### **Current Flow Diagram**

No. 1/1

## 6.0 I/309 kW - Motronic, engine code BAN

• Radiator fan

From May 2002

#### Notes:

For information concerning

- Relay and fuse assignment
- Multi-pin connectors
- Control units and relays
- Earth connections
- → Overview of Fitting Locations!

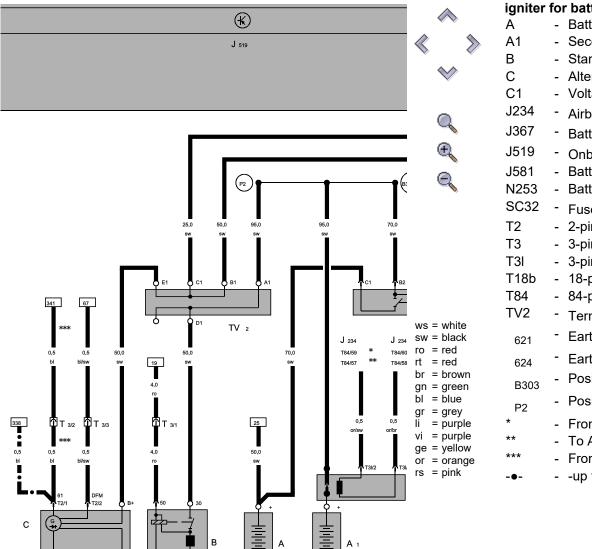
For information concerning

- ♦ Fault Finding Programs
- → Guided Fault Finding

Edition 02.2007

No. 1/2

#### Phaeton **Current Flow Diagram**



#### Battery, alternator, starter, relay for battery parallel circuit, igniter for battery isolator

- Battery

- Second battery

- Starter - Alternator

- Voltage regulator

Airbag control unit

Battery monitor control unit Onboard supply control unit

Battery parallel circuit relay

Battery isolation igniter

Fuse 32 on fuse holder C

- 2-pin connector - 3-pin connector - 3-pin connector - 18-pin connector

- 84-pin connector

- Terminal 30 wiring junction

Earth point next to onboard supply battery

Earth point, next to starter battery

- Positive connection 7 (30), in main wiring harness

- Positive connection (30), in battery wiring harness

- From May 2005

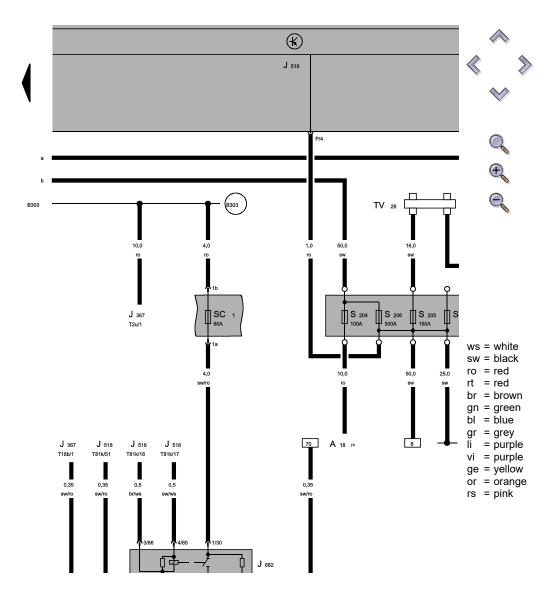
- To April 2005

- From August 2002

- -up to July 2002

#### **Current Flow Diagram**

No. 1/3



#### Terminal 50 voltage supply relay, fuse S204, S205, S206, S207, SC1

- Windscreen heater voltage transformer A18

J367 Battery monitor control unit

J518 Entry and start authorisation control unit

J519 Onboard supply control unit

J682 Terminal 50 voltage supply relay

S204 Fuse 1 (30)

S205 - Fuse 2 (30) 💩

S206 Fuse 3 (30)

S207 - Fuse 4 (30) 🔯

SC1 - Fuse 1 on fuse holder C

T2u - 2-pin connector T18b - 18-pin connector

T81k 81-pin connector

TV28 Terminal 30 wiring junction 3

Positive connection 3 (30), in main wiring harness

B299 Positive connection 6 (30), in main wiring harness

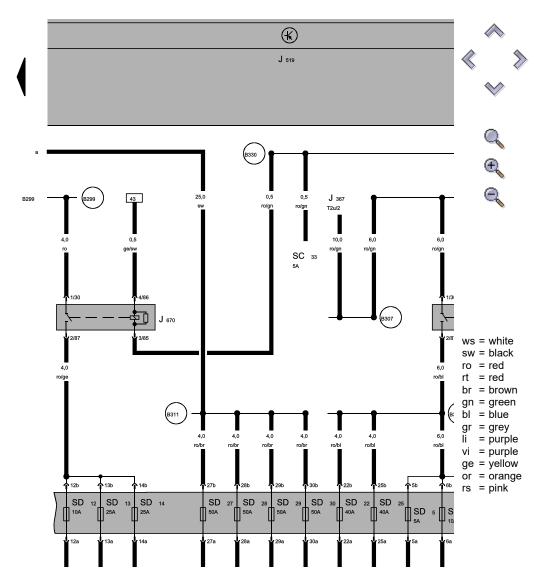
B302 - Positive connection 7 (30), in main wiring harness

