

INSTRUMENT CLUSTER

INDEX

GENERAL DESCRIPTION	17-2
INTERNAL WIRING DIAGRAM (printed circuit)	17-2
Functional description	17-2
Wiring diagram	17-3
Components and Connectors	17-4/2
INSTRUMENT CLUSTER SUPPLY	17-4/4
Wiring diagram	17-4/4
Functional Description	17-6
Components and Connectors	17-6
REV COUNTER AND SPEEDOMETER (up to M.Y. '97)	17-8
Wiring diagram	17-8
Functional Description	17-9
Components and Connectors	17-10
REV COUNTER AND SPEEDOMETER (from M.Y. '98)	17-10/1
Wiring diagram	17-10/1
Functional Description	17-10/2
Components and Connectors	17-10/3
ENGINE WARNING LIGHTS	17-11
Wiring diagram	17-11
Functional Description	17-12/1
Components and Connectors	17-12/2
BRAKING SYSTEM WARNING LIGHTS	17-15
Wiring diagram	17-15
Functional Description	17-16/2
Components and Connectors	17-16/2
LOCATION OF COMPONENTS (Petrol Versions)	17-19
LOCATION OF COMPONENTS (TD Version)	17-20
FAULT-FINDING TABLE	17-21
CHECKING COMPONENTS	17-22

GENERAL DESCRIPTION

The instrument cluster offers all the indications and information about the conditions of the vehicle which are indispensable for safe and troublefree driving. The cluster is of the analogue type with two large dials for the speedometer and rev counter, plus other gauges for the fuel level and coolant temperature. A comprehensive set of plainly visible warning lights completes the information for the driver.

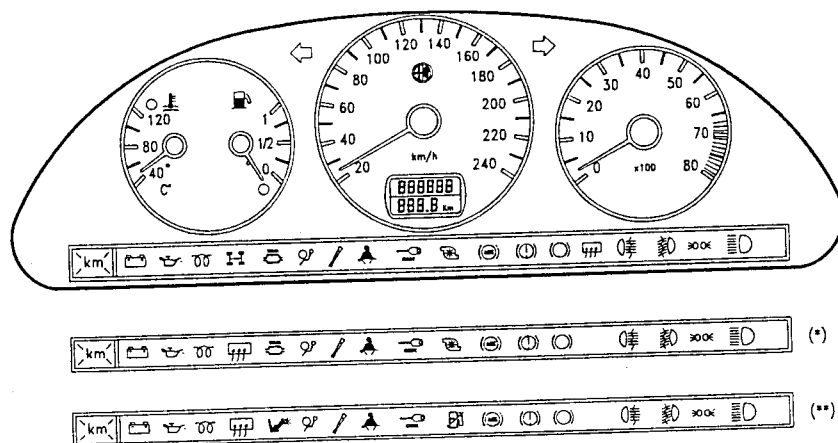
N.B.: The instrument cluster is made as a single component: all the internal connections are made on a printed circuit which brings together the contacts of the instruments and of the various warning lights. **Therefore, repair operations are not possible, not even the changing of a warning light bulb.**

Note: the section has been subdivided into 5 wiring diagrams:

- the **first diagram** considers all the internal connections of the printed circuit.

– the following 4 diagrams describe certain specific functions: here, only those functions that do not appear elsewhere are described and only with regard to the instrument cluster; other functions, such as warning lights, are included in the wiring diagram of the unit or system to which they refer: for example the high beam headlamp warning light is included in the diagram "High beam and low beam headlamps", etc...

N.B.: the first diagram shows the connections which supply the instrument cluster ( or ) and earth (); in the subsequent diagrams these lines are no longer shown, but this connection is indicated by the corresponding symbols, and may at all events be checked in the internal diagram. The instrument cluster lighting, supplied when the sidelights are turned on, is described separately (see Lighting of controls and indicators")



(*) from Model Year '97

(**) from Model Year '99

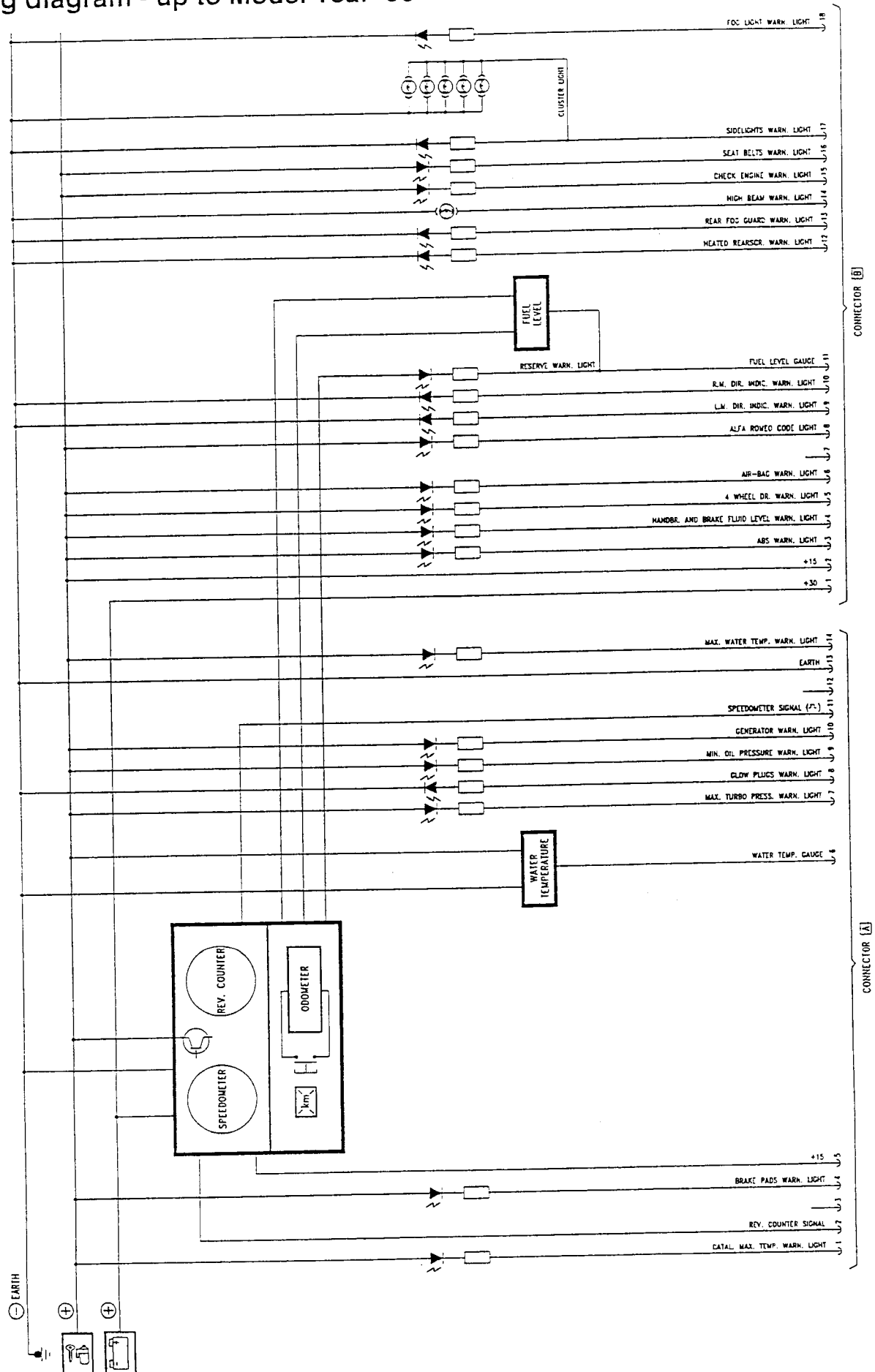
INTERNAL WIRING DIAGRAM (printed circuit)

Functional description

This wiring diagram represents the printed circuit and the connections inside the instrument cluster C10. shown, while this diagram gives an overall view of the entire instrument cluster C10. the other diagrams concerning the outside connections of the cluster, only the lines concerned are shown, while this diagram gives an overall view of the entire instrument cluster C10.

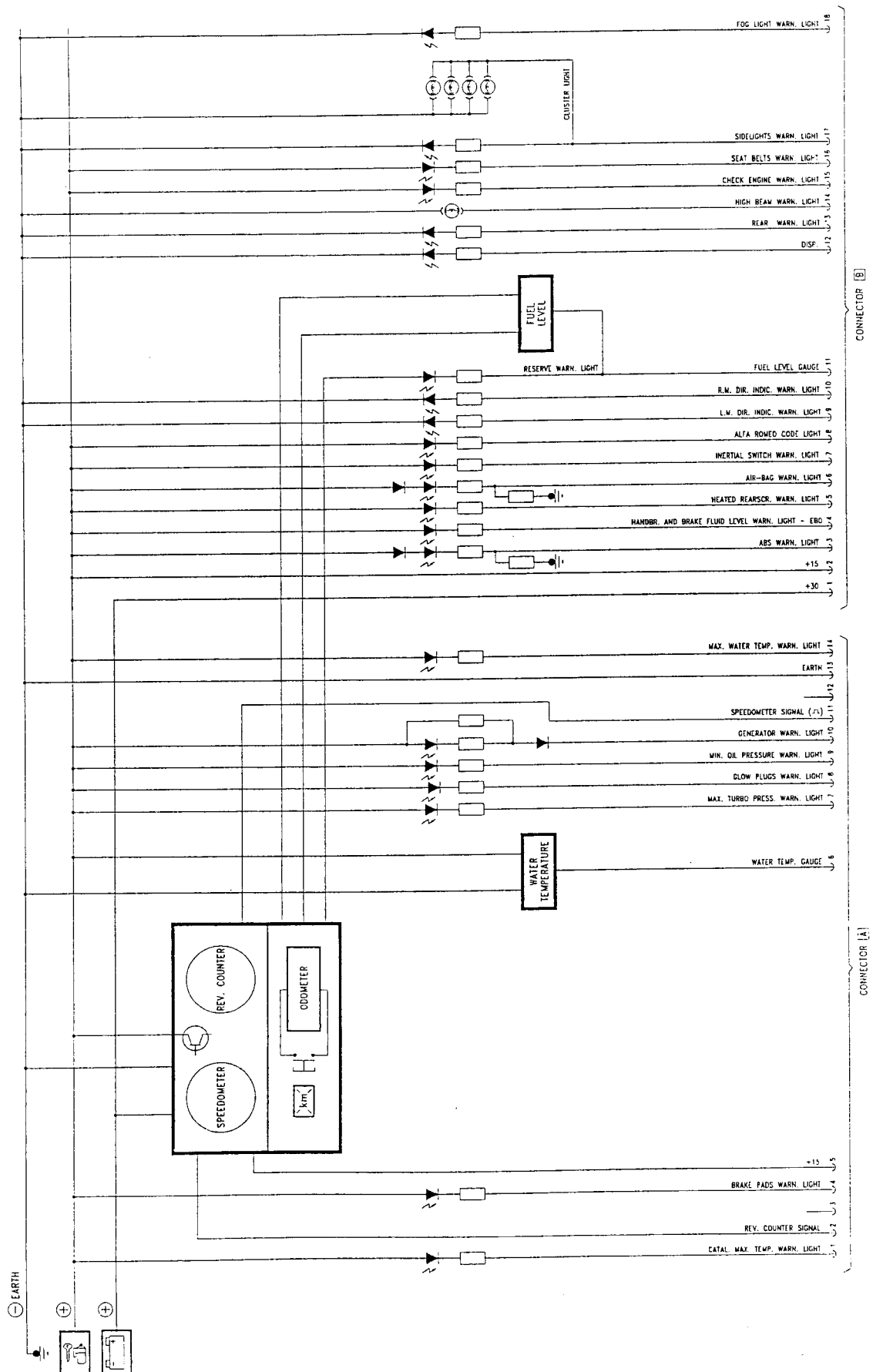
NOTE: not all the output pins are connected for all the versions of the car: some lines in this diagram therefore might not be used (e.g. warning lights not connected) but they are still present on the printed circuit, which is the same for all versions.

