

**SportDesign Exterior Mirrors (I-no. 529)**

Revision: This bulletin replaces bulletin Group 6, #34/13, dated October 30, 2015.  
 Labor time 66796191 was replaced with Labor time 66796280.

Model Year: **As of 2014 up to 2016**

Concern: **Retrofitting**

Note: SportDesign exterior mirror with V-shaped mirror base (manually retractable).



Parts Info:	<p><b>991.044.801.40</b></p> <p><b>991.044.801.41</b></p>	<p>SportDesign mirrors, left-hand drive (LHD), USA/Canada set</p> <p>⇒ Basic version</p> <p>⇒ Anti-dazzle (I-no. 256)</p>
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## Parts List:

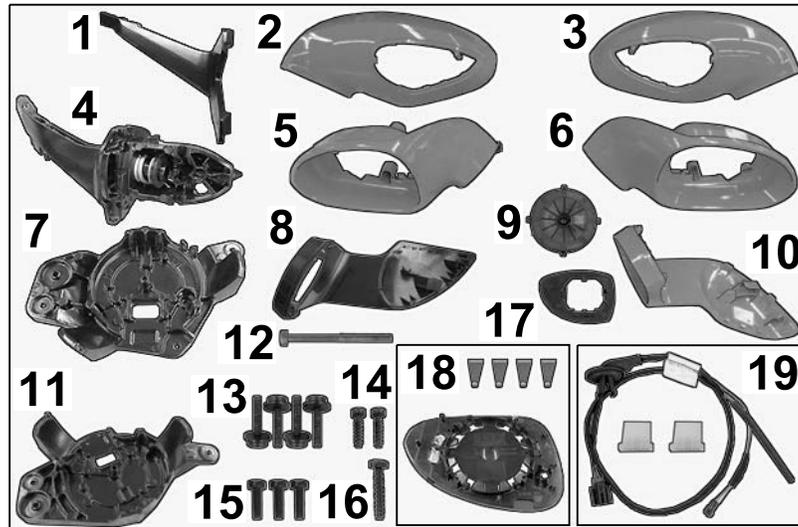


Figure 2

991.731.221.00	1 x	Lower bracket, LHD/L ⇒ Figure 2-1-
991.731.222.00	1 x	Lower bracket, LHD/R (not shown)
991.731.629.00 G2L	1 x	Upper part of housing, LHD/L ⇒ Figure 2-2-
991.731.630.00 G2L	1 x	Upper part of housing, LHD/R ⇒ Figure 2-3-
991.731.229.00	1 x	Mirror base, LHD/L ⇒ Figure 2-4-
991.731.230.00	1 x	Mirror base, LHD/R (not shown)
991.731.631.00 G2L	1 x	Housing frame, LHD/L ⇒ Figure 2-5-
991.731.632.00 G2L	1 x	Housing frame, LHD/R ⇒ Figure 2-6-
991.731.519.00	1 x	Amplifier plate, LHD/L ⇒ Figure 2-7-
991.731.729.00 G2L	1 x	Left cover ⇒ Figure 2-8-
7PP.959.578.B	2 x	Mirror adjusting motor without memory ⇒ Figure 2-9-
7PP.959.578.C	2 x	Mirror adjusting motor with memory (not shown)
991.731.730.00 G2L	1 x	Right cover ⇒ Figure 2-10-
991.731.520.00	1 x	Amplifier plate, LHD/R ⇒ Figure 2-11-
— — —	1 x	Set of screws consisting of: 2 x oval-head screws (M3 x 38) ⇒ Figure 2-12-, 8 x oval-head screws (3 x 14) ⇒ Figure 2-13-, 4 x oval-head screws (3 x 12) ⇒ Figure 2-14-, 6 x oval-head screws (3 x 10) ⇒ Figure 2-15-, 2 x oval-head screws (3 x 16) ⇒ Figure 2-16-
991.731.833.00	1 x	Lower seal, left (not shown)
991.731.834.00	1 x	Lower seal, right ⇒ Figure 2-17-
991.622.711.00 <sup>1</sup>	2 x	Wire harness ⇒ Figure 2-19-
991.622.712.00 <sup>1</sup>	2 x	Wire harness with memory (not shown)