B303

- Connection (terminal 50 diagnosis), in main wiring B660 harness

#### **Current Flow Diagram**

## No. 1/4



# Current supply relay for Motronic, current supply relay 2 for Motronic, fuses

J271 - Motronic current supply relay

J367 - Battery monitor control unit

J519 - Onboard supply control unit

J670 - Motronic current supply relay 2 🔕

SC33 - Fuse 33 on fuse holder C

SD5 - Fuse 5 on fuse holder D

SD6 - Fuse 6 on fuse holder D

SD7 - Fuse 7 on fuse holder D

SD10 - Fuse 10 on fuse holder D

SD12 - Fuse 12 on fuse holder D

SD12 - Fuse 12 on fuse holder D

SD13 - Fuse 13 on fuse holder D

SD14 - Fuse 14 on fuse holder D

SD22 - Fuse 22 on fuse holder D

SD25 - Fuse 25 on fuse holder D

SD27 - Fuse 27 on fuse holder D

SD28 - Fuse 28 on fuse holder D

SD29 - Fuse 29 on fuse holder D

SD30 - Fuse 30 on fuse holder D

T2u - 2-pin connector

<sub>B299</sub> - Positive connection 3 (30), in main wiring harness

B307 - Positive connection 11 (30), in main wiring harness

B308 - Positive connection 12 (30), in main wiring harness

B311 - Positive connection 15 (30), in main wiring harness

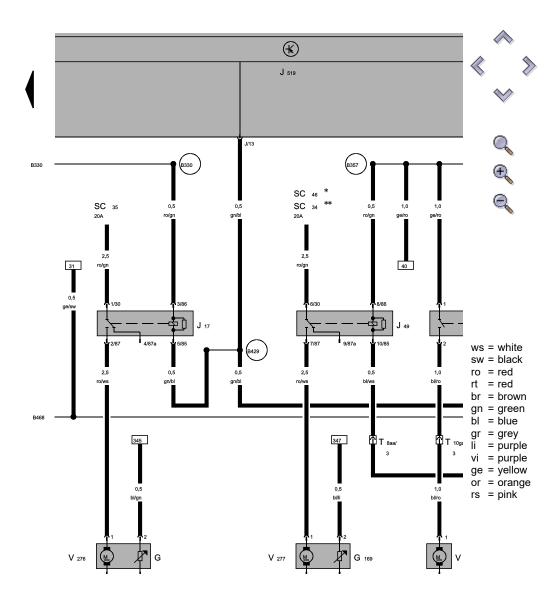
B330 - Connection 16 (30a), in main wiring harness

B352 - Connection 3 (87a), in main wiring harness

B468 - Connection 4, in main wiring harness

#### **Current Flow Diagram**

No. 1/5



Fuel pump relay, relay for electric fuel pump 2, relay for additional coolant pump, fuel gauge sender, fuel gauge sender 2, fuel pumps

G - Fuel gauge senderG169 - Fuel gauge sender 2

G169 - Fuel gauge sender 2 J17 - Fuel pump relay

J49 - Electric fuel pump 2 relay 🔕

J496 - Additional coolant pump relay

J519 - Onboard supply control unit 🔕

SC34 - Fuse 34 on fuse holder C 🔕

SC35 - Fuse 35 on fuse holder C

SC46 - Fuse 46 on fuse holder C

T8aa - 8-pin connector, black, coupling point 3/engine prewiring

harness

T10ga - 10-pin connector, black, coupling point 1/gearbox

V51 - Continued coolant circulation pump

V276 - Fuel pump 1

V277 - Fuel pump 2

- Earth connection 11, in main wiring harness

623 - Earth point 2 for earth plate

B330 - Connection 16 (30a), in main wiring harness

B357 - Connection 8 (87a), in main wiring harness

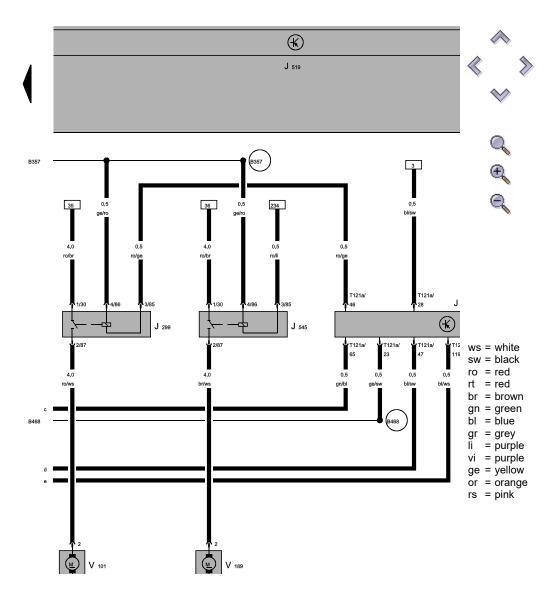
B429 - Connection (EFPR), in main wiring harness

\* - From November 2003

\*\* - To October 2003

#### **Current Flow Diagram**

No. 1/6



Engine control unit, relay for secondary air pump, relay for secondary air pump 2, motor for secondary air pump, motor for secondary air pump 2

J299 - Secondary air pump relay

J519 - Onboard supply control unit

J527 - Steering column electronics control unit

J545 - Secondary air pump 2 relay

J623 - Engine control unit

T16f - 16-pin connector

T17c - 17-pin connector, on left under dash panel

T121a - 121-pin connector

V101 - Secondary air pump motor

V189 - Secondary air pump motor 2

- Earth connection 33, in main wiring harness

- Earth point 3, on left in engine compartment

 $_{\mbox{\footnotesize B357}}$  - Connection 8 (87a), in main wiring harness

B441 - Connection (CCS), in main wiring harness

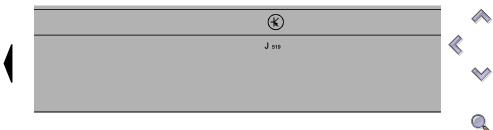
 $_{\rm B468}~$  - Connection 4, in main wiring harness

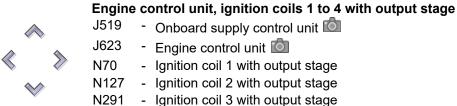
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## Phaeton

