TABLE OF CONTENTS

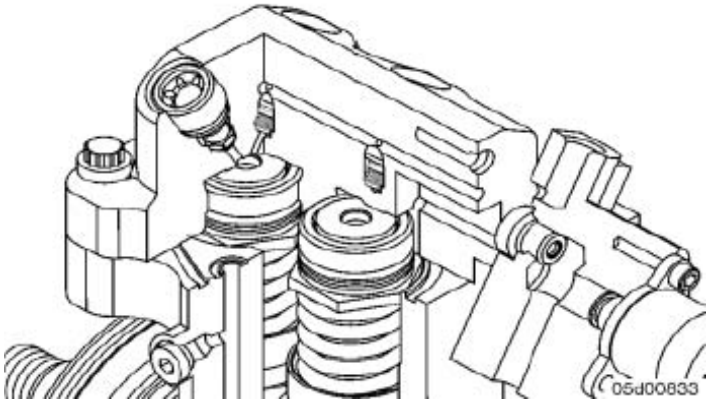
SAFETY 3

GENERAL INFORMATION
- Cleaning 5
- Inspection 5
- Bearings 5
- Needle Bearings 5
- Gears 5
- Oil Seals, O-Rings And Gaskets 5
- Shafts 5
- Service Parts 5
- Lubrication 5

STANDARD TORQUE DATA FOR NUTS AND BOLTS
- Chart 1 (Plain Nuts/Bolts) 6
- Chart 2 (Phosphate Coated Nuts/Bolts) 6
- Chart 3 (Zinc or Cadmium Plated Nuts/Bolts) 7

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Injectors and Fuel Lines - Overview

WARNING

Fuel is flammable. Keep all cigarettes, flames, pilot lights, arcing equipment, and switches out of the work area and areas sharing ventilation to reduce the possibility of severe personal injury or death when working on the fuel system.

High-pressure common rail fuel systems use solenoid-actuated injectors. High-pressure fuel flows into the side of the injector. When the solenoid is activated, an internal needle lifts and fuel is injected. The clearances in the nozzle bore are extremely small and any dirt or contaminants will cause the injector to stick. This is why it is important to clean around all fuel connections before servicing the fuel system. Also, cap or cover any open fuel connections before a fuel system repair is performed.

High-pressure fuel is supplied to the injector from the fuel rail by an injector supply line and a fuel connector. The fuel connector pushes against the injector body when the fuel connector nut is tightened. The injector supply line is then connected to the fuel connector.

CAUTION

To reduce the possibility of engine damage, always use the proper torque on the high-pressure line nuts.

The torque and sequence for this joint is critical. If the nut or line is under-tightened, the surfaces will **not** seal and a high-pressure fuel leak will result. If the nut is over-tightened, the connector and injector will deform and cause a high-pressure fuel leak. This leak will be inside the head and will **not** be visible. The result will be a fault code, low power, or no-start.

If the injector is **not** fully seated prior to the installation of the high-pressure connector, the joint will **not** seal.

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Table 3 PIDS Supported on J1587											
PID	**J1587 Message Name**	**Update Rate**	**QSB**	**QSC**	**QSL9**	**QSM11**	**QSX15**	**QSK19**	**QST30**	**QSK45**	**QSK60**
244	Trip Distance	10.0 s	TX	TX	TX						
245	Total Vehicle Distance	10.0 s	TX	TX	TX						
247	Total Engine Hours	On Request	TX	TX	TX	TX	TX	TX (*)	TX	TX	TX
248	Total PTO Hours	On Request	TX	TX	TX	TX	TX		TX		
250	Total Fuel Used	On Request	TX	TX	TX	TX	TX				
251	Clock	On Request	no	no	no	TX	TX				
252	Date	On Request	no	no	no	TX	TX				
254	Escape	On Request	no	no	no	TX/RX	TX/RX				

(*) Not in software phase 2.7

Notes on numbers (1) – (5) used in Table:

1. These PIDs are specified as broadcast PIDs in SAE J1587 but due to limitation in the number of broadcast PIDs that can be supported in the Quantum calibration, they are instead available *On Request*
2. Cummins PID 194 messages include occurrence count when requested. When PID 194 is broadcast, the fault count information is not included.
3. PID 194 should be used for new products. Refer to Table 7-1 for system fault codes.
4. Active faults are broadcast at the rates specified in the SAE J1587 specification (7/96). Inactive faults are only available on request.
5. The SAE J1587 specification does not contain all the information on PIDs 234, 237 and 243. Cummins has provided the following detailed definitions:

PID 234 - Software Identification

Format: **PID** **Data**

234 n a a a a * b b b b * c c c c c c c c c c c c*dddd*ee*ff

n - Number of parameter data characters following this byte

a - Module Part Number, 8 bytes, ASCII

b - Module Serial Number, 8 bytes, ASCII

c - Engine Calibration Date and Time Stamp, 12 bytes, ASCII (format = mmddyyhhmmss)

d - Phase Designation (describes software version number), 4 bytes, ASCII

e- Module Identifier, 2 bytes, ASCII

f - Application Identifier, 2 bytes, ASCII

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McCormick Diagnostic tool

A laptop based service tool is available to carry out several procedures on the tractor.

- The down loading of control modules with new software.
- The setting up of the tractors functions.
- The setting of some default values.
- The set up of extra or replacement auxiliary valves.
- The retrieval, and erasing of error codes.

In order to connect the laptop to the tractor you must use an AVG interface between the laptop and the tractor, this basically allows the J1939 CAN messages from the tractor to be converted into hexi-decimal computer messages and the computer messages back to J1939.

The part number of the AVG is 1014T1.

The laptop then plugs into the AVG via its USB port (a USB A to B connector lead will also be required - This is the type of lead commonly used to connect a PC to a printer via its USB port) and the AVG interface box plugs into the diagnostic socket located under the right hand side of the instrument panel.

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To reset a specific field area counter (to zero) (Menu 1-3):

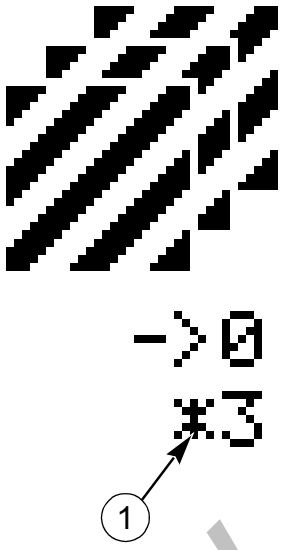
STEP 1

Momentarily press the menu button to enter the sub menu.

STEP 2

Use the UP button to scroll through the sub menus until the correct menu is displayed, as shown below.

NOTE: *The STAR (1) next to the field number identifies which field is currently selected.*



Once you have found the correct menu,

momentarily press the menu button again to enter the sub sub menu.The scroll up/down symbol will appear next to the current field selected.

STEP 3

Use the UP and Down buttons to scroll through the sub sub menus until the required field is found.

STEP 4

Momentarily press the menu button and the area counter will zero, will return to the sub menu and display the current field selected.

To view the total area worked (of all fields, up to a maximum of nine) (Menu 1-4):

STEP 1

Momentarily press the menu button to enter the sub menu.

STEP 2

Use the UP button to scroll through the sub menus until the correct menu is displayed, as shown below.

