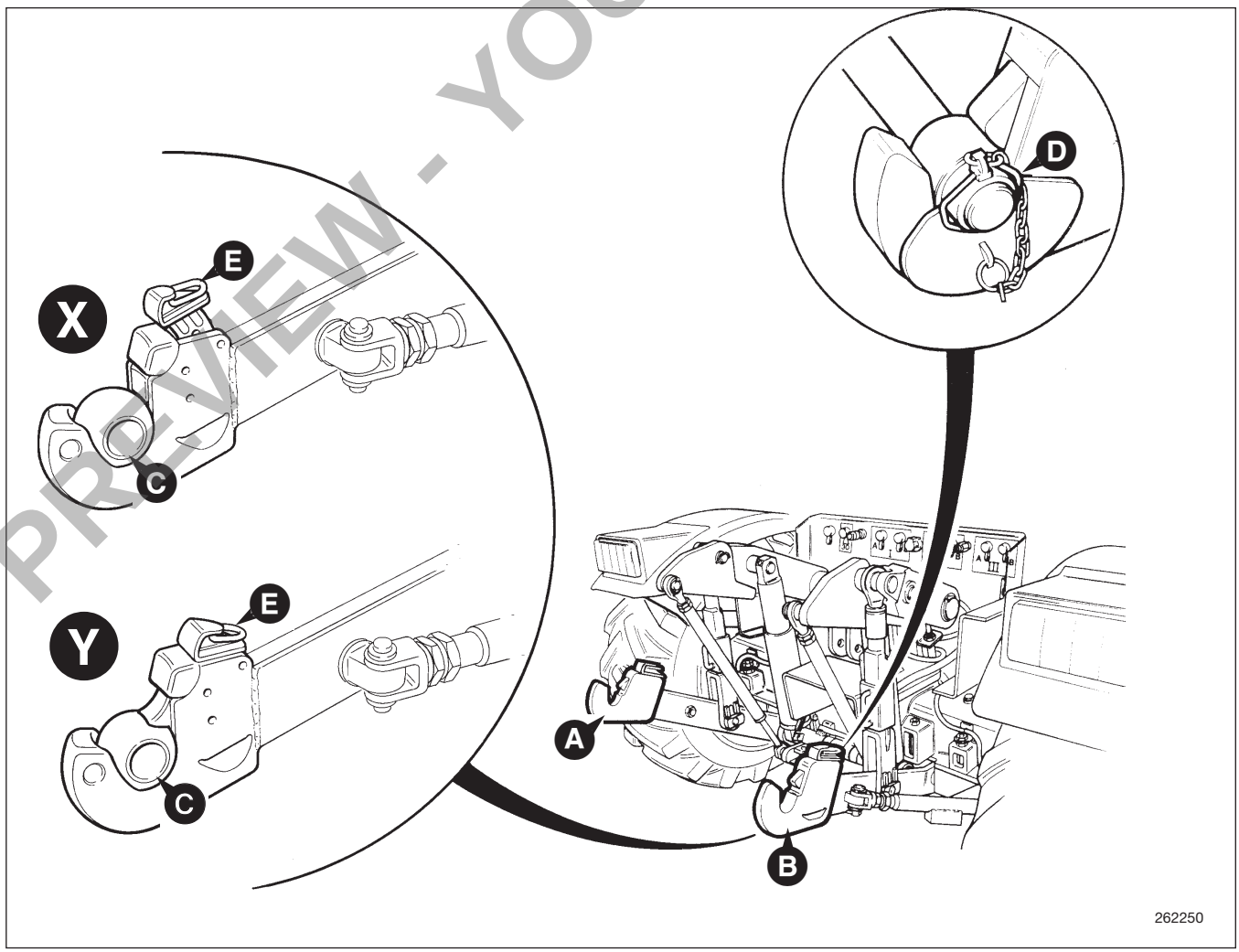
To enable unlatching from the cab, cables could be fitted to the latches but these are not supplied with the machine.

Connect the top link, if required, once the lower links have been secured.

