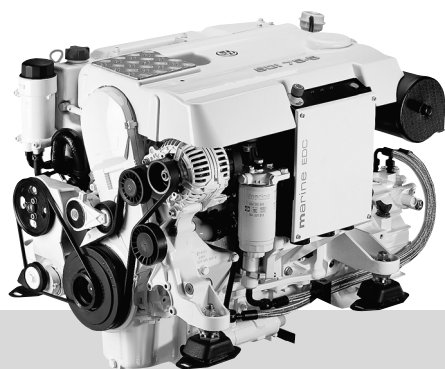
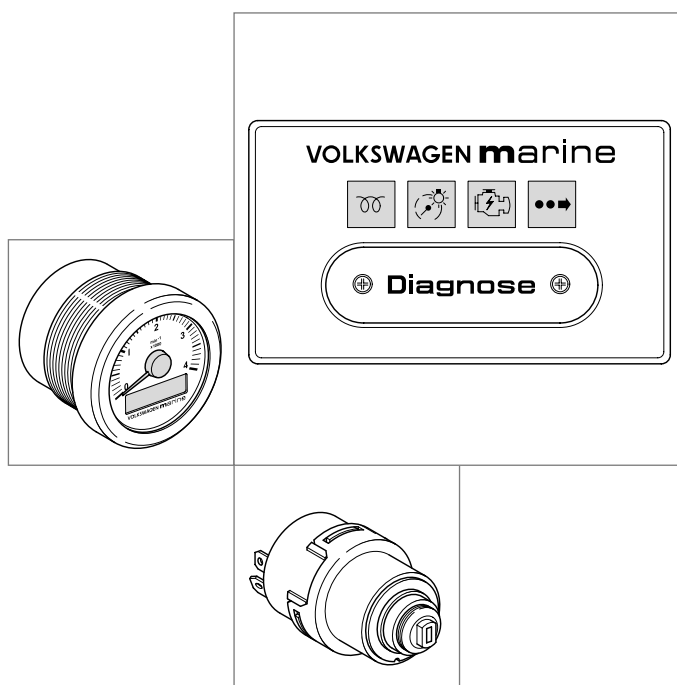


Einbauanleitung EA02 Installation Instruction EA02



Bootsmotoren von Volkswagen Marine

Individual-Instrumentierung Individual Instrumentation



TDI 100-5
TDI 120-5
TDI 150-5
TDI 150-5D

SDI 55-5
SDI 75-5

SDI 40-4
SDI 50-4
SDI 60-4

Individual Instrumentation

Volkswagen Marine offers you the possibility to individually design your cockpit. You can select from the components described in these installation instructions.

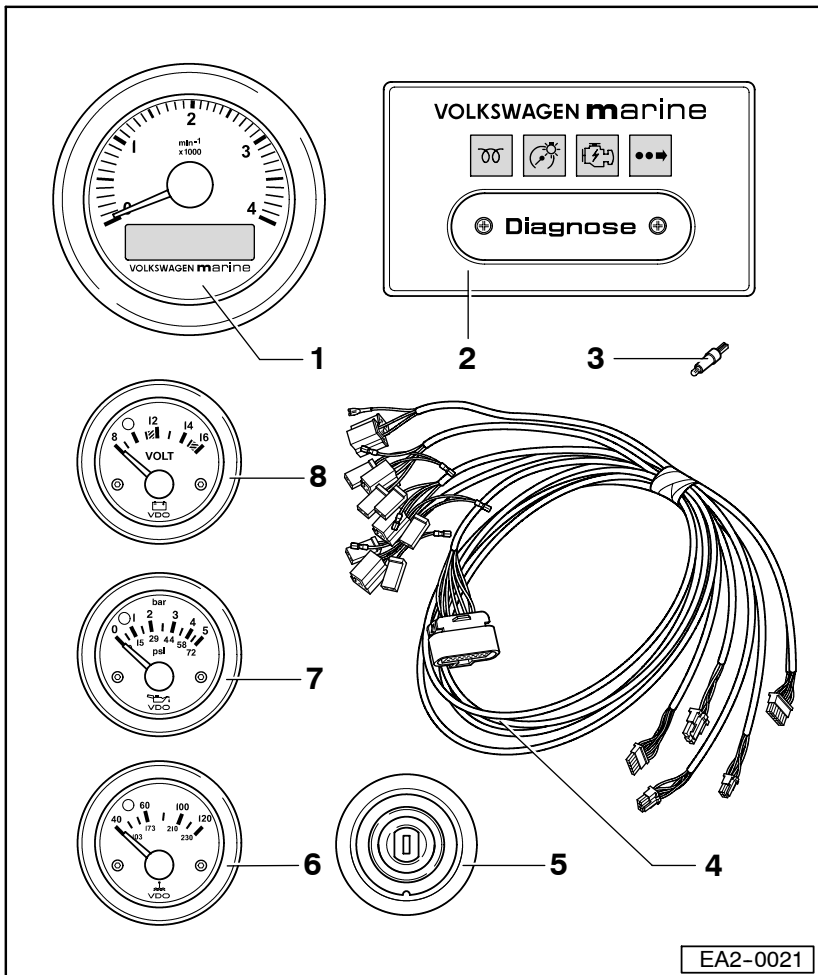
Safety precautions:

- ◆ When installing this instrumentation, care must be taken that the electrical lines are carefully and properly laid.
- ◆ Cable plugs must be plugged in securely and engaged to ensure correct functioning.
- ◆ Additional voltage drops for other instruments or devices may only be connected to the terminal strip (X14) of the operating unit (max. 2 ampere each for Kl.15 -ignition on- and Kl.30 -permanent live-).
- ◆ The contact on the terminal strip X14-3 -dimmer lighting- should be used for lighting these instruments or devices.

General Information:

A comprehensive description of the individual functions for the revolution counter's multifunction display can be found in the operation manual and supplemental operation manual in your on-board booklet.

