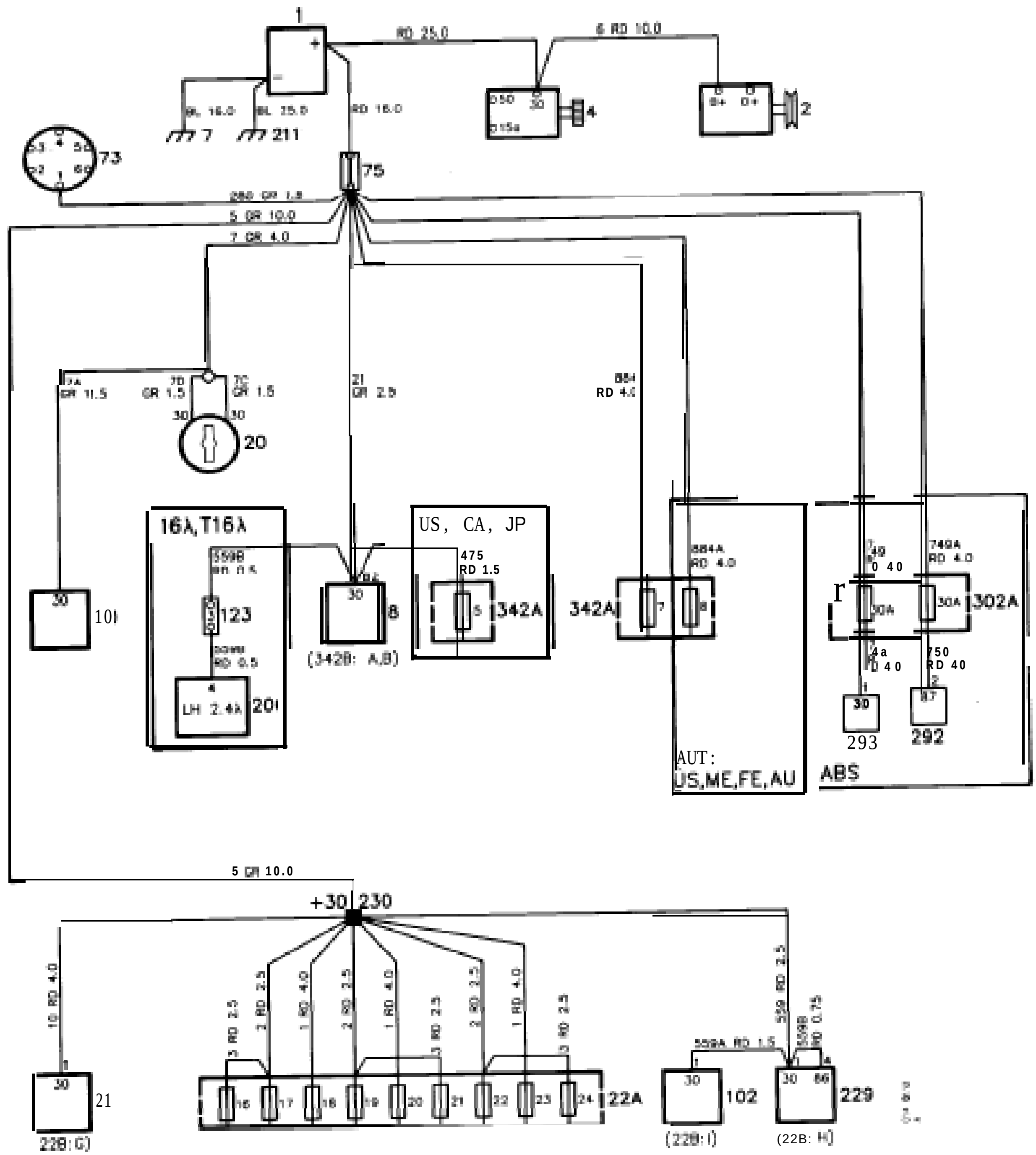
Supply +30



1
RD 25.0
6 RD 10.0
BL 16.0
BL 25.0
7
211
RD 16.0
73
75
4
2
280 GR 1.5
5 GR 10.0
7 GR 4.0
7A
GR 11.5
7D
GR 1.5
7C
GR 1.5
21
GR 2.5
884
RD 4.0
20
16A, T16A
559B
123
20
LH 2.4A
10
8
(342B: A,B)
US, CA, JP
475
RD 1.5
342A
342A
884A
RD 4.0
749A
RD 4.0
302A
750
RD 40
293
292
AUT:
US, ME, FE, AU
ABS
5 GR 10.0
+30
230
10 RD 4.0
21
22B:G)
22A
559A RD 1.5
559 RD 2.5
102
(22B:I)
229
(22B: H)

