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AIR CONDITIONING & HEATER CONTROLS

Air Conditioning

To obtain air conditioning at face level, move switch **B** to the right and open vents **A.** Air will also be directed down onto the windscreen via slots below the vents. This air flow will increase if vents **A** are closed.

To control the temperature from ambient downwards, turn knob **C** clockwise to decrease the temperature, or anti-clockwise to increase. Select a suitable fan speed by turning knob **D.**

Note: *To keep the air conditioning system in good condition during the winter months, it is advisable periodically to switch on the system for a short time.*

Heating

To admit heated air through vent **E** and demisting slots **F,** move switch **B** to the left and select the required temperature using heat control **G.** Select a suitable fan speed by turning knob **H.**

Note: *With the heater on, cool air will still flow through vents **A** and down onto the screen but the fan will run at its slowest speed regardless of the setting of knob **D**.*

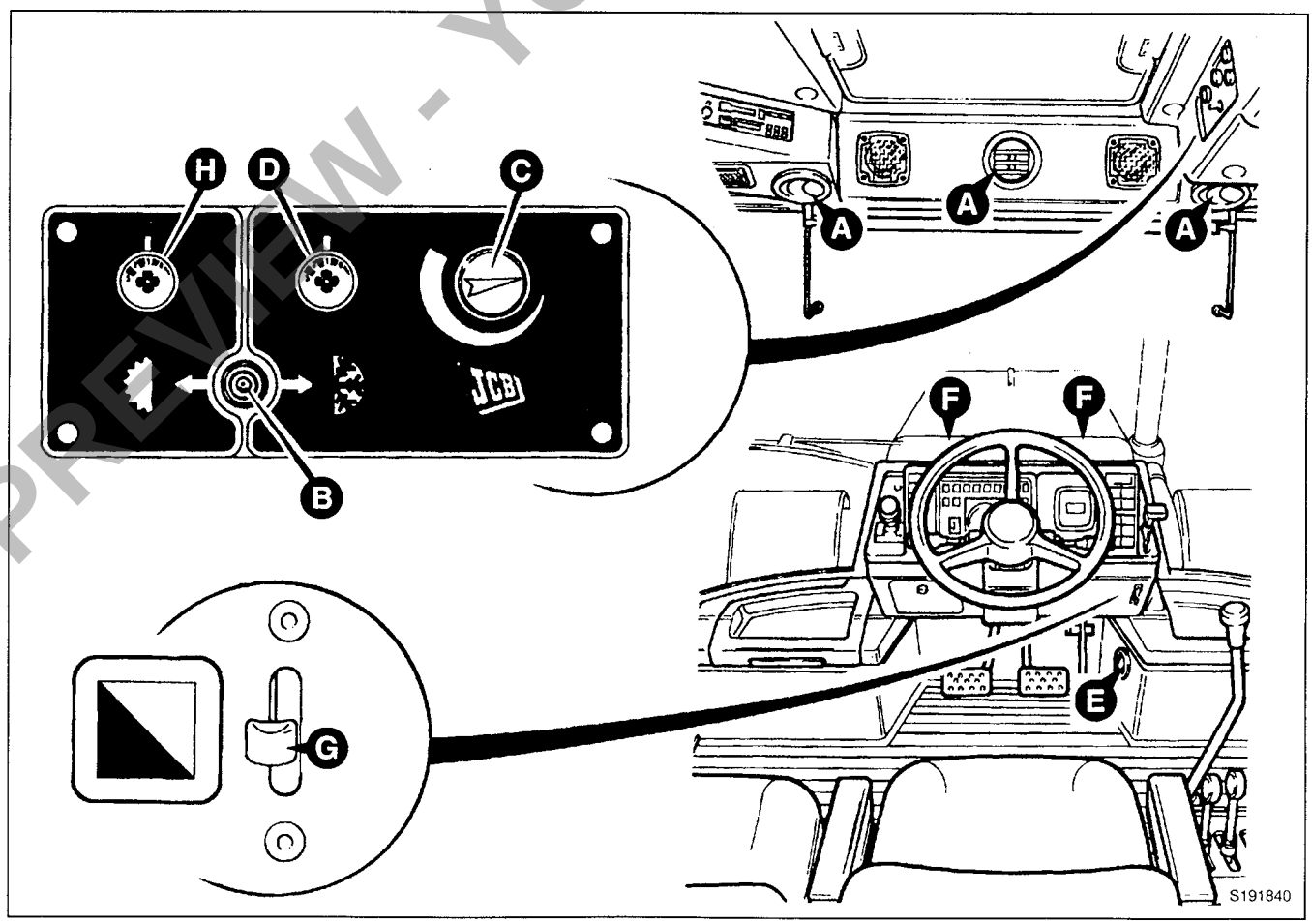
Defrosting

To provide maximum defrosting of the windows, move switch **B** to the left, select fan speed 3 on knob **H**, select maximum temperature on control **G** (fully up) and close vent **E.**

⚠ WARNING

The air conditioning system is a closed loop system and contains pressurised refrigerant. No part of the system must be disconnected except by a qualified refrigeration engineer. You can be severely frostbitten or injured by escaping refrigerant.