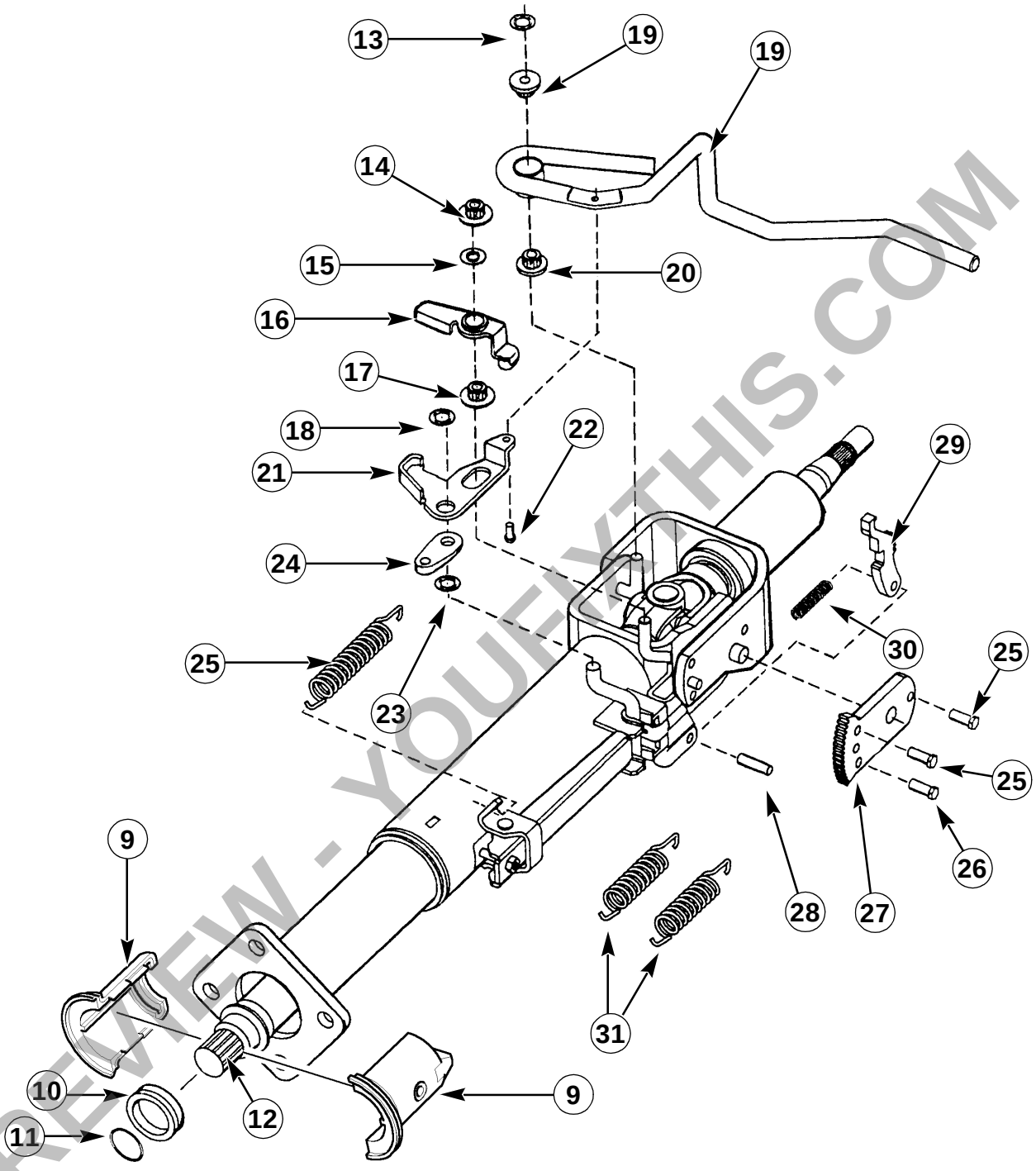


STEP 3

Use the UP and Down buttons to scroll through to the next sub menu.

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DI98G231

NOTE: *Refer to STEP 15 to STEP 21 for Installation of bushings (9), seal ring (10) and o-ring (11).*

9. BUSHING (2)
10. SEAL RING (IF EQUIPPED)
11. O-RING (IF EQUIPPED)
12. LOWER SPLINED SHAFT
13. RETAINING RING
14. FLANGE LOCKNUT
15. WASHER
16. UPPER LINK ARM
17. BUSHING
18. RETAINING RING
19. LEVER
20. BUSHING
21. LOWER LINK ARM
22. RIVET
23. WASHER
24. LINK
25. SPRING
26. RETAINING SCREW
27. TOOTH SEGMENT PLATE (3)
28. PIVOT PIN
29. ARM
30. SPRING
31. SPRING

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Splitting - Powershift/Intermediate housing

General

Due to the diversity of the hydraulic and mechanical options available on the ZTX series tractors, mention will only be made of the main pipes or connections to be disconnected.

For this reason, before and when splitting the tractor, ensure no connections remain between the fixed assembly and the moving assembly.

ATTENTION: ***When splitting any part of the tractor, make sure appropriate splitting equipment is used.***

A. Preliminary operations

STEP 1

Disconnect the battery terminals.

STEP 2

Remove cab.

STEP 3

Position the rear wheels in wide tread.

STEP 4

Remove the side panels and hood.

STEP 5

Remove the right footstep and battery compartment.

STEP 6

Disconnect and blank the front differential and front axle pipes.

STEP 7

Remove the guard and the MFD transmission shaft.

STEP 8

Mark then disconnect the steering hoses from the Orbitrol steering unit.

STEP 9

Remove the left footstep.

STEP 10

Drain the fuel tanks. Remove balance pipe guard and balance pipe.

STEP 11

Mark and disconnect the harness to the fuel tank gauge and the fuel supply and return hoses.

STEP 12

Remove the fuel tanks.

STEP 13

Mark positions of following parts then disassemble from the transmission:

Harnesses, sensors (intermediate speeds, engine speeds, road speed, powershift temperature and pressure), connectors to receptacles A, B, C, D, E, F of the TC unit installed on the right-hand side of the Powershift box.

STEP 14

Drain the intermediate housing.

STEP 15

Remove suction pipe (**1**) (Fig. 1) at the Gerotor pump, and the elbow unions fitted on the intermediate housing and the Full Powershift powershift.

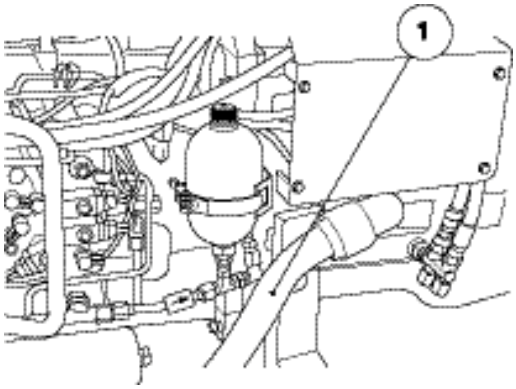


Figure 1

STEP 16

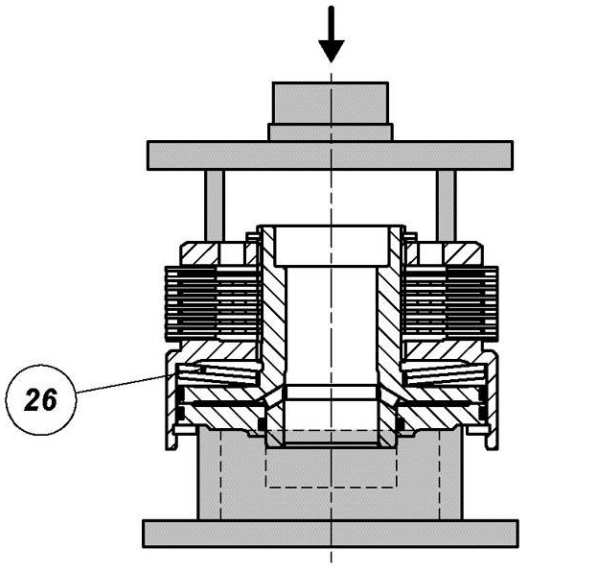
Disconnect the creeper control on the right hand side of the intermediate housing.