Wiring diagram - up to Model Year '96



10-1996

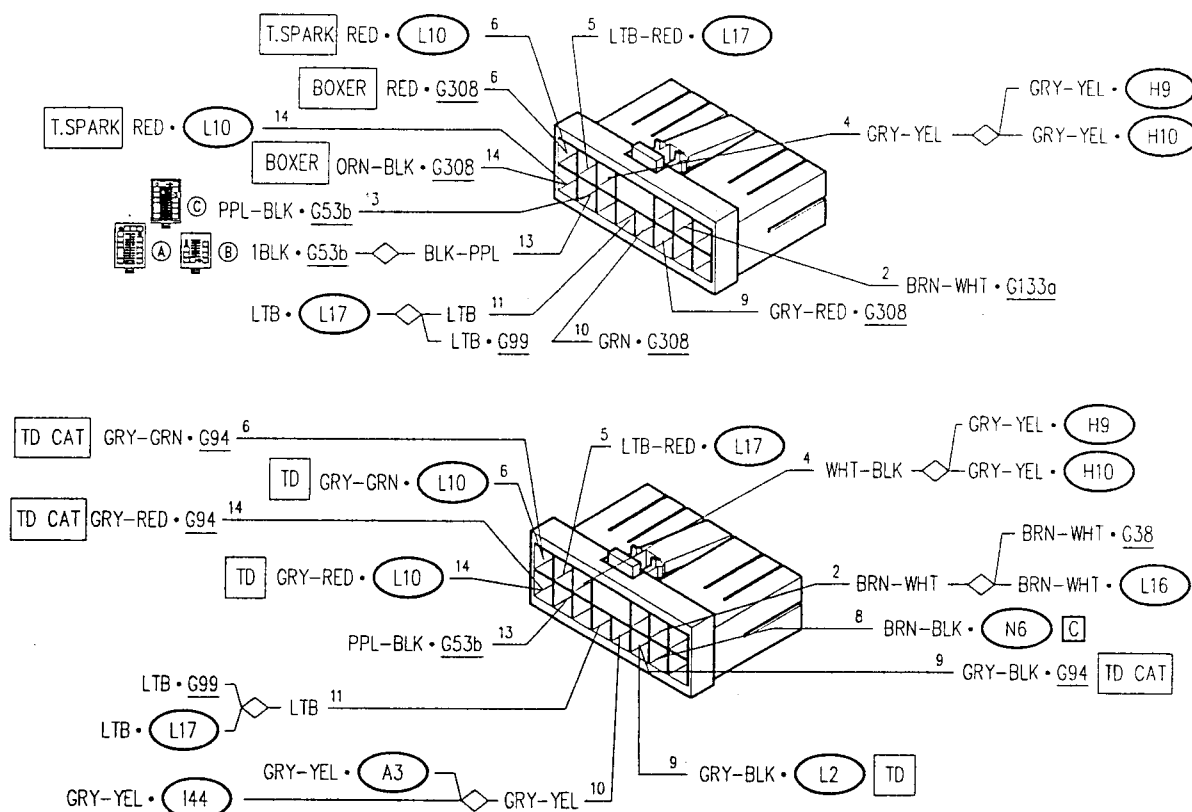
Wiring diagram - from Model Year '99



Components and Connectors

Instrument cluster (**)

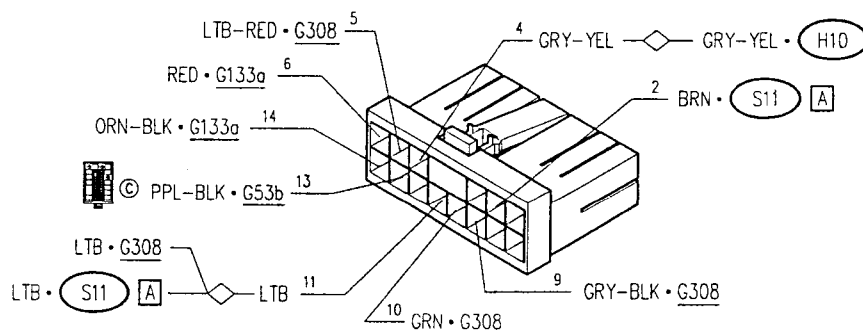
C10 A



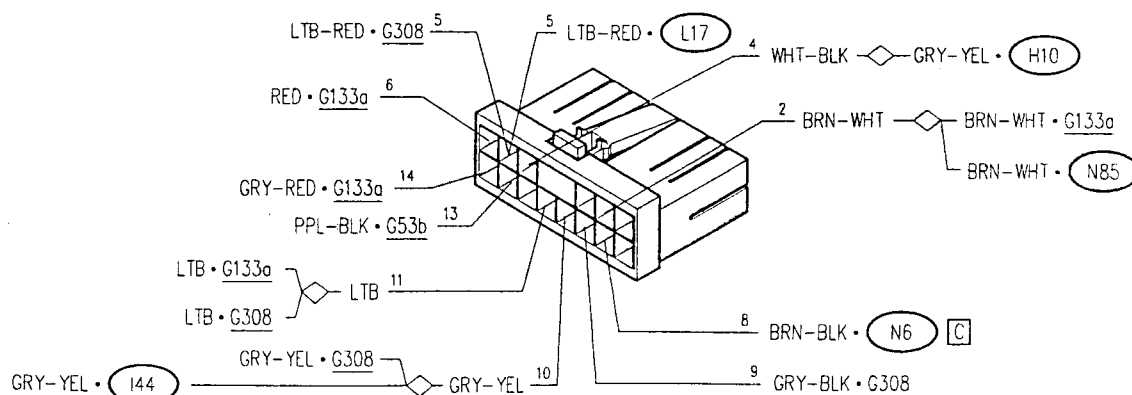
Instrument cluster (•)

C10 A

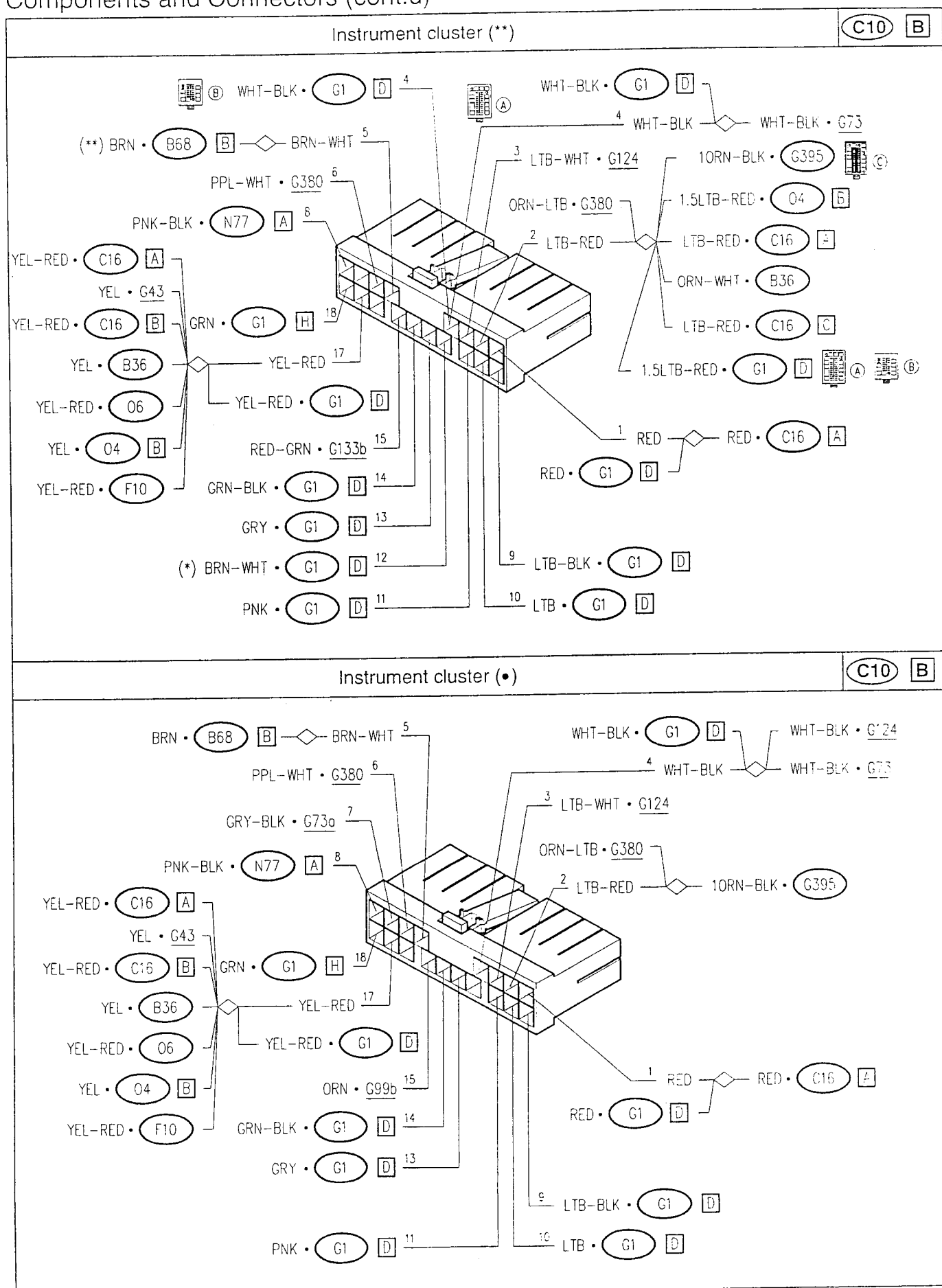
M1.5.5



JTD



Components and Connectors (cont.d)



(*) up to Model Year '96
PA493000000012

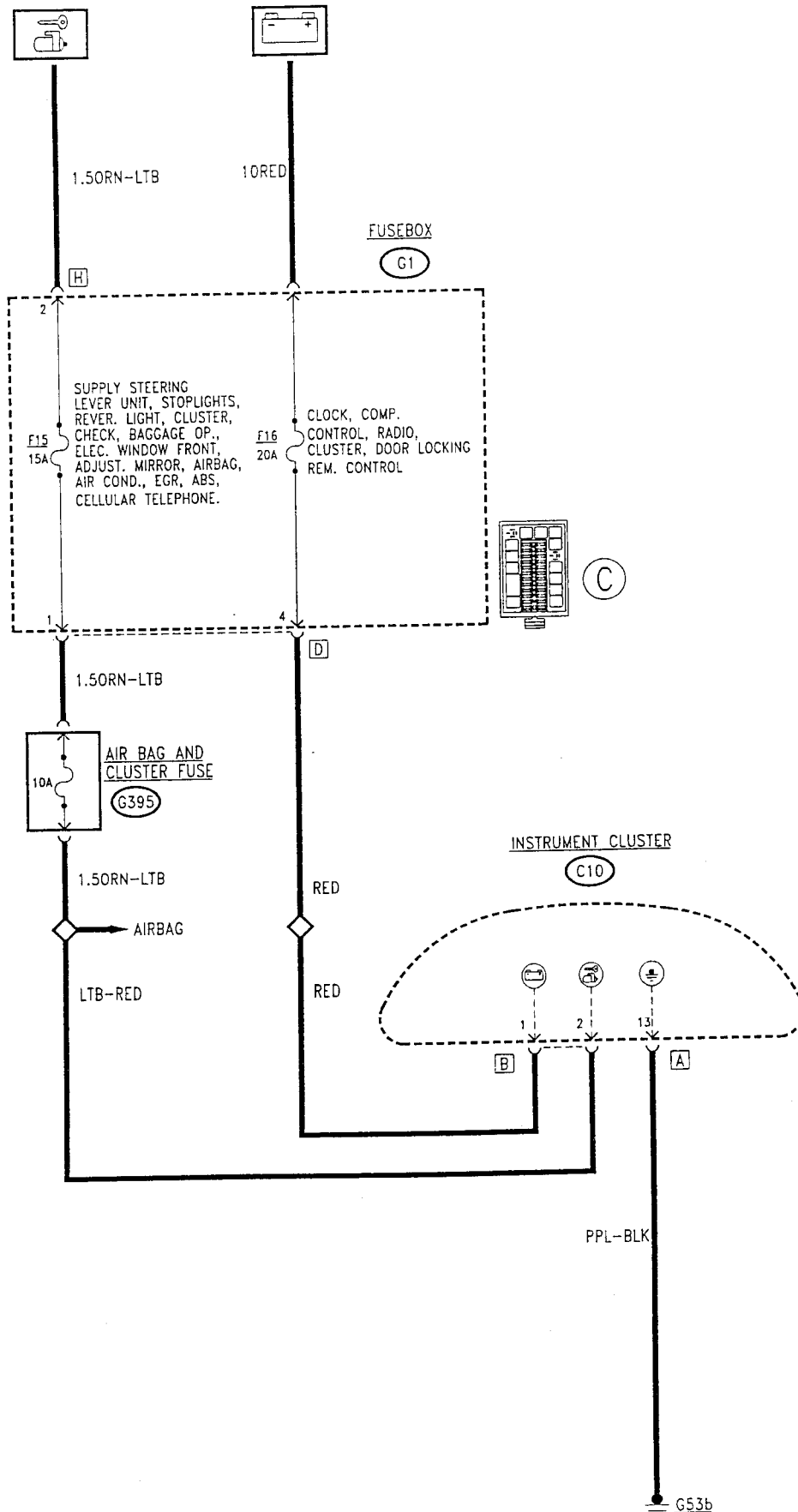
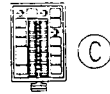
(**) up to Model Year '97
- 4/3 -

(•) Model Year '98

Wiring diagram



Wiring diagram



Functional Description

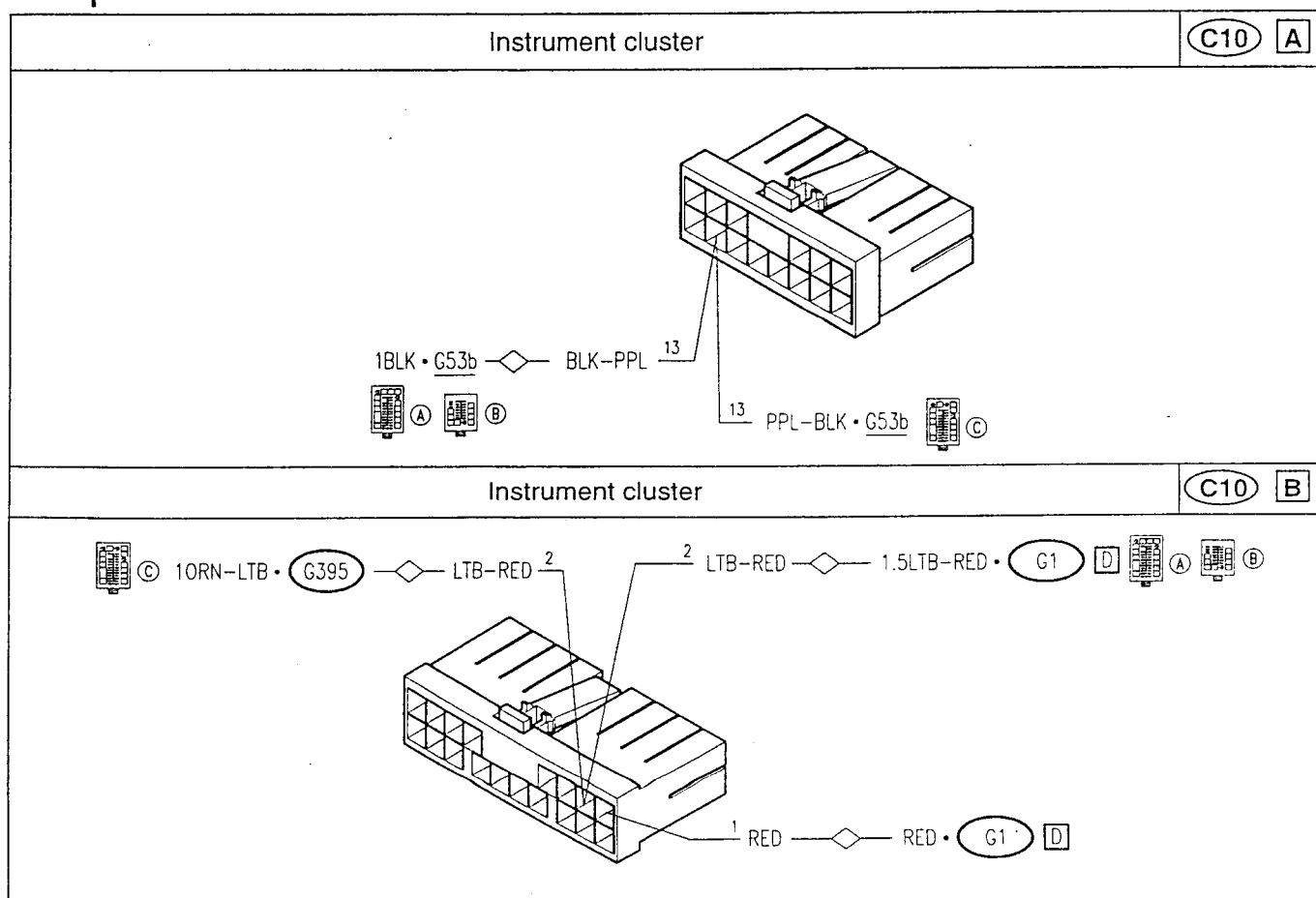
The instrument cluster is supplied by direct voltage via fuse **F16** and with "key-operated" voltage via fuse **F15** of fusebox **G1**.