4-3-4-1/1



1331-4

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BEFORE STARTING THE ENGINE

Note: *Read* ***Operating in Low Temperatures*** *or* ***Operating in High Temperatures*** *if you will be using the machine in very cold or very hot climates.*

1 Engage the Parking brake

The parking brake should have been engaged when the machine was last parked. But if it is not already engaged, engage it now.

2 Do a Pre-start Inspection

Note: *If the engine has not been run for a long period (e.g. 3 months, it may be necessary to bleed the fuel system.*

For your own safety (and others) and for a maximum service life of your machine, do a pre-start inspection before starting the engine.

a If you have not already done it, do a walkround inspection of the outside of the machine. See **Before entering the Cab**. Also do the daily checks as detailed in the Service Schedules.

b Remove dirt and rubbish from the cab interior, especially around the pedals and control levers.

⚠ WARNING

Keep the machine controls clean and dry. Your hands and feet could slide off slippery controls. If that happens you may lose control of the machine.
7-2-2-8

c Remove oil, grease and mud from the pedals, control levers and the steering wheel.

d Make sure that your hands and shoes are clean and dry.

⚠ WARNING

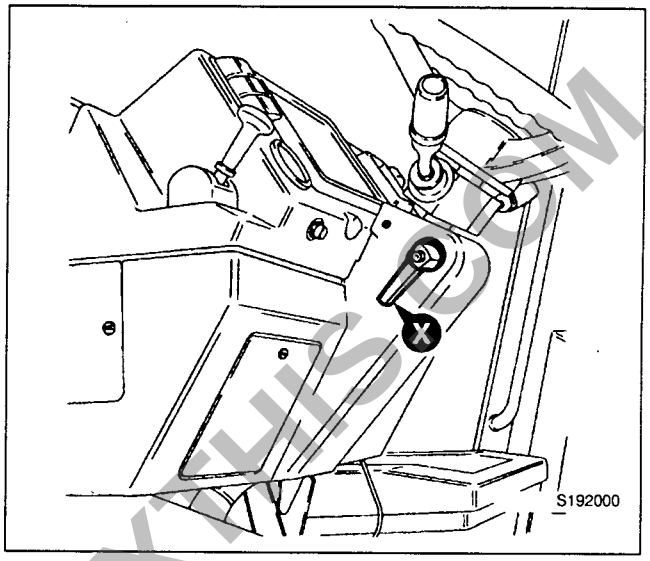
Loose articles can fall and strike you or roll on the floor. You could be knocked unconscious, or the controls could get jammed. If that happens you will lose control of the machine.
2-2-3-7/1

e Remove or secure all loose articles in the cab - such as lunch boxes, tools etc.

f Make sure that power take-off guards are in position and that the bonnet is closed firmly.

g Check round the cab for loose or missing bolts, screws etc. Renew or tighten where necessary.

h Check that the following are in working order :- Lights, Warning Lights, Rotating Beacon, Horn, Indicator Lights, All Switches, Direction Indicators, Hazard Warning Lights, Windscreen Washers and Wipers.



3 Sit in the Driving Seat and adjust the Seat and the Steering Column

⚠ WARNING

The ROPS cab is designed to give you protection in an accident. If you do not wear your seat belt you could be thrown about inside the cab, or thrown out of the machine and crushed. You must wear a seat belt when using the machine. Fasten the seat belt before starting the engine.
2-2-1-9

Slacken knob **X** and adjust the rake of the column forwards or backwards. Tighten the knob securely when the wheel is in the most comfortable position.

⚠ CAUTION

Make sure the steering column is fully clamped before driving the machine.
5-2-1-3

4 Set the Rear View Mirror(s)

Set the rear view mirror(s) to give you a good view close behind the machine when you are correctly seated.

5 Make sure that other people are clear of machine and equipment

6 Ensure that both PTO switches (when fitted) are in the brake position and that the PTO shields are in place.

The engine will not start unless the clutch pedal is depressed and the PTO switches are in the brake position.

7 Put the Speed Gearbox Lever in Neutral

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DRAWBARS AND HITCHES

Pick-up Hitch (PUH)

This is used for towing heavy trailers which need frequent attaching and detaching.

Maximum Vertical Load: 3000kg (6600 lb)

Lowering

1 Start the engine.

2 Activate the electronic linkage control panel by moving the main control lever to lift and then lower (See ***Electronic Linkage Control***). Use the lift button to fully raise the linkage which will unlatch the hitch **A**.