### **Current Flow Diagram**

No. 1/7



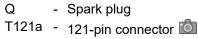








N292



- Earth connection 2, in engine compartment wiring harness 131

- Earth connection 3, in engine compartment wiring harness 132

- Earth point, on right of cylinder head 🔕 600

Onboard supply control unit

- Ignition coil 1 with output stage

- Ignition coil 2 with output stage

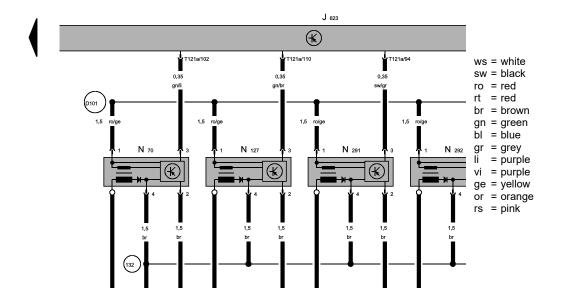
- Ignition coil 3 with output stage

- Ignition coil 4 with output stage

Engine control unit

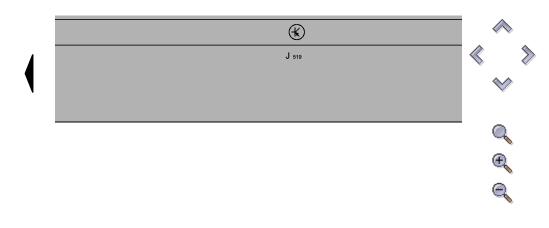
- Spark plug connector

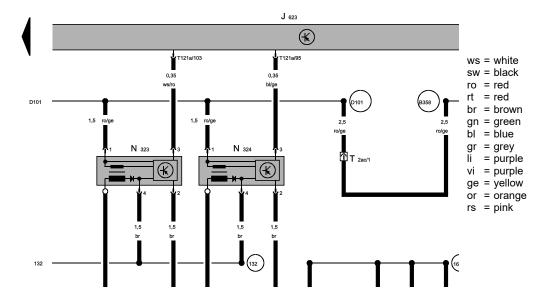
- Connection 1, in engine compartment wiring harness D101



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## Phaeton Current Flow Diagram No. 1 / 8





#### Engine control unit, ignition coil 5 and 6 with output stage

l519 - Onboard supply control unit 쳽

J623 - Engine control unit

N323 - Ignition coil 5 with output stage N324 - Ignition coil 6 with output stage

P - Spark plug connector

Q - Spark plug

T2ac - 2-pin connector, black, coupling point 1/engine prewiring harness

T121a - 121-pin connector

- Earth connection 2, in engine compartment wiring harness

- Earth connection 3, in engine compartment wiring harness

- Earth connection 4, in engine compartment wiring harness

649 - Earth point 5, on bulkhead 🔕

 $_{\rm B358}~$  - Connection 9 (87a), in main wiring harness

D<sub>101</sub> - Connection 1, in engine compartment wiring harness

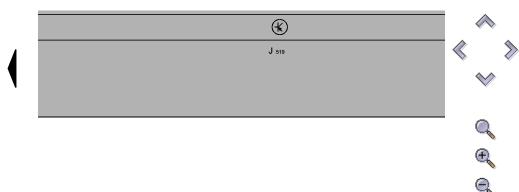
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## Phaeton

SD 10A

### **Current Flow Diagram**

No. 1/9



J 623

N 32



br = brown gn = green bl = blue gr = grey li = purple vi = purple ge = yellow or = orange

rs = pink

#### Engine control unit, injectors for cylinders 1 to 6, fuse SD1

J519 - Onboard supply control unit 🔕

J623 - Engine control unit

N30 - Injector, cylinder 1

N31 - Injector, cylinder 2

N32 - Injector, cylinder 3

N33 - Injector, cylinder 4

N83 - Injector, cylinder 5

N84 - Injector, cylinder 6

SD1 - Fuse 1 on fuse holder D

T8aa - 8-pin connector, black, coupling point 3/engine prewiring

harness

T121a - 121-pin connector

B358 - Connection 9 (87a), in main wiring harness

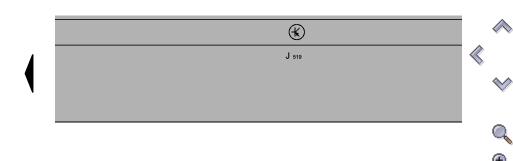
- Connection (injectors), in engine compartment wiring harness

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## Phaeton

### **Current Flow Diagram**

No. 1/10



#### Engine control unit, knock sensor 1, knock sensor 2

G61 - Knock sensor 1 G66 - Knock sensor 2

G83 - Radiator outlet coolant temperature sender

J519 - Onboard supply control unit 🔕

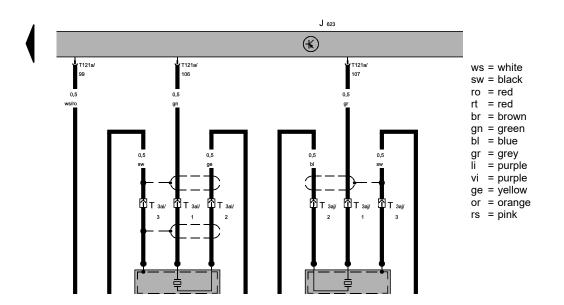
J623 - Engine control unit

T3ai - 3-pin connector T3aj - 3-pin connector

T121a - 121-pin connector 🔕

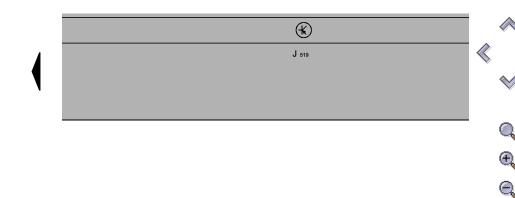
- Earth connection (sender earth), in Motronic wiring

harness



#### **Current Flow Diagram**

No. 1/11



Engine control unit, thermostat for map controlled engine cooling, secondary air inlet valve, right solenoid valve for electrohydraulic engine mounting, valves for camshaft adjustment N80 F265