For box "C" there is fuse **G395** next to it. Connection is made respectively at pin 1 and 2 of connector B of the cluster **C10**.

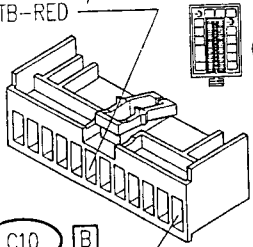
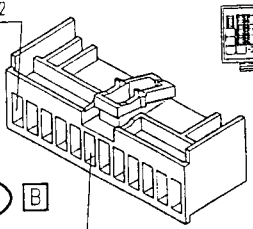
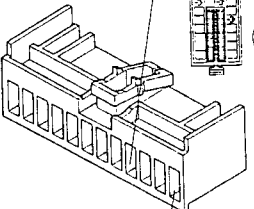
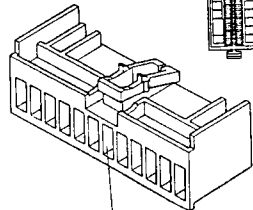
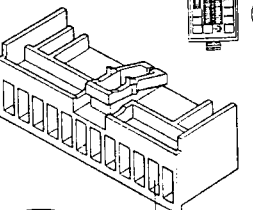
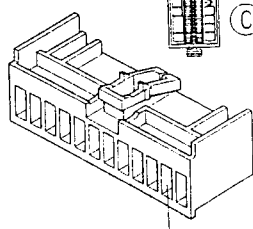
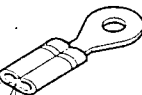
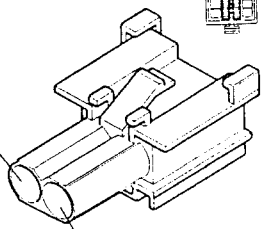
Connection takes place respectively at pins 1 and 2 of connector B of the cluster **C10**.

The cluster **C10** is connected to earth by the cable that leaves pin 13 of connector A towards earth **G53b**.

Components and Connectors



Components and Connectors (cont.d)

Components and Connectors (cont.d)		Fusebox		G1
10RED • C56 				
Fusebox		G1 D		
LTB-RED • C10 B 1.5LTB-RED 7 RED • C10 B RED 1 A  LTB-RED • C10 B 1.5LTB-RED 12 RED • C10 B RED 7 B  RED • C10 B RED 4 10RN-LTB • G395 1 C 				
Fusebox		G1 H		
1.5ORN-LTB 6 1.5GRY-BLK • B1 A A  1.5GRY-BLK • B1 A 1.5ORN-LTB 2 B  1.5ORN-LTB • B1 A 2 C 				
LH engine compartment earth	G53b	Air Bag and cluster fuse	G395	
TD BLK-PPL • C10 A (*) BLK-PPL • C10 A (**) BLK-PPL • C10 A 1BLK 		10RN-LTB • G1 D LTB • C10 B 10RN-LTB 		

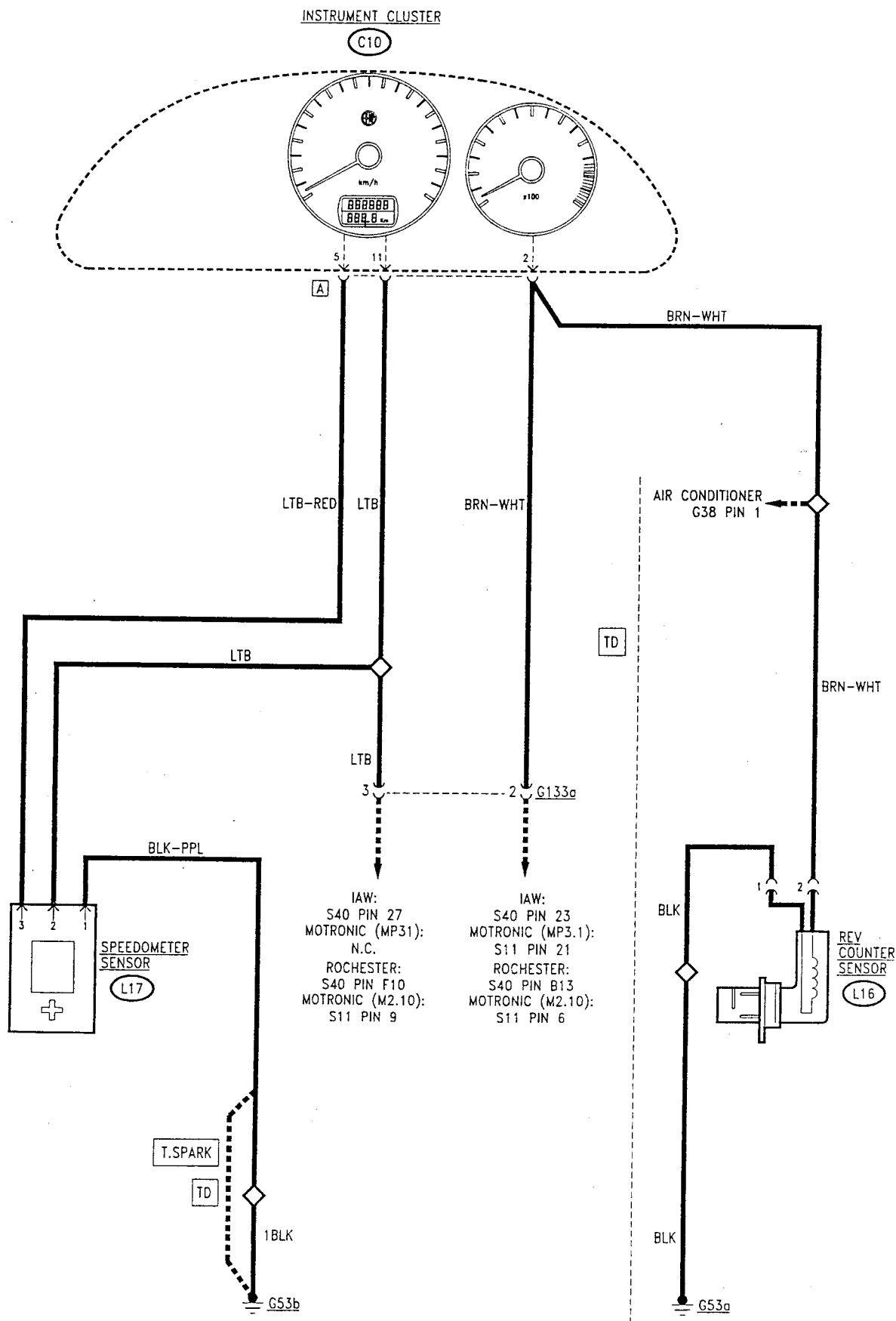
(*) up to chassis no. ____
PA49300000012

(**) from chassis no. ____
- 7 -

2-1999

REV COUNTER AND SPEEDOMETER (up to M.Y. '97)

Wiring diagram



Functional Description

The **rev counter signal** is supplied to the instrument cluster:

for the **Petrol version**: by the engine injection/ignition control unit **S11/S40** which processes an "rpm" signal thanks to sensor **S31**.

The signal reaches the cluster **C10** at pin 2 of connector A, leading from connector **G133a** which connects the injection/ignition system with the other circuits; inside the cluster it then reaches the electronic device that operates the rev counter.

for the **TD version**: from the special sensor **L16** fitted on the flywheel ring gear so that it can constantly read the engine rpm.

The sensor is inductive and detects the engine rpm through the change in a magnetic field produced by the passage of the teeth of the flywheel ring gear. The signal reaches the instrument cluster **C10** at pin 2 of connector A, leading from sensor **L16**; inside the cluster it then reaches the electronic device that operates the rev counter.

The same signal is then sent to the heating and ventilation system, to the compressor cut-out control unit **Q67**.

The **speedometer signal** is supplied by the speedometer sensor **L17**: this is fitted on the gearbox and detects the speed of the car at all times.

This device is a pulse generator which generates and processes a signal that is proportionate with the speed of the camshaft at the gearbox output, therefore with that of the wheels: it is a "square-wave" signal obtained:

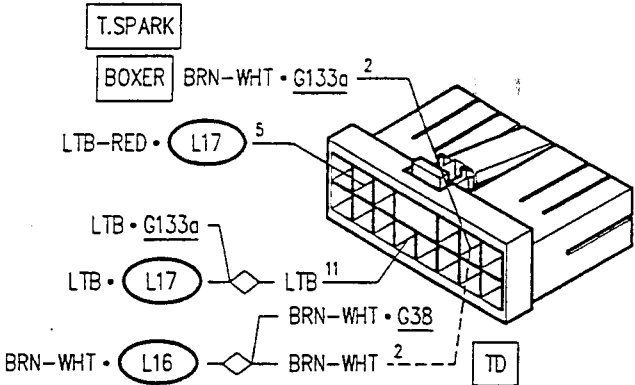
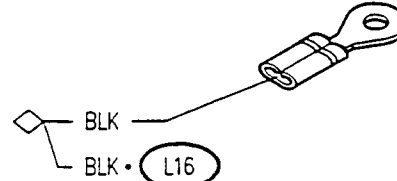
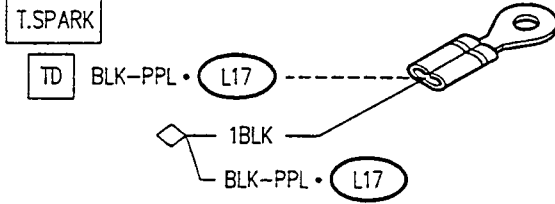
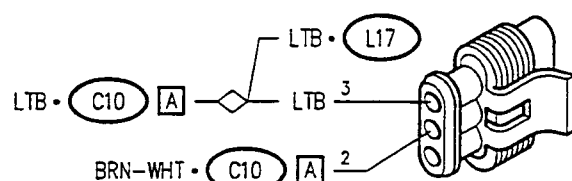
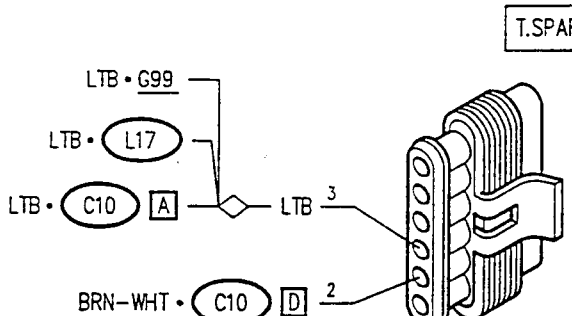
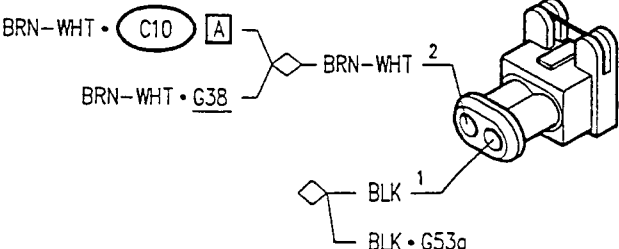
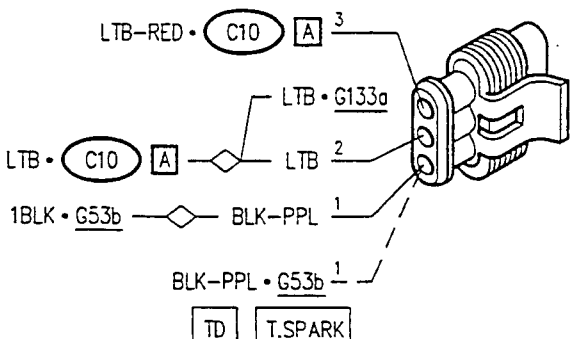
for the **Petrol versions**: through an electronic module, inside the actual sensor, which "squares" a sinusoidal signal captured by a magnetic core.

for the **TD version**: it is a Hall effect sensor which processes the output signal.

