Vehicle: Diagram Information and Instructions

How to Find Wiring Diagrams

NOTE: Wiring Diagrams are classified by OE as belonging to one of three categories.

These Three OE Categories Are::

1 - Standard Equipment
2 - Engine Specific
3 - System Specific and Optional Equipment (Common Systems)

ALLDATA Presents These Three Categories As Follows:

Standard Equipment
This category includes equipment such as Instrument Cluster and Gauges, Headlights/Tail Lights/Turn Signals, Rear Window Defroster, Wipers and Washers, etc..

Standard equipment is found on all vehicles regardless of which engine or optional equipment is installed.

The Standard Equipment diagrams can be found at Power and Ground Distribution diagrams, or via a component name on the **Master Diagram Index** at the vehicle level diagrams.

Engine Specific
This category includes components and systems circuits such as Starting and Charging Systems, Engine Controls, Ignition System, Fuel Injection System, etc., which are unique to a specific engine.

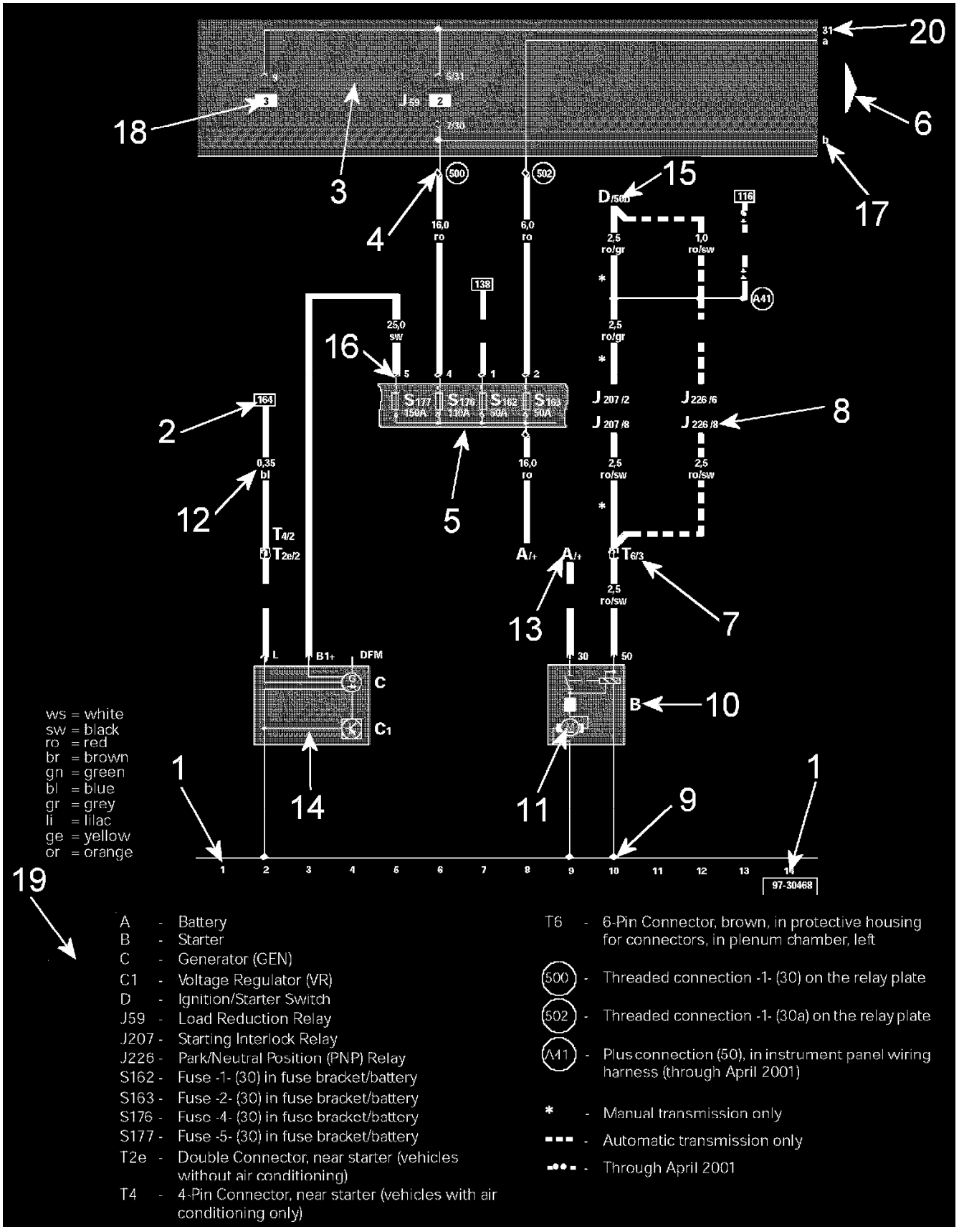
The Engine Specific diagrams can be found at Powertrain Management diagrams, or via a component name on the **Master Diagram Index** at the vehicle level diagrams.

System Specific and Optional Equipment
This category includes equipment such as Air Bag Systems, Anti-lock Brake System, Heated Seats, HVAC System, Comfort System, etc.. and provides circuit details for those systems and components.

The System Specific and Optional Equipment diagrams can be found at the specific ALLDATA System/SubSystem that they are most closely related to, or via a component name on the **Master Diagram Index** at the vehicle level diagrams.

Master Diagram Index
See: Electrical Diagrams/Master Diagram Index

How to Read Track Diagrams



Wiring Diagram Layout

1 - Track Numbers

Imaginary grid lines extending from the numbers on the bottom of the diagram toward the top of the diagram. These imaginary grid lines are used for identifying wire/circuit locations on diagrams.

2 - Reference of wire/circuit continuation to another diagram

Number in frame indicates track where the wire/circuit is continued. For example, the reference in **this** diagram is to track 164, which is on another diagram. In the **other** diagram showing track 164, the number in the frame for the same wire/circuit will change to the number 2, as that is the track number for where the wire/circuit came from on **this** diagram.

3 - Relay Panel - Indicated by grey area.

4 - Diagram of threaded pin on relay panel
White circle shows a detachable connection.

5 - Fuse designation
Use legend at bottom of page to identify the fuse code.

6 - Arrow
Indicates wiring circuit is continued on the previous and/or next diagram.

7 - Wire connection designation in wiring harness
Location of wire connections are indicated in the legend.

8 - Terminal designation
Designation which appears on actual component and/or terminal number of a multi-point connector. For example: J226/8 = PNP Relay/terminal #8.

9 - Ground connection

10 - Component designation
Use legend at bottom of page to identify the component.

11 - Component symbols

12 - Wire cross-section size (in mm sq.) and wire colors

13 - Component symbol with open drawing side
Indicated component is continued on another wiring diagram.

14 - Internal connections (thin lines)
These connections are not wires. Internal connections are current carrying and are listed to allow tracing of current flow inside components and wiring harness.

15 - Reference of continuation of wire to component
For example: D/50b = Ignition/Starter Switch/terminal 50b.

16 - Relay panel connectors
Shows wiring of multi-point or single connectors on relay panel.

17 - Reference of internal connection continuation
Letters indicate where connection continues on the previous and/or next diagram.

18 - Relay location number
Indicates the physical location of the relay (by position number) on the relay panel. (For an actual relay panel image/view, see the component location for the relay in question.)

19 - Legend

The legend contains the explanations for all of the designation codes used within the diagram. In all wiring diagrams the same component designation (code) is used for a particular component. For example, always "A" for the battery.

20 - Power/Ground Distribution Circuit Identification Following are the most common numbered/lettered circuits:

Terminal (circuit) 1
Ignition distributor low voltage (typically used as an Engine Speed (RPM) signal for the tachometer)

Terminal (circuit) 15
Switch Battery Positive Voltage (B+) from ignition/starter switch

Terminal (circuit) 30
Battery Positive voltage (B+), hot at all times

Terminal (circuit) 31
Ground (GND)

Terminal (circuit) 50
Starter control; switched B+ from ignition/starter switch

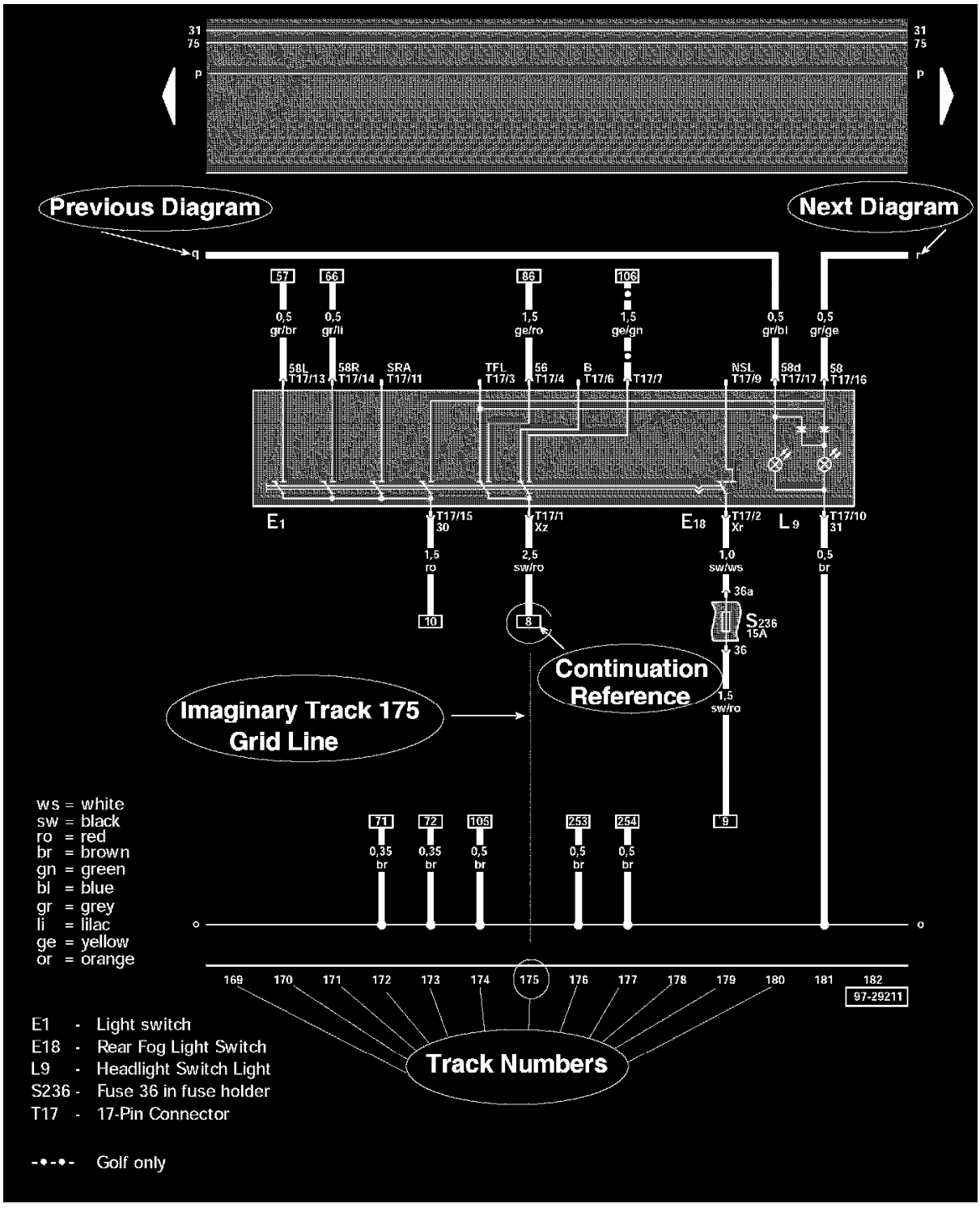
Terminal (circuit) 56
Switched headlight B+ from light switch

Terminal (circuit) 58
Switched parking light, taillight. illumination B+ from light switch

Terminal (circuit) S (SU)
Key in ignition circuit; switched B+ from ignition/starter switch

Terminal (circuit) X
Load reduction circuit; switched B+ from load reduction relay

How to Use Track Diagrams



WHAT ARE TRACKS?

Tracks are navigational aids, like the grid lines on a map, but they are invisible on the diagrams. They are only identified by numbers at the bottom of the diagram.

The diagram wires/circuits are laid out over these imaginary vertical lines, and each diagram is identified by the range of tracks it is laid over, not by the diagram's contents (i.e. Track 1-14, Track 15-28, and so on).

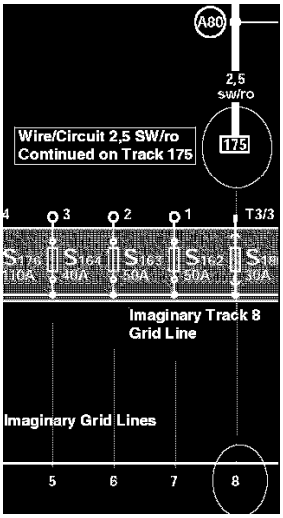
HOW DO THE WIRES/CIRCUITS WORK WITH THE TRACKS?

Wires/Circuits that do not originate/terminate on the same diagram will have a notation of where they are coming from/going to at either end.

Wires/Circuits entering/leaving the diagram in a horizontal direction will pick up again on the previous/next diagram in the series.

However, wires/circuits traveling the diagram in a vertical direction are following the tracks, and when they enter/leave a diagram they could be skipping numerous diagrams in the series before picking up again on the destination diagram. When these wires/circuits enter or leave a diagram, the track number of the diagram they came from/go to will be shown within a continuation reference frame/box.

HOW DO I NAVIGATE THE DIAGRAMS VIA THE TRACK NUMBERS?

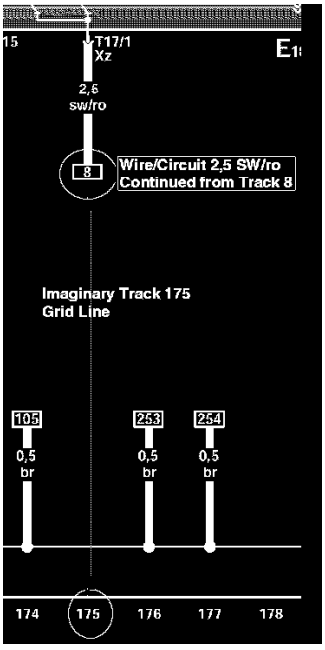


Track 1-14

Assume you are tracing the wire/circuit identified by its size and color as **2,5 sw/ro** on the diagram named Track 1-14.

This wire/circuit is running on track 8 of the diagram and terminates at the box labeled 175. To continue tracing this wire/circuit, you must now go to Track 175, which is located within the diagram named Track 169-182.

But before going to the diagram named Track 169-182, again make note of the current track that you are leaving, which is Track 8.



Track 169-182

After arriving at the diagram named Track 169-182, locate track 175 at the bottom of the diagram.

Follow the imaginary track 175 grid line toward the top of the diagram looking for a box labeled 8 (the track you are coming from).

When you locate the box labeled 8, you have picked up the continuation of wire/circuit **2,5 sw/ro** and can continue to trace it until it terminates at either a component or at yet another continuation reference box.

NOTE: It is equally important that you always know the track that you are coming from as well as the one you are going to.

Circuit and Terminal Designations

Several wiring circuits in the vehicle's electrical system are identified with a number or letter designation. These circuits are identified the same in all wiring diagrams and are most commonly shown near the top of each page in the fuse/relay panel portion of the wiring diagram. The circuit designations may also be used to identify switch connector terminals (switch circuits). Following are the most common numbered/lettered circuits:

Terminal (circuit) 1
Ignition distributor low voltage (typically used as an Engine Speed (RPM) signal for the tachometer)

Terminal (circuit) 15
Switch Battery Positive Voltage (B+) from ignition/starter switch

Terminal (circuit) 30
Battery Positive voltage (B+), hot at all times

Terminal (circuit) 31
Ground (GND)

Terminal (circuit) 50
Starter control; switched B+ from ignition/starter switch

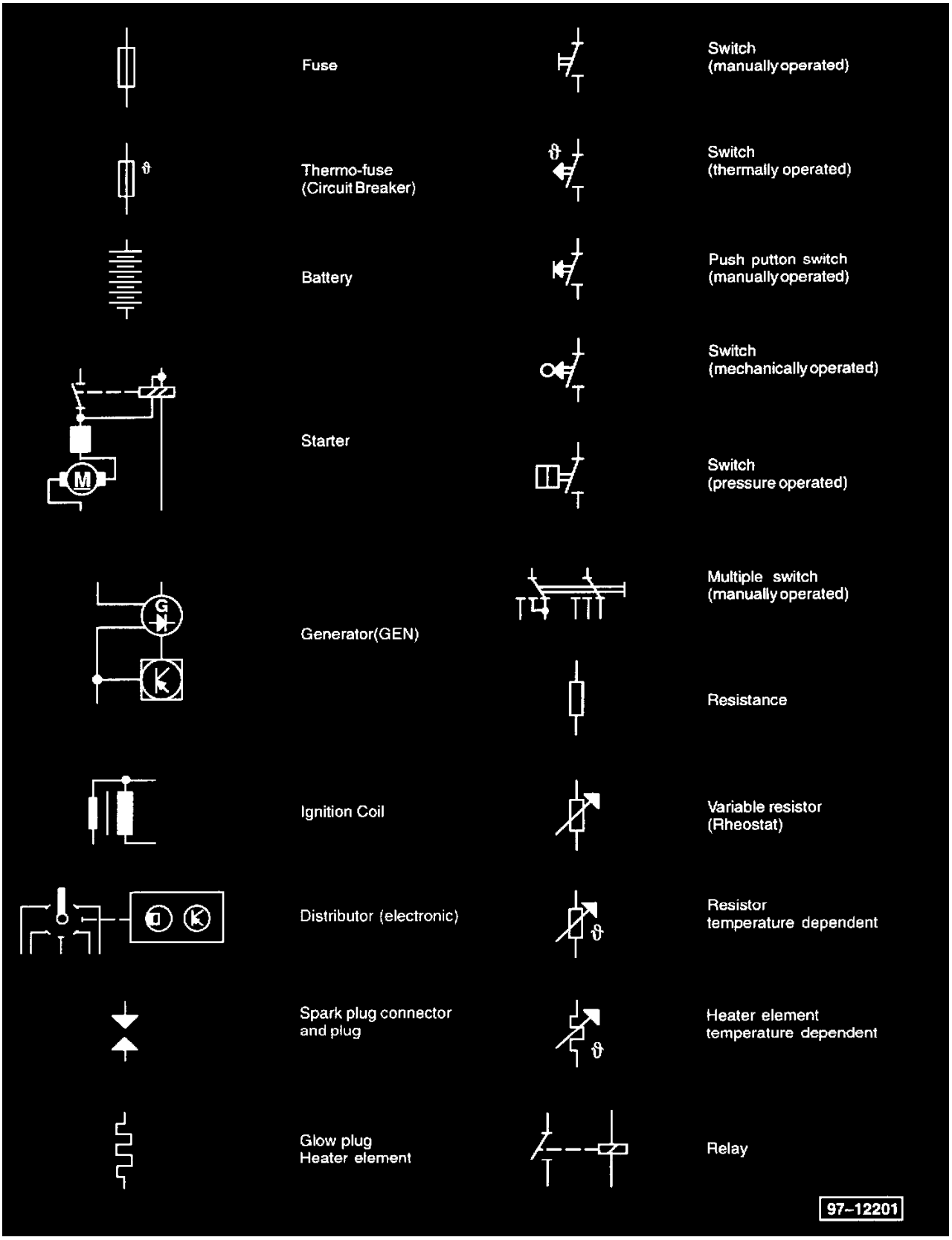
Terminal (circuit) 56
Switched headlight B+ from light switch

Terminal (circuit) 58
Switched parking light, taillight. illumination B+ from light switch

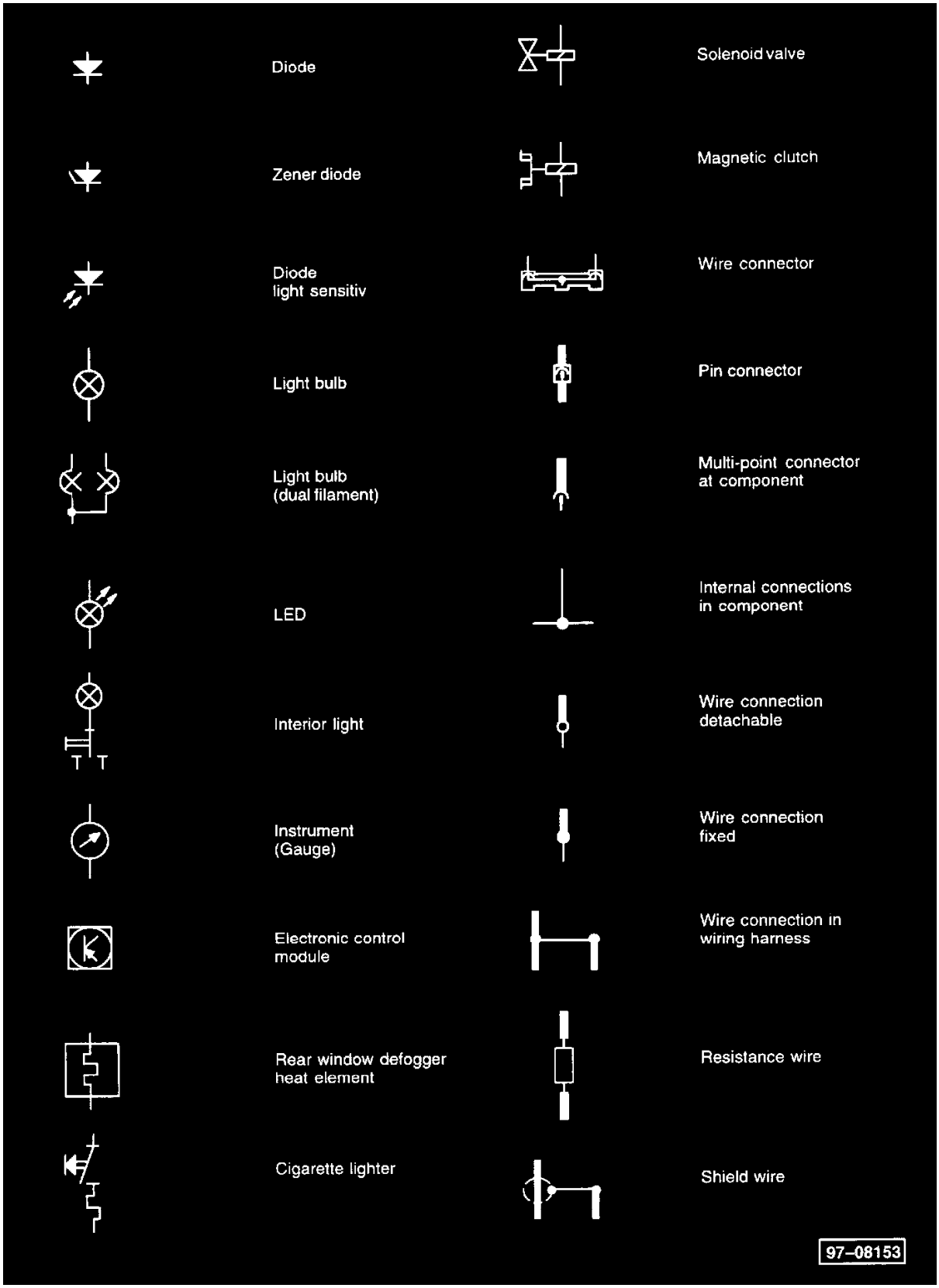
Terminal (circuit) S (SU)
Key in ignition circuit; switched B+ from ignition/starter switch

Terminal (circuit) X
Load reduction circuit; switched B+ from load reduction relay

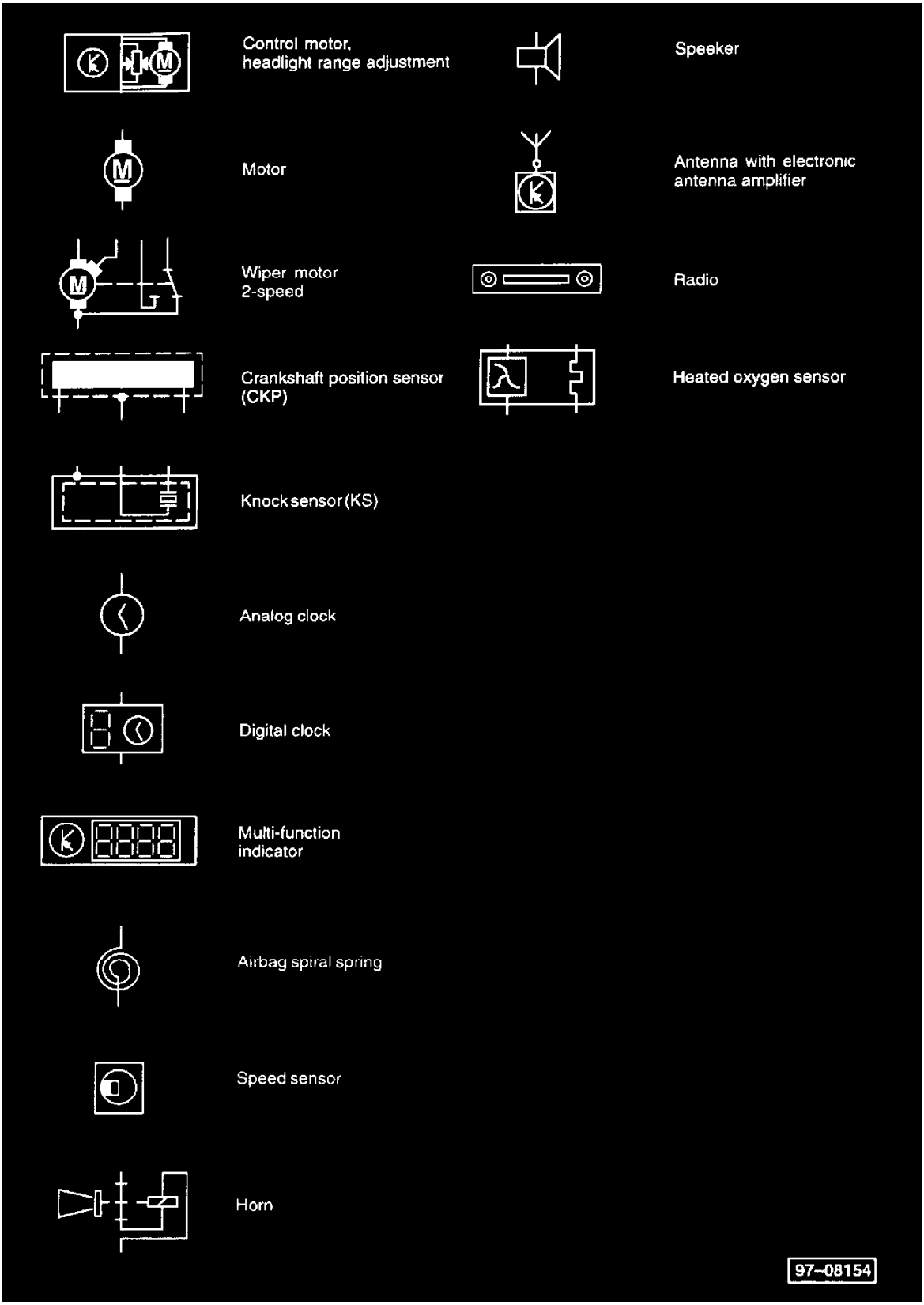
Symbols Used In Wiring Diagrams


Fuse
Thermo-fuse
(Circuit Breaker)
Battery
Starter
Generator(GEN)
Ignition Coil
Distributor (electronic)
Spark plug connector
and plug
Glow plug
Heater element
Switch
(manually operated)
Switch
(thermally operated)
Push putton switch
(manually operated)
Switch
(mechanically operated)
Switch
(pressure operated)
Multiple switch
(manually operated)
Resistance
Variable resistor
(Rheostat)
Resistor
temperature dependent
Heater element
temperature dependent
Relay
97-12201

Part 1


Diode
Zener diode
Diode
light sensitiv
Light bulb
Light bulb
(dual filament)
LED
Interior light
Instrument
(Gauge)
Electronic control
module
Rear window defogger
heat element
Cigarette lighter
Solenoid valve
Magnetic clutch
Wire connector
Pin connector
Multi-point connector
at component
Internal connections
in component
Wire connection
detachable
Wire connection
fixed
Wire connection in
wiring harness
Resistance wire
Shield wire
97-08153

Part 2



Part 3

Wire and Fuse Color Code Identification

Wire Color Code Identification

ws = white
sw = black
ro = red
br = brown
gn = green
bl = blue
gr = grey
li = violet
ge = yellow

or = orange

Fuse Colors:

30 A - Green
25 A - White
20 A - Yellow
15 A - Blue
10 A - Red
7,5 A - Brown
5 A - Beige
3 A - Violet

Wire Size Conversion

Wire Size Conversion Chart

Wiring Diagrams identify wires by the metric wire size. Metric wire sizes indicate cross-sectional area in square millimeter (mm sq.). The chart below lists metric wire sizes and their equivalents in American Wire Gauge (AWG) sizes.

Metric size Cross-section (mm^2)	American Wire Gauge size (AWG)
0.35	22
0.50	20
0.75	18
1.00	16
1.50	14
2.50	12
4.00	10
6.00	8
16.00	4
25.00	2
35.00	2