- Map-controlled engine cooling system thermostat

J519 Onboard supply control unit

J623 Engine control unit

N80 - Activated charcoal filter system solenoid valve 1

N112 - Secondary air inlet valve

N145 - Right electrohydraulic engine mounting solenoid valve

- Camshaft control valve 1 N205

N318 - Exhaust camshaft control valve 1

- 2-pin connector, on rear of engine T2t

T8aa - 8-pin connector, black, coupling point 3/engine prewiring

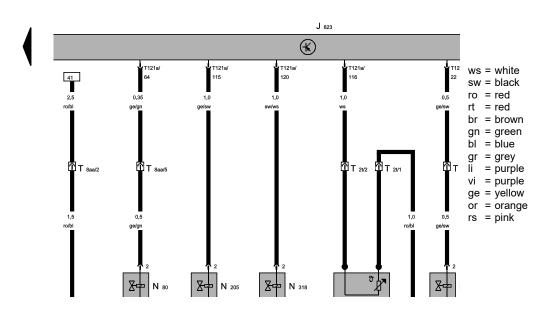
harness

T10ga - 10-pin connector, black, coupling point 1/gearbox

T10gb - 10-pin connector, black, coupling point 2/gearbox

T121a - 121-pin connector

- Connection (87a), in engine wiring harness

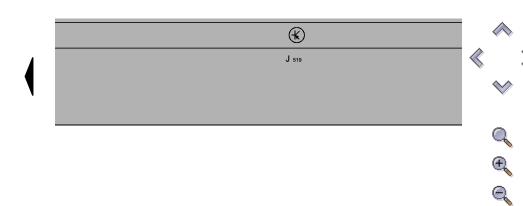


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## Phaeton

#### **Current Flow Diagram**

No. 1/12



# Engine control unit, throttle valve control module, Lambda probe

G39 - Lambda probe

G186 - Throttle valve drive for electric throttle

G187 - Throttle valve drive angle sender 1 for electric throttle

G188 - Throttle valve drive angle sender 2 for electric throttle

J338 - Throttle valve module

J519 - Onboard supply control unit 🔕

J623 - Engine control unit

T6au - 6-pin connector

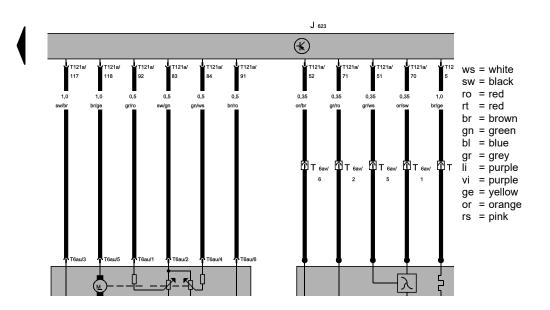
T6av - 6-pin connector, black, coupling point 1/before plenum

chamber in engine compartment

T121a - 121-pin connector

Z19 - Lambda probe heater

<sub>B353</sub> - Connection 4 (87a), in main wiring harness



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## Phaeton

### **Current Flow Diagram**

No. 1/13









# Engine control unit, Lambda probe after catalytic converter, Lambda probe 2

G108 - Lambda probe 2

G130 - Lambda probe after catalytic converter

J519 - Onboard supply control unit 🔕

J623 - Engine control unit

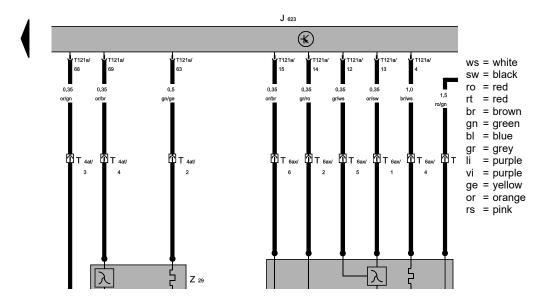
T4at - 4-pin connector, black, coupling point 3/before plenum chamber in engine compartment

T6ax - 6-pin connector, green, coupling point 2/before plenum chamber in engine compartment

T121a - 121-pin connector

Z28 - Lambda probe heater 2

Z29 - Lambda probe 1 heater after catalytic converter



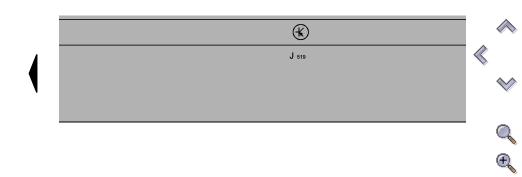
WI-XML

## Phaeton

#### **Current Flow Diagram**

No. 1/14

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Engine control unit, kickdown switch, intake air temperature sender, Lambda probe 2 after catalytic converter, air mass meter 2

F8 - Kickdown switch

G42 - Intake air temperature sender

G70 - Air mass meter

G131 - Lambda probe 2 after catalytic converter

J519 - Onboard supply control unit 🔕

J623 - Engine control unit

T4av - 4-pin connector, green, coupling point 4/before plenum

chamber in engine compartment

T5ab - 5-pin connector

T121a - 121-pin connector

Z30 - Lambda probe 2 heater after catalytic converter

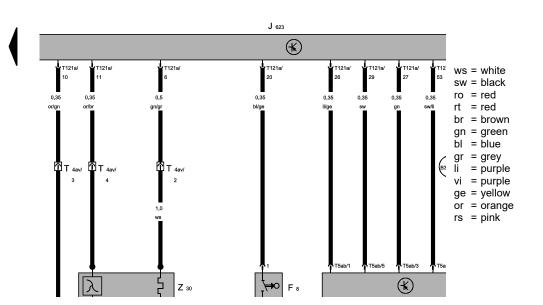
- Earth connection 6, in main wiring harness

