

Machine Identification Plate

Each machine has an identification plate located at **X**. The Vehicle Identification Number (VIN), and the serial numbers of the engine and transmission are stamped on the plate.

Typical Vehicle Identification No. (VIN)



A = Manufacturing Code

B = Machine Range

* **C** = Engine Code:

- 07 = 1006-6T4
- 10 = 6BTA
- 13 = New 1000 Series, Rating 1941/2300 (2115)
- 14 = New 1000 Series, Rating 1929/2300 (2125)
- 15 = New 1000 Series, Rating 1947/2300 (2135)
- 16 = New 1000 Series, Rating 1930/2200 (2150)
- 20 = Fastrac 2140 engine

* **D** = Transmission Speed Code:

- 3 = 30 km/h
- 4 = 40 km/h
- 5 = 55 km/h
- 6 = 65 km/h
- 7 = 75 km/h

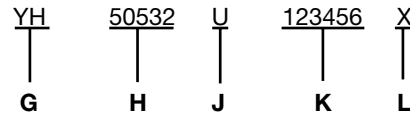
C = 40 km/h (Fastrac 2140 only)

E = Vehicle Max. Speed Code:

- 30 = 30 km/h
- 40 = 40 km/h
- 50 = 50 km/h
- 80 = 80 km/h

F = Sequential Serial Number

Typical Engine Identification Number



G = Engine Type:-

- YB = Turbocharged 1000 Series, 6 cylinder
- YD = Intercooled 1000 Series, 6 cylinder
- YH = Turbocharged New 1000 Series, 6 cylinder
- YK = Intercooled New 1000 Series, 6 cylinder

H = Build List Number

(see **Engine Technical Data** for details)

J = Country of Origin

K = Engine Serial Number

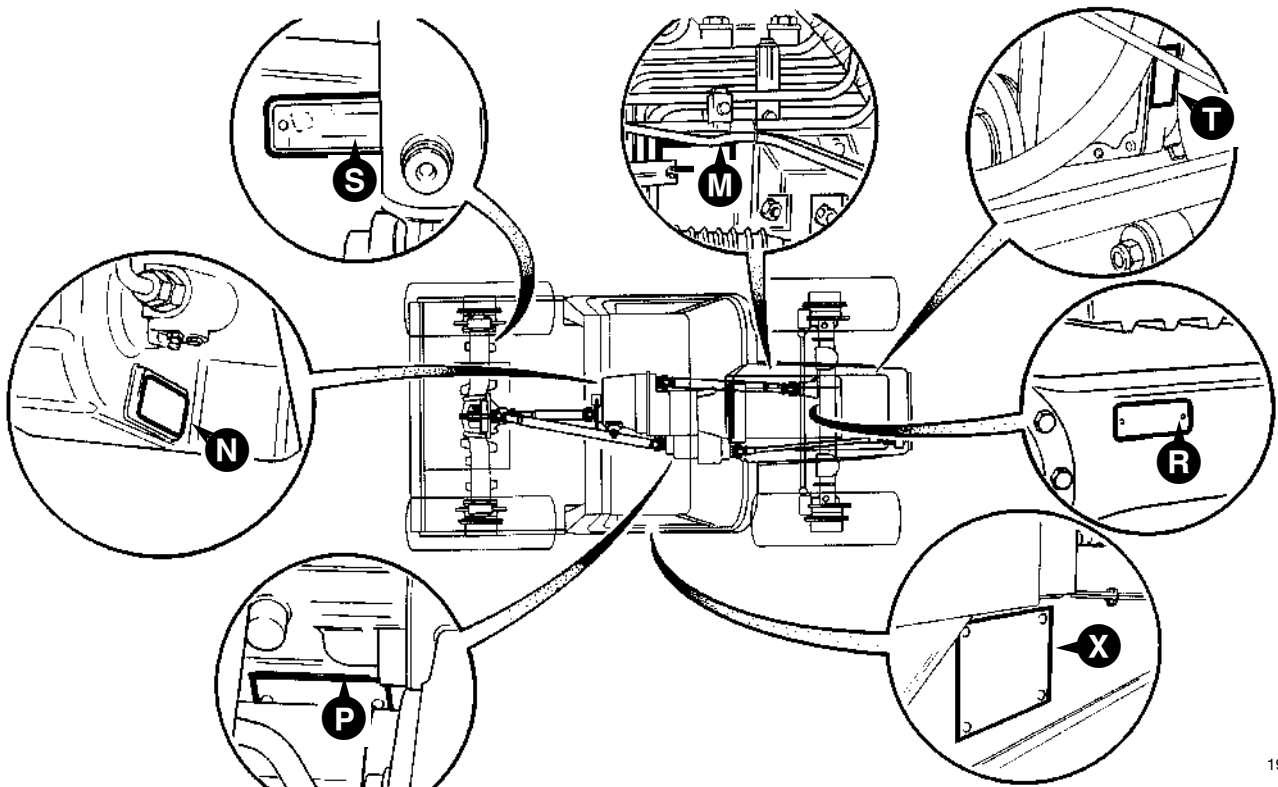
L = Year of Manufacture

* **Note:** Fastrac 2140 and 3185 engines are identified by the model number and a separate engine serial number.

Unit Identification

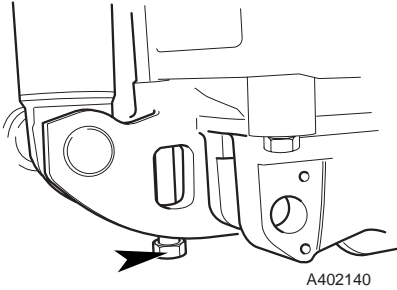
The serial number of each major unit is also stamped on the unit itself as shown below. If a major unit is replaced by a new one, the serial number on the plate will be wrong. Either stamp the new number of the unit on the identification plate, or simply stamp out the old number. This will prevent the wrong unit number being quoted when replacement parts are ordered.

- * Fastrac 2115, 2125, 2135, 2150 and 3155 Engines **M**
- Fastrac 2140 and 3185 Engines **T**
- Transmission (Assembly of all three gearboxes) **N**
- Speed Gearbox **P**
- Front Axle **R**
- Rear Axle **S**

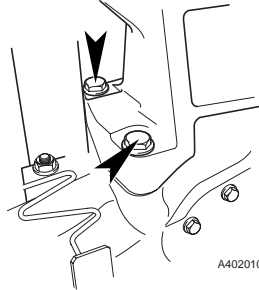


Dacromet Fasteners (mottled silver finish) - List of Torque Settings (cont.)

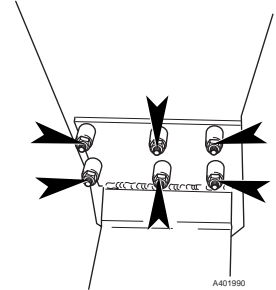
Location: Lower Link Bolt (capscrew)
Nm: 654 **kgf m:** 67 **lbf ft:** 482



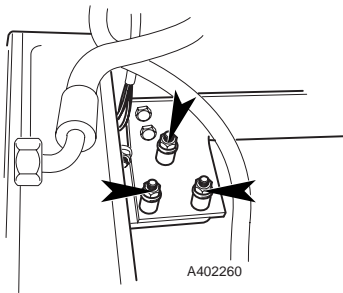
Location: Tower Casting to Axle
Nm: 392 **kgf m:** 40 **lbf ft:** 289



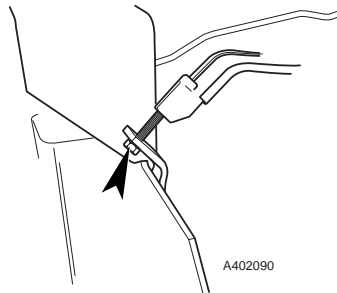
Location: Front Lower Crossmember
Nm: 115 **kgf m:** 12 **lbf ft:** 85



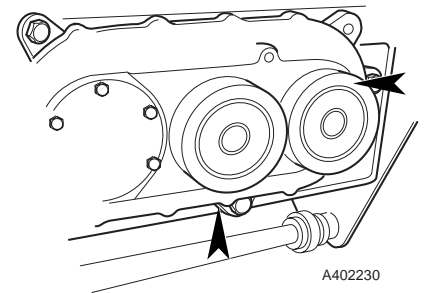
Location: Rear Lower Crossmember
Nm: 200 **kgf m:** 20 **lbf ft:** 148
 (3000 series machines only)