The sensor **L17** is supplied at pin 3 with stabilised voltage through an electronic device inside the instrument cluster (from pin 5 of connector A of **C10**); pin 1 is connected to earth **G53b**, while the tachometric signal (proportionate with the speed of the car leaves pin 2 and is sent to the instrument cluster **C10** at pin 11 of connector A, and from here to the electronic device that operates the speedometer and the two mileage recorders (total and trip).

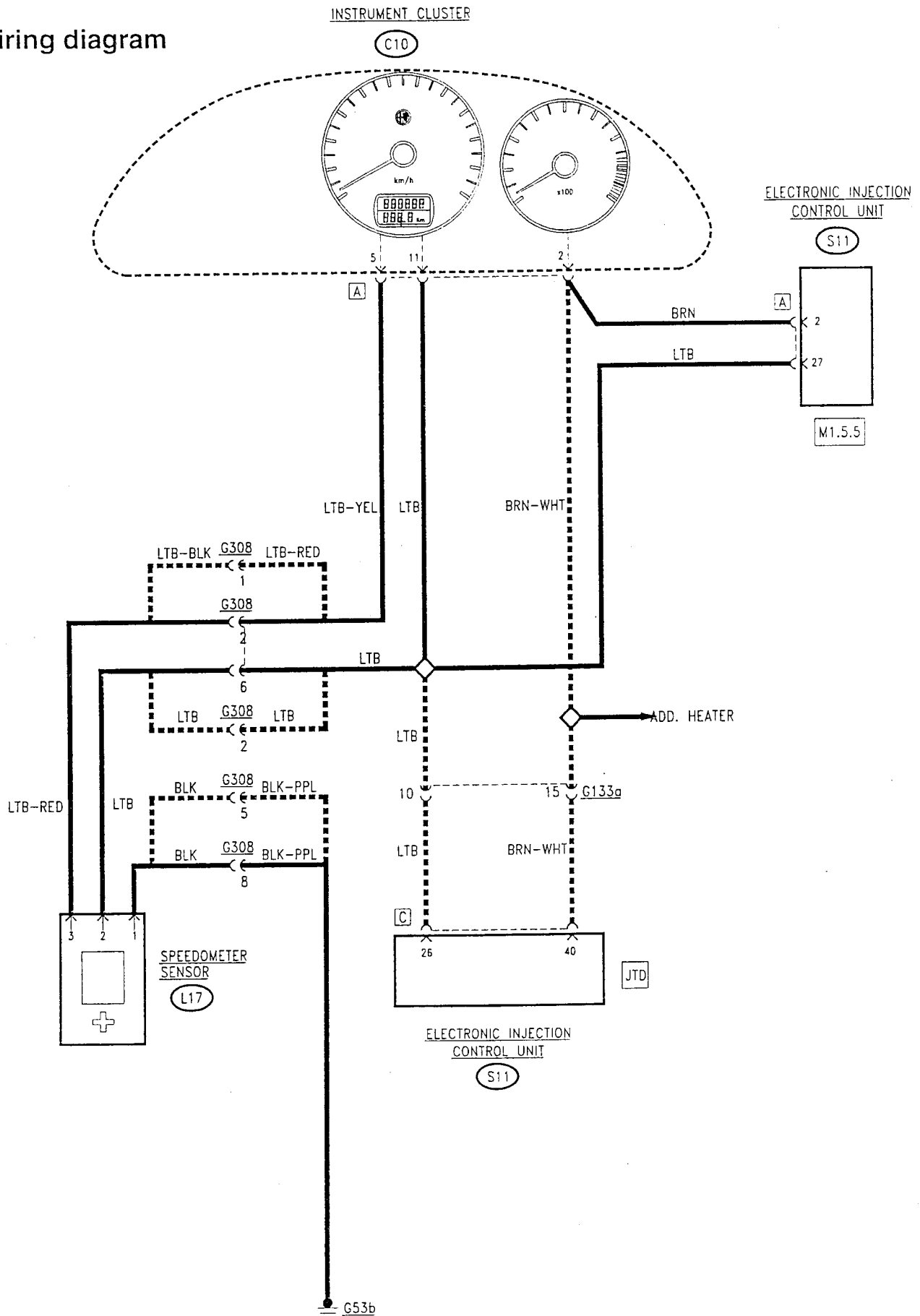
The same signal is also sent - for the **Petrol versions** - to the injection/ignition system which needs the "car speed" information (see the corresponding sections).

Components and Connectors

Instrument cluster	C10 A	RH engine compartment earth	G53a
 Diagram of the instrument cluster connector showing terminals and wire connections: - T.SPARK - BOXER - BRN-WHT • G133a 2 - L7B-RED • L17 5 - L7B • G133a - L7B • L17 - L7B 11 - BRN-WHT • G38 - BRN-WHT • L16 - BRN-WHT 2 - TD		 Diagram of the RH engine compartment earth connector showing a black wire and terminal L16: - BLK - BLK • L16	
LH engine compartment earth	G53b	Electronic injection wiring connector A	G133a
 Diagram of the LH engine compartment earth connector showing a black wire and terminal L17: - T.SPARK - TD - BLK-PPL • L17 1BLK - BLK-PPL • L17		 Diagram of the electronic injection wiring connector A showing terminals and wire connections: - BOXER - L7B • L17 - L7B • C10 A - L7B 3 - BRN-WHT • C10 A 2	
 Diagram of the electronic injection wiring connector A showing terminals and wire connections: - T.SPARK - L7B • G99 - L7B • L17 - L7B • C10 A - L7B 3 - BRN-WHT • C10 D 2			
Rev counter sensor	L16	Speedometer sensor	L17
 Diagram of the rev counter sensor connector showing terminals and wire connections: - BRN-WHT • C10 A - BRN-WHT • G38 - BRN-WHT 2 - BLK 1 - BLK • G53a		 Diagram of the speedometer sensor connector showing terminals and wire connections: - L7B-RED • C10 A 3 - L7B • G133a - L7B • C10 A - L7B 2 1BLK • G53b - BLK-PPL 1 - BLK-PPL • G53b 1 - TD - T.SPARK	

REV COUNTER AND SPEEDOMETER (from M.Y. '99)

Wiring diagram



Functional Description

The **rpm signal** is supplied to the instrument cluster: from the engine injection control unit **S11** which receives an "engine rpm" signal from sensor **S31**. The signal reaches the cluster **C10** at pin 2 of connector A.

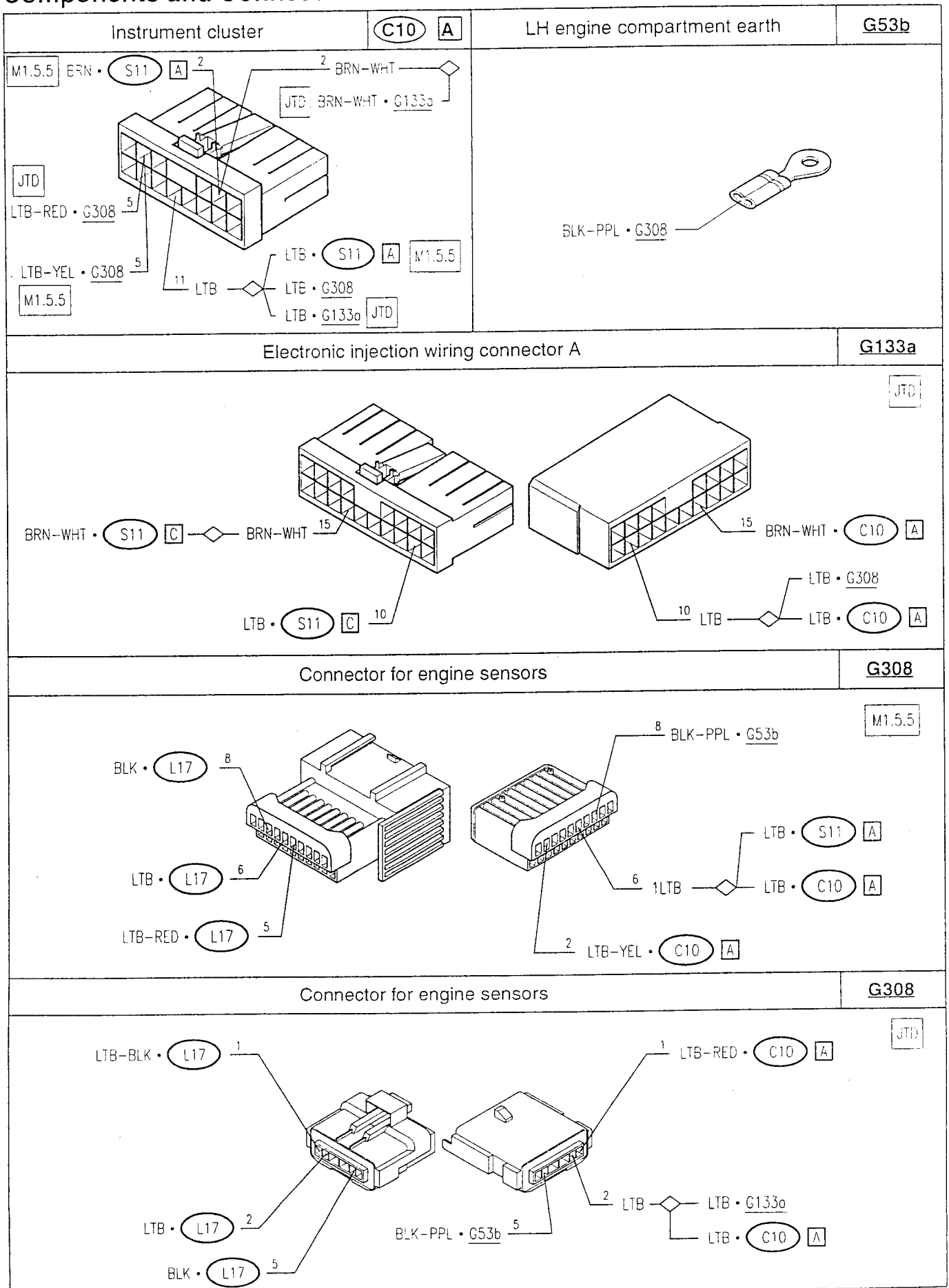
The **speedometer signal** is supplied by the speedometer sensor **L17**: this is fitted on the gearbox and detects the speed of the car at all times.

This device is a pulse generator which generates and processes a signal that is proportionate with the speed

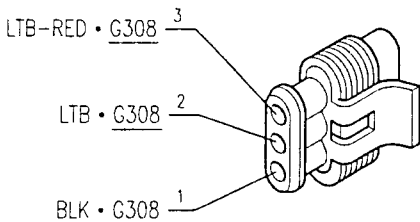
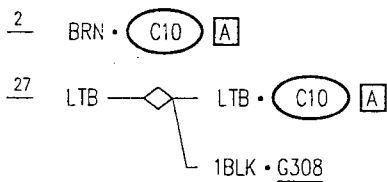
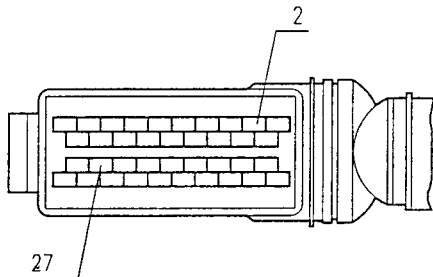
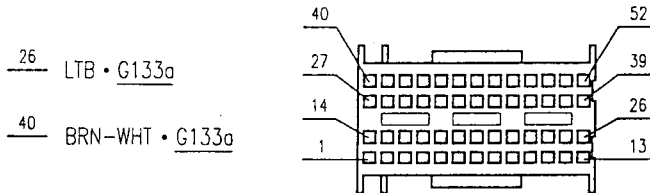
of the camshaft at the gearbox output, therefore with that of the wheels: it is a "square-wave".

The sensor **L17** is supplied at pin 3 with stabilised voltage through an electronic device inside the instrument cluster (from pin 5 of connector A of **C10**); pin 1 is connected to earth **G53b**, while the tachometric signal (proportionate with the speed of the car leaves pin 2 and is sent to the instrument cluster **C10** at pin 11 of connector A, and from here to the electronic device that operates the speedometer and the two mileage recorders (total and trip).