- Earth connection 7, in main wiring harness

639 - Earth point, left A-pillar

 $_{\mbox{\footnotesize B353}}$  - Connection 4 (87a), in main wiring harness

<sub>B356</sub> - Connection 7 (87a), in main wiring harness



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## Phaeton

### **Current Flow Diagram**

No. 1 / 15



Hall sender 3. engine speed sender - Engine speed sender G28

G40 - Hall sender

- Coolant temperature sender G62

G300 - Hall sender 3

J519 Onboard supply control unit

J623 Engine control unit

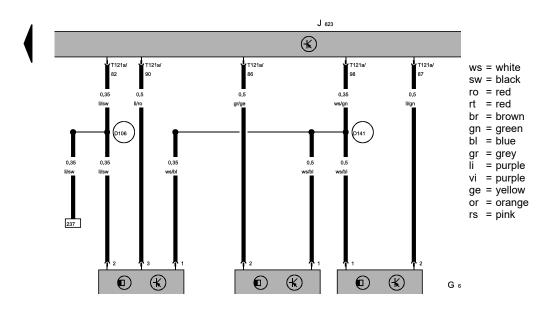
T121a - 121-pin connector

- Earth connection (sender earth), in engine wiring harness 220

- Connection 4, in engine compartment wiring harness D106

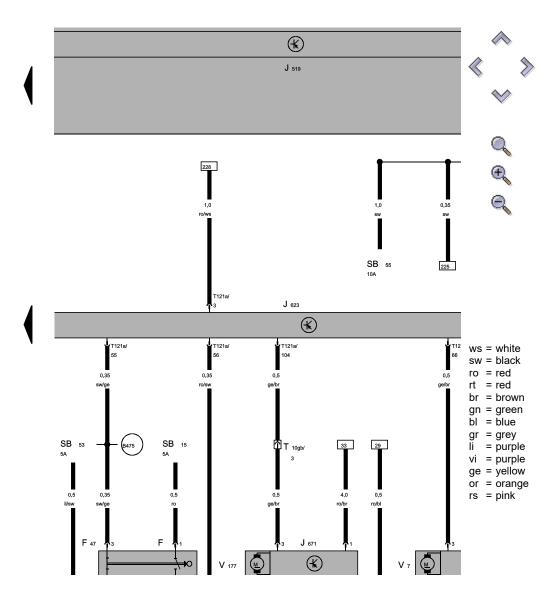
Engine control unit, Hall sender, coolant temperature sender,

- Connection (5V) in engine prewiring harness D141



#### **Current Flow Diagram**

No. 1/16



Engine control unit, brake light switch, brake pedal switch, control unit for radiator fan, control unit 2 for radiator fan, radiator fan

- Brake light switch

- Brake pedal switch F47

- Radiator fan control unit J293

J519 Onboard supply control unit

J623 Engine control unit

J671 - Radiator fan control unit 2

SB15 - Fuse 15 on fuse holder B

SB53 - Fuse 53 on fuse holder B 🔘

SB55 Fuse 55 on fuse holder B

T10gb - 10-pin connector, black, coupling point 2/gearbox

121-pin connector

V7 - Radiator fan Radiator fan 2

V177

Earth point, electronically controlled fan 642

Connection 3 (15a), in main wiring harness B279

Connection 1 (54), in main wiring harness B335

Connection 5 (87a), in main wiring harness B354

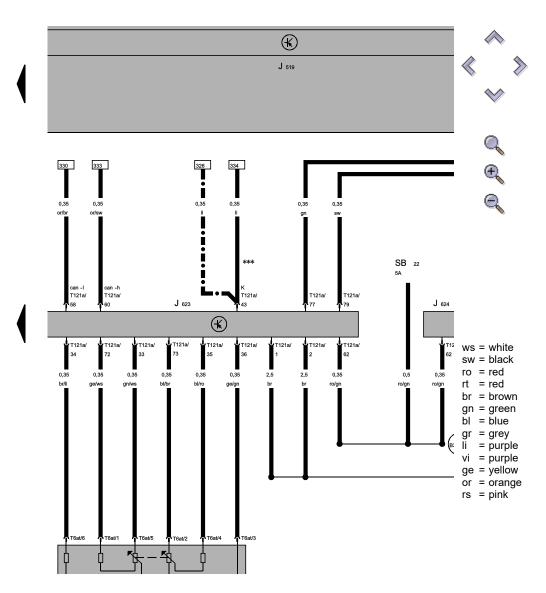
Connection 11, in main wiring harness B475

