



CONTENTS

Chap. 1 INTRODUCTION

Chap. 2 ENGINE

Chap. 3 CLUTCH

Chap. 4 POWERFIVE / DELTAFIVE TRANSMISSION

Chap. 5 4WD FRONT AXLE

Chap. 6 POWER TAKE-OFF

Chap. 7 HYDRAULIC CIRCUIT

Chap. 8 MECHANICAL POWER LIFT

Chap. 9 ELECTRONIC POWER LIFT

Chap. 10 ELECTRICAL SYSTEM

Chap. 11 CAB AND AIR CONDITIONING SYSTEM

Chap. 12 SPECIAL TOOLS



Tractor identification and technical specifications

2-2 Weights and measurements

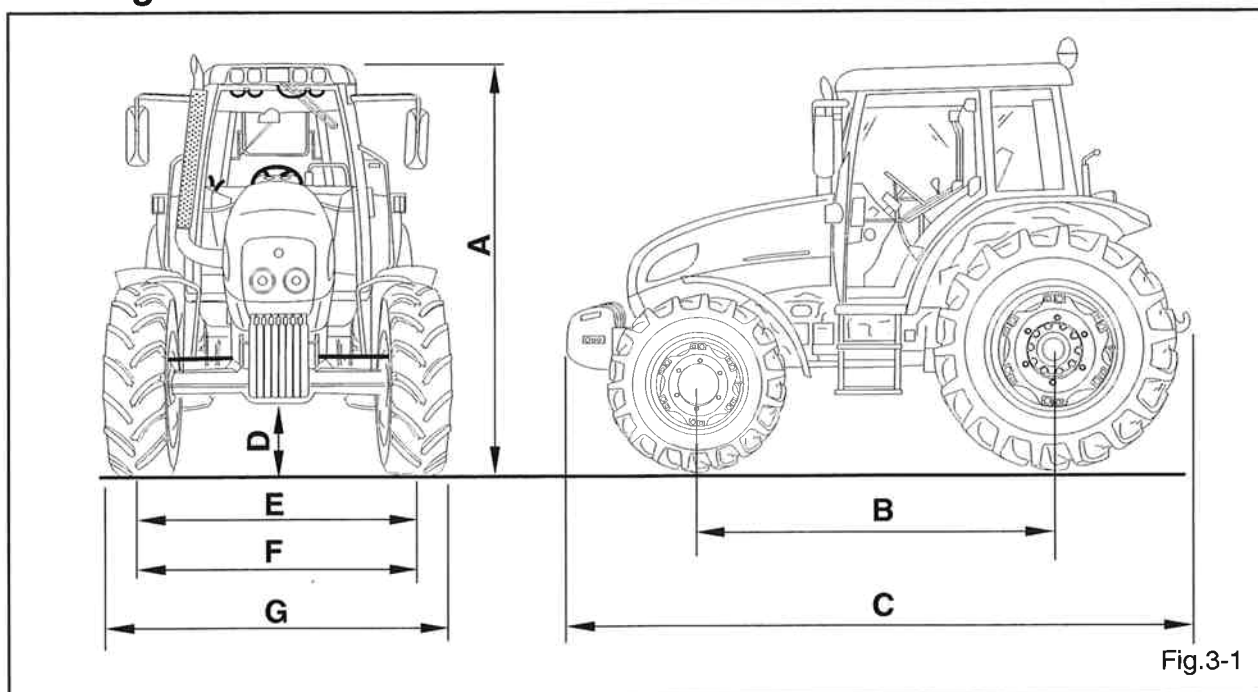


Fig.3-1

GENERAL SPECIFICATIONS	90	100	110
	4WD	4WD	4WD
With tyres:			
- Front	13,6 R24	14,9 R24	14,9 R24
- Rear	16,9 R34	18,4 R34	18,4 R38
WEIGHTS			
In running order, without ballast, with cab Kg	4260	4280	4690
In running order, with front and rear ballast with cab Kg	4920	4960	5350

DIMENSIONS	90	100	110
	4WD	4WD	4WD
A - Cab height from ground mm	2720	2770	2870
Cab height from rear wheel center mm	1975	2000	2050
B - Wheelbase mm	2426	2449	2759
C - Maximum length			
- without front ballast mm	4160	4160	4160
D - Ground clearance mm	450	475	525
E - Front track (see tab.) mm	1738	1937	1937
F - Carreggiate post. (vedi le tab.) mm	1692	1720	1720
G - Maximum width on road mm	2062	2062	2062



1004-40T/1006-60 engine timing

3-4 Injection pump timing

Warning: Do not unscrew the nut (5) that fixes the hub to the injection pump shaft. The hub is mounted on the shaft in a permanent way. If the hub moves, an injection pump specialist must set it back in the right position on the shaft using the special test equipment possessed by Perkins dealers.