1



Overview of the scope of supply

1 - Rev. counter

- ◆ with multi-function display
- ◆ Description ⇒ page 22
- ◆ Display range 0...4000 RPM

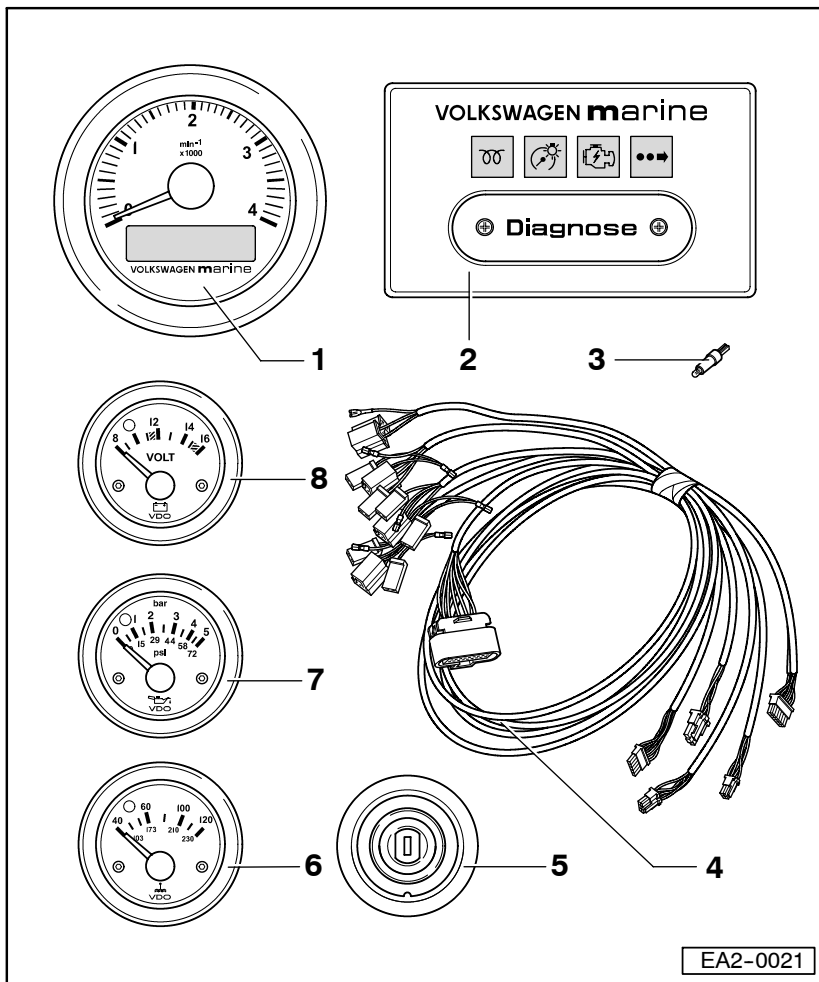
2 - Operating unit

- ◆ with connection for diagnostic system tester

3 - Indicator lamp

- ◆ Qty 3
- ◆ for voltmeter, water temperature indicator and oil pressure indicator
- ◆ to be built in to the back of the respective instrument before assembly

2



EA2-0021

4 - Wiring harness complete

- ◆ Description ⇒ page 9

5 - Ignition switch

- ◆ with 2 ignition keys
- ◆ Description ⇒ page 21

6 - Water temperature indicator

- ◆ Description ⇒ page 19
- ◆ Display range 40°...120°

7 - Oil pressure indicator

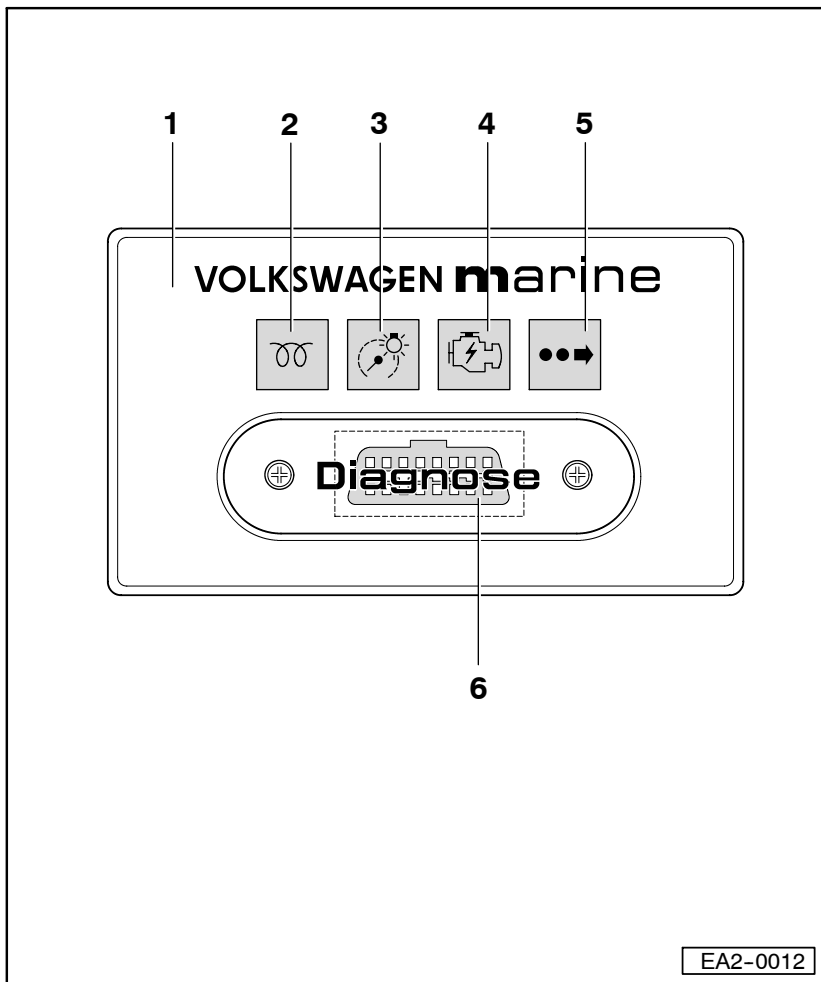
- ◆ Description ⇒ page 20
- ◆ Display range 0...5 bar