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## Phaeton

### **Current Flow Diagram**

No. 1 / 17



## Engine control unit, engine control unit 2, accelerator position sender

G79 - Accelerator position senderG185 - Accelerator position sender 2

J519 - Onboard supply control unit

J623 - Engine control unit

J624 - Engine control unit 2 🔕

SB22 - Fuse 22 on fuse holder B

T6at - 6-pin connector

T121a - 121-pin connector 🔕

T121b - 121-pin connector

<sub>390</sub> - Earth connection 25, in main wiring harness

647 - Earth point 3, on bulkhead

B329 - Connection 15 (30a), in main wiring harness

\*\*\* - From August 2002

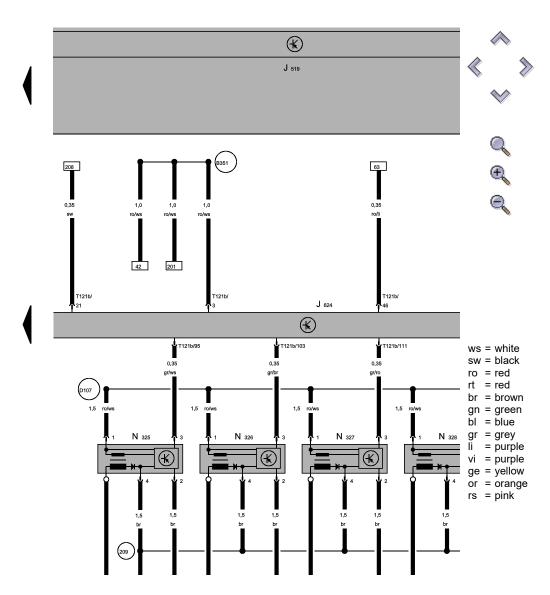
-•-•- - Up to July 2002

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## Phaeton

### **Current Flow Diagram**

No. 1/18



#### Engine control unit 2, ignition coil 7 up to 10 with output stage

J519 - Onboard supply control unit 🔕

J624 - Engine control unit 2 🔕

N325 - Ignition coil 7 with output stage

N326 - Ignition coil 8 with output stage N327 - Ignition coil 9 with output stage

N328 - Ignition coil 10 with output stage

P - Spark plug connector

Q - Spark plug

T121b - 121-pin connector

- Earth connection 5, in engine compartment wiring harness

- Earth connection 6, in engine compartment wiring harness

601 - Earth point, on left of cylinder head

B351 - Connection 2 (87a), in main wiring harness

D<sub>107</sub> - Connection 5, in engine compartment wiring harness

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## Phaeton

#### **Current Flow Diagram**

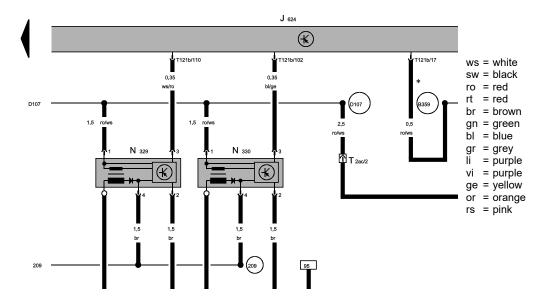
## No. 1/19











#### Engine control unit 2, ignition coil 11 and 12 with output stage

J519 - Onboard supply control unit 🔕

J624 - Engine control unit 2

N329 - Ignition coil 11 with output stage N330 - Ignition coil 12 with output stage

P - Spark plug connector

Q - Spark plug

T2ac - 2-pin connector, black, coupling point 1/engine prewiring harness

T121b - 121-pin connector

- Earth connection 5, in engine compartment wiring harness

- Earth connection 6, in engine compartment wiring harness

B359 - Connection 10 (87a), in main wiring harness

 $_{\rm D107}~$  - Connection 5, in engine compartment wiring harness

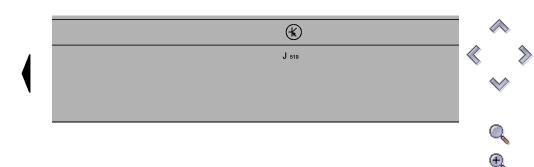
\* - Only engine code BAN up to October 2003

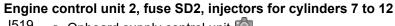
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## Phaeton

### **Current Flow Diagram**

No. 1/20





J519 - Onboard supply control unit 🔕

J624 - Engine control unit 2 🔕

N85 - Injector, cylinder 7

N86 - Injector, cylinder 8 N299 - Injector, cylinder 9

N300 - Injector, cylinder 10

N301 - Injector, cylinder 11

N302 - Injector, cylinder 12

SD2 - Fuse 2 on fuse holder D

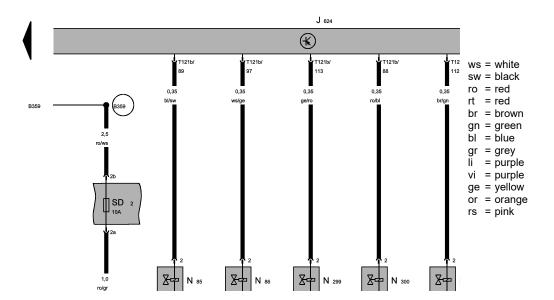
T8aa - 8-pin connector, black, coupling point 3/engine prewiring

harness

T121b - 121-pin connector

<sub>B359</sub> - Connection 10 (87a), in main wiring harness

- Connection 2 (injectors), in engine compartment wiring harness

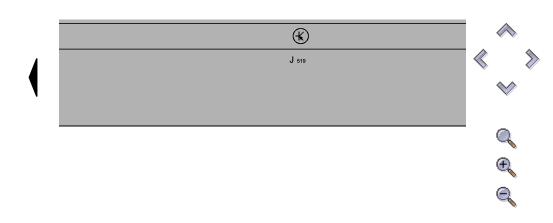


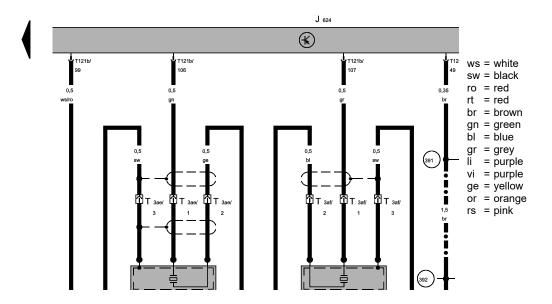
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## Phaeton