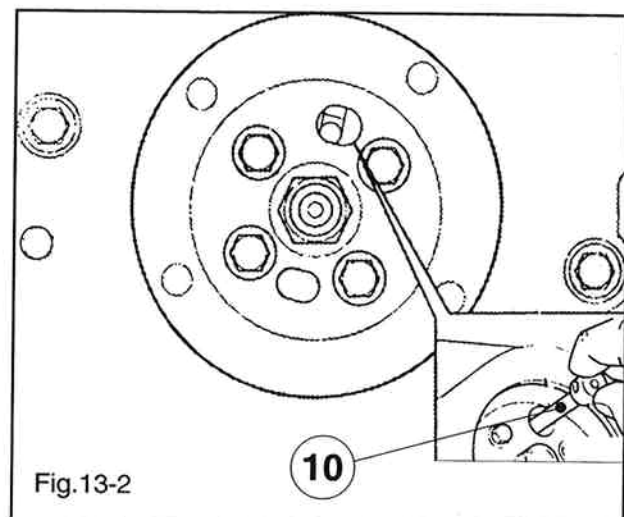
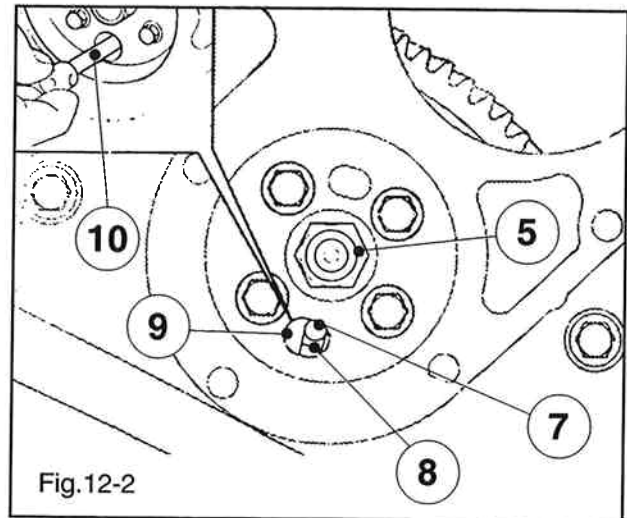
- 1 - Move the piston of cylinder number 1 to TDC of its compression stroke.
- 2 - Demount the gear cover from the valve gear housing for gear operated coolant pumps. Demount the coolant pump.

Note: four security bolts fix the fuel pump gear in more recent engines with belt type coolant pumps. Special equipment is required to slacken off these bolts. Consult your Perkins area dealer.

- 3 - Fit the timing pin (10) in the hole of the injection pump gear (9) into the slit in the hub (8). Fully push the pin into the hole (7) in the injection pump casing. If the pin can be fully inserted, this means that the pump is correctly timed. It should not need to be forced in any way when it is inserted.

Note: The position of the timing pin for Lucas and Stanadyne injection pumps is illustrated in Fig.12-2. The position of the timing pin (10) for BX EPVE injection pumps is shown in Fig.13-2.

- 4 - Remove the timing pin (10).
- 5 - If the timing pin cannot be fully fitted into the pump casing, make sure that the engine has been correctly set to TDC of the compression stroke of cylinder number 1.
If the engine has been correctly set to TDC of the compression stroke of cylinder number 1 but the pin fails to fit into the hole, demount the injection pump and have it calibrated by an authorized expert.
- 6 - Mount the gear cover on to that of the valve gear housing.





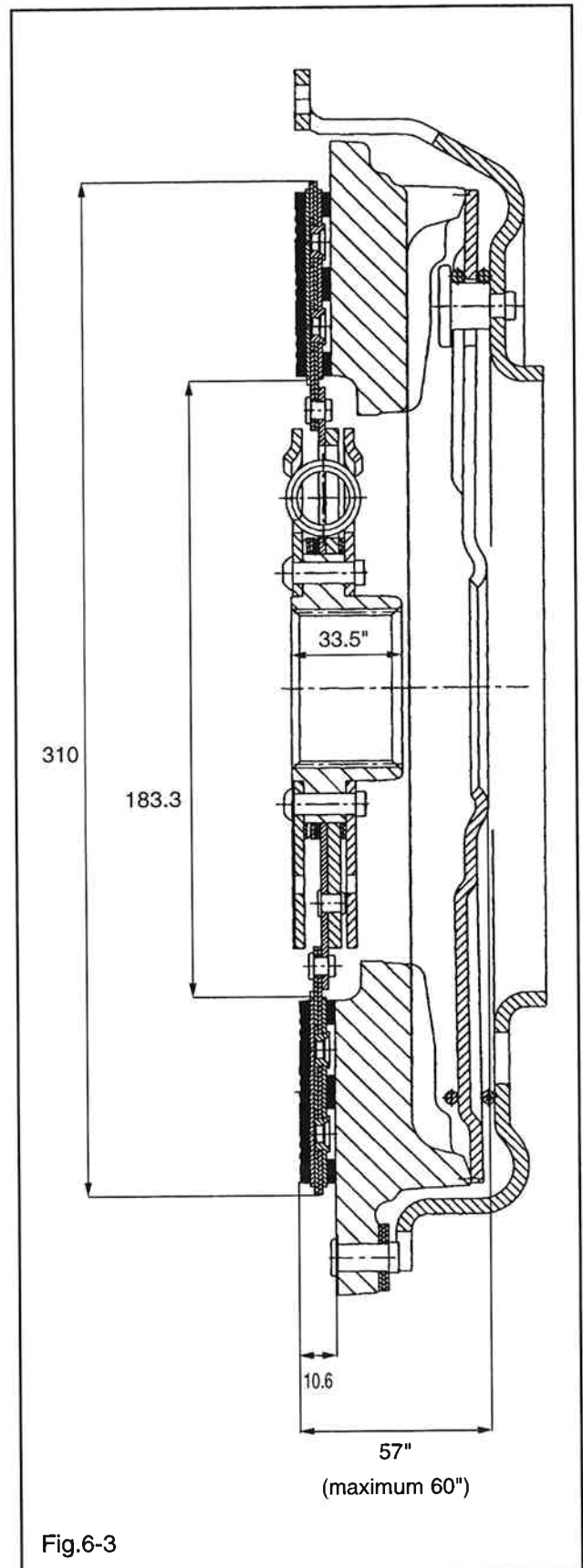
Sect. 3 - Inspections

3-1 Inspection

- 1 - Thoroughly clean all components and check them carefully;
- 2 - Check the retention bearing. Make sure that it turns in a regular way and that the seal is in a good condition;

Single-plate clutch

- 3 - Check the friction surface on the flywheel, the clutch thrust plate and the friction disc.
If necessary, grind the friction surface on the flywheel, removing not more than 1 mm of material from the original surface.





