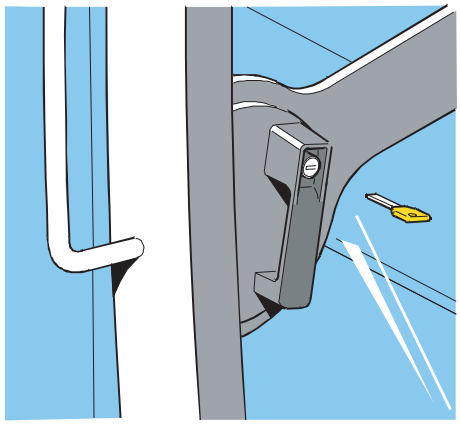
Open front screen

Service Manual

8052
8060

Cab

The cab is bolted on top of the mainframe and is a welded steel construction. The cab has sliding windows on the right hand side which may be secured in any position with a locking knob, a hinged door and an up and over windscreen. All windows are of toughened glass. The cab is fitted with a windscreen wiper, heater fan, seat and all operating controls and instruments.



CAUTION

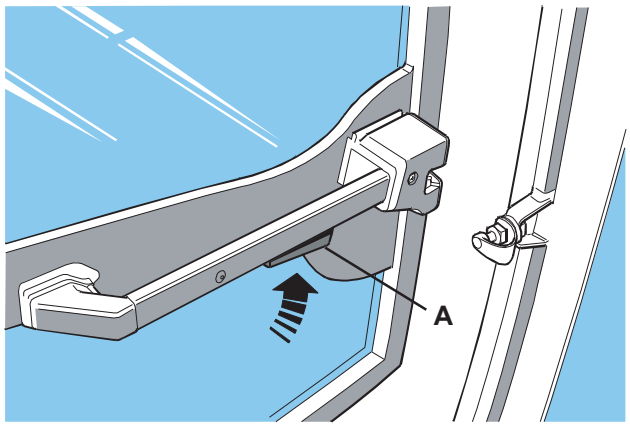
Do not drive the machine with the door unlatched. It must be correctly closed or secured fully open.

HOP29

Opening and Closing the Door

8052 upto Serial No.803370
8060 from Serial No.883000

To open the door from the outside, unlock it with the key provided and press the lock barrel to release the catch. To open a door from inside, depress lever **A** upwards. Close the door from the inside by pulling it firmly, it will latch itself.



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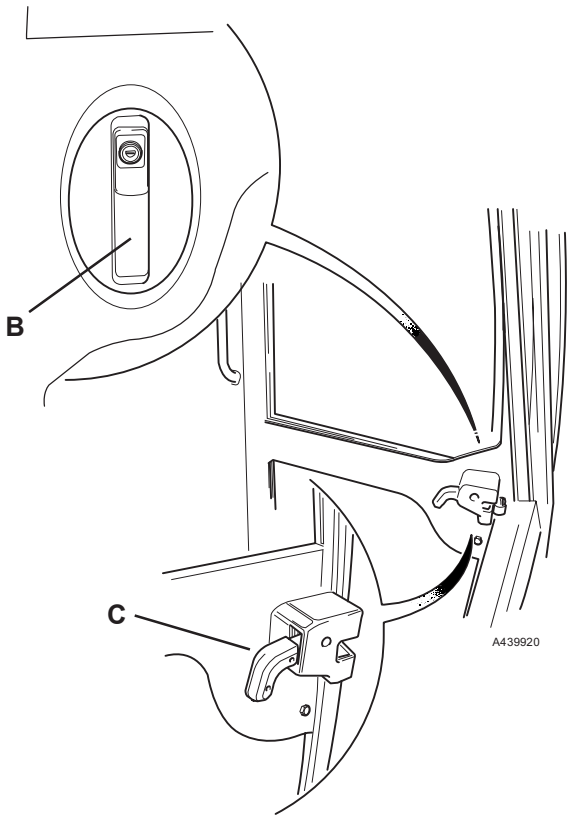
Opening and Closing the Door

8052 from Serial No. 803371

To open ferom the outside, unlock it with the key provided and pull on the handle **B** to release the catch. To open the door from inside, push lever **C**. Close the door from the inside by pulling it firmly using the handle, it will latch itself. The door must be in the closed position when operating the machine.



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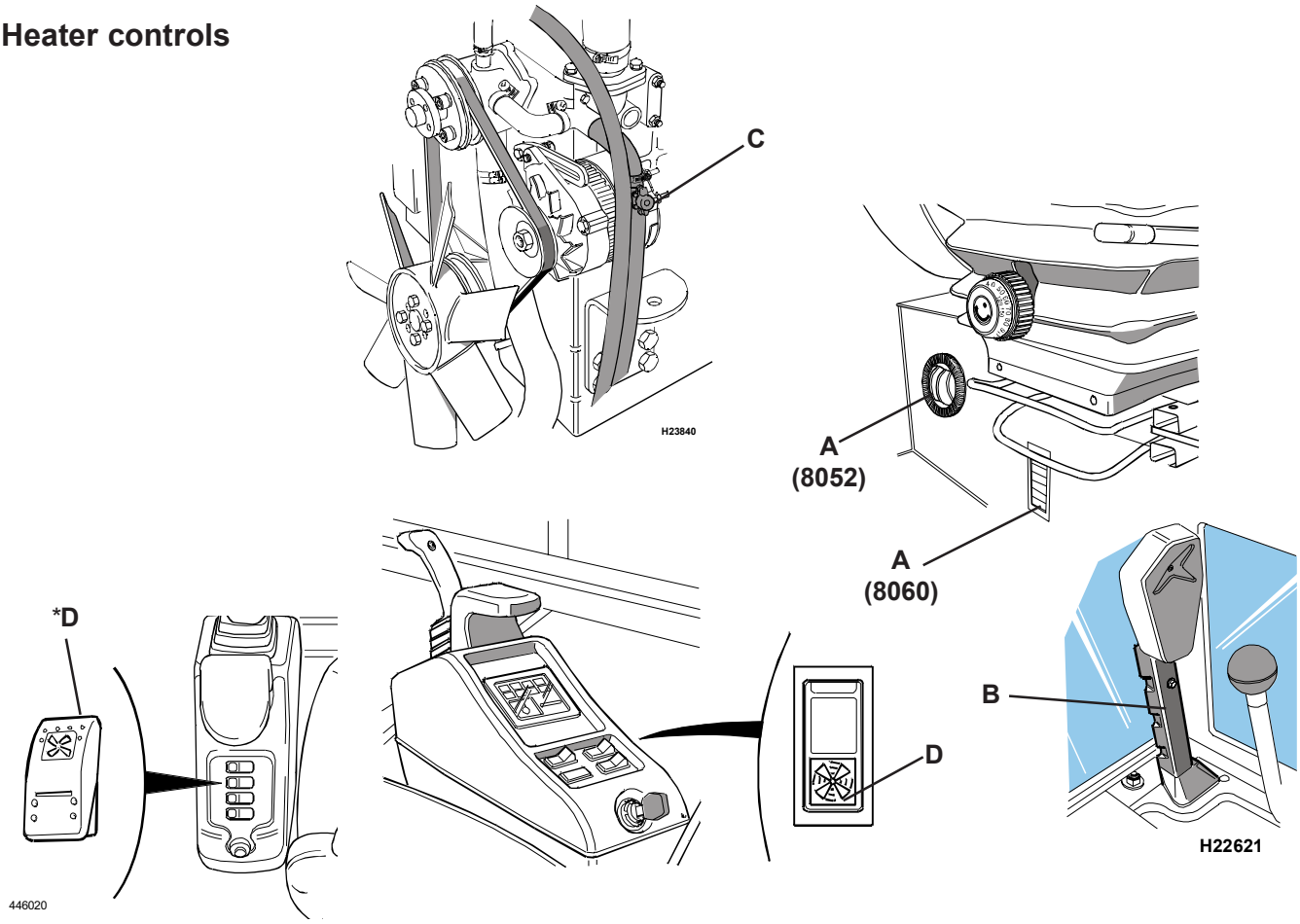
Heater controls