### **Current Flow Diagram**

No. 1/21





# Engine control unit 2, solenoid valve 2 for activated charcoal filter, knock sensor 3, knock sensor 4

G198 - Knock sensor 3 G199 - Knock sensor 4

J519 - Onboard supply control unit

J624 - Engine control unit 2 🔕

N333 - Activated charcoal filter system solenoid valve 2

T3ae - 3-pin connector
T3af - 3-pin connector

T8aa - 8-pin connector, black, coupling point 3/engine prewiring

harness

T121b - 121-pin connector

- Earth connection 26, in main wiring harness

 $_{\rm 392}$   $\,$  - Earth connection 27, in main wiring harness

646 - Earth point 2, on bulkhead

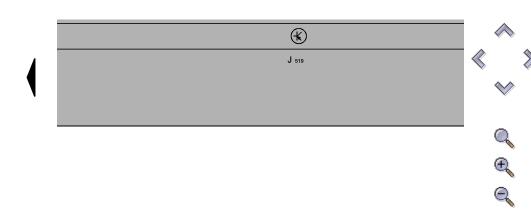
D<sub>108</sub> - Connection 6, in engine compartment wiring harness

-•-• - From August 2002 -•-• - Up to July 2002 WI-XML Page 22 of 27

## Phaeton

### **Current Flow Diagram**

No. 1/22



# Engine control unit 2, throttle valve control module, Lambda probe 3

G285 - Lambda probe 3

G296 - Throttle valve drive 2

G297 - Angle sender 1 for throttle valve drive 2

G298 - Angle sender 2 for throttle valve drive 2

J519 - Onboard supply control unit 🔕

J544 - Throttle valve module 2

J624 - Engine control unit 2 🔕

T6aw - 6-pin connector

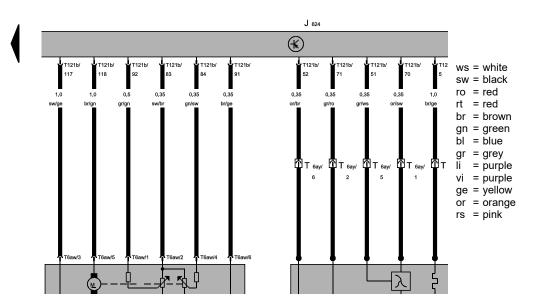
T6ay - 6-pin connector, brown, coupling point 8/before plenum

chamber in engine compartment

T121b - 121-pin connector

Z62 - Lambda probe heater 3

<sub>B355</sub> - Connection 6 (87a), in main wiring harness



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## Phaeton

### **Current Flow Diagram**

No. 1/23









# Engine control unit 2, Lambda probe 3 after catalytic converter, Lambda probe 4

G286 - Lambda probe 4

G287 - Lambda probe 3 after catalytic converter

J519 - Onboard supply control unit 🔕

J624 - Engine control unit 2 🔕

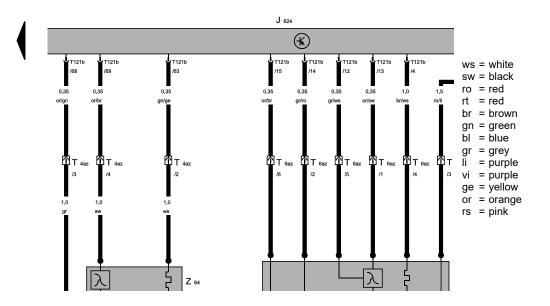
T4az - 4-pin connector, brown, coupling point 6/before plenum chamber in engine compartment

T6az - 6-pin connector, grey, coupling point 7/before plenum

chamber in engine compartment

T121b - 121-pin connector 
Z63 - Lambda probe heater 4

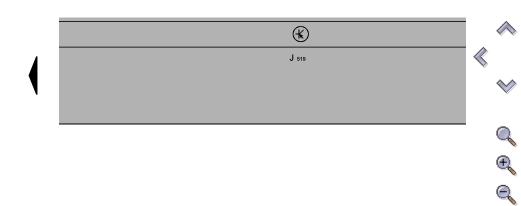
Z64 - Lambda probe 4 heater after catalytic converter



#### **Current Flow Diagram**

No. 1/24

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Engine control unit 2, air mass meter 2, intake air temperature sender 2, Lambda probe 4 after catalytic converter, valve 2 for camshaft adjustment, secondary air inlet valve 2

G246 - Air mass meter 2

G288 - Lambda probe 4 after catalytic converter

G299 - Intake air temperature sender 2

J519 - Onboard supply control unit

J624 - Engine control unit 2 🔕

N208 - Camshaft control valve 2

N319 - Exhaust camshaft control valve 2

N320 - Secondary air inlet valve 2

T4ax - 4-pin connector, grey, coupling point 5/before plenum

chamber in engine compartment

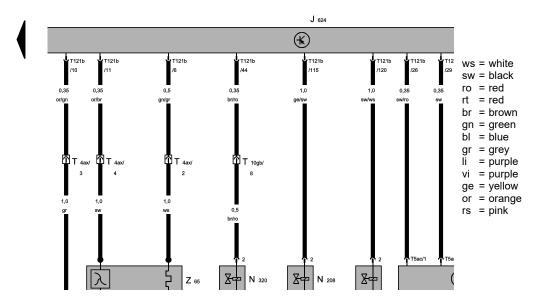
T5ac - 5-pin connector

T10gb - 10-pin connector, black, coupling point 2/gearbox

T121b - 121-pin connector

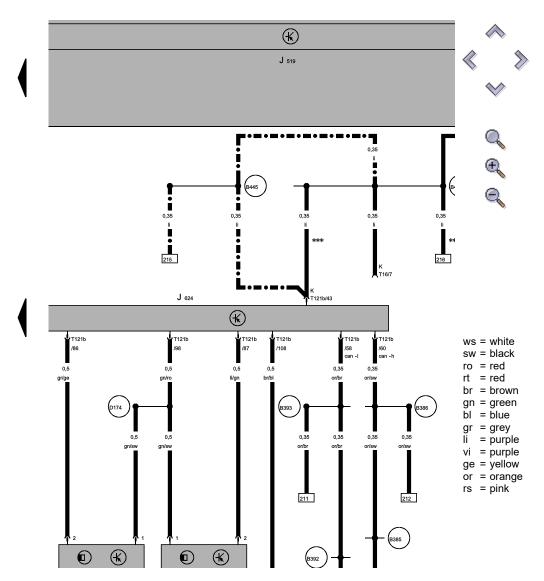
Z65 - Lambda probe 4 heater after catalytic converter