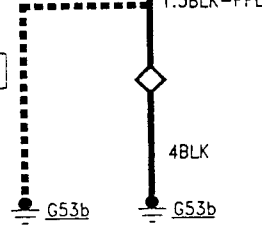
Components and Connectors



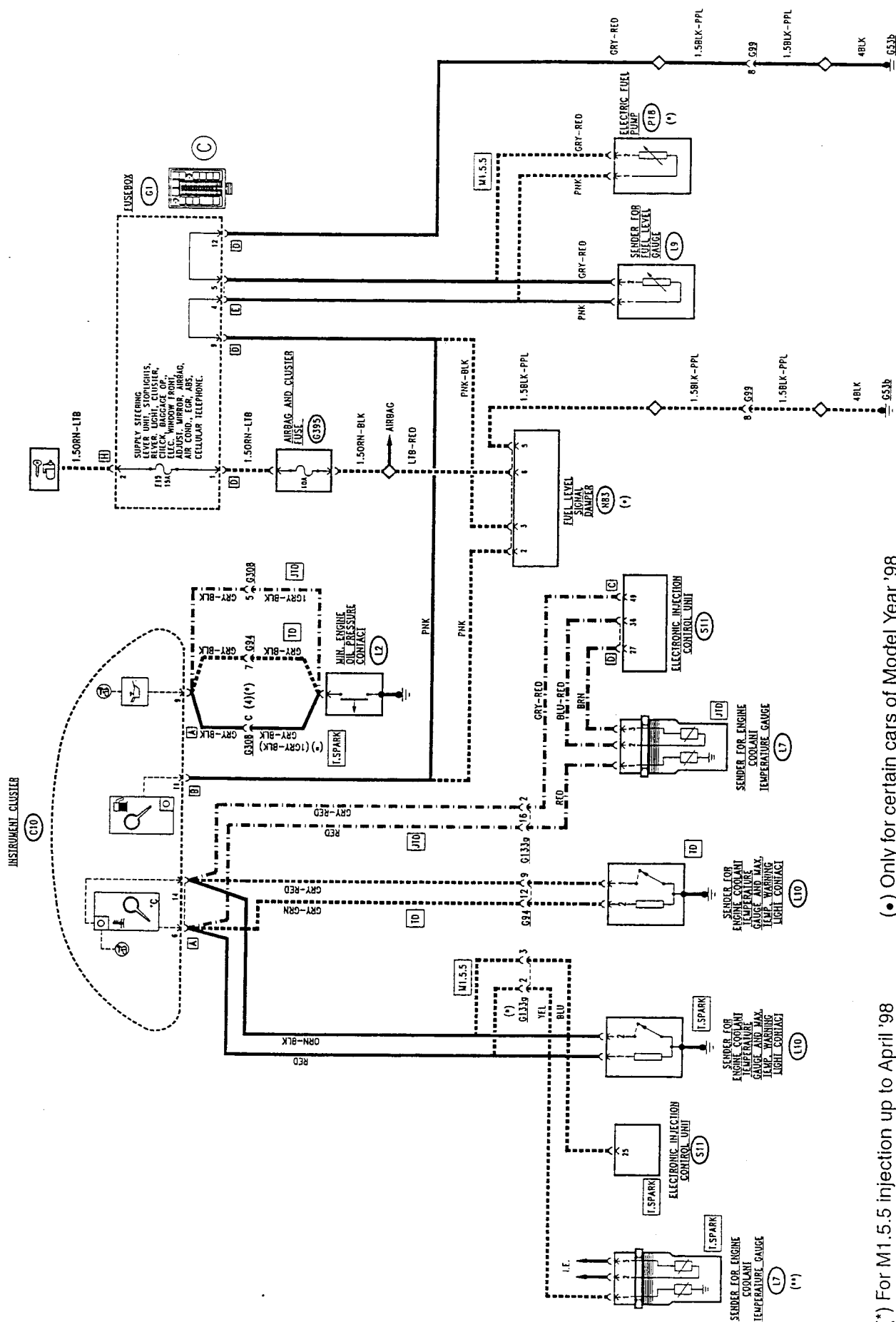
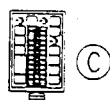
Components and Connectors (cont.d)

Speedometer sensor	L17
	
Electronic injection control unit	S11 A
 	M1.5.5
Electronic injection control unit	S11 C
	

Wiring diagram



Wiring diagram



(•) Only for certain cars of Model Year '98

(*) For M1.5.5 injection up to April '98
(**) For M1.5.5 injection from May '98

Functional Description

The temperature of the engine coolant is shown continuously by the special analogue indicator and if the temperature is too high, the driver is alerted by the "maximum coolant temperature" warning light.

The engine coolant temperature sender and maximum temperature contact **L10 (for TD and T.SPARK Version up to April '98)** is fitted on the engine head and comprises a thermistor which generates a signal proportionate with the temperature of the fluid and a contact that closes to earth when the fluid temperature is too high. The first signal is sent to the instrument cluster **C10** at pin 6, while the second is sent to pin 14 of connector A.

For the **Boxer version** the sender **L7** and the thermal contact **L5** are separate, but their function and electrical connection are the same.

For the **JTD version and T.SPARK version from May '98**, the transmitter **L7** sends a signal proportionate with the temperature (the same signal is sent to the i.e. control unit **S11**, which supplies the maximum temperature signal to the cluster (from pin 49 connector C).

The fuel level sender **L9** is a sensor submerged in the fuel tank. Its resistance changes with the changing level in the tank changes.

An earth signal reaches pin 1 of **L9**, while a signal proportionate with the level is sent from pin 2, through fusebox **G1**, to the instrument cluster **C10**, at pin 11 of connector B.

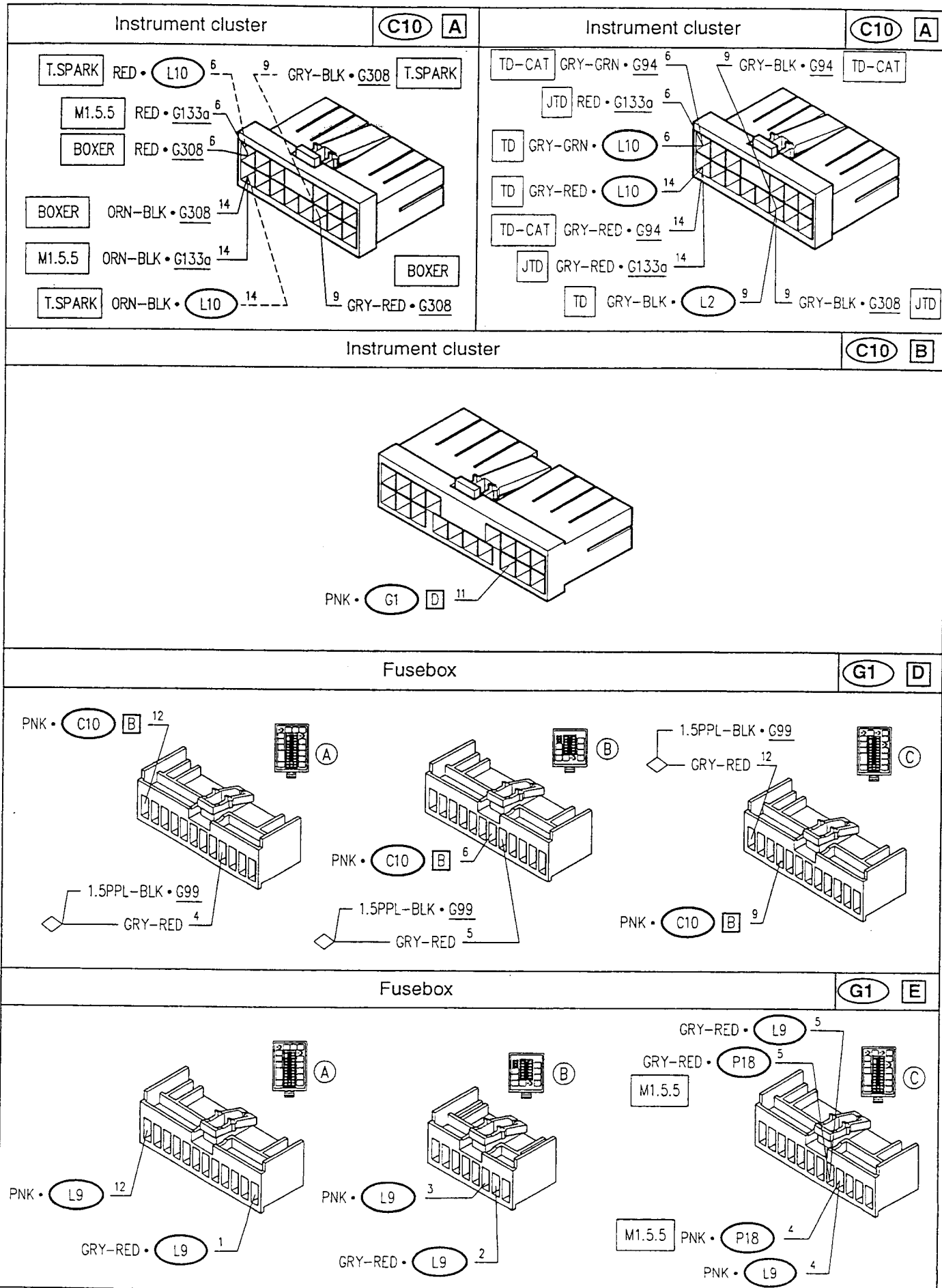
For M1.5.5 injection the fuel level transmitter is integrated in the pump unit **P18**.

Inside the fuel level gauge an electronic device selects the signal corresponding to reserve and turns on the corresponding warning light.

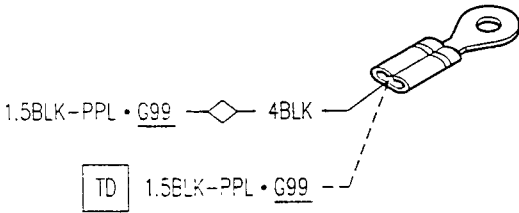
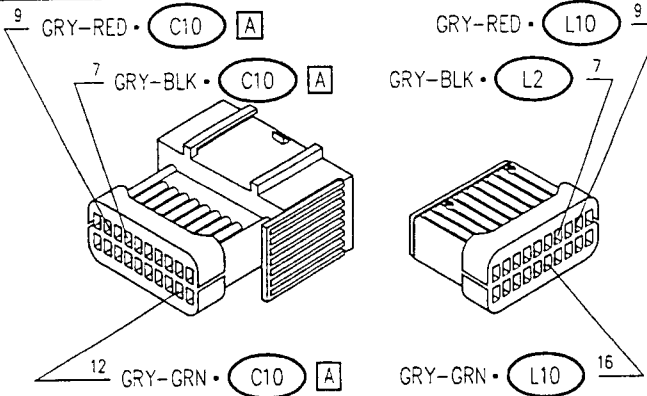
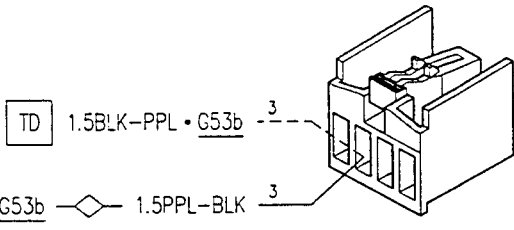
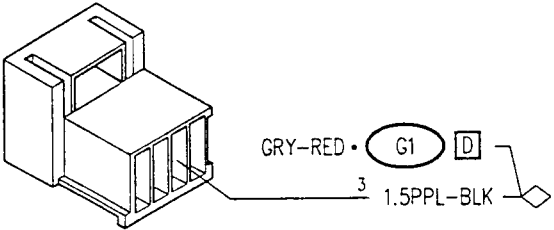
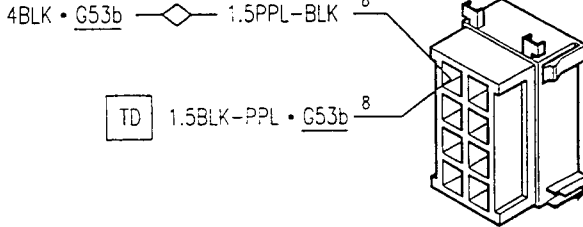
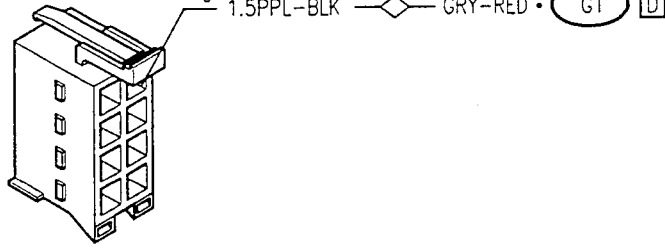
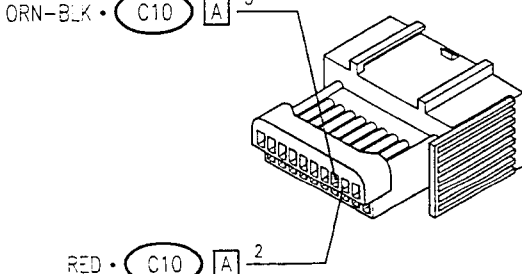
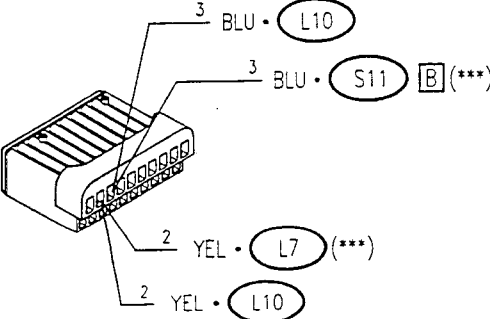
The minimum oil pressure contact **L2**, also fitted on the crankcase, closes when the pressure falls below a certain limit sending an earth signal to the instrument cluster **C10** at pin 9 of connector A, thereby turning on the "low oil pressure" warning light.

For some Model Year '98 cars an electronic damper **N83** has been inserted which corrects the signal of the fuel level transmitter **P18** which differs from the one described here.