991.622.713.00 <sup>2</sup>	2 x	Wire harness, automatic dimming (not shown)
991.622.714.00 <sup>2</sup>	2 x	Wire harness, memory and automatic dimming (not shown)
991.731.045.00 <sup>1</sup>	1 x	Mirror glass, LHD/L, flat (not shown)
991.731.048.01 <sup>1</sup>	1 x	Mirror glass, LHD/R, convex, USA (not shown)
991.731.045.02 <sup>2</sup>	1 x	Mirror glass, LHD/L, flat, automatic dimming (not shown)
991.731.048.04 <sup>2</sup>	1 x	Mirror glass, LHD/R, convex, USA automatic dimming (not shown)

<sup>1</sup> Only in set 991.044.801.40

<sup>2</sup> Only in set 991.044.801.41

Work Procedure: 1 Paint SportDesign exterior mirrors as described in the Paint Manual.

2 Connect a battery charger. ⇒ *Workshop Manual '2X00IN Battery trickle charging'*

3 Remove rear-view mirror at the left and right. ⇒ *Workshop Manual '668919 Removing and installing rear-view mirror'*

4 Assemble SportDesign exterior mirror.

4.1 Install wire harness.

4.1.1 Guide wire harness ⇒ *Figure 3-1* through the bores ⇒ *Figure 3-2 and 3* - on the mirror base.

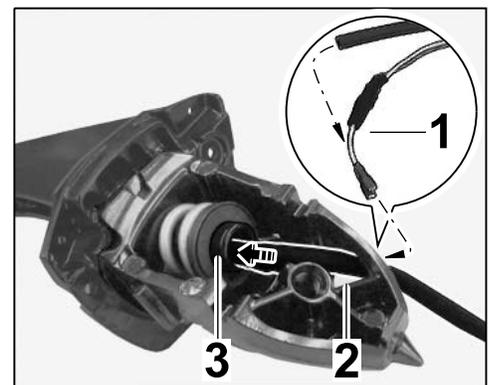


Figure 3

Distance between connector  $\Rightarrow$   
*Figure 4 -1-* and bore  $\Rightarrow$  *Figure 4*  
*-2-* on mirror base:  
 $X = 46$  cm

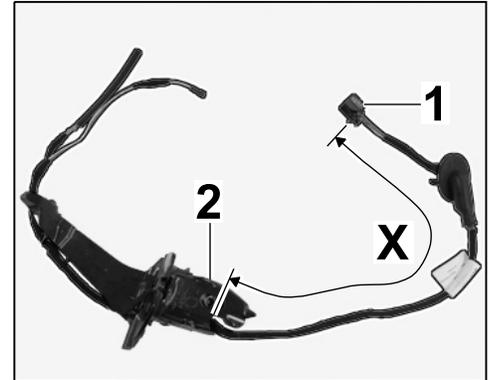


Figure 4

- 4.1.2 Fit wire harness  $\Rightarrow$  *Figure 5-1-* in  
the mirror base  $\Rightarrow$  *Figure 5-2-*.

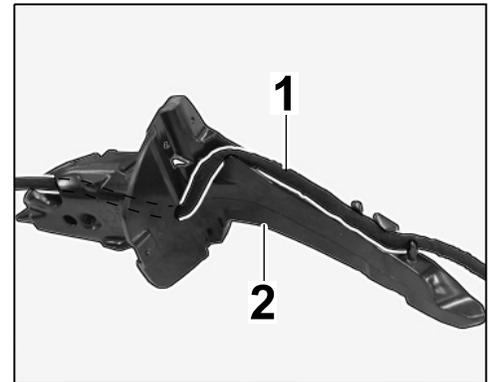


Figure 5

- 4.2 Carefully join left cover and upper part of  
housing.

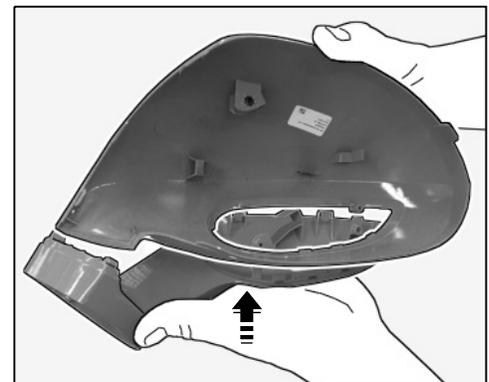


Figure 6

Locking lugs ⇒ *Figure 7* -**arrows**- must lock with an audible click.

