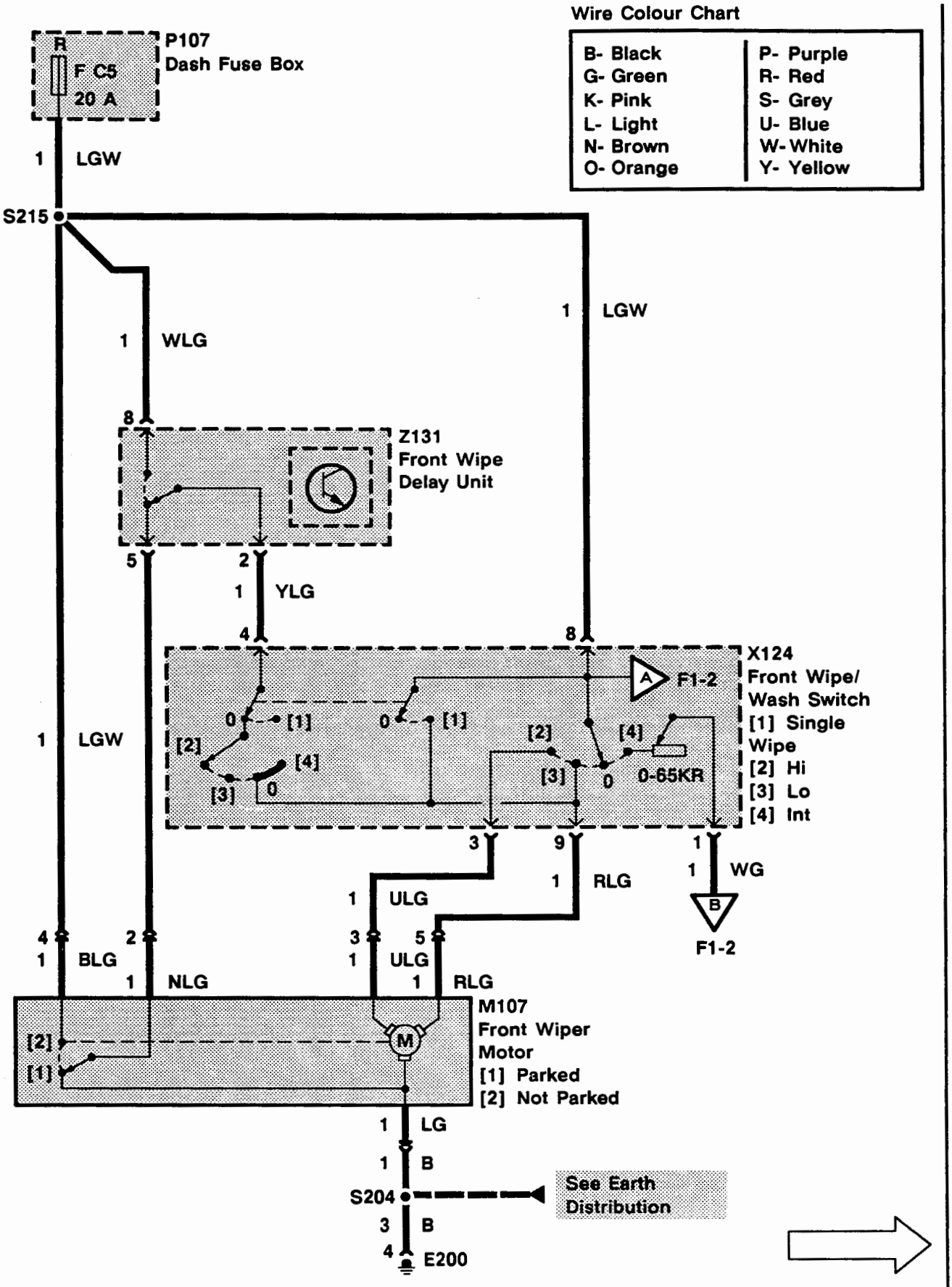
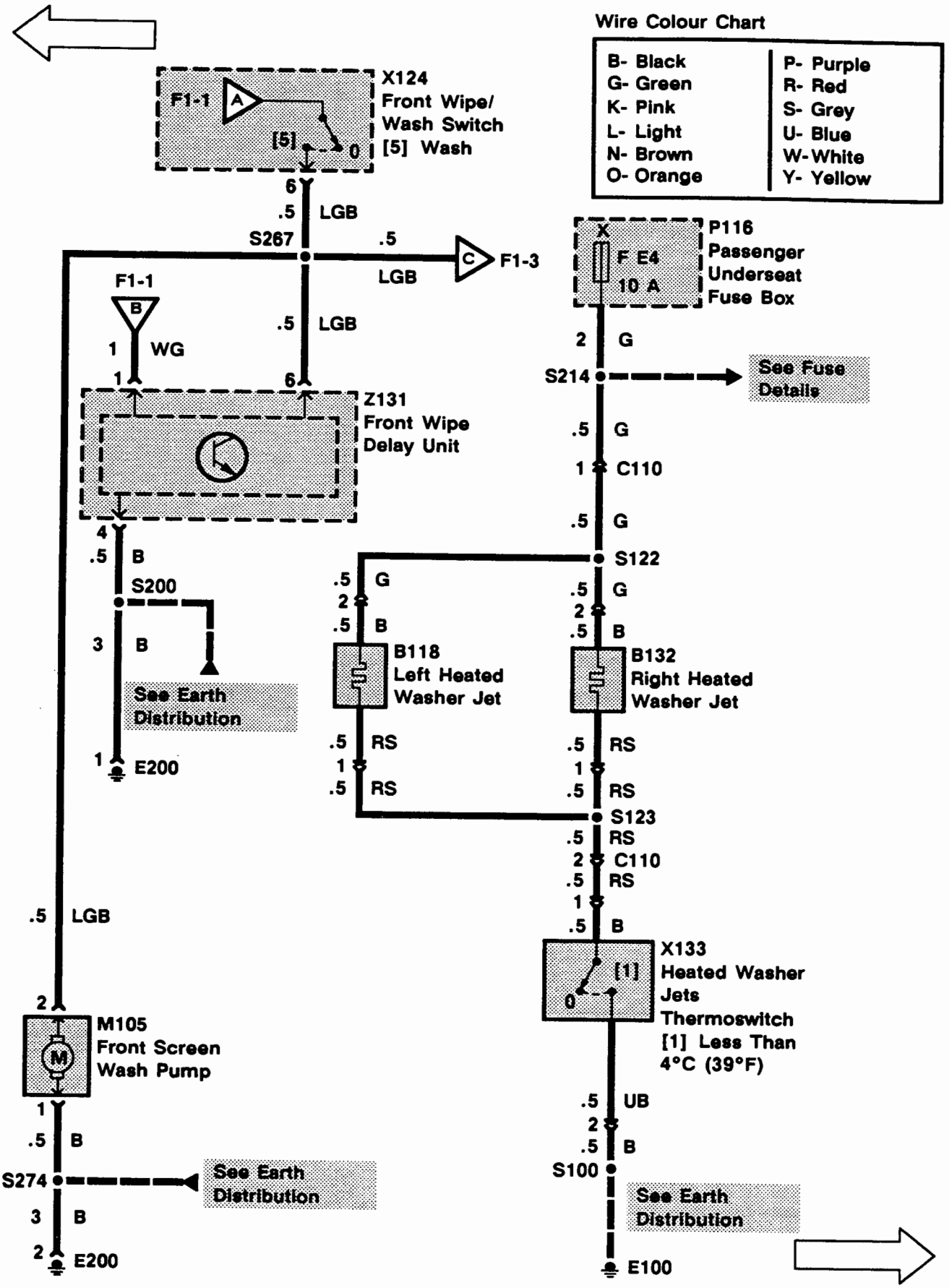