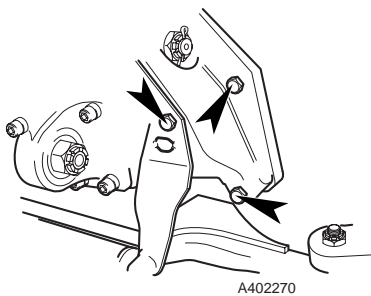
Location: Fuel Tank Support Strap
Nm: 47.5 **kgf m:** 4.8 **lbf ft:** 35
 (2000 series machines only)



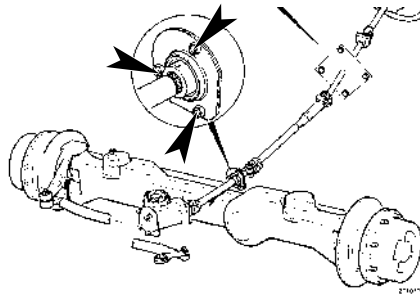
Location: Front P.T.O. Box
Nm: 200 **kgf m:** 20 **lbf ft:** 148



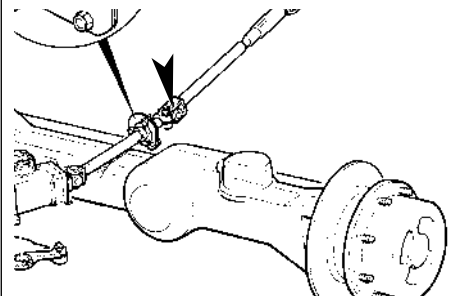
Location: Front Axle Upper Arm Mounting Bracket
Nm: 200 **kgf m:** 20 **lbf ft:** 148
 (3000 series machines only)



Location: Steershaft Bearing
Nm: 28 **kgf m:** 2.9 **lbf ft:** 21
 (3000 series machines only)



Location: Steershaft Intermediate UJ
Nm: 38 **kgf m:** 3.9 **lbf ft:** 28
 (3000 series machines only)



Operating Safety

DANGER

Parking

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

WARNING

Roll Over Protection Structure (ROPS)

The machine is fitted with a Roll Over Protection Structure (ROPS). You could be killed or seriously injured if you operate the machine with a damaged or missing ROPS. If the ROPS has been in an accident, do not use the machine until the structure has been renewed. Modifications and repairs that are not approved by the manufacturer may be dangerous and will invalidate the ROPS certification.

13-1-1-8/1

WARNING

Entering/Leaving

Always face the machine when entering and leaving the cab. Use the step(s) and handrails. Make sure the step(s), handrails and your boot soles are clean and dry. Do not jump from the machine. Do not use the machine controls as handholds, use the handrails.

INT-2-1-7

WARNING

Seat

Position the seat so that you can comfortably reach the machine controls. You could have an accident if you operate the machine with the seat in the wrong position.

INT-3-3-5

WARNING

Seat Belt

Operating the machine without a seat belt can be dangerous. Before starting the engine, make sure your seat belt is fastened. Check the tightness and condition of the seat belt securing bolts regularly (see maintenance schedules).

INT 2 -1-8/1

WARNING

Passengers

Ensure that passengers use the seat provided in the cab. Passengers must not be carried on the rear deck of the vehicle under any circumstances.

13-1-1-1/1

WARNING

Reversing

Reversing at high speeds can cause accidents. Always drive at a safe speed to suit working conditions

13-1-1-3

WARNING

Visibility

Accidents can be caused by working in poor visibility. Keep windows clean and use your lights to improve visibility. Do not operate the machine if you cannot see properly.

INT-2-1-11

WARNING

Practice

You or others can be killed or seriously injured if you do unfamiliar operations without first practising them. Practise away from the work site on a clear area. Keep other people away. Do not perform new operations until you are sure you can do them safely.

INT-2-1-1

WARNING

Machine Limits

Operating the machine beyond its design limits can damage the machine, it can also be dangerous. Do not operate the machine outside its limits. Do not try to upgrade the machine performance with unapproved modifications.

INT-2-1-4

WARNING

Brakes

Do not coast the machine with the engine stopped as the main brakes will only operate for a limited number of applications and hydraulic trailer brakes will not function at all. Also the steering will become very heavy.

13-1-1-5/2

CAUTION

Hydraulic Trailer Brakes

Trailers with single line hydraulic brakes used in the United Kingdom are subject to a maximum speed of 20 mph (32 kph).

13-2-2-8

CAUTION

Trailer Brakes

Trailers with single line air brakes used in the Republic of Germany are subject to a maximum speed of 25 km/h (15 mph).

13-2-2-13

WARNING

Engine

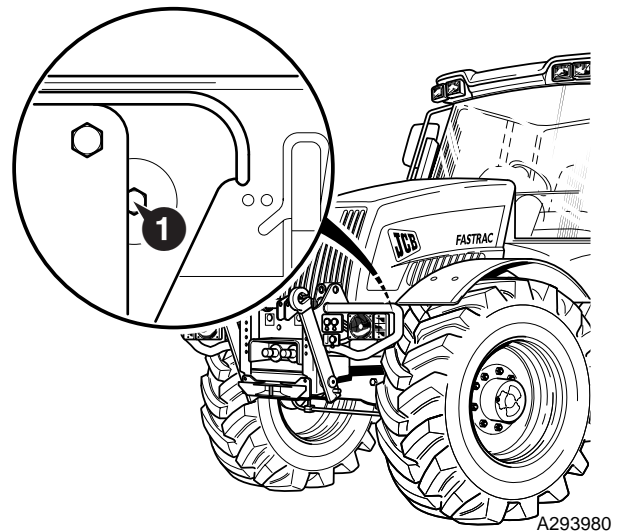
The engine has rotating parts. Do not open the engine cover while the engine is running. Do not use the machine with the cover open.

INT-2-1-6

Steering Box Input Shaft Seal

Grease at point **1** through the hole in the chassis side member.

Note: Apply only one shot of grease from a manual grease gun with a rigid connector. Excessive greasing would damage the internal seals of the steering box.



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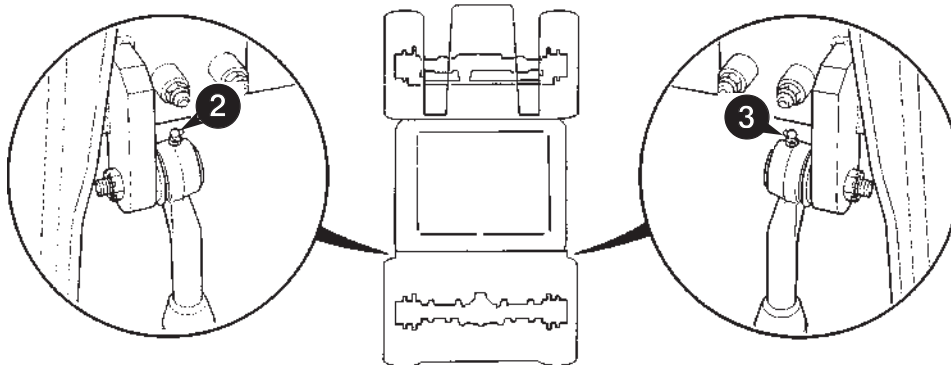
Rear Anti-roll Bar Ball Joints

⚠ 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

Grease points **2** and **3**.



262210

Cleaning the Radiator

If the radiator tubes or fins become clogged, the radiator will be less efficient.

- 1 Stop the engine.

⚠ WARNING

Make sure the engine cannot be started. Disconnect the battery before doing this job.