Components and Connectors



Components and Connectors (cont.d)

LH engine compartment earth		Engine compartment (••)		G94	
 1.5BLK-PPL • G99 — 4BLK TD 1.5BLK-PPL • G99 —		 9 GRY-RED • C10 [A] 9 GRY-RED • L10 7 GRY-BLK • C10 [A] 7 GRY-BLK • L2 12 GRY-GRN • C10 [A] 16 GRY-GRN • L10			
Engine/dashboard wiring connector (*)				G99	
 TD 1.5BLK-PPL • G53b — 3 4BLK • G53b — 3  GRY-RED • G1 [D] — 3 3 1.5PPL-BLK					
Engine/dashboard wiring connector (**)				G99	
 4BLK • G53b — 8 TD 1.5BLK-PPL • G53b — 8  8 1.5PPL-BLK — 8 8 GRY-RED • G1 [D]					
Connector for electronic injection wiring A (•)				G133a	
 ORN-BLK • C10 [A] — 3 RED • C10 [A] — 2  3 BLU • L10 3 BLU • S11 [B] (***) 2 YEL • L7 (***) 2 YEL • L10					

Components and Connectors (cont.d)

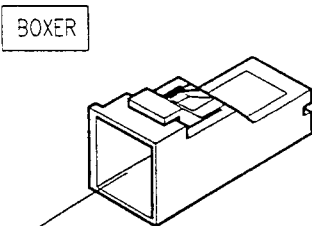
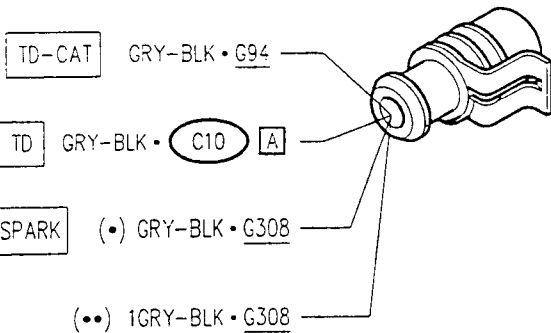
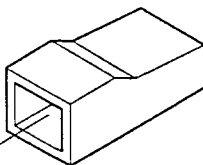
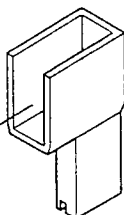
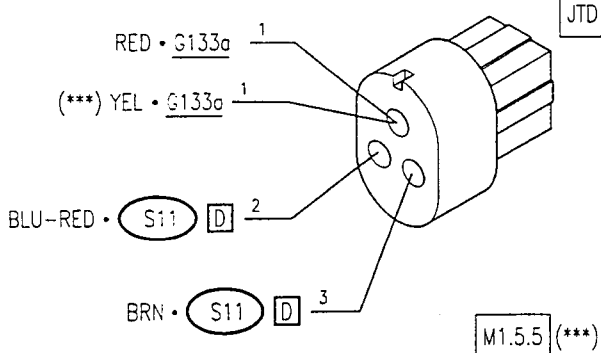
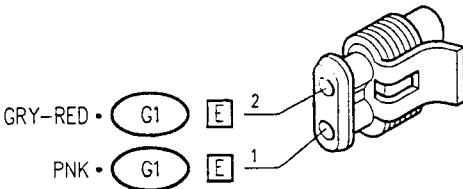
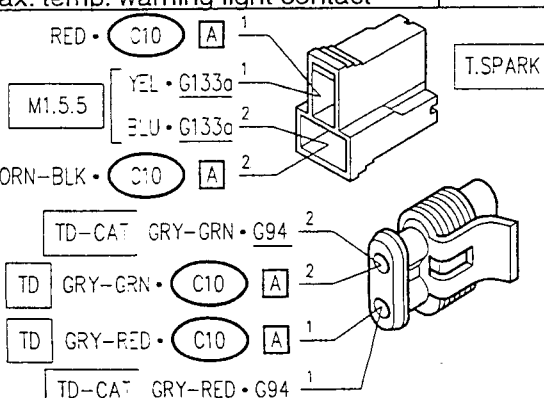
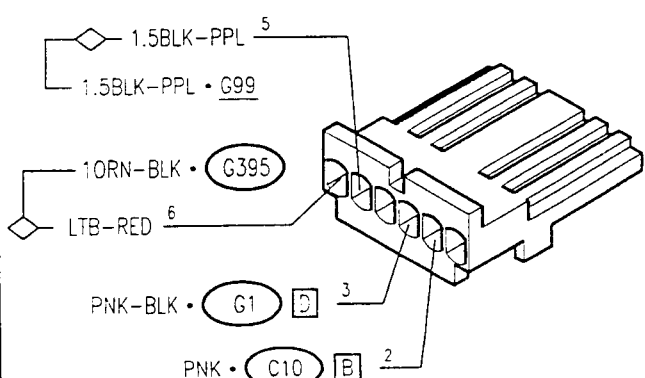
Connector for electronic injection wiring A	G133a
GRY-RED • S11 [C] 2 JTD RED • L7 16 GRY-RED • C10 [A] 2 RED • C10 [A] 16	
Engine sensors connector (•)	G308
BOXER T.SPARK GRY-RED • C10 [A] C ORN-BLK • C10 [A] B RED • C10 [A] A GRY-RED • L2 C ORN-BLK • L5 B RED • L7 A GRY-BLK • L2 3 GRY-BLK • C10 [B] 3	
Engine sensors connector (••)	G308
T.SPARK 1GRY-BLK • L2 4 GRY-BLK • C10 [A] 4	
Engine sensors connector	G308
JTD 1GRY-BLK • L2 5 GRY-BLK • C10 [A] 5	

(•) up to M.Y. '97

(••) from M.Y. '98

PA493000000010

Components and Connectors (cont.d)

Minimum engine oil pressure sensor contact		L2	
BOXER GRY-RED • G333 	TD-CAT GRY-BLK • G94 TD GRY-BLK • C10 A T.SPARK (•) GRY-BLK • G308 (••) 1GRY-BLK • G308 		
Max. engine coolant temperature warning light thermal contact	L5	Sender for engine coolant temperature gauge	L7
ORN-BLK • G308 		RED • G308 	
Sender for engine coolant temperature gauge	L7	Sender for fuel level gauge (•)	L9
JTD RED • G133a 1 (***) YEL • G133a 1 BLU-RED • S11 D 2 BRN • S11 D 3 M1.5.5 (***) 		GRY-RED • G1 E 2 PNK • G1 E 1 	
Sender engine coolant temp. gauge and max. temp. warning light contact	L10	Fuel level signal damper (*)	N83
T.SPARK RED • C10 A 1 M1.5.5 YEL • G133a 1 BLU • G133a 2 ORN-BLK • C10 A 2 TD-CAT GRY-GRN • G94 2 TD GRY-GRN • C10 A 2 TD GRY-RED • C10 A 1 TD-CAT GRY-RED • G94 1 		1.5BLK-PPL 5 1.5BLK-PPL • G99 10RN-BLK • G395 LTB-RED 6 PNK-BLK • G1 D 3 PNK • C10 B 2 	

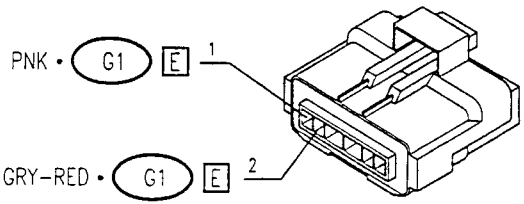
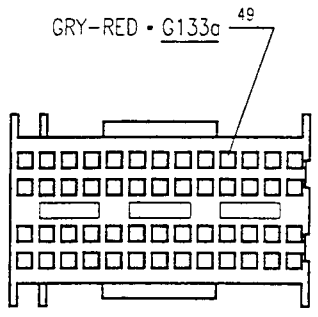
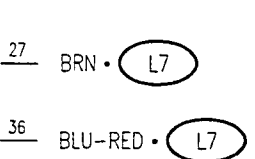
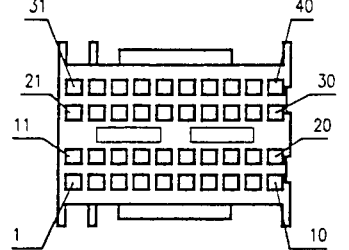
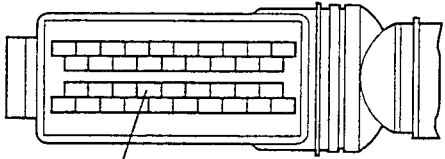
(*) only for certain cars of Model Year '98

(***) from May '98

(•) up to Model Year '97

(••) from Model Year '98

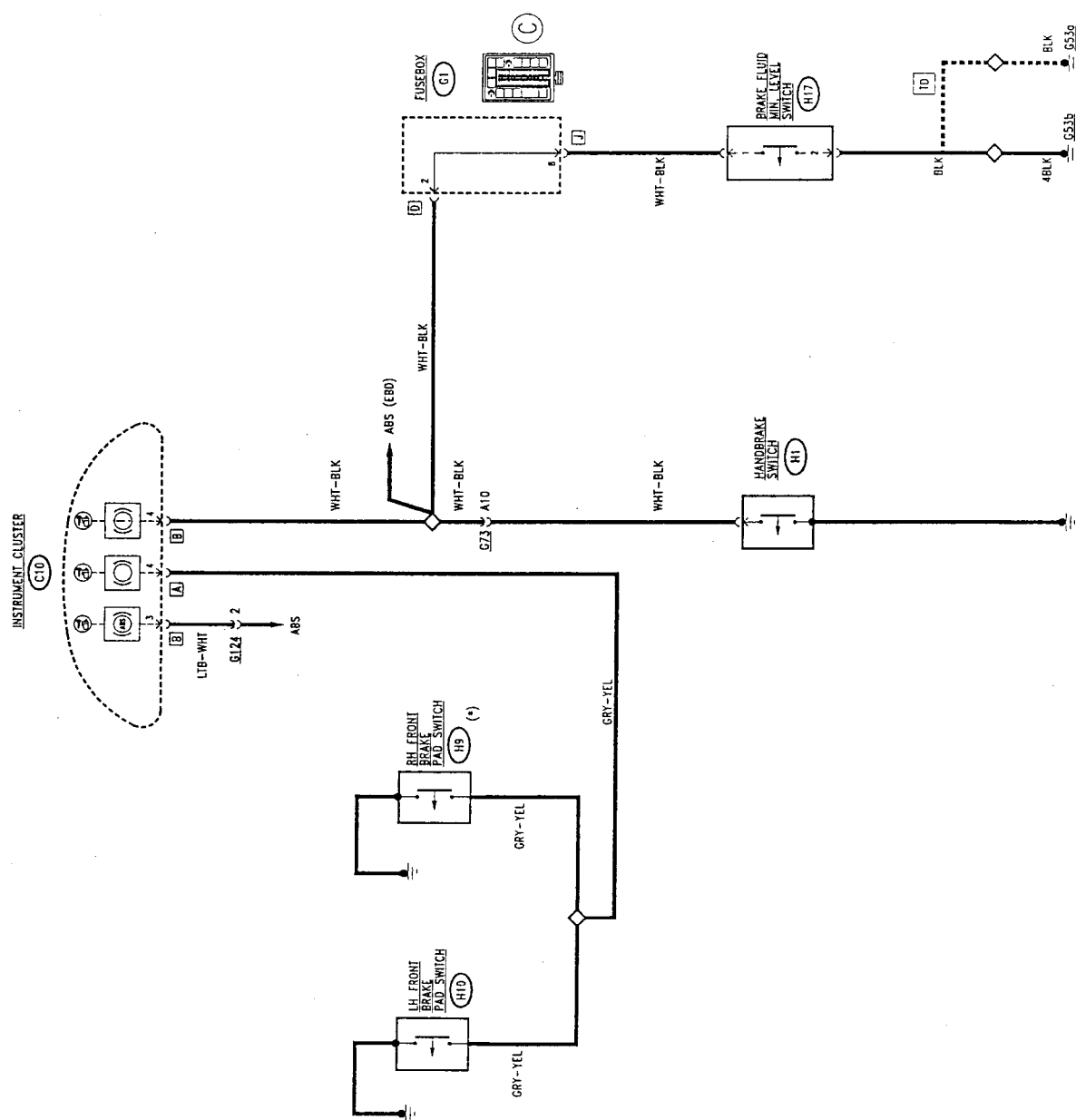
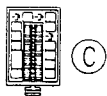
Components and Connectors (cont.d)

Electric fuel pump (••)	P18	Electronic injection control unit	S11 C
			
Electronic injection control unit			S11 D
			
Electronic injection control unit (***)			S11 B
			

(••) From Model Year '98

(***) From May '98

Wiring diagram



(*) from Model Year '98 no longer present in some versions

Functional Description

Three warning lights alert the driver in the event of problems with the braking system.

The two brake pad switches **H9** right and **H10** left are formed of a microswitch on the pad that closes to earth when the thickness of the pad thins, sending a signal to the instrument cluster **C10** at pin 4 of connector A, thereby turning on the "brake pad wear" warning light.

NOTE: RH switch, starting from M.Y. '98, no longer present in some versions.

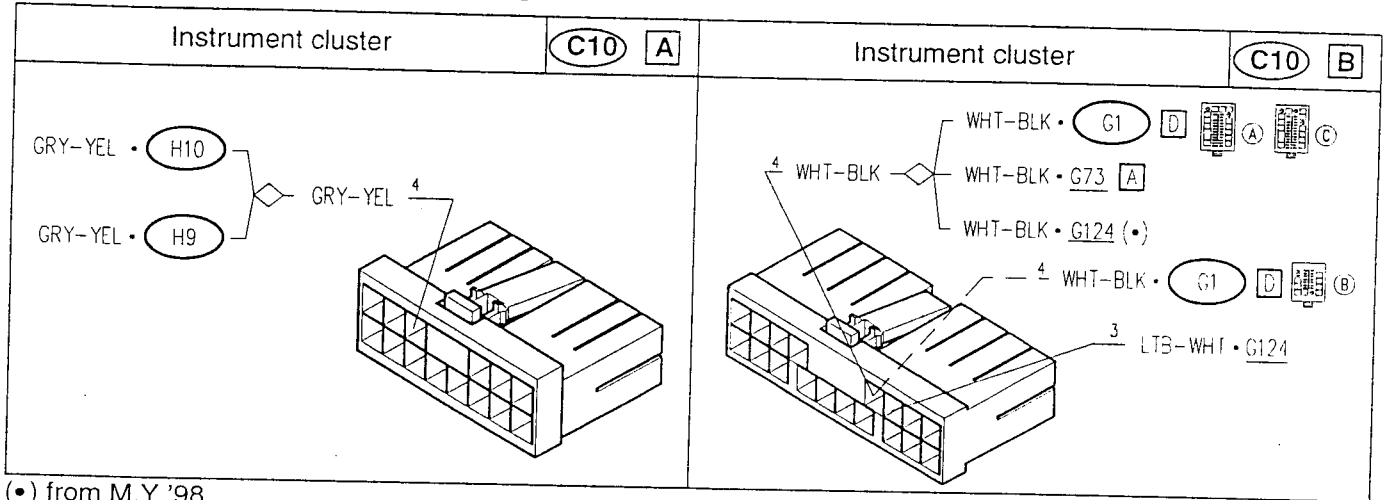
The handbrake switch **H1** closes when the handbrake lever is pulled and supplies a signal to the instrument cluster **C10**, at pin 4 of connector B, turning on the "handbrake engaged" warning light.