Operation

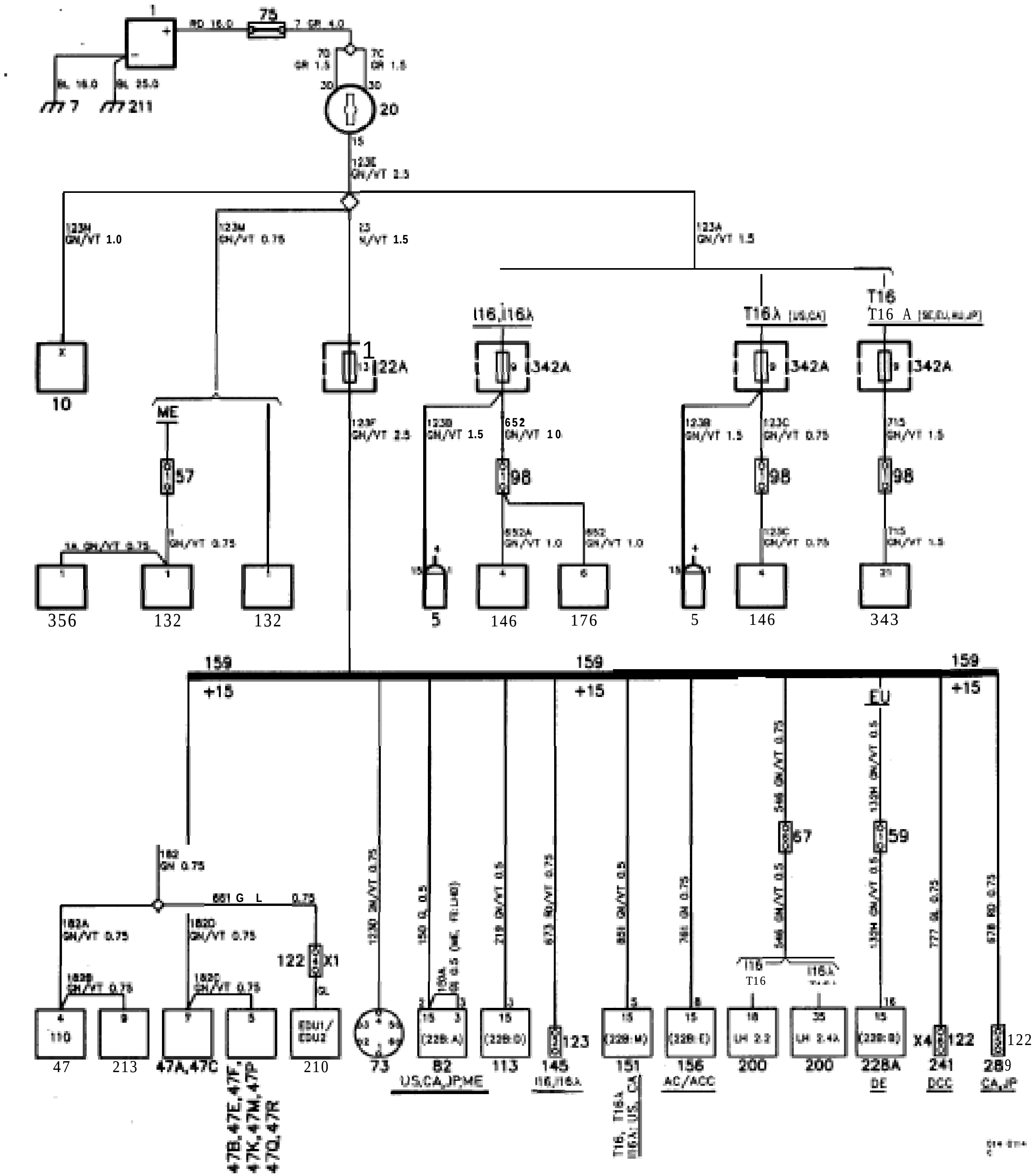
The positive supply is taken directly from battery 1 to the following components:

- Starter motor 4 and then to alternator 2
- Distribution block 75
- Ignition switch 20
- Light switch 10
- Lighting relay 8 and then on to:
  - Control unit 200 for the LH 2.4 fuel injection system (I16A)
  - Fuse 5 in electrical distribution box 342A in the engine compartment (US, CA, JP)
- Fuse 7 in electrical distribution box 342A in the engine compartment
- Fuse 8 in electrical distribution box 342A in the engine compartment (AUT for US, ME, FE and AU)
- Distribution terminal +30 (230) and then on to:
  - Fuses 16-24 in electrical distribution box 22 behind the glove compartment
  - Ignition switch relay 21
  - Main relay 229 for the fuel injection, and fuel pump relay 102
- Fuse holder ABS 302A and then to relays 292 and 293 in electrical distribution box ABS 302 in the engine compartment

Fault-tracing hints

1. Check the battery voltage.
2. Check the terminals of distribution block 75 and terminal +30 (230).
3. Check that the supply to each component is live.
4. Check the relevant wiring.

Supply +15



1
75
20
7
211
10
ME
57
356
132
132
122A
I16, I16A
342A
98
5
146
176
T16A
T16
342A
98
5
146
343
159
+15
159
+15
159
+15
EU
67
59
122
X1
47
213
47A, 47C
47B, 47E, 47F, 47K, 47M, 47P, 47Q, 47R
210
73
82
US, CA, JP, ME
113
123
145
I16, I16A
151
T16, T16A, I16A, US, CA
156
AC/ACC
200
200
228A
DE
X4
122
241
DCC
122
289
CA, JP

Operation

The positive supply from battery 1 is taken to ignition switch 20. When the ignition switch is in the drive or start position, current will flow from terminal 15 of the ignition switch, across fuse 13, to distribution terminal +15 (159). The following components are supplied from the distribution terminal:

- Fuel gauge 47A
- Fuel reserve warning lamp 47B
- Coolant temperature gauge 47C
- Charging warning lamp 47E
- Brake fluid level warning lamp 47F
- Handbrake warning lamp 47M
- CHECK ENGINE warning lamp 47P
- ABS warning lamp 47Q
- Washer fluid level warning lamp 47R
- Timing service instrument socket 73
- Seat-belt/ignition key warning relay 82
- Tachometer 110
- Relay 113 for the rear window heater element
- EZK test tapping 145
- Time delay relay 151 for the interior lighting
- Relay 156 for the AC and ACC radiator fan
- Fuel system control unit 200
- EDU1/EDU2 trip computer 210
- Pictogram 213
- Filament monitor 228A (glove compartment)
- DCC trip computer 241
- Connection 289 for burglar alarm control unit