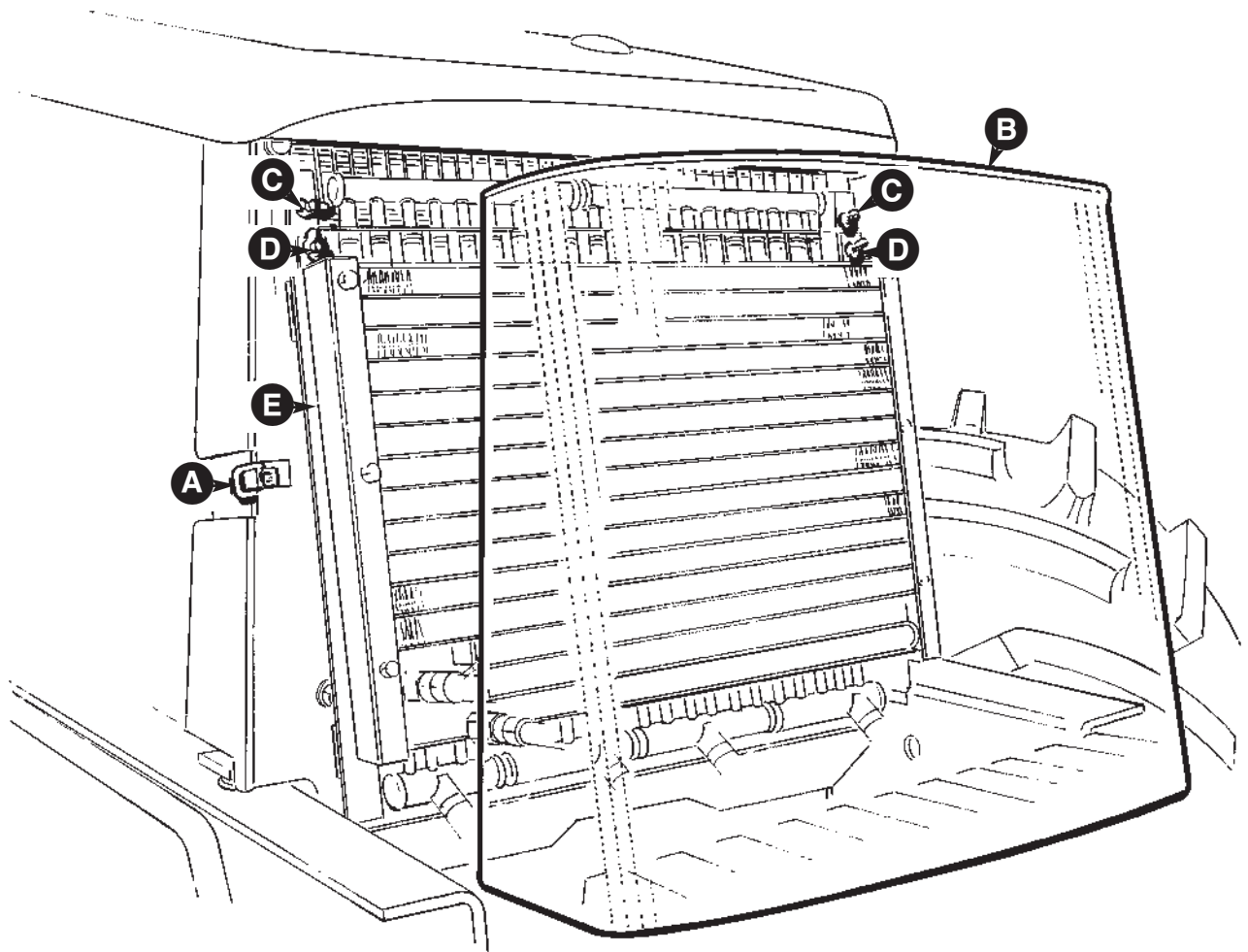
2-3-3-5

- 2 Release fasteners **A** (one each side) and lift out grille **B**.
- 3 Remove nuts **C** and **D**. Swing the coolers and condenser **E** forwards and downwards.

- 4 Brush off all debris from the tubes and fins of the radiator, coolers and condenser. Make sure all the loosened material is brushed out of the radiator enclosure.

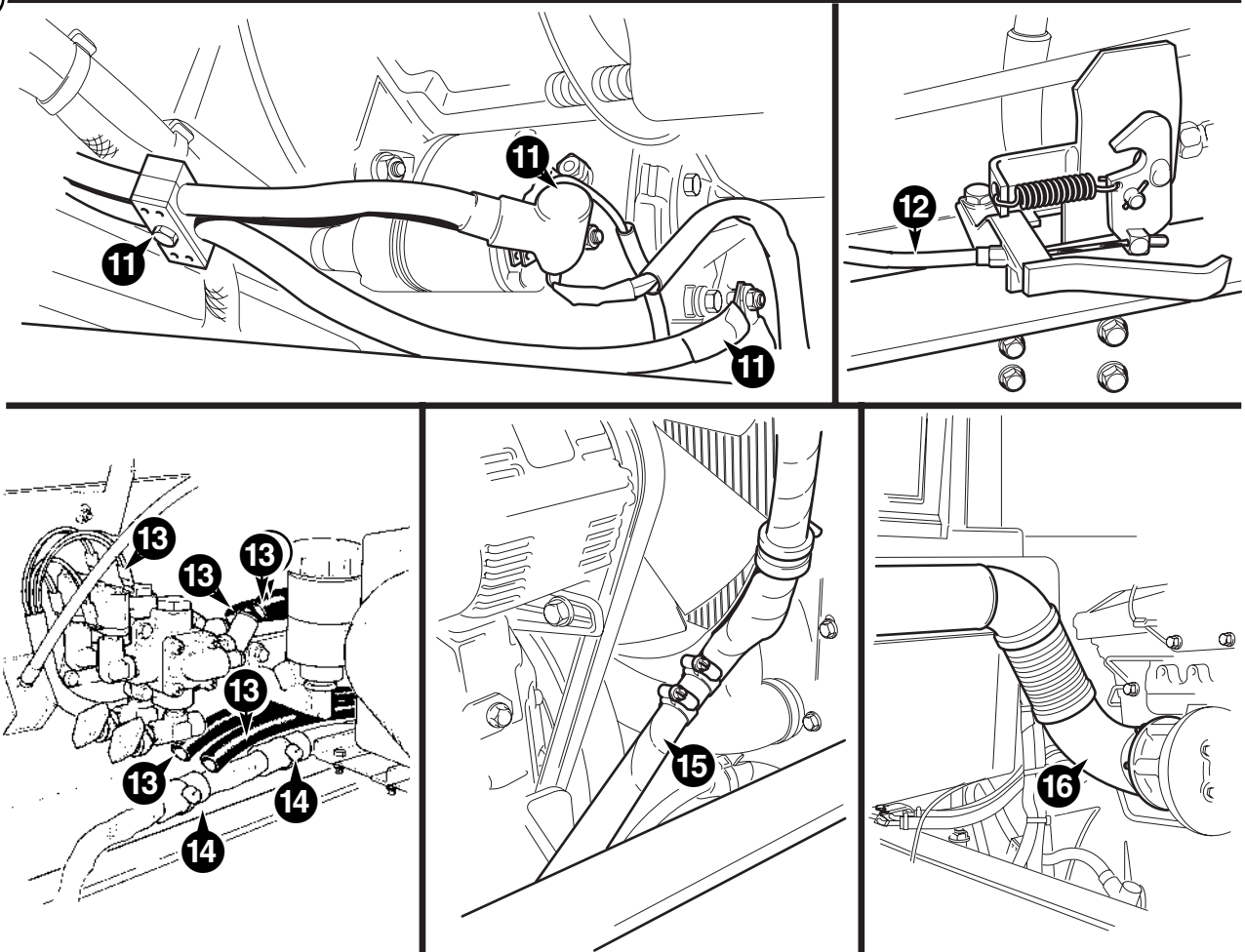
- 5 Reposition the coolers and the condenser. Refit nuts **C** and **D**.

- 6 Refit the grille and secure with fasteners **A**.