4.2.1 Check gap dimensions.

4.3 Install lower bracket and mirror base.

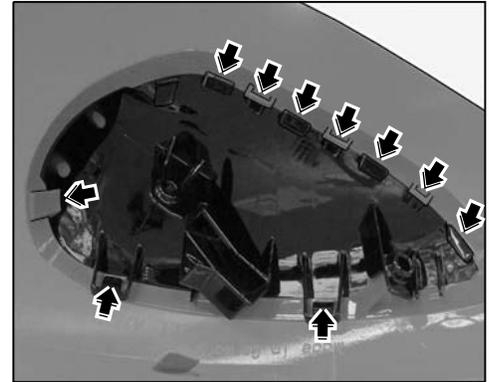


Figure 7

4.3.1 Insert lower bracket ⇒ *Figure 8* -**1**- into the guide ⇒ *Figure 8* -**arrow**- for the left cover (upper part of housing).

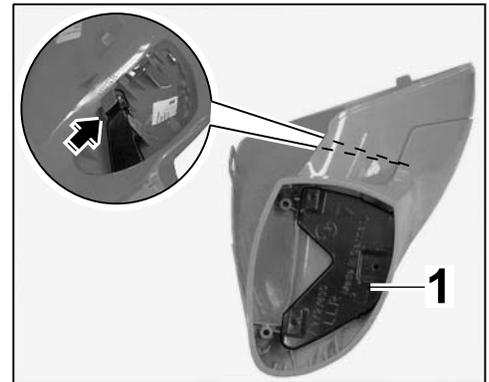


Figure 8

4.3.2 Insert mirror base ⇒ *Figure 9* -**1**- into the guide ⇒ *Figure 9* -**arrow**- for upper part of housing.

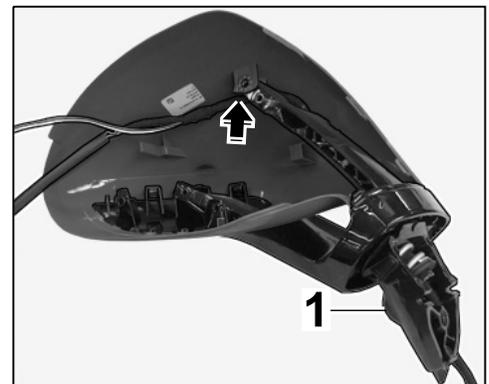


Figure 9

- 4.3.3 Secure lower bracket with two fastening screws (3 x 12) ⇒ *Figure 10-1-*.

Secure mirror base with three fastening screws (3 x 10) ⇒ *Figure 10-2-*.

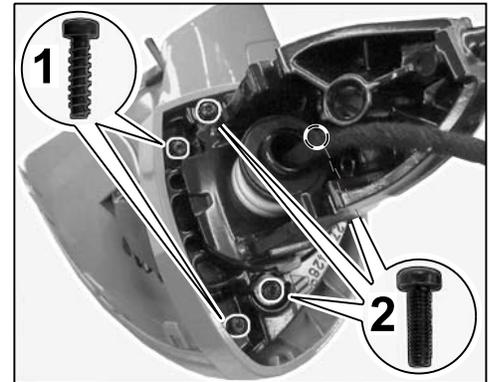


Figure 10



#### Information

Illustration shows exterior mirror with mirror heating without automatic dimming.

- 4.4 Install amplifier plate.
- 4.4.1 Position amplifier plate ⇒ *Figure 11-1-* on the lower bracket and mirror base. Guide adjusting motor lines (shrink-fit hose) through the slot.
- Guide mirror heating lines ⇒ *Figure 11-3-* under the amplifier plate.
- 4.4.2 Secure amplifier plate with fastening screws (3 x 14) ⇒ *Figure 11-2-*.
- 4.5 Insert socket contacts into plug socket.
- 4.5.1 Pull off protective tube ⇒ *Figure 12-1-* (⇒ *Figure 12-arrow-*).