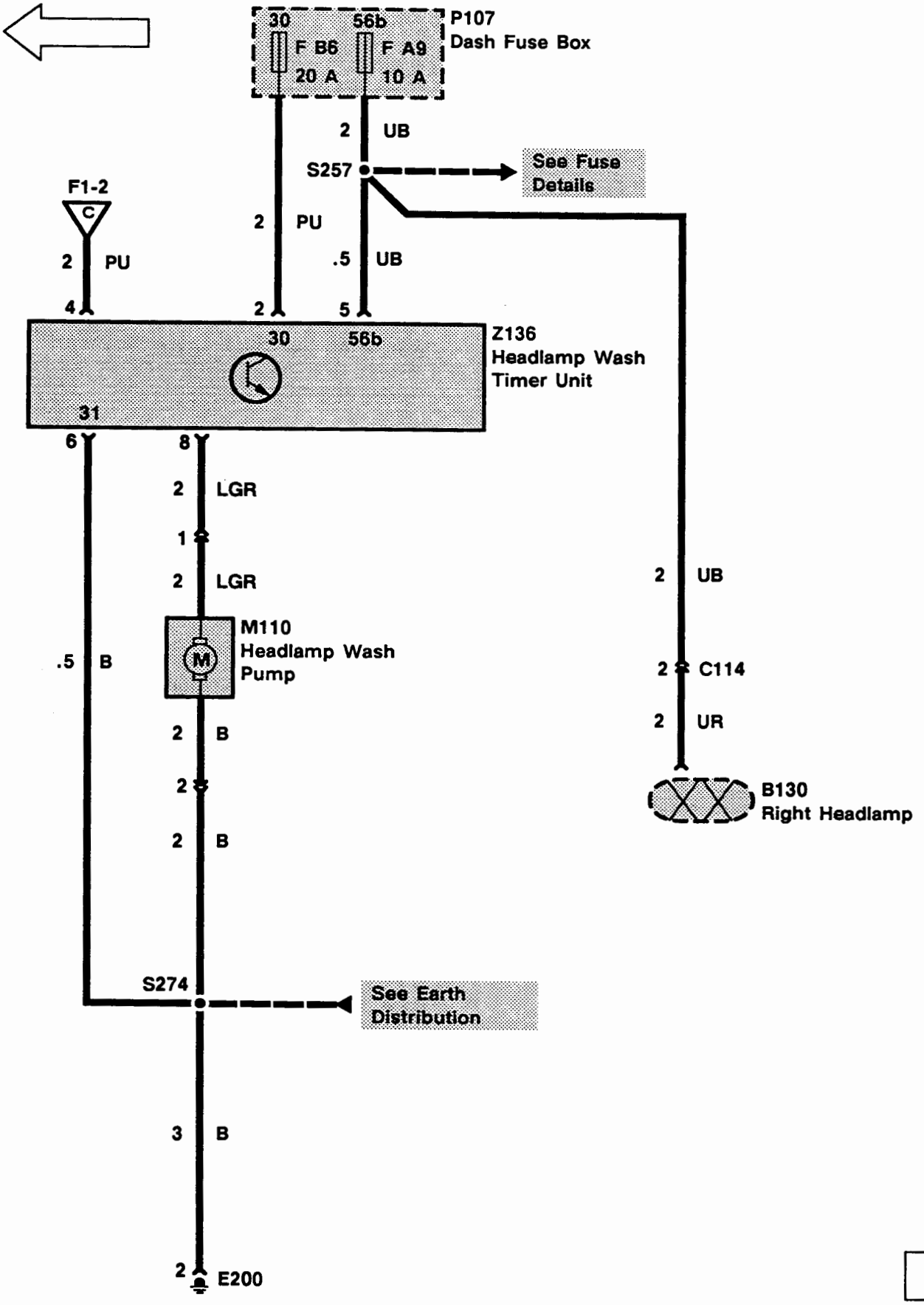