3 Move the hitch release lever to unlatched position **B** and whilst holding the lever, operate the lower button to lower the hitch to the ground. Return lever to position **C**.

Lifting

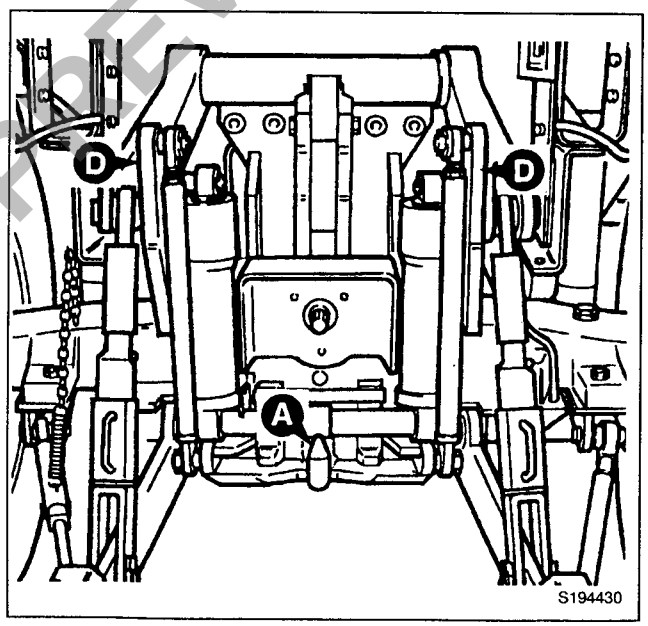
1 Reverse up to the trailer and align the hook with the trailer drawbar.

⚠ WARNING

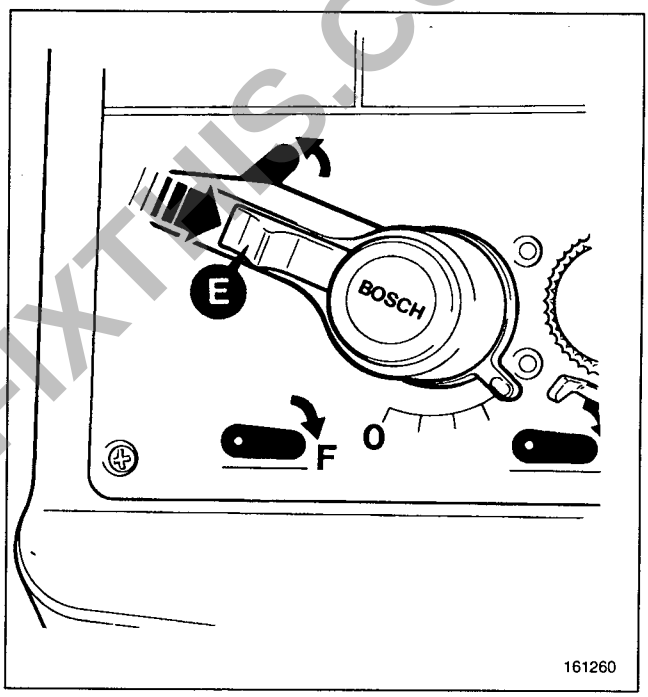
When the vehicle is approaching a trailer or equipment to be hitched, make sure that no persons are present between vehicle and trailer or equipment. When mounting equipment at the rear of the vehicle, you must ensure that proper steering control is maintained. The reduction of front axle loading must not exceed 80%.