8 - Voltmeter

- ◆ Description ⇒ page 18
- ◆ Display range 8...16 Volt

Listing of instrument set 065 800 547 B:

Quantity	Part Number Manufacturer	Part Number Volkswagen Marine	Designation
1	-	065 959 714	Operating unit
1	N 02 012 911	065 920 800	Rev. counter
1	N 02 124 106	065 857 002	Oil pressure indicator
1	N 02 321 602	065 857 003	Water temperature indicator
1	N 02 410 802	065 857 001	Voltmeter
1	32 83 50	065 905 845	Ignition switch
1	-	065 951 307	Buzzer
1	-	065 971 086	Line for voltmeter
1	-	065 971 086 A	Line for oil pressure indicator
1	-	065 971 086 B	Line for water temperature indicator
1	-	065 971 086 C	Line for rev. counter
1	-	065 971 086 D	Line for ignition switch
3	N 05 800 762	2Y1 919 240	Indicator lamp

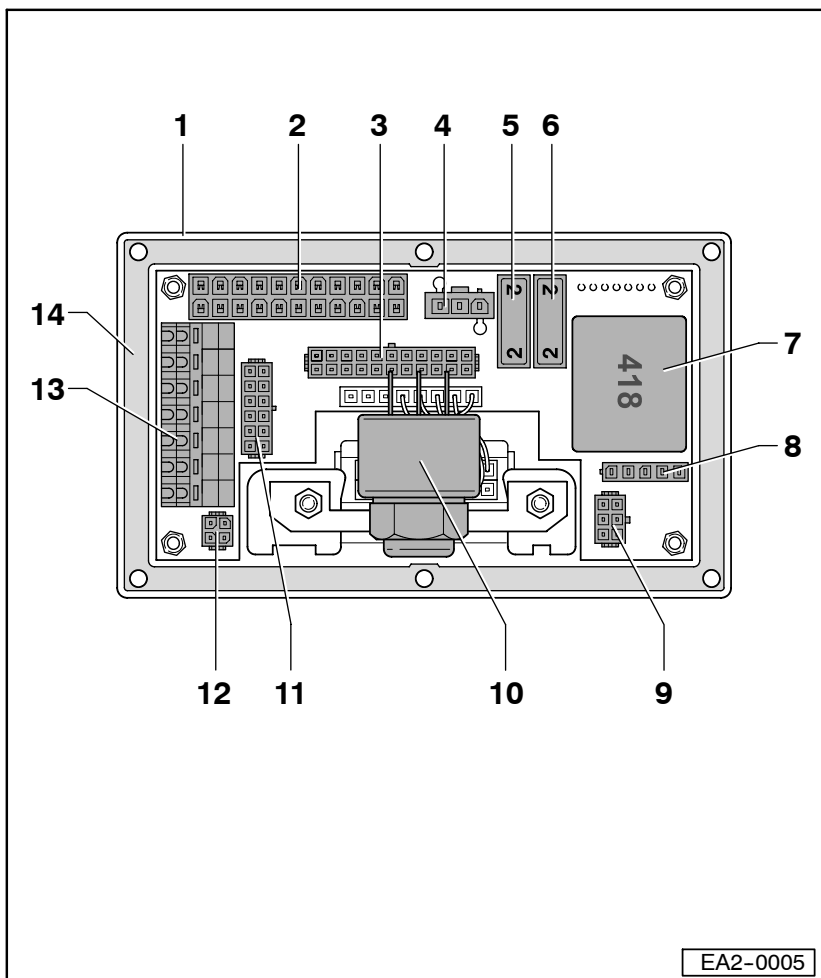


EA2-0012

Operating unit (front side)

- 1 - Operating unit**
◆ Installation template ⇒ page 25
- 2 - Control lamp for glow plug system and engine fault**
- 3 - Button for dimmer regulation of the instrument lighting**
- 4 - Acknowledge button for acoustic signal**
- 5 - Button for multifunction display**
◆ You will find information on this in the operation manual and supplemental operation manual in your on-board booklet.
- 6 - Cover for diagnostic connection**
◆ Connection ⇒ page 24