The same warning light is also turned on to indicate "low brake fluid level" through switch **H17** located in the fluid reservoir: this is a float device which closes a contact when the level of the fluid in the brake fluid reservoir falls below a certain reference.

The "handbrake on" and "low brake fluid level" warning light is also turned on by the ABS system to indicate a fault in the "EBD" electronic braking device (see section 39B "ABS 5.3 with EBD").

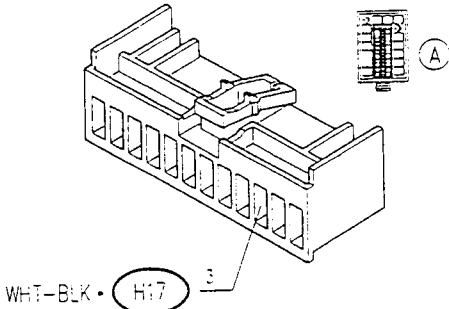
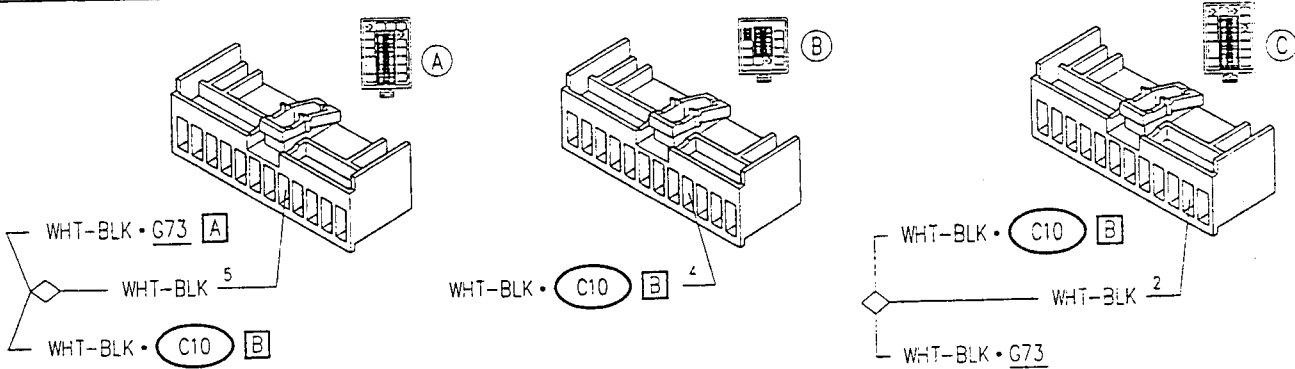
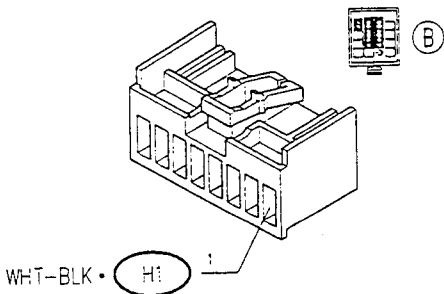
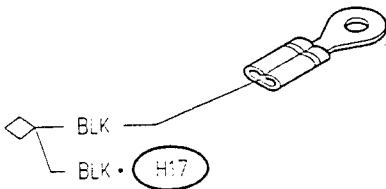
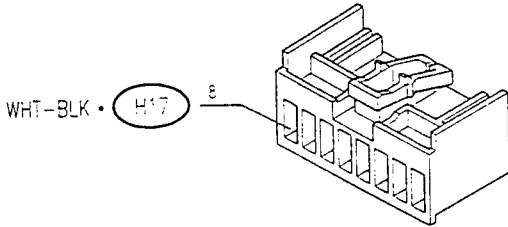
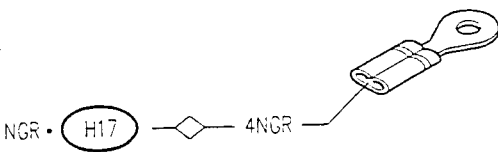
The third warning light referring to the braking system is the "ABS system failure" warning light which is described in the corresponding section (see "ABS").

Components and Connectors



(•) from M.Y '98

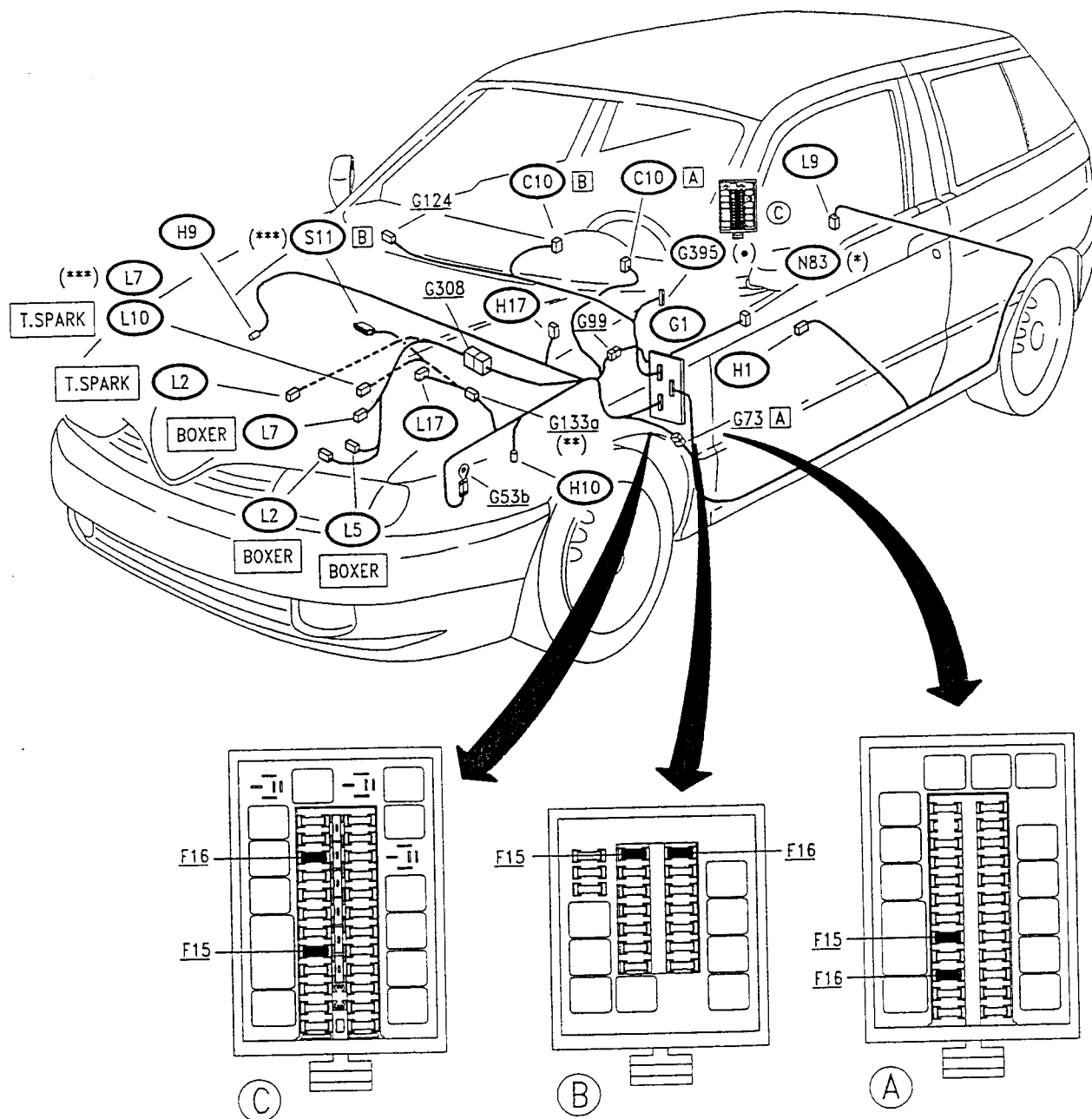
Components and Connectors (cont.d)

Fusebox		G1	A
			
Fusebox		G1	D
			
Fusebox	G1	E	
			
RH engine compartment earth	G53a		
			
Fusebox	G1	J	
			
LH engine compartment earth	G53b		
			

Components and Connectors (cont.d)

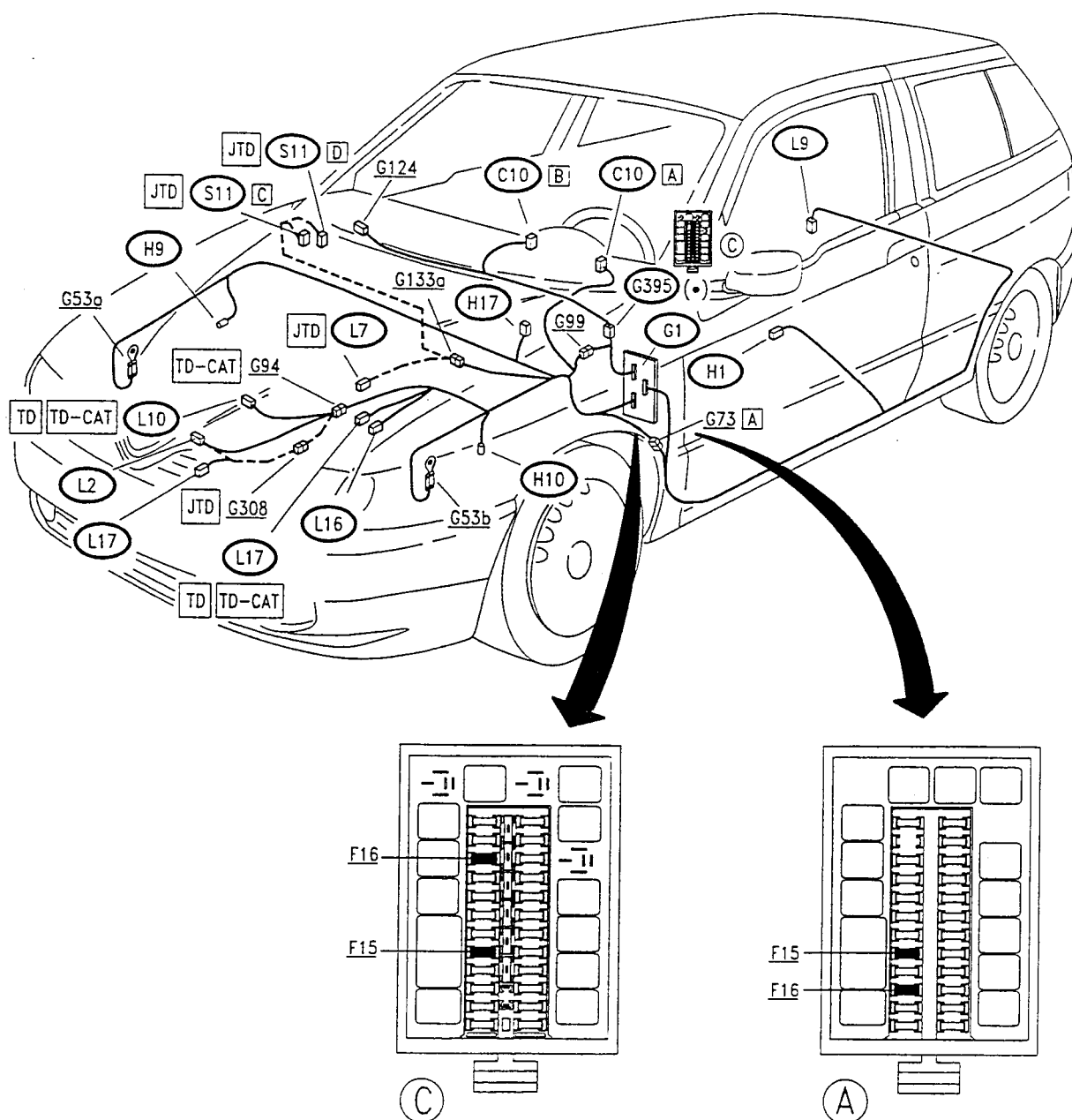
Rear services connector		G73	A
ABS system connector	G124	Handbrake switch	H1
RH front brake pad switch.	H9	LH front brake pad switch	H10
Minimum brake fluid level switch			H17

LOCATION OF COMPONENTS (Petrol Versions)



- (•) red fuseholder
- (*) only for certain cars of Model Year '98
- (**) from Model Year '98
- (***) from May '98

LOCATION OF COMPONENTS (TD and JTD Version)



(•) red fuseholder

FAULT-FINDING TABLE**NOTE:**

The faults described below ("warning light not working") give a summary of all the cases in which the warning light is not operating correctly: e.g. the warning light turns on to indicate a failure and this failure does not exist, or vice-versa, a function has been switched on and the warning light fails to show it, etc...

PRECAUTION:!

The instrument cluster C10 cannot be overhauled.

Therefore in the event of a failure, individual warning lights cannot be changed and the whole unit **C10** must be replaced (the only exceptions are the high beam warning light and the cluster lighting lamp) .

Also in the case of an incorrect setting of one of the indicators, it is not possible to change the individual component (e.g. rev counter, fuel level gauge, etc.) and the whole instrument cluster unit **C10** must be replaced.