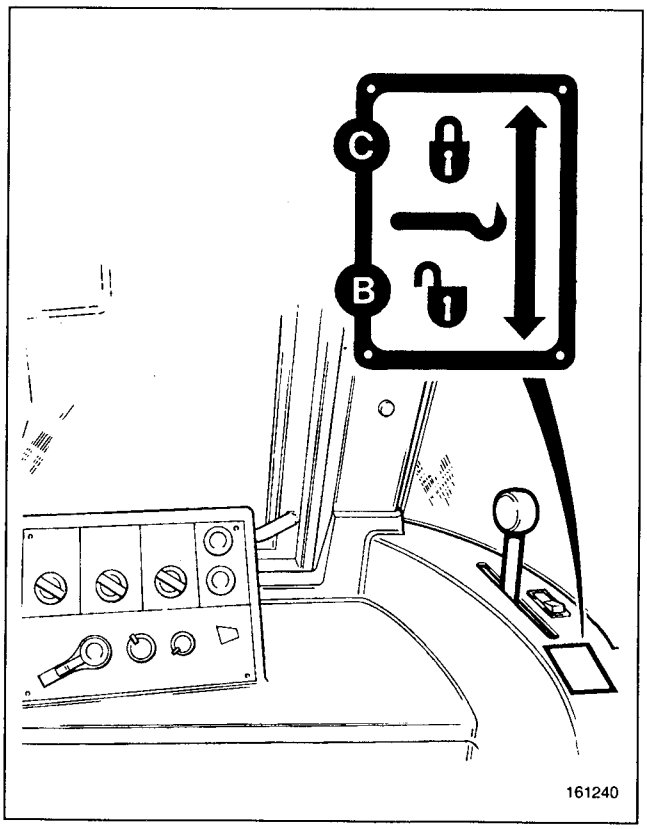
13-1-1-13

2 Press the lift button and hold it until the linkage is fully raised and the hitch is heard to latch.



***Note**: Avoid lowering the link arms **D** too far otherwise they may foul on the trailer drawbar. It is advisable to lock the arms at a suitable height using the transport lock **E** particularly if the machine is going to be used for a long time without detachment.*





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REAR 3-POINT LINKAGE
MECHANICAL CONNECTIONS & ADJUSTMENT
(continued)

Lift Rods

Both lift rods **H** and **J** are adjustable for length.

To adjust the rods, lift the centre collar **K** and rotate. Ensure that the collar drops down after adjustment so that it can no longer rotate. The collar should be left so that the handles are positioned in a fore and aft direction.

The lower end of each rod is connected to the lower link by a pin and locating plate **L**.

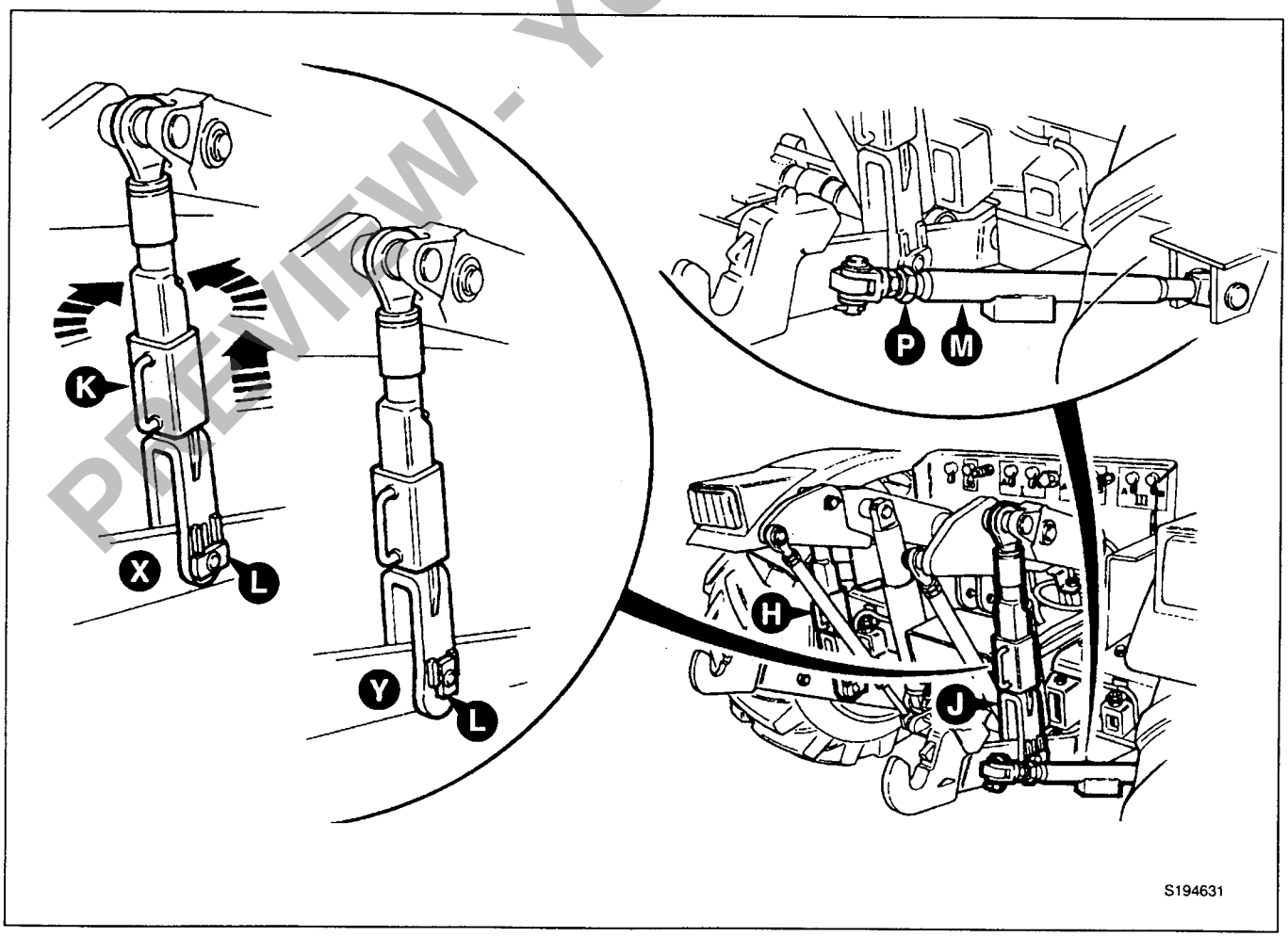
To connect the rods rigidly to the lower links, position the plate **L** horizontally as at **X**.