Wire Colour Chart
B- Black
G- Green
K- Pink
L- Light
N- Brown
O- Orange
P- Purple
R- Red
S- Grey
U- Blue
W- White
Y- Yellow
P107
Dash Fuse Box
F C5
20 A
1 LGW
S215
1 WLG
1 LGW
Z131
Front Wipe
Delay Unit
1 YLG
X124
Front Wipe/
Wash Switch
[1] Single
Wipe
[2] Hi
[3] Lo
[4] Int
F1-2
0-65KR
1 LGW
1 WG
1 RLG
1 ULG
1 BLG
1 NLG
1 ULG
1 RLG
M107
Front Wiper
Motor
[1] Parked
[2] Not Parked
1 LG
1 B
S204
See Earth
Distribution
3 B
4 E200

F1 ETM

1992 RANGE ROVER




30
56b
F B6
20 A
F A9
10 A
P107
Dash Fuse Box
2 UB
S257
See Fuse Details
F1-2
C
2 PU
4
2 PU
2
.5 UB
5
30
56b
Z136
Headlamp Wash
Timer Unit
31
6
8
2 LGR
1
2 LGR
M110
Headlamp Wash
Pump
M
.5 B
2 B
2
2 B
2 UB
2 C114
2 UR
B130
Right Headlamp
S274
See Earth Distribution
3 B
2 E200

KEY INFORMATION

CIRCUIT DIAGRAMS

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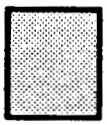
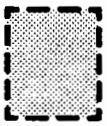
- Only those components that work together in the circuit are shown. If only part of a component is used in the circuit, then only that part of the component is shown.
- Remember:



Entire component



Part of a component

TERMINAL NUMBER	DESIGNATION
50	Battery voltage: Ignition Switch in position III
30	Battery voltage: supplied constantly
15	Battery voltage: Ignition Switch in position II or III
R	Battery voltage: Ignition Switch in positions I, II
31	Earth

See Introduction (i) for additional circuit diagram symbols.

DIAGNOSIS

- If the diagram is accompanied by text:

- Read the Circuit Operation before proceeding with the electrical diagnosis.
- Read the Troubleshooting Hints before performing the System Diagnosis.
- Tests follow the System Diagnosis.
- When performing the System Diagnosis, be certain that all components disconnected in previous steps are reconnected unless otherwise directed.

Component is disconnected. Backprobe harness connector

Component is connected. Backprobe harness connector

Component is disconnected. Probe component

Component is disconnected. Probe harness connector

Probe in-line connector

CIRCUIT OPERATION

Washer

The Rear Screen Washer Pump (M119) motor is earthed at all times. The motor runs when battery voltage is applied to the motor through the Rear Wipe/Wash Switch (X155) when the switch is held in the WASH position.

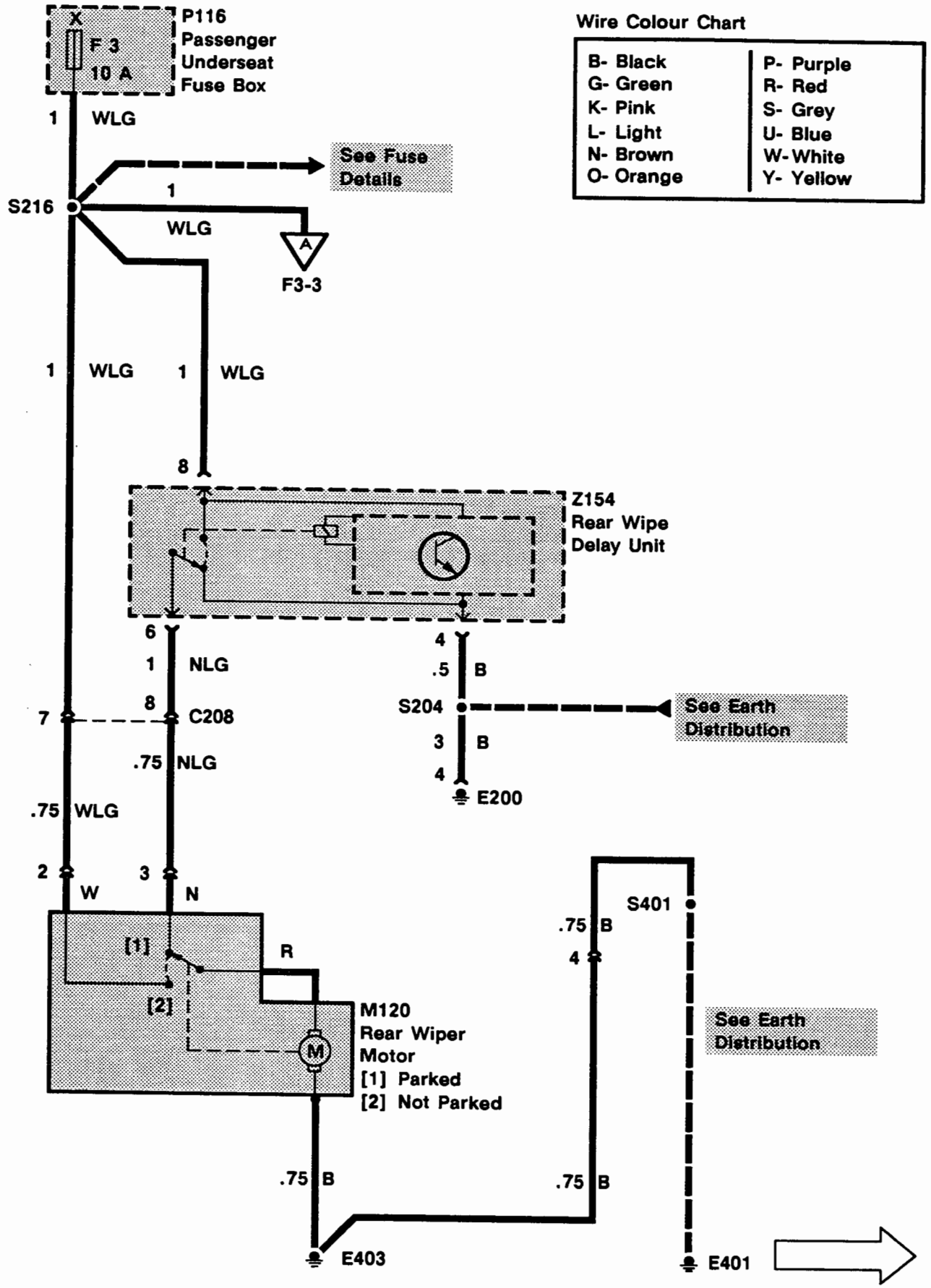
Wiper

When the Rear Wipe/Wash Switch (X155) is pulled momentarily to the WIPE position, the Rear Wipe Delay Unit (Z154) applies battery voltage to the Rear Wiper Motor (M120). The motor leaves the PARK position and receives battery power from the 'ignition on' wire. The wiper then makes 2 sweeps across the rear screen every 10 seconds. When the switch is pulled momentarily to WIPE, the wiper makes 1 sweep across the rear screen and then stops when the motor's internal cam switch moves to the PARK position.