5

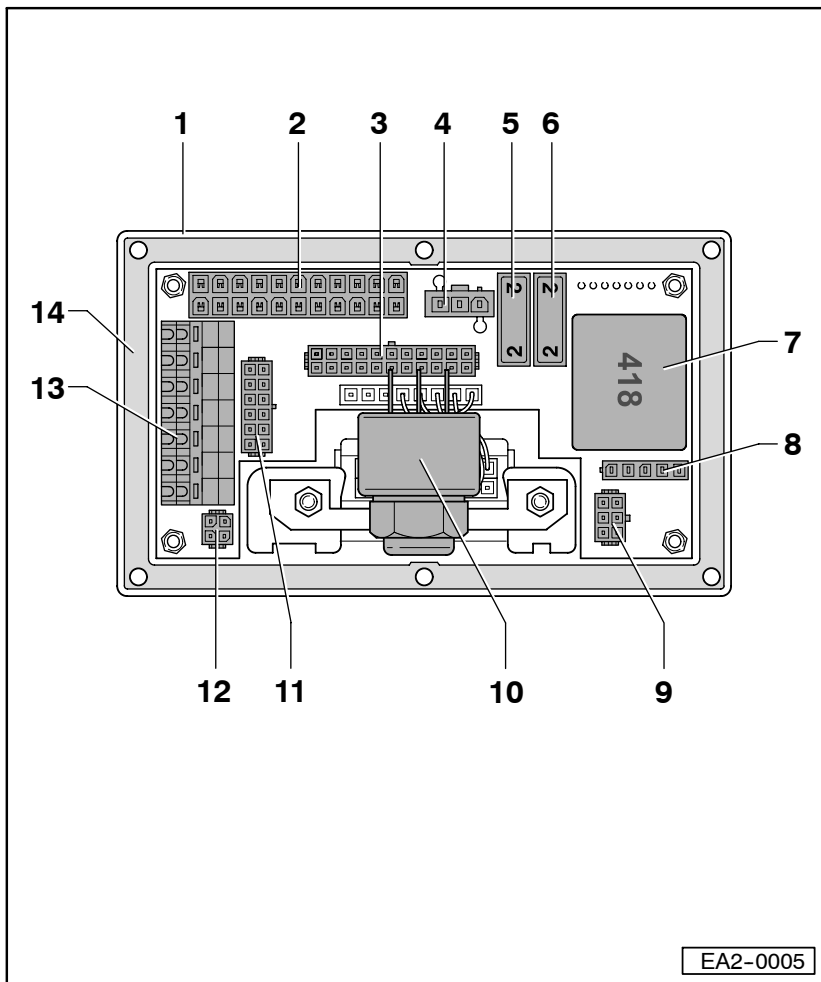


EA2-0005

Operating unit (rear side)

- 1 - Operating unit**
◆ Installation template ⇒ page 25
- 2 - Connection plug T22**
◆ white
◆ from the operating unit to the central electrical system
◆ Contact assignment ⇒ page 10
- 3 - Connection plug T22a**
◆ from the operating unit to the flying bridge
◆ Contact assignment ⇒ page 12
- 4 - Connection plug T3**
◆ from the operating unit to the ignition switch
◆ Contact assignment ⇒ page 14
- 5 - Fuse (2 ampere)**
◆ F2 terminal 30 (Permanent live)

6



Continued

6 - Fuse (2 ampere)

- ◆ F1 terminal 15 (ignition on)

7 - Relay for instrument lighting

8 - Connection plug T5

- ◆ from the operating unit to the oil pressure indicator
- ◆ Contact assignment ⇒ page 16

9 - Connection plug T6

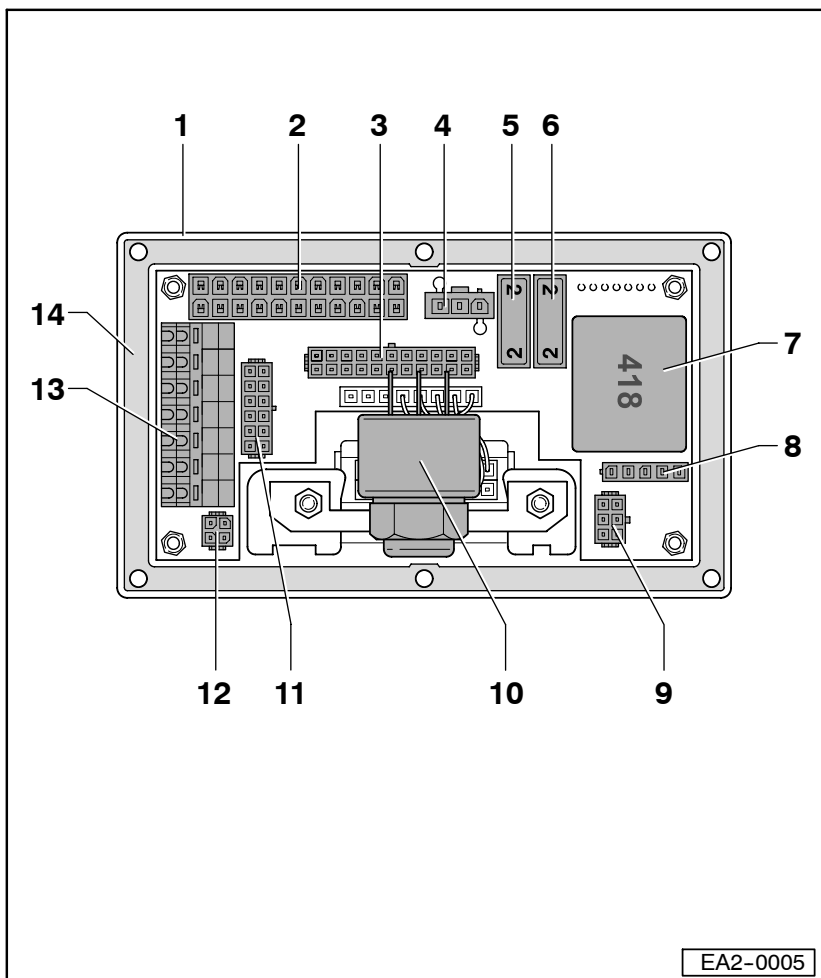
- ◆ from the operating unit to the water temperature indicator
- ◆ Contact assignment ⇒ page 16