To connect the rods to the lower links with a degree of float, position the plate **L** vertically as at **Y**. Use this setting for wide soil-engaging implements (not ploughs).

Stabilizers (Standard type)

Both stabilizers **M** are adjustable for length.

To adjust the rods, slacken the locknut **P** and rotate the tubular section of the rod. Tighten the locknut.



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ENGINE COOLING SYSTEM (continued)

Draining and Refilling the Coolant (Cummins Engine)

⚠ WARNING

Make the machine safe before getting beneath it. Do the following: Park on level ground. Engage the parking brake. Lower any mounted implements to the ground. Stop the engine, remove the starter key, disconnect the battery. Chock the wheels

13-3-1-1

⚠ WARNING

The cooling system is pressurised when the coolant is hot. Hot coolant will burn you. Make sure the engine is cool before checking the coolant level or draining the system.

2-3-3-3

1 Open the bonnet. Carefully loosen the filler cap. Let any pressure escape. Remove the cap.

⚠ CAUTION

Keep your face away from the drain hole when removing the drain plug.

2 Remove drain plugs **D** and **E**. Let the coolant drain out.

⚠ CAUTION

Keep your face away from the hose while disconnecting it.

5-3-3-1

3 Check for damaged hoses and loose or damaged hose clips. Check the radiator for damage and build up of dirt. Clean and repair as required.

4 Clean and refit drain plugs **D** and **E**.

5 Prepare a mixture of 19 litres of water and 0.4 gm sodium carbonate (or a commercially available alternative).

6 Open the aftercooler bleed screw **F** and fill the system slowly with the mixture to prevent air locks. Wait 2 to 3 minutes to allow air to be vented, then close the bleed screw and top up to the level marked '**COLD MIN**'. Do not fit the filler cap at this stage.

7 Run the engine for 5 minutes at the normal running temperature. Stop the engine and allow to cool.

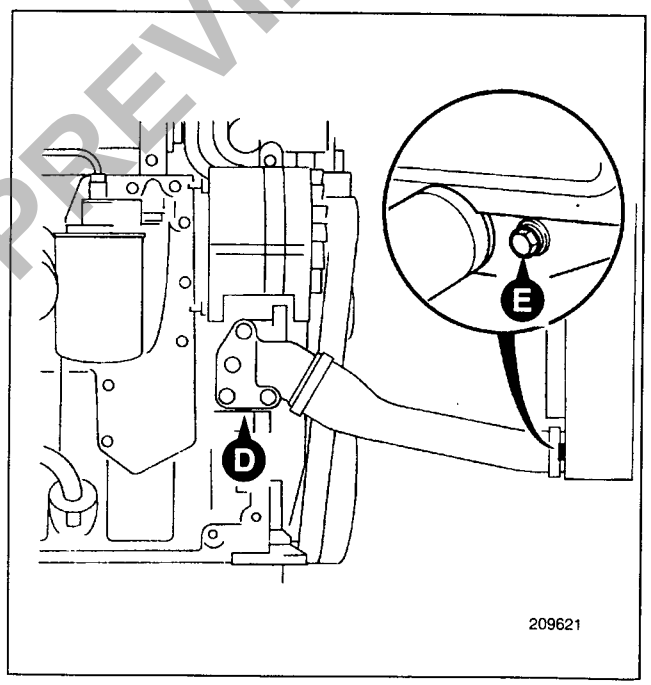
8 Drain the cooling system, checking that the coolant is not dirty. If it is, repeat the flushing process (steps **5** to **8**).