⚠ WARNING

When the vehicle is approaching a trailer or equipment to be hitched, make sure that no persons are present between vehicle and trailer or equipment. When mounting equipment at the rear of the vehicle, you must ensure that proper steering control is maintained. The machine must never be loaded such that less than 20% of the vehicle weight is carried on the front axle.

13-1-1-13/1



262250

1521-1

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

OPERATION (continued)

Moving a Disabled Machine
General 98
Limp Home Mode 98
Preparation for Towing 99

Transporting the Machine 101

MAINTENANCE

Service Requirements 111

Service Schedules 112

Lubricants - Health and Safety 115

Fluids, Lubricants, Capacities and Specifications .. 116

Cleaning the Machine 117

Checking for Damage 117

Opening and Closing the Bonnet 117

Checking Seat Belt Condition and Security 117

Greasing 118

Brakes
Checking the Foot Brake Fluid Level 124
Checking the Trailer Air Tank 125
Checking and Renewing the Footbrake Pads 126
Checking the Parking Brake Pads 127

Hydraulic System
Checking the Fluid Level 128

Engine Air Filter
Changing the Elements 129
Cleaning the Optional Pre-cleaner 130

Engine Oil and Filter
Checking the Oil Level 130
Changing the Oil and Filter 131

Engine Cooling System
Checking the Coolant Level 132
Coolant Mixtures 132
Changing the Coolant 133
Cleaning the Radiator 134
Checking the Fan Belt 135

Fuel System
Types of Fuel 136
Filling the Tank 136
Fuel Standards 136
Low Temperature Fuels 136
Draining the Fuel Filter 137
Bleeding the Fuel System 138

Transmission
Checking the Gearbox Oil Level 139
Changing the Transmission Oil Filter 139

Front PTO Transfer Gearbox (Optional)
Checking the Oil Level 140

Front Axle
Checking the Differential Oil Level 141
Checking the Hub Oil Levels 141

Rear Axle - 2WS
Checking the Oil Level 142

Rear Axle - 4WS
Checking the Differential Oil Level 143
Checking the Hub Oil Levels 143

Automatic Trailer Coupling (if fitted) 144

Tyres and Wheels
General 144
Pressures, Speeds and Loads 145
Tyre Inflation 146
Checking Wheel Nut Torques 146
Adjustable Track Width 146
Lock Stops 146
Checking and Adjusting the Wheel Alignment 147
Fender Adjustment 148

Electrical System
Fuses 149

Battery
Warning Symbols 151
First Aid - Electrolyte 151
Checking the Electrolyte Level 152

Headlights
Checking the Beam Alignment 153

Air Conditioning
Cleaning the Filter 154
Adjusting the Compressor Belt 154

Windscreen Washer
Checking Fluid Level 155

Obtaining Replacement Parts 155

SPECIFICATION

Static Dimensions 161

Weights and Loads 162

Maximum Travel Speeds in All Gear Ratios 163

Tyre Sizes and Pressures - See *MAINTENANCE* section

PREVIEW - YOUFIXTHIS.COM

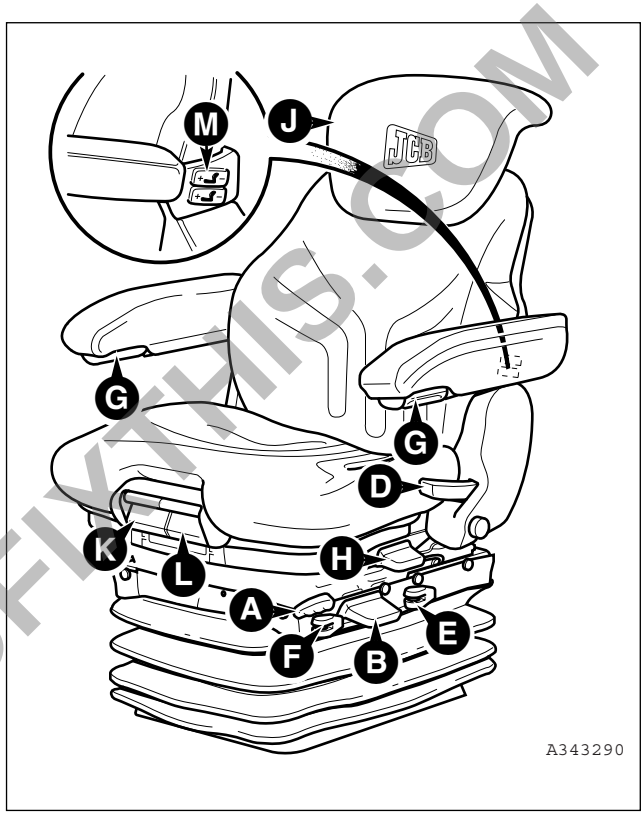
Download full manual at youfixthis.com

SEATS
(continued)