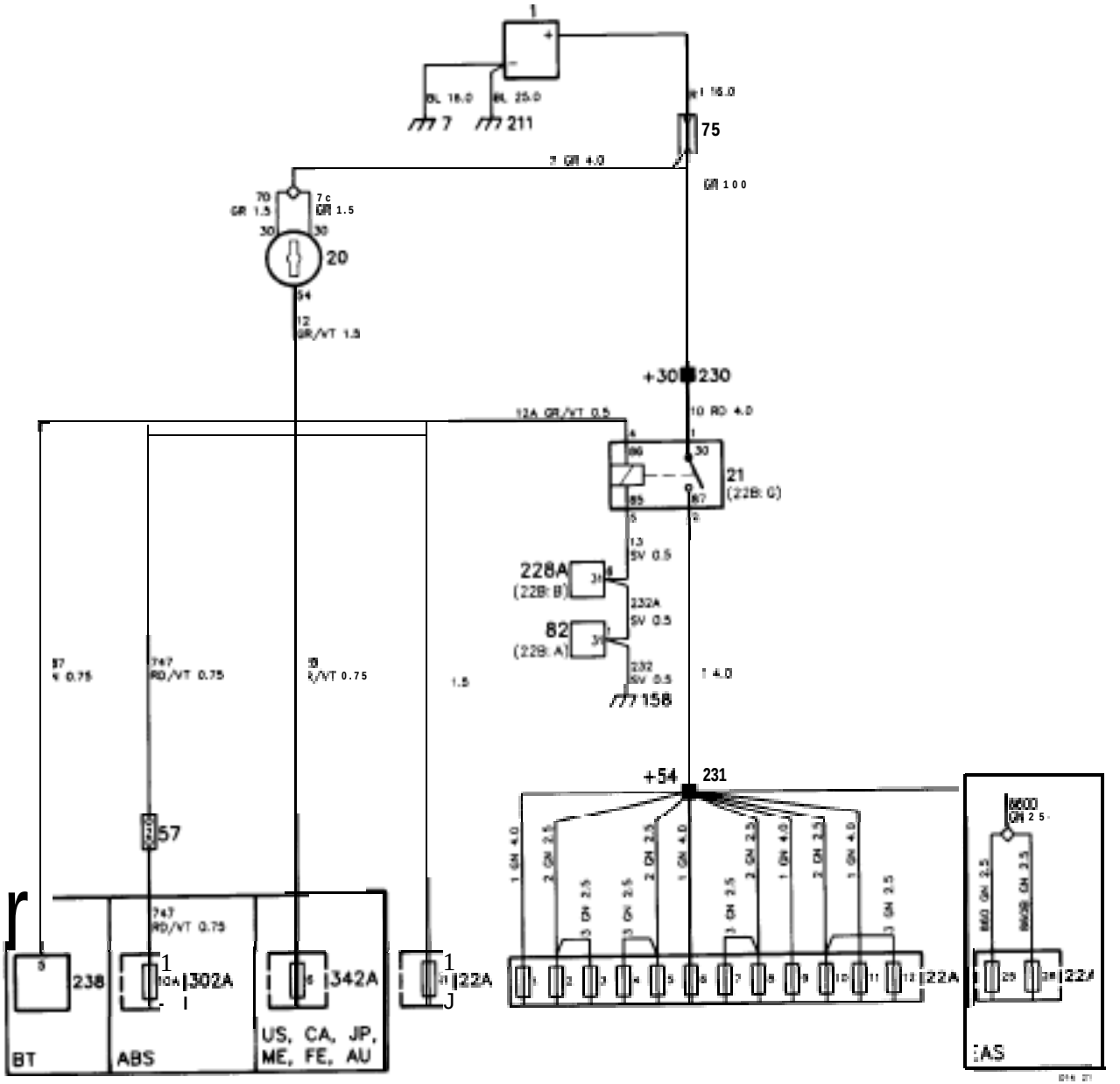
The supply is also taken from terminal 15 of the ignition switch directly to light switch 10, sensor 132 for the speed transmitter and control unit 356 for the speed warning.

Ignition system amplifier 146, ignition coil 5 and EZK control unit 176 for the ignition system (I16, I16λ) are supplied across fuse 9 in electrical distribution box 342A in the engine compartment. On T16 and T16λ cars (SE, EU, AU, JP), the DI-APC control unit is supplied across fuse 9.

Fault-tracing hints

1. Check the battery voltage.
2. Check the terminals of distribution block 75 and of terminal +15 (159).
3. Set the ignition switch to the drive position and check that the supplies from fuses 9 and 13 are live,
4. Check the relevant wiring.

Supply +54


1
BL 16.0
BL 25.0
7
211
1 16.0
75
7 GR 4.0
GR 1.0 0
70
GR 1.5
7c
GR 1.5
30
30
20
54
12
GR/VT 1.5
+30
230
12A GR/VT 0.5
10 RD 4.0
86
30
21
(22B: G)
85
87
1.5
5V 0.5
228A
(22B: B)
232A
5V 0.5
82
(22B: A)
232
5V 0.5
158
1 4.0
87
0.75
747
RD/VT 0.75
VT 0.75
1.5
+54
231
57
747
RD/VT 0.75
238
104
302A
342A
22A
22A
BT
ABS
US, CA, JP,
ME, FE, AU
AS
GN 4.0
GN 2.5
GN 2.5
GN 2.5
GN 4.0
GN 2.5
GN 4.0
GN 2.5
GN 4.0
GN 2.5
GN 4.0
GN 2.5
8600
GN 2.5
8600 GN 2.5
8600B GN 2.5
22A

Operation

The positive supply is taken from battery 1 across distribution block 75 to:

- Terminal +30 (230) and then on to terminal 30 of ignition switch relay 21
- Terminal 30 of ignition switch 20.

