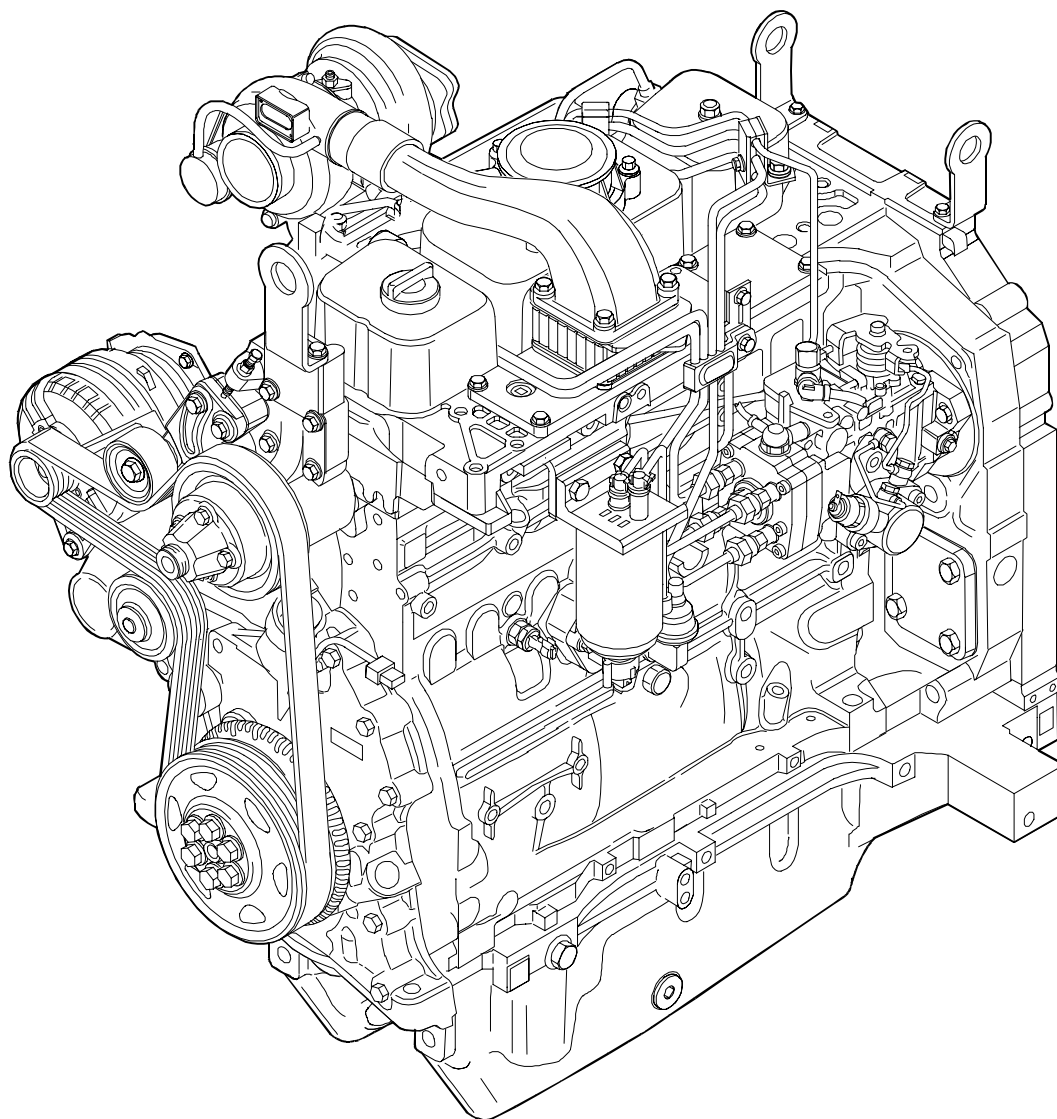
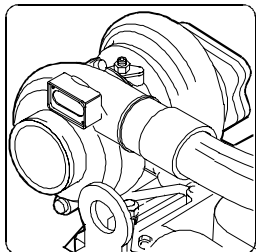


CONSUMABLES

COMPONENT TO BE FILLED OR TOPPED UP	QUANTITY US gal. (litres)	RECOMMENDED NEW HOLLAND PRODUCT	NEW HOLLAND SPECIFICA- TIONS	INTERNATIONAL SPECIFICATIONS
Cooling system: without cab: with cab:	3.69 (14) 4.22 (16)	Water and AMBRA AGRIFLU fluid 50% + 50%	NH 900 A	-
Windscreen washer reservoir	0.52 (2)	Water and liquid detergent	-	-
Fuel tank mod. TL70A, TL80A mod. TL90A, TL100A ...	30.38 (115) 35.66 (135)	Decanted and filtered diesel fuel	-	-
Engine sump: without filter: with filter:	2.35 (8.9) 2.50 (9.5)	AMBRA MASTER GOLD HSP 15W - 40 oil or HSP 10W - 30	NH 330H (SAE 15W-40) NH 324H (SAE 10W-30)	API CF-4/SG CCMC D4 MIL-L-2104E
Brake control circuit without front brakes	0.10 (0.4)	AMBRA BRAKE LHM fluid	NH 610 A	ISO 7308
Hydrostatic steering circuit ..	0.52 (2.0)	AMBRA MULTI G fluid	NH 410 B	API GL4 ISO 32/46 SAE 10W-30
Front axle: axle casing: mod. TL70A mod. TL80A, TL90A, TL100A	1.18 (4.5) 1.84 (7.0)			
final drives (each): mod. TL70A mod. TL80A, TL90A, TL100A	0.21 (0.8) 0.33 (1.25)			
Rear transmission (bevel drive, final drives and brakes), gearbox, hydraulic lift, PTO and hydrostatic steering: mod. TL70A mod. TL80A, TL90A, TL100A	12.94 (49) 14.52 (55)			
Front wheel hubs	-	AMBRA GR9 grease	NH 710 A	NLGI 2
Grease fittings	-			
Antifreeze fluid reservoir for air brakes	0.13 (0.5)	Antifreeze fluid AMBRA SUPER FLUID	NH 202 A	-