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Shimming the clutch

J1 shimming

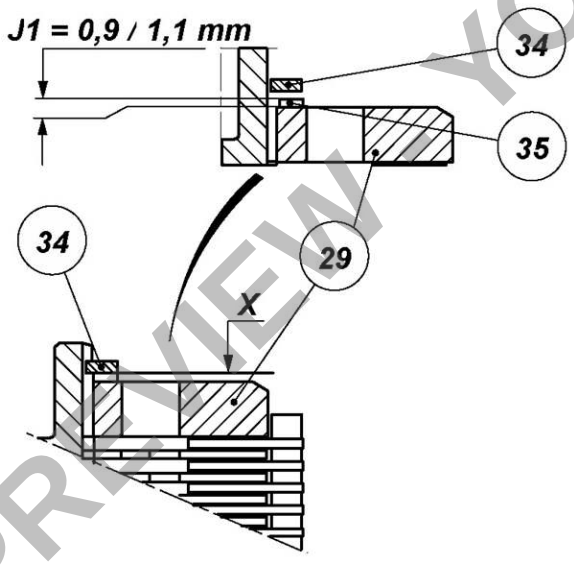
STEP 44



MH04C107

Using a press and an appropriate fixture, apply a load of 2000 daN (45 lb f) so as to fully compress the Belleville washers (**26**).

STEP 45



MH04C108

Fit circlip (**34**). Using a set of feeler gauges, measure the gap **(X**), between cover plate (**29**) and circlip (**34**). Select a thickness of shim(s) (**35**) to provide a clearance of:

J1 = 0.9 mm to 1.1 mm.

STEP 46

Remove circlip (**34**).

STEP 47

Position the shim(s) selected in operation 45 between the cover plate and the circlip.

IMPORTANT: *Fit the splined shim on the circlip side.*

STEP 48

Refit the circlip.

STEP 49

Lubricate and fit the O-rings (**24**) (**40**) on piston (**39**) and refit it.

STEP 50

Fit circlip (**38**).

STEP 51

Couple clutch assembly (**15**) and bell shaped gear (**10**).

NOTE: *Bush (**6**) is force fitted in the bell-shaped gear and then rebored.*

STEP 52

Refit the clutch assembly (**15**) and bell shaped gear (**10**). Carry out steps 21 to 28.

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Dimension to be measured on carrier (40) (Fig. 20)

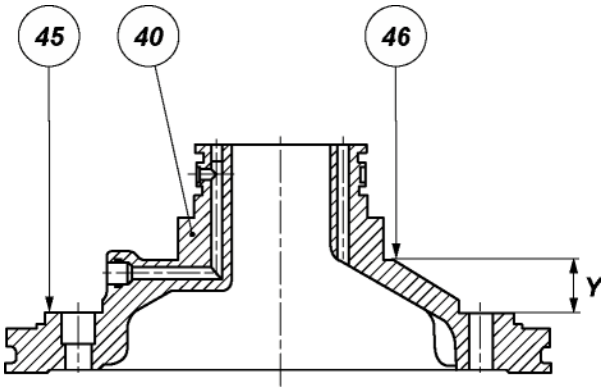


Figure 20

STEP 97

Measure dimension "**Y**" using an appropriate depth gauge and rule.

STEP 98

Calculate distance "**E**" between the thrust faces of bearing cup (**46**) and carrier (**40**):

E = C – Y

Fill in space "**E**" with a thickness of shims (**48**).

STEP 99

In space "**E**", add additional shims between 0.05 mm and 0.15 mm, in order to obtain **P2** (Fig. 21):

P2 = 0.05 mm to 0.15 mm

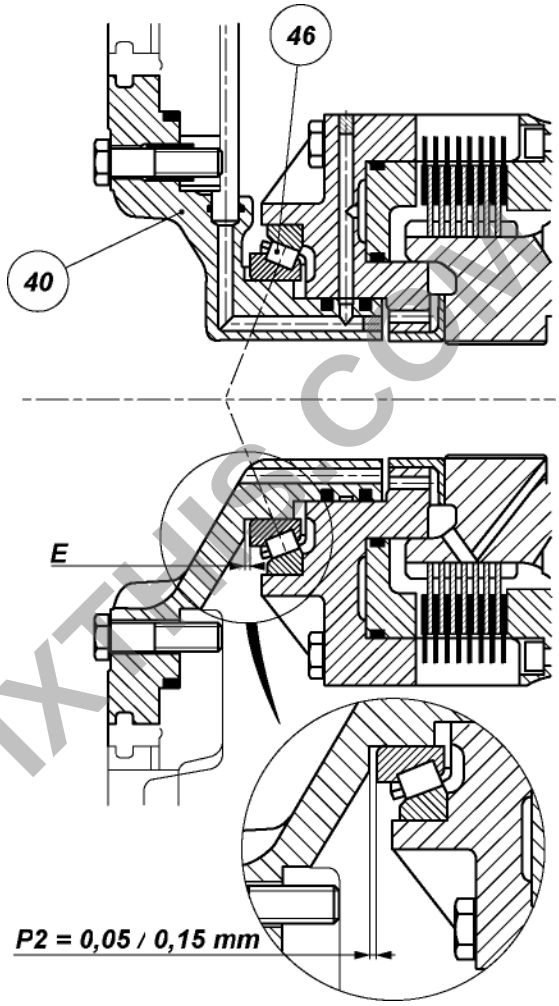


Figure 21

Final operations

STEP 100

Remove the tool and bearing cup (46).

STEP 101

On carrier (40), place the shims determined in step 99. Centre the differential assembly, carry out steps 33 and 34. Insert the carrier, carry out steps 35 to 38**.**

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Rear Axle - Rear hitch mechanism

A. Disassembling and reassembling a lift cylinder

Preliminary operations

STEP 1

Run the engine and lower the lower bars to their maximum using the ELC.

STEP 2

Disconnect the feed hose, remove the cylinder and empty it of oil.

Disassembly (Fig. 7)

STEP 3

Remove the 90° union (**1**) fitted with its O-ring.

STEP 4

Push the cylinder ram (**5**) until snap ring (**4**) is visible in port **O** of the union.

STEP 5

Introduce a screwdriver in this port and while turning the cylinder ram push the snap ring into the V-shaped recess.

STEP 6

Remove the ram and seal (**4**). Drive off scraper seal (**2**) and oil seal (**3**) (systematically discard these three parts).

Reassembly

IMPORTANT: *Carefully clean all components. Replace any parts that are scratched or bowed. In cases of seizing up or serious scratching, replace the cylinder and ram.*

STEP 7

Dry all components using compressed air.

STEP 8

Lubricate the assembly with clean transmission oil.

STEP 9

Proceed with assembly of the cylinder. Carry out operations 3 to 6 in reverse order.

IMPORTANT: *New seals and snap rings must always be fitted.Use an appropriate fixture to force fit the parts without damaging the seals. Fit the ram into the cylinder with care.*

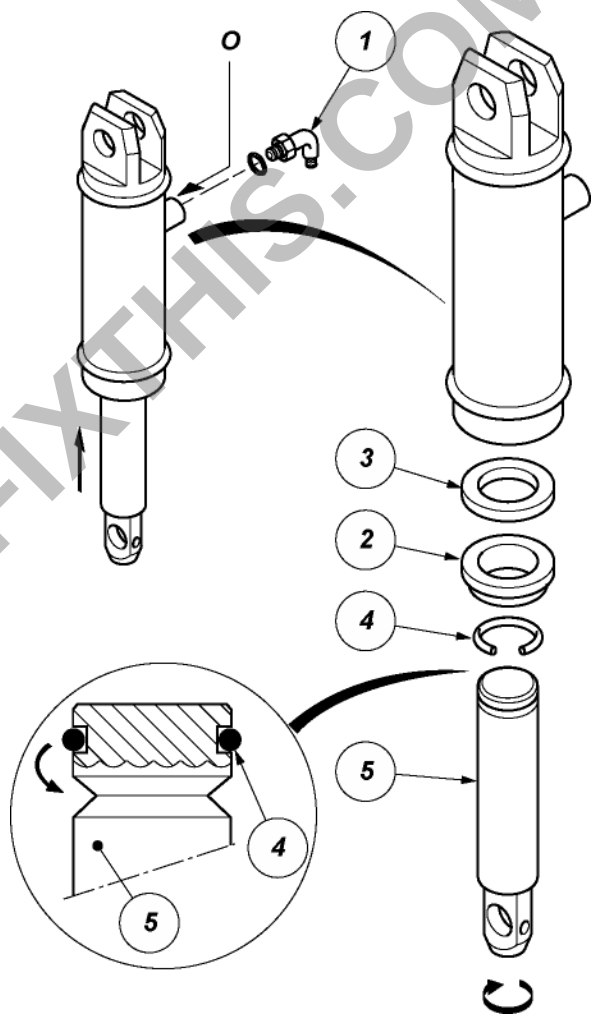


Figure 7

Final operations

STEP 10

Lubricate the upper and lower pins with anti-seize grease and refit them. Reconnect the feed hose.