***8052 machines from 803371**

8052 machines upto 803370

Hot air can be directed to the cab floor by closing / opening vent **A**. Hot air is directed to the windscreen via. a fixed vent system **B**.

For summer use, the **8052** heater element can be turned off at the water valve **C** on the engine.

The **8060** machine has a rotary temperature control knob.

WARNING

Stop the engine before lifting the engine cover to operate valve C. HOP30

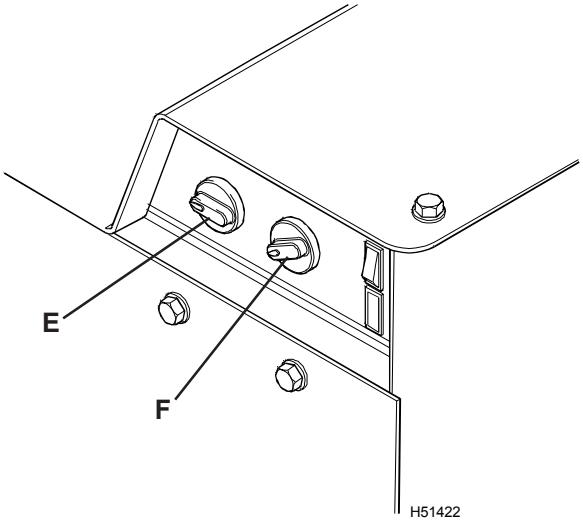
Heater Fan

8052 Two speed fan

Press the rocker switch **D** located on the right hand instrument console or on the left hand instrument panel on later machines, down, to select the speed required. Return the switch to the first position to turn the fan off.

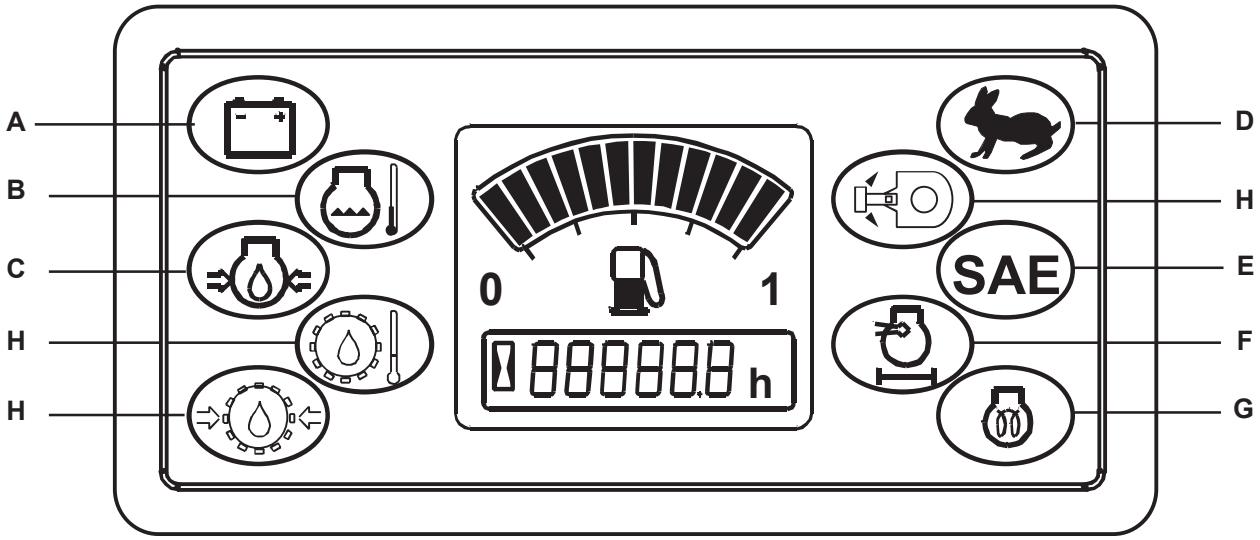
8060 Three speed fan

The 8060 machine has a three speed control **E** located on the left side of the seat bulkhead and a temperature control **F** adjacent to it.



Instrument cluster

8052 machines from 803371



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Indicators for the engine and related systems are mounted in the instrument cluster in the left hand console.

A Charge (Fault) Indicator
Indicates Alternator operation. Illuminates RED when a fault occurs.

B Coolant Temperature (High) Indicator
Illuminates RED when coolant temperature is too high.

C Engine Oil (Low) Indicator
Illuminated RED when engine oil pressure is too low.

D Two Speed (High Engaged) Indicator
Illuminated GREEN when high speed is engaged.