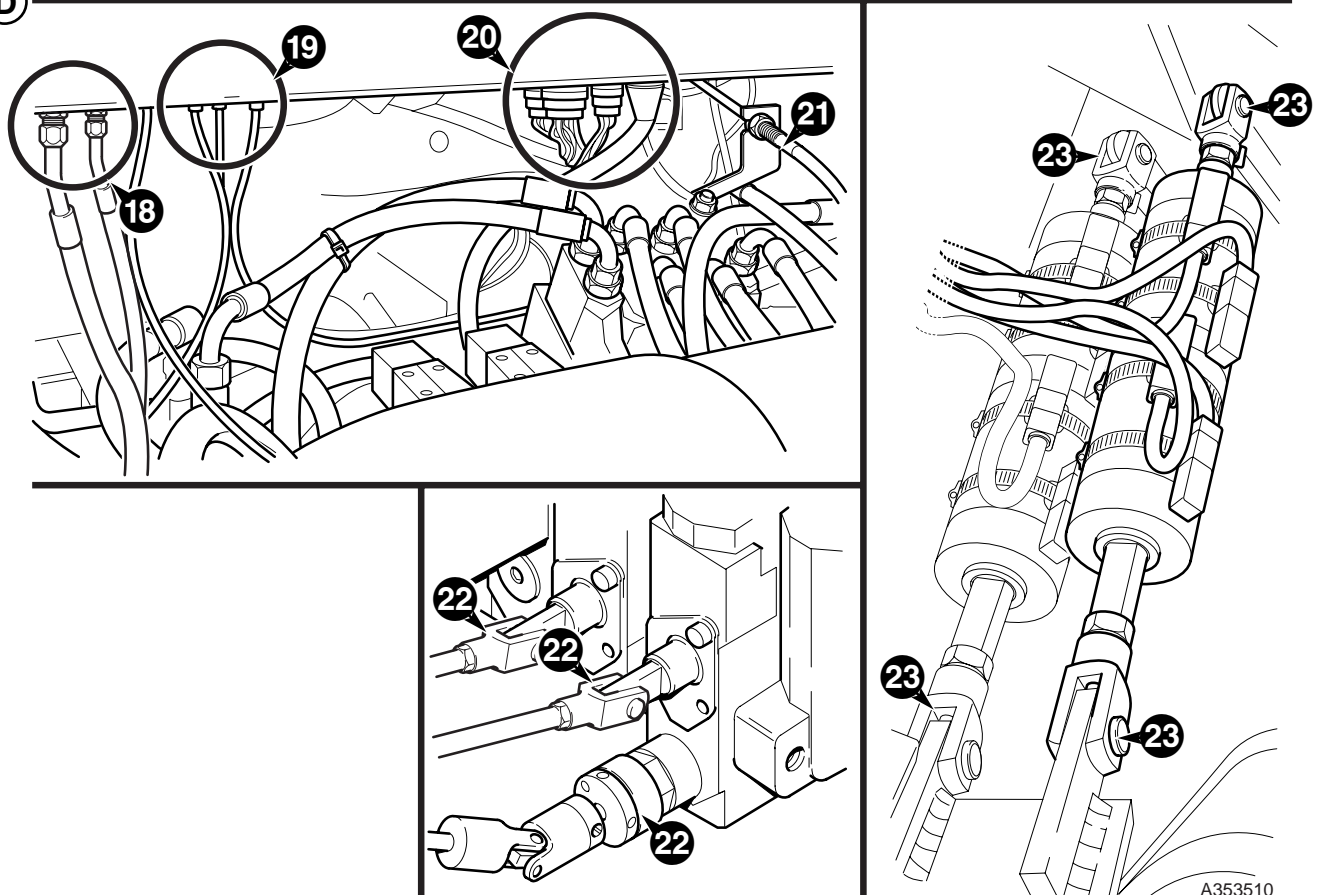
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C



A353430

D



A353510

*** Wiring Diagram
- Early Machines**

Component Key

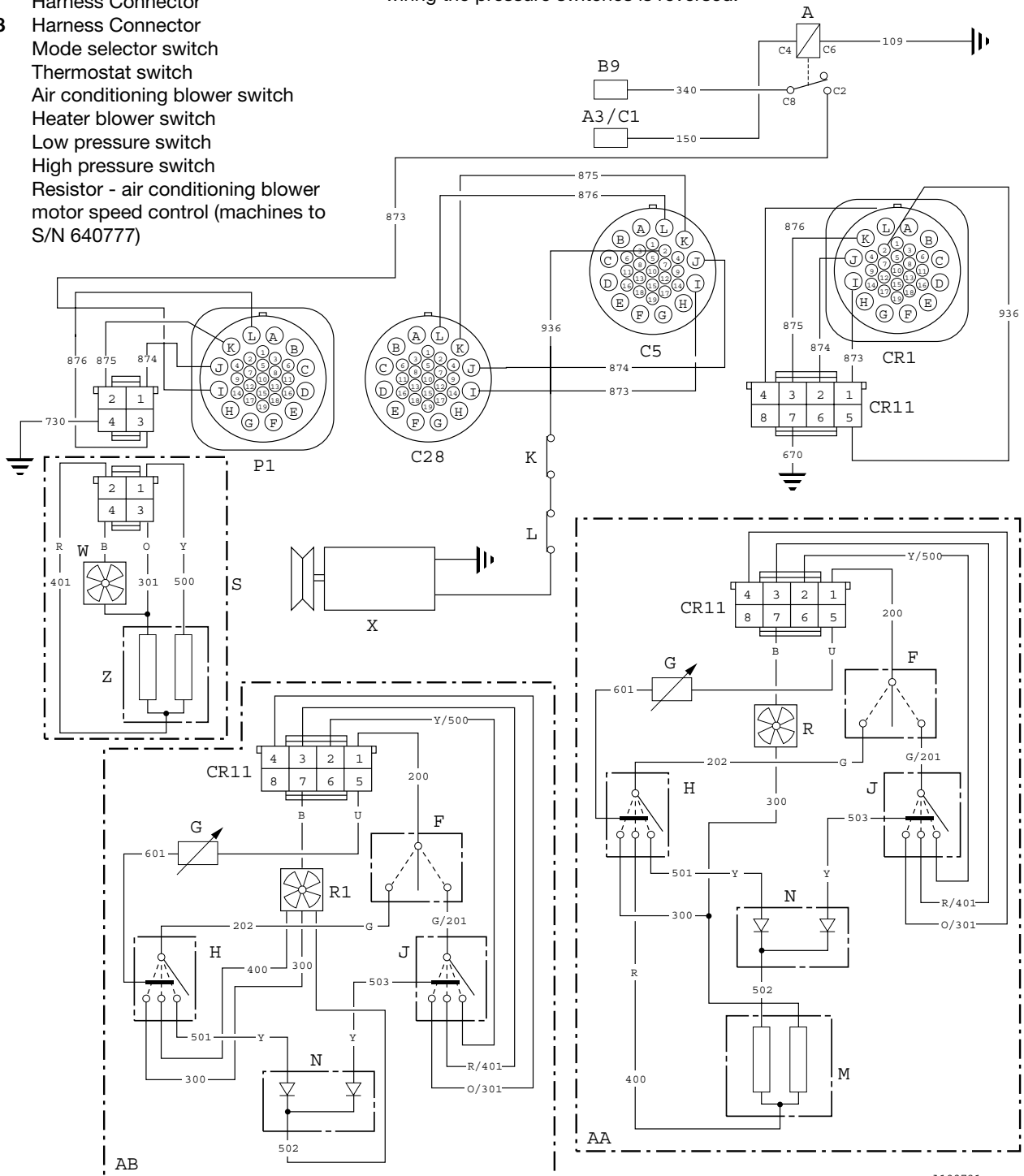
- A** Air Conditioning Relay
- AA** Evaporator/blower unit and control panel (machines to S/N 640777)
- AB** Evaporator/blower unit and control panel (machines from S/N 640778)
- A3/C1** Fuse
- B9** Fuse
- CR1** Harness Connector
- CR11** Harness Connector
- C5** Harness Connector
- C28** Harness Connector
- F** Mode selector switch
- G** Thermostat switch
- H** Air conditioning blower switch
- J** Heater blower switch
- K** Low pressure switch
- L** High pressure switch
- M** Resistor - air conditioning blower motor speed control (machines to S/N 640777)

- N** Diode
- P1** Harness Connector
- R** Air conditioning blower motor (machines to S/N 640777)
- R1** Air conditioning blower motor/resistor assembly) (machines from S/N 640778)
- S/N** Heater Unit
- S** Heater blower motor
- W** Heater blower motor
- X** Compressor
- Z** Resistor - heater blower motor speed control

Wire Colour Code

- B** Black
- G** Green
- O** Orange
- R** Red
- U** Blue
- Y** Yellow

Note: On some machines, the sequence of wiring the pressure switches is reversed.