STEP 11

Run the engine. Using the ELC, raise the lower hitch bars into the high position and vice versa.

STEP 12

Check that the hitch is operating correctly and that there are no oil leaks around either cylinder or ram.

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TABLE OF CONTENTS

SPECIFICATIONS 3

SPECIAL TORQUES 4

SPECIAL TOOLS 5

GENERAL INFORMATION 8

PLANETARY GEAR
- Removal and Installation 8
- Disassembly and Assembly 9

WHEEL HUB
- Disassembly 10
- Assembly 13

AXLE BEAM
- Disassembly 16
- Assembly 18

DIFFERENTIAL SUPPORT
- Disassembly 19
- Assembly 22

DIFFERENTIAL
- Disassembly 26
- Assembly 28

PINION
- Disassembly 30
- Assembly 32

TOE-IN AND STEERING ANGLE
- Toe-in adjustment 35

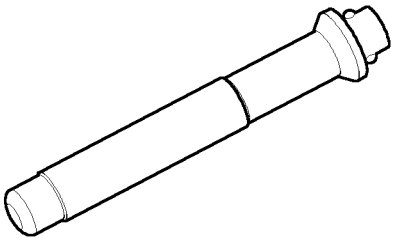
TOE-IN AND STEERING ANGLE
- Steering angle adjustment 37

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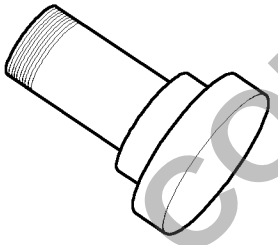
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SPECIAL TOOLS

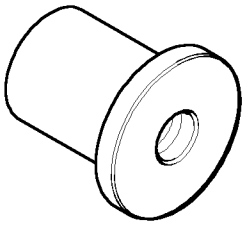
The special tools used to fit seals, bearings and bushes should always be used with the interchangeable handle CA119033 and a suitable safety handle to protect the hands.



CA119033



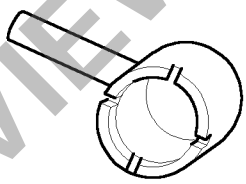
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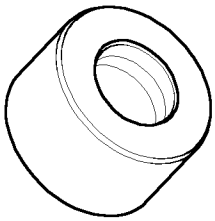
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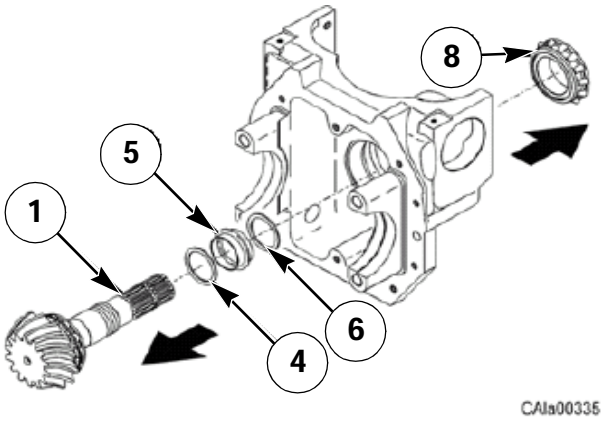


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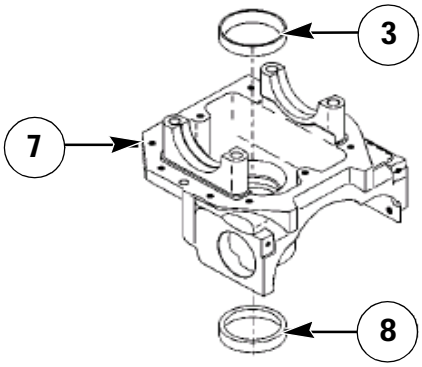
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STEP 3



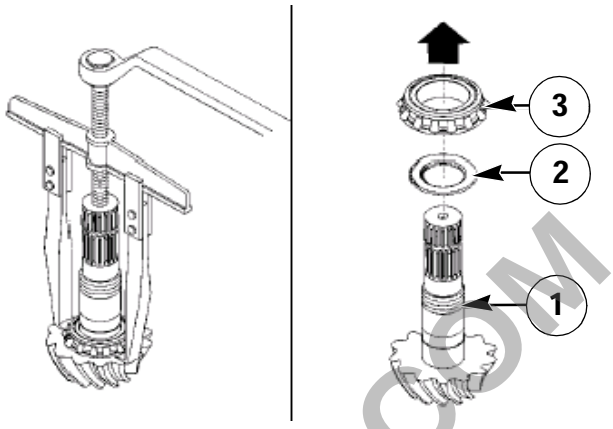
Tap the shaft with a soft hammer to remove the pinion (1). Remove the washers (4) and (6), the collapsible spacer (5) and the outer cone of the taper roller bearing (8).

STEP 4



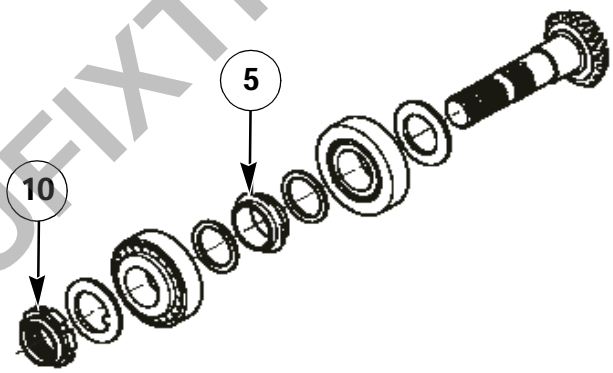
Place the differential support (7) on a fat surface and remove the bearing cups (3) and (8) using a drift and a hammer.

STEP 5



Remove the inner bearing cone (3) from the pinion using a standard puller. remove the underlying shim (2).

STEP 6



Check all the pinion components for wear.