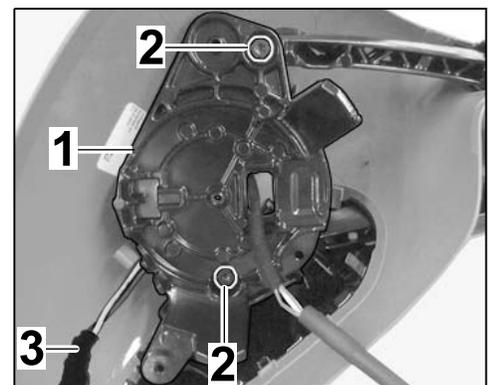


Figure 11

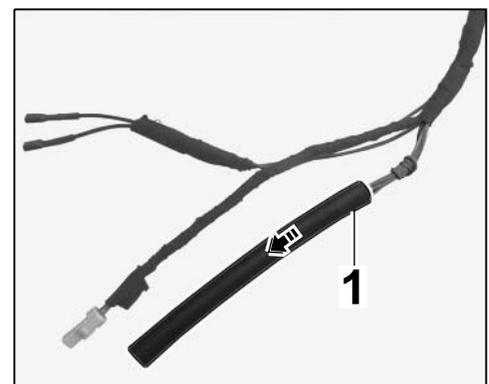


Figure 12

4.5.2 Version: Mirror adjusting motor (3-pin plug socket) ⇒ *Figure 13-1-*.

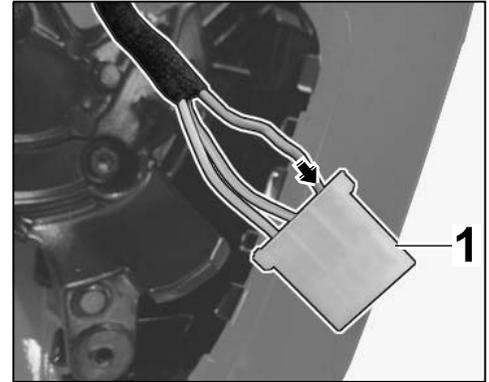


Figure 13

Color of wire	Chamber
GY	1
GY/VT	2
VT	3

4.5.3 Version: Mirror adjusting motor with memory (8-pin plug socket) ⇒ *Figure 14-1-*.

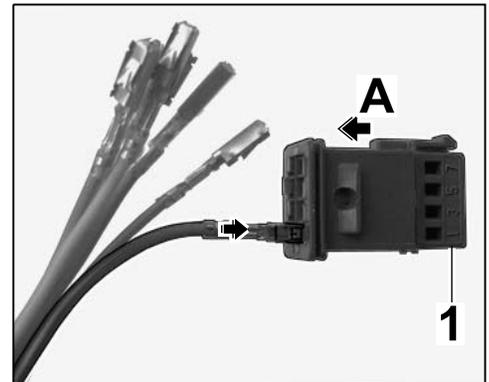


Figure 14

Color of wire	Chamber
RD/GY	1
GY	2
YE/WH	3
YE/VT	5
GY/VT	6
BN/GY	7
VT	8

Lock locking mechanism ⇒ *Figure 14 -arrow A-* on plug socket ⇒ *Figure 14-1-* at both sides.

#### 4.6 Install housing frame.

- 4.6.1 Position housing frame ⇒ *Figure 15-2-* and upper part of housing ⇒ *Figure 15-1-* with respect to each other and press them together ⇒ *Figure 15 -arrow-* until the retaining lugs engage.

Guide wire harness for mirror heating ⇒ *Figure 16 -arrow-* out between the housing frame and amplifier plate.

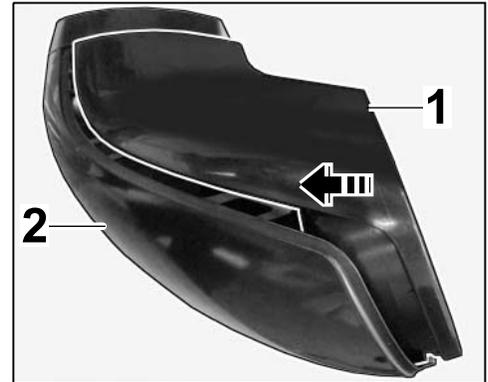


Figure 15

- 4.6.2 Secure housing frame with two fastening screws (3 x 14) ⇒ *Figure 16-2-* and one fastening screw (3 x 16) ⇒ *Figure 16-1-*.