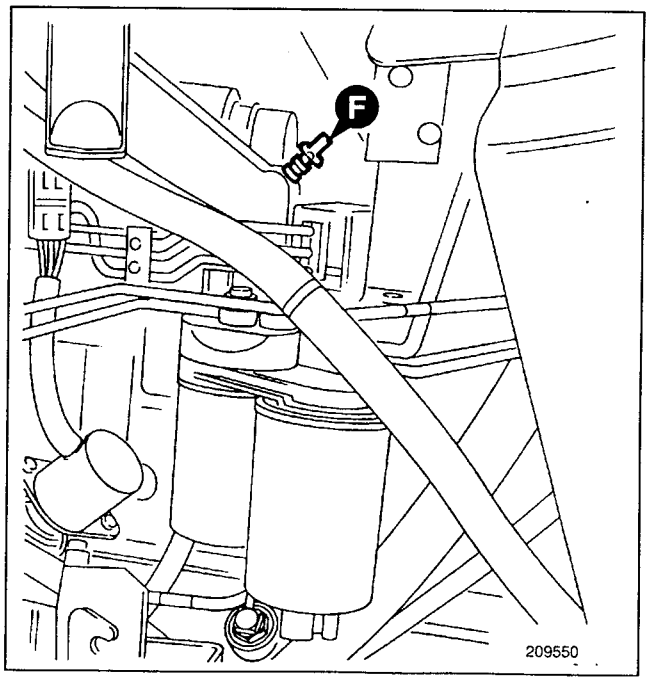
9 Refill the system as described at step **6** but using pre-mixed water/antifreeze solution (as specified in **Coolant Mixtures**). Do not overfill. Fit the filler cap.

Note: *A 50% anti-freeze mixture must be used even if frost protection is not needed. This gives protection against corrosion and raises the coolant's boiling point.*

10 Run the engine and raise the coolant to working temperature. Stop the engine. Check for leaks

Note: *Make sure the heater control is in the hot position before running the engine. This will ensure that the coolant mixture circulates through the entire cooling system.*





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ENGINE OIL AND FILTER(S)

Changing the Oil and Filter(s) (Perkins Engine)

1 Drain the oil when the engine is warm as contaminants held in suspension will then be drained with the oil. Park the machine on firm ground and turn the front wheels to full left hand lock.

⚠ WARNING

Make the machine safe before getting beneath it. Do the following: Park on level ground. Engage the parking brake. Lower any mounted implements to the ground. Stop the engine, remove the starter key, disconnect the battery. Chock the wheels

13-3-1-1

2 Drain the Oil

⚠ CAUTION

Oil will gush from the hole when the drain plug is removed. Hot oil and engine components can burn you. Keep to one side when you remove the plug.

13-3-1-15

- **a** Place a container that can hold at least 18 litres (4UK gal) beneath the engine to catch the oil.
- **b** Remove drain plug **C** and its 'O' ring. Make sure the 'O' ring is not damaged. Let the oil drain out, then clean and refit the drain plug and its 'O' ring. Tighten to 34 Nm (25 lb ft).

3 Open the bonnet. Change the Filter(s)

- **a** Unscrew the single filter **D** (normally aspirated engine) or the two filters **E** (turbocharged engine).

Note: *An internal pipe is fitted to each filter to retain the oil as it is removed. The oil can spill if the filter is tipped over after removal.*

- **b** Clean the filter head **F** and check tightness of adapter(s) **G**.
- **c** Add clean engine lubricating oil to each new filter. Allow enough time for the oil to pass through the filter element.
- **d** Smear the seal **H** on each new filter with oil. Screw in the new filter(s), hand-tight only.