CHAP. 4

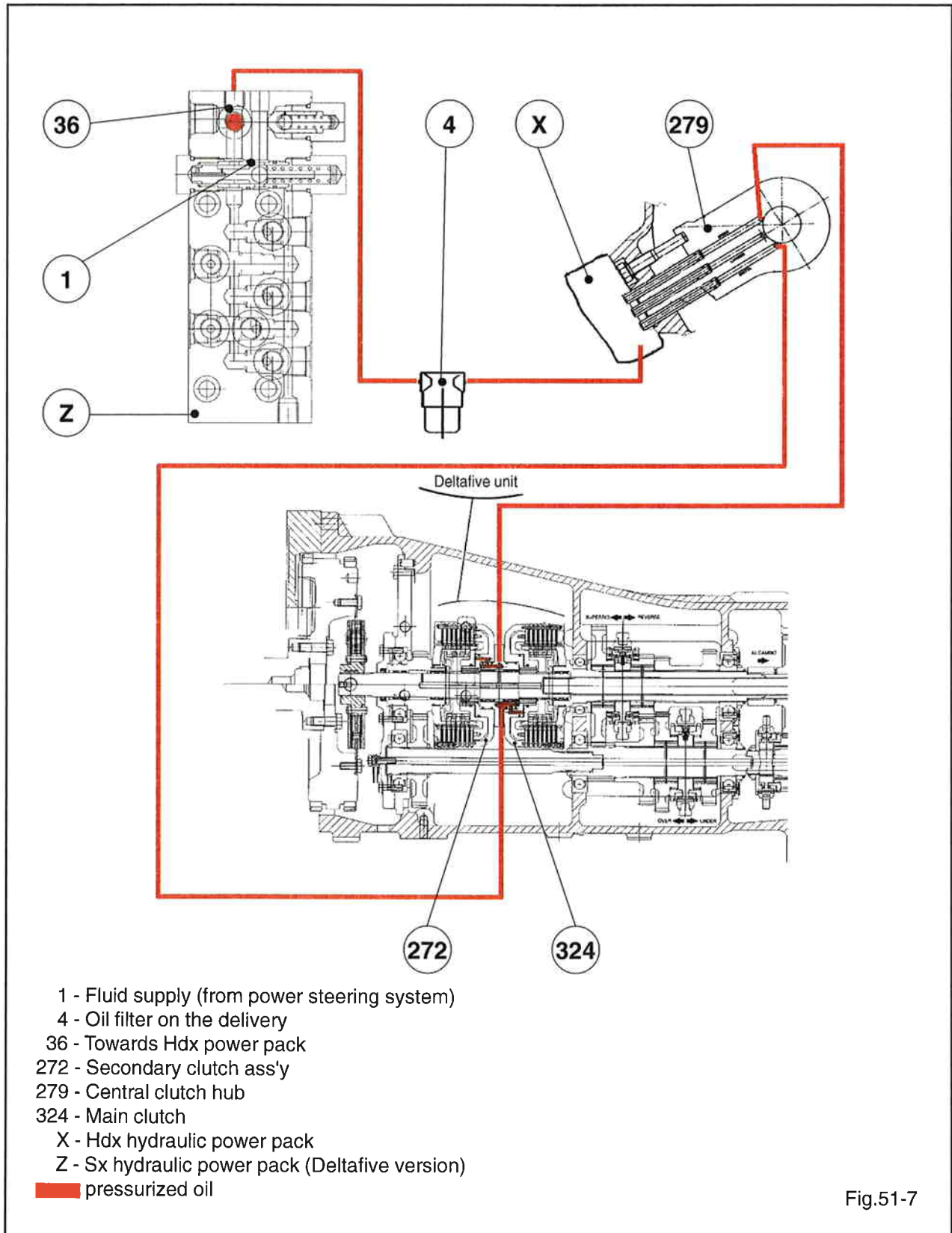
INDEX

Sect. 1	General description	4-3
	1-1 Introduction	4-5
	1-2 Drawing of assembly, main assemblies and description of operation	4-6
	1-3 Control levers	4-8
	1-4 Power train diagrams	4-10
Sect. 2	Technical specifications	4-13
	2-1 Main technical specifications	4-14
	2-2 Driving torques and sealants	4-16
	2-3 Ground speed table	4-17
Sect. 3	Demounting, remounting and adjustment instructions	4-21
	A - Gearbox-axle assembly (Powerfive version)	4-23
	B - Gearbox-axle assembly (Deltafive version)	4-39
	C - Gearbox (Powerfive version)	4-71
	D - Gearbox (Deltafive version)	4-81
	E - Bevel gear pair and differential	4-85
	F - Side final drives	4-97
	G - Rear brakes	4-107
Sect. 4	Special tools	4-113



H - Hydraulic clutches (Deltafave version)