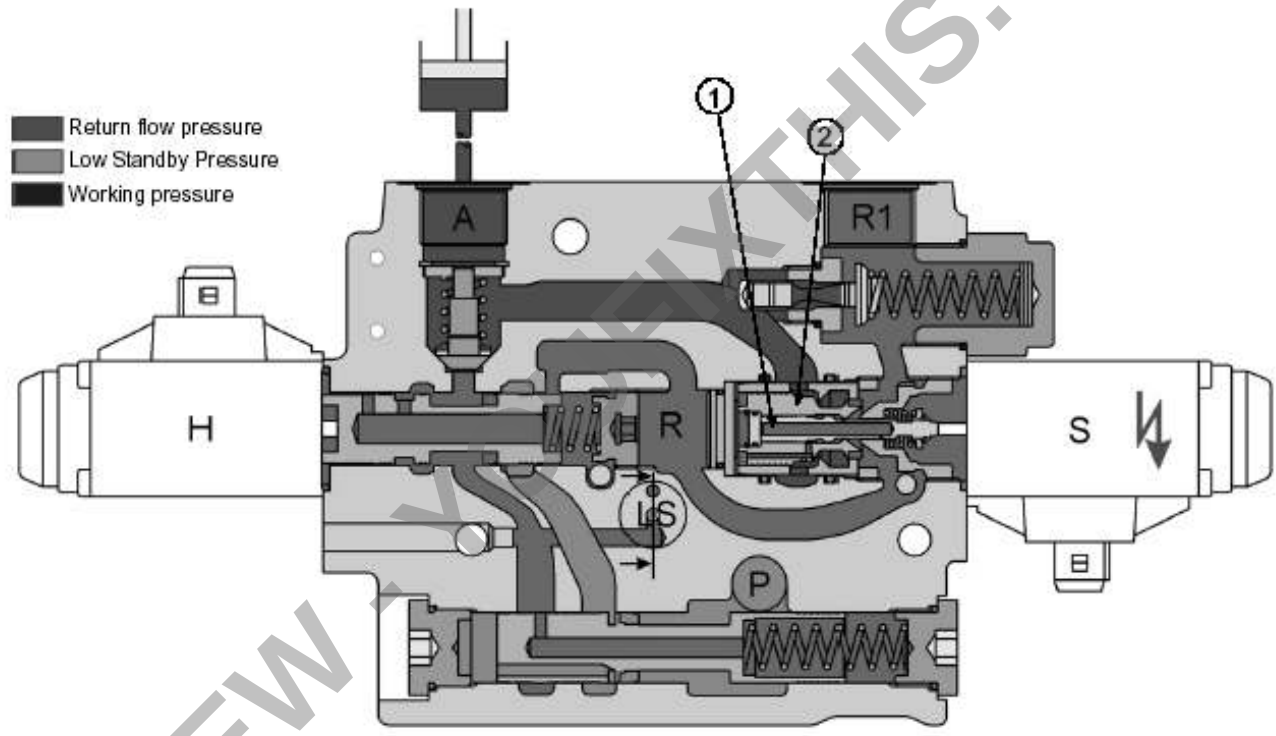
ATTENTION: *The ring nut (10) and the collapsible spacer* (5) *must be replaced when reassembling.*

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Rear hitch lower

When the operator gives the command to lower the implement the Bosch electronic control module looks at the desired rate of drop set on the drop rate potentiometer and powers the proportional solenoid accordingly, this then moves the lower spool to give the desired lower speed and height on the linkage arms. The lower spool connects the service port of the valve
directly, to the tank port when operated.



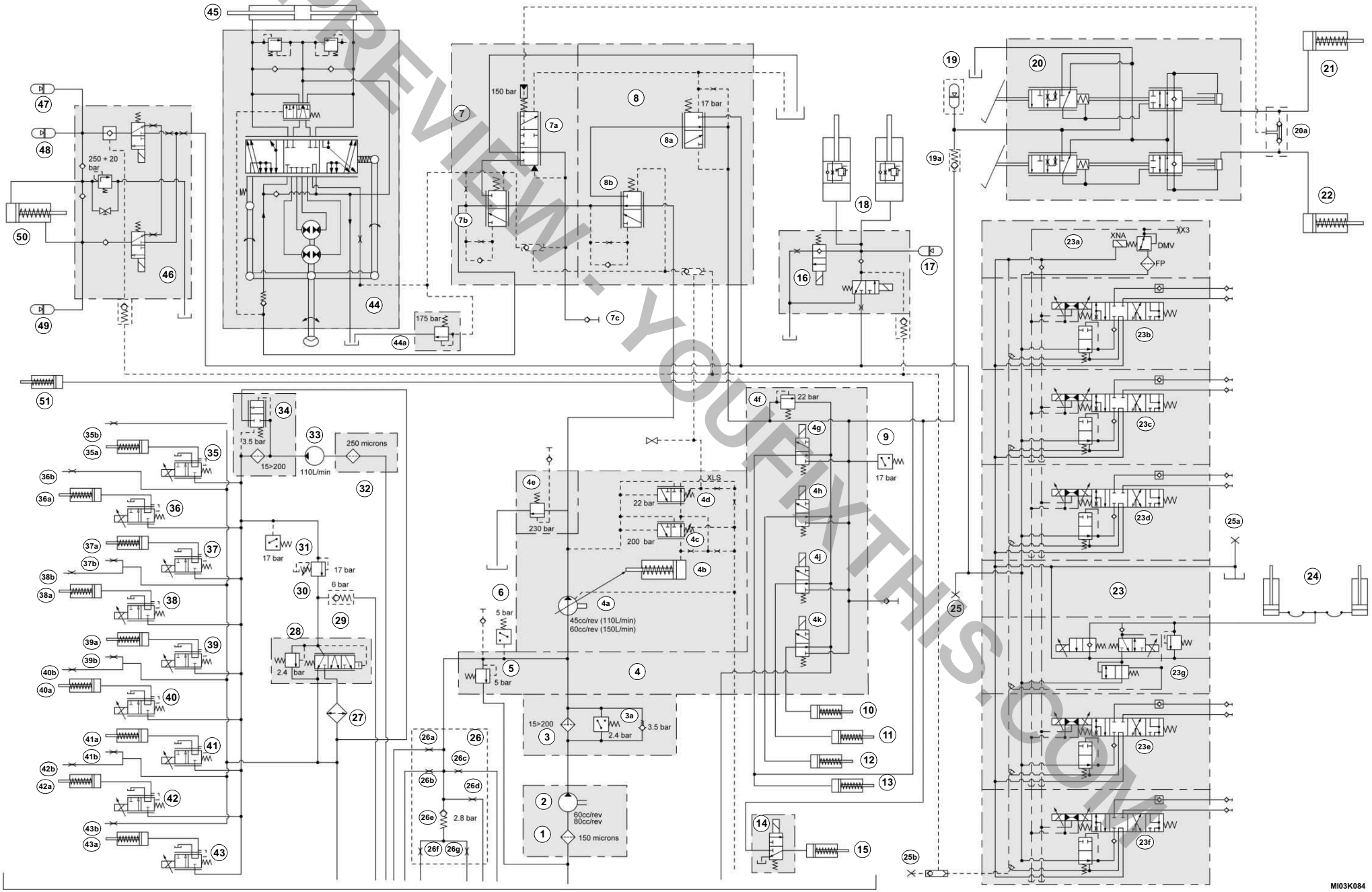
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Shock valve operation

A shock valve, or cushion valve as it is sometimes called, is fitted in the service port gallery linking it directly to tank. This valve is held closed by its spring. If however a heavy implement should bounce whilst being carried in the air and inflict the hydraulic system to a pressure spike that is likely to damage the hydraulics or anything else on the tractor, the shock valve will open, and release a small amount of oil to cushion the shock. The Bosch hitch module will then sense that the implement has dropped from its set position and lift it back up accordingly.

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Hydraulic Schematic for Tractors With Trailer Brake and External Steering Pressure Relief Valve - refer to key on page 29.



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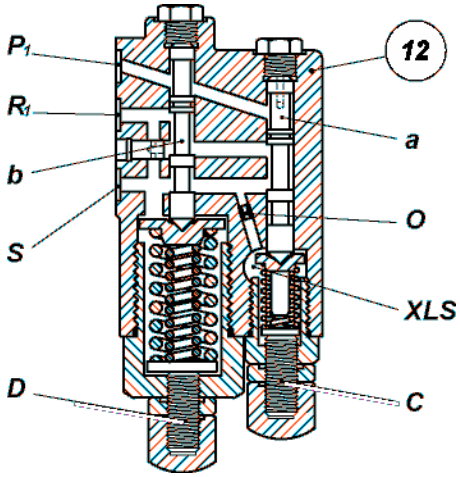


Figure 18

Identification of ports and channels (Fig. 18)

C. 22 bar adjusting screw
D. 200 bar adjusting screw
O. Decompression port
P. Pump pressure
R. To piston (**10**)
S. Return
XLS. Signal

IMPORTANT: *The adjusting screws C and D are factory set. Do not modify these settings.*

Pressure relief-valve (2) (Fig. 19)

The high pressure flowrate discharged by the variable displacement pump is directed towards the priority block(s).