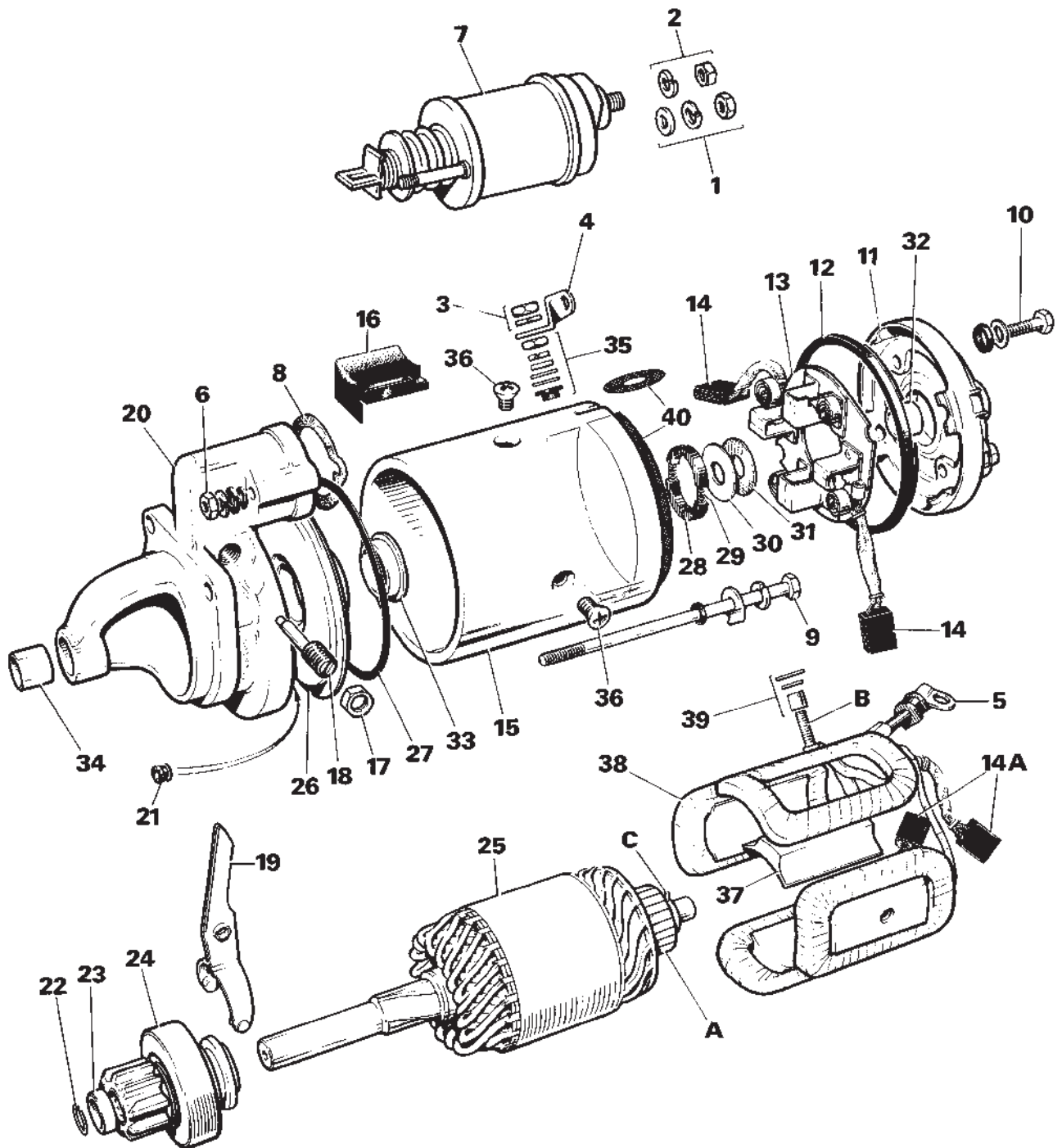
A198731

Wire Numbers

Note: Where the term 'CAN' is used in the wire number list, this is an abbreviation for CAN-BUS (see Technical Data).

INSTRUMENTATION SIGNAL WIRES (continued)

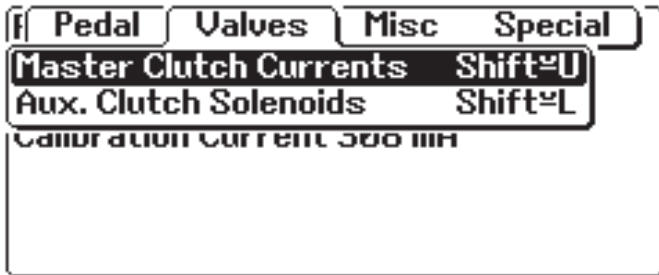
| No. | Size | Description | 491 | 0.6 | Control unit (ECU) to select solenoid connector (reverse). | 514E | 0.6 | CAN low splice 3 to CAN low splice 1. |
|--------|------|--|-------|-----|--|--------|-----|--|
| * 478A | 0.6 | Power range medium splice to control unit (ECU). | 492 | 0.6 | Control unit (ECU) to select solenoid connector (low). | 514F | 0.6 | CAN low splice 1 to instrument cluster. |
| * 478B | 0.6 | Power range medium splice to instrument cluster. | 493 | 0.6 | Control unit (ECU) to select solenoid connector (medium). | 514G | 0.6 | CAN low splice 1 to resistor (instrument cluster end). |
| * 479 | 0.6 | Range change column switch or column switch splice (less HI range) to power range high splice. | * 494 | 0.6 | Control unit (ECU) to select solenoid connector (high). | * 514H | 0.6 | CAN low splice 3 to Minder interconnect or Minder ECU |
| * 479A | 0.6 | Power range high splice to control unit (ECU). | * 495 | 0.6 | Powershift ECU to clutch up switch (dry clutch machines only). | 515 | 0.6 | Control unit (ECU) to CAN high splice 2. |
| * 479B | 0.6 | Power range high splice to instrument cluster. | 496 | 0.6 | 4WS control panel to instrument cluster (4WS). | 515A | 0.6 | CAN high splice 2 to resistor (control unit ECU end). |
| * 479C | 0.6 | Column switch splice to column switch (less HI range). | 497 | 0.6 | Speed sensor to instrument cluster (+12v presence). | 515B | 0.6 | CAN high splice 2 to CAN high splice 3. |
| * 479D | 0.6 | Column switch splice to column switch (less HI range). | * 498 | 0.6 | Column switch button to instrument cluster (wet clutch machines only). | 515C | 0.6 | CAN high splice 3 to 4WS control panel (4WS). |
| * 480 | 0.6 | Range change column switch to power range reverse splice. | 500 | 0.6 | Radar speed sensor to radar signal splice. | 515D | 0.6 | CAN high splice 3 to diagnostic connector. |
| * 480A | 0.6 | Power range reverse splice to control unit (ECU). | 500A | 0.6 | Radar signal splice to instrument cluster. | 515E | 0.6 | CAN high splice 3 to CAN high splice 1. |
| * 480B | 0.6 | Power range reverse splice to instrument cluster. | 500B | 0.6 | Radar signal splice to EDC ECU. | 515F | 0.6 | CAN high splice 1 to instrument cluster. |
| * 481 | 0.6 | Powershift ECU to instrument cluster ('R' display) (dry clutch machines only). | 501 | 0.6 | Radar speed sensor to instrument cluster (presence signal). | 515G | 0.6 | CAN high splice 1 to resistor (instrument cluster end). |
| * 482 | 0.6 | Powershift ECU to instrument cluster ('L' display) (dry clutch machines only). | 502 | 0.6 | Instrument cluster to fuel return meter. | * 515H | 0.6 | CAN high splice 3 to Minder interconnect or Minder ECU. |
| * 483 | 0.6 | Powershift ECU to instrument cluster ('M' display) (dry clutch machines only). | 503 | 0.6 | ECU to raise solenoid (EDC). | 516 | 0.6 | Instrument cluster to diagnostics connector (serial TX). |
| * 484 | 0.6 | Powershift ECU to instrument cluster ('H' display) (dry clutch machines only). | 503A | 0.6 | ECU to control panel (EDO). | 517 | 0.6 | Instrument cluster to diagnostics connector (serial RX). |
| 485 | 0.6 | Control unit (ECU) to instrument cluster (3 kph signal). | 504 | 0.6 | ECU to lower solenoid (EDC). | 518 | 0.6 | Instrument cluster to EDC ECU (slip -). |
| 486 | 0.6 | Control unit (ECU) to instrument cluster (1 kph signal splice) (2000 series) | 504A | 0.6 | ECU to control panel (EDO). | * 520 | - | Heated front screen. |
| 486A | 0.6 | 1 kph signal splice to instrument cluster (1 kph signal) (3000 series) | 505 | 0.6 | Instrument cluster to EDC ECU (slip +). | * 521 | 0.6 | Powershift ECU to clutch pedal |
| 486B | 0.6 | 1 kph signal splice to 4WS control panel (1 kph signal) (2000 series) | 506 | 0.6 | Control panel to ECU (EDC). | * 522 | 0.6 | Powershift ECU to clutch pedal |
| 487 | 0.6 | Control unit (ECU) to neutral solenoid connector (reverse). | 507 | 0.6 | Control panel to ECU (EDC). | * 523 | 0.6 | potentiometer (wet clutch machines only). |
| 488 | 0.6 | Control unit (ECU) to neutral solenoid connector (low). | 508 | 0.6 | EDC ECU to EDC control panel. | * 524 | 0.6 | Powershift ECU to clutch pedal |
| 489 | 0.6 | Control unit (ECU) to neutral solenoid connector (medium). | 509 | 0.6 | EDC ECU to EDC lower signal splice. | * 524A | 0.6 | Trans oil temp splice 2 to trans oil temp splice 1 (wet clutch machines only). |
| 490 | 0.6 | Control unit (ECU) to neutral solenoid connector (high). | 509A | 0.6 | Lower signal splice to 4WS control panel. | * 524B | 0.6 | Trans oil temp splice 1 to Powershift ECU (wet clutch machines only). |
| | | | 509B | 0.6 | Lower signal splice to instrument cluster. | * 524C | 0.6 | Trans oil temp splice 2 to oil temp sensor 1 (wet clutch machines only). |
| | | | 510 | 0.6 | Instrument cluster to EDC ECU (slip setpoint). | * 524D | 0.6 | Trans oil temp splice 2 to oil temp sensor 2 (wet clutch machines only). |
| | | | 511 | 0.6 | Instrument cluster to EDC earth splice (option present). | * 525 | 0.6 | Powershift ECU to oil temp sensor 1 (wet clutch machines only). |
| | | | * 512 | 0.6 | Instrument cluster to fuel flow meter (dry clutch machines only). | * 526 | 0.6 | Powershift ECU to oil temp sensor 2 (wet clutch machines only). |
| | | | 513 | 0.6 | Instrument cluster to diagnostics connector (program). | * 530 | 1.0 | Powershift ECU to splitter dump inhibit switch (clutch fully down checking lamp?). |
| | | | 514 | 0.6 | Control unit (ECU) to CAN low splice 2. | * 531 | 1.0 | Powershift ECU to splitter dump inhibit splice (calibration link †). |
| | | | 514A | 0.6 | CAN low splice 2 to resistor (control unit ECU end). | | | |
| | | | 514B | 0.6 | CAN low splice 2 to CAN low splice 3. | | | |
| | | | 514C | 0.6 | CAN low splice 3 to 4WS control panel (4WS). | | | |
| | | | 514D | 0.6 | CAN low splice 3 to diagnostic connector. | | | |