H1 - Main components





Trailer brake for the Export market

Q4.1 - PHASE WITH TRAILER HITCHED AND PEDAL BRAKES UNUSED

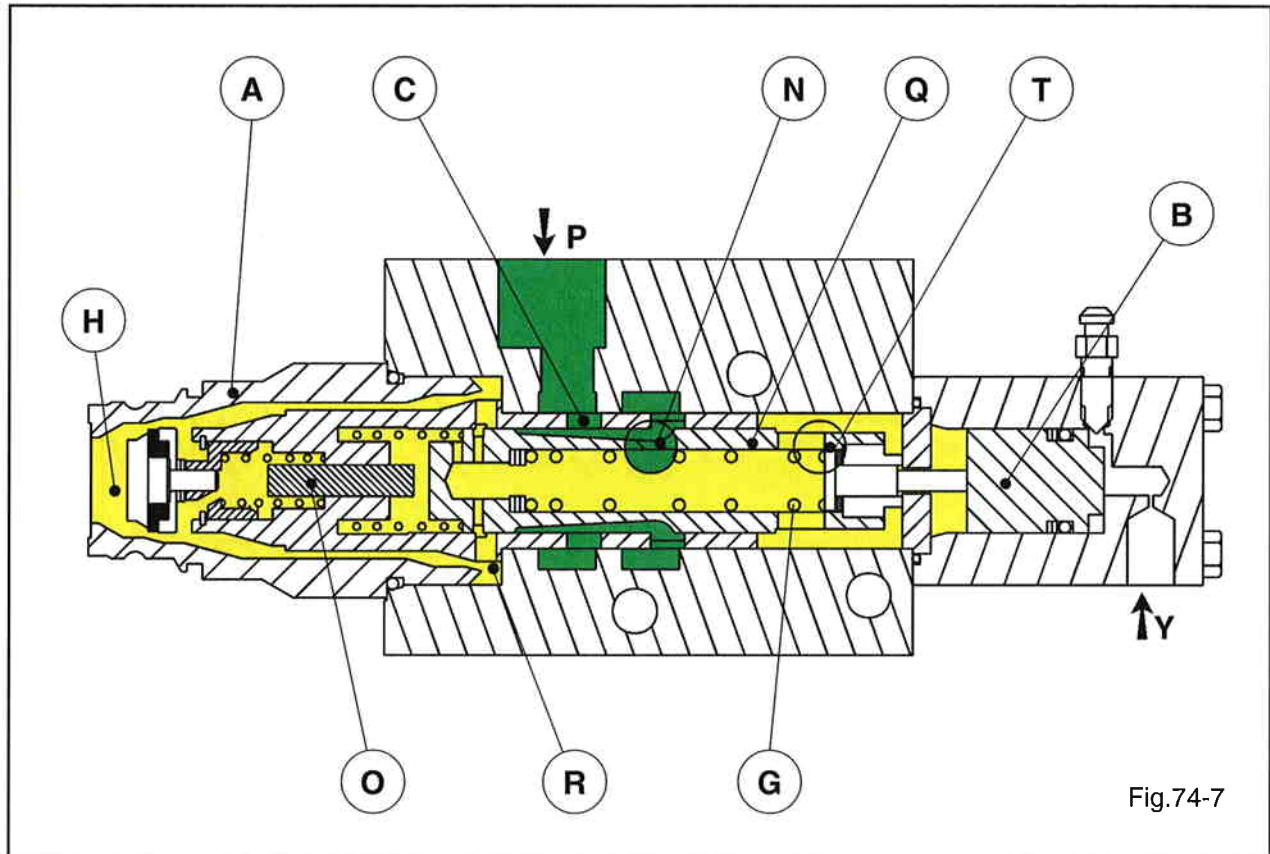




Fig.74-7

Oil from the pump passes through race "C" and leaves through duct "N" to supply the hydraulic power lift.

The oil in duct "H" flows towards outlet "T" through ducts "R" and spring chamber "G".

- A - Quick coupling for trailer brake connection
- B - Auxiliary control valve activating plunger
- C - Pump - power lift connecting race
- G - 140 bar pressure upkeep spring
- H - Trailer brake outlet
- N - To power lift
- O - Return plunger
- P - From pump
- Q - Main control valve plunger
- R - Trailer brake fluid supply race
- T - To outlet
- Y - From trailer brakes