<sub>B355</sub> - Connection 6 (87a), in main wiring harness



#### **Current Flow Diagram**

No. 1/25



# Engine control unit 2, dash panel insert, self-diagnosis connection, Hall sender 2, Hall sender 4

G163 - Hall sender 2

G301 - Hall sender 4

J285 - Control unit in dash panel insert

J519 - Onboard supply control unit

J624 - Engine control unit 2 💩

T16 - 16-pin connector, on left under dash panel, self-diagnosis connection

T17e - 17-pin connector, on left under dash panel

T32 - 32-pin connector, blue

T32a - 32-pin connector, green

T121b - 121-pin connector

- Earth connection (sender earth 2) in engine wiring

B383 - Connection 1 (powertrain CAN bus, high), in main wiring

B385 - Connection 3 (powertrain CAN bus, high), in main wiring harness

B386 - Connection 4 (powertrain CAN bus, high), in main wiring

B390 - Connection 1 (powertrain CAN bus, low), in main wiring harness

B392 - Connection 3 (powertrain CAN bus, low), in main wiring harness

B393 - Connection 4 (powertrain CAN bus, low), in main wiring harness

<sub>B444</sub> - Connection 1 (diagnosis), in main wiring harness

B445 - Connection 2 (diagnosis), in main wiring harness

D174 - Connection 2 (5V) in engine prewiring harness

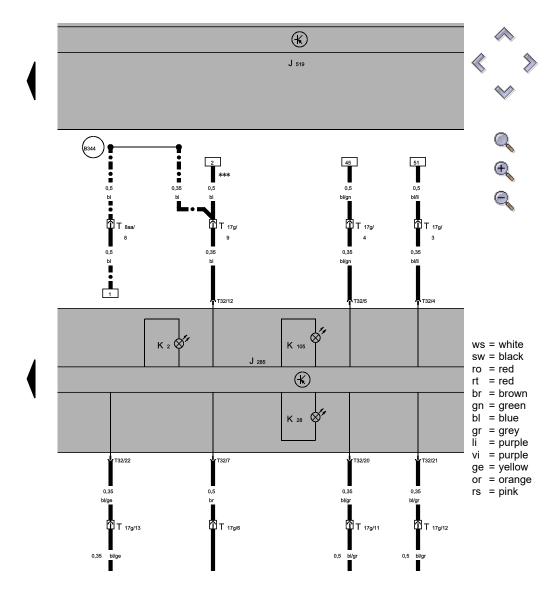
\*\*\* - From August 2002

-•-•- - Up to July 2002

#### Current Flow Diagram

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Control unit in dash panel insert, sender for coolant shortage indicator, alternator warning lamp, fuel gauge sender 3 and 4, warning lamp for fuel reserve

G32 - Coolant shortage indicator sender

G237 - Fuel gauge sender 3 G393 - Fuel gauge sender 4

J285 - Control unit in dash panel insert J519 - Onboard supply control unit

K2 - Alternator warning lamp

K28 - Coolant temperature and coolant shortage warning lamp

K105 - Reserve fuel warning lamp

T8aa - 8-pin connector, black, coupling point 3/engine prewiring

harness

T17g - 17-pin connector, on left under dash panel

T32 - 32-pin connector, blue

- Earth connection 28, in main wiring harness

- Earth connection 34, in main wiring harness

B344 - Connection 1 (61), in main wiring harness

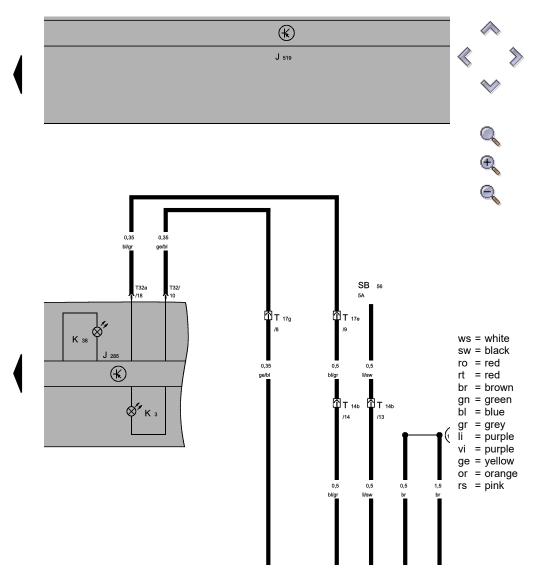
\*\*\* - From August 2002

-•-•- - Up to July 2002

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# Phaeton

Current Flow Diagram No. 1 / 27



Dash panel insert, oil level and oil temperature sender, oil pressure switch, oil pressure warning lamp, oil level warning lamp

F1 - Oil pressure switch

G266 - Oil level and oil temperature sender

J285 - Control unit in dash panel insert

J519 - Onboard supply control unit

K3 - Oil pressure warning lamp

K38 - Oil level warning lamp

SB56 - Fuse 56 on fuse holder B

T14b - 14-pin connector, coupling point 2/engine prewiring

harness

T17e - 17-pin connector, on left under dash panel

T17g - 17-pin connector, on left under dash panel

T32 - 32-pin connector, blue

T32a - 32-pin connector, green

- Earth connection 1, in front wiring harness

<sub>650</sub> - Earth point 6, on bulkhead 🔕