10 - Buzzer

11 - Connection plug T12

- ◆ from the operating unit to the rev. counter
- ◆ Contact assignment ⇒ page 15

EA2-0005



12 - Connection plug T4

- ◆ from the operating unit to the voltmeter
- ◆ Contact assignment ⇒ page 14

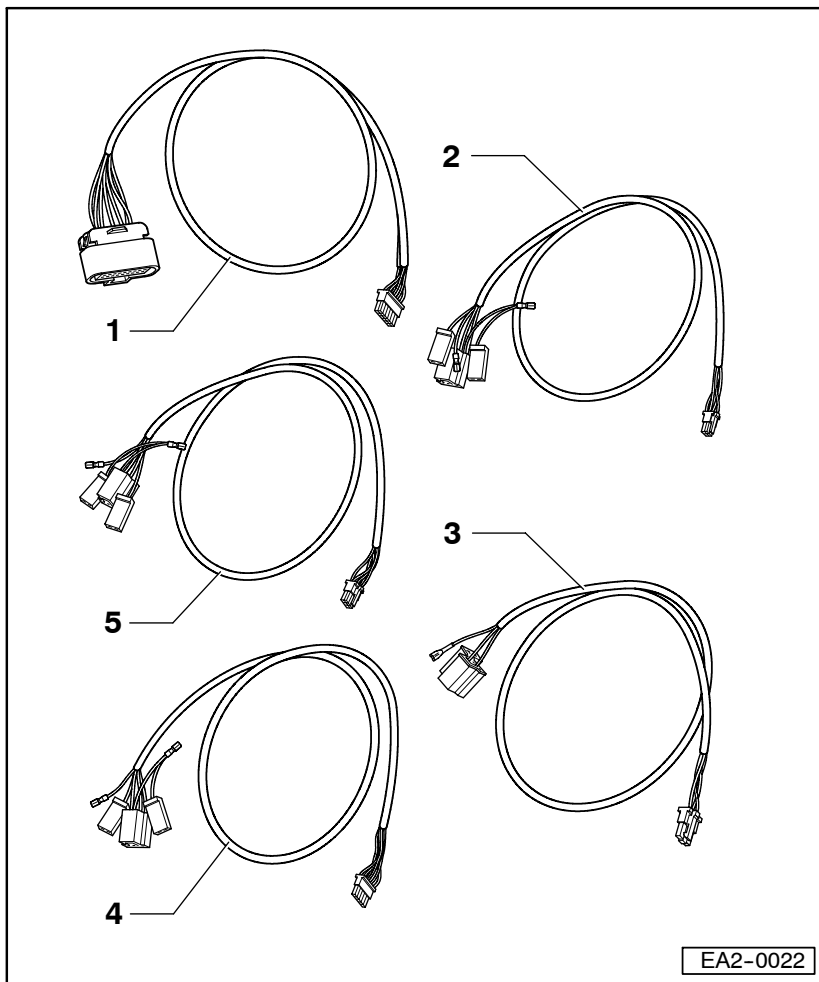
13 - Connection strip X14

- ◆ Operating unit terminal strip
- ◆ Contact assignment ⇒ page 17

14 - Gasket

- ◆ Renew if damaged

EA2-0005



Description of the wiring harness

1 - Connecting wires for rev. counter

2 - Connecting wires for voltmeter

◆ Connection contact assignment
+ and - pay attention at the voltmeter

3 - Connecting wires for ignition switch

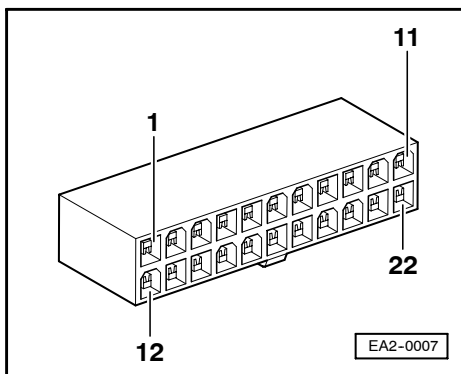
4 - Connecting wires for oil pressure indicator

◆ Connection contact assignment
+ and - pay attention at the oil pressure indicator

5 - Connecting wires for water temperature indicator

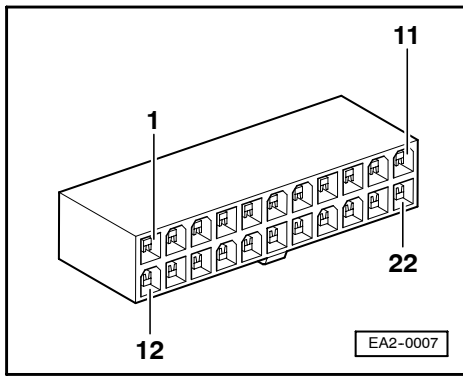
◆ Connection contact assignment
+ and - pay attention at the water temperature indicator

Contact assignment of the individual connection plugs:



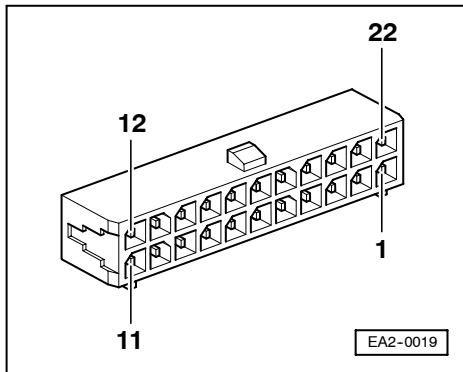
◀ **Connection plug T22 (white), operating unit to fuse box/relay plate**

Contact	Designation
T22-1	Alternative speed signal
T22-2	D+ for cutoff relay
T22-3	Neutral from the gearbox
T22-4	Terminal 31 (earth)
T22-5	System lamp
T22-6	Terminal 50a (start)
T22-7	Ignition on at fuse box/relay plate
T22-8	Stop at fuse box/relay plate
T22-9	Terminal 30 (permanent live)



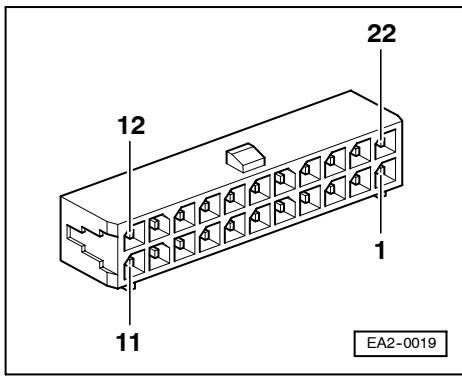
◀ **Continued**

Contact	Designation
T22-10	Water temperature switch
T22-11	Water temperature sender
T22-12	Neutral at fuse box/relay plate
T22-13	Oil pressure switch
T22-14	Sensor for water in fuel
T22-15	Alarm relay acknowledgement
T22-16	Sensor for water level
T22-17	CAN-Low
T22-18	Buzzer
T22-19	Charge monitoring
T22-20	K line
T22-21	Oil pressure sender
T22-22	CAN-High