Suspension Seat (Optional)

The following features are identical to those on the standard suspension seat:

A Fore/Aft Adjustment
D Backrest Angle Adjustment
E Damper Adjustment
F Fore/Aft Isolator
G Armrest Adjustment
H Swivel Adjustment
J Backrest Extension Height Adjustment (original equipment on the optional seat)



The following features are unique to the optional seat.

Height/Auto Weight Adjustment

1 Sit on the seat.

2 Raise lever **B** and let it go to set the automatic weight adjustment.

3 Lever **B** now provides the means to adjust the seat height. Lift the lever to raise the seat, press down to lower it.

Seat Cushion Depth Adjustment

1 Raise lever **K** and slide the cushion backwards or forwards to adjust the distance from the base of the backrest to the front of the seat.

2 Release the lever to lock the cushion in the desired position.

Seat Cushion Angle Adjustment

1 Raise lever **L** and adjust the cushion angle by applying or releasing pressure on the spring mechanism.

2 Release the lever to lock the cushion at the desired angle.

Lumbar Support Adjustment

Operate the two switches **M** as required until the lower part of your back is comfortably supported.

Suspension Locknut

To eliminate seat movements set lever **E** (see ***Damper Adjustment***) to its stiffest position and swivel lever **F** (see ***Fore/Aft Isolator***) rearwards.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

EXTERNAL HYDRAULICS (continued)

Front 3 point Linkage Operation

Push spool **4** lever forward towards position **A** to lower. Pull lever back towards position **B** to raise. The hydraulic kick-out detent is each direction will hold the lever in position until the linkage reaches the end of its travel. The lever will then be returned automatically to neutral.

The lever can be pushed fully forward to the second detent position **Z** (float) to allow an implement to follow ground contours. The lever must be pulled back manually out of float.

Use float for all ground following implements; for example drum mowers, furrow presses etc.

Use normal lower mode for fully mounted, non ground-engaging equipment.

Note: *The linkage lowering speed can be governed by turning knob **C** on the flow regulator. Turn the knob clockwise to reduce the speed or anti-clockwise to increase the speed.*

⚠ WARNING

Make sure that no-one operates the controls in the cab when you are working on the linkage or the flow regulator. If the spool 4 lever is pushed forward the linkage will drop and could cause injury, even if the engine is not running.

This service is fitted with a zero leak feature which prevents an implement from creeping down when not in use.

When no implement is fitted on the front linkage, make sure that the arms are raised to the travelling position (see ***Front 3-point Linkage, Mechanical Connections and Adjustment***).

Connecting Equipment

Take the following precautions when connecting or disconnecting hydraulic hoses to implements and read ***Quick Release Couplings***, this Section.

1 Ensure that the implement is lowered to the ground or safely supported.

2 Ensure that the implement does not contain unsuitable or contaminated hydraulic oil which could cause damage to the hydraulics of the JCB Fastrac.