-  discharge
-  to power lift



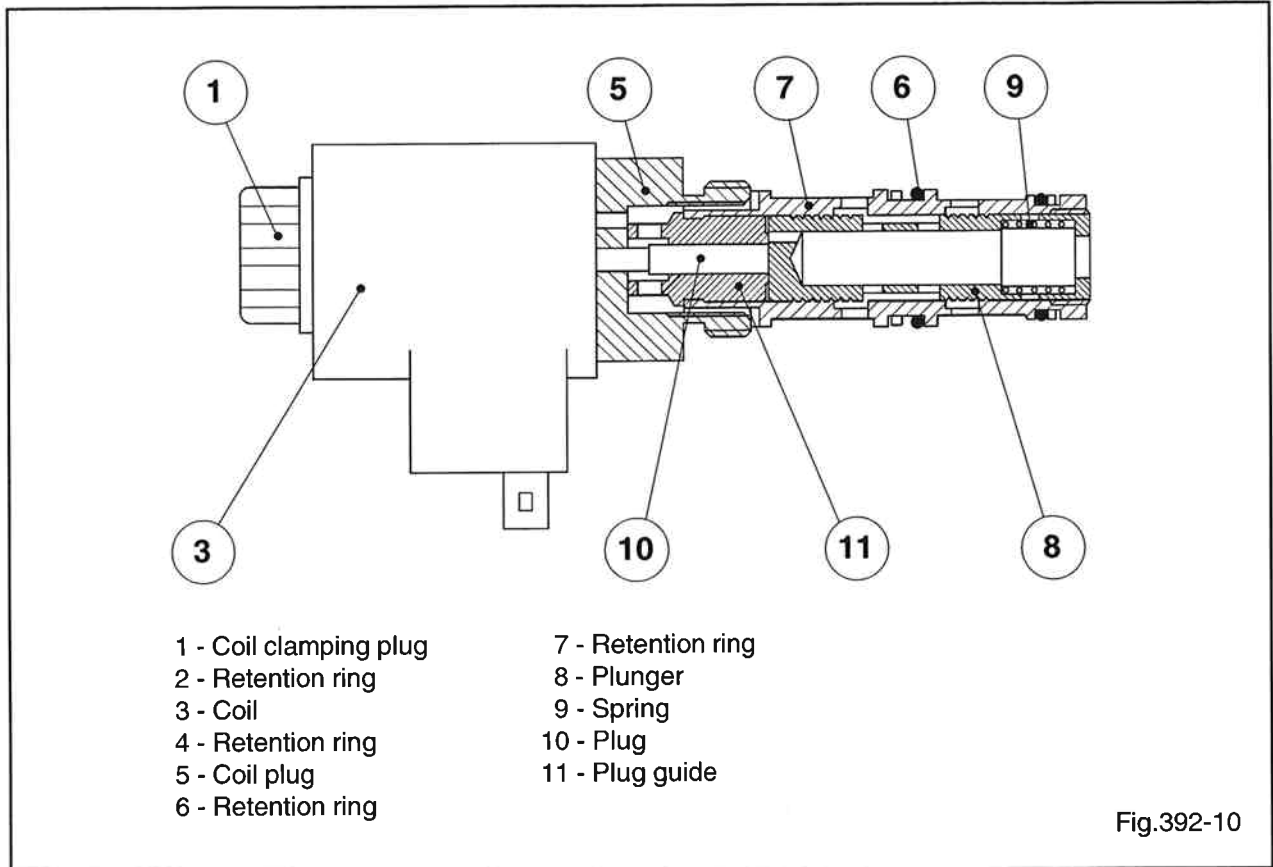
Solenoid valves

In Mythos "Deltafive" tractors, proportional solenoid valves allow the two hydraulic clutch assemblies to be engaged/disengaged in a modular way. Their function is to send oil to the user as needed, by varying the opening.

These solenoid valves are controlled by an electronic board installed in the plant and supplied by the manu-

facturer, which is part of an electronic management program.

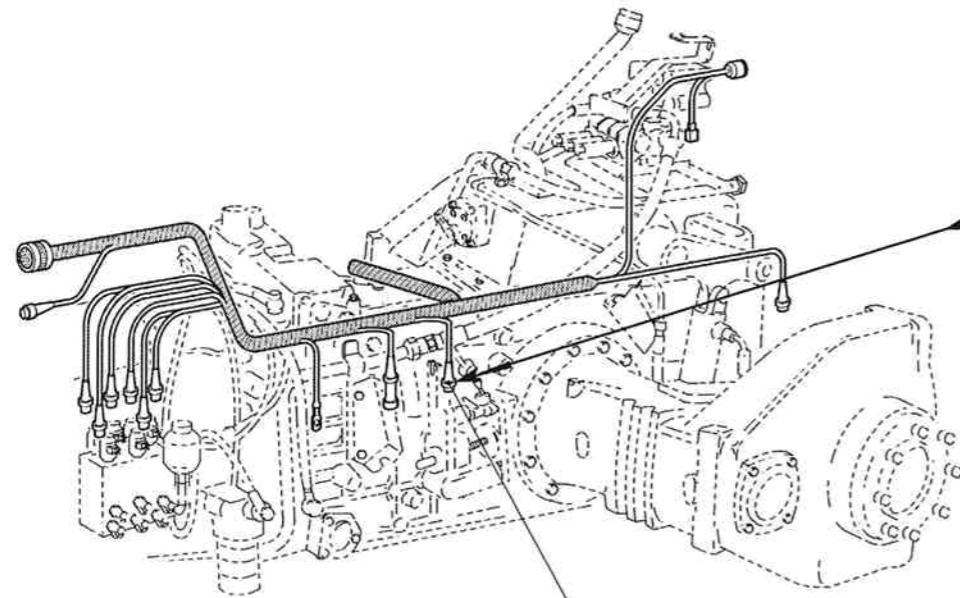
Checks to ensure that these solenoid valves operate correctly must necessarily be carried out with the aid of a PC and using the electronic management software of the "Deltafive" module (Landtools software).