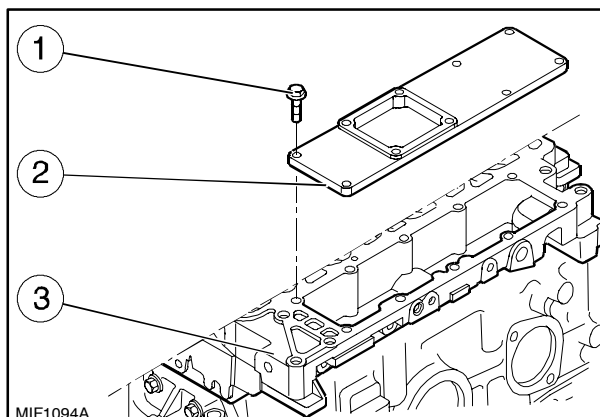
model TL90A

MIF1097A

2

View of TL90A tractor engines of 67 kW (90 HP) and TL100A of 73.5 kW (100 HP)

- Spread LOCTITE 5999 sealant between the cover (2) and the manifold (3) and tighten the screws (1) to the torque prescribed on page 11.

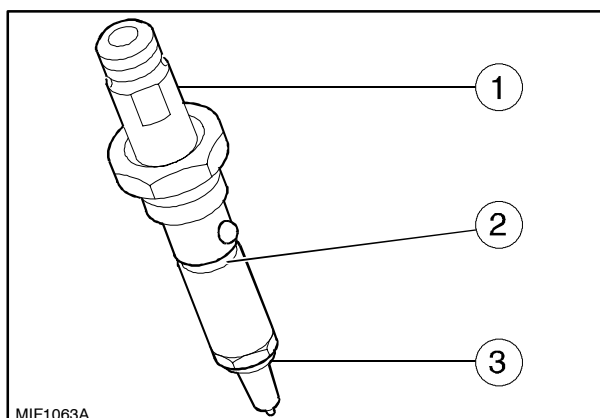


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FITTING THE INJECTORS

(Disassembly operation 50.)

- On the injector (1), mount a new seal (2) lubricated with Vaseline and a new washer (3).
- Fit the injectors 2, 3, 4 in the seats on the cylinder head and tighten them to the torque prescribed on page 11.

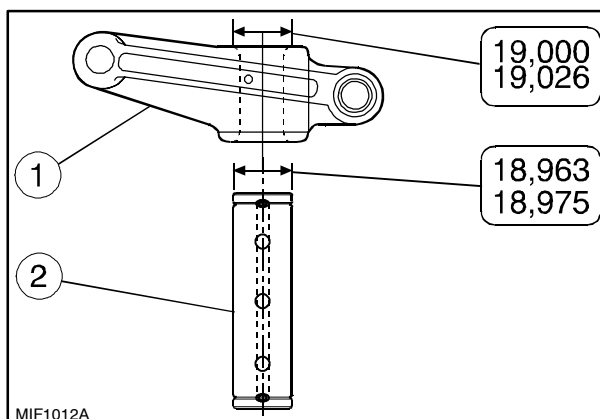


155

FITTING THE ROCKER ARM ASSEMBLY

(Disassembly operation 49.)

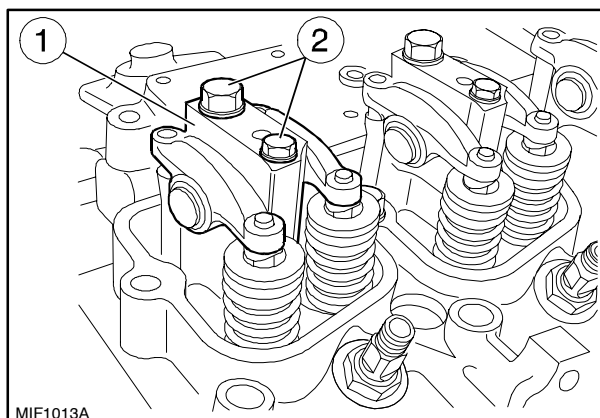
- Check that the spindle (2) / rocker arm (1) coupling surfaces are neither too worn nor damaged.