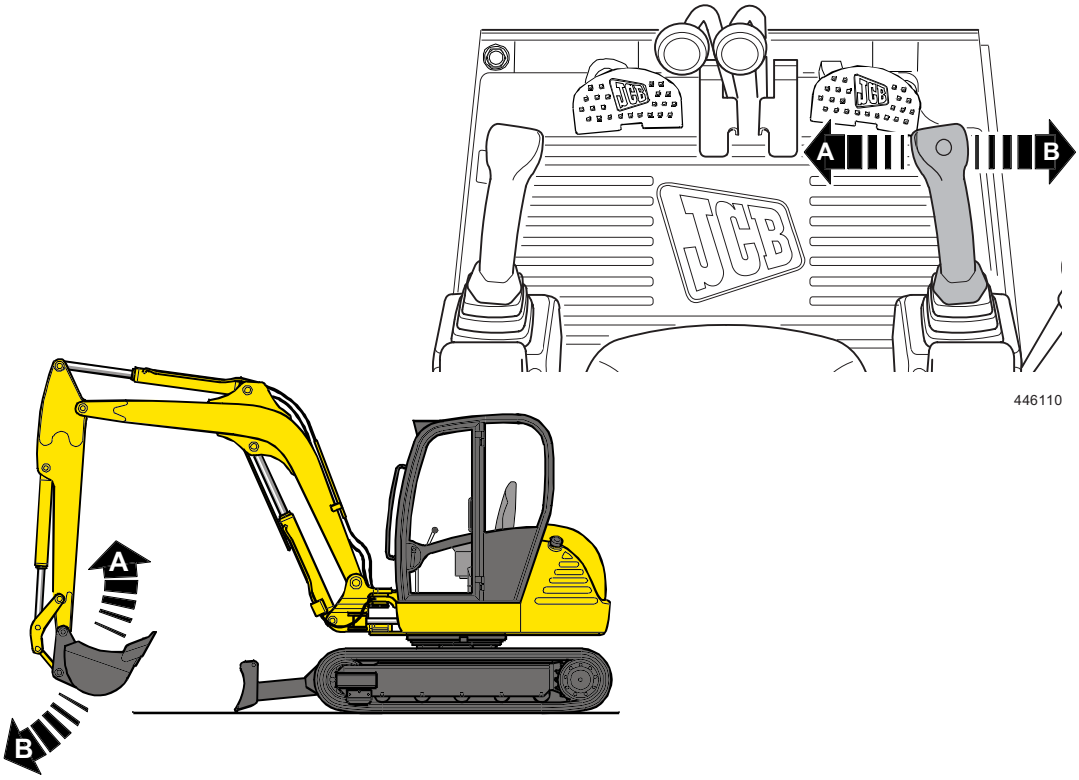
E SAE Controls (Selected) Indicator
Illuminates GREEN when the SAE Control Pattern is selected.

F Air Filter (Blocked) Indicator
Illuminates YELLOW when the Air Filter is blocked.

G Glow Plugs (On) Indicator
Illuminates YELLOW when the Glow Plugs are energised.

H Not Used

Excavator Controls (cont.)



CAUTION

The hand throttle's lowest setting allows the engine to idle when the excavator is not being operated. Before any service is selected, the engine speed must be increased to maximum.
NEVER operate any services with the engine at idle.

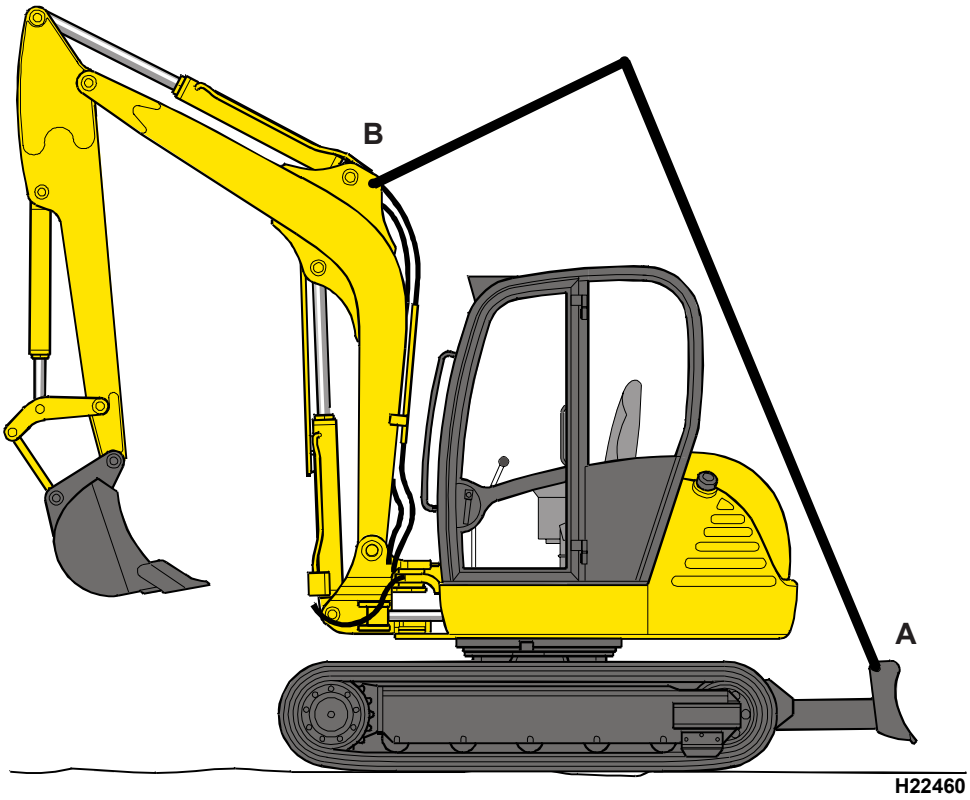
Close Bucket

To close the bucket (to gather a load), move the right controller to the left **A**. Release the controller when the bucket is closed sufficiently.

Open Bucket

To open the bucket (to dump a load), move the right controller to the right **B**. Release the controller when the bucket is open far enough.

Moving a disabled machine



CAUTION

Do not tow a disabled machine. Permanent damage to the track motors will occur if the machine is towed. HOP68

If the machine becomes disabled, it must not be towed or otherwise moved on its tracks. The machine should be made safe, lifted onto a transporter and moved to a location where maintenance can be carried out.

Equipment used must be capable of lifting 5.2 tonne (8052 machines) and 6 tonne (8060 machines).

Lifting points have been provided on the machine as follows:-

1 On each end of the dozer blade at points **A**.

2 On each side of the boom at points **B**.

The boom should be set to the fully raised position and lifted using these lifting points.

CAUTION

Ensure the lifting slings do not interfere with the top of the cab, damaging the top glazing. It may be necessary to remove the FOGS guard.

Secure the machine on the transporter.

Maintenance Safety (cont'd)

⚠ 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. 8-3-4-4/1

⚠ WARNING

Hydraulic Pressure

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. Makes sure the engine cannot be started while the hoses are open. INT-3-1-11/1

⚠ WARNING

Hydraulic Fluid

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-3-2-4

⚠ CAUTION

Rams

The efficiency of the rams will be affected if they are not kept free of solidified dirt. Clean dirt from around the rams regularly. When leaving or parking the machine, close all rams if possible to reduce the risk of weather corrosion. INT-3-2-10

⚠ CAUTION

Cleaning

Cleaning metal parts with incorrect solvents can cause corrosion. Use only recommended cleaning agents and solvents. INT-3-2-11

⚠ CAUTION

'O' rings, Seals and Gaskets

Badly fitted, damaged or rotted 'O' rings, seals and gaskets can cause leakages and possible accidents. Renew whenever disturbed unless otherwise instructed. Do not use Trichloroethane or paint thinners near 'O' rings and seals. INT-3-2-12

⚠ WARNING

Hot Coolant

The cooling system is pressurised when the engine is hot. Hot coolant can spray out when you remove the radiator cap. Let the system cool before removing the radiator cap. To remove the cap; turn it to the first notch and let the system pressure escape, then remove the cap. INT-3-2-9

⚠ WARNING

Battery Gases

Batteries give off explosive gases. Keep flames and sparks away from the battery. Do not smoke close to the battery. Make sure there is good ventilation in closed areas where batteries are being used or charged. Do not check the battery charge by shorting the terminals with metal; use a hydrometer or voltmeter. INT-3-1-8

⚠ WARNING

Battery Terminals

The machine is negatively earthed. Always connect the negative pole of the battery to earth.