When the washer is requested, battery voltage is applied to the Rear Wipe Delay Unit (Z154). The unit applies battery voltage to the Rear Wiper Motor (M120) as described above. The motor runs as long as the switch is held in WASH or for a few sweeps across the screen. If the tailgate is open, the Tailgate Switch (X170) applies earth to the Rear Wipe Delay Unit (Z154), which then removes battery voltage from the Rear Wiper Motor (M120). The wiper will not operate with the interior lamps on, because the wipe inhibit input of the Rear Wipe Delay Unit (Z154) is earthed when the interior lamps are switched on.

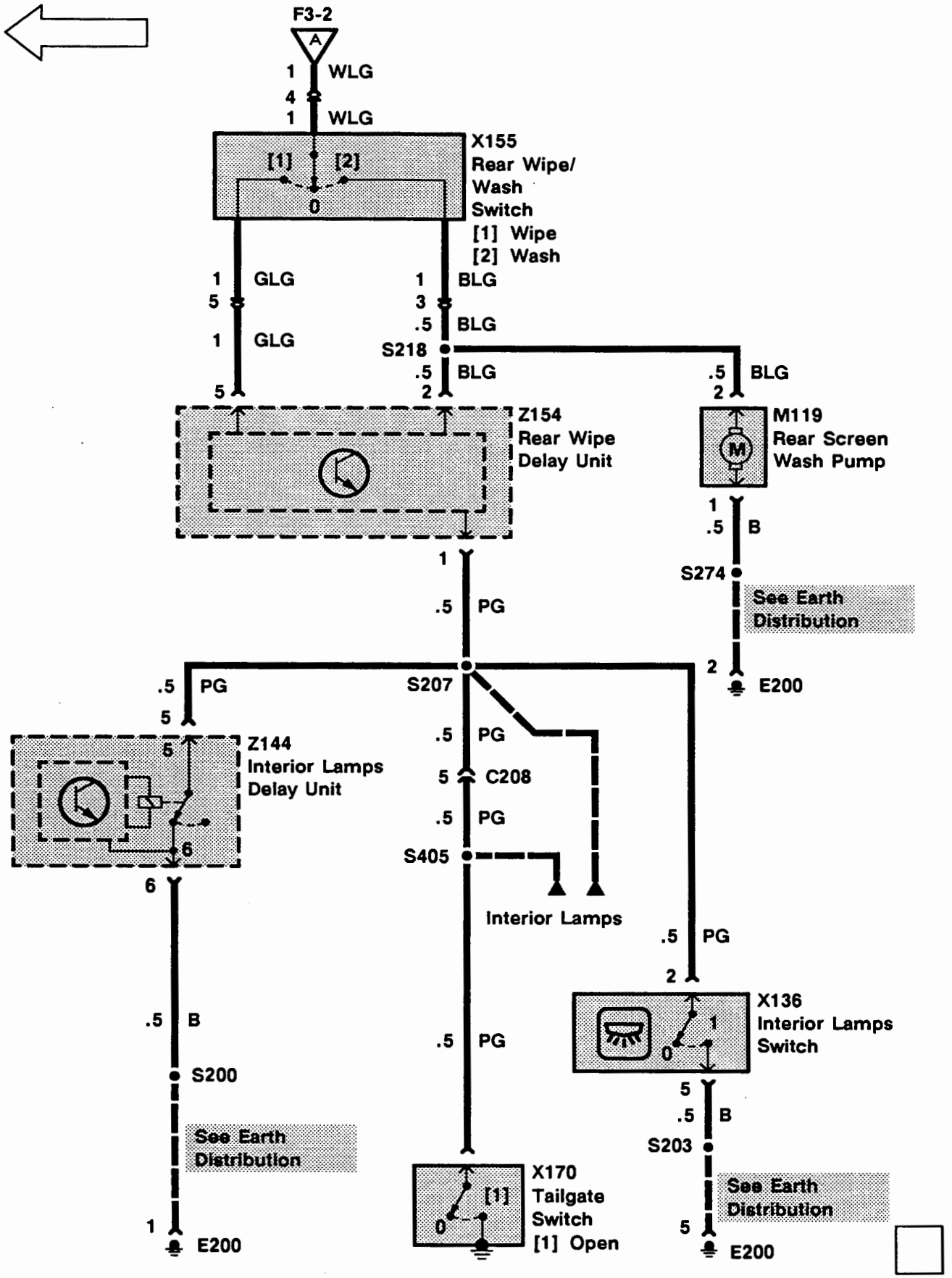
F3 ETM

1992 RANGE ROVER



Wire Colour Chart

B- Black	P- Purple
G- Green	R- Red
K- Pink	S- Grey
L- Light	U- Blue
N- Brown	W- White
O- Orange	Y- Yellow


F3-2
A
1 WLG
4
1 WLG
X155
Rear Wipe/
Wash
Switch
[1] Wipe
[2] Wash
[1]
[2]
0
1 GLG
5
1 GLG
5
1 BLG
3
.5 BLG
S218
.5 BLG
2
.5 BLG
2
Z154
Rear Wipe
Delay Unit
M119
Rear Screen
Wash Pump
M
1
.5 B
S274
See Earth
Distribution
2 E200
1
.5 PG
.5 PG
5
Z144
Interior Lamps
Delay Unit
6
6
.5 B
S200
See Earth
Distribution
1 E200
S207
.5 PG
5 C208
.5 PG
S405
Interior Lamps
.5 PG
2
X136
Interior Lamps
Switch
1
0
5
.5 B
S203
See Earth
Distribution
5 E200
.5 PG
X170
Tailgate
Switch
[1] Open
[1]
0

TROUBLESHOOTING HINTS

1. If the washer does not operate, check the washer fluid hoses for kinks or blockage.
2. If the wiper does not operate only when washer is requested, check BLG wire and Rear Wipe Delay Unit (Z154).
3. If the wiper operates with tailgate open and the interior lamps do not light, check Tailgate Switch (X170) and PG wires.
4. If the wiper operates with the tailgate open and the interior lamps operate normally, check PG wire and Rear Wipe Delay Unit (Z154).
5. If the washer runs continuously, replace the Rear Wipe/Wash Switch (X155).