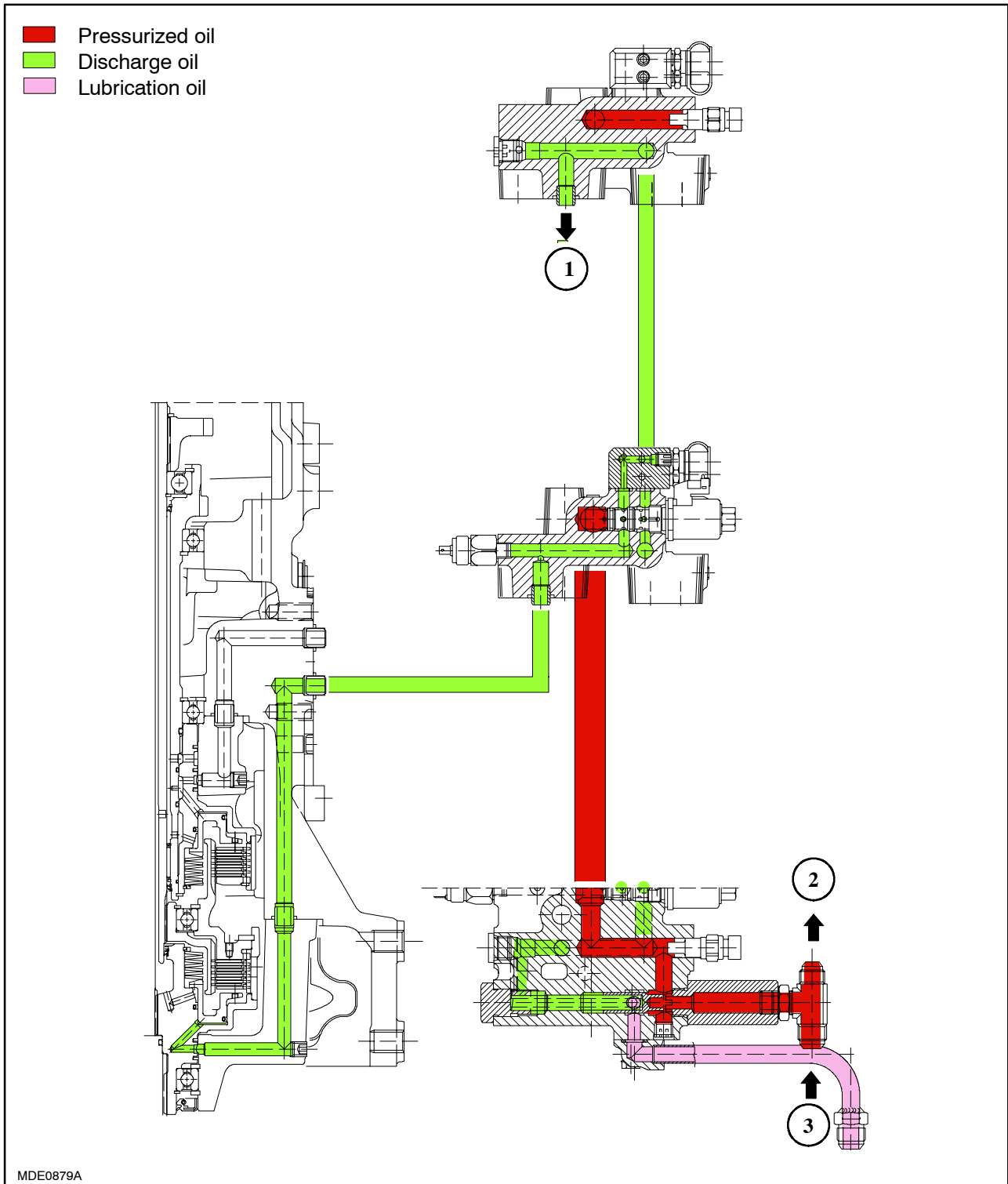
156

Main spindle-rocker arm data (mm)

- Check that the tappet adjusters are unscrewed to prevent them sticking on the rods when fitting the rocker arm assembly (1).
- Then mount the rocker arm assembly comprising the support and spindles and secure them to the head without tightening the bolts (2) to torque. They will be tightened to torque together with those fixing the cylinder head.



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12

Power Shuttle transmission with Dual Command (2 Speed Power Shift) function (24+24) - Clutch A in discharge

1. Discharge oil
2. Oil to the differential lock, four-wheel drive, power
3. Oil from the pump

TOOLS

**WARNING**

The operations described in this section can only be carried out with **ESSENTIAL** tools indicated by an (X). To work safely and efficiently and obtain the best results, it is also necessary to use the recommended specific tools listed below and certain other tools, which are to be made according to the drawings included in this manual.

380000301 Rotating stand for overhaul operations.

380000271 Front bracket (with **380000301**).

380000272 Rear bracket (with **380000301**).

380000249 Bevel pinion positioning gauge.

List of specific tools required for the various operations described in this Section.

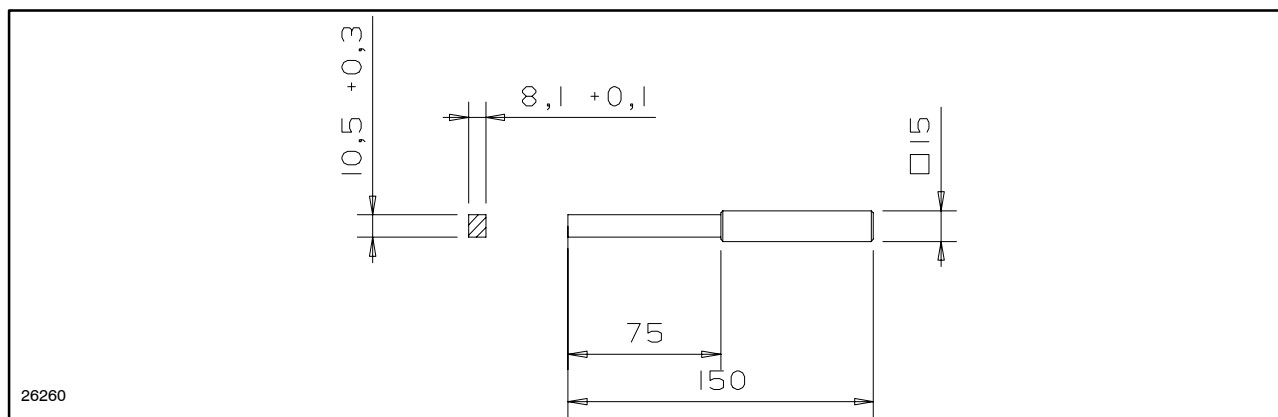
380000250 Tool for differential lock spring.