The pressure relief-valve calibrated at 230 bar and screwed into the cover, ensures the safety of the high pressure circuit. In case of any abnormal variation in pressure, valve (**1**) raises and the oil is directed to the housing via ports **R** in the relief-valve.

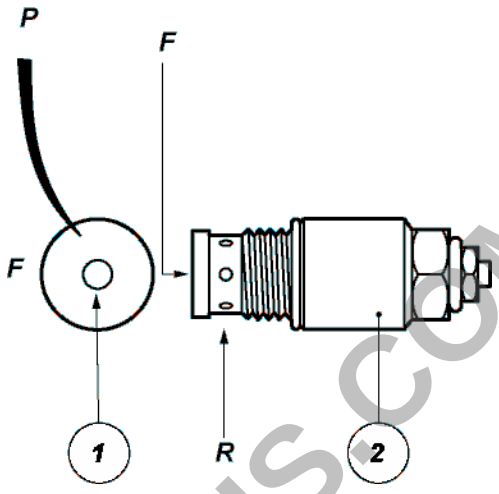


Figure 19

C. Removing and refitting the pump

Preliminary operation

STEP 27

Remove the right-hand side cover (see Page 14).

Removal (Fig. 20 - 21)

STEP 28

Disconnect any pipes linked to the pump (**41**).

STEP 29

Take out the obturator (**74**) along with its seal.

STEP 30

Immobilise the pump shaft by blocking pinions (**39**) (**82**) using a bronze drift.

STEP 31

Unscrew nut (**37**) and recover washer (**38**).

STEP 32

Via the port obturator, introduce an extractor so that its threaded rods screw into and lock in the threaded holes of the pinion. Operate the extractor and remove the pinion from the conical pump shaft.

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Hydraulics - Closed Centre
Auxiliary spool valves

General

Description of the components

The SB23LS - EHS BOSCH type spool valves that control the supply to the hydraulic couplers comprise two parts:

A hydraulic part:

See operation below.

An electro-hydraulic part comprising:

An ON / OFF solenoid valve and a 3-way pressure relief valve located on the left-hand end plate of the distribution block,

A pilot valve fitted in the electro-hydraulic unit.

This section only deals with the hydraulic part. For the electronic part, (see section 10001).

The SB23LS - EHS electro-hydraulically operated spool valves are fitted as standard equipment to ZTX series tractors with a closed centre hydraulic circuit. They are supplied with high pressure, high flow rate oil from the priority blocks.

When no functions are being activated, the entire flowrate is directed towards the spool valves. When certain functions are being supplied, the remaining flow then remains available to the auxiliary spool valves.

The main spool of the spool valve directs oil towards the outlet ports **A** or **B**.

Each outlet port is linked to the **LS** pilot line of the variable displacement pump regulating valve via the priority block(s).

The spool valves consist of both electronic and hydraulic components, the latter containing spools and valves.

Some elements cannot be repaired by replacing with spare parts.

The tractors are fitted with a basic block, comprising three to four spool valves (according to options).

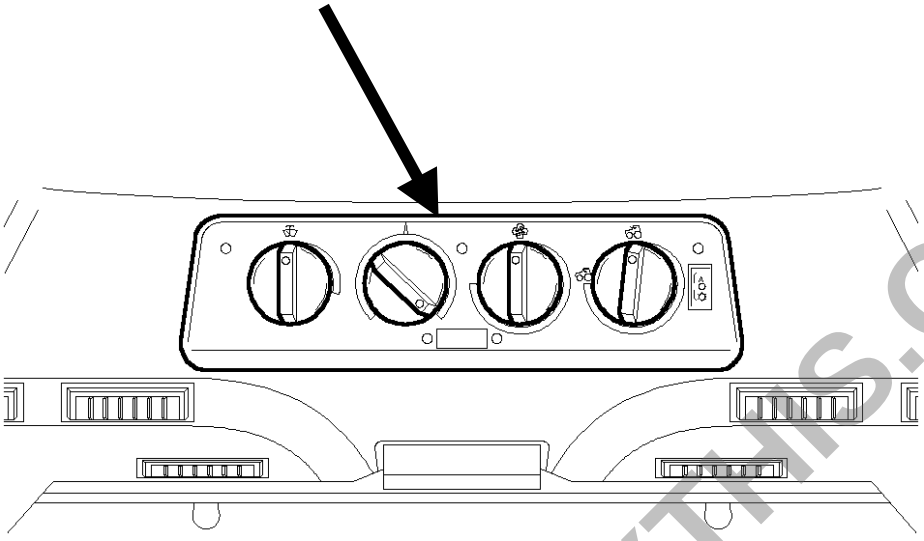
Parts list (Fig. 1)

(**1**) Electro-hydraulic auxiliary spool valves
(**6**) Left-hand end plate with pressure relief valve
(**14**) Right-hand end plate, LS outlet
(**17**) Lift control spool valve
(**21**) Oil manifold

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The climate control module is located within the climate control unit



The instrument cluster is also a controller



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Controller Error Code 47

Fault Description.

The signal from the auxiliary/remote valve AV4 flow control potentiometer is too high.

System Response.

The auxiliary/remote valve controller does not transmit CAN bus messages to valve AV4. Valve AV4 will display valve error codes 11 and 12.

Possible Cause.

1. Valve AV4 flow control potentiometer signal circuit shorted to another circuit.
2. Valve AV4 flow control potentiometer ground open circuit open circuit.
3. Damaged armrest harness or printed circuit board.
4. Bad AV4 flow control potentiometer.

IMPORTANT: *Before carrying out the following tests, refer to "CIRCUIT TESTING" on page 8.*

Circuit Checks/Corrective Action.

1. If a high potentiometer signal error code is present for all control, flow and timer potentiometers, refer to "Multiple Controller Potentiometer High Signal Error Codes" on page 50.
2. Disconnect the connector 50 (fender harness to armrest harness). Turn the key to the ON position, enable the auxiliary valve system and check for a voltage reading at connector 50 pin 11 for wire 530 Dark Blue.
   - If a voltage reading is detected check wire 530 Dark Blue between connector 44 and connector 50.
3. Remove the armrest lower cover and check the following:
   - The armrest harness between connector 50 and printed circuit board connector X2.
   - Armrest printed circuit board and connectors X2 and X8.
4. Disconnect the auxiliary/remote valve AV4 flow control and timer control potentiometers from the printed circuit board at connector X8. Check the resistance reading between terminals 1 and 3 (Red and Brown wires) of connector X8.
   - If a reading of approximately 5000 Ohms is not detected replace the AV4 flow control and timer control potentiometer assembly.
5. Turn the AV4 flow potentiometer knob to the 0% position and check the resistance reading between terminals 1 and 2 (Red and White wires) of connector X8.
   - If a reading of approximately 5000 Ohms is not detected replace the AV4 flow control and timer control potentiometer assembly.
6. Slowly turn the AV4 flow potentiometer knob from the 0% position to the 100% position and check the resistance reading between terminals 1 and 2 (Red and White wires) of connector X8.
   - A steadily reducing Ohms reading from approximately 5000 Ohms to approximately 1.5 Ohms should be observed. If the readings are incorrect or an intermittent reading is detected replace the AV4 flow control and timer control potentiometer assembly.
7. Replace the auxiliary/remote valve controller.