When connecting the battery, connect the earth lead (-) last.
When disconnecting the battery, disconnect the earth lead (-) first. INT-3-1-9

⚠ WARNING

Electrical Circuits

Understand the electrical circuit before connecting or disconnecting an electrical component. A wrong connection can cause injury and/or damage. INT-3-1-4

⚠ CAUTION

Never use water or steam to clean inside the cab. The use of water or steam could damage the on-board computer and render the machine inoperable. Remove dirt using a brush or damp cloth. 8-3-4-8

Greasing (every 250 hours)

Slew Ring Bearings

WARNING

Do not overgrease the slew ring as this will result in the displacement of the grease seal.

Ensure the slew ring is kept full of grease.

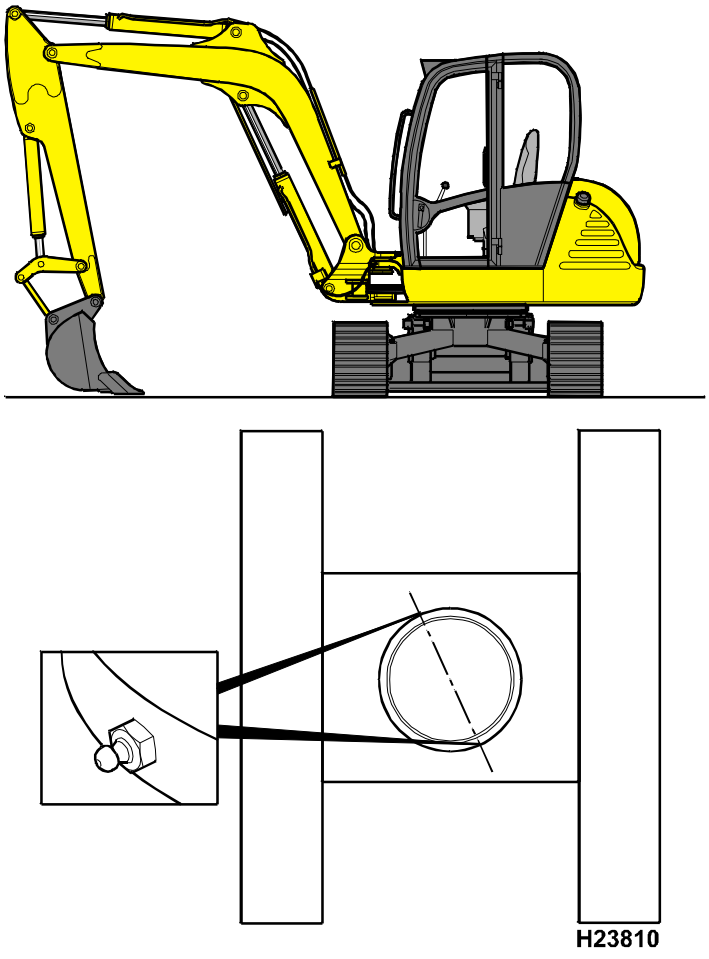
Slew the machine 90° across the tracks.
Locate the grease points (forward and aft) on the slew ring.

To ensure full distribution of the grease, use the following procedure.

1 Grease in, using 4 strokes of the grease gun. Rotate 180°.

2 Grease in, using 4 strokes of the grease gun. Rotate 180°.

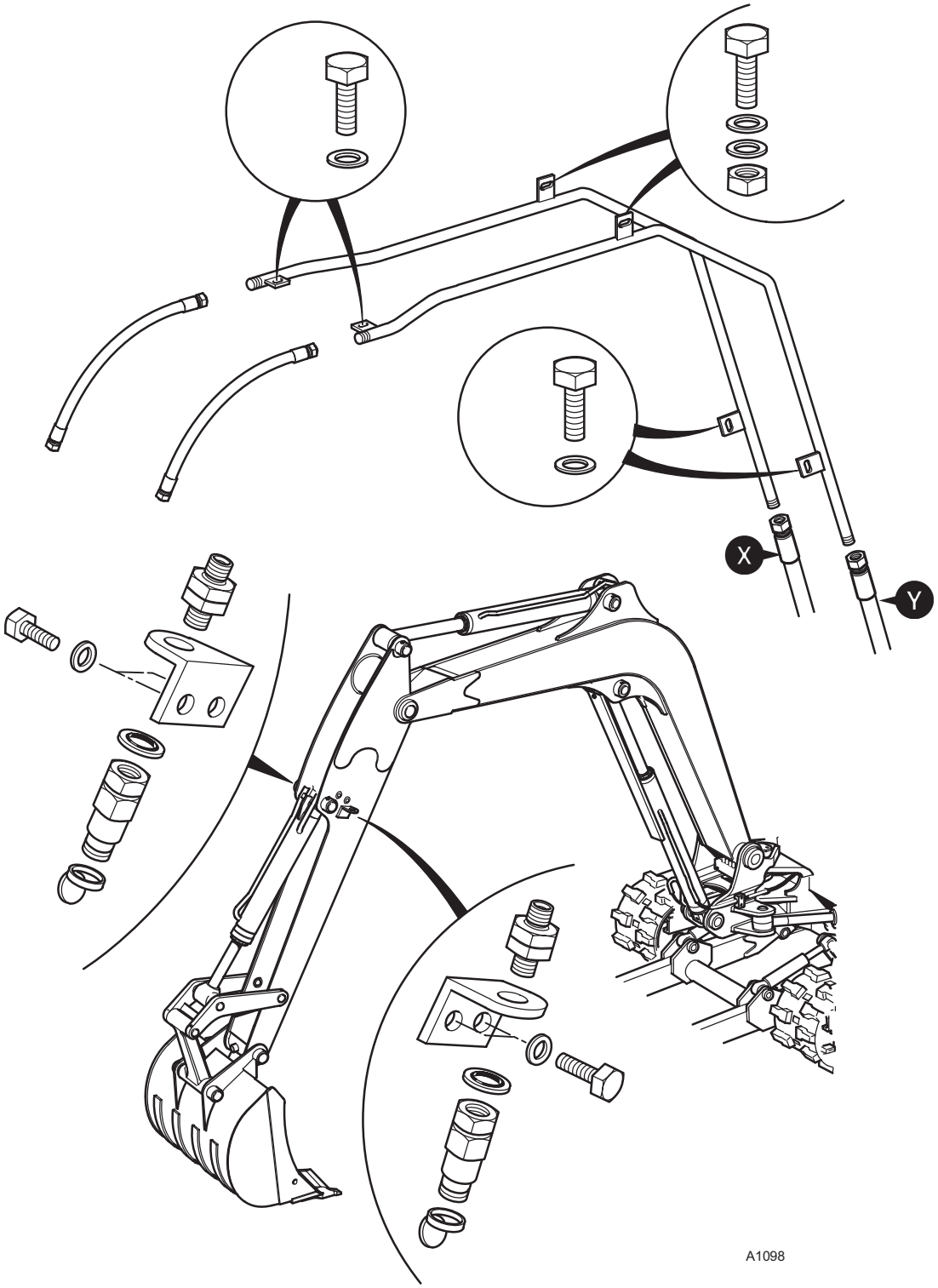
3 Grease in using 4 strokes of the grease gun.