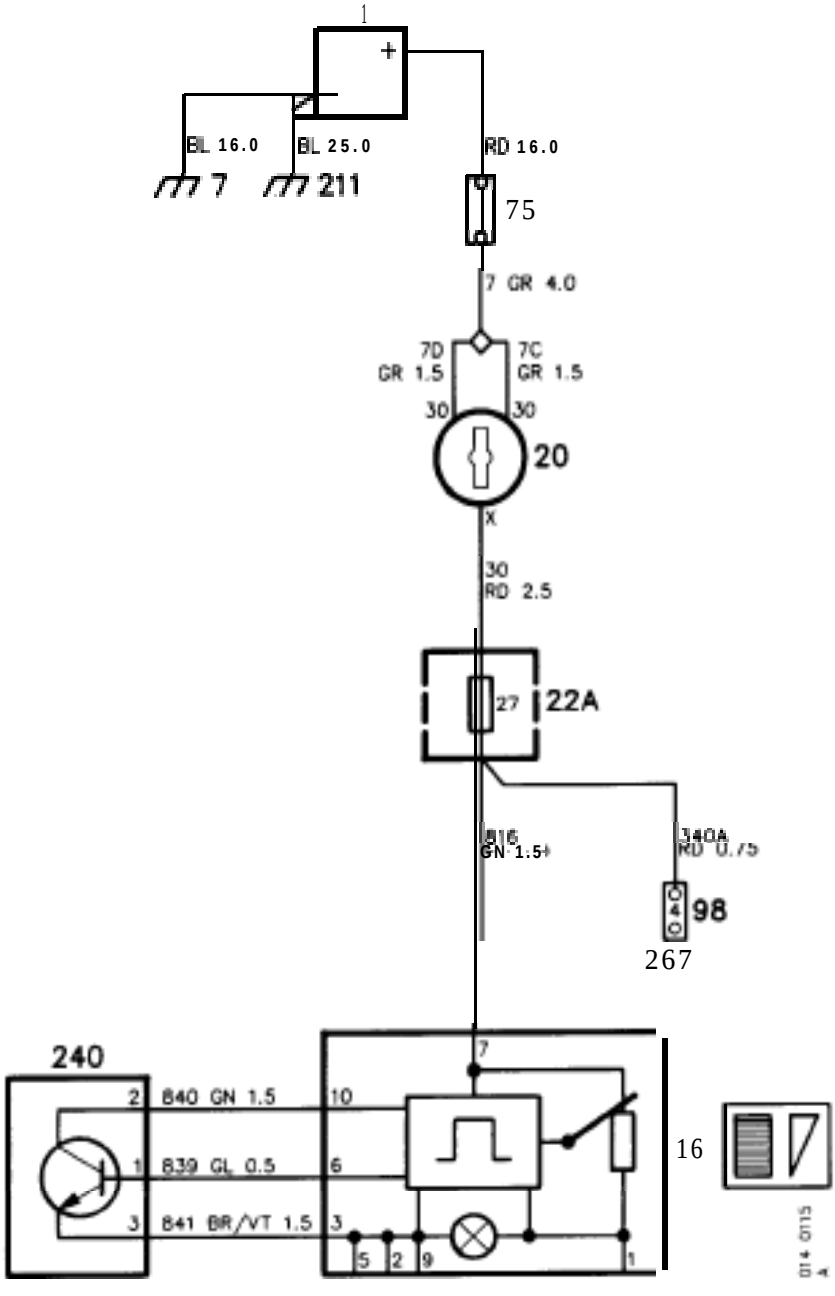
When the ignition switch is set to the drive position, terminals 30 and 54 of the ignition switch will be interconnected. Power will then be supplied to fuse 31 and to the coil of ignition switch relay 21, and the relay will be energised. The relay contacts will close and power will be supplied across distribution terminal +54 (231) to fuses 1-12 and 25-26 in fuse board 22A, which is located in electrical distribution box22 behind the glove compartment, and to control unit 238 for the seat-belt tensioners.

In addition, power will be supplied to fuses 302A (ABS) and to fuse 6 in fuse board 342A in the engine compartment (US, CA, JP, ME, FE, AU).