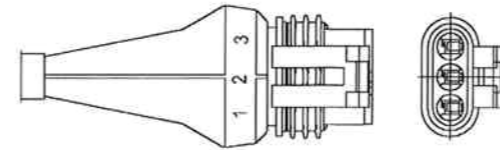


Check-control and troubleshooting

Faulty Hall sensors

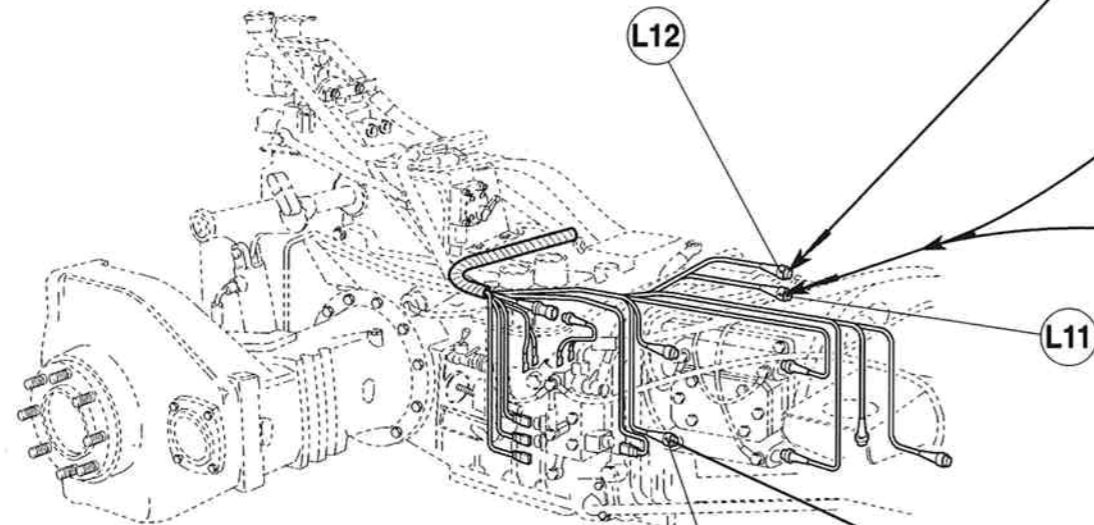


L5



CONNECTOR (L5) FOR GROUND SPEED SENSOR

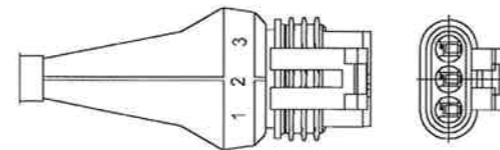
Terminal	Wire colour	To connector or component	Terminale
1	BN	L1	23
2	B	L17 (ground)	-
3	R	L1	5



L12

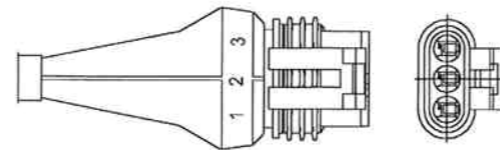
L11

L26



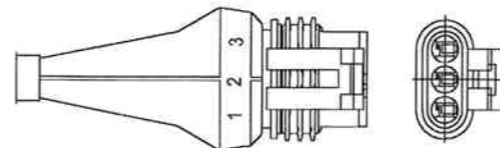
CONNECTOR (L12) FOR DELTAFIVE SPEED SENSOR (GEARBOX)

Terminal	Wire colour	To connector or component	Terminal
1	CN	L1	9
2	B	L8-L9-L11 L15-L16-L17 (ground)	2-2-2-2-2
3	R	L1-L11-L26	4-3-3



CONNECTOR (L11) FOR DELTAFIVE SPEED SENSOR (GEARBOX)

Terminal	Wire colour	To connector or component	Terminal
1	A	L1	10
2	B	L8-L9-L12 L15-L16-L17 (ground)	2-2-2-2-2
3	R	L1-L12-L26	4-3-3



CONNECTOR (L26) FOR ENGINE RPM SENSOR

Terminale	Wire colour	To connector or component	Terminal
1	HR	L1	13
2	B	L17 (ground)	-
3	R	L1-L11-L12	4-3-3



Guide to the "calibration" module

4-5 Clutch pedal calibration (precise)