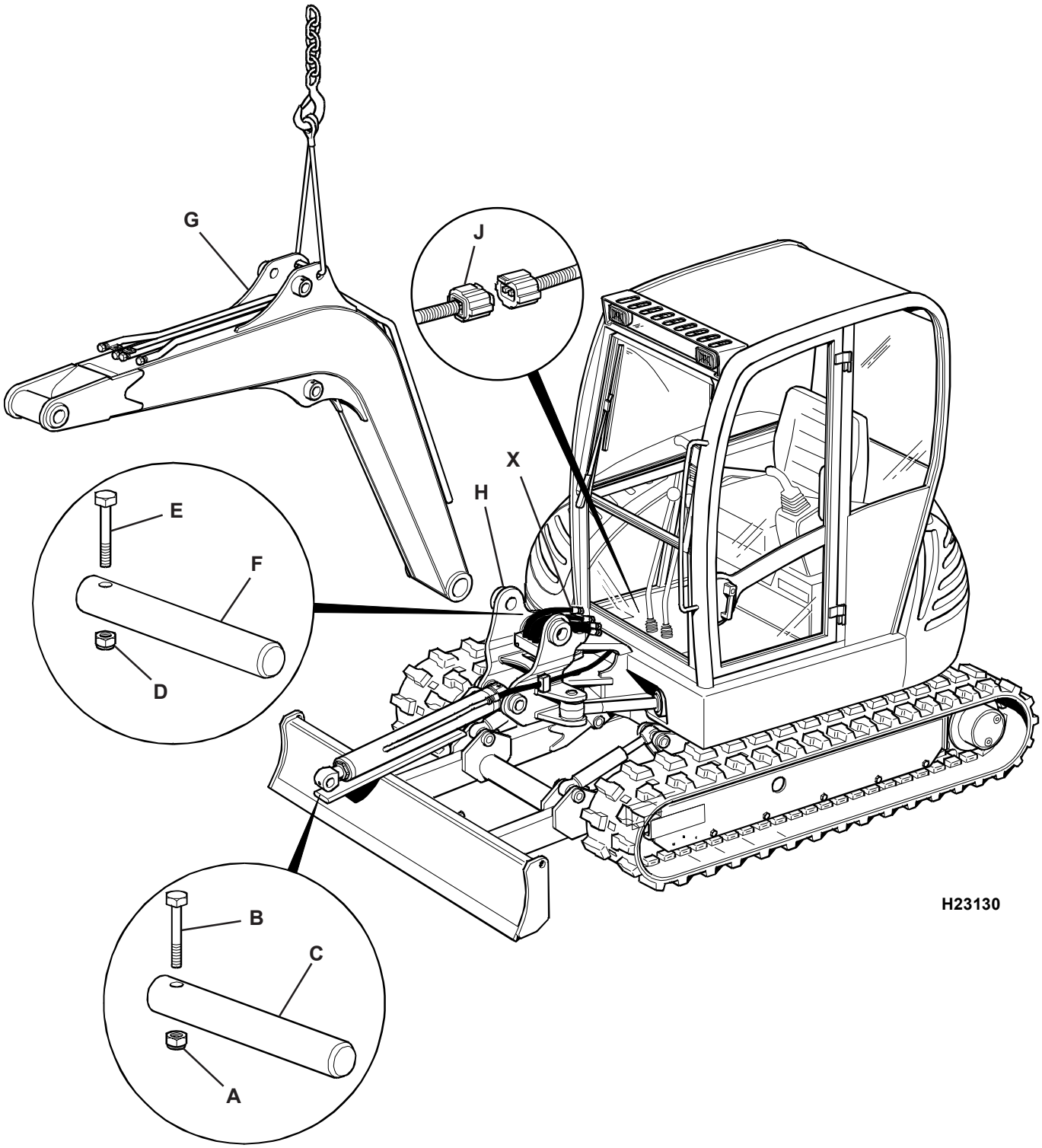


Installing the Boom and Dipper Pipes and Hoses

Install the components as shown in view A, with the exception of boom to mainframe hoses **X** and **Y** which must be routed between the bottom of the boom and the kingpost before connection (see **Installing the Boom to Mainframe Hoses**).

A




G
J
X
H
E
F
D
B
C
A
H23130

Starter Motor (cont'd)

Inspection and Testing

1 Check torque settings for all connections, and connections are free from contamination caused by arcing or sparking, Clean and re-torque as required.

Note: *Do not over tighten connections, this could result in damaged threads or internal damage to the starter motor.*

CAUTION

Never remove the inner lock nut on either the Starter Motor **A** or Solenoid **B**. **Removal will cause permanent internal damage to the Starter Motor and Solenoid.**

2 If the starter will still not start, disconnect electrical connections and remove the starter from the engine.

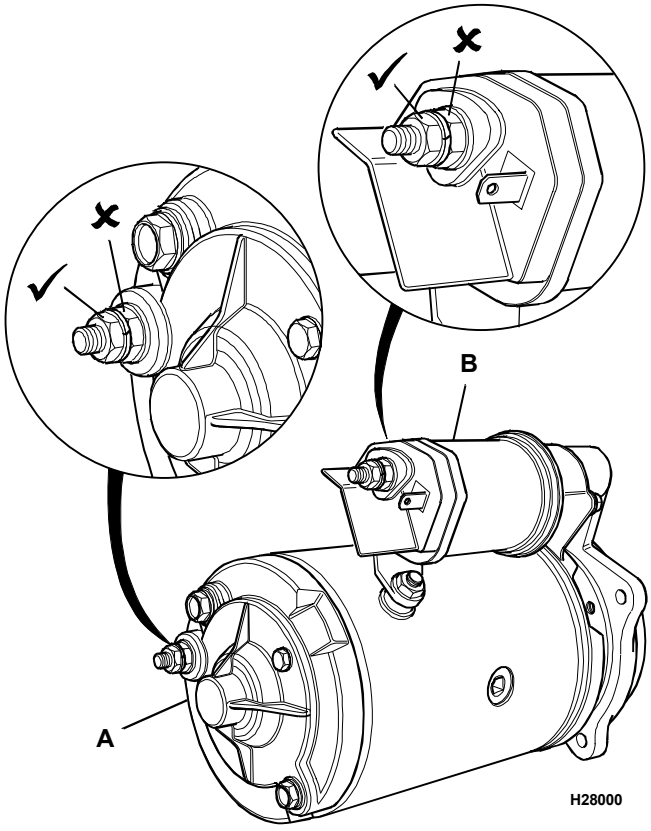
For the following tests, a 12V battery, (in a good state of charge), two heavy duty battery jump leads fitted with crocodile clips and a 5 amp lead, with open circuit in line push button switch are required.