2043C

* **Diagnostics - Wet Clutch (continued)**

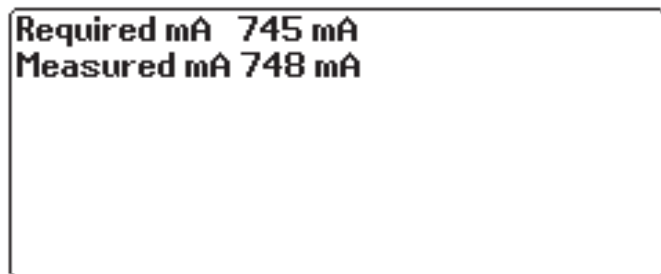
'Values' Menu



S360430

This menu displays options that give the ability to view the current status of the master wet clutch current and auxiliary clutch status.

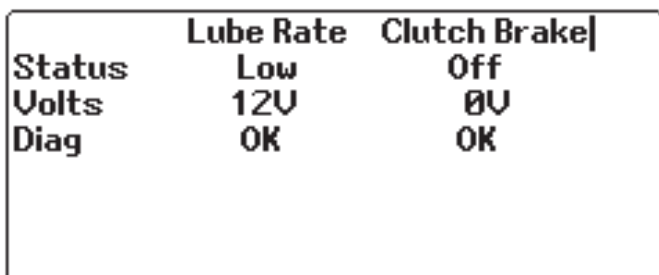
'Master Clutch Currents'



S360440

The 'Required mA' value is the current the ECU wants to achieve for a command signal to the master clutch solenoid. The 'Measures mA' value is the current the ECU measures for a given command signal. These numbers will differ slightly.

'Aux. Clutch Solenoids'

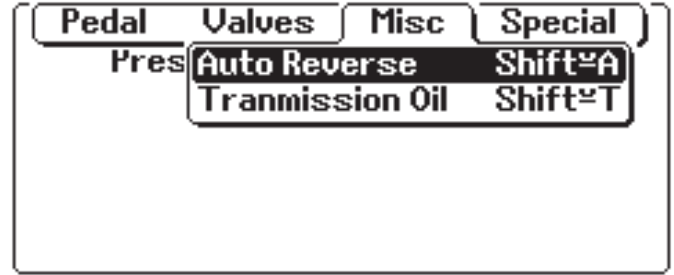


S360450

This option shows whether the Auxiliary clutch solenoids (clutch lubrication solenoid and transmission brake solenoid) are on or off along with the fault and status indicators. If there is a fault the ECU may have switched the solenoid off which resets the fault status to OK. ('Lube Rate' Low = 12 V, High = 0 V and 'Clutch Brake' Off = 0 V On = 12 V).

Note: 'Clutch Brake' is also referred to as 'Transmission Brake' in other parts of this manual.

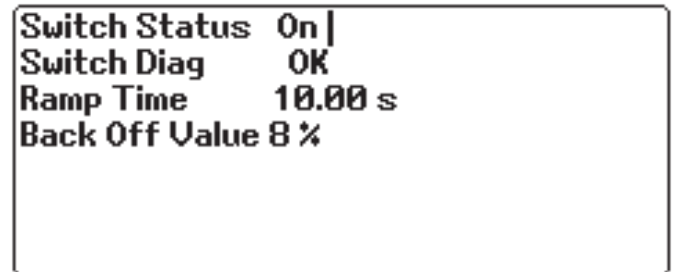
'Misc' Menu



S360460

The 'Misc' menu displays miscellaneous information relating to wet clutch vehicles.

'Auto Reverse'

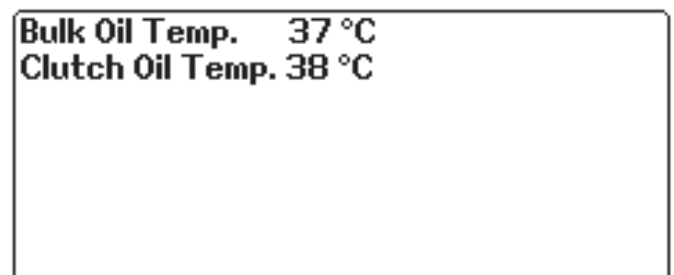


S360470

The 'Auto Reverse' option displays the status of the Auto Reverse button and information relating to the Auto Reverse characteristics which cannot be changed.

Note: 'Auto Reverse' is also known as 'Auto-Shuttle'.

'Transmission Oil'



S360480

This option displays the current bulk and master clutch oil temperatures. Bulk refers to the oil in the main transmission lubrication circuit.

'Special' Menu



S360490

This allows a way out back to the main menu.

3.0 Setup (continued)

3.1 Setup from Vehicle Type

Note: This option only needs to be used if a new dashboard is fitted to the machine.

Note: On the Vehicle Type selection the letter 'E' represents an Electronic engine.

| | |
|----------------------------|--|
| Vehicle Type | to select the corresponding type of Fastrac, e.g. 3220 |
| Rated Vehicle Speed | to select the speed of the Fastrac, e.g. 65 kph |
| Language | to select the language the Fastrac dash displays, e.g. English |
| Tyre Size | to select the correct size tyres on the Fastrac (the number on the right corresponds the rolling radius) |
| Serial Number | enter here the serial number of the Fastrac (seven digits) |
| Wheel Slip Switch | to either enable or disable the wheel slip (select the Disabled option if using an external wheel slip switch) |
| Flow Divider | to either enable or disable the flow divider (if no flow divider is fitted or no icon or warning lamp appears on the EMS then disable) |
| Fuel Flow Meters | sets the Fuel Flow and Fuel Return rates (in Pulses/Litre) (Not required on electronic engine Fastracs) |
| Fuel Level Sensor | select either Stick or Arm depending on the Fastrac |

The Fuel Flow Meters are an optional package on the Fastrac and their section will only be highlighted if they are fitted.

* **2000 Series Machines****Description**

The diagram shows the hydraulic circuits of the machine to clarify the way in which they relate to each other.

- * Note that later machines are fitted with a different External Hydraulics/Draft Control Valve **A** (Type 2††). Be sure to refer to the correct circuit diagram, **Schematic Circuit - 2000 Series Machines (Type 1†)** or **Schematic Circuit - 2000 Series Machines (Type 2††)** as applicable.