Fault	Component to be checked													
	F15	F16	C10	L17	L16 (3)	L7 (2)	L5 (2)	L2	L10 (1)	L9	H17	H1	H9	H10
All lights on instrument panel are out	•		•											
Rev counter & speedometer (together)		•	•											
Speedometer			•	•										
Rev counter			•		•									
Water t. indicator			•			•			•					
Fuel gauge			•							•				
Handbrake & low brake fluid level warning light			•								•	•		
Brake pad wear warning light			•										•	•
Min. oil p. warning light			•					•						
Max. water t. warning light			•				•		•					

(1) TD or T.SPARK

(2) Boxer

(3) TD only and T.SPARK from May '98

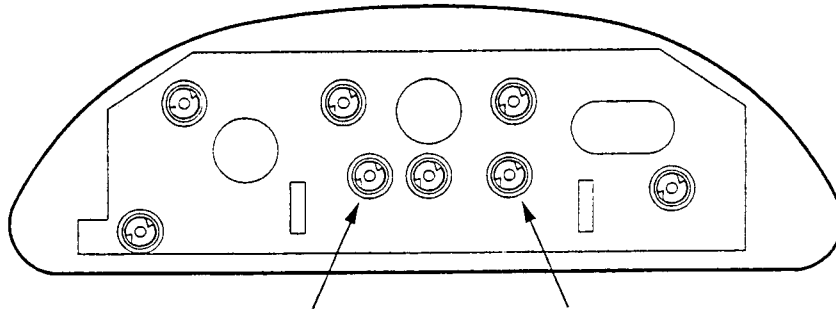
NOTE:

The faults of warning lights not described here are to be found in the section concerning the system to which they belong: e.g. for the high beam headlamp warning light, see the section "High beam and low beam headlamps"

NOTE:

ABS and Air Bag "smart" warning lights (from M.Y. '99).

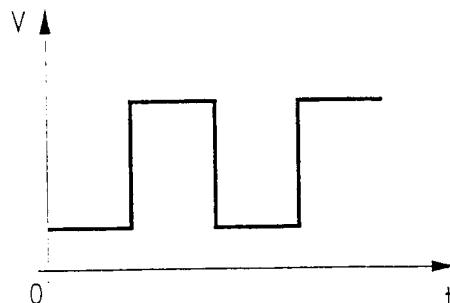
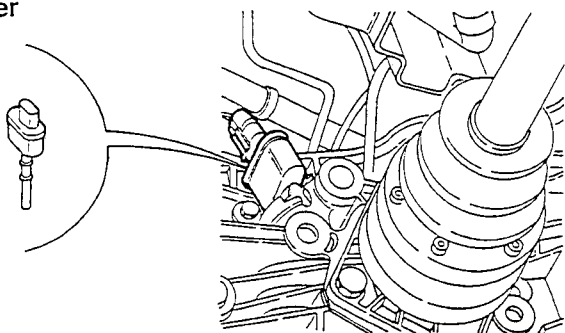
If one or both systems are not fitted on the vehicle, the "smart" warning light circuit is short circuited via a **yellow** coloured cap.



CHECKING COMPONENTS

Speedometer sensor (L17)

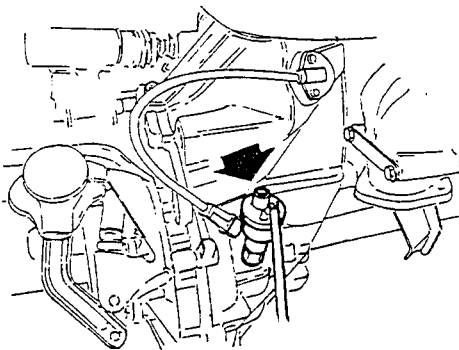
Boxer



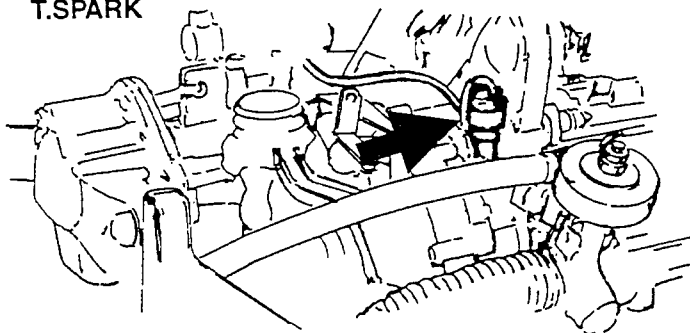
Output signal (with car on the move):
voltage at pin 2: pulses per turn

NOTE: The sensor differs, in the shape and internal functioning for the different engines, but the output signal is the same.

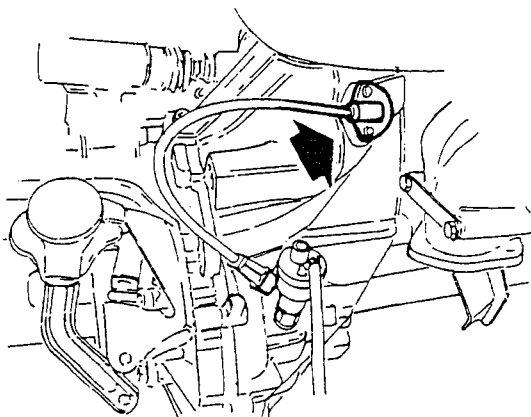
TD



T.SPARK



Rpm sensor (L16) (TD only)



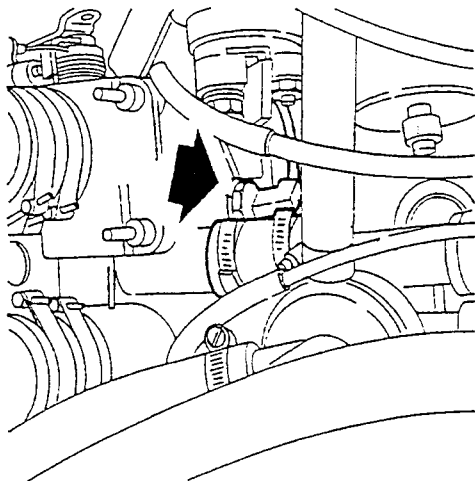
SPECIFICATIONS

Magnetic induction sensor

Coil resistance	$680 \Omega \pm 15\%$
Inductance	$295 \text{ mH} \pm 10\%$
Gap on flywheel ring gear	$0.25 \div 1.3 \text{ mm}$

Sender for engine coolant temperature gauge (L7)

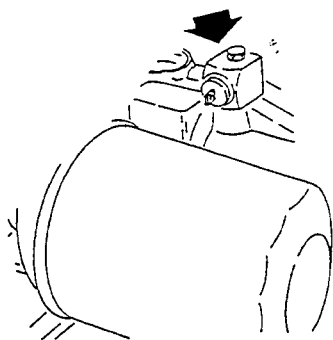
(Boxer only)



SPECIFICATIONS		
Temperature °C	Resistance Ω	Type of fluid for check
40	900 ÷ 1400	Water
60	470 ÷ 600	Water
80	235 ÷ 300	Water
90	175 ÷ 215	Water
100	135 ÷ 165	Glycerine
120	80 ÷ 100	Glycerine

Engine coolant max. temperature warning light contact (L5)

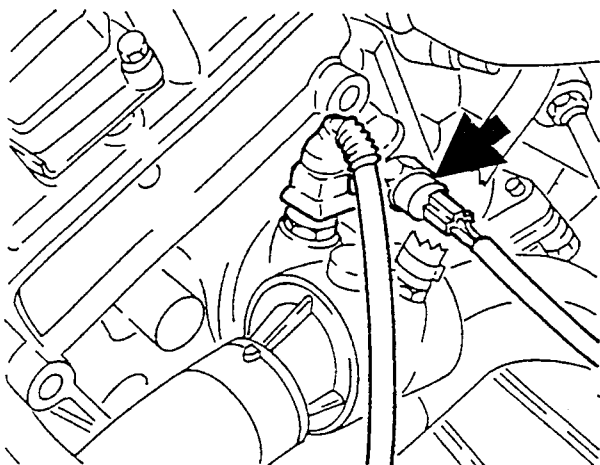
(Boxer only)



SPECIFICATIONS	
Cut-in temperature	117 ± 3°C
Cut-out temperature	100 ± 3°C

Sender for engine coolant temperature gauge & max. temp. warning light contact (L10)

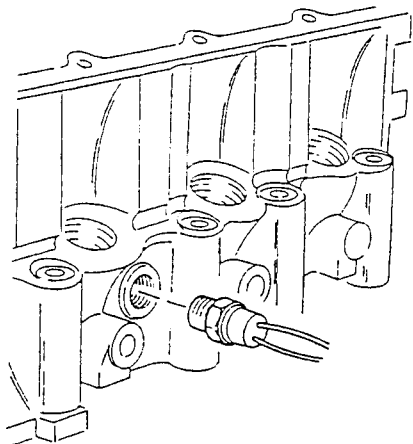
(T.SPARK - Up to May '99)



SPECIFICATIONS		
Sender		
Temperature °C	Resistance Ω	Type of fluid for check
60	525 ÷ 605	Water
90	195 ÷ 245	Water
120	82 ÷ 94	Glycerine
Contact		
Contact closes		122 ± 2°C
Contact opens		122 ± 3°C

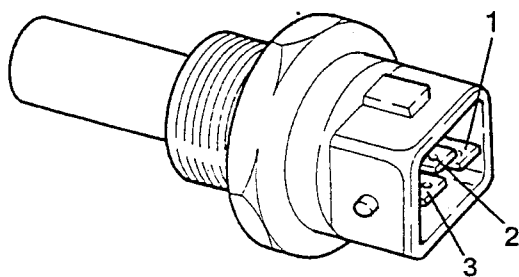
Sender for engine coolant temperature gauge & max. temp. warning

light contact **L10** (TD only)



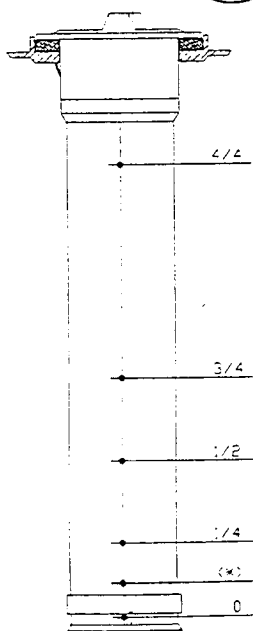
SPECIFICATIONS		
Sender		
Temperature °C	Resistance Ω	Type of fluid for check
60	470 ÷ 600	Water
90	160 ÷ 230	Water
120	73 ÷ 93	Glycerine
Contact		
Contact closes		120 ± 2°C
Contact opens		85°C

Sender engine temperature **L7** (JTD and T.SPARK from May '99)



SPECIFICATIONS	
Nominal resistance (at 20°C) between pin 1 and earth	2300 ÷ 2600 Ω

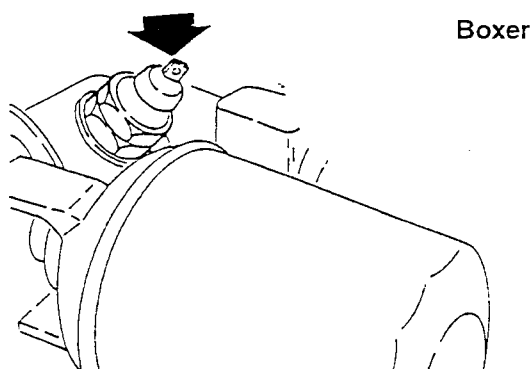
Fuel level gauge sender **L9**



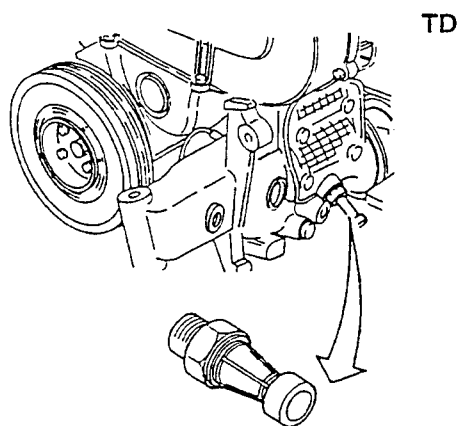
SPECIFICATIONS	
Level (see figure)	Resistance (Ω)
4/4	0 ÷ 7
3/4	56.5 ÷ 71.5
1/2	111 ÷ 131
1/4	181 ÷ 206
start of reserve (*)	262
0	290 ÷ 320

(*) appr. 7 litres

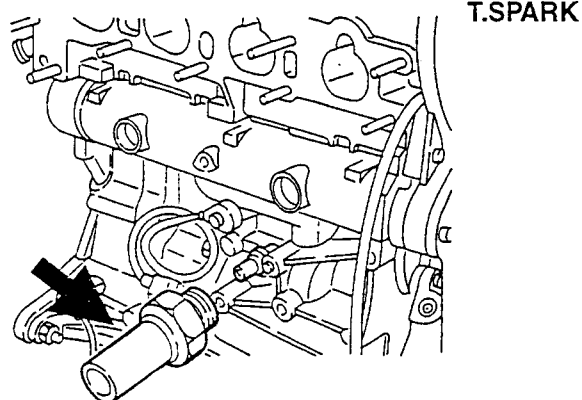
Minimum oil pressure contact (L2)



Boxer



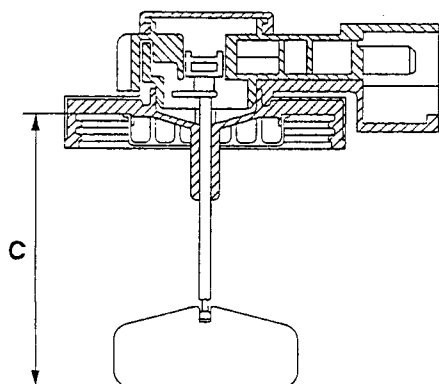
TD



T.SPARK

SPECIFICATIONS	
contact closes (pressure falling)	0.2 ÷ 0.5 bar
contact opens (pressure rising)	0.2 ÷ 0.5 bar

Min. brake fluid level switch (H17)



SPECIFICATIONS
The float closes the contact if dimension C (see figure) exceeds 40 ± 1 mm.

NOTA: to check the operation of the switch, it is sufficient to lightly press on the upper end of the cover: in this case the contact closes and it is possible to check whether the warning light is working properly.