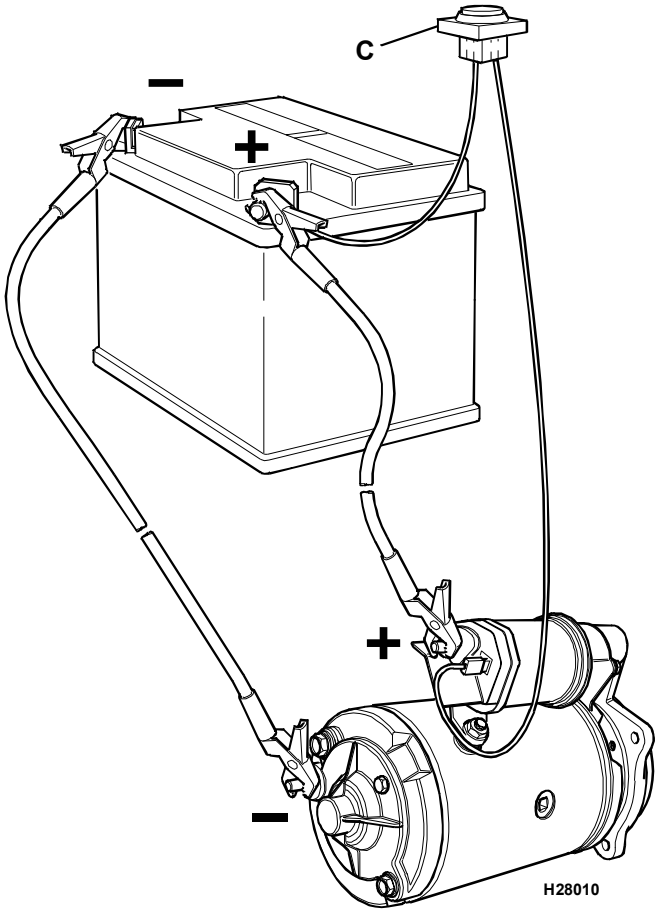
3 Secure the motor in a vice or similar.

4 Connect the battery positive lead to the heavy duty solenoid connection, using one of the battery jump leads. Connect the second jump lead to the starter motor case terminal and battery negative pole.
There should be NO operation of the starter motor, if there is any buzzing, smoking or sparking from the starter motor it is faulty and should be replaced.

5 With the existing connections in place, connect the 5 amp capacity wire between battery positive and solenoid lucar blade.
Operate the push button switch **C**, the solenoid should engage moving the starter pinion out.
The starter motor will rotate, releasing the push button will allow the pinion to retract and the starter to stop rotating.
If there is any abnormal noise, electrical buzzing, smoke, the starter does not rotate or the pinion does not move forward or back, the starter motor is faulty and should be replaced.

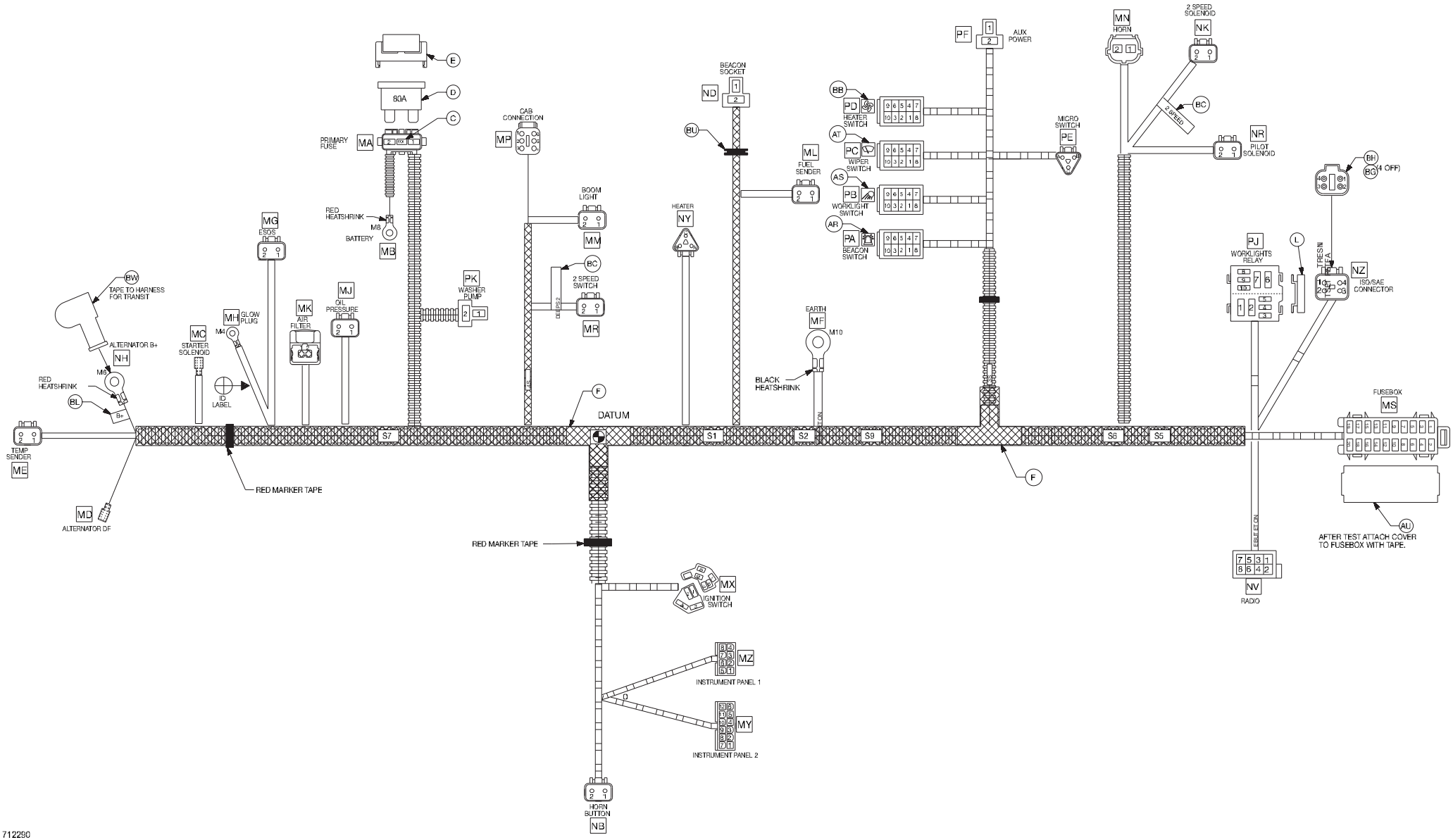
If the starter motor operates correctly investigate the machine electrical system.