SYSTEM DIAGNOSIS

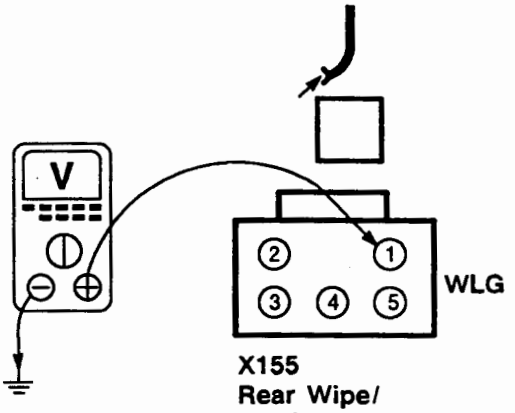
1. If wiper and washer do not operate, do Test A.
2. If the wiper does not operate but washer is OK, do Test B.
3. If the washer does not operate but wiper is OK, do Test C.
4. If the wiper runs with Rear Wipe/Wash Switch (X155) off, do Test D.

Test A

1A

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- WLG Wire
- F 3 Fuse

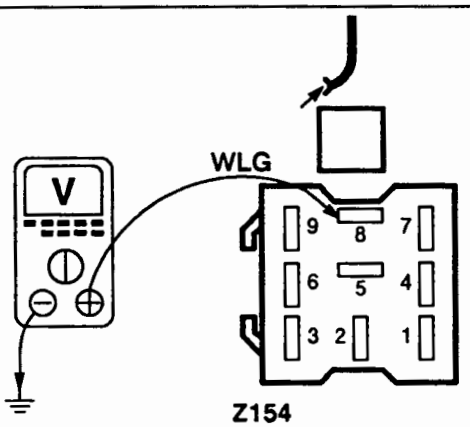
OK **PROBLEM CAUSE**
- Rear Wipe/Wash Switch

Test B

1B

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- WLG Wire

OK

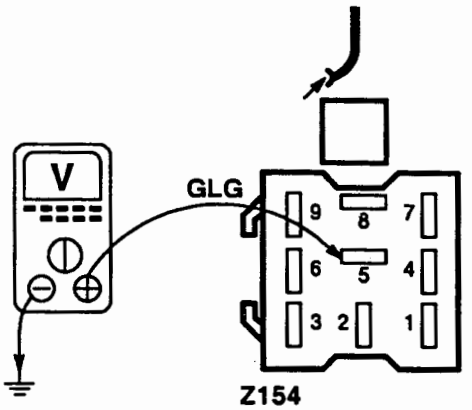
2B

1B

2B

CONDITIONS
- **Ignition Switch**
  Position: II
- **Rear Wipe/Wash Switch**
  WIPE

RESULTS
BAT VOLT



OK

PROBLEM CAUSE
- **GLG Wire**
- **Rear Wipe/Wash Switch**

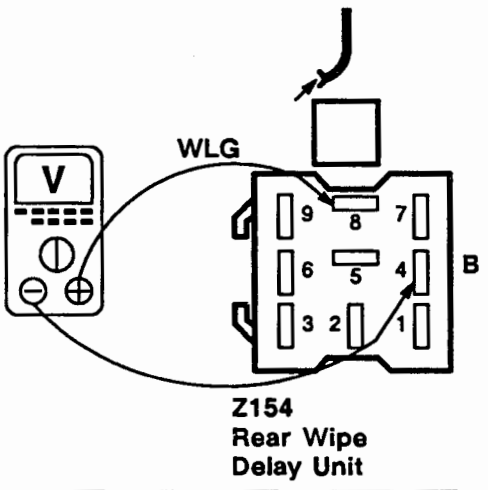
OK

3B

3B

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



OK

PROBLEM CAUSE
- **B Wire**

OK

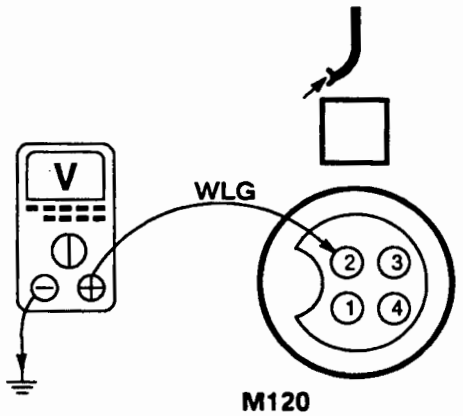
4B

3B

4B

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



M120
Rear Wiper
Motor

OK **PROBLEM CAUSE**
- **WLG Wire**
- **F 3 Fuse**

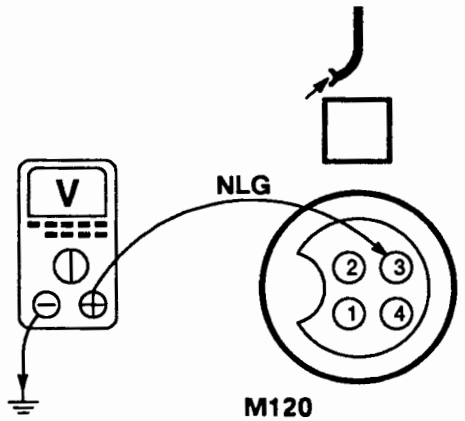
OK

5B

5B

CONDITIONS
- **Ignition Switch**
  Position: II
- **Rear Wipe/Wash Switch**
  WIPE