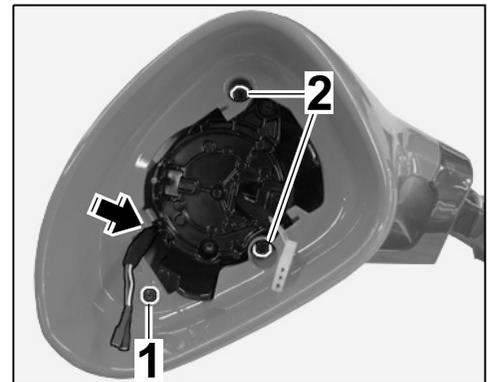


Figure 16

#### 4.7 Install mirror adjusting motor.

- 4.7.1 Connect plug connection ⇒ *Figure 17 -arrow-*.
- 4.7.2 Move mirror adjusting motor ⇒ *Figure 17-2-* into installation position and secure with a fastening screw (M3 x 38) ⇒ *Figure 17-1-*.

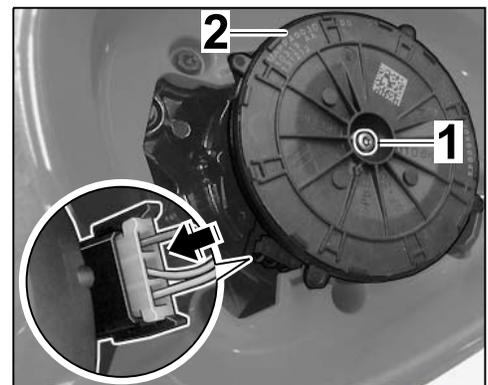


Figure 17

#### 4.8 Install mirror glass.

- 4.8.1 Slide vibration damper ⇒ *Figure 18* -1- onto the mirror glass ⇒ *Figure 18* -arrows-.

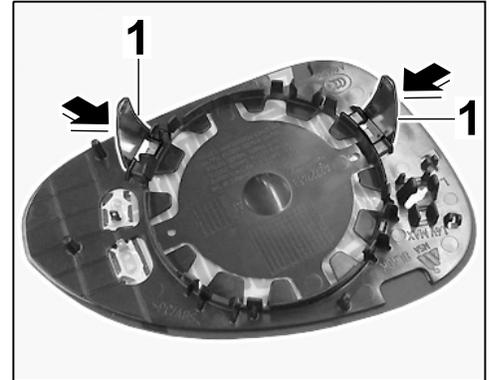


Figure 18

- 4.8.2 Connect plug connection for mirror heating ⇒ *Figure 19* -arrow-.

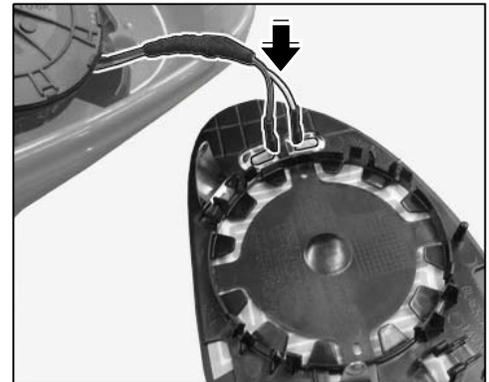


Figure 19

- 4.8.3 **Only** for vehicles with automatic dimming:  
Connect plug connection for automatic dimming ⇒ *Figure 20* -3- and clip it into its holder ⇒ *Figure 20* -2-.

- 4.8.4 Carefully fit mirror glass on the mirror adjusting motor. ⇒ *Workshop Manual '667819 Removing and installing mirror glass'*

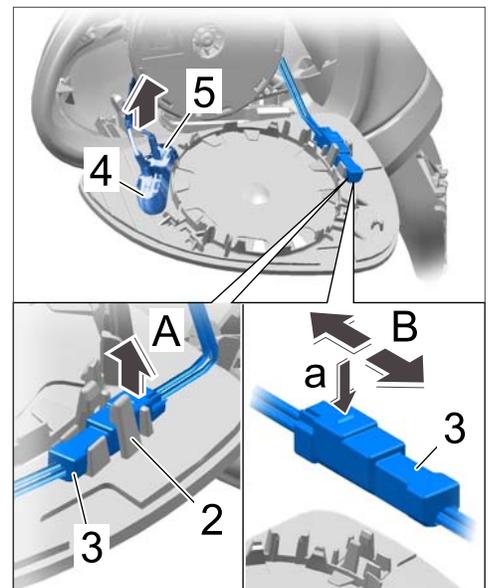


Figure 20

- 4.9 Fit seal ⇒ *Figure 21-1*.
- 5 Assemble second SportDesign exterior mirror as described in Step 3.
- 6 Install SportDesign exterior mirror on the left and right. ⇒ *Workshop Manual '668919 Removing and installing rear-view mirror'*