380000294 Cab lift adapter.

380000236 Tractor disassembly trolley.

380000240 Universal hydraulic pressure control kit.

380000227 Clutch casing lift hook.



2

Tool to be constructed for adjusting differential lock sleeve travel
(Mark part with No. 50041 - Measurements in mm)
 Make using C40 material.

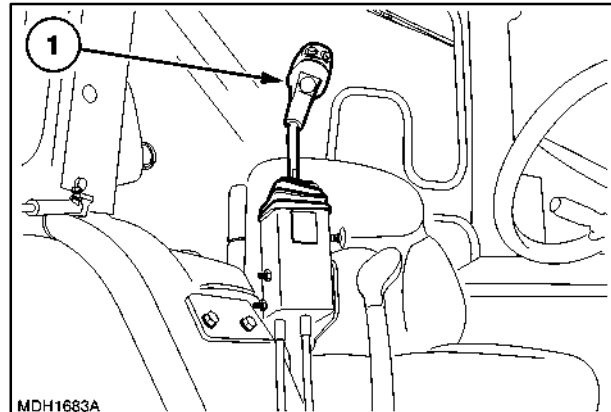
VENTRAL CONTROL VALVE JOYSTICK

The ventral control valves are governed by a joystick (1) on the operator's right-hand side.

There are two types of joystick:

- a joystick with just one button, for the North America version.
- a joystick with two buttons, for the ISO version.

NOTE: If you purchase a loader equipped with a fourth external service, the third button on the joystick is not provided in the kit, it will be supplied with the loader.



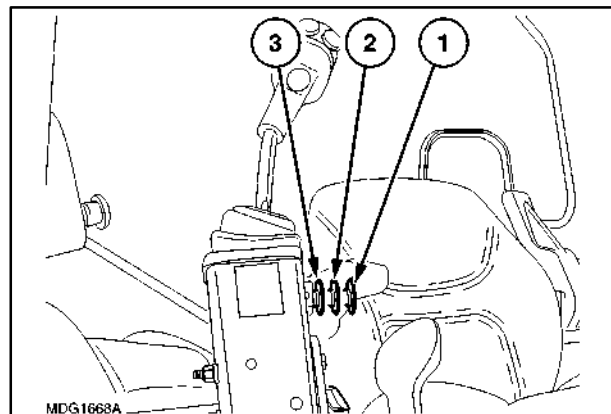
9

Front loaders should only be attached to agricultural tractors that are equipped with a safety lock for the auxiliary control valve joystick.

Tractors without lockable controls should have a shut-off valve installed in the hydraulic line between the auxiliary control valve and loader arm lift cylinders.

The safety lock on the joystick has three positions:

1. Fully out. All joystick movements available.
2. Mid Position. Side movement (loading, unloading and fast unloading bucket) locked out.
3. Fully in. All joystick movements locked.