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SPECIAL TOOLS



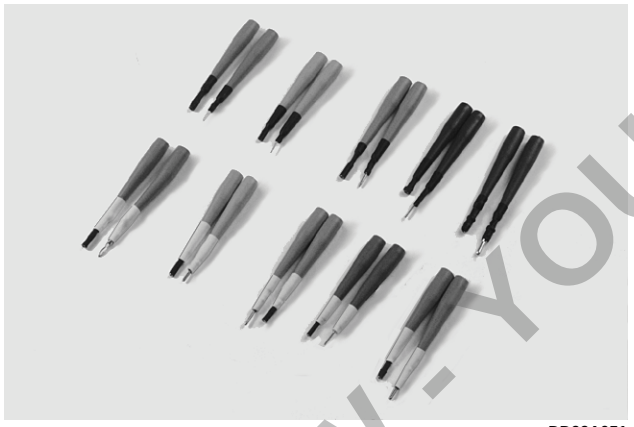
DD98H120

MC2616 MULTIMETER KIT includes:
MC2616-1 MULTIMETER ONLY
MC2616-2 TEST LEADS
MC2616-3 TEMPERATURE PROBE



MD04C017

1025T1 McCORMICK DIAGNOSTIC CENTRE
1014T1 COMMUNICATIONS ADAPTER



DD99A051

MC2656 TEST PROBE KIT



DD97E383

MC31000B HARNESS REPAIR KIT (EUROPE)

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AXLE POTENTIOMETER

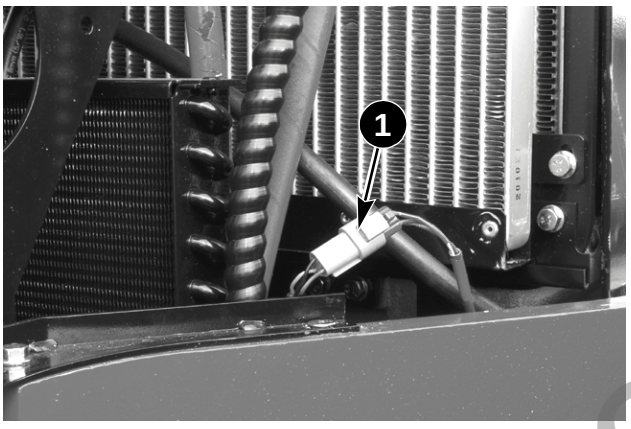
Potentiometer Check

IMPORTANT: *The potentiometer check is to be carried out in the calibration mode from the operators seat.*

STEP 1

Park the tractor on hard level ground, apply the parking brake, lower the axle to the bottom mechanical stops and STOP the engine. Put blocks in front of and behind the rear wheels.

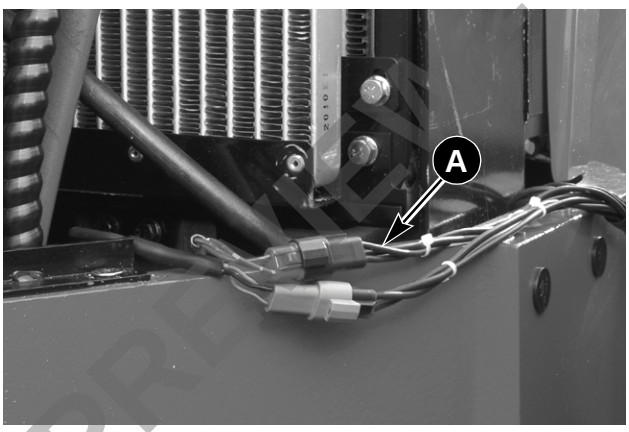
STEP 2



MD04B081

Disconnect the potentiometer harness connector (1).

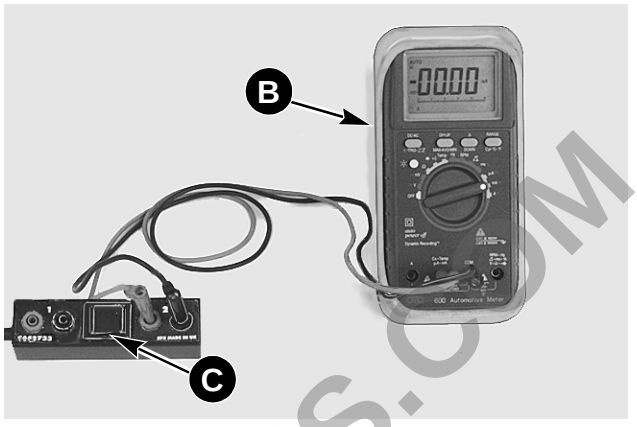
STEP 3



MD04B082

Connect Green wedge connectors of the test harness MC3000 (A) to the axle potentiometer harness. Route the test harness through the left hand cab door into the cab.

STEP 4

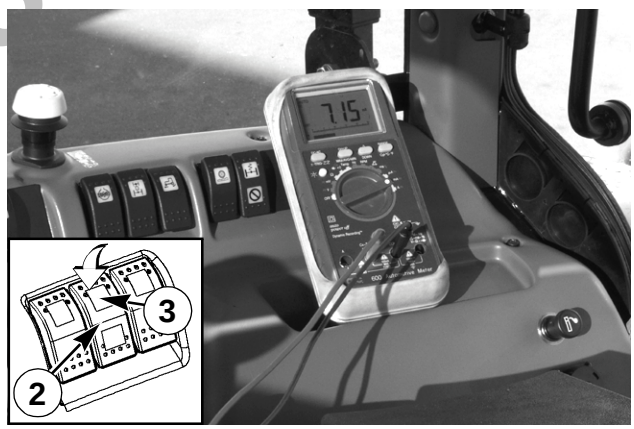


MD01G015

Connect the multimeter MC2616 (B) to test points 2 of MC3000. Put switch (C) in the CENTRE position and set the multimeter to read Milliamperes (mA).

IMPORTANT: *Before starting the engine make sure switch (C) is the in the center position, the multimeter is switched on and set to read milliampere (mA). Failure to do so will cause an error code to be displayed.*

STEP 5



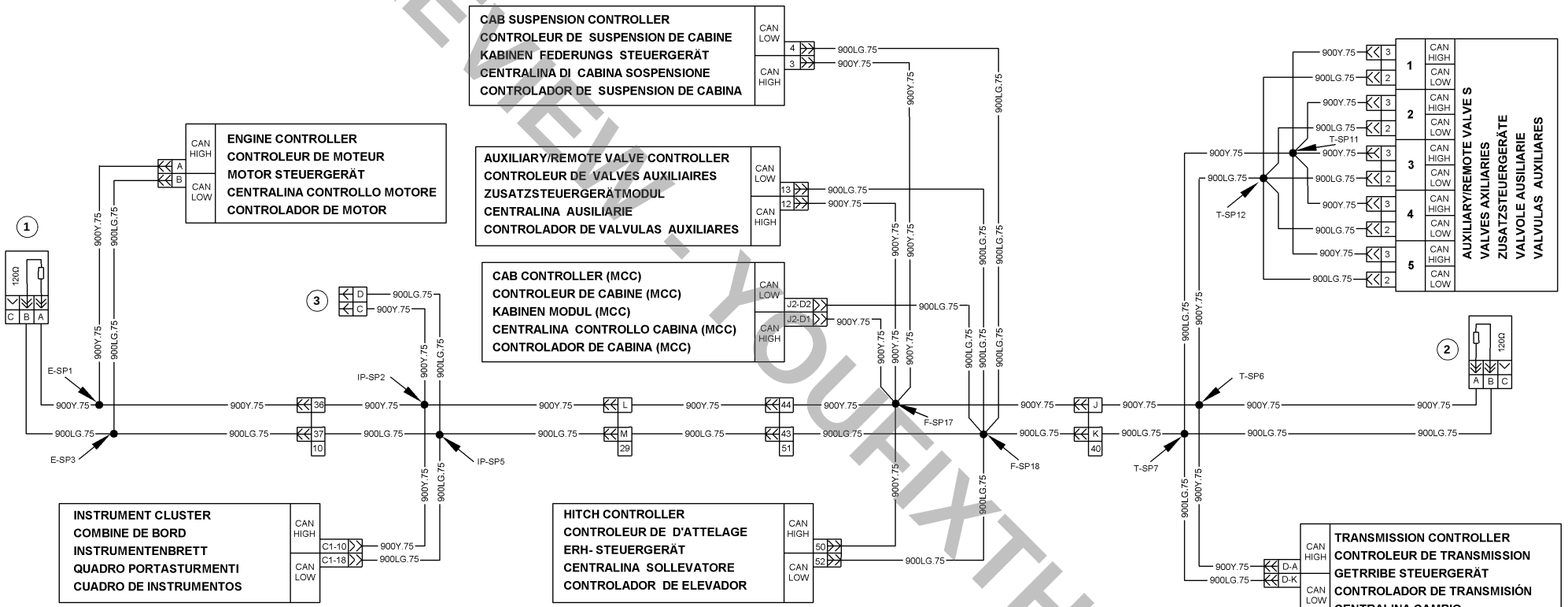
MD04B086

Start and run the engine at low idle. Press and hold the suspended front axle switch (2) in the suspension ON position for 10 seconds. When the suspension ON indicator light (3) begins to flash release the switch.