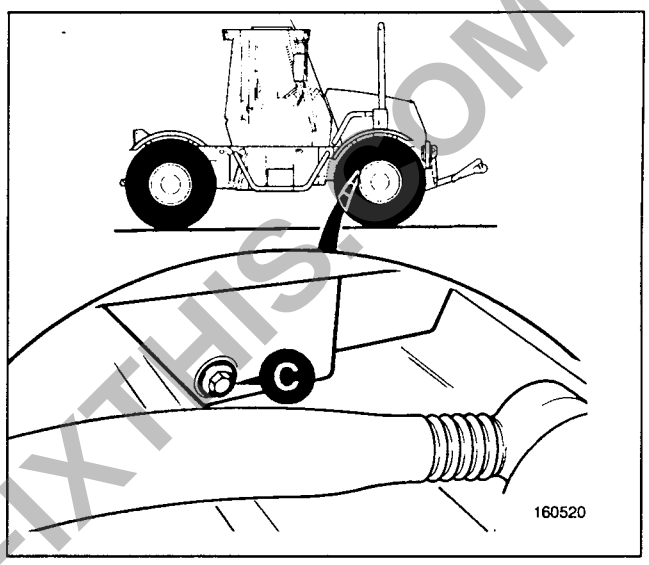
4 Fill the System

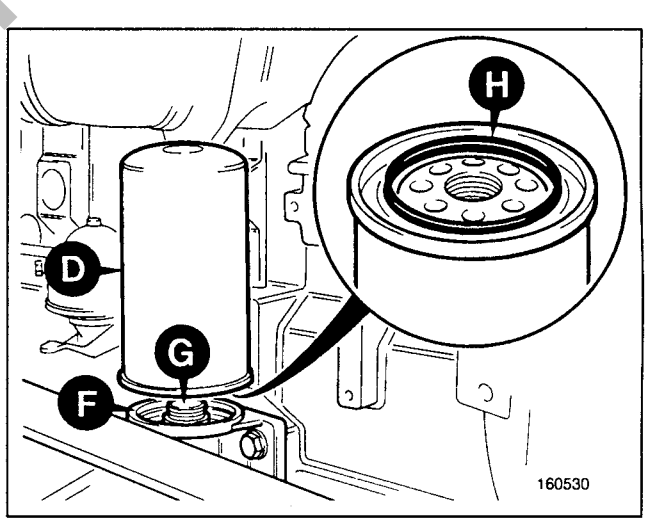
Fill the engine to the upper mark on the dipstick with new oil through the filler **B** (shown on previous page). See ***Fluids, Lubricants and Capacities*** for recommended oil grades. Wipe off any spilt oil. Check for leaks. Make sure the filler cap is correctly refitted.

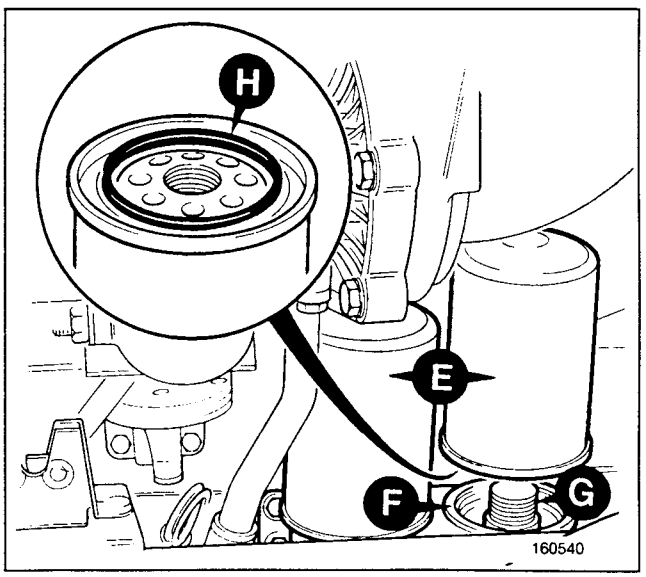
5 Check for Leaks

Note: *Before starting the engine, remove the ESOS fuse and rotate the engine on the starter until the oil pressure low light has gone out. Refit the fuse and start the engine.*

Run the engine and check for leaks. Stop the engine. When the engine has cooled, recheck the oil level.







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BRAKES
(continued)

Checking the Parking Brake Pads

⚠ WARNING

Brake pads generate dust which if inhaled, may endanger health. Wash off the caliper before commencing work. Clean hands thoroughly after work.
13-3-1-3

⚠ WARNING

Before checking the parking brake, park on level ground. Put chocks each side of all four wheels. Ensure that all three air tank warning lights are out. Release the parking brake, then stop the engine and disconnect the battery so that the engine cannot be started. If you do not take these precautions the machine could run over you.
13-3-1-4/1

1 Check the Pad Condition

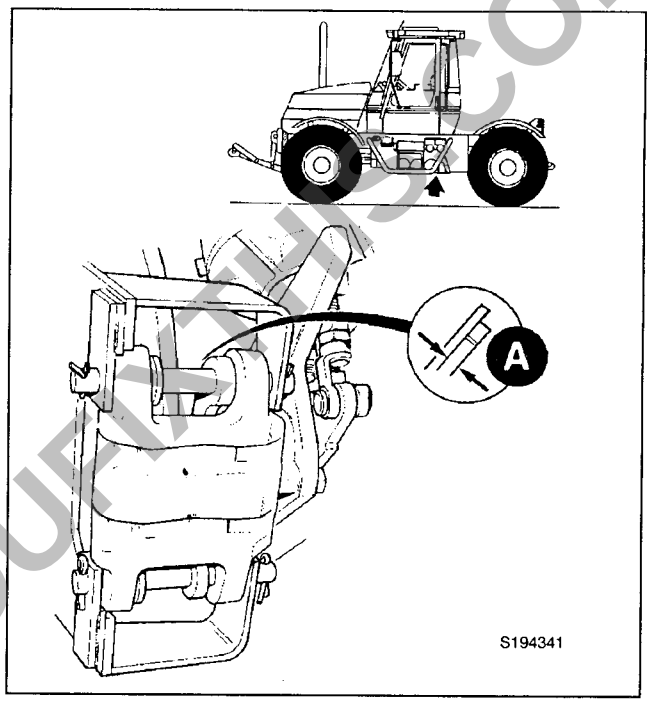
Measure pad thickness **A**. If the thickness of the friction material is 3 mm (0.12 in) or less, the pads must be renewed by your JCB Distributor.