3 Ensure that the hoses are in good condition and that connections are clean.

4 After connecting hoses, operate the implement a few times then check the hydraulic oil level.

⚠ WARNING

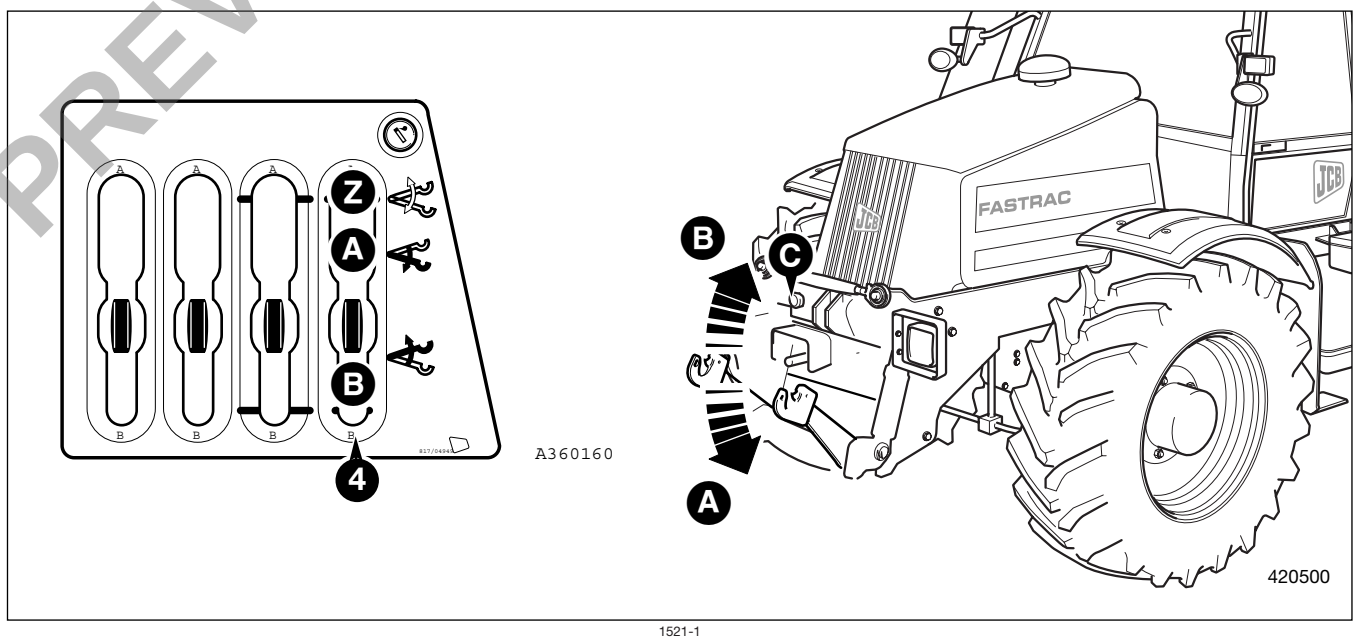
Hydraulic fluid at system pressure can injure you. Before disconnecting or connecting hydraulic hoses, stop the engine and operate the controls to release pressure trapped in the hoses. Make sure the engine cannot be started while the hoses are open.

INT-3-1-11/1

⚠ WARNING

Fine jets of hydraulic fluid at high pressure can penetrate the skin. Do not use your fingers to check for hydraulic fluid leaks. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic fluid. If hydraulic fluid penetrates your skin, get medical help immediately.

INT-3-1-10/1



1521-1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

BRAKES

Checking the Foot Brake Fluid Level

⚠ WARNING

If the brake fluid warning light comes on, check the brake fluid level immediately.

13-3-1-2/1

⚠ WARNING

Faulty brakes can kill. If you have to top up the brake reservoir frequently, get the brake system checked by your JCB distributor. Do not use the machine until the fault has been put right.

2-3-2-5/1

⚠ WARNING

Using incorrect brake fluid could damage the system. See the Fluids, Capacities and Lubricants chart in this manual for the correct fluid. The fluid can harm your skin. Wear rubber gloves. Cover cuts and grazes.

2-3-2-6/1

1 Check the Fluid Level in the Reservoirs.

Pull the step unit **F** towards you and raise the step unit to expose the fluid reservoirs. The step unit will be supported by the automatic stay

The fluid level should be between the two lines **A** and **B** moulded into the side of each reservoir. Machines with ABS have three reservoirs, other machines have two. If necessary, add fluid as in **Step 2.**

Note: *If the level has fallen below the lower mark, the system must be checked by your JCB distributor.*