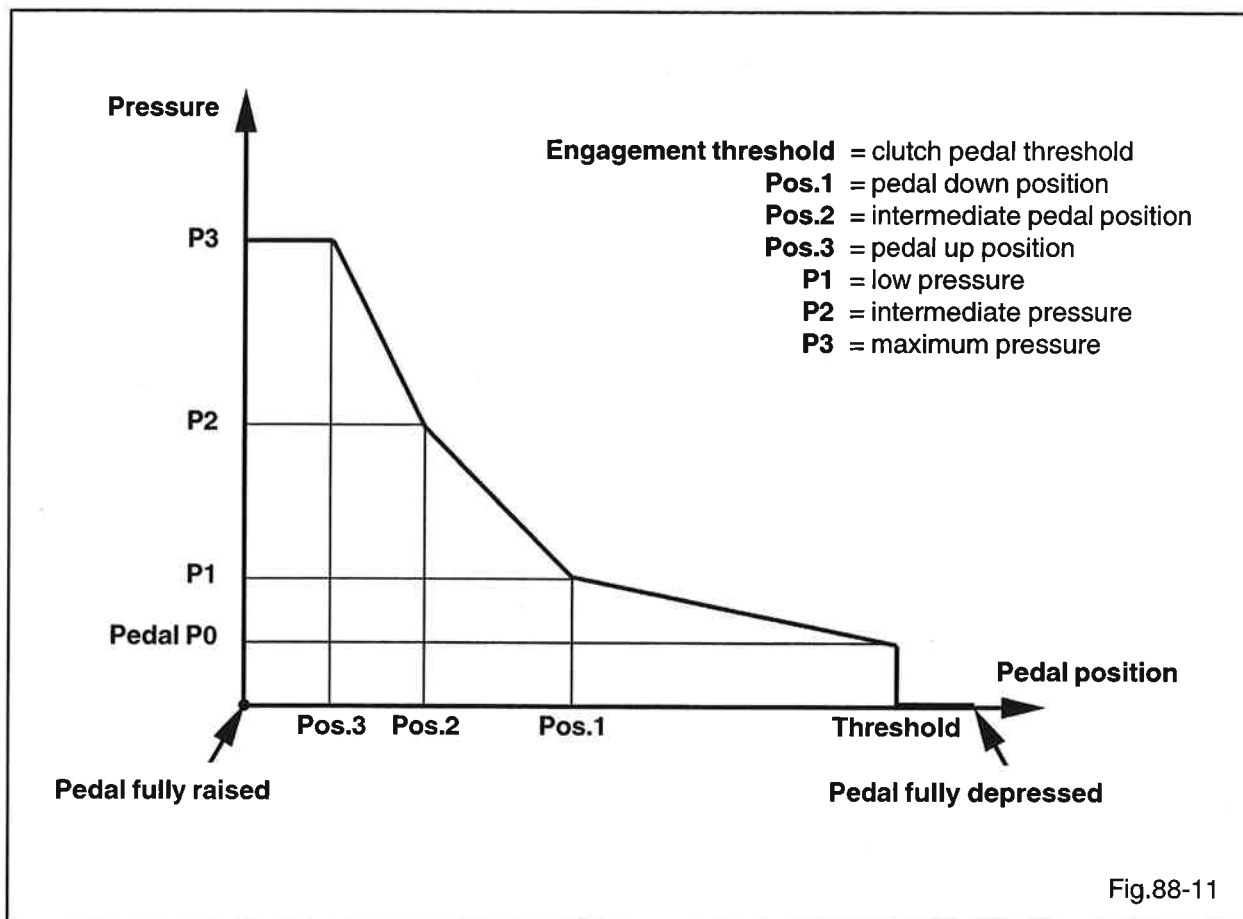


Fig.88-11

The diagram in Fig.88-11 graphically illustrates the **manual piloting** law of Mythos Deltafive tractors. It shows the pressure trend within the clutch assemblies depending on the position of the pedal. A different pedal calibration is obtained by changing the values that identify sections with different slopes. Consequently, the moment in which they cause the tractor to move will also be different.

Once the P0 parameters have been calibrated, the program will automatically activate the window shown in Fig.89-11, so that the tractor adjustments can be completed by accurately calibrating the clutch pedal. The procedure is the same as the one described in section 4-2 which illustrates the rough pedal calibration procedure.

Greater accuracy can now be achieved for the representative engaging pressure values.

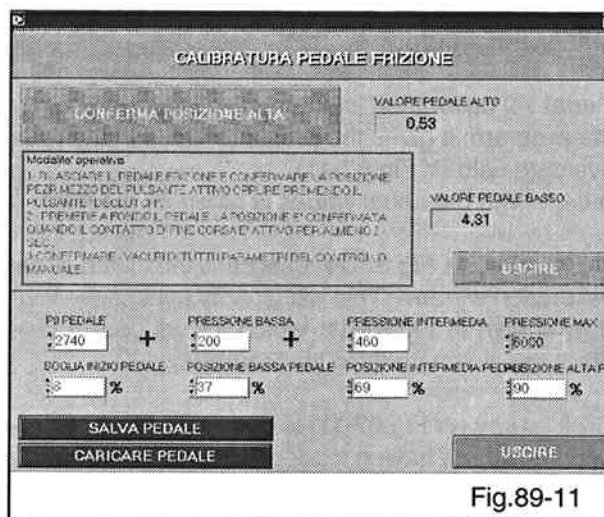


Fig.89-11



CHAP. 12

Air-conditioning system (A/C)

INDEX

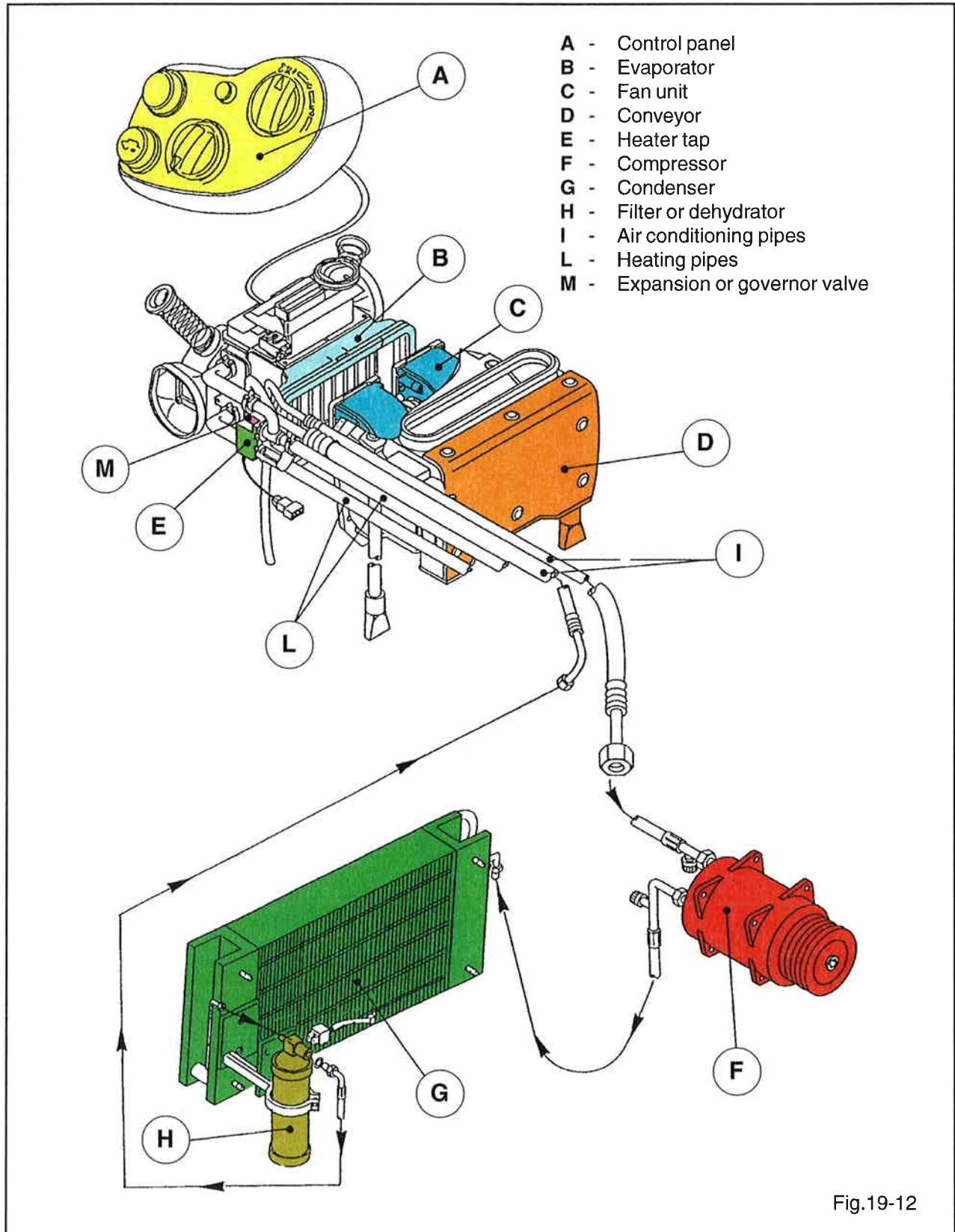
Sect.3 Air-conditioning system (A/C)