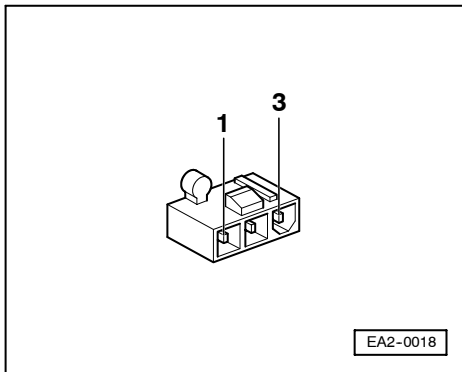
◀ **Connection plug T22a (black)
Operating unit to the flying bridge**

Contact	Designation
T22a-1	External speed signal
T22a-2	Instrument lighting earth
T22a-3	Neutral from the main panel
T22a-4	Terminal 31 (earth)
T22a-5	System lamp
T22a-6	Terminal 50a (start)
T22a-7	Terminal 15 (ignition on) from the main panel
T22a-8	Stop at fuse box/relay plate (over the main panel)
T22a-9	Terminal 30 (permanent live)
T22a-10	Water temperature switch
T22a-11	NMEA-A (navigation system)
T22a-12	Neutral
T22a-13	Oil pressure switch
T22a-14	Sensor for water in fuel



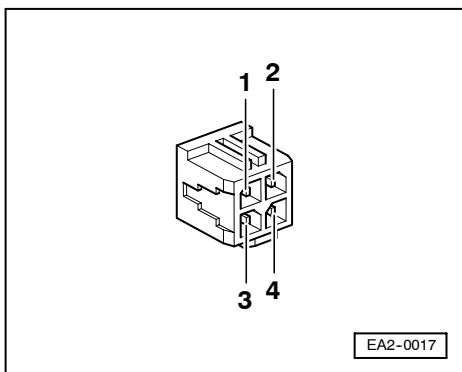
◀ **Continued**

Contact	Designation
T22a-15	Alarm relay acknowledgement
T22a-16	Sensor for water level
T22a-17	CAN-Low
T22a-18	Buzzer
T22a-19	Charge monitoring
T22a-20	Dimmer button
T22a-21	NMEA-B (navigation system)
T22a-22	CAN-High



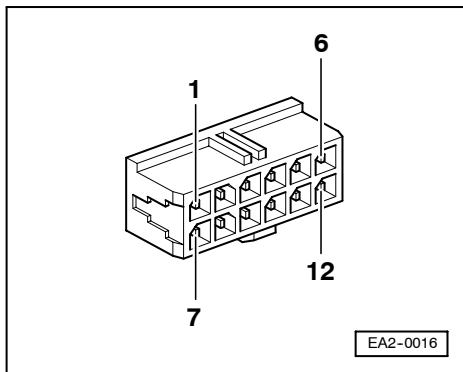
◀ **Connection plug T3 (white)
Operating unit to the ignition switch**

Contact	Designation
T3-1	Terminal 30 (permanent live)
T3-2	Terminal 15 (ignition on)
T3-3	Terminal 50a



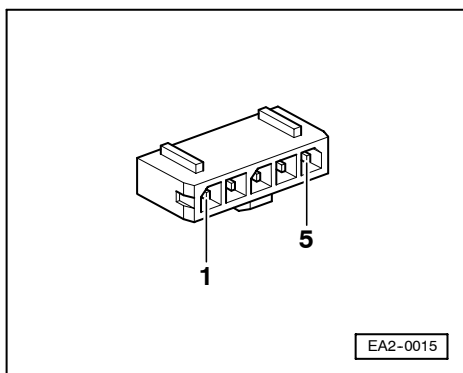
◀ **Connection plug T4 (black)
Operating unit to the voltmeter**

Contact	Designation
T4-1	Terminal 15 (ignition on)
T4-2	Terminal 31 (earth)
T4-3	Instrument lighting
T4-4	D+



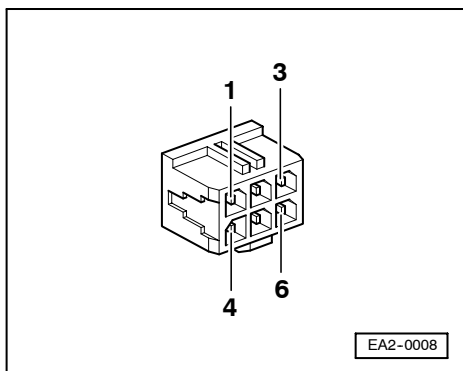
◀ **Connection plug T12 (black)**
Operating unit to the rev. counter

Contact	Designation
T12-1	Neutral
T12-2	Instrument lighting
T12-3	NMEA-A (navigation system)
T12-4	CAN-High
T12-5	CAN-Low
T12-6	NMEA-B (navigation system)
T12-7	Sensor for water level
T12-8	Water separator
T12-9	Terminal 31 (earth)
T12-10	Buttons
T12-11	Terminal 15 (ignition on)
T12-12	Terminal 30 (permanent live)



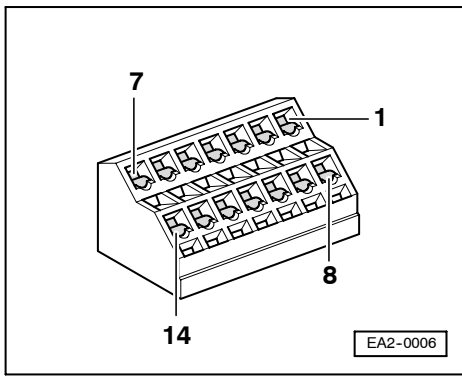
◀ **Connection plug T5 (black)**
operating unit to the oil pressure indicator