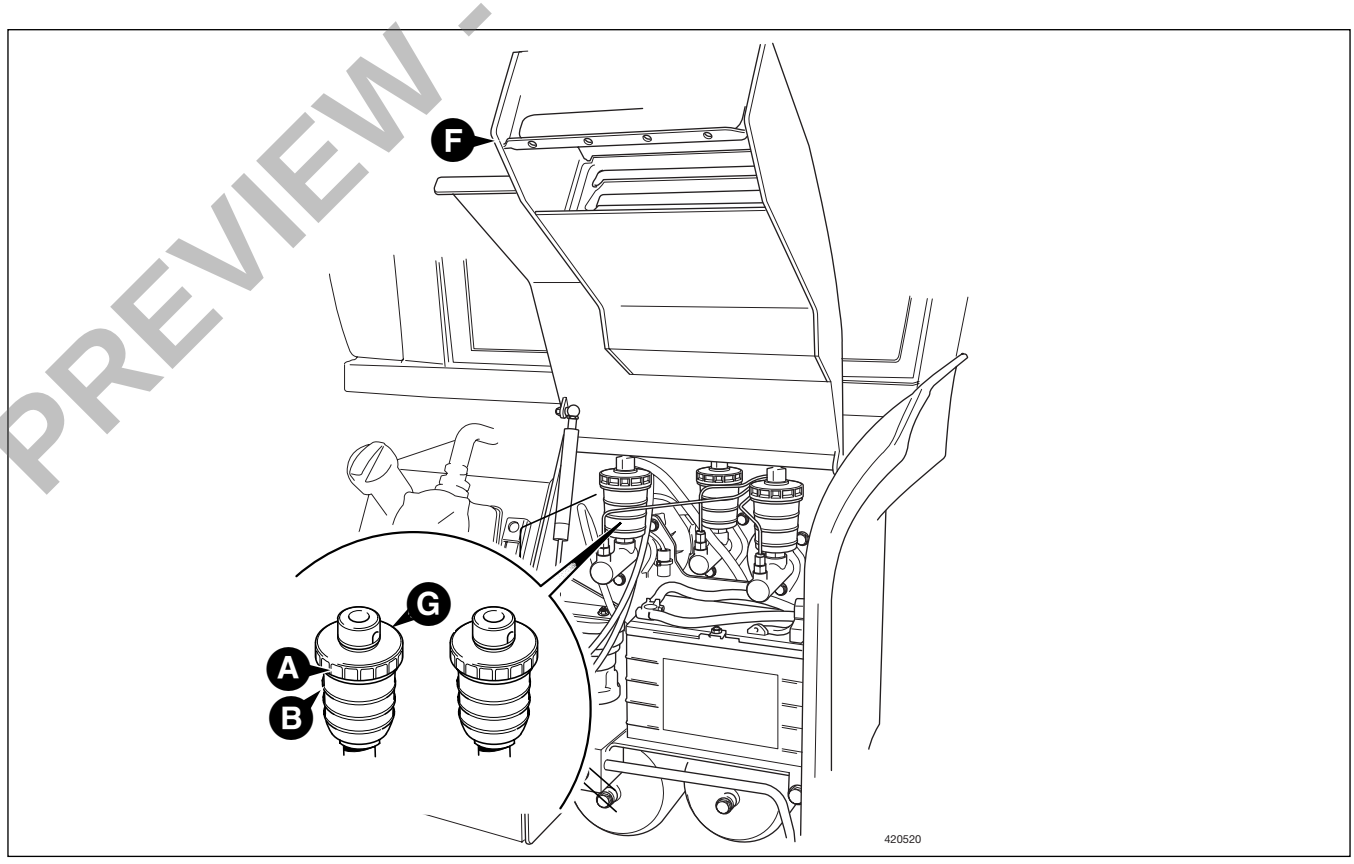
2 Add the Specified Brake Fluid

⚠ CAUTION

Do not use ordinary hydraulic fluid in the brake system.

13-3-2-6

Clean the area around each filler cap **G**. Remove the cap and carefully pour in the recommended fluid until it reaches the correct level. Avoid spilling it. Wipe up any spillage. Do not allow dirt to enter the reservoir. Fit the cap securely.



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 152 pages

The full manual includes:

- All 152 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

JCB Fastrac 2140 Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual