Wiring diagram layout

31
30

Relay panel
Indicated by grey area.

(500)

10,0
ro

WIRING COLOR CODE	
ws =	white
sw =	black
ro =	red
br =	brown
gn =	green
bl =	blue
gr =	grey
li =	lilac
ge =	yellow

D/50

2,5
ro/sw

T10a/1

100

0,5
bl

16,0
ro

1   **2**

T4e/2

S162 **S163**
110A **80A**

T4e/1

Consumer circuit with wire routing
All switches and contacs are shown in the "off" position.

25,0
sw

D+   **B**   **+**   **30**   **50**

C   **A**   **B**

C1

Vehicle ground
Numbers in circle indicate location on vehicle (see legend).

25,0   **25,0**

2   **1**

1 **2** **3** **4** **5** **6** **7** **8**

Current track number
Makes it easier to find the connections.

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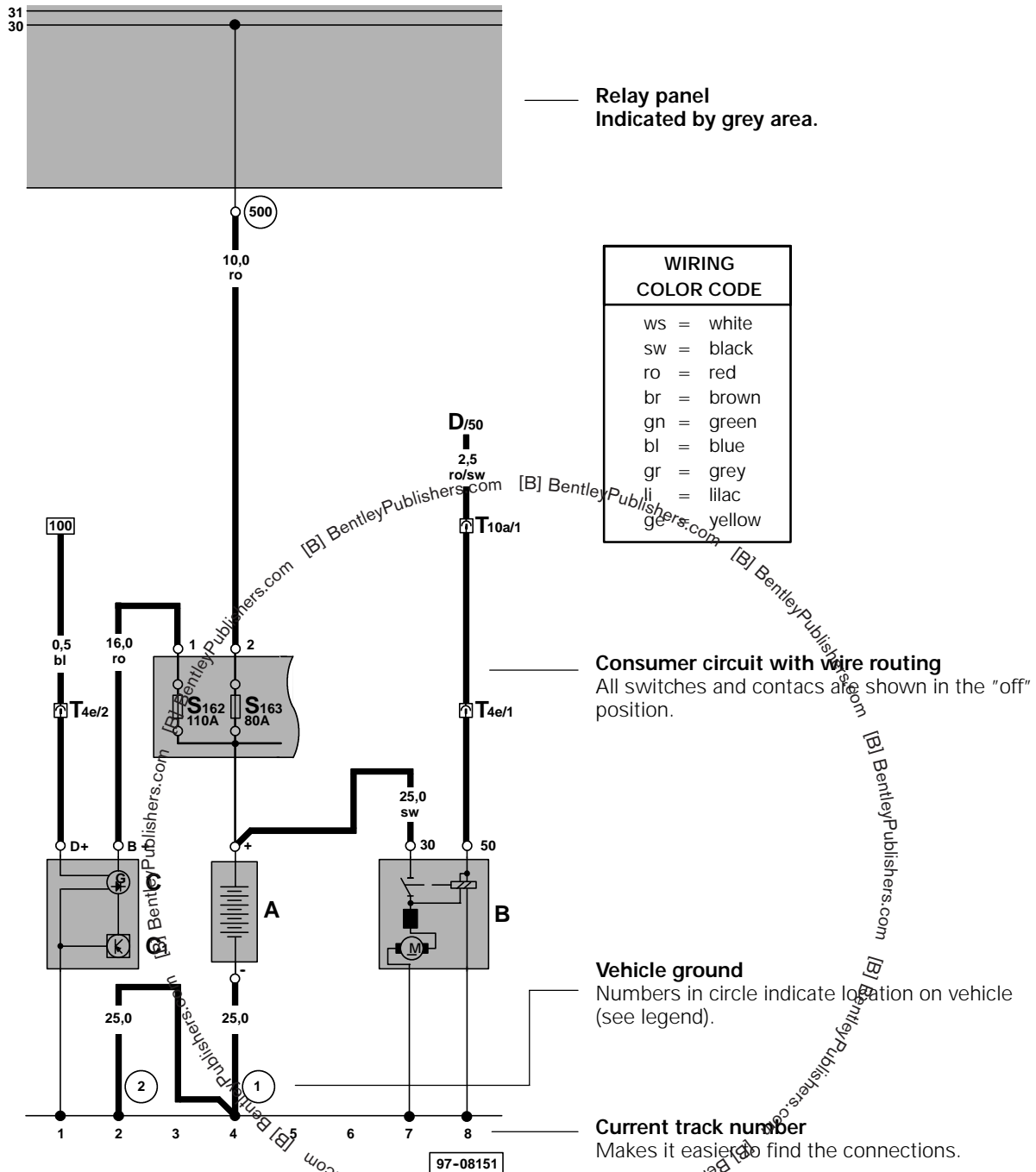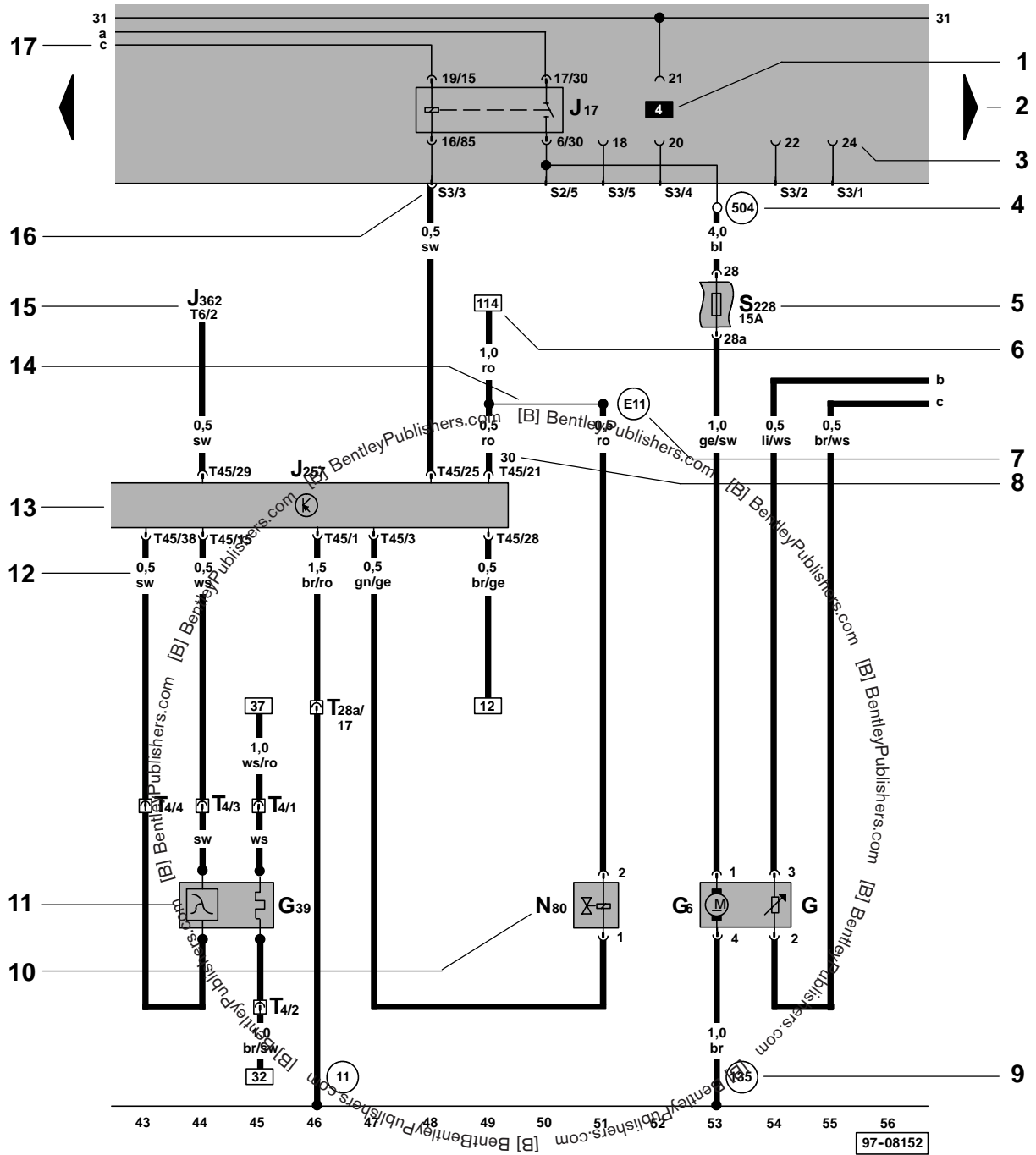
A   -   Battery
B   -   Starter
C   -   Generator (GEN)
C1   -   Voltage Regulator (VR)
D   -   Ignition/Starter Switch
S162 -   Fuse -1- (30) in fuse bracket / battery
S163 -   Fuse -2- (30) in fuse bracket / battery
T4e -   4-Pin Connector, on transmission
T10a -   10-Pin Connector, on protective housing for control module, in engine compartment, left

1   -   Ground strap, battery to body

2   -   Ground strap, transmission to body

500 -   Screw connection -1- (30), on relay panel
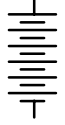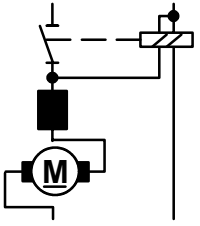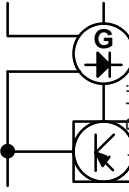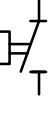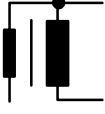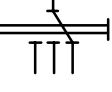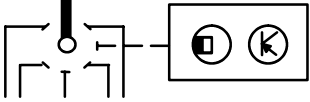
Legend
In all wiring diagrams the same component designation (code) is used for a particular component; for example, always A for battery.

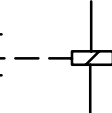|			
17			**1**
			2
	J₁₇		**3**
16			**4**
15	J₃₆₂ T6/2		**5**
14		114	**6**
		E11	S₂₂₈ 15A
13	J₂₅₇		**7**
12			**8**
11	G₃₉		
10		N₈₀	G₆ G
			9

31
a
c

19/15   17/30   21   4
16/85   6/30   18   20   22   24
S3/3   S2/5   S3/5   S3/4   S3/2   S3/1
504

0,5 sw   4,0 bl

28

1,0 ro   28a

0,5 sw   0,5 ro   0,5 ro   1,0 ge/sw   0,5 li/ws   0,5 br/ws   b   c

T45/29   T45/25   30 T45/21

T45/38   T45/13   T45/1   T45/3   T45/28

0,5 sw   0,5 ws   1,5 br/ro   0,5 gn/ge   0,5 br/ge

37   T28a/ 17   12

1,0 ws/ro

T4/4   T4/3   T4/1
sw   ws

T4/2
br/sw
32

1,0 br

11   N35

43 44 45 46 47 48 49 50 51 52 53 54 55 56

97-08152
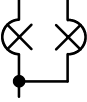
1 - Relay location number
Indicates location on relay panel.

2 - Arrow
Indicates wiring circuit is continued on the previous and/or next page.

3 - Connection designation - relay control module on relay panel
Shows the individual terminals in a multi-point connector.
For example: contact 24 on terminal **4** on relay panel.

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

5 - Fuse designation
For example: S228 = Fuse number 28, 15 amps, in fuse holder

6 - Reference of wire continuation (current track number)
Number in frame indicates current track where wire is continued.

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.

9 - Ground connection designation in wire harness
Locations of ground connections are indicated in legend.

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

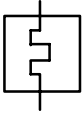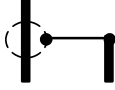**11 - Component symbols (see page IV - VI)**

12 - Wire cross section size (in mm^2) and wire colors
Abbreviations are explaining in color chart beside the wiring diagram.

13 - Component symbol with open drawing side
Indicated component is continued on another wiring diagram. The number of corresponding
wiring diagram can taken from list of contents.

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: Control module for anti-theft immobilizer J362 on 6-Pin Connector, terminal 2

16 - Relay panel connectors
Shows wiring of multi-point or single connectors on relay panel
For example: S3/3 = Multi-point connector S3, terminal 3

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

Symbols used in wiring diagrams

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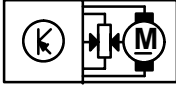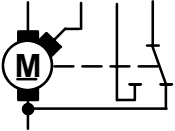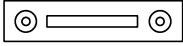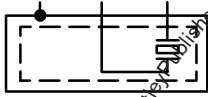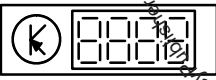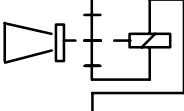
97–12201

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

97-08153

Symbols used in wiring diagrams

Symbol	Description	Symbol	Description
	Control motor, headlight range adjustment		Speeker
	Motor		Antenna with electronic antenna amplifier
	Wiper motor 2-speed		Radio
	Crankshaft position sensor (CKP)		Heated oxygen sensor
	Knock sensor (KS)		
	Analog clock		
	Digital clock		
	Multi-function indicator		
	Airbag spiral spring		
	Speed sensor		
	Horn		

Starting with the reported problem, troubleshooting procedures show step-by-step **what** is checked and **how** it is checked in order to find the problem in the quickest and most reliable way. If several causes (of a problem) are possible in one system, a test procedure is used for diagnosis.

Structure of a Test step:

What is checked **(assumed problem)**	
How is it checked	
Test results	

Cause of problem/repair instructions	To next test
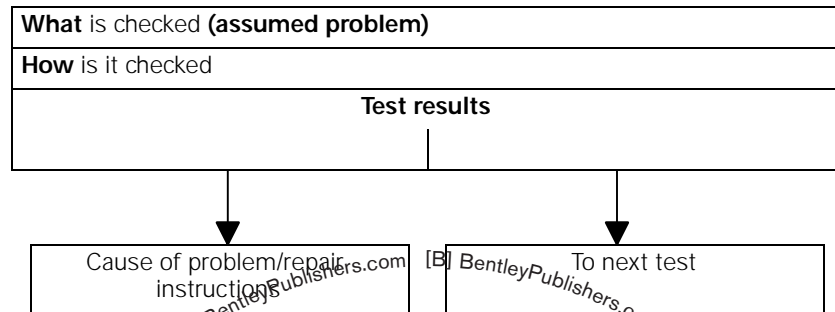
Example of a troubleshooting procedure:

Open circuit in relay panel between connector terminals A4 and D2	
- Connect terminal D2 of multi-point connector to ground using Connector Test Kit VW 1594	
Warning lamp lights	Warning lamp does not light

Replace relay panel	To next test