Fault-tracing hints

1. Check the battery voltage.
2. Check the terminals of distribution block 75 and terminals +30 (230) and +54 (231).
3. If terminal +30 is live but terminal +54 is not, check that ignition switch relay 21 operates by setting the ignition switch to the drive position, Terminal 87 of the relay should then be live.
4. Check the relevant wiring.

Supply +x


1
+
BL 16.0
BL 25.0
RD 16.0
7
211
75
7 GR 4.0
7D
GR 1.5
7C
GR 1.5
30
30
20
X
30
RD 2.5
27
22A
B16
GN 1.5
340A
RD 0.75
98
267
240
7
2
840 GN 1.5
10
1
839 GL 0.5
6
3
841 BR/VT 1.5
3
5
2
9
1
16
014 0115
A

Operation

The positive supply from battery 1 is taken to ignition switch 20. When the ignition switch is in the parked, drive or start position, power will be supplied from terminal X of the ignition switch, across fuse 27, to:

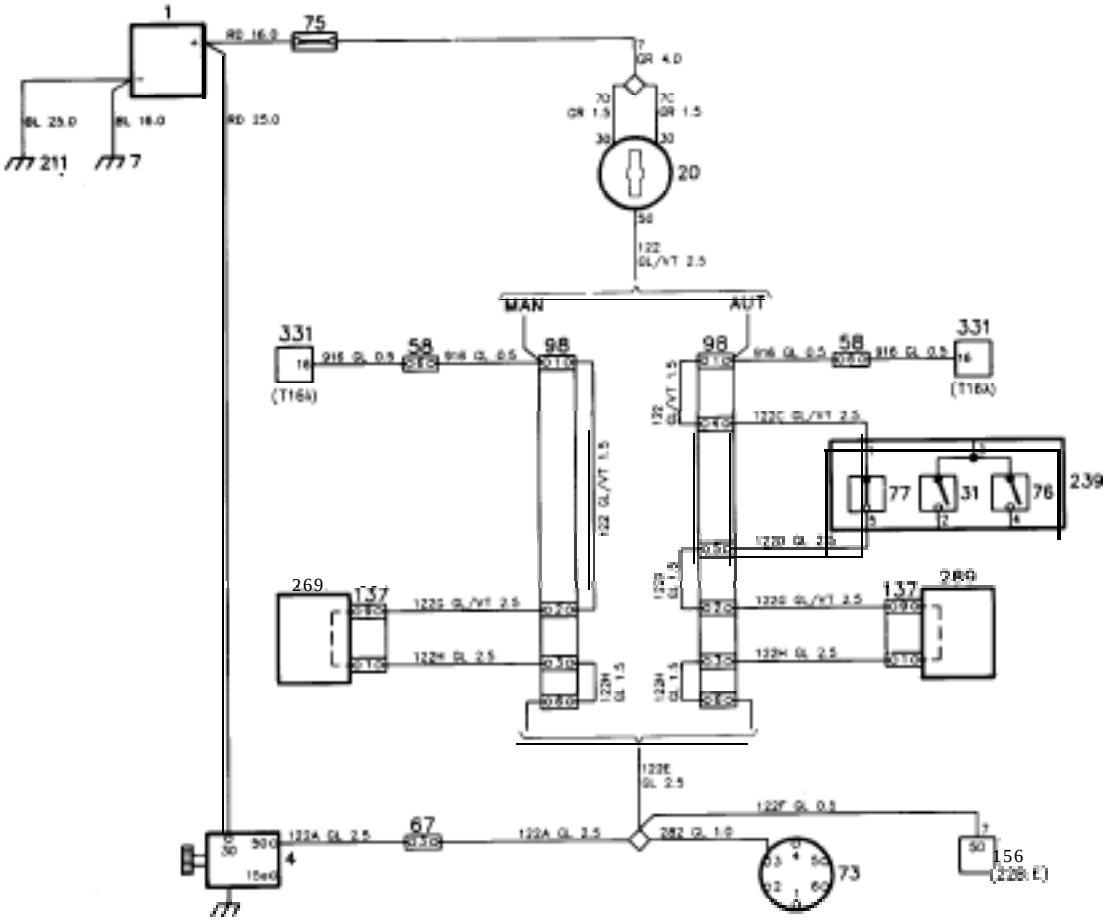
- Instrument lighting rheostat 16 and its electronic unit 240
- Radio connection 267 (ten-pole connector).