10

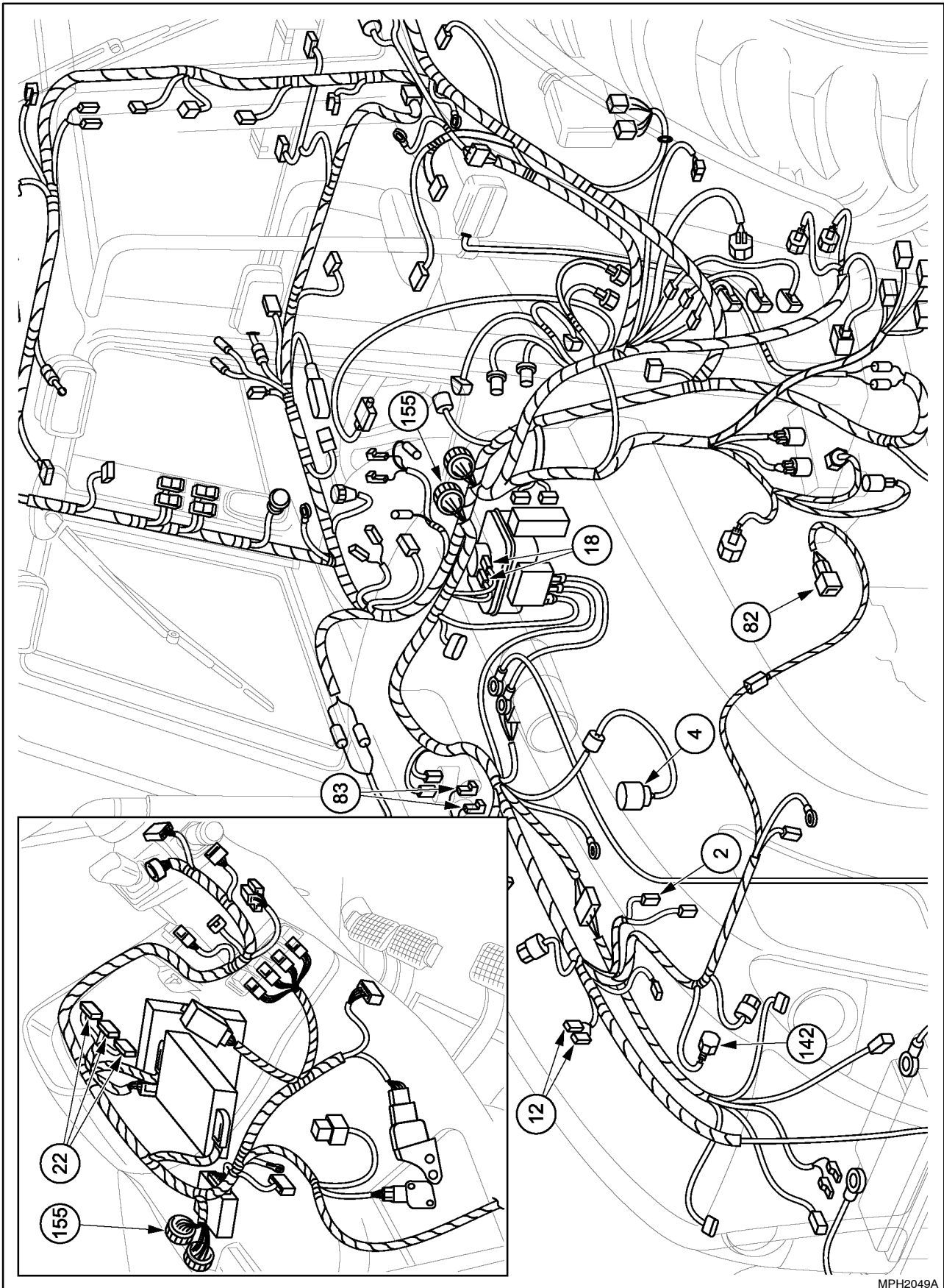
⚠ ATTENTION ⚠

To prevent accidental movement of the loader, the control lever or joystick should always be locked in neutral when travelling on the public highway or, alternatively, the shut-off valve should be closed (where fitted).





WIRING DIAGRAM H - CAB VERSIONS



MPH2049A

ERROR CODE 2042 - CLUTCH A SOLENOID SHORT TO +12 VOLTS**Cause:**

Short to +12 Volts between the clutch A solenoid and the controller, or the controller is faulty.

Effects:

The transmission is critically disabled. The tractor is not operative.

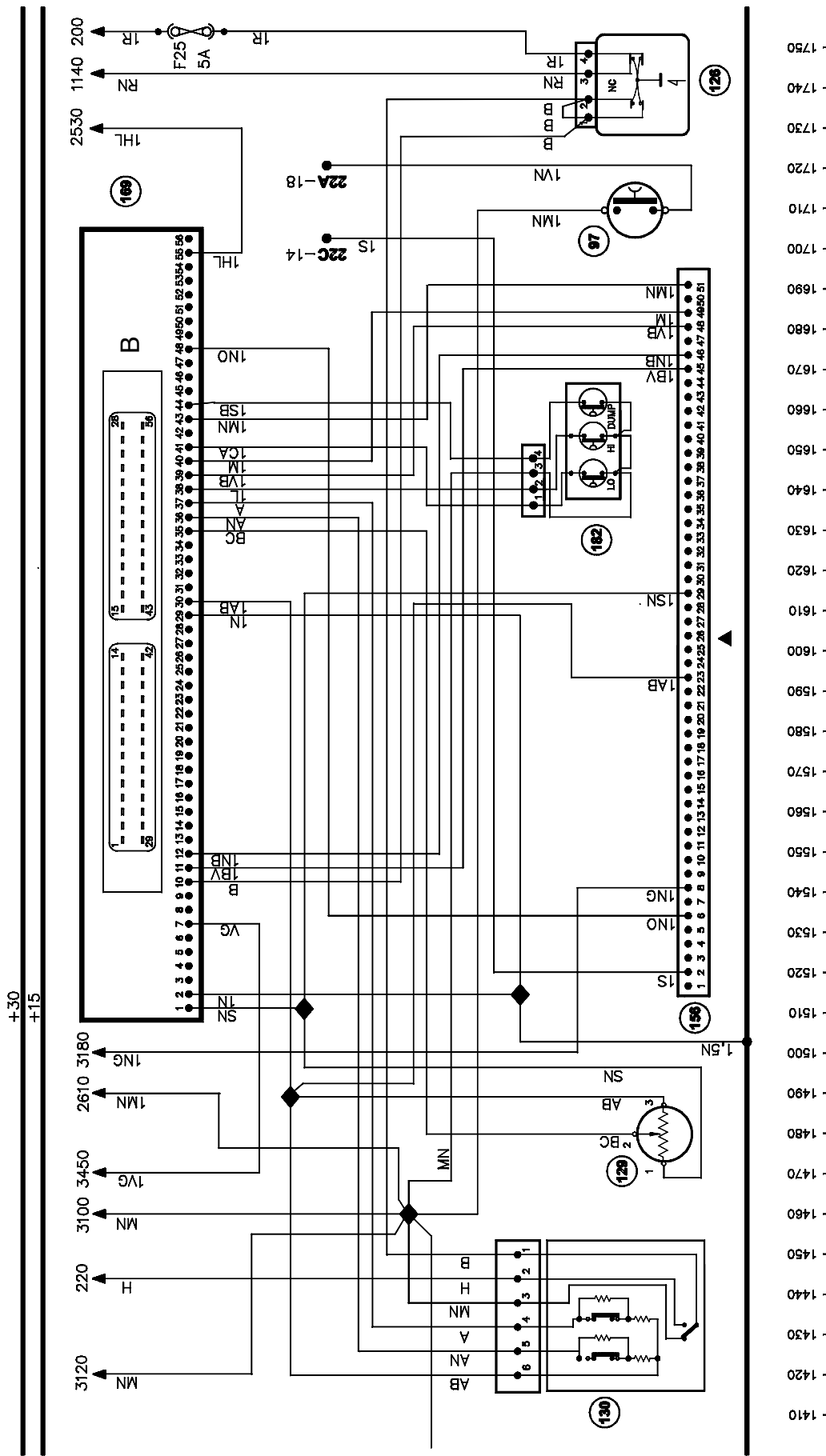
Possible failure modes:

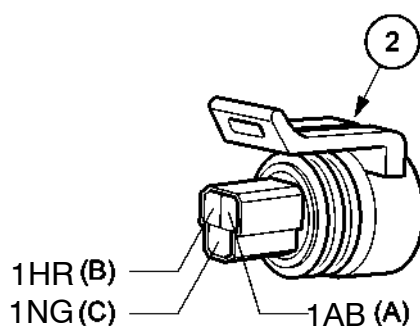
1. Faulty connector
2. Faulty harness
3. Faulty controller

Solution:

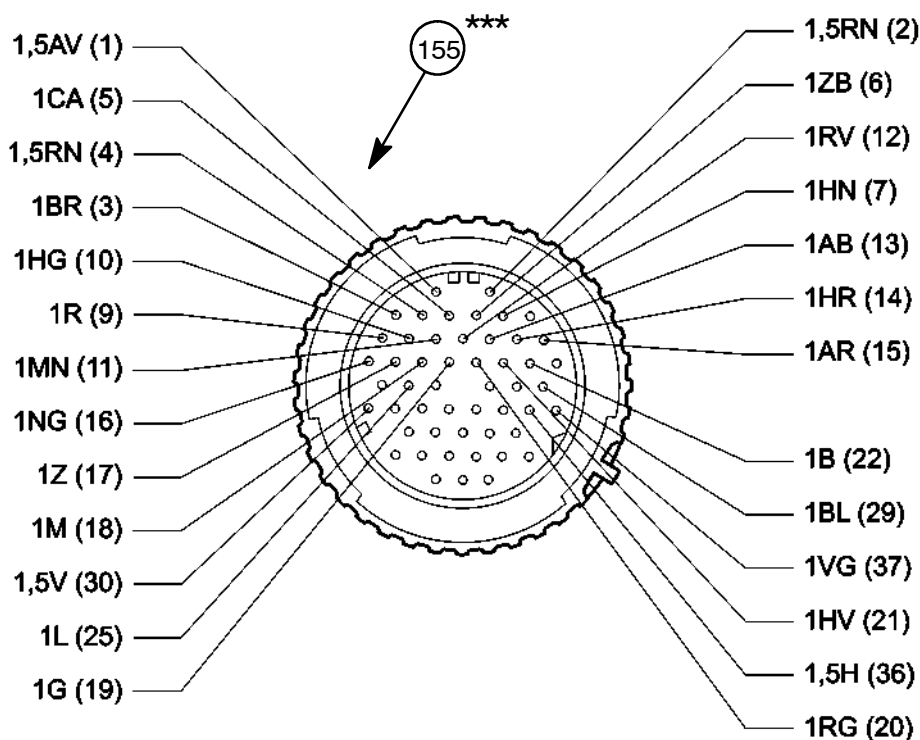
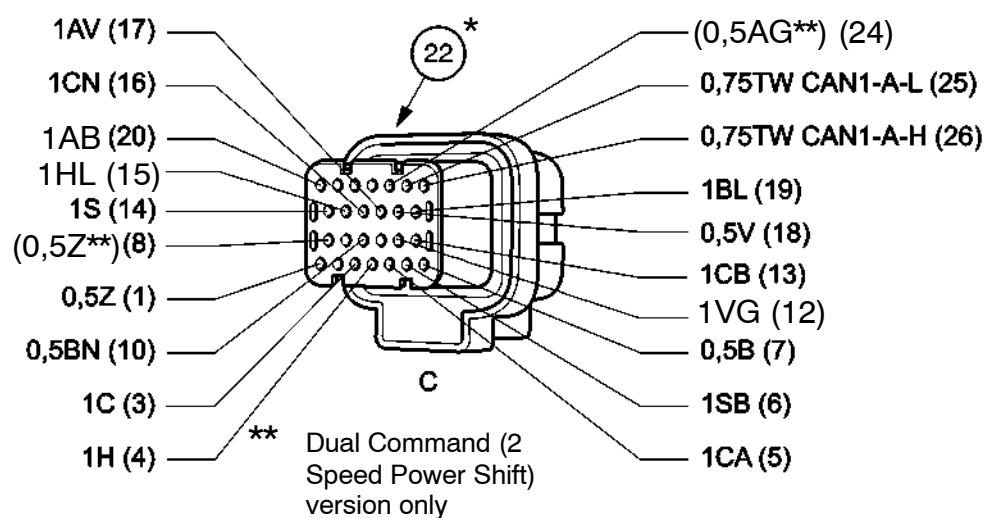
NOTE: When the cause of the error code has been rectified, clear the error code and test the system for normal operation.