The circuits each have their own pump section:

- P1** Suspension/Rear Axle Differential Lock
- P2** Steering (front axle) (2WS/4WS)
- P3** External Hydraulic Services/Draft Control
- P4** Transmission
- P5** Steering (rear axle) (4WS) (if fitted)

P1 and **P2** are the two sections of the engine-driven pump. **P3**, **P4** and **P5** (if fitted) are the sections of the gearbox-driven pump.

The external hydraulics and draft control circuits are described in detail in this section of the manual. More details on the other circuits are given in the relevant sections of the manual.

When a machine is fitted with provision for hydraulic trailer brakes, line **1** from the pump feeds the hydraulic trailer brake valve **B** and line **1A** is not fitted.

When there is no hydraulic trailer brake valve, line **1A** is fitted to give a direct feed to control valve **A** which controls feeds to the external services by means of spools **I**, **II** and **III**. A four spool control valve is illustrated but two and three spool valves are also available to the same general design. When the four spool valve is fitted, spool **III** feeds the front linkage lift rams **R**. The optional lift ram drop flow control valve **RD** can be fitted when extra control is required while lowering front attachments, especially heavy attachments.

When the machine is fitted with the optional Flow Regulator Valve **AE**, line **2A** is not required, the oil flow to External Hydraulics/Draft Control Valve **A** coming from port B of valve **AE**. Flow Regulator Valve **AE** provides the means of adjusting flow to external implements (see **Flow Regulator, Flow Testing and Pressure Testing** in Section A).

- * **Note 1:** The optional Flow Regulator Valve **AE** is shown in outline only. For the internal details see **Schematic Circuits - Flow Regulator Valve**.

Control valve **A** incorporates the main relief valve **A1**. It also incorporates a draft control section which feeds the rear lift rams **RR**.

Exhaust oil returns from control valve **A** to tank through filter **Fm**.

Component Key

| | |
|------------|---|
| A | External Hydraulics/Draft Control Valve |
| AA | Steering Rams (front axle) |
| AB | Steering Pump Relief Valve |
| AC | Feed to Hydraulic Trailer Brake Connector TH |
| AD | Power Track Rod (rear wheel steering) (optional) |
| AE | Flow Regulator Valve (optional) |
| AE1 | Flow Regulator Valve Auxiliary Output Circuit |
| AWS | Four-wheel Steer Valve (optional) |
| A1 | Main Relief Valve |
| B | Hydraulic Trailer Brake Valve (optional) |
| CS | Steering Circuit Cooler |
| Fm | Main Filter |
| G | Front Auxiliary Circuit (Optional) |
| H | Rear Auxiliary Circuits |
| M | Accumulator - Ride Height Adjustment |
| N | Ride Height Corrector Valves |
| P1 | Pump - Suspension/Rear Axle Differential Lock |
| P2 | Pump - Steering (front axle) |
| P3 | Pump - External Hydraulics/Draft Control |
| P4 | Pump - Transmission |
| P5 | Pump - Steering (rear axle) (optional) |
| Q | Pilot Feed from Front Brakes Hydraulic Brake Fluid Line |
| R | Front Lift Rams (Optional) |
| RD | Drop Flow Control Valve (front lift rams) (optional) |
| RR | Rear Lift Rams |
| S | Suspension Cylinders |
| SP | Proportional Solenoid Valve (optional) |
| SU | Steering Unit |
| T | Tank |
| V | Suspension Pressure Maintenance/Differential Lock Valve |
| X | Rear Axle Differential Lock |
| Y | Differential Lock Relief Valve |

- * **Note 2:** Certain ports of valve **A** are identified by the letters **a** and **b** cast into the valve block. These identifications are included in the schematic opposite but do not relate to the letters **A** and **B** on the control lever decal or the quick release coupling decals.

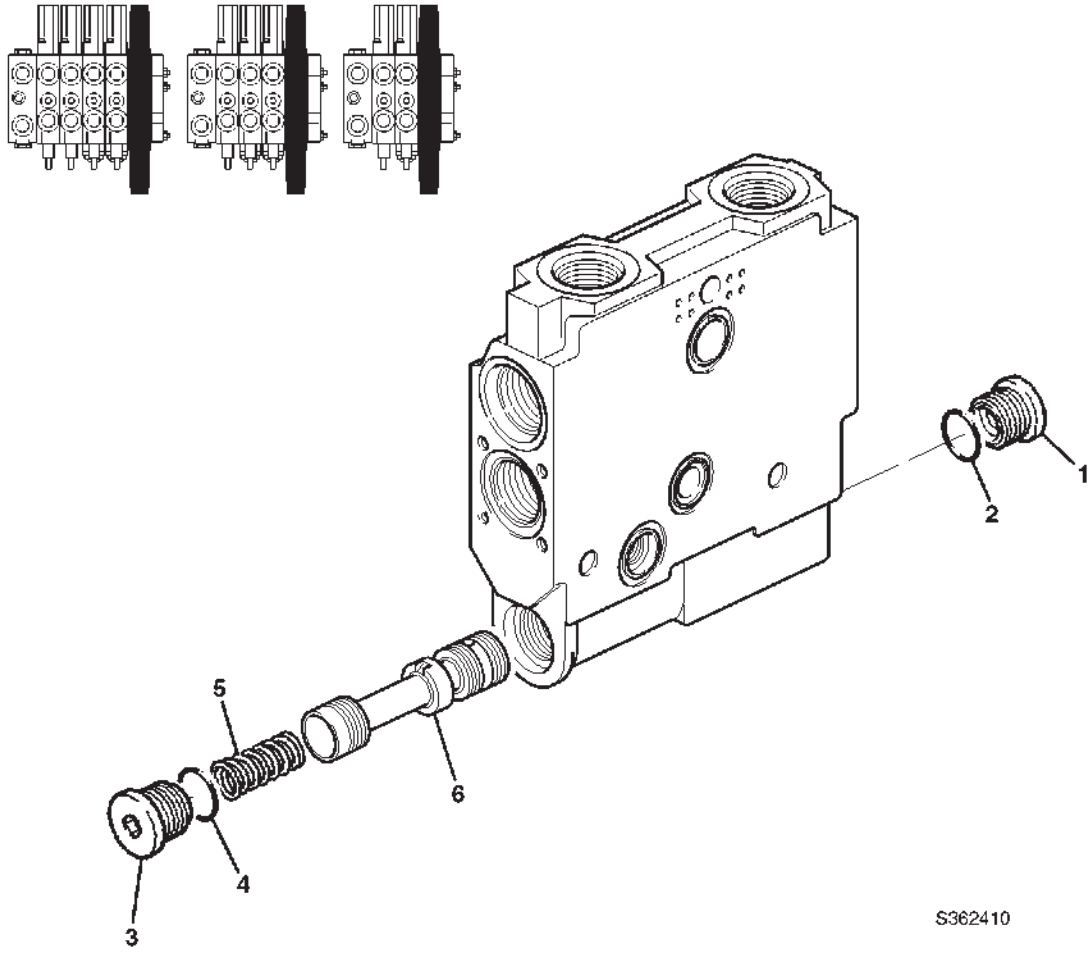
- * **Note 3:** Machines with Type 2†† External Hydraulics/Draft Control Valves use colour codes on the relevant control and hydraulic coupling decals. The valve spools correspond with the colour code as follows:

| * Valve Spool | Colour Code |
|---------------|-------------|
| I | Green |
| II | Blue |
| III | Brown |
| IIII | Orange |

The above colour code key only relates to the Type 2†† circuit diagram. Do not relate the key to the Type 1† circuit.

- * † 2000 Series to S/N 739999,

- * †† 2000 Series from S/N 740000,



Powershift Clutches

⚠ WARNING

The procedure below must be carried out with the engine running. Apply the parking brake, chock the wheels and ensure that no-one enters the cab.

SUS 1-1

* **Note:** Dry clutch machines are not fitted with solenoid valve **A**.

- 1 Ensure that the transmission oil is at working temperature. Connect a 0-20 bar (0-300 lbf/in²) gauge to test point **TPL**.
- 2 Put speed gearbox in neutral, select any range and confirm engagement.
- 3 Run engine at 1500 rev/min. Remove foot from clutch pedal and, using the buttons on the speed change lever, select the low (snail) Powershift clutch.
- 4 Note gauge reading which will indicate pressure in low clutch circuit (see **Technical Data**).
- 5 Repeat steps 1 to 4 with gauge connected to test point **TPM** and the medium (tortoise) Powershift clutch selected.