Fault-tracing hints

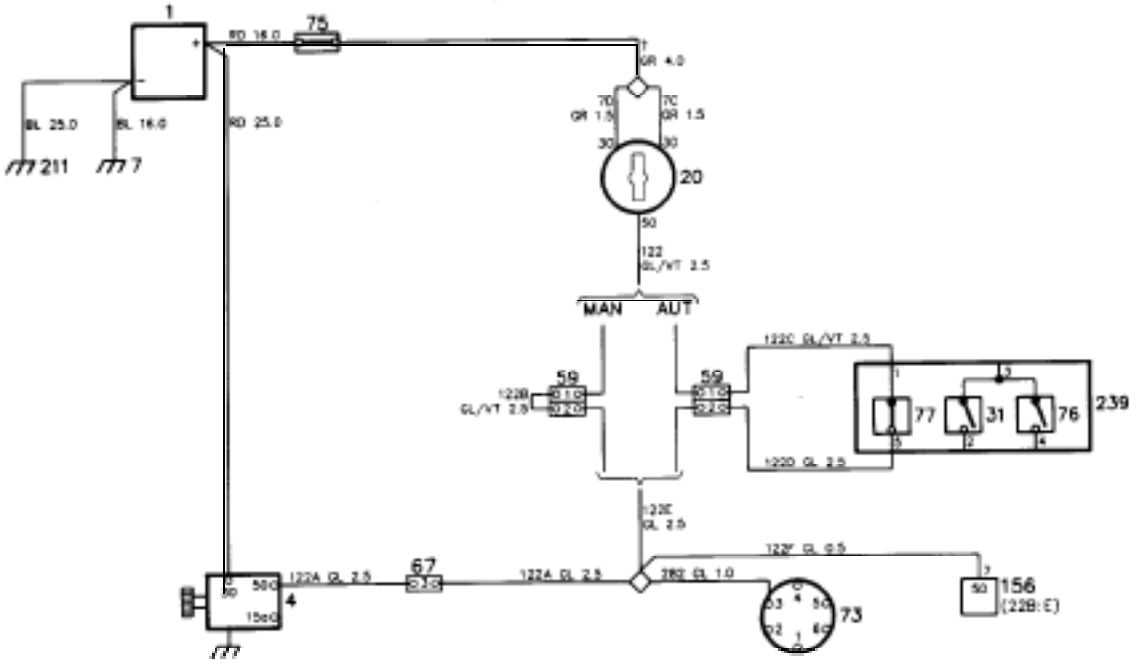
1. Check the battery voltage.
2. Check the terminals of distribution block 75.
3. Check fuse 27 and check that the supply to it is live.
4. Check the relevant wiring.

Starting system and supply +50

US



SE, FI, EU, GB, ME, FE, AU, CA, JP



Operation

The +50 supply to ignition switch 20 is taken from battery 1 and a supply cable is also run directly from the battery to terminal 30 of starter motor 4.

When the ignition switch is turned to the start position, the solenoid coil will be energised. The coil will close the starting contacts, so that current will flow from the battery through the starter motor, and the motor will start to rotate.

The +50 supply is also used for supplying TSI socket 73 and AC and ACC radiator fan relay 156.

US market

The +50 supply is also used for supplying electronic unit 331 for the airbag and electronic unit 289 for the burglar alarm.

Automatic transmission

Cars with automatic transmission are equipped with starting interlock contacts 77 which prevent the engine from being started when the selector lever is in 1, 2, 3, D or R.

Fault-tracing hints

1. Check the **battery** voltage at terminal 30 of starter motor 4.
2. Check the energising voltage to the starter motor solenoid, with the ignition switch in the start position.
3. Check the terminal blocks and wiring.
4. Check that the motor is earthed to the chassis of the car.