3-1 Main components	12-26
3-2 How to use the air-conditioning system	12-27
3-3 Wiring diagram	12-28



Sect.3 - Air-conditioning system (A/C)

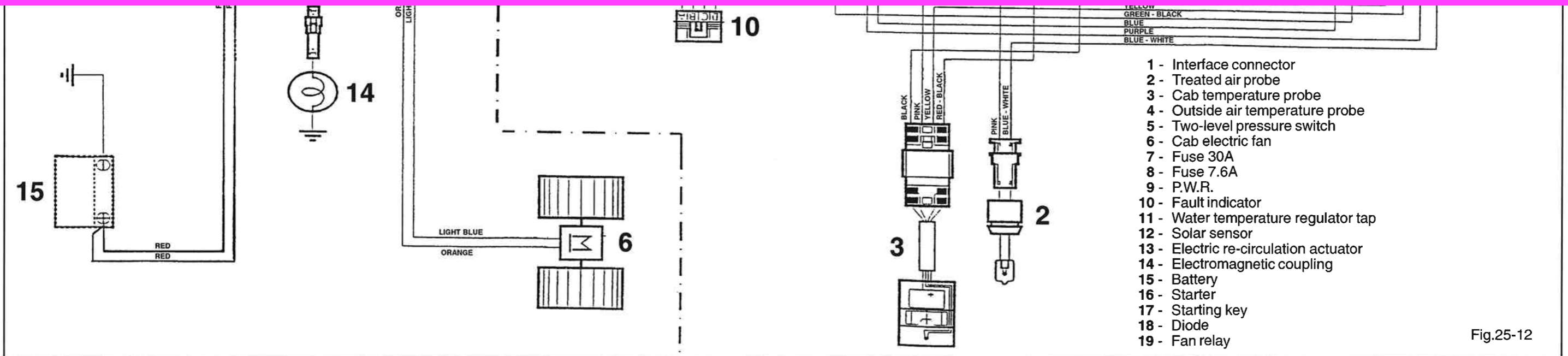
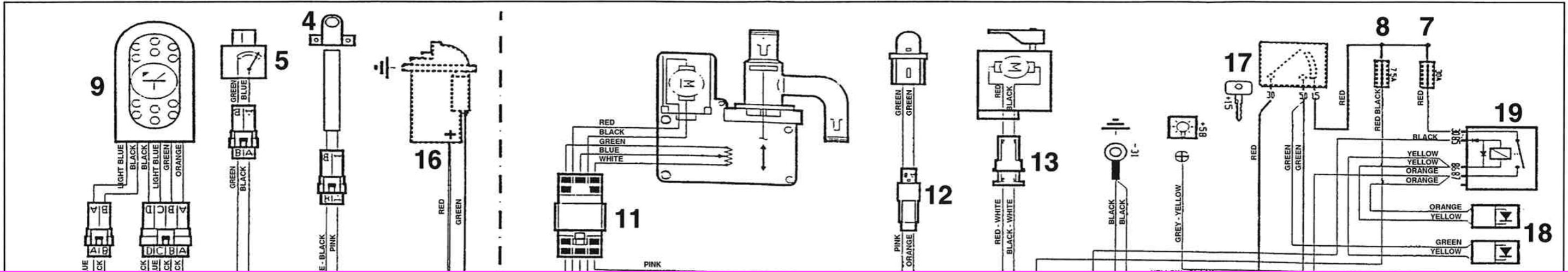
3-1 Main components





Air-conditioning system (ECC)

4-4 Wiring diagram



- 1 - Interface connector
- 2 - Treated air probe
- 3 - Cab temperature probe
- 4 - Outside air temperature probe
- 5 - Two-level pressure switch
- 6 - Cab electric fan
- 7 - Fuse 30A
- 8 - Fuse 7.6A
- 9 - P.W.R.
- 10 - Fault indicator
- 11 - Water temperature regulator tap
- 12 - Solar sensor
- 13 - Electric re-circulation actuator
- 14 - Electromagnetic coupling
- 15 - Battery
- 16 - Starter
- 17 - Starting key
- 18 - Diode
- 19 - Fan relay

Fig.25-12