1. Check the clutch A solenoid connector **C134**, inline harness connector **C156**, and the controller connector **C169A_CN1**.
 - A. Ensure the connectors are connected, not damaged, the pins are in the correct position and that the fit is tight. Repair or replace as required.
 - B. If the connectors are okay, continue to step 2.
2. Check for a short to +12 Volts.
 - A. Disconnect **C134**. Turn the keystore ON. Measure the voltage between connector:
C134 pin **A**, wire 1.0 (**AN**) and **ground**
C134 pin **B**, wire 1.0 (**AG**) and **ground**
If a voltage is indicated, turn the keystore OFF. Disconnect connector **C169A_CN1**. Turn the keystore ON. If a voltage is still indicated, repair or replace the harness as required.
 - B. If a voltage is not indicated, download the correct level of software. If the fault re-occurs, remove and replace the controller.

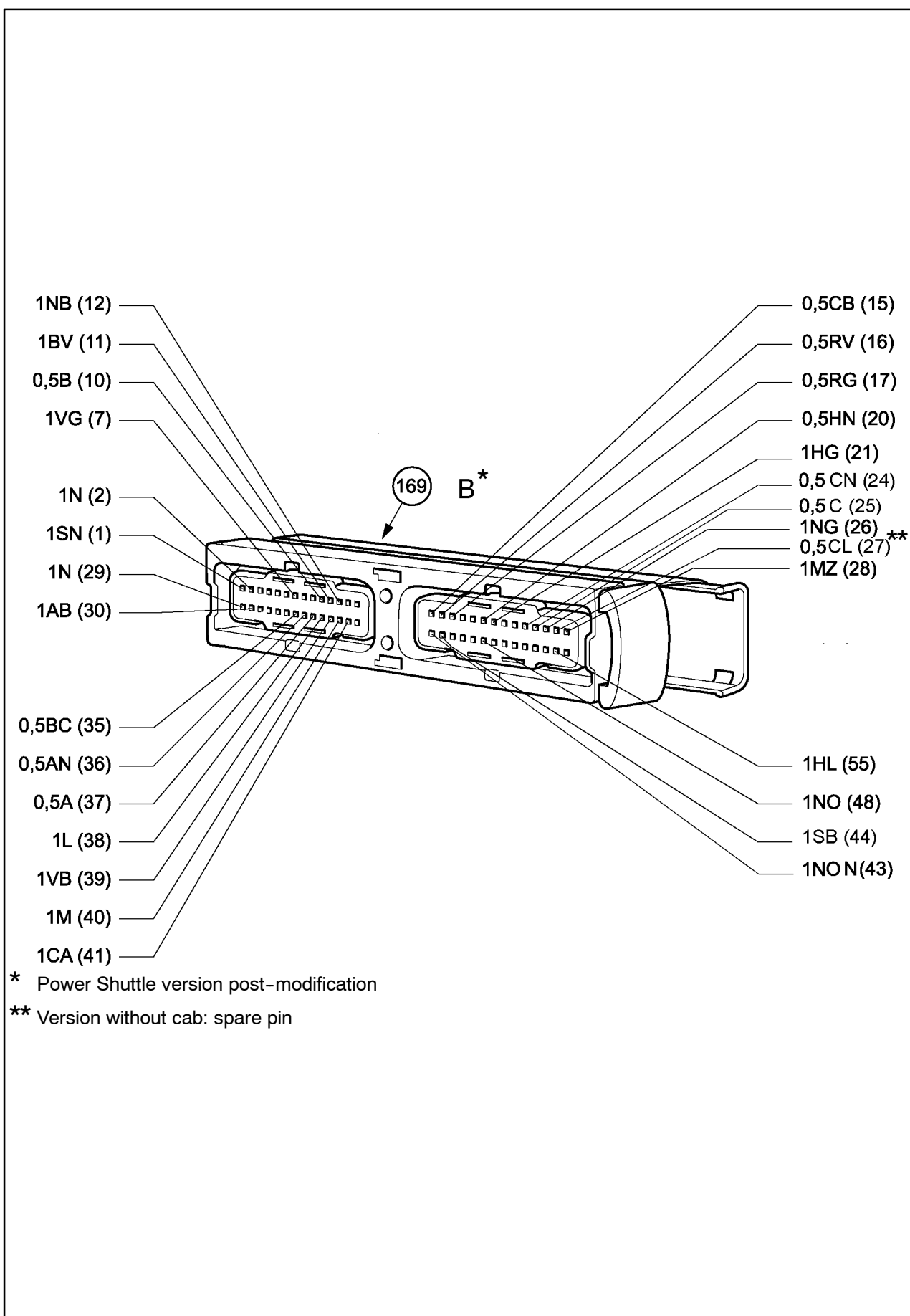


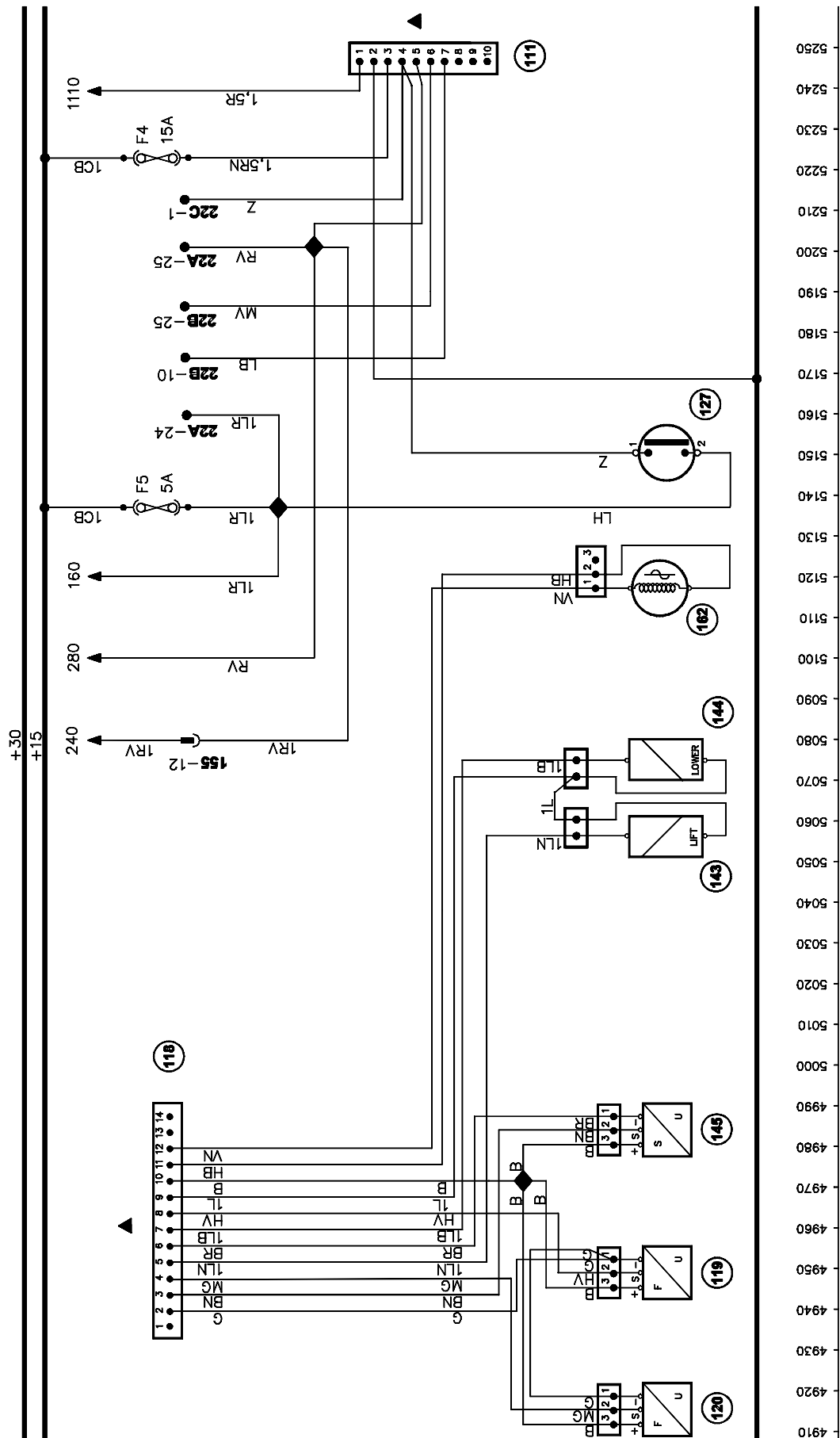


* Post-modification version



*** Power Shuttle version post-modification





- Fit the upper guide of the condenser and the two retaining bolts.
- Refit the lower condenser retaining pin.
- Refit the cab heater return pipe and its clamp.
- Refit the cab heater delivery pipe and its clamp
- Install the fitting of the cab heater radiator coolant return pipe connected to the bottom of the coolant pump and refill the radiator with engine coolant.
- Fit the guard on the right-hand side of the fan and the three retaining bolts.
- Fit the clutch tie-rod, rubber guard and associated retaining nut.
- Fit the right- and left-hand dashboard panels and the relevant four knobs.
- Refit the throttle control tie-rod connected to the injection pump and the associated retaining clip.
- Install the flexible cables governing the hand and pedal throttle and the associated retaining clips.
- Reconnect the brake pump control lines with the pressure gauges.
- Connect the electrical connections installed on the brake pumps.
- Connect the brake fluid reservoir electrical connections.
- Connect the two oil delivery and return hoses to the power steering cylinders and the delivery pipe between the pump and power steering.
- Reconnect the other electrical connections between the cab and the engine.
- Fit the three front retaining bolts of the engine bonnet.
- Fit the four rear retaining bolts of the bonnet support.
- Fit the silencer and exhaust pipe.
- Connect the air filter dust ejector pipe, fit the clamp and the four nuts securing the silencer to the exhaust manifold.
- Fit and tighten the three rear exhaust silencer retaining bolts.
- Install the bonnet as described in operation **9010022**.
- Reconnect the battery negative cable and lower the bonnet.