CIRCUIT OPERATION

When the Ignition Switch (X134) is in position 1, voltage from Fuse B 1 is applied to the Front and Rear Window Relays (K114, K133), causing the relays to energize. With the relays energized, voltage is applied to the Rear Window Isolation Switch (X187), One Touch Window Control Unit (Z147), Passenger Window Switch (X151) and Rear Window Console Switches (X141, X162).

When a window console switch is in the DOWN position, voltage is applied to the window motor through the 'down' switch contacts. The window motors operate because they are earthed through the 'up' contacts of the window console switch.

When a switch is in the UP position, the polarity applied to the window motor is reversed, causing the motor to run in the opposite direction and the window to close. With the exception of the driver window, all of the windows operate as described.

Driver Window Operation

When the Driver Window Switch (X122) is in the DOWN position, terminal 7 of the One Touch Window Control Unit (Z147) is earthed through the switch. When this occurs, a relay in the One Touch Window Control Unit (Z147) energizes and applies voltage at terminal 6 of the Driver Window Motor (M130). The Driver Window Motor (M130) is earthed by the One Touch Window Control Unit (Z147) at terminal 5 through the 'up' contacts, allowing the motor to run.

If the switch is in the DOWN position for more than 400 milliseconds, the unit will fully lower the window. The window can be stopped by placing the switch in the UP position momentarily.

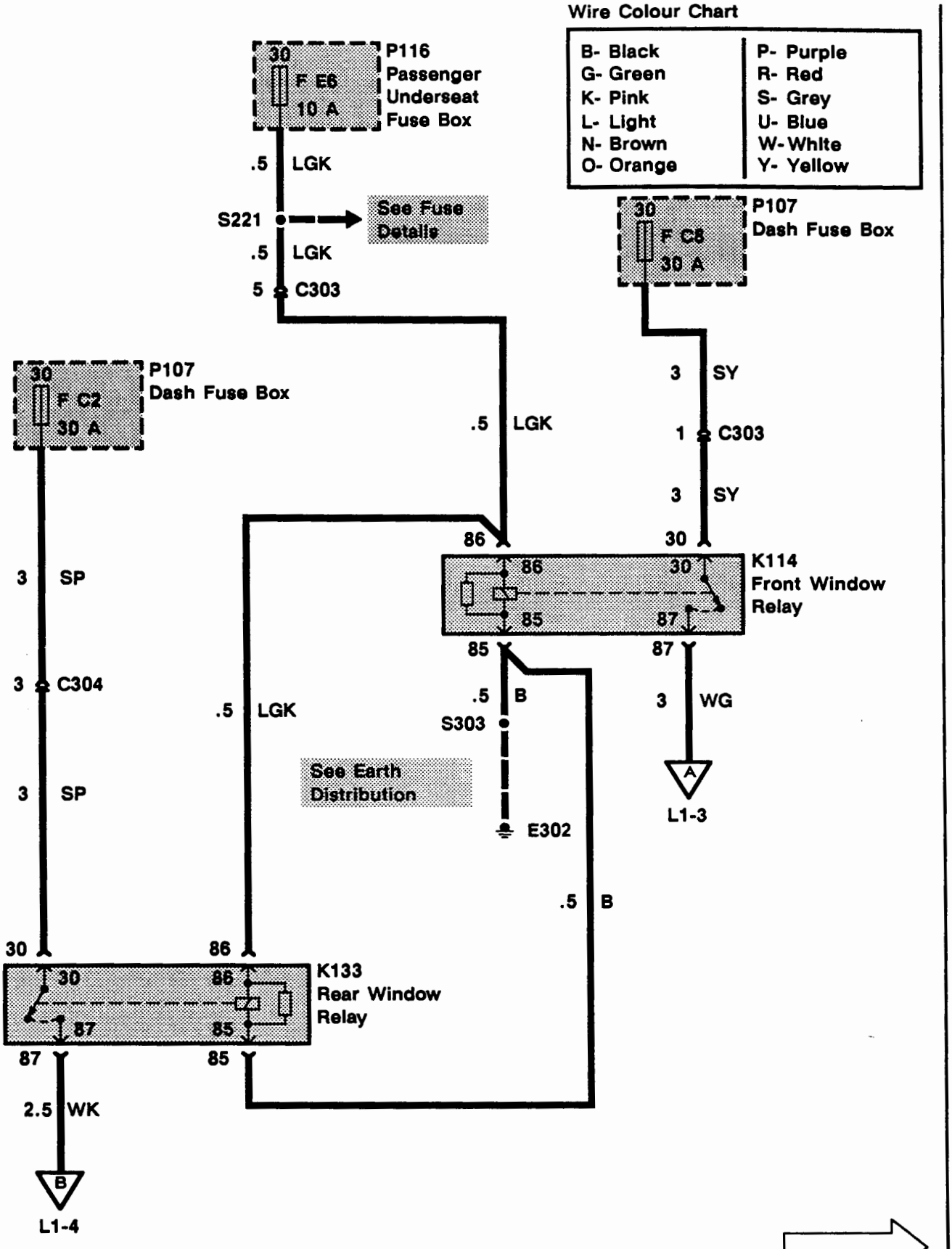
When the Driver Window Switch (X122) is in the UP position, terminal 4 of the One Touch Window Control Unit (Z147) is earthed. This signals the unit at terminal 5 to apply voltage to the motor. The one touch feature does not apply to the driver window up operation.

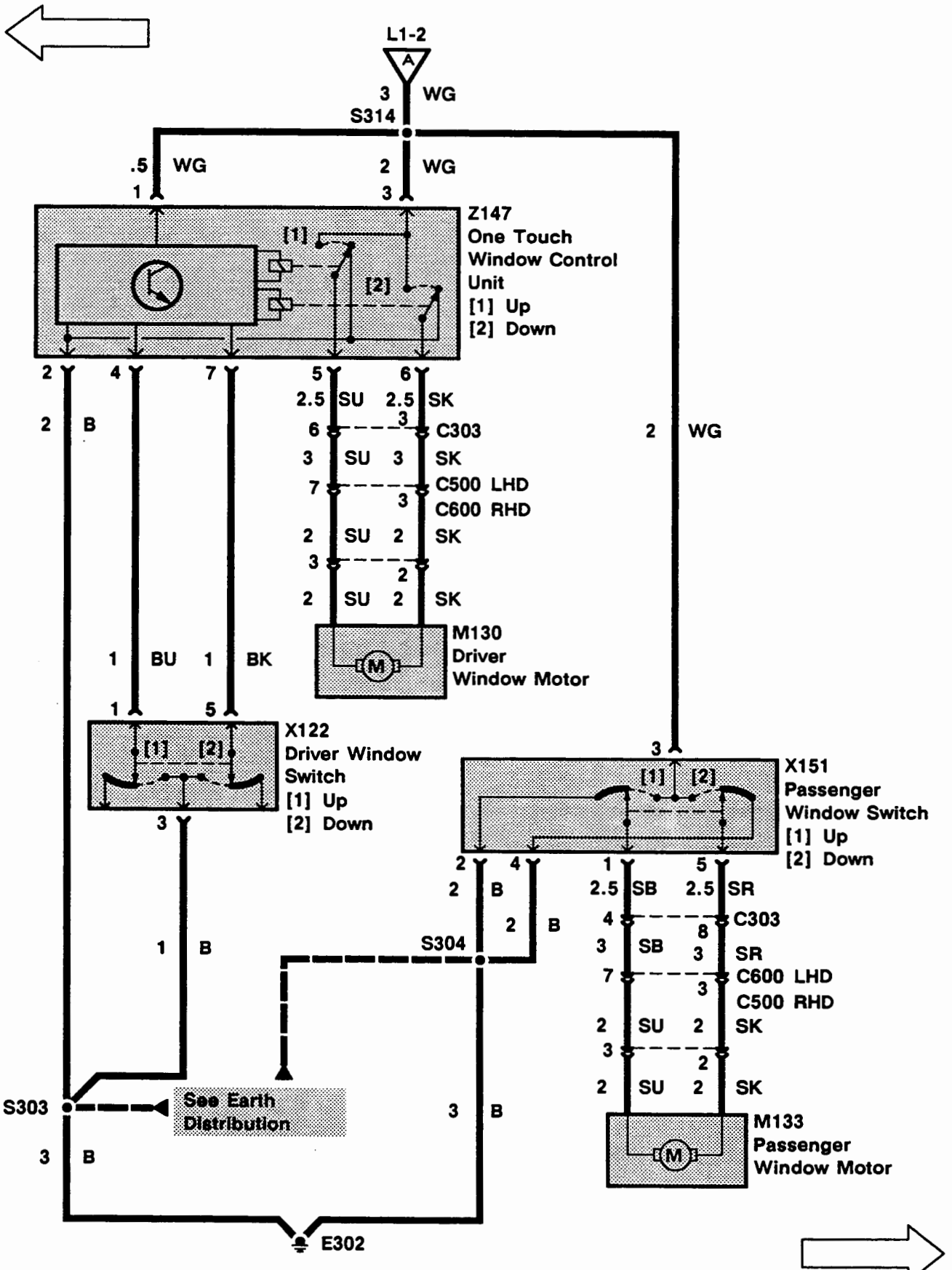
Rear Window Isolation Switch (X187)

The Rear Window Isolation Switch (X187) is placed in series with the voltage supply to the Rear Window Door Switches (X188, X189). If the isolation switch is opened, the voltage supply is interrupted, preventing rear window operation using the rear door switches.

L1 ETM

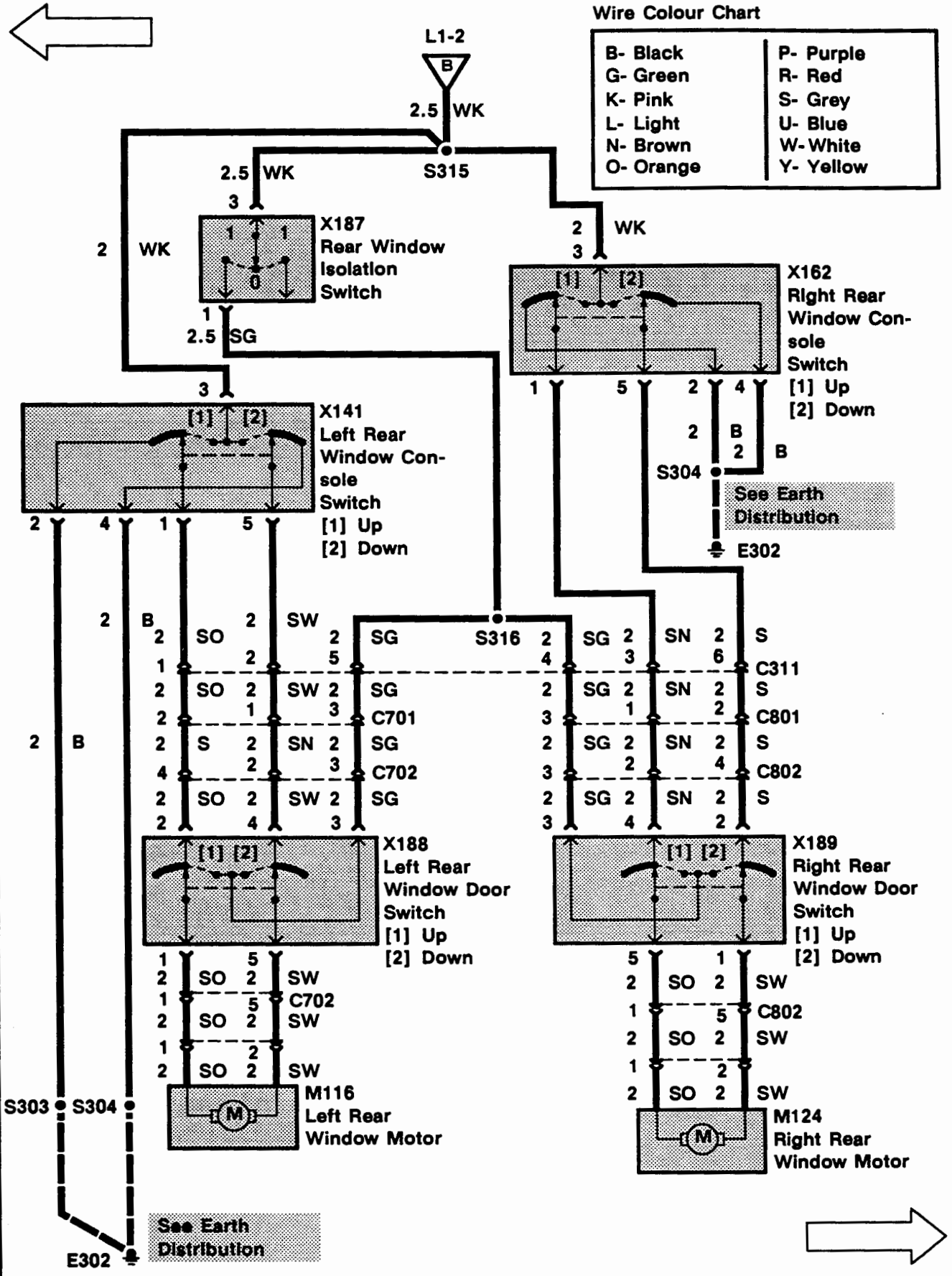
1992 RANGE ROVER

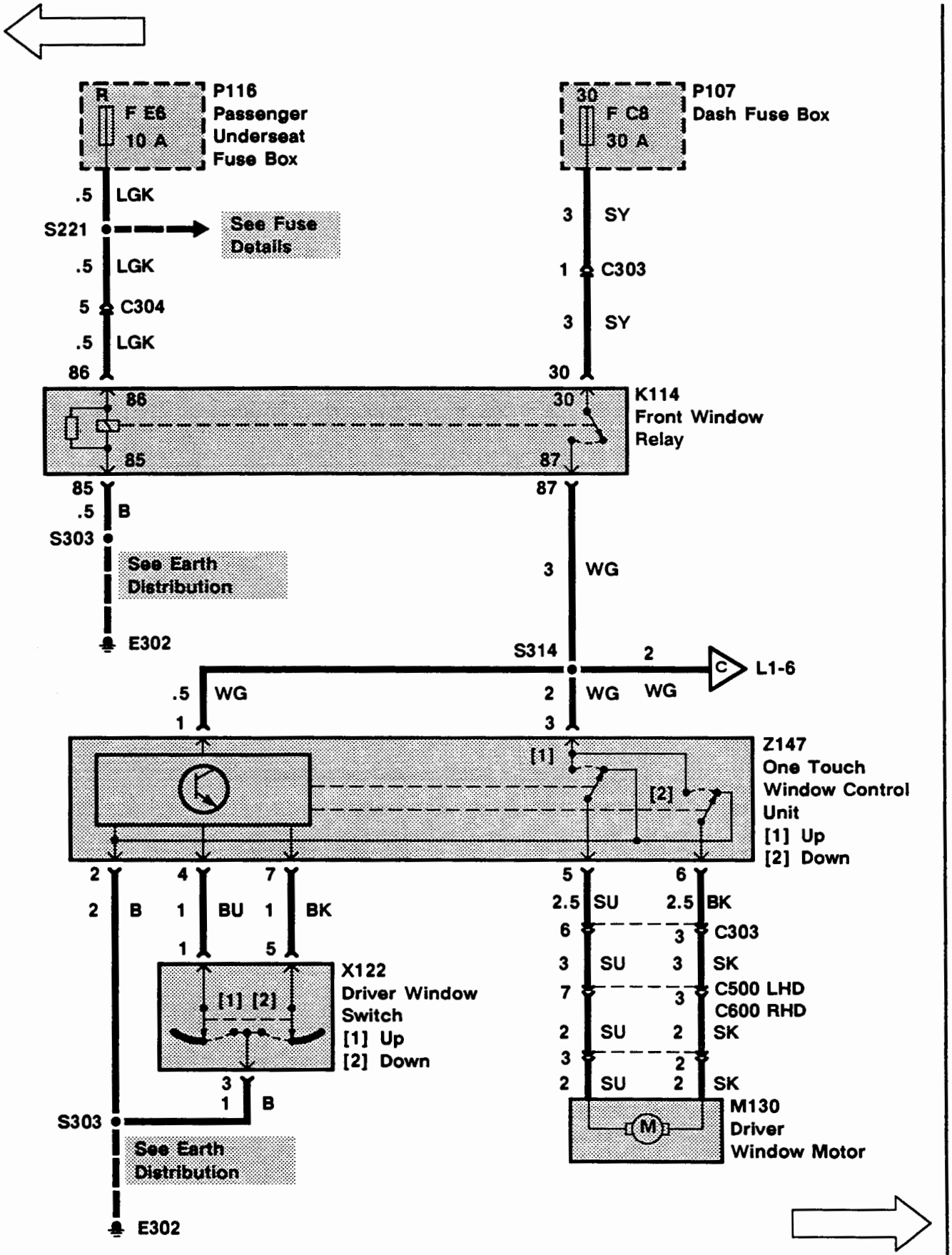



L1-2
A
3 WG
S314
.5 WG
1
2 WG
3
Z147
One Touch
Window Control
Unit
[1] Up
[2] Down
[1]
[2]
2 4 7 5 6
2.5 SU 2.5 SK
2 B
6 3 C303
2 WG
3 SU 3 SK
7 C500 LHD
3
C600 RHD
2 SU 2 SK
3 2
2 SU 2 SK
M130
Driver
Window Motor
1 BU 1 BK
1 5
X122
Driver Window
Switch
[1] Up
[2] Down
3
X151
Passenger
Window Switch
[1] Up
[2] Down
2 4 1 5
2 B 2.5 SB 2.5 SR
4 C303
2 B
8
1 B
S304
3 SB 3 SR
7 C600 LHD
3
C500 RHD
2 SU 2 SK
3 2
2 SU 2 SK
M133
Passenger
Window Motor
S303
See Earth
Distribution
3 B
3 B
E302

L1 ETM

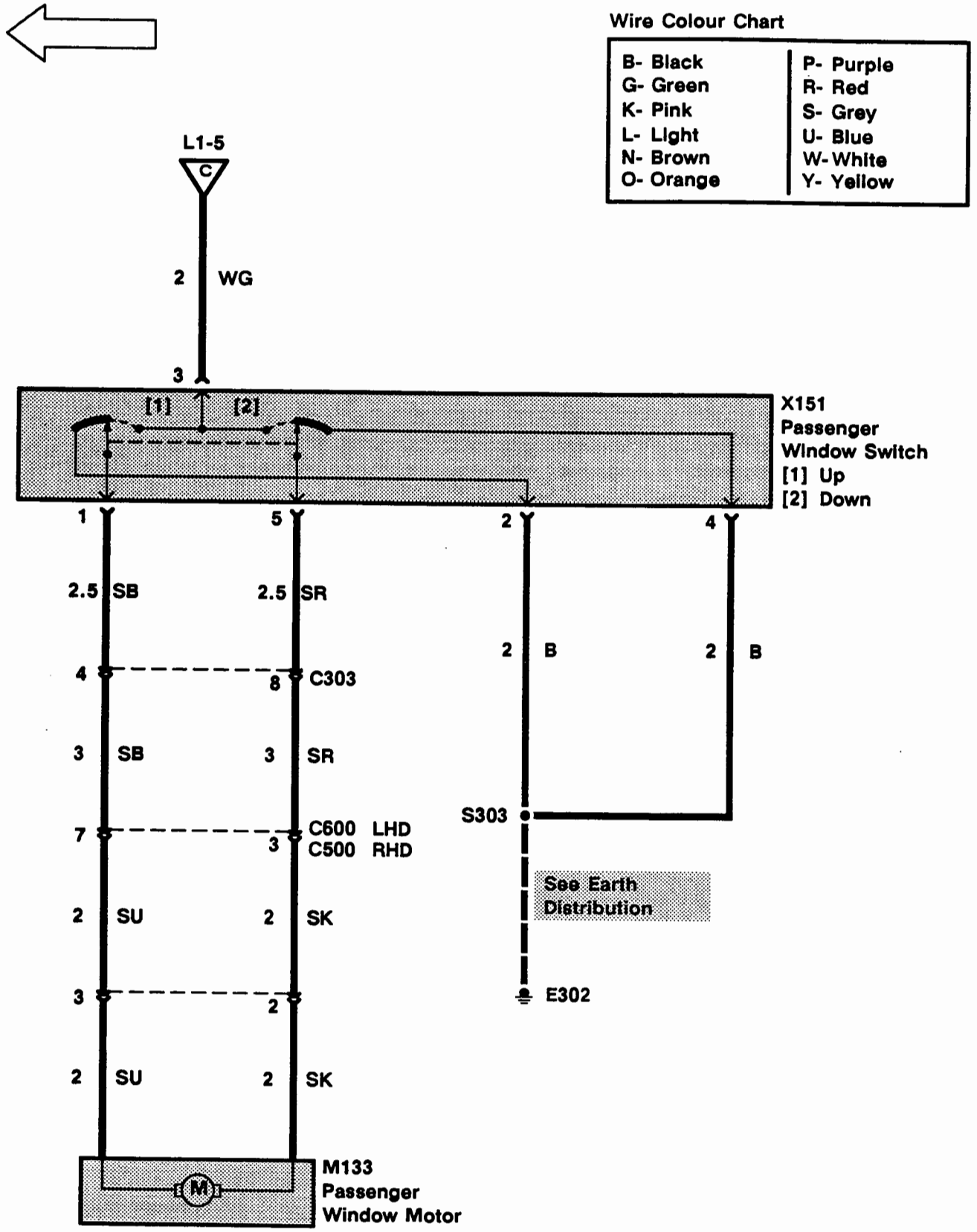
1992 RANGE ROVER




R
F E6
10 A
P116
Passenger
Underseat
Fuse Box
30
F C8
30 A
P107
Dash Fuse Box
.5 LGK
S221
See Fuse Details
.5 LGK
5 C304
.5 LGK
86
3 SY
1 C303
3 SY
30
86
85
30
87
K114
Front Window
Relay
85
.5 B
S303
See Earth Distribution
E302
87
3 WG
S314
2
C
L1-6
.5 WG
1
2 WG
3
WG
[1]
[2]
Z147
One Touch
Window Control
Unit
[1] Up
[2] Down
2
2 B
4
1 BU
1
1
7
1 BK
5
5
2.5 SU
6
3 SU
7
2 SU
3
2
3
2 SU
6
2.5 BK
3 C303
3 SK
3 C500 LHD
C600 RHD
2 SK
2
2 SK
[1] [2]
X122
Driver Window
Switch
[1] Up
[2] Down
3
1 B
S303
See Earth Distribution
E302
M
M130
Driver
Window Motor

L1 ETM

1992 RANGE ROVER



TROUBLESHOOTING HINTS

1. If the one touch window feature does not operate but the driver window operates, replace the One Touch Window Control Unit (Z147).

SYSTEM DIAGNOSIS

1. If both front and rear windows do not operate, do Test A.
2. If the rear windows do not operate from centre console switches but the front windows operate correctly, do Test B.
3. If the rear windows do not operate from the centre console switches and the rear door switches, do Test C.
4. If one rear window does not operate, do Test D.
5. If a rear window does not operate using the door switch but does operate from the centre console switch, do Test F.
6. If a rear window does not operate from the centre console switch but does work when the door switch is used, do Test E.
7. If both front windows do not operate but the rear windows do, do Test A.
8. If the front passenger window does not operate, do Test G.
9. If the driver window does not operate, do Test H.

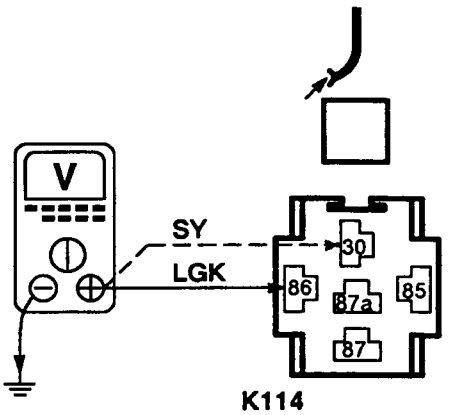
L1 ETM

Test A

1A

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
BAT VOLT



K114
Front Window
Relay

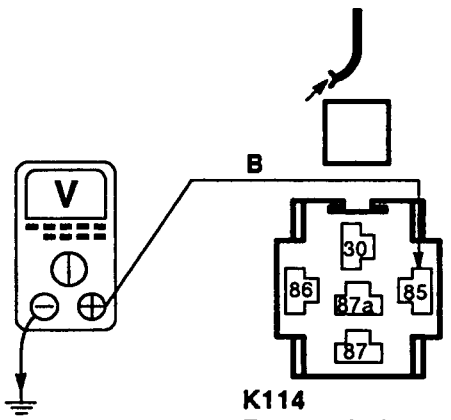
OK **PROBLEM CAUSE**
- F E6 Fuse
- LGK Wire
- SY Wire

OK → 2A

2A

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
Less than 1 ohm



K114
Front Window
Relay

OK **PROBLEM CAUSE**
- B Wire
- E302

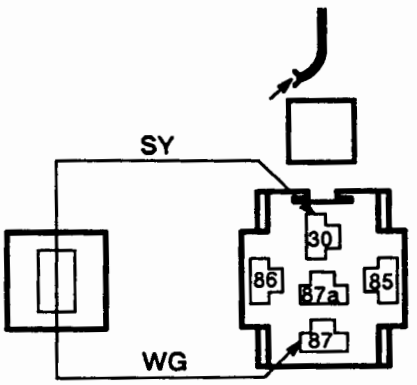
OK → A3

2A

3A

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
- **Front Windows**
  Operate



K114
Front Window Relay

OK

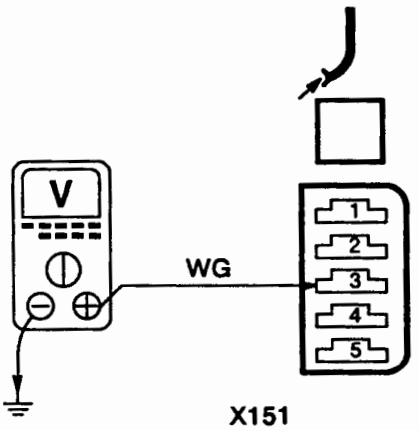
OK **PROBLEM CAUSE**
- **Front Window Relay**

4A

4A

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



X151
Passenger Window Switch

OK **PROBLEM CAUSE**
- **WG Wire**
- **One Touch Window Control Unit**

OK **PROBLEM CAUSE**
- **Passenger Window Switch**

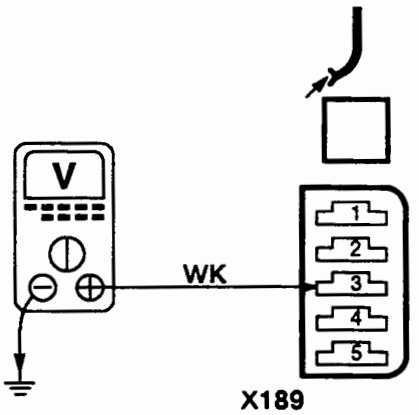
L1 ETM

Test B

1B

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
BAT VOLT



X189
Right Rear Window Door Switch

OK **PROBLEM CAUSE**
- **WK Wire**

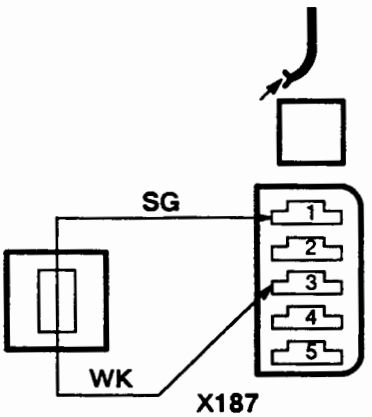
OK

2B

2B

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
- **Rear Windows**
  Work when operated



X187
Rear Window Isolation Switch

OK **PROBLEM CAUSE**
- **SG Wire**

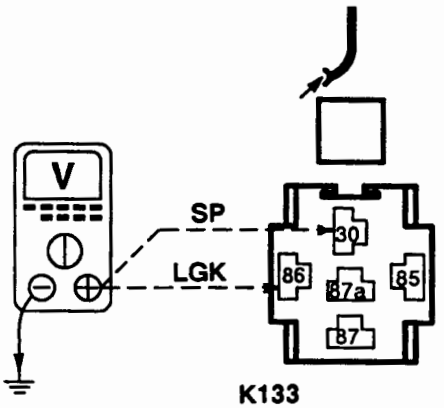
OK **PROBLEM CAUSE**
- **Rear Window Isolation Switch**

Test C

1C

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
BAT VOLT



K133
Rear Window
Relay

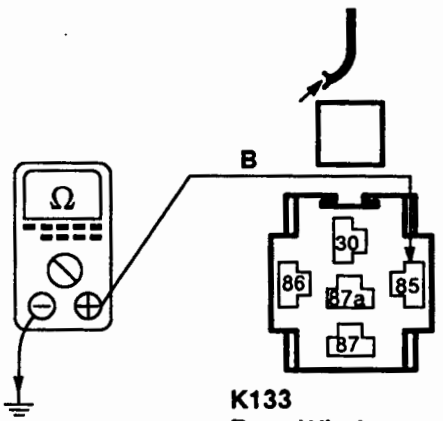
OK **PROBLEM CAUSE**
- F C2 Fuse
- SP Wire
- LGK Wire

OK → C2

2C

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



K133
Rear Window
Relay

OK **PROBLEM CAUSE**
- B Wire

OK → 3C

L1 ETM

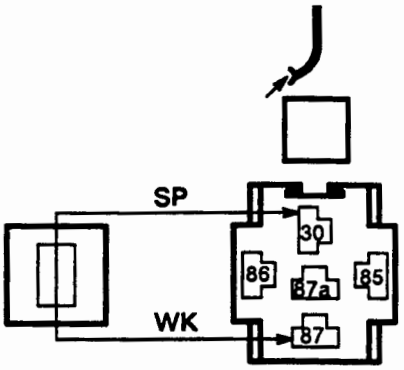
1992 RANGE ROVER

2C

3C

CONDITIONS
- **Ignition Switch**
  Position: I
- **Rear Window Isolation Switch**
  OFF

RESULTS
- **Rear Windows**
  Operate



K133
Rear Window
Relay

OK **PROBLEM CAUSE**
- **WK Wire**
- **X141, X162 Rear Window Console Switch**

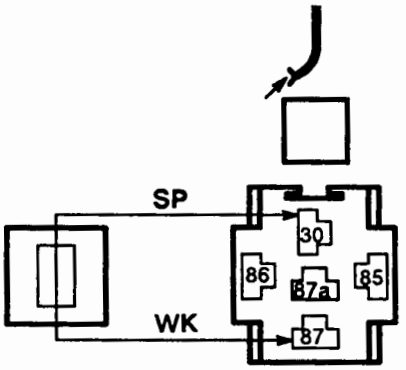
OK

4C

4C

CONDITIONS
- **Ignition Switch**
  Position: I
- **Rear Window Isolation Switch**
  ON

RESULTS
- **Rear Windows**
  Operate



K133
Rear Window
Relay

OK **PROBLEM CAUSE**
- **SG Wire**
- **Rear Window Isolation Switch**
- **X141, X162 Rear Window Console Switch**

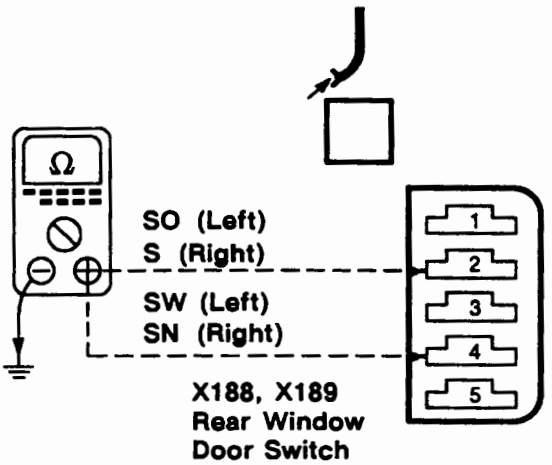
OK **PROBLEM CAUSE**
- **Rear Window Relay**

Test D

1D

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



OK **GO TO TEST E**

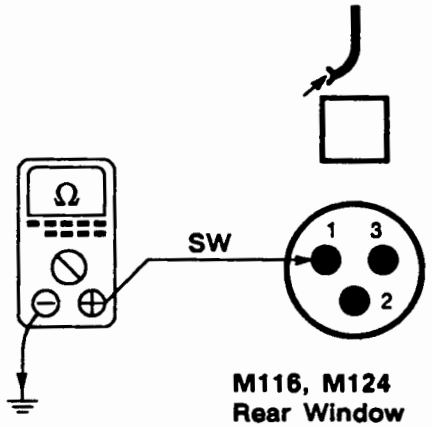
OK

2D

2D

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
- **X188, X189 Rear Window Door Switch**
  ⇩ = *More than 10K ohms*
  OFF = Less than 1 ohm



OK **PROBLEM CAUSE**
- **SW Wire**
- **X188, X189 Rear Window Door Switch**

OK

3D

L1 ETM

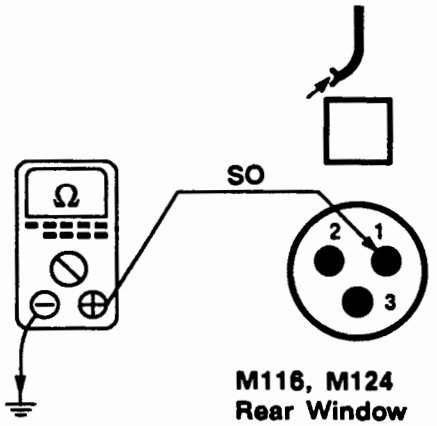
1992 RANGE ROVER

2D

3D

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
- **X188, X189 Rear Window Door Switch**
  ⬆ = *More than 10K ohms*
  OFF = Less than 1 ohm



OK **PROBLEM CAUSE**
- SO Wire
- X188, X189 Rear Window Door Switch

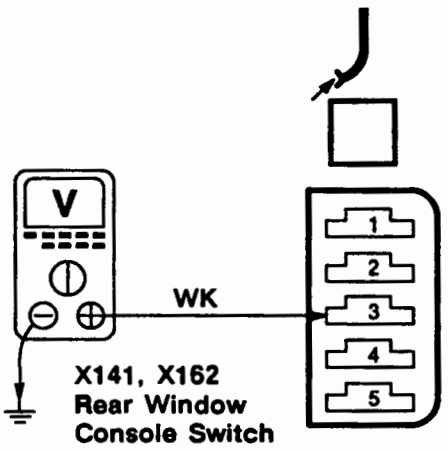
OK **PROBLEM CAUSE**
- M116, M124 Rear Window Motor

Test E

E1

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- WK Wire

OK

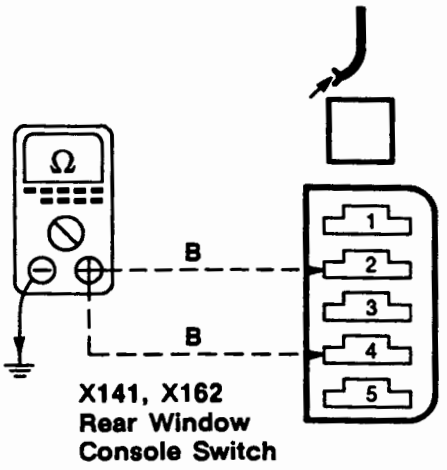
2E

1E

2E

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



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

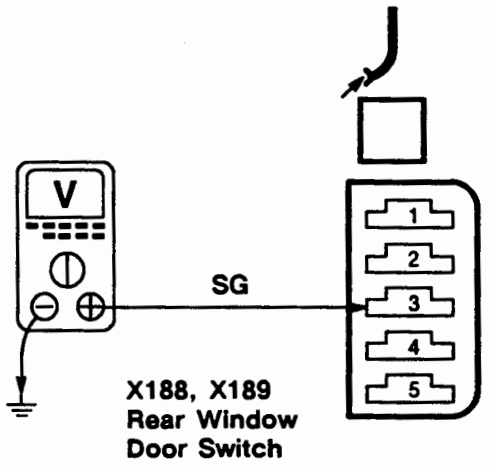
OK **PROBLEM CAUSE**
- **X141, X162 Rear Window Console Switch**

Test F

1F

CONDITIONS
- **Ignition Switch**
  Position: I
- **Rear Window Isolation Switch**
  ON

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- **SG Wire**

OK **PROBLEM CAUSE**
- **X188, X189 Rear Window Door Switch**

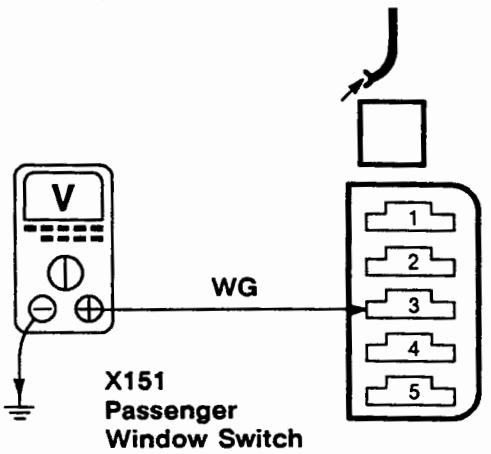
L1 ETM

Test G

1G

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
BAT VOLT



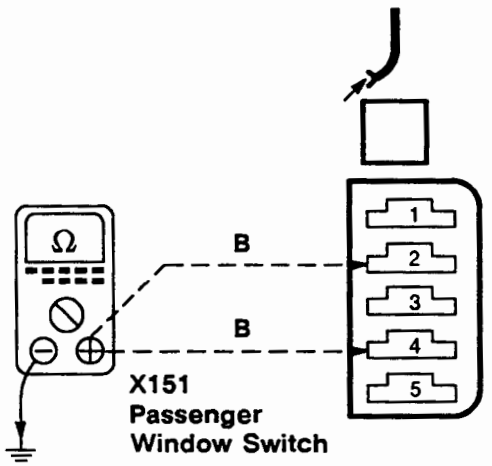
OK **PROBLEM CAUSE**
- **WG Wire**

OK → 2G

2G

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



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

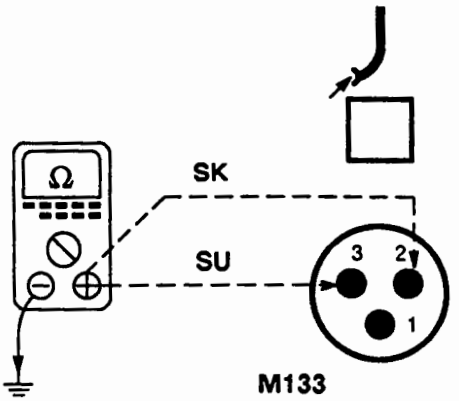
OK → 3G

2G

3G

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



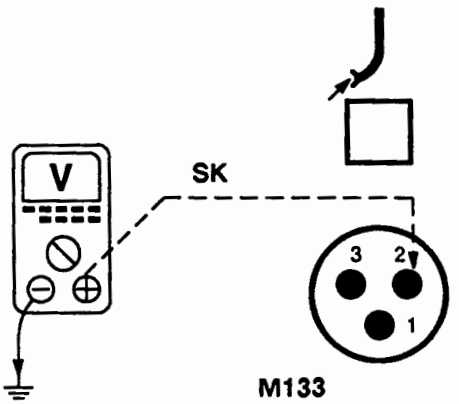
OK **PROBLEM CAUSE**
- SK Wire
- SU Wire
- Passenger Window Switch

OK → 4G

4G

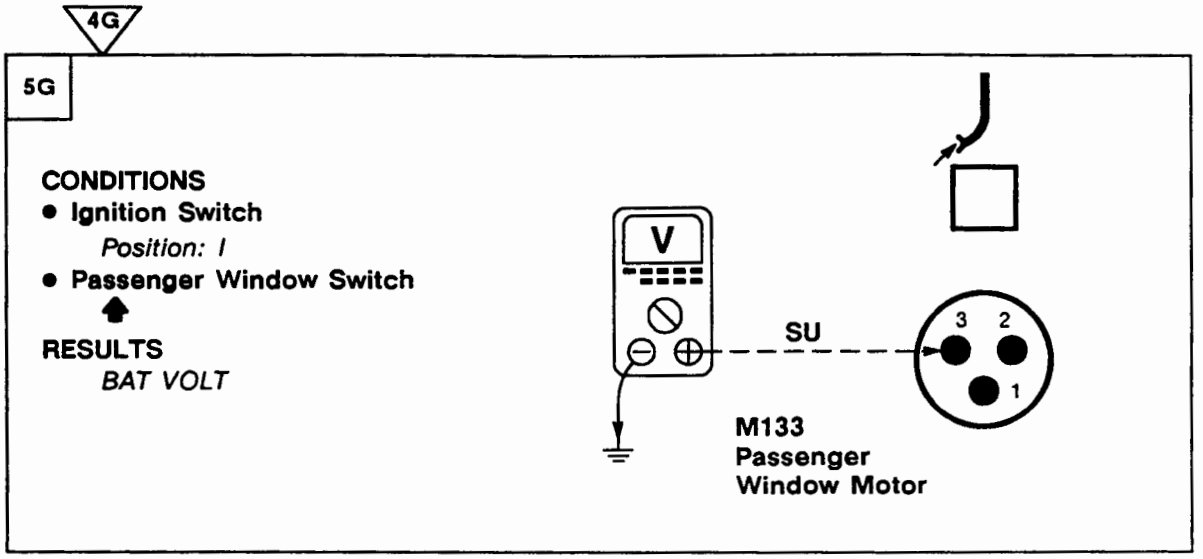
CONDITIONS
- **Ignition Switch**
  Position: I
- **Passenger Window Switch**
  ⇩

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- Passenger Window Switch

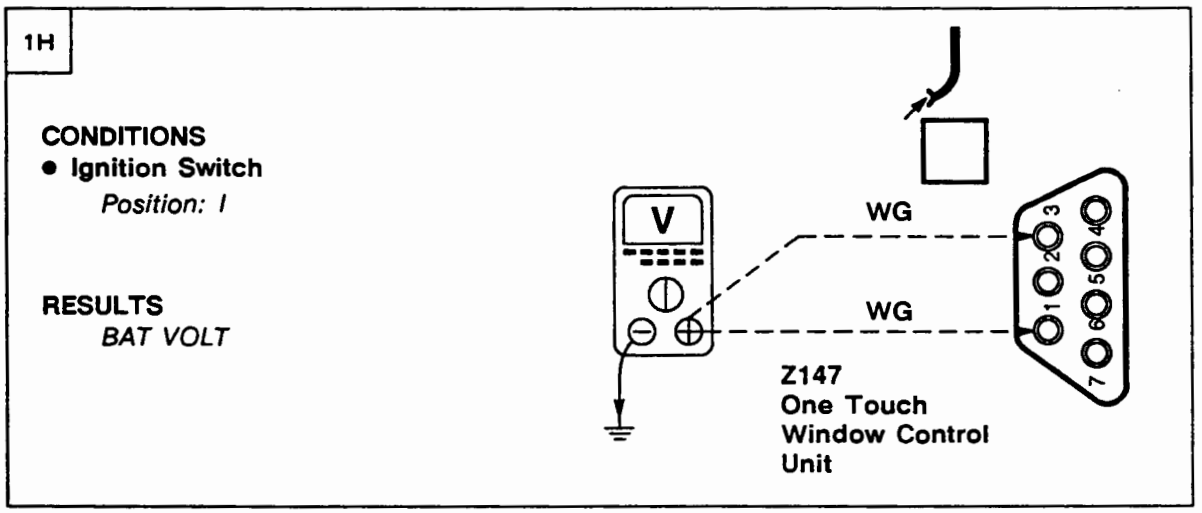
OK → 5G



OK PROBLEM CAUSE
- Passenger Window Switch

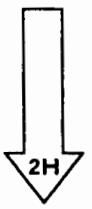
OK PROBLEM CAUSE
- Passenger Window Motor

Test H



OK PROBLEM CAUSE
- WG Wire

OK

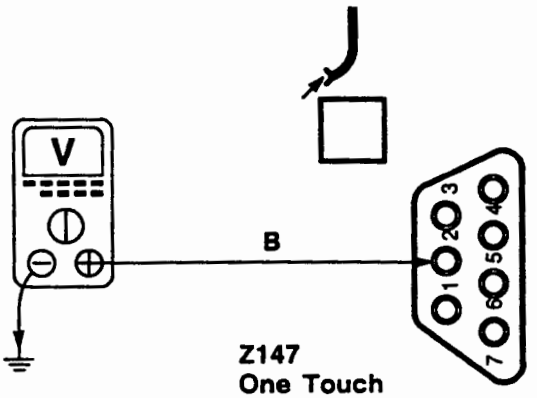


1H

2H

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



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

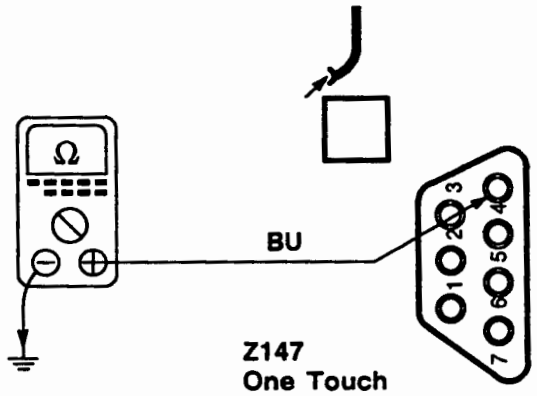
OK

3H

3H

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
- **Driver Window Switch**
  ↑ = *Less than 1 ohm*
  OFF = More than 10K ohms



OK **PROBLEM CAUSE**
- **BU Wire**
- **B Wire**
- **Driver Window Switch**

OK

4H

L1 ETM

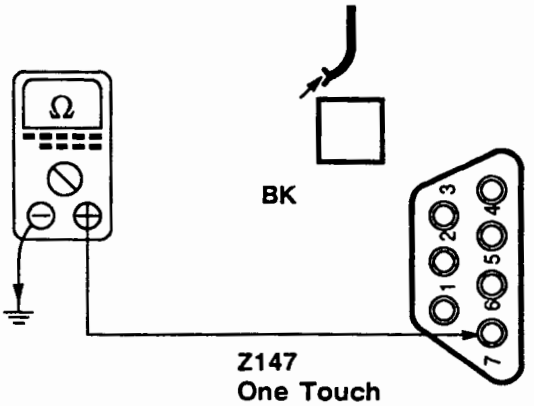
1992 RANGE ROVER

3H

4H

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
- **Driver Window Switch**
  ⇩ = *Less than 1 ohm*
  OFF = More than 10K ohms



Z147
One Touch
Window Control
Unit

OK

PROBLEM CAUSE
- BK Wire
- Driver Window Switch

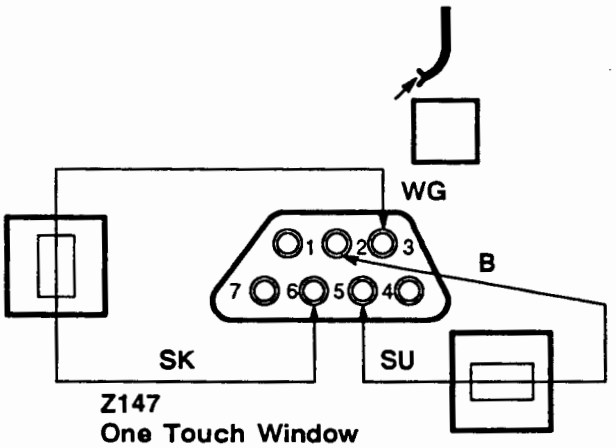
OK

5H

5H

CONDITIONS
- **Ignition Switch**
  Position: I

RESULTS
- **Driver Window**
  Operates



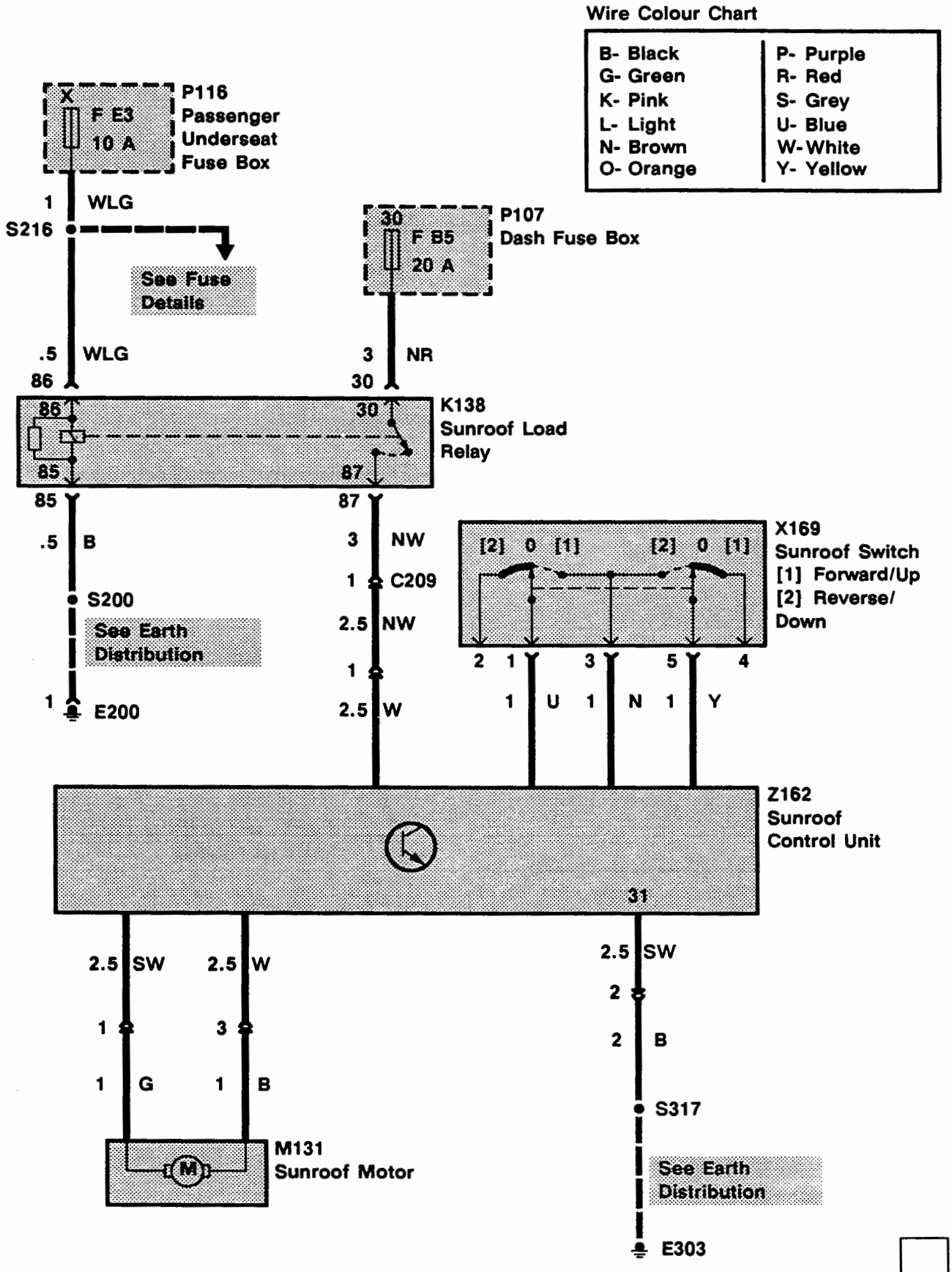
Z147
One Touch Window
Control Unit

OK

PROBLEM CAUSE
- SU Wire
- SK Wire
- Driver Window Motor

OK

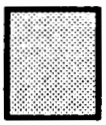
PROBLEM CAUSE
- One Touch Window Control Unit


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 E3
10 A
P116
Passenger
Underseat
Fuse Box
1
WLG
S216
See Fuse Details
30
F B5
20 A
P107
Dash Fuse Box
.5
WLG
86
3
NR
30
86
30
K138
Sunroof Load
Relay
85
87
85
87
.5
B
3
NW
1
C209
2.5
NW
1
2.5
W
S200
See Earth Distribution
1
E200
[2] 0 [1]
[2] 0 [1]
X169
Sunroof Switch
[1] Forward/Up
[2] Reverse/
Down
2 1 3 5 4
1 U 1 N 1 Y
Z162
Sunroof
Control Unit
31
2.5 SW
2.5 W
1
3
1 G
1 B
M131
Sunroof Motor
M
2.5 SW
2
2 B
S317
See Earth Distribution
E303

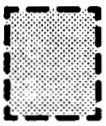
KEY INFORMATION

CIRCUIT DIAGRAMS

- Circuit diagrams are arranged so that current flow is from the top of the diagram (current source) to the bottom of the diagram (earth).
- 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

The locking functions on 4 door models is controlled by the Central Locking Control Unit (Z113). On 2 door models the Driver Door Lock Switch (X117) controls the passenger door and tailgate locking functions.

2 Door Operation

Power to the Driver Door Lock Switch (X117) for the locking functions is supplied by fuse F C7 through the NK wire. The switch is earthed at E200 through the B wire.

When the driver's door is locked, the Driver Door Lock Switch applies voltage from terminal 3 to terminal 1 of the Passenger Door Lock Actuator (M118) and to terminal 2 of the Tailgate Lock Actuator (M132). At the same time the Driver Door Lock Switch also applies earth to the lock actuators momentarily when the driver's door is locked. The lock actuators' path to earth is through terminal 4 of the Driver Door Lock Switch. The switch earths the actuators at E200 through its contacts. When the lock actuators are momentarily earthed, the actuators move to the locked position.

When the driver's door lock is unlocked, the Driver Door Lock Switch reverses the voltage applied to the actuators. The Driver Door Lock Switch now applies earth through its terminal 3 to the lock actuators. Voltage to unlock the actuators is supplied momentarily by the Driver Door Lock Switch at terminal 4 through the O and K wires.

4 Door Operation

Fuses F C7 and F 2 supply voltage to the Central Locking Control Unit (Z113) for the locking functions. The control unit is earthed at terminal 11 to earth E200.

Inputs

The Central Locking Control Unit (Z113) monitors the position of the front door locks through input switches that are part of the Front Door Lock Actuators (M114, M122). When the control unit sees an input switch change position, the control unit responds by locking or unlocking the doors.

Lock

The Central Locking Control Unit (Z113) locks the doors by momentarily applying battery voltage at its terminal 8 to the actuators through the K wire. The lock actuators are earthed by the Central Locking Control Unit at terminal 7 through the O wire. The actuators now move to the locked position.

Unlock

To unlock the doors the Central Locking Control Unit (Z113) momentarily applies battery voltage from terminal 7 to the actuators through the O wire. The actuators are earthed by the Central Locking Control Unit at terminal 8 through the K wire. The lock actuators now unlock.

Fuel Flap

When the Fuel Flap Release Switch (X125) is operated, voltage from fuse F C6 is applied to the Fuel Flap Actuator (M108) through the switch, the YK wire and the YP wire. The actuator is earthed to the Fuel Filler Pipe (P110) and earth E402.

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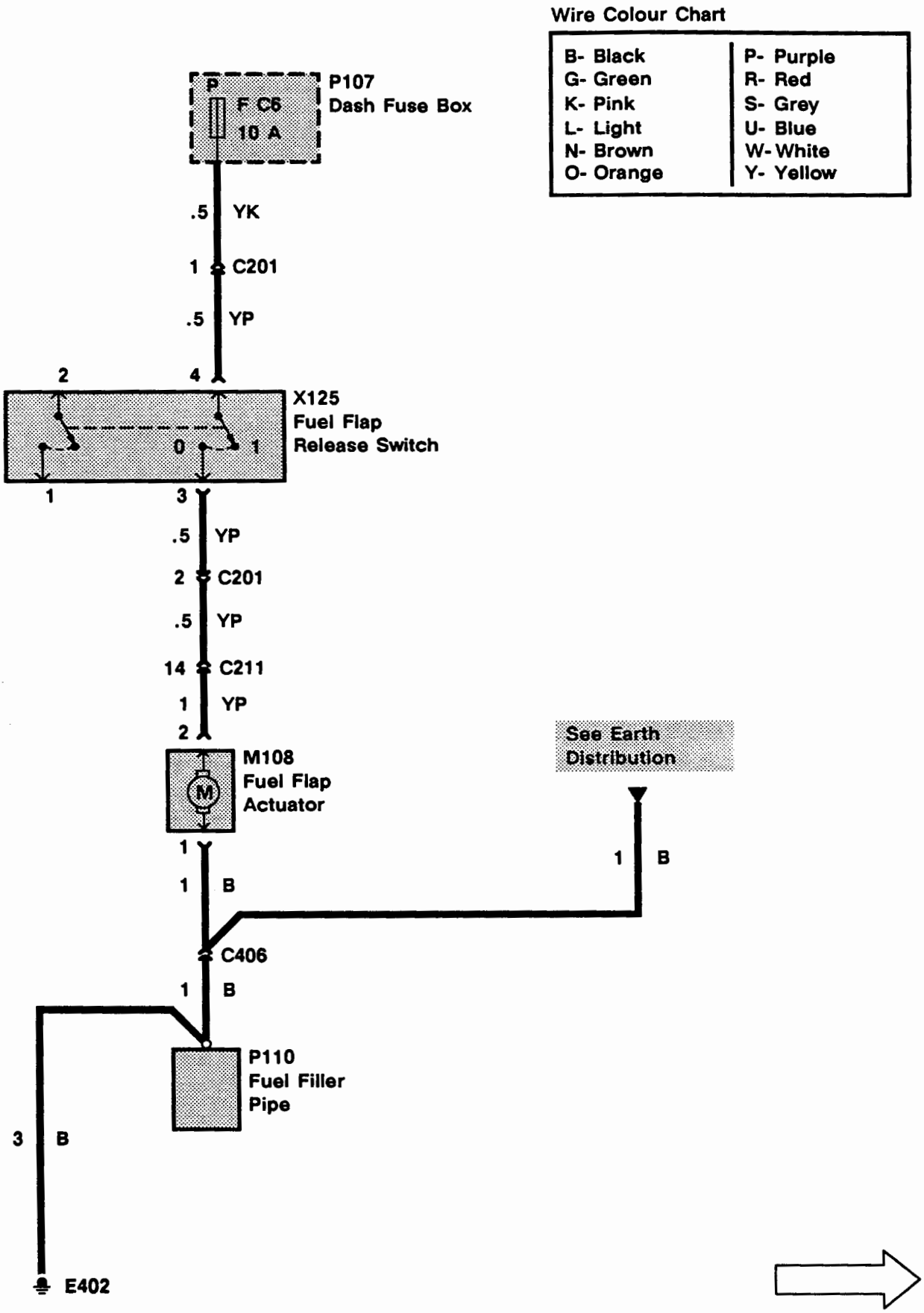
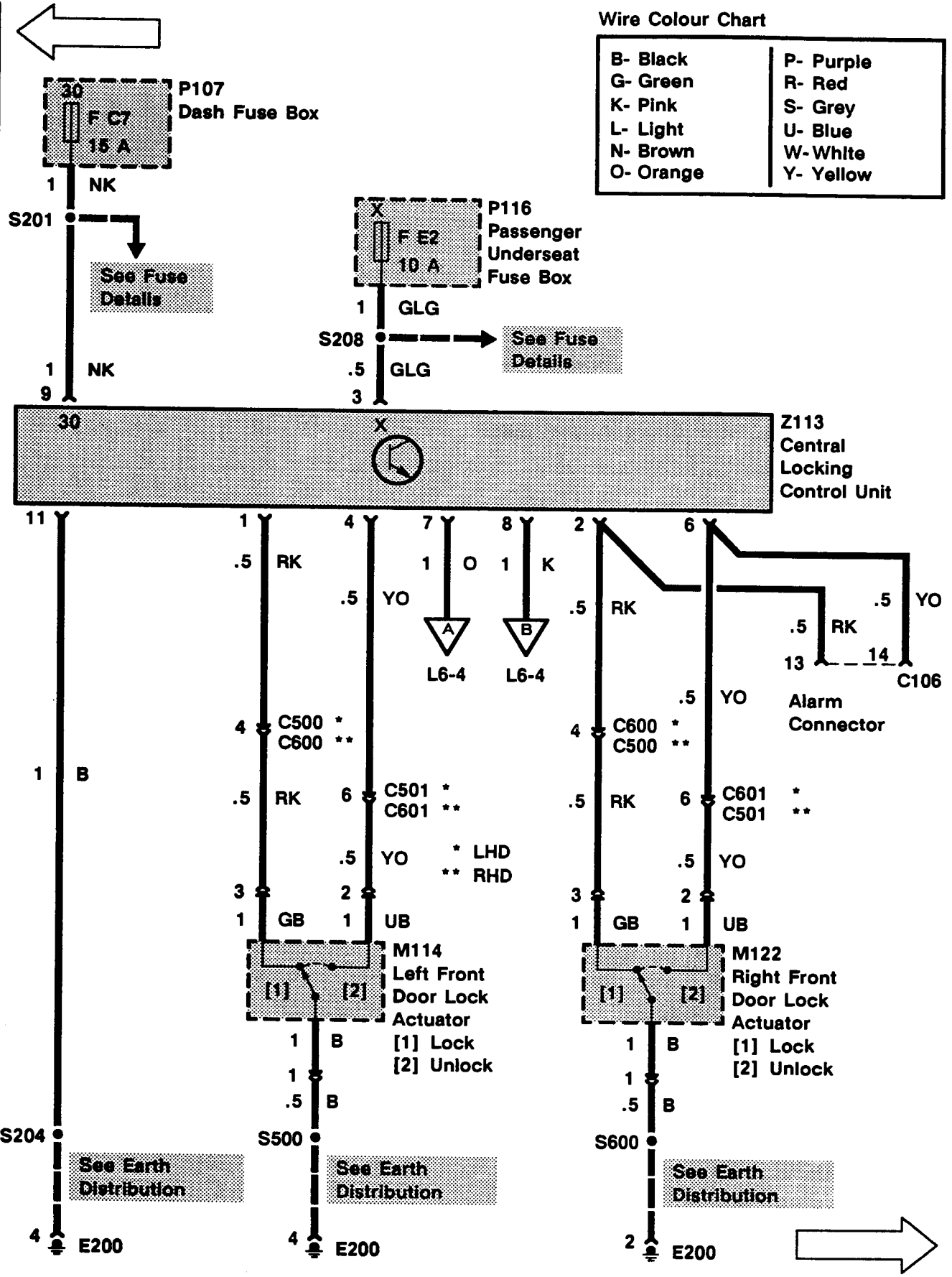
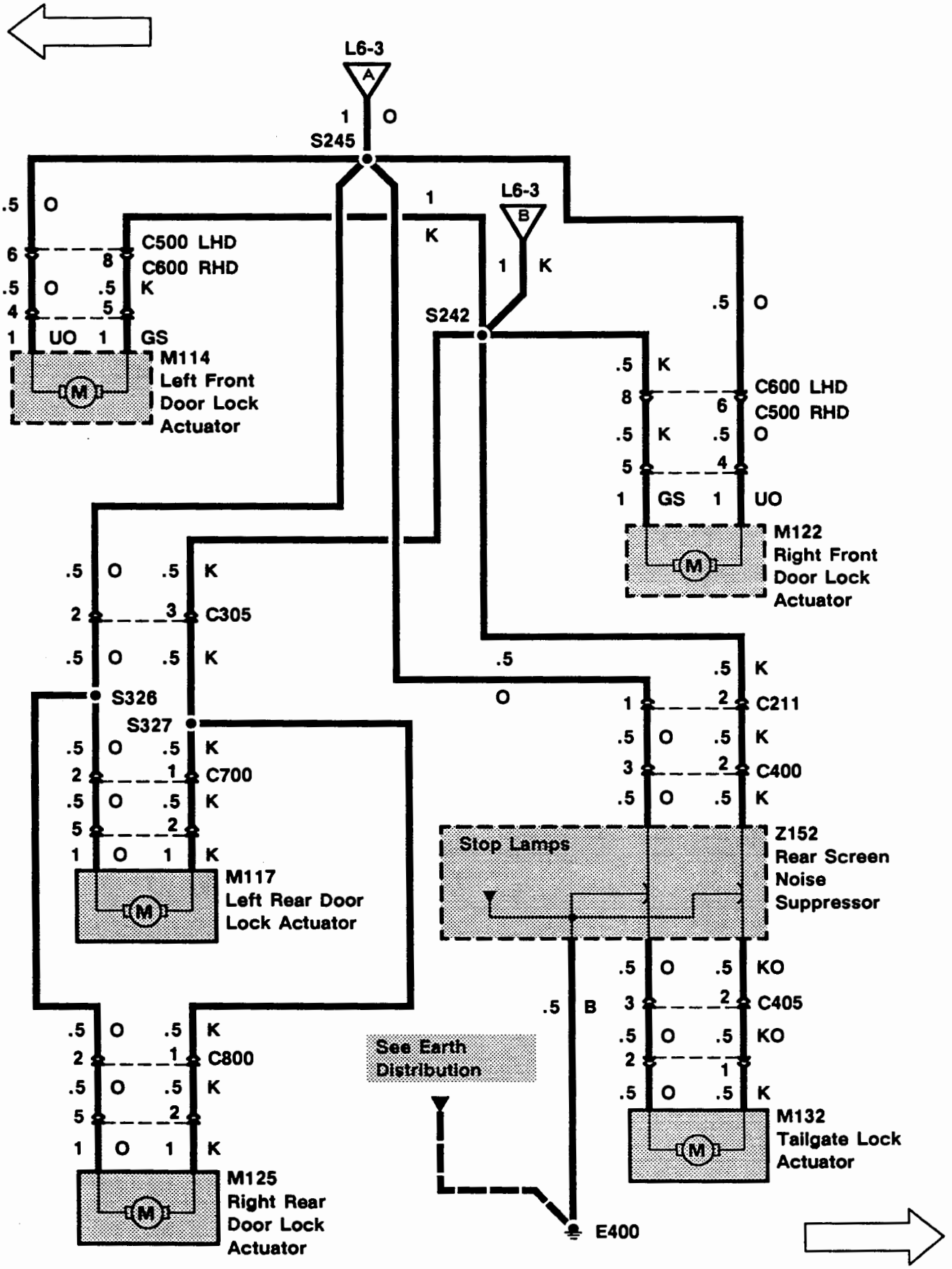

Wire Colour Chart
B- Black
G- Green
K- Pink
L- Light
N- Brown
O- Orange
P- Purple
R- Red
S- Grey
U- Blue
W- White
Y- Yellow
P
F C6
10 A
P107
Dash Fuse Box
.5 YK
1 C201
.5 YP
2
4
X125
Fuel Flap
Release Switch
0
1
1
3
.5 YP
2 C201
.5 YP
14 C211
1 YP
2
M108
Fuel Flap
Actuator
M
See Earth Distribution
1
1 B
1 B
C406
1 B
P110
Fuel Filler
Pipe
3 B
E402

L6 ETM

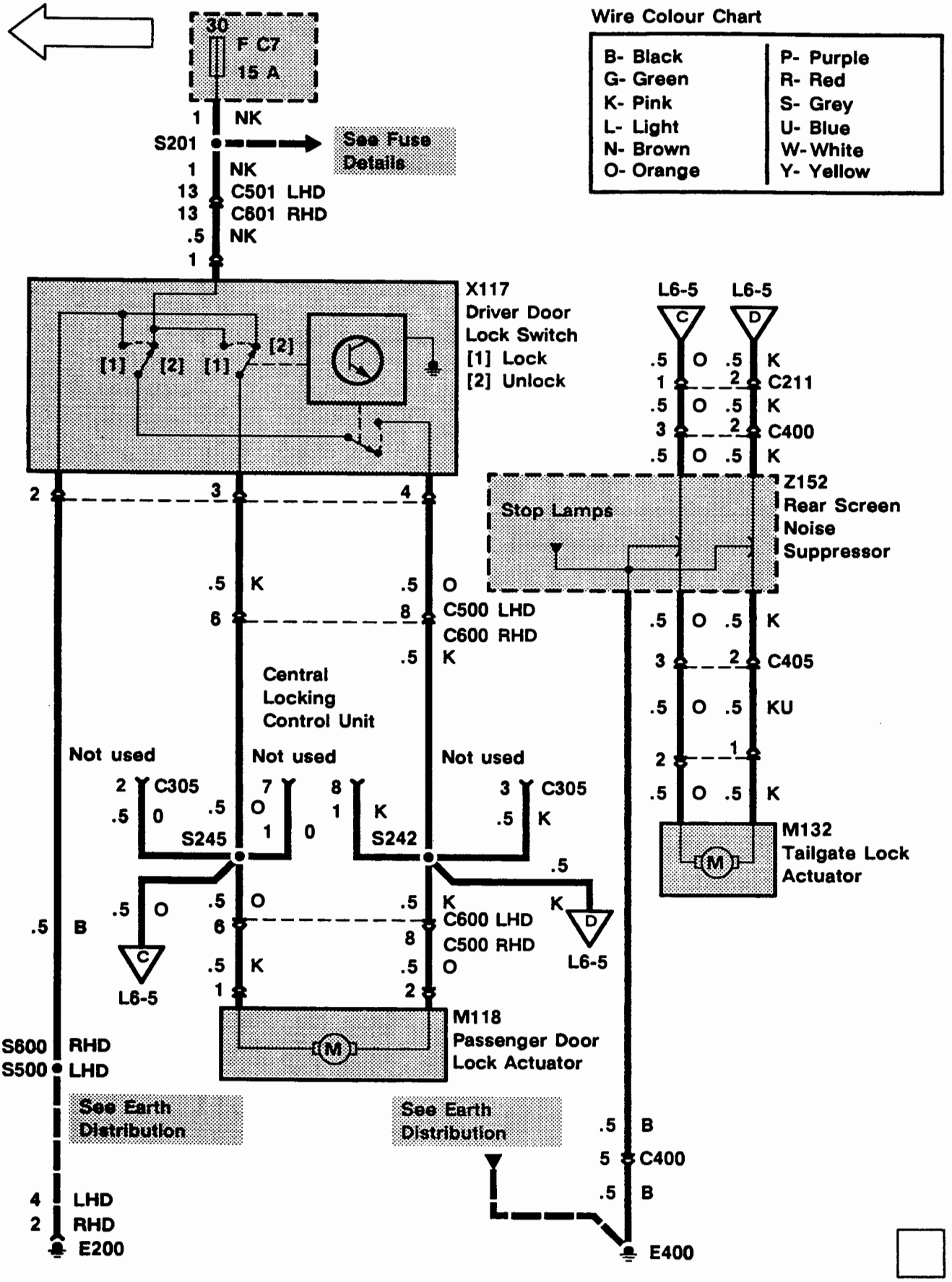
1992 RANGE ROVER




L6-3
A
1
O
S245
.5 O
6
8
C500 LHD
C600 RHD
.5 O .5 K
4
5
1 UO 1 GS
M114
Left Front
Door Lock
Actuator
1
K
L6-3
B
1 K
S242
.5 O
.5 K
8
6
C600 LHD
C500 RHD
.5 K .5 O
5
4
1 GS 1 UO
M122
Right Front
Door Lock
Actuator
.5 O .5 K
2
3
C305
.5 O .5 K
S326
S327
.5 O .5 K
2
1
C700
.5 O .5 K
5
2
1 O 1 K
M117
Left Rear Door
Lock Actuator
.5
O
.5 K
1
2
C211
.5 O .5 K
3
2
C400
.5 O .5 K
Stop Lamps
Z152
Rear Screen
Noise
Suppressor
.5 O .5 K
2
1
C800
.5 O .5 K
5
2
1 O 1 K
M125
Right Rear
Door Lock
Actuator
See Earth
Distribution
.5 B
.5 O .5 KO
3
2
C405
.5 O .5 KO
2
1
.5 O .5 K
M132
Tailgate Lock
Actuator
E400

L6 ETM

1992 RANGE ROVER



SYSTEM DIAGNOSIS

2 Door

1. If the Passenger Door Lock Actuator (M118) and Tailgate Lock Actuator (M132) do not lock or unlock, do Test H, the Driver Door Lock Switch (X117) test.
2. If the Passenger Door Lock Actuator (M118) does not operate but the Tailgate Lock Actuator (M132) works, do Test G.
3. If the Tailgate Lock Actuator (M132) does not work, do Test E.

4 Door

1. If no central locking functions work, do Test A, power and earth test
2. If a Front Door Lock Actuator (M114, M122) does not operate, do Test B.
3. If the doors relock or unlock themselves after operating the door locks, do Test C, door input short test.
4. If the central locking function does not operate from one of the front doors, do Test D, open door input test.
5. If both Rear Door Lock Actuators (M117, M125) do not operate, do Test F.
6. If the Tailgate Lock Actuator (M132) does not work, do Test E.

Fuel Flap

If the fuel flap does not release when operated, do Test I.

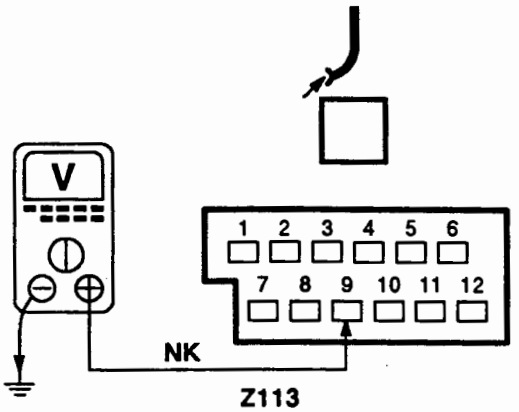
L6 ETM

Test A

1A

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
BAT VOLT



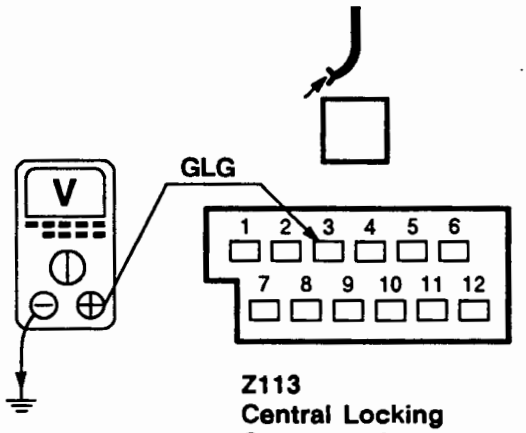
OK **PROBLEM CAUSE**
- F C7 Fuse
- NK Wire

OK → 2A

2A

CONDITIONS
- **Ignition Switch**
  Position: II

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- F 2 Fuse
- GLG Wire

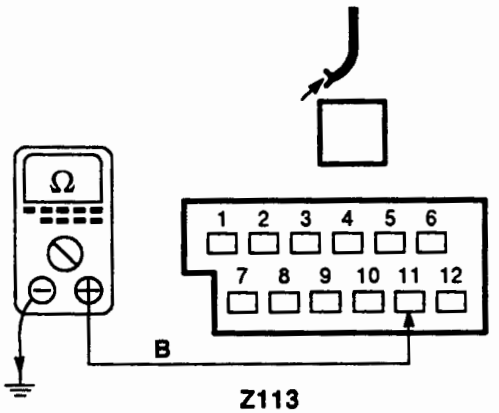
OK → 3A

2A

3A

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



Z113
Central Locking
Control Unit

OK **PROBLEM CAUSE**
- **B Wire**
- **E200**

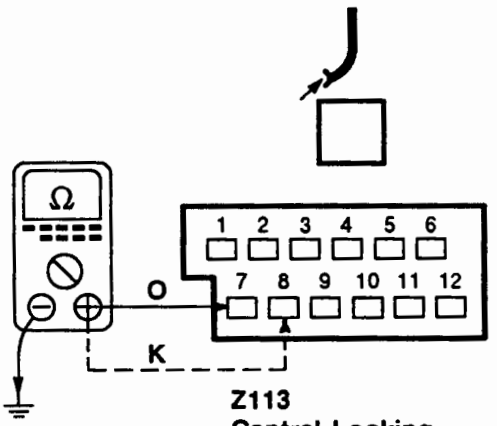
OK

4A

4A

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
More than 1000 ohms



Z113
Central Locking
Control Unit

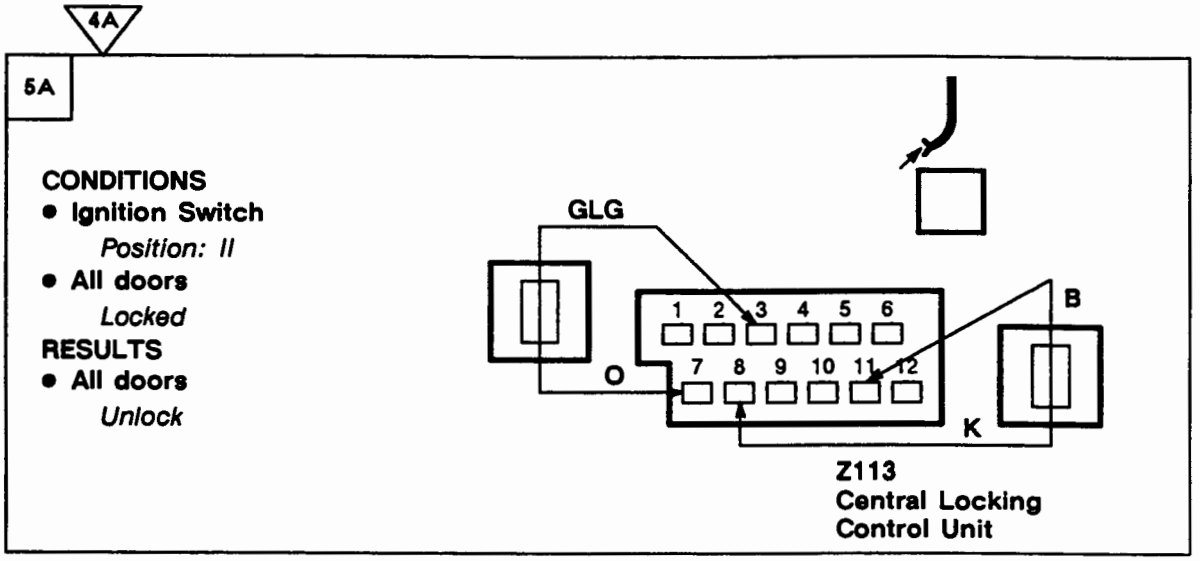
OK **PROBLEM CAUSE**
- **O Wire**
- **K Wire**

OK

5A

L6 ETM

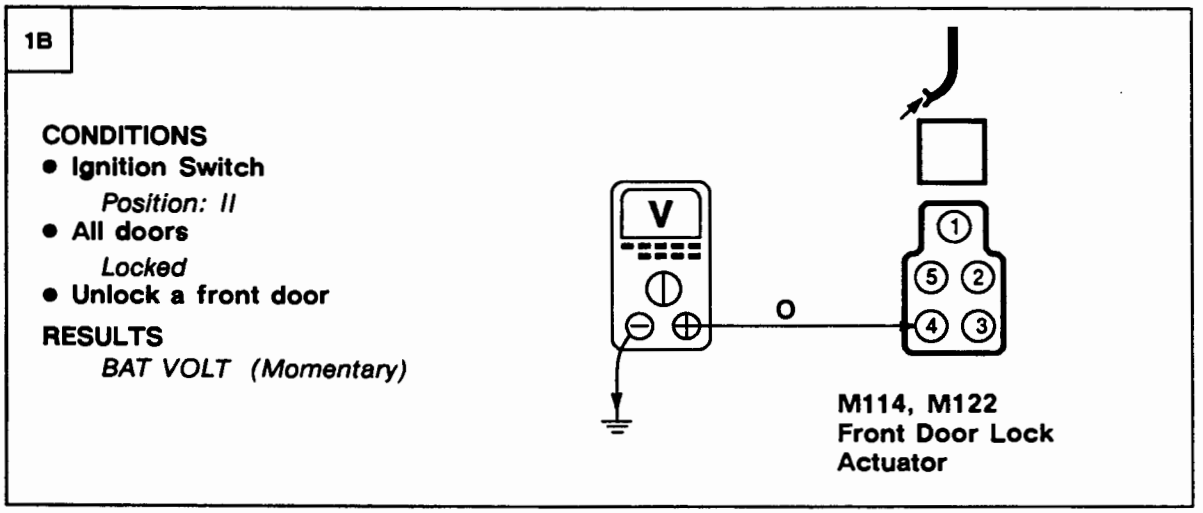
1992 RANGE ROVER



OK GO TO TEST B

OK PROBLEM CAUSE
- Central Locking Control Unit

Test B



OK PROBLEM CAUSE
- O Wire

OK

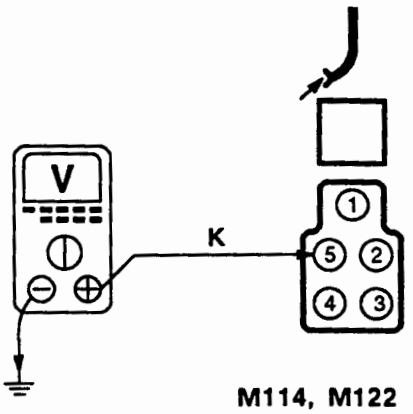
2B

1B

2B

CONDITIONS
- **Ignition Switch**
  Position: II
- **All doors**
  Unlocked
- **Lock a front door**

RESULTS
BAT VOLT (Momentary)



M114, M122 Front Door Lock Actuator

OK **PROBLEM CAUSE**
- K Wire

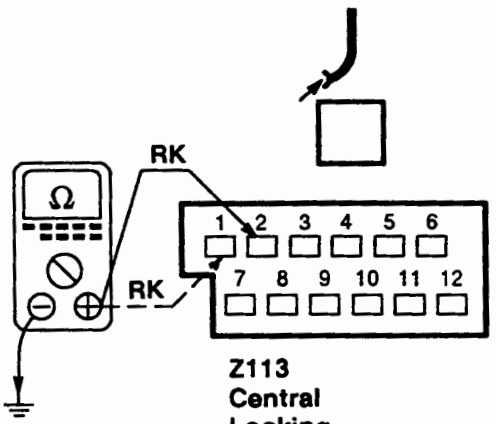
OK **PROBLEM CAUSE**
- M114, M122 Front Door Lock Actuator

Test C

1C

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked

RESULTS
More than 1000 ohms



Z113 Central Locking Control Unit

OK **PROBLEM CAUSE**
- RK Wire
- M114, M122 Front Door Lock Actuator

OK

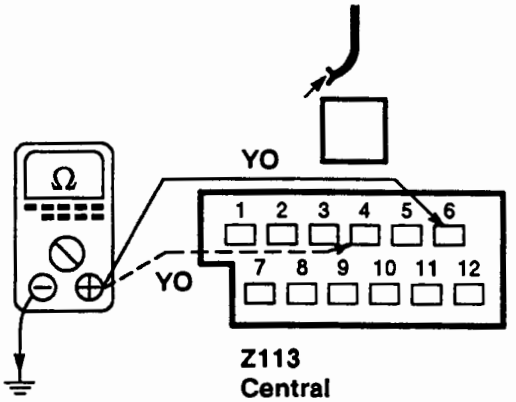
2C

1C

2C

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Locked

RESULTS
More than 1000 ohms



OK **PROBLEM CAUSE**
- YO Wire
- M114, M122 Front Door Lock Actuator

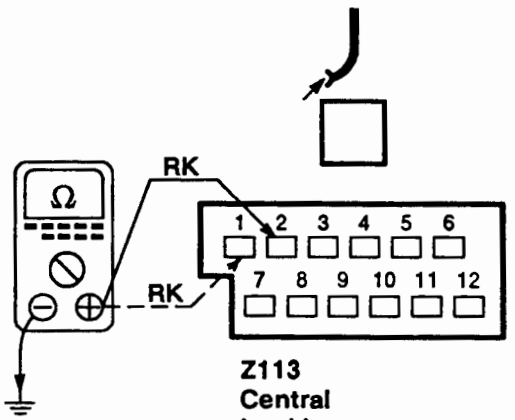
OK **PROBLEM CAUSE**
- Central Locking Control Unit

Test D

1D

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Locked

RESULTS
J738



OK **GO TO TEST 3D**

OK

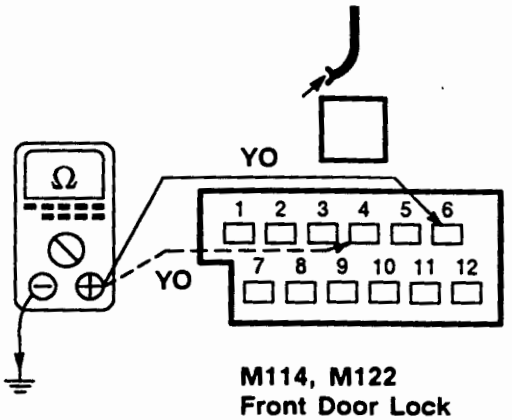
2D

1D

2D

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked

RESULTS
Less than 1 ohm



M114, M122
Front Door Lock Actuator

OK **GO TO TEST E**

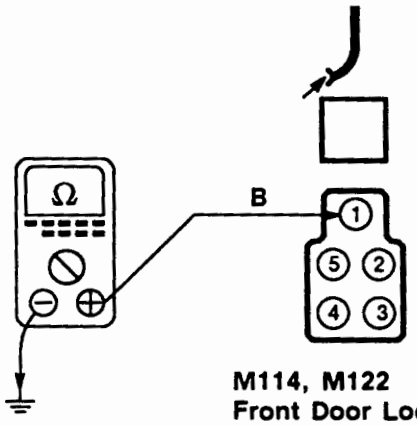
OK **PROBLEM CAUSE**
- **Central Locking Control Unit**

1D

3D

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



M114, M122
Front Door Lock Actuator

OK **PROBLEM CAUSE**
- **B Wire**
- **E200**

OK

4D

L6 ETM

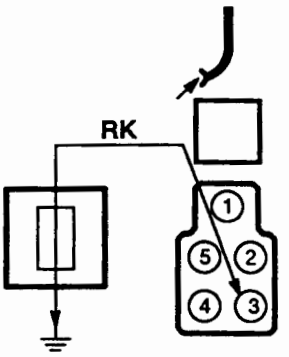
1992 RANGE ROVER

3D

4D

CONDITIONS
- **Ignition Switch**
  Position: II
- **All doors**
  Unlocked

RESULTS
- **All doors**
  Lock



M114, M122
Front Door Lock
Actuator

OK

PROBLEM CAUSE
- RK Wire
- Central Locking Control Unit

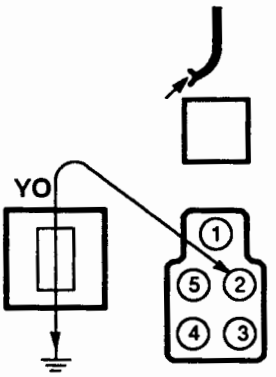
OK

5D

5D

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Locked

RESULTS
- **All doors**
  Unlock



M114, M122
Front Door Lock
Actuator

OK

PROBLEM CAUSE
- YO Wire
- Central Locking Control Unit

OK

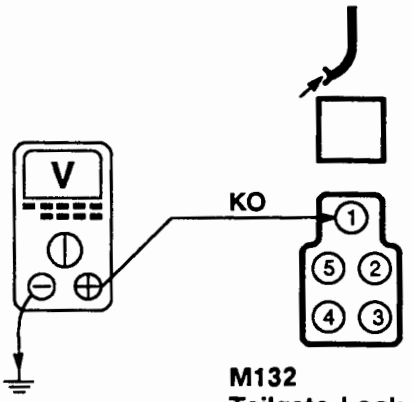
PROBLEM CAUSE
- M114, M122 Front Door Lock Actuator

Test E

1E

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked
- **Lock a front door**

RESULTS
BAT VOLT (Momentary)



M132
Tailgate Lock Actuator

OK **PROBLEM CAUSE**
- K Wire
- KO Wire
- Rear Screen Noise Suppressor

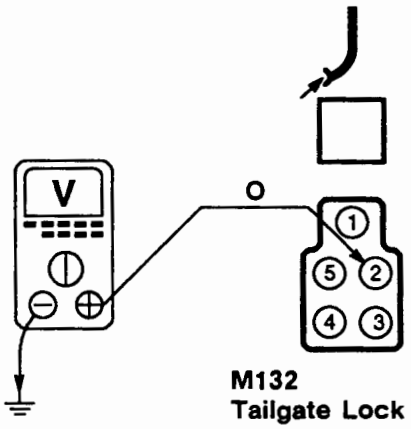
OK

2E

2E

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Locked
- **Unlock a front door**

RESULTS
BAT VOLT (Momentary)



M132
Tailgate Lock Actuator

OK **PROBLEM CAUSE**
- O Wire

OK **PROBLEM CAUSE**
- Tailgate Lock Actuator

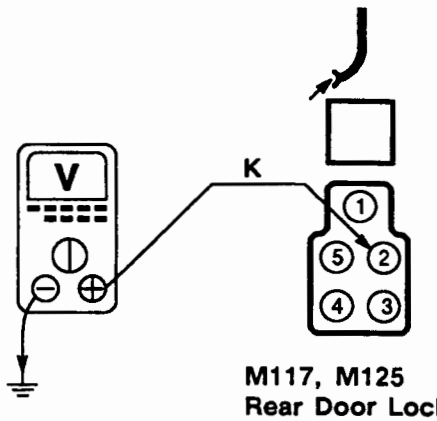
L6 ETM

Test F

1F

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked
- **Lock a front door**

RESULTS
BAT VOLT (Momentary)



M117, M125
Rear Door Lock
Actuator

OK **PROBLEM CAUSE**
- K Wire

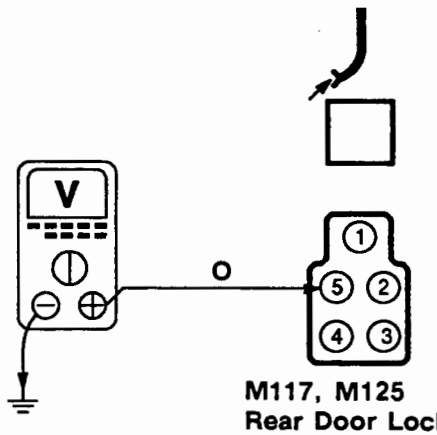
OK

2F

2F

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Locked
- **Unlock a front door**

RESULTS
BAT VOLT (Momentary)



M117, M125
Rear Door Lock
Actuator

OK **PROBLEM CAUSE**
- O Wire

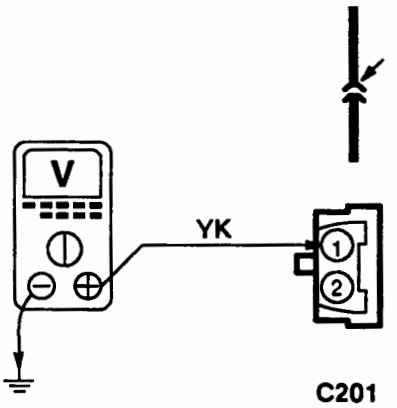
OK **PROBLEM CAUSE**
- M117, M125 Rear Door Lock Actuator

Test G

1G

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
BAT VOLT



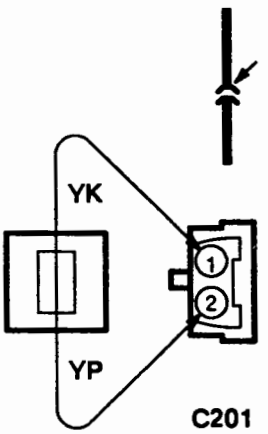
OK **PROBLEM CAUSE**
- F C6 Fuse
- YK Wire

OK → 2G

2G

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
- **Fuel flap**
  Released



OK → 3G

OK **PROBLEM CAUSE**
- Fuel Flap Release Switch

L6 ETM

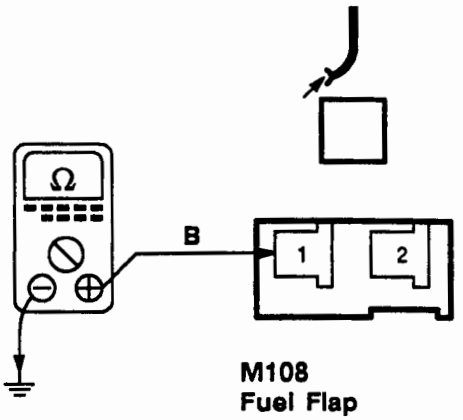
1992 RANGE ROVER

2G

3G

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
Less than 1 ohm



M108
Fuel Flap
Actuator

OK **PROBLEM CAUSE**
- **B Wire**
- **E402**

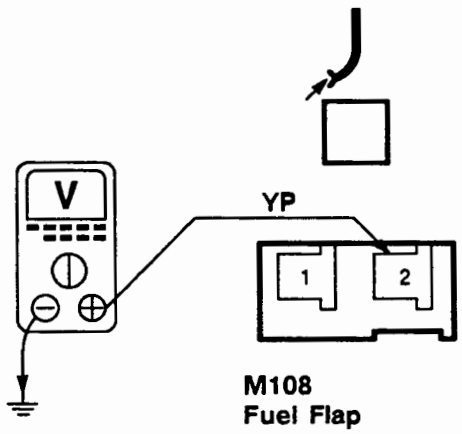
OK

4G

4G

CONDITIONS
- **Ignition Switch**
  Position: 0
- **Fuel Flap Release Switch**
  Depressed

RESULTS
BAT VOLT



M108
Fuel Flap
Actuator

OK **PROBLEM CAUSE**
- **YP Wire**

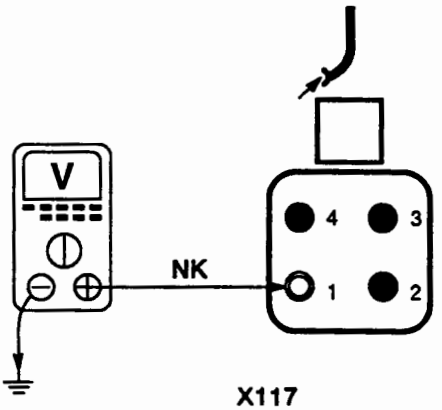
OK **PROBLEM CAUSE**
- **Fuel Flap Actuator**

Test H

1H

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
BAT VOLT



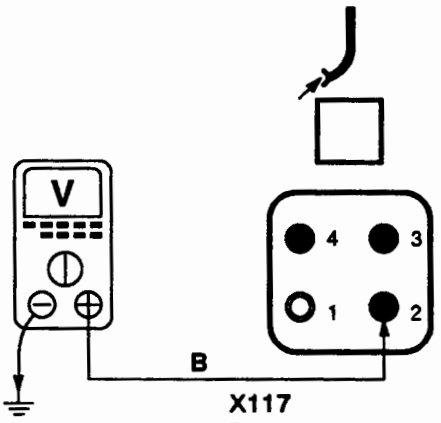
OK **PROBLEM CAUSE**
- F C7 Fuse
- NK Wire

OK → 2H

2H

CONDITIONS
- **Ignition Switch**
  Position: 0

RESULTS
BAT VOLT



OK **PROBLEM CAUSE**
- B Wire
- E200

OK → 3H

L6 ETM

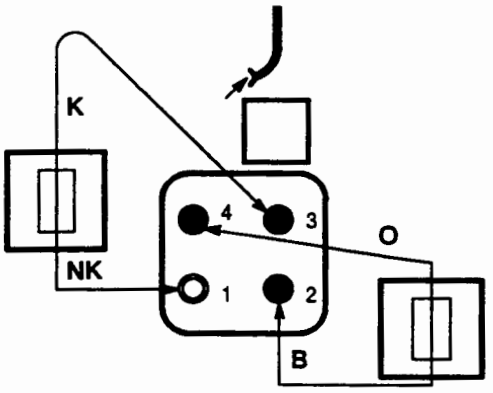
1992 RANGE ROVER

2H

3H

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked

RESULTS
- **All doors**
  Lock



X117
Driver Door
Lock Switch

OK

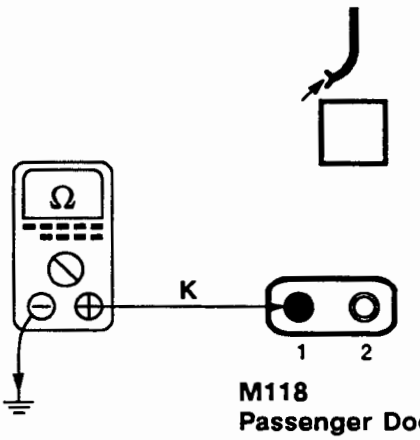
OK **PROBLEM CAUSE**
- **Driver Door Lock Switch**

4H

4H

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked

RESULTS
Less than 1 ohm



M118
Passenger Door
Lock Actuator

OK **PROBLEM CAUSE**
- **K Wire**

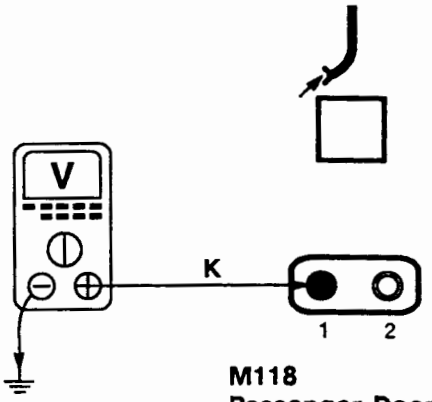
OK **PROBLEM CAUSE**
- **K Wire**

Test I

1I

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Unlocked
- **Lock driver's door**

RESULTS
BAT VOLT (Momentary)



M118
Passenger Door
Lock Actuator

OK **PROBLEM CAUSE**
- K Wire

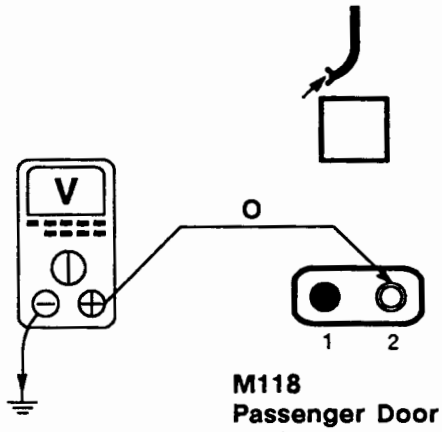
OK

2I

2I

CONDITIONS
- **Ignition Switch**
  Position: 0
- **All doors**
  Locked
- **Unlock driver's door**

RESULTS
BAT VOLT (Momentary)



M118
Passenger Door
Lock Actuator

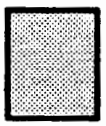
OK **PROBLEM CAUSE**
- O Wire

OK **PROBLEM CAUSE**
- Passenger Door Lock Actuator

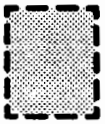
KEY INFORMATION

CIRCUIT DIAGRAMS

- Circuit diagrams are arranged so that current flow is from the top of the diagram (current source) to the bottom of the diagram (earth).
- 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.

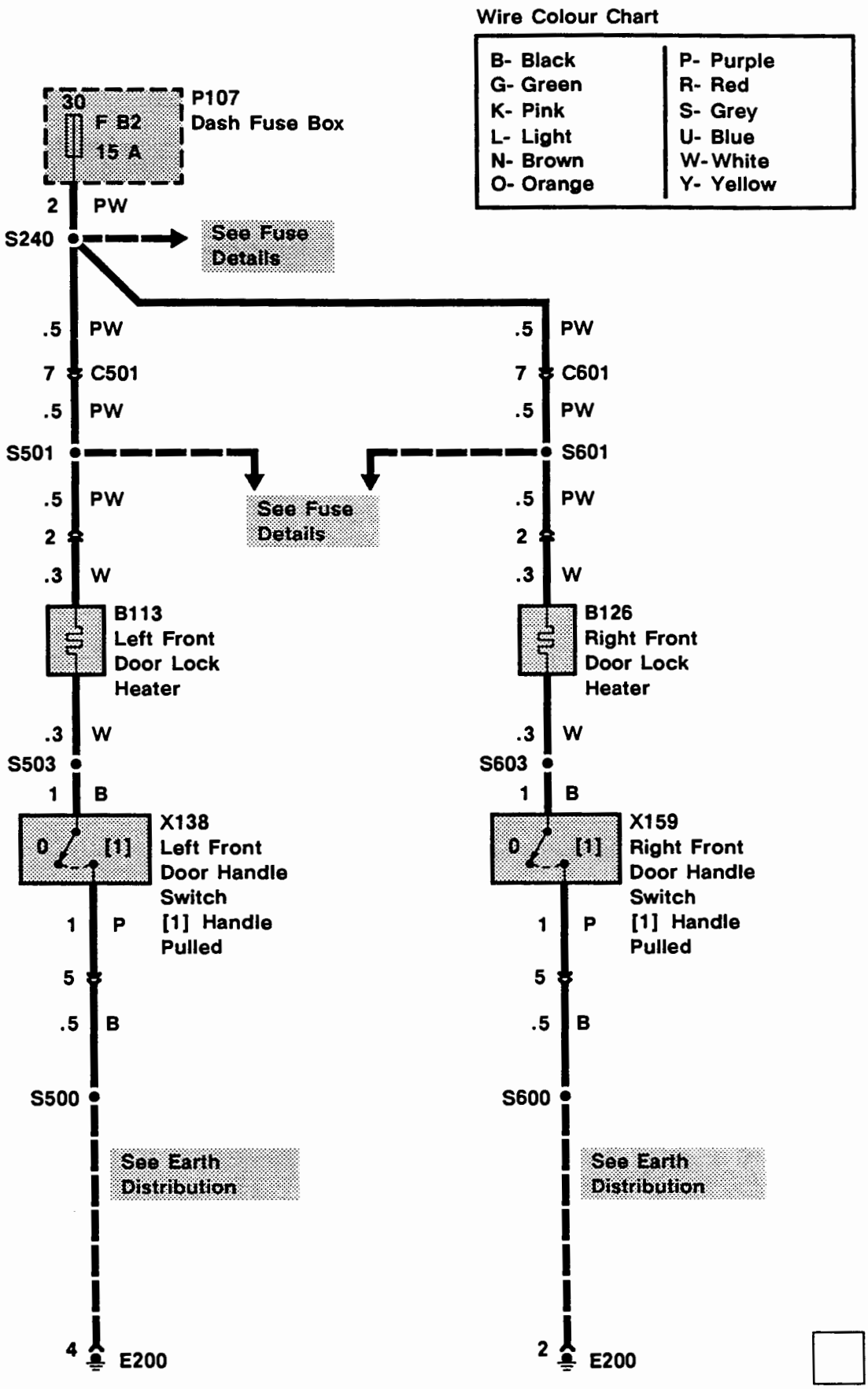
Component is disconnected. Backprobe harness connector

Component is connected. Backprobe harness connector

Component is disconnected. Probe component

Component is disconnected. Probe harness connector

Probe in-line connector


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
30
F B2
15 A
P107
Dash Fuse Box
2 PW
S240
See Fuse Details
.5 PW
7 C501
.5 PW
S501
.5 PW
2
.3 W
B113
Left Front
Door Lock
Heater
.3 W
S503
1 B
0 [1]
X138
Left Front
Door Handle
Switch
1 P
[1] Handle
Pulled
5
.5 B
S500
See Earth Distribution
4 E200
.5 PW
7 C601
.5 PW
S601
See Fuse Details
.5 PW
2
.3 W
B126
Right Front
Door Lock
Heater
.3 W
S603
1 B
0 [1]
X159
Right Front
Door Handle
Switch
1 P
[1] Handle
Pulled
5
.5 B
S600
See Earth Distribution
2 E200

KEY INFORMATION

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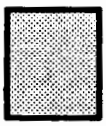
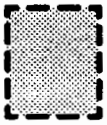


Entire component



Part of a component

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Component is connected. Backprobe harness connector

Component is disconnected. Probe component

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Probe in-line connector