Note: Some machines may not feature the 90° adapter shown at **TPH**.

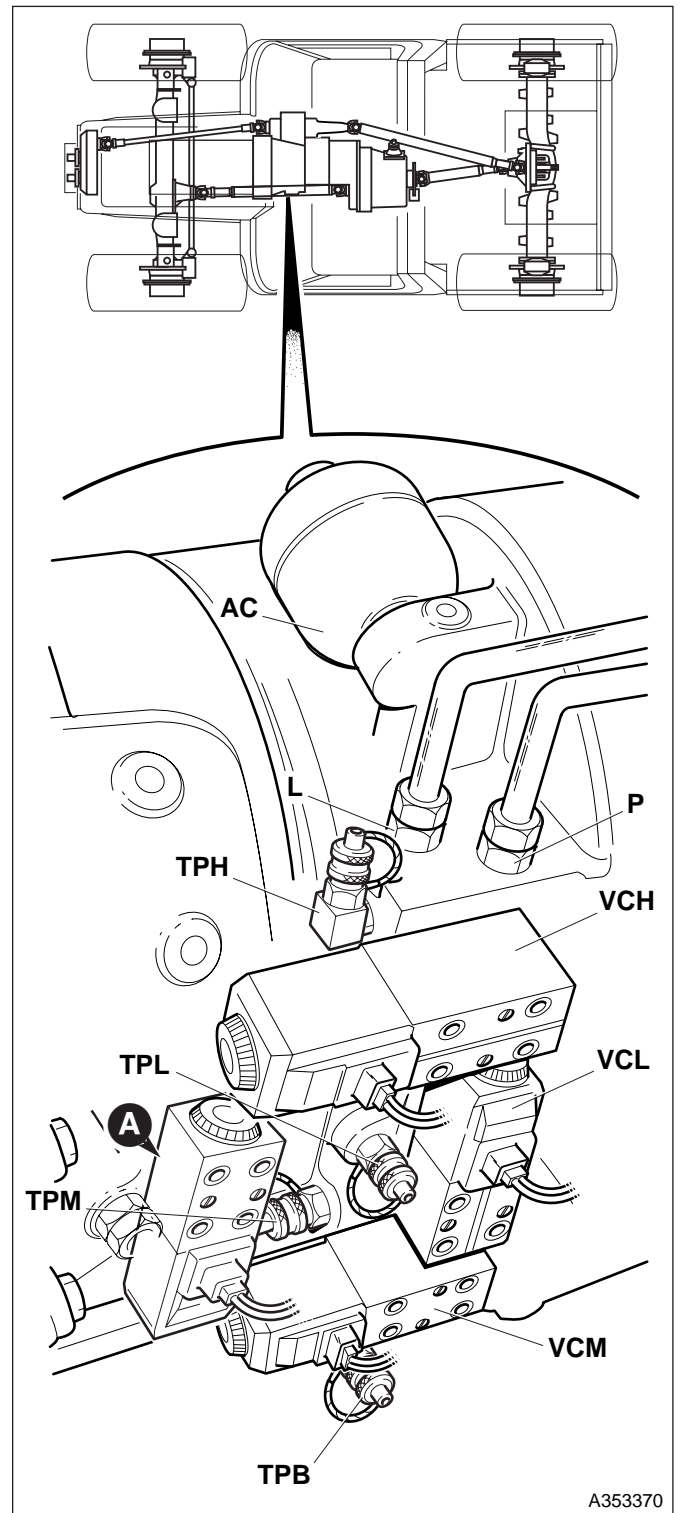
- 6 Repeat steps 1 to 4 with gauge connected to test point **TPH** and the high (hare) Powershift clutch selected.
- 7 If all clutch pressures are equal but incorrect, check the setting of the transmission pressure maintenance valve. If one clutch pressure is low, suspect leakage at the solenoid or clutch pack.

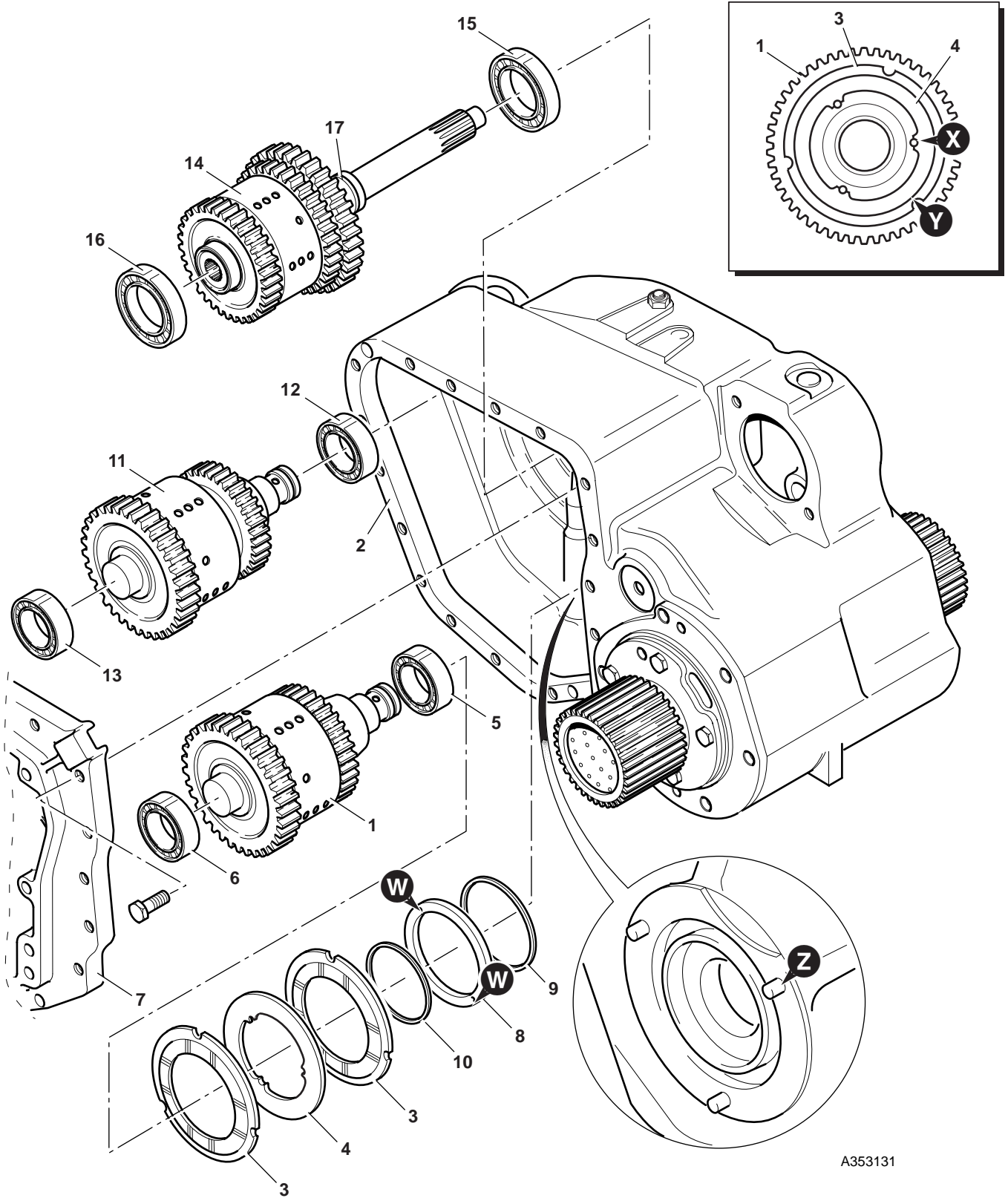
Note: The pressure maintenance valve must not be set above the specified figure under any circumstances.

Transmission Brake (Wet Clutch Machines)

- 1 Make sure that the transmission pressure maintenance valve is set correctly.
- 2 Ensure that the transmission oil is at working temperature. Connect a 0-20 bar (0-300 lbf/in²) gauge to test point **TPB**.
- 3 Put the speed gearbox into neutral, select any range using the Selectronic control and confirm engagement. Run the engine at 1500 rev/min and fully depress the clutch pedal.
- 4 Note the gauge reading which will indicate the pressure in the transmission brake cylinder (see **Technical Data**). If the reading is zero, suspect a faulty transmission brake control valve, possibly the solenoid. If the pressure is low, suspect leakage at the brake piston seals.

* **Note:** The wiring loom connector for the transmission brake solenoid valve is coloured red and has wires 823 and 640N.





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