Main Harness - 721/11351 Issue 1

8052 machines from 0803371



Control Cables

Inspection

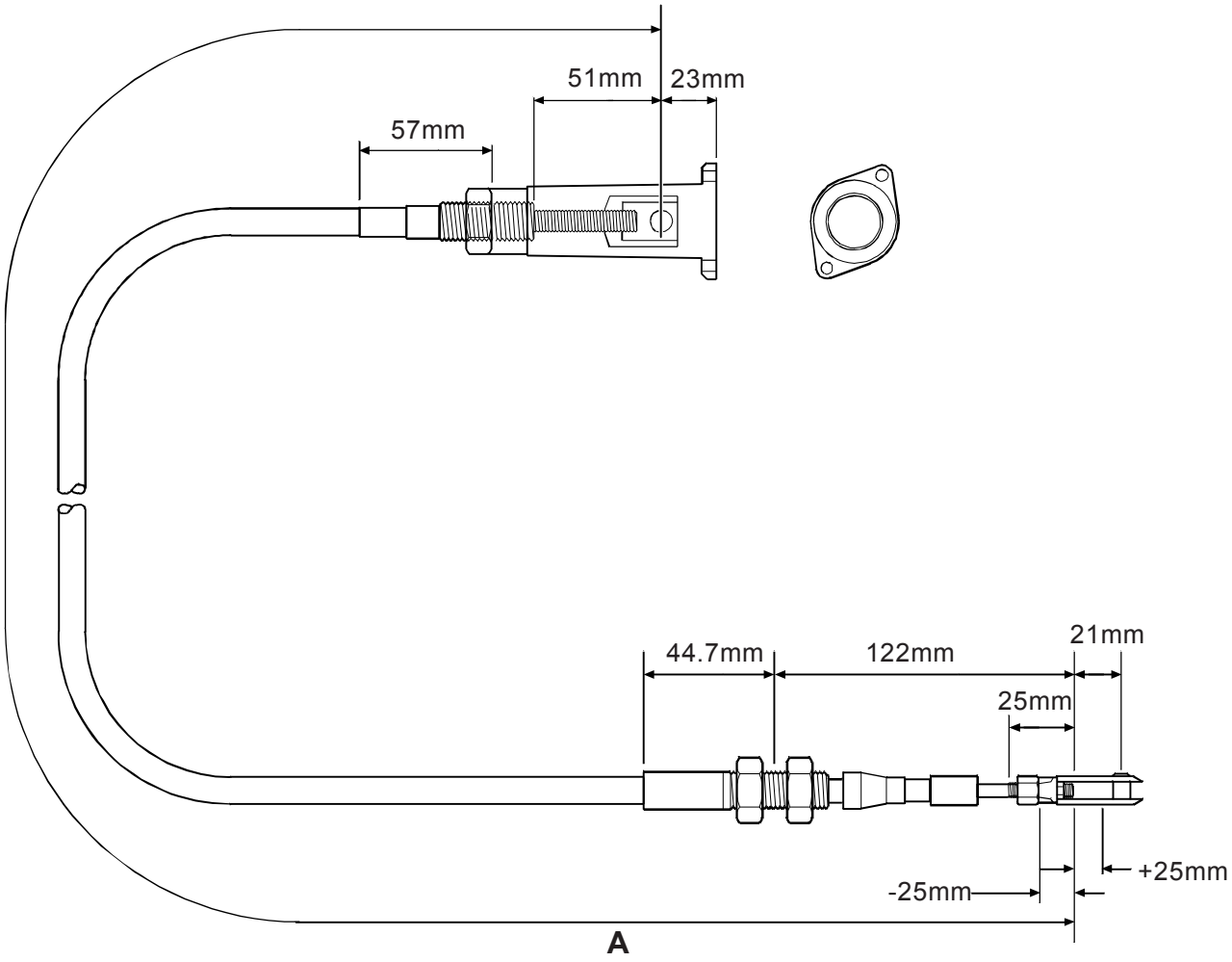
1 Gain access to the cable.

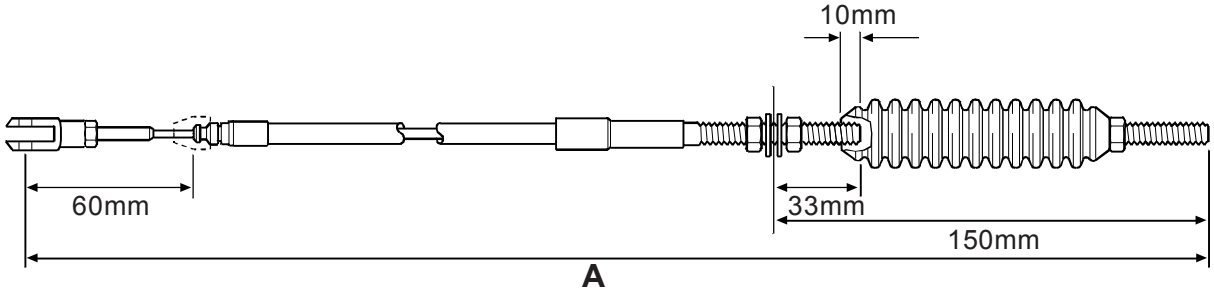
2 Remove the cable from the machine.

3 Examine the cable for signs of wear, or deformation, replace as required.

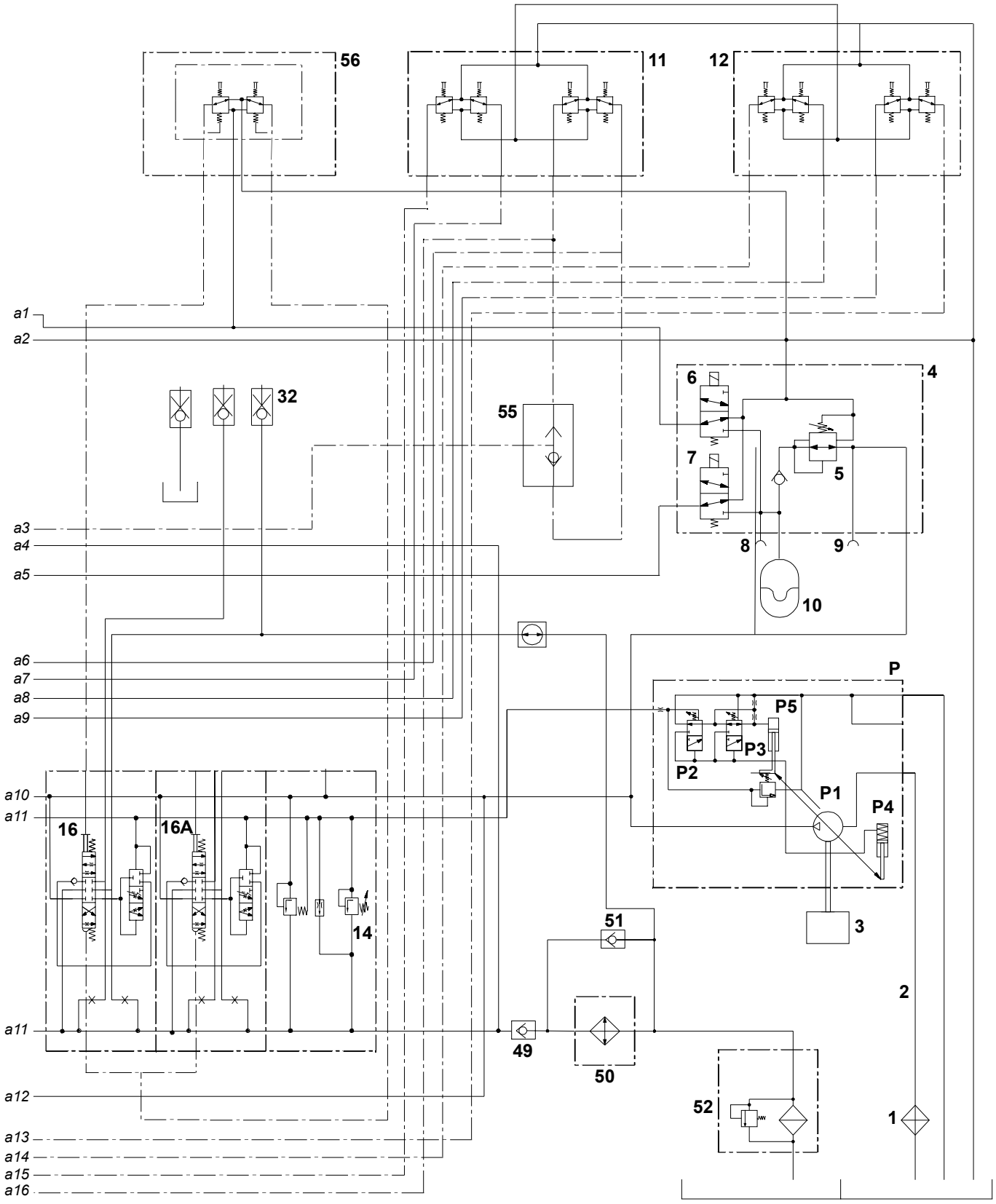
4 Adjust the cable (for mid-stroke position) to conform with the dimensions shown.