⚠ WARNING

Oil on the brake disc will reduce brake effectiveness. Keep oil away from the brake disc. Remove any oil from the disc with a suitable solvent. Read and understand the solvent manufacturer's safety instructions. If the pads are oily, new ones must be fitted.
2-3-2-3/3

2 Check the disc condition

If the surface of the disc is badly warped, pitted or showing signs of overheating, you must have it renewed by your JCB Distributor.



HYDRAULIC SYSTEM

Checking the Fluid Level

1 Prepare the Machine

Park the machine on level ground. Apply the parking brake. Lower the rear linkage to the ground. Stop the engine. Remove the starter key.

2 Check the Level

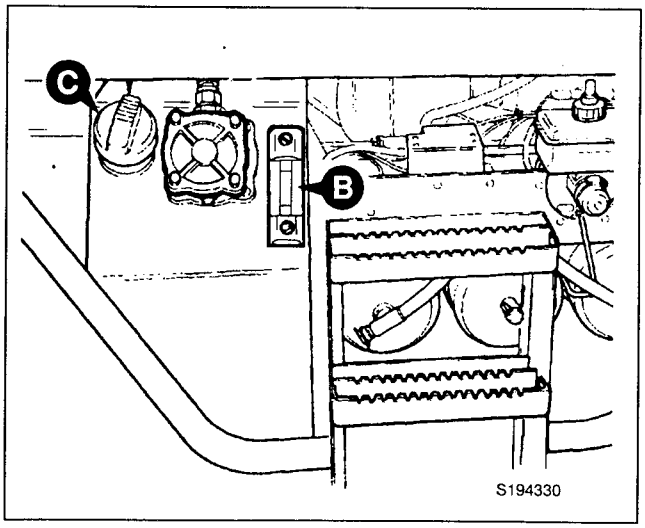
Look at the fluid level in the sight gauge **B** The level should be between the two marks on the gauge. If the fluid is cloudy, water or air has entered the system. Water or air in the system could damage the hydraulic pump. Contact your JCB distributor if the fluid is cloudy.

3 Add Oil

If necessary, add recommended fluid at tank cap **C**.

⚠ CAUTION

Using incorrect fluid could damage the system. See the Fluids, Capacities and Lubricants chart in this handbook for the correct fluid. The fluid can harm your skin. Wear rubber gloves. Cover cuts or grazes.
2-3-5-1/1



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ABOUT THIS HANDBOOK

Machine Models and Serial Numbers

This handbook provides information for the JCB Fastrac 125, 135, 155 and 185 from serial number 636369 onwards.

Note: The Fastrac 185 is fitted with a Cummins engine. All other models are fitted with Perkins engines.

Using this Handbook

This handbook is arranged to give you a good understanding of the machine and its safe operation. It also contains maintenance information and specification data. Read this handbook from front to back before using the machine for the first time. Particular attention must be given to all the safety aspects of operating and maintaining the machine.

General warnings in this chapter are repeated throughout the book, as well as specific warnings. Read all the safety statements regularly, so you do not forget them. Remember that the best operators are the safest operators.

Finally, treat this handbook as part of the machine. Keep it clean and in good condition. Do not operate the machine without a handbook in the cab. If there is anything you are not sure about, ask your JCB Distributor or employer. Do not guess, you or others could be killed or seriously injured.

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.

Units of Measurement

In this handbook, the S.I. system of units is used. For example, liquid capacities are given in litres. The Imperial units follow in parenthesis ( ), for example 28 litres (6 UK gal).

Page Cross References

In this handbook, page cross references are made by presenting the subject title printed in bold and italic to signify a cross reference. (This is followed by the title of the section containing the subject if this is different from the one being read at the time). For example :

5 Do the Pre-Start Checks

See Steps **2** to **7** of ***Before Starting the Engine*** *(OPERATION section).*

Use the contents list and/or the index to find the exact page number.

Page Numbering

The page numbering system in this handbook is not continuous. There is a gap of about ten pages between sections. This allows for the insertion of new pages in later issues of the handbook.

Left Side, Right Side

References in this handbook to 'left' and 'right' are as viewed looking forwards from the rear of the machine.

Using the Machine

To use the Fastrac efficiently and safely you must know the machine and have the skill to use it. You must abide by all relevant laws and regulations (speed limits for example). This handbook instructs you on the machine, its controls and its safe operation. It is not a training manual on the art of operating or a guide to the relevant laws and regulations. If you are a new operator, get yourself trained in the skills of using the Fastrac before trying to work with it. If you don't, you will not do your job well, and you will be a danger to yourself and others.

Warranty

A copy of the manufacturer's warranty is printed at the back of this book. We advise you to read and understand the warranty before using the machine.

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