Contact	Designation
T5-1	Terminal 15 (ignition on)
T5-2	Terminal 31 (earth)
T5-3	Instrument lighting
T5-4	Oil pressure switch
T5-5	Oil pressure sender



◀ **Connection plug T6 (black)**
Operating unit to the water temperature indicator

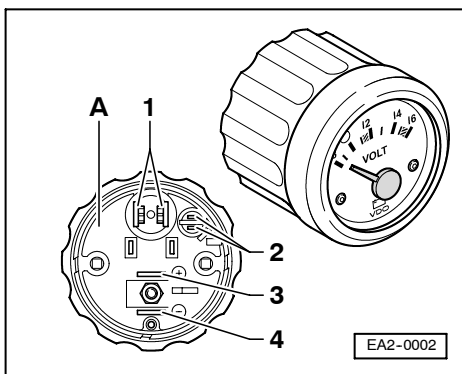
Contact	Designation
T6-1	Terminal 15 (ignition on)
T6-2	Terminal 31 (earth)
T6-3	Instrument lighting
T6-4	Water temperature switch
T6-5	Water temperature sender
T6-6	Vacant



◀ **Terminal strip X14 (grey)**
Operating unit

Contact	Designation
X14-1	NMEA-A (navigation system)
X14-2	NMEA-B (navigation system)
X14-3	Instrument lighting
X14-4	External speed signal
X14-5	Terminal 31 (earth)
X14-6	Terminal 31 (earth)
X14-7	D+ cutoff relay
X14-8	Terminal 15 (ignition on)
X14-9	Terminal 30 (permanent live)
X14-10	Neutral from the gearbox
X14-11	Neutral at fuse box/relay plate
X14-12	Neutral at flying bridge
X14-13	K line
X14-14	Vacant

Description of the instruments and components:



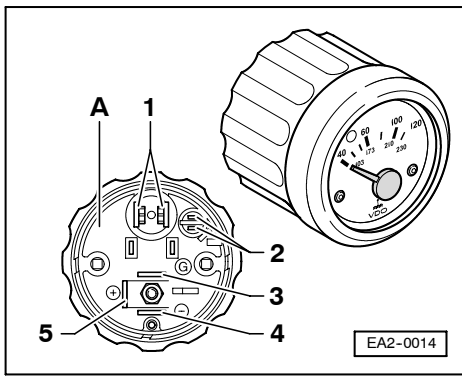
◀ **Voltmeter**

Located on the rear side -A- of the voltmeter are the electrical connections, with the following contact assignment:

Contact	Designation
1	Instrument lighting
2	Warning lamp
3	Terminal 15
4	Terminal 31 (earth)

Note:

When connecting, pay attention to the correct designation of the contact assignment (+ and -).



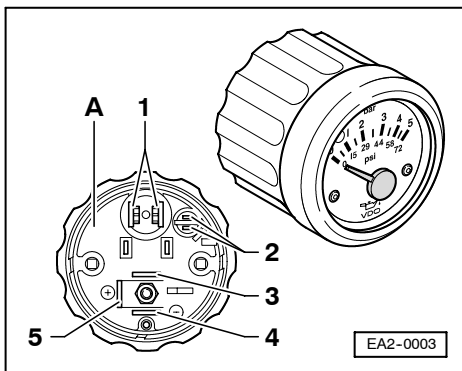
Water temperature indicator

Located on the rear side -A- of the water temperature indicator are the electrical connections, with the following contact assignment:

Contact	Designation
1	Instrument lighting
2	Warning lamp
3	Water temperature sender
4	Terminal 15
5	Terminal 31 (earth)

Note:

When connecting, pay attention to the correct designation of the contact assignment (+ and -).



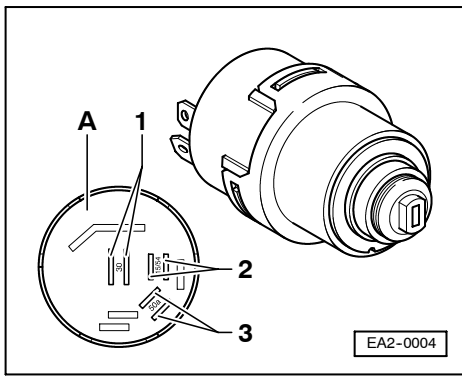
Oil pressure indicator

Located on the rear side -A- of the oil pressure indicator are the electrical connections, with the following contact assignment:

Contact	Designation
1	Instrument lighting
2	Warning lamp
3	Oil pressure sender
4	Terminal 15
5	Terminal 31 (earth)

Note:

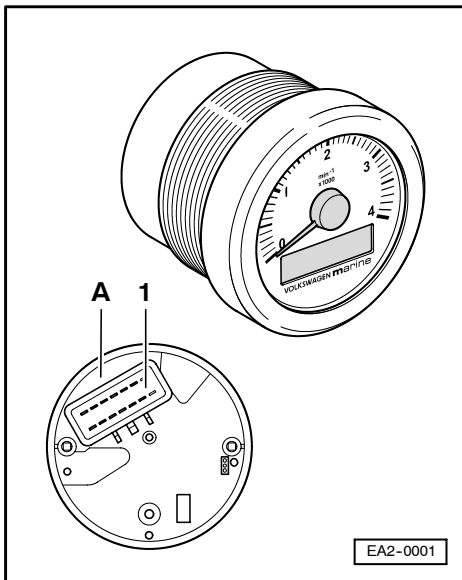
When connecting, pay attention to the correct designation of the contact assignment (+ and -).