Cable Set-up Dimensions	
	'A'
Dozer	1500mm
Track	1685mm
Swing	2140mm
Throttle	2600mm





Schematic Hydraulic Circuit - 8060



Control Valve - 8052 and 8060

***Description**

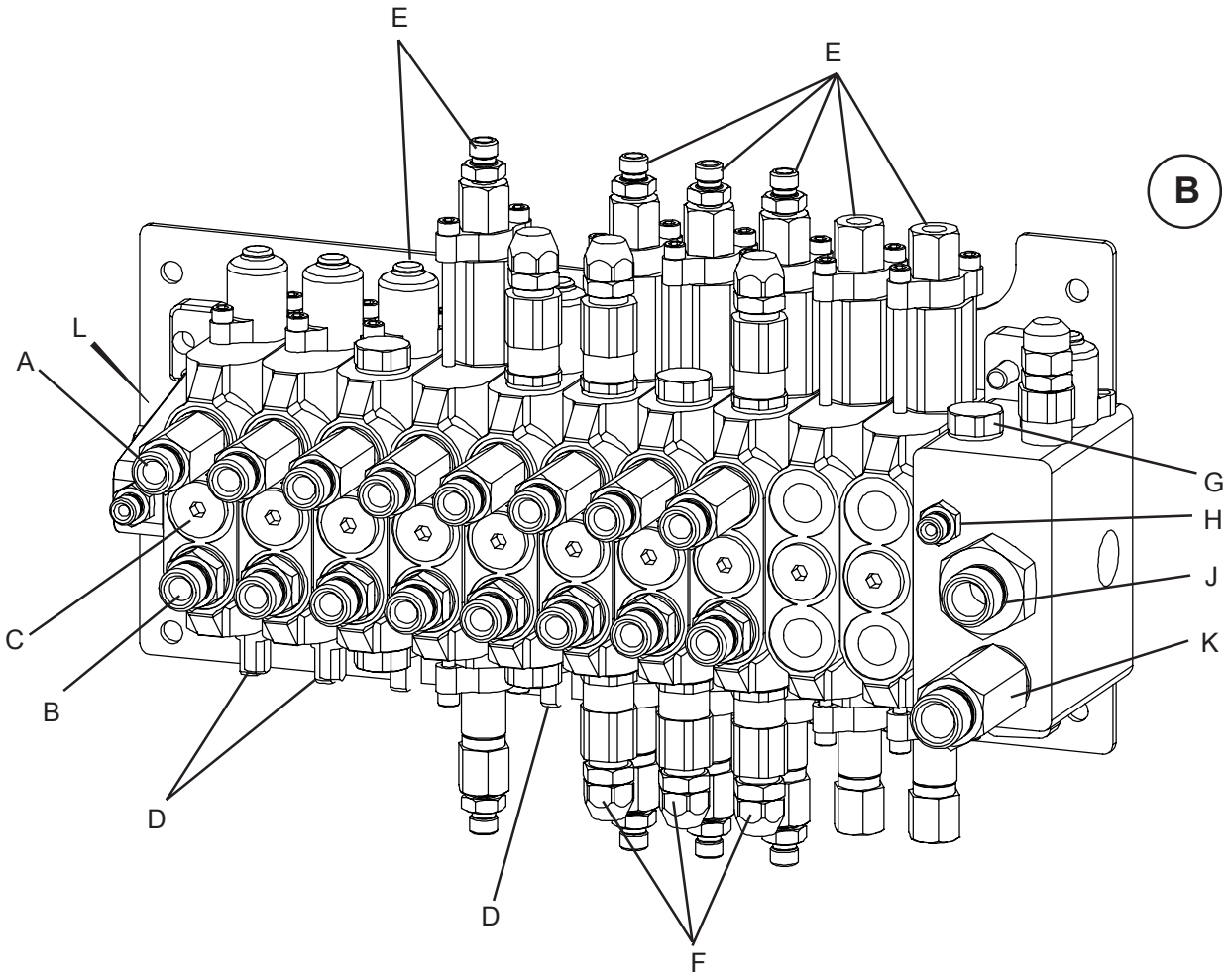
The excavator valve is mounted on a backing plate, located on the rear of the hydraulic tank, under the rear lockable cover.

This sectionalized valve is an assembly of **A** (8052) 9 spools or **B** (8060 Illustrated) 10 spools, (extra Auxiliary spool section), all of which are load-sensed pressure compensated valves. They control the volume, direction of the oil flow and maintain a constant flow regardless of the changing load pressures.

The valve sections are designed to suit the various duties of the excavator and tracking services.

Key 8052 and 8060

- **A** 'A' Service Ports (upper ports)
- **B** 'B' service Ports (lower ports)
- **C** Compensator Valve (if fitted)
- **D** Mechanical Linkage Spools
- **E** Servo Operated Spools
- **F** Auxiliary Relief Valves
- **G** Load Sensing Valve
- **H** Load Sensing Port
- **J** Return to Tank
- **K** Pressure Port 1
- **L** Pressure Port 2
- **M** Check Valves



8060 TEN SECTION HYDRAULIC VALVE BLOCK