> **WARNING:** *Never operate the engine in a closed building. Proper ventilation is required under all circumstances.*

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CAN Bus Schematic Circuit



MI03k001

Key

1. CAN TERMINATION RESISTOR 1 (ENGINE HARNESS)
2. CAN TERMINATION RESISTOR 2 (TRANSMISSION HARNESS)
3. J1939 DIAGNOSTIC CONNECTOR

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Error Code 75

Fault Description

Clutch 'L' (Powershift) solenoid fine control current (current 0) above specified limits.

Possible Cause

1. Clutch 'L' solenoid return wire short circuit.
2. Bad transmission controller.

IMPORTANT: *Before carrying out the following tests, refer to "CIRCUIT TESTING" on page 12.*

Circuit Checks/Corrective Action

1. Check the Clutch 'L' solenoid return wire (L) Brown for short circuit to 12 volts.
2. Reprogram the transmission controller and calibrate the transmission.
3. If the error remains replace the transmission controller and calibrate the transmission.

Error Code 76

Fault Description

Clutch 'L' (Powershift) solenoid fine control current (current 0) below specified limits.

Possible Cause

1. Clutch 'L' solenoid return wire short circuit.
2. Bad transmission controller.

IMPORTANT: *Before carrying out the following tests, refer to "CIRCUIT TESTING" on page 12.*

Circuit Checks/Corrective Action

1. Check the Clutch 'L' solenoid return wire (L) Brown for short circuit to ground.
2. Reprogram the transmission controller and calibrate the transmission.
3. If the error remains replace the transmission controller and calibrate the transmission.

Error Code 77

Fault Description

Loss of CAN message.

Possible Cause

1. Bad CAN circuit.
2. Bad CAN termination resistor(s).
3. Bad Cab controller.

IMPORTANT: *Before carrying out the following tests, refer to "CIRCUIT TESTING" on page 12.*

Circuit Checks/Corrective Action

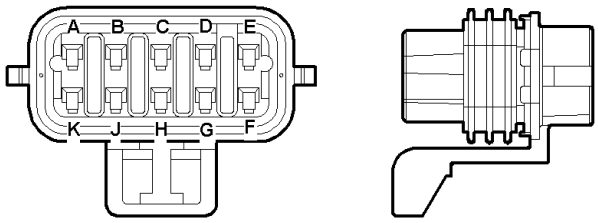
1. Check the CAN high wire 900 Yellow and CAN low wire 900 Light Green for open or short circuit.
2. Check the termination resistor connectors.
3. Check the resistance of the termination resistors.
4. Reprogram the cab controller and calibrate the transmission.
5. If the error remains replace the cab controller and calibrate the transmission.

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Connector 45a (Black)

Location: Rear Cab Panel



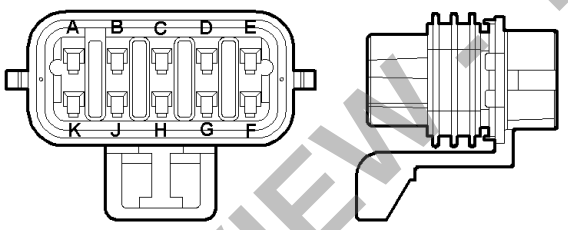
MI04A058

TRANSMISSION CONTROLLER CONNECTOR A

Cavity	Wire No	Circuit
A	(C) R	POWERSHIFT SOLENOID ‘C’
B	(A) R	POWERSHIFT SOLENOID ‘A’
C	(B) R	POWERSHIFT SOLENOID ‘B’
D	(DIFF) R	DIFFERENTIAL LOCK SOLENOID
E	(H) R	POWERSHIFT SOLENOID ‘H’
F	(L) R	POWERSHIFT SOLENOID ‘L’
G	(M) R	POWERSHIFT SOLENOID ‘M’
H	(1) R	POWERSHIFT SOLENOID ‘1’
J	(2) R	POWERSHIFT SOLENOID ‘2’
K	(R) R	POWERSHIFT SOLENOID ‘R’

Connector 45b (Gray)

Location: Rear Cab Panel



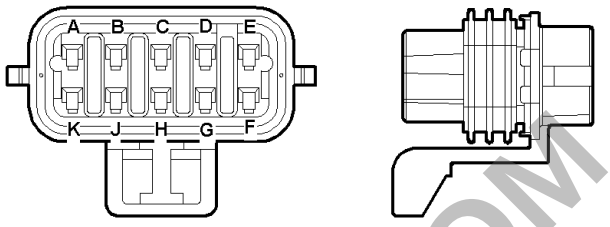
MI04A059

TRANSMISSION CONTROLLER CONNECTOR A

Cavity	Wire No	Circuit
A	BR	GROUND
B	662 R	INCHING PEDAL SWITCH (BOTTOM OF PEDAL)
C	280 Y	POWERSHIFT SOLENOID ‘B’
D	(RPTO) BR	REAR PTO SOLENOID RETURN
E	593 BR	PTO BRAKE SOLENOID RETURN
F	593 R	PTO BRAKE SOLENOID FEED
G	(RPTO) R	REAR PTO SOLENOID FEED
H	(4WD) R	MFD SOLENOID FEED
J	550 R	SWITCHED B+
K	BR	GROUND

Connector 45c (Black)

Location: Rear Cab Panel



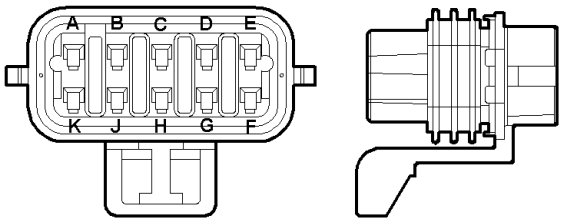
MI04A058

TRANSMISSION CONTROLLER CONNECTOR A

Cavity	Wire No	Circuit
A	(C) BR	POWERSHIFT SOLENOID ‘C’
B	(A) BR	POWERSHIFT SOLENOID ‘A’
C	(B) BR	POWERSHIFT SOLENOID ‘B’
D	(1) BR	POWERSHIFT SOLENOID ‘1’
E	(H) BR	POWERSHIFT SOLENOID ‘H’
F	(L) BR	POWERSHIFT SOLENOID ‘L’
G	(M) BR	POWERSHIFT SOLENOID ‘M’
H	(2) R	POWERSHIFT SOLENOID ‘2’
J	(R) BR	POWERSHIFT SOLENOID ‘1’
K	(DIFF) BR	DIFFERENTIAL LOCK SOLENOID

Connector 45d (Gray)

Location: Rear Cab Panel



MI04A059

TRANSMISSION CONTROLLER CONNECTOR A

Cavity	Wire No	Circuit
A	900 Y	CAN HIGH
B	- - - - -	OPEN
C	- - - - -	OPEN
D	- - - - -	OPEN
E	- - - - -	OPEN
F	254 Y	PARK LOCK INDICATOR SWITCH
G	267 BR	TRANSMISSION TEMPERATURE SENDER RETURN
H	- - - - -	OPEN
J	267 Y	TRANSMISSION TEMPERATURE SENDER FEED
K	900 LG	CAN LOW

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