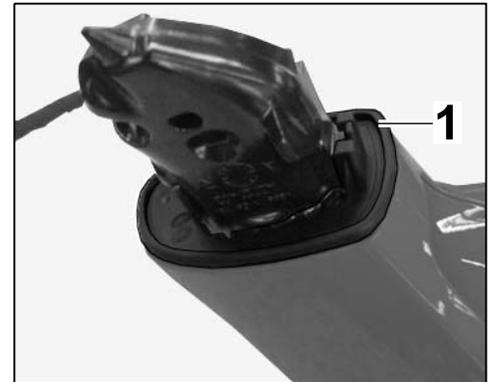


Figure 21

**NOTICE****Voltage drop**

- Risk of irreparable damage to control unit
  - Risk of damage to control unit
  - Fault entries in the control unit
  - Coding in the control unit is aborted
  - Malfunctions in control unit, even during programming
- ⇒ Prior to disconnecting the control unit, switch off the ignition and remove the ignition key.
- ⇒ Ensure that the power supply is not interrupted during programming.
- ⇒ Connect battery charger/power supply suitable for AGM Type batteries, recommended current rating of 70A fixed voltage 13.5V to 14.5V.

**Information**

The **9818 - PIWIS Tester 2** instructions take precedence since the description may be different with later Tester releases.

The procedure described here has been structured in general terms; different text or additions may appear on the **9818 - PIWIS Tester 2**.

- 7 Code SportDesign exterior mirrors.
- 7.1 **9818 - PIWIS Tester II** must now be connected and ignition switched on.
- 7.2 Select vehicle type. PIWIS Tester II Diagnostics starts.
- 7.3 Update vehicle data.
- 7.3.1 **Select Additional menu** by pressing **•F7** . Press **•F11** to confirm the question "Create vehicle analysis log (VAL)?".

- 7.3.2 Select the **Maintenance of vehicle data** function. Press •F12" until **M numbers** appears in the Value group column.



**Information**

The coding values to be changed depend on the vehicle equipment.

- 7.3.3 Select the relevant coding values (e.g. 261 – EXTERIOR MIRROR.....) one after the other in the Coding value column. When you touch the Installed cell, the tick disappears.
- 7.3.4 Select coding value **529 - SportDesign exterior mirror** in the Coding value column. When you touch the Installed cell, a tick appears.
- 7.3.5 Press •F12" to continue. A table showing all selected coding values appears. Press •F8" to write values.  
  
Wait until the following message appears: **Creation of vehicle data is complete.**
- 7.3.6 Press •F12" to switch to Report management. Open the log by pressing •F10" and check that vehicle equipment **529 – SportDesign exterior mirrors** is entered.  
  
Check that the vehicle equipment, e.g. **261 - EXTERIOR MIRROR.....** is no longer entered.

7.4 Adapt coding.

- 7.4.1 Press •F11" to switch to the control unit overview.
- 7.4.2 Select all control units. Press •F12" to continue. Switch to the **Codings/adaptations** menu.
- 7.4.3 **Select Automatic coding.** Press •F12" to continue.
- 7.4.4 Wait until the following message appears: **Coding was completed successfully.** Press •F12" to continue.

7.5 Read out the fault memories of all systems, work through any existing faults and erase the fault memories. ⇒ *Workshop Manual '033500 Fault memory for on-board diagnosis'*

7.6 Switch off ignition and disconnect **9818 - PIWIS Tester II.**

8 Disconnect battery charger. ⇒ *Workshop Manual '2X00IN Battery trickle charging'*

66892005:      Retrofitting SportDesign exterior mirrors      Labor time: **183 TU**  
 Includes:      Removing standard exterior mirrors, assembling and installing  
                     SportDesign exterior mirrors

- 66796280: SportDesign exterior mirrors, right and left (complete), new parts painted Labor time: **110 TU**  
 Includes: Materials: 4 MU  
 Without: Paint preparation (separate LO No.)!
- 51017105: Preparing body paintwork Labor time: **130 TU**  
 Includes: Order-based  
 New part painting Step 1  
 Plastic part

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