◀ Ignition switch

Located on the rear side -A- of the ignition switch are the electrical connections, with the following contact assignment:

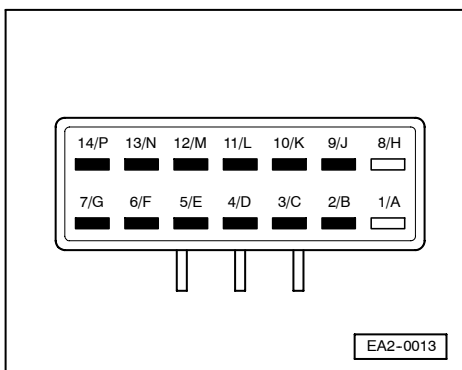
Contact	Designation
1	Terminal 30 (permanent live)
2	Terminal 15
3	Terminal 50a

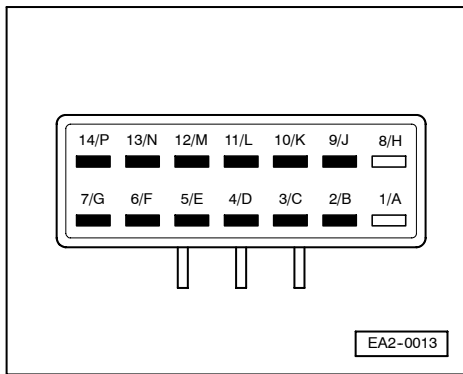


◀ Rev. counter

Located on the rear side -A- of the rev. counter are the electrical connections, with the following contact assignment:

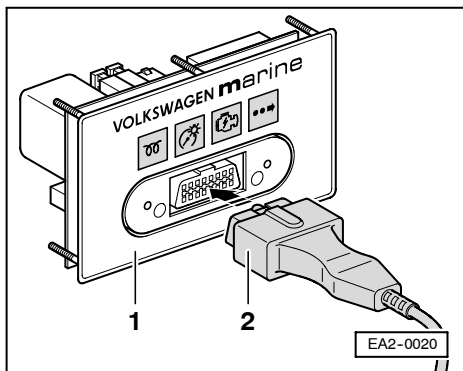
Contact	Designation
T14-1/A	Vacant
T14-2/B	Water separator
T14-3/C	Neutral
T14-4/D	NMEA-A (navigation system)
T14-5/E	NMEA-B (navigation system)





◀ **Continued**

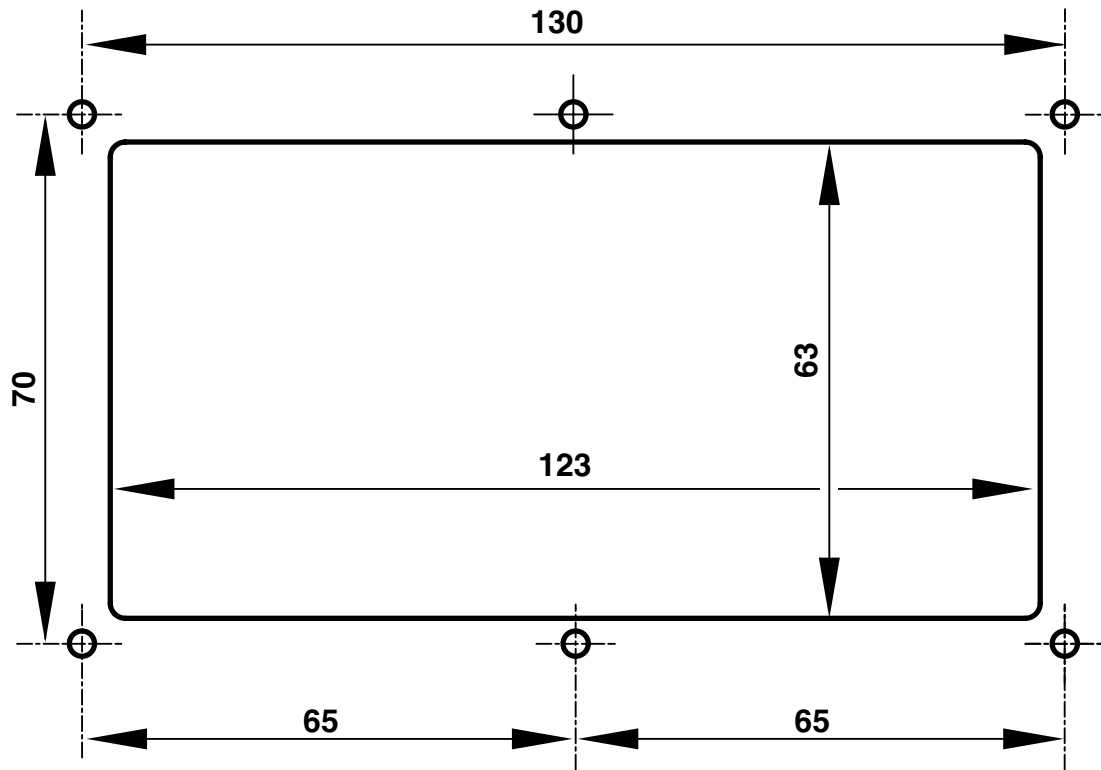
Contact	Designation
T14-6/F	Terminal 31 (earth)
T14-7/G	Terminal 30 (permanent live)
T14-8/H	Vacant
T14-9/J	CAN-High
T14-10/K	CAN-Low
T14-11/L	Probe
T14-12/M	Sensor for water level
T14-13/N	Instrument lighting
T14-14/P	Terminal 15 (ignition on)



◀ **Connection for system tester (self-diagnosis)**

- Unscrew the 2 fastening screws of the cover on the operating unit -1-.
- Connect the diagnosis plug -2- from the system tester to the operating unit connection.

Installation template for operating unit



———— 25 ————

Einbauanleitung EA02

Installation Instruction EA02

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