RESULTS
BAT VOLT



M120
Rear Wiper
Motor

OK **PROBLEM CAUSE**
- **NLG Wire**
- **Rear Wipe Delay Unit**

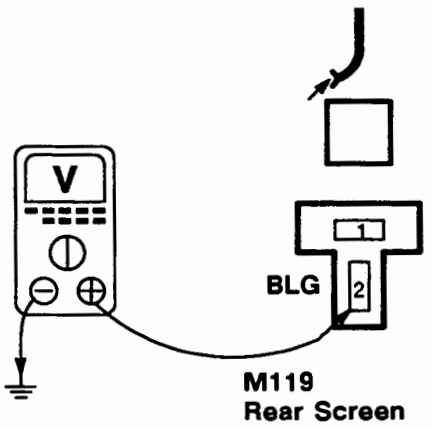
OK **PROBLEM CAUSE**
- **R Wire**
- **B Wire**
- **Rear Wiper Motor**

Test C

1C

CONDITIONS
- **Ignition Switch**
  Position: II
- **Rear Wipe/Wash Switch**
  WASH

RESULTS
BAT VOLT



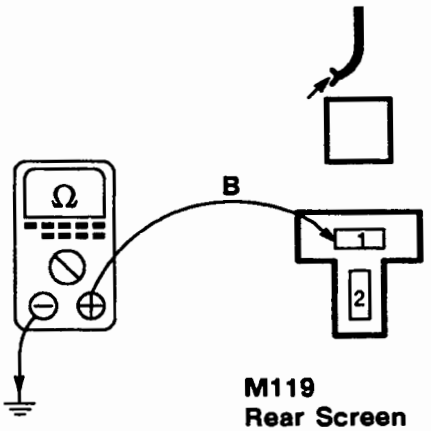
OK **PROBLEM CAUSE**
- **BLG Wire**
- **Rear Wipe/Wash Switch**

OK → 2C

2C

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 2 ohms



OK **PROBLEM CAUSE**
- **B Wire**

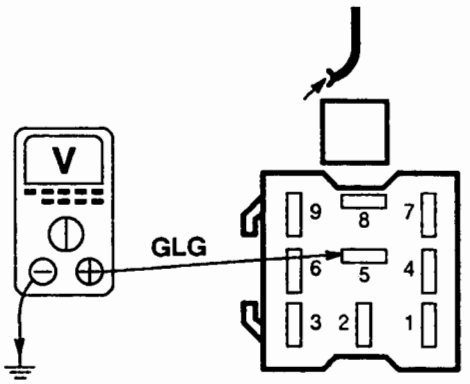
OK **PROBLEM CAUSE**
- **Rear Screen Wash Pump**

Test D

1D

CONDITIONS
- **Ignition Switch**
  Position: II
- **Rear Wipe/Wash Switch**
  OFF

RESULTS
0V



Z154
Rear Wipe
Delay Unit

OK **PROBLEM CAUSE**
- **Rear Wipe/Wash Switch**

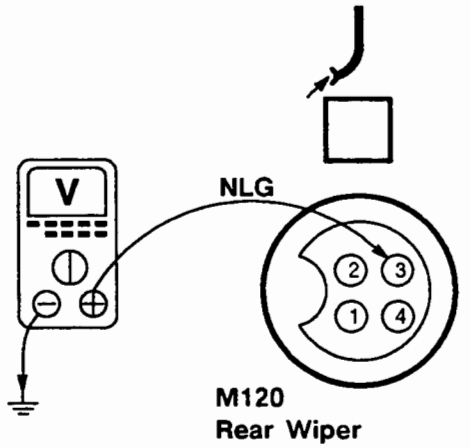
OK

2D

2D

CONDITIONS
- **Ignition Switch**
  Position: II
- **Rear Wipe/Wash Switch**
  OFF

RESULTS
0V



M120
Rear Wiper
Motor

OK **PROBLEM CAUSE**
- **Rear Wipe Delay Unit**

OK **PROBLEM CAUSE**
- **Rear Wiper Motor**

KEY INFORMATION

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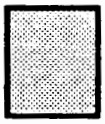
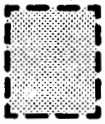