Locations of components

1 Battery
on the left-hand side of the engine compartment

4 Starter motor
at the rear of the engine, below the intake manifold

7 Earthing point
on the left-hand wheel housing

20 Ignition switch
on the right-hand side of the steering column

58 12-pole connector
below the facia, on the right-hand side (behind the knee guard), at the electronic unit for the airbag

59 Two-pole connector
below the facia, to the left of the heater housing

67 Six-pole connector
in the engine compartment, at the windscreen wiper motor

73 Timing service instrument (TSI) socket
in the engine compartment, on the left-hand side, at the bulkhead

75 Distribution block
forward of the battery

77 Starting interlock contacts (automatic transmission)
in selector position switch 239, at the selector lever

98 lo-pole connector
below the facia, to the left of the heater housing

137 16-pole connector
on the electronic unit for the burglar alarm

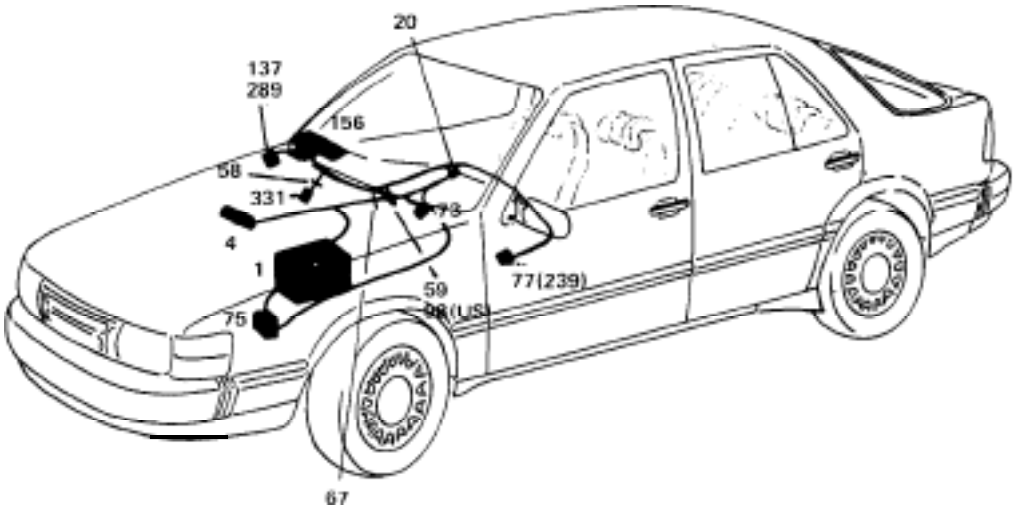
156 Time-delay relay for the AC and ACC radiator fan
in the electrical distribution box behind the glove compartment

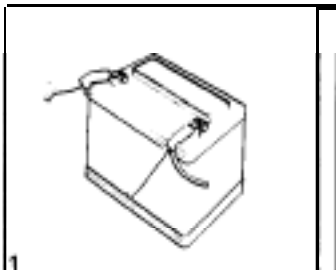
211 Earthing point on the gearbox

289 Connector for electronic unit for the burglar alarm
below the facia, on the right-hand side (behind the knee guard)

331 Electronic unit for the airbag
below the facia, on the right-hand side, above the knee guard

Components

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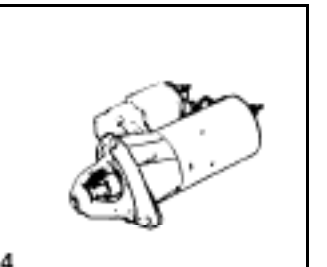
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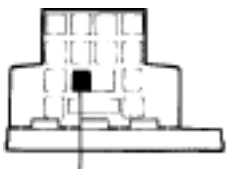
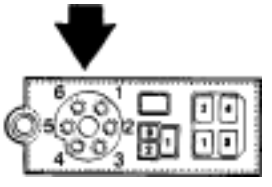
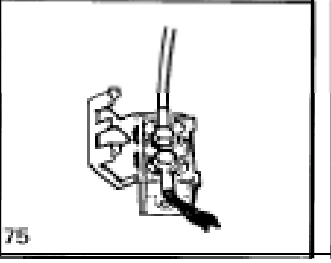
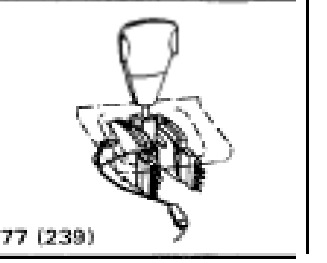

2B 156



73


75


77 (239)