Entire component



Part of a component

TERMINAL NUMBER	DESIGNATION
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30	Battery voltage: supplied constantly
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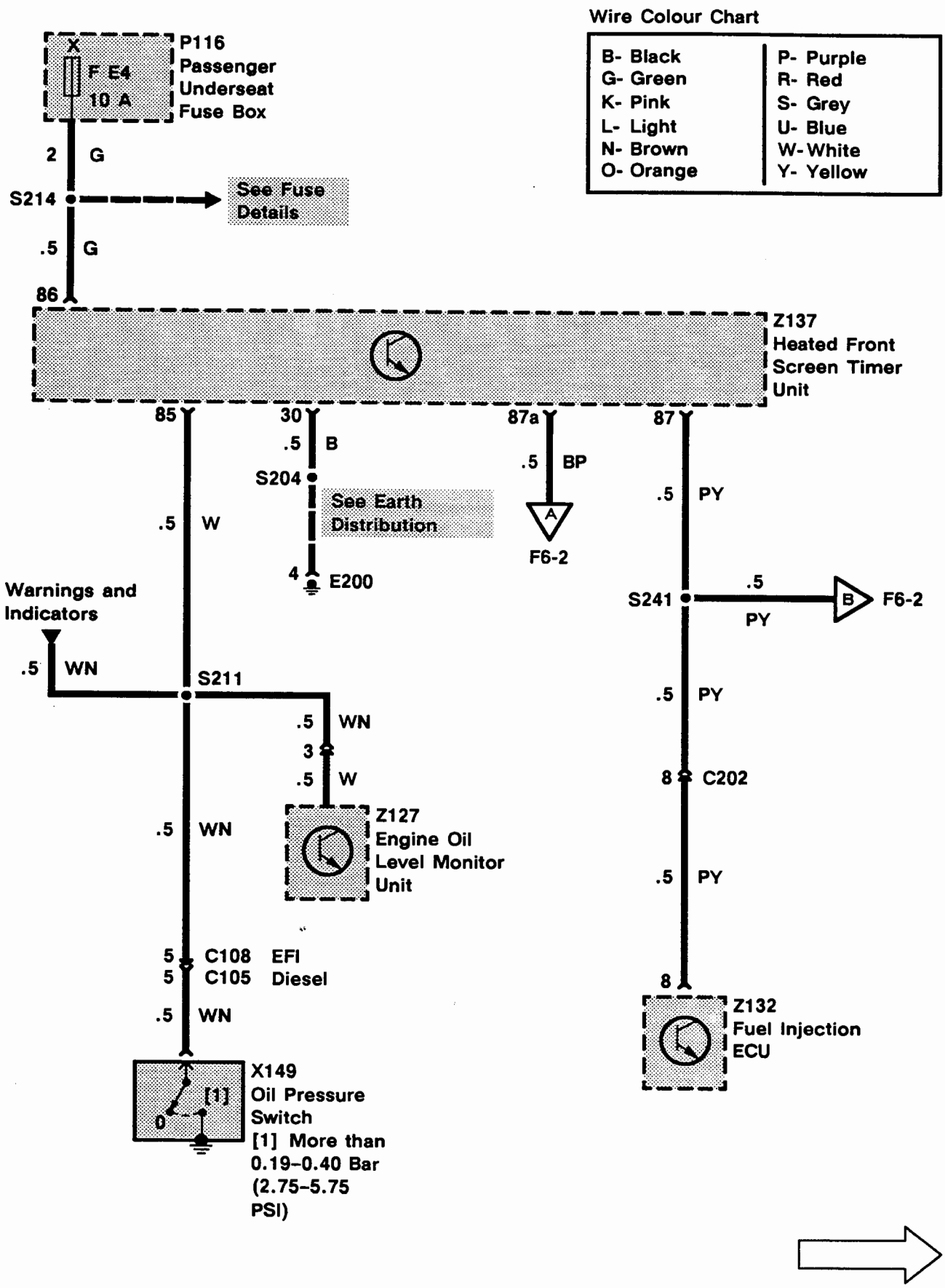
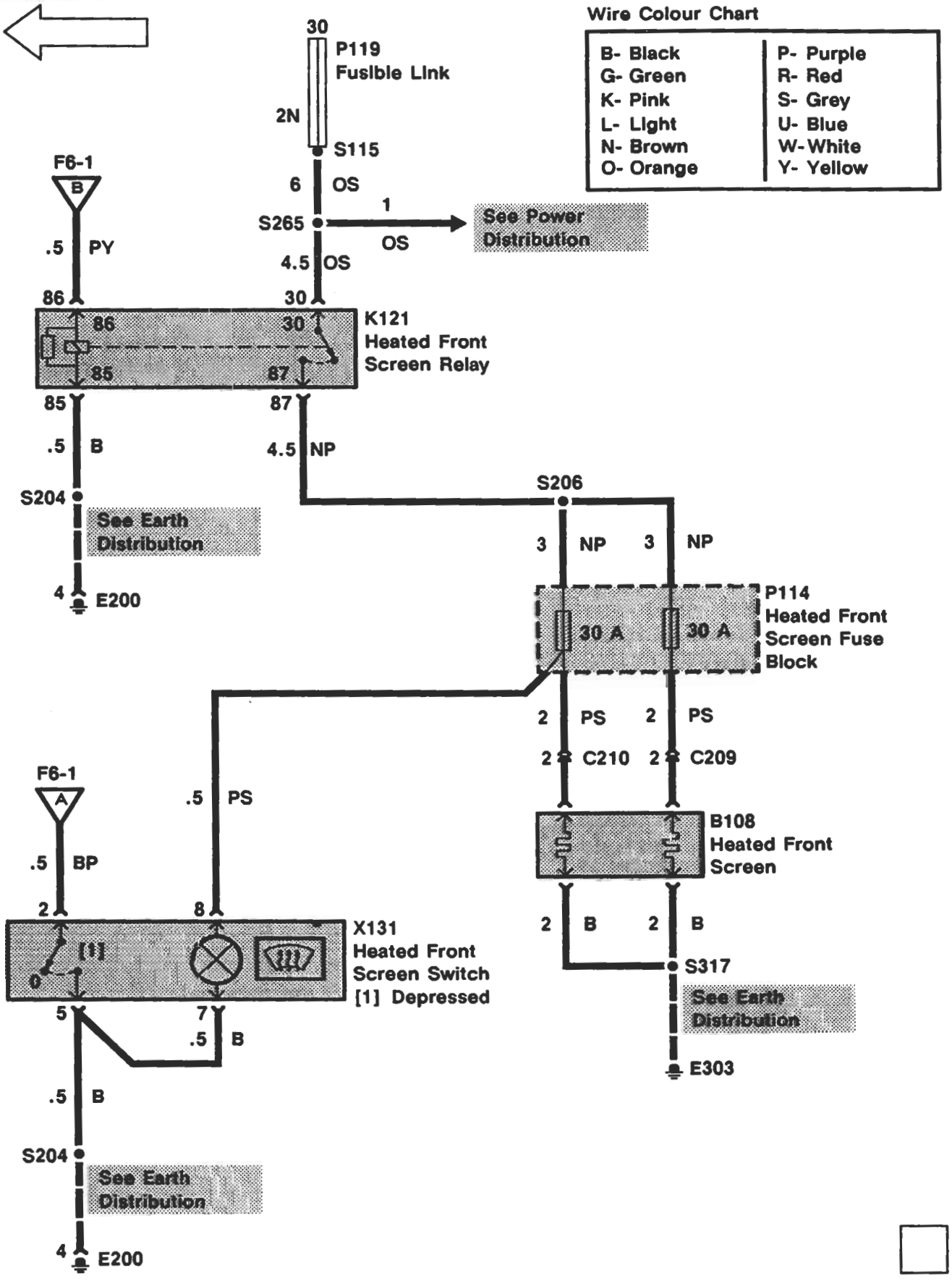
Component is disconnected. Probe harness connector

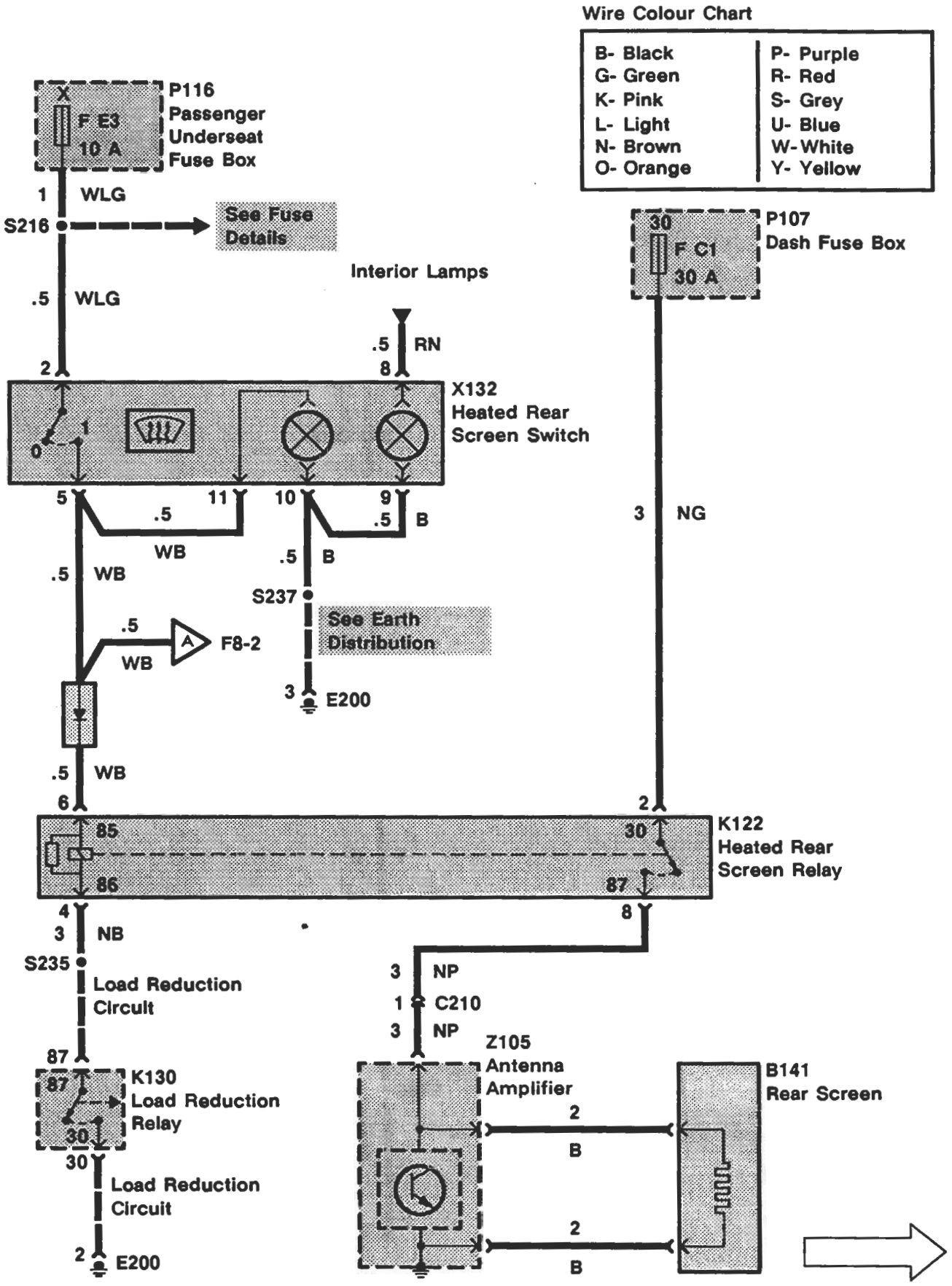
Probe in-line connector


Wire Colour Chart
B- Black
G- Green
K- Pink
L- Light
N- Brown
O- Orange
P- Purple
R- Red
S- Grey
U- Blue
W- White
Y- Yellow
X
F E4
10 A
P116
Passenger
Underseat
Fuse Box
2
G
S214
See Fuse Details
.5
G
86
Z137
Heated Front
Screen Timer
Unit
85
30
.5
B
87a
.5
BP
87
.5
PY
S204
See Earth Distribution
.5
W
4
E200
A
F6-2
Warnings and Indicators
.5
WN
S211
S241
.5
PY
B
F6-2
.5
WN
3
.5
W
.5
PY
8
C202
.5
WN
Z127
Engine Oil
Level Monitor
Unit
.5
PY
5
C108
EFI
5
C105
Diesel
.5
WN
8
Z132
Fuel Injection
ECU
X149
Oil Pressure
Switch
[1]
0
[1] More than
0.19–0.40 Bar
(2.75–5.75
PSI)

F6 ETM

1992 RANGE ROVER

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P116
Passenger
Underseat
Fuse Box
F E3
10 A
1
WLG
S216
See Fuse Details
.5
WLG
2
Interior Lamps
.5
RN
8
X132
Heated Rear
Screen Switch
0
1
5
11
10
9
.5
WB
.5
B
.5
WB
.5
B
S237
See Earth Distribution
3
E200
.5
WB
A
F8-2
.5
WB
6
P107
Dash Fuse Box
30
F C1
30 A
3
NG
2
K122
Heated Rear
Screen Relay
85
86
30
87
4
3
NB
S235
Load Reduction
Circuit
87
K130
Load Reduction
Relay
87
30
30
Load Reduction
Circuit
2
E200
8
3
NP
1
C210
3
NP
Z105
Antenna
Amplifier
2
B
2
B
B141
Rear Screen

F8 ETM

1992 RANGE ROVER