

Technical Information

Boxster
3/99 9415 9

Litronic Retrofit Kit

Binder - 9, Electrics
This bulletin replaces bulletin Grp. 9, #3/99, dated 5-20-99.

Vehicle Type: **Boxster**

Model Year: **As of 1997 (V)**

Concern: **Retrofitting Litronic Headlights**

Information: A Porsche Litronic headlight retrofit kit is now available for 1997 and later Boxsters. The retrofit kit functions in the same manner as the factory installed Litronic system, but with the following exceptions:

- The retrofit Litronic system **is not equipped with automatic headlight beam adjustment (AHBA).**
- The retrofit Litronic headlight control unit **is not diagnosable with the PST2.**

Please advise your dealership personnel accordingly.

Benefits of the Litronic headlight system

The Litronic headlight has modified reflector geometry (depth) and H7 halogen high beam lamps that considerably improve headlight brightness (intensity) over standard H1 halogen lamps. The Litronic headlight system produces a wide and homogeneous illumination pattern.

Important: Always observe all local laws and ordinances!

Parts Information:	Part Number	Qty	Description
	000 044 900 41	1	Litronic retrofit kit

Kit Includes:

Part Number	Qty	Description
996 631 157 07	1	Left Litronic headlight
996 631 158 07	1	Right Litronic headlight
000 044 900 38	1	Headlight control unit, with mounting hardware
999 652 568 22	2	Electrical pin/receptacle, size 2
N 020 904 4	4	Tie wrap
996 612 988 00	1	Electrical wiring harness, including 4-pin plug housing (2 x)
996 552 621 01 D05	1	Dummy cover, not used for USA

Materials Needed: Corrosion protection, primer coat 285-16 (refer to *Paint Manual*)
Electrical tape
Tie wraps
Commercially available etching-primer for touch-up
4 ft. white (0.35mm²) wire (only required for MY '02 and up)

Tools Required:

- Torque wrench up to 10.0 Nm (7.5 ftlb.)
- 10 mm socket wrench
- Side cutters
- Hand drill
- Drill bit, 3.0 mm/6.0 mm
- Various screwdrivers
- Crimping pliers
- Shop lamp
- Headlight unlocking key (in vehicle tool kit)
- Headlight adjustment unit, such as the Bosch EFLE 61 (see *Equipment Information Bulletin # 9801*)
- Headlight adjusting wrench
- Soldering iron and solder

Only if necessary, for step 1.5:

- Scriber
- Small flat file or round file
- Center bit, 20.0 mm
- Triangular scraper
- Vacuum cleaner

Installation:

1. Preliminary steps.

- 1.1** Cover the front of the vehicle with protective covers to prevent paint damage. Remove battery cover panel. Disconnect the battery and cover the battery posts.
- 1.2** Remove spare wheel, brake booster cover, audio amplifier and CD changer, if equipped. Remove carpet from front luggage compartment.
- 1.3** Remove both headlights (see *Technical Manual*, Group 9, Section 94 15 19).
- 1.4** Drill a 3 mm hole in the grommet for the electrical harness (Figure 1, Item A).
- 1.5** Check for a plug on the left and right wall of the luggage compartment, near the headlight adjusters. (Figure 2 and 3, Item A)

If plugs exist, proceed to step 1.6

Only if plugs do not exist, perform the following:

- Bore a 20 mm hole at both positions marked "A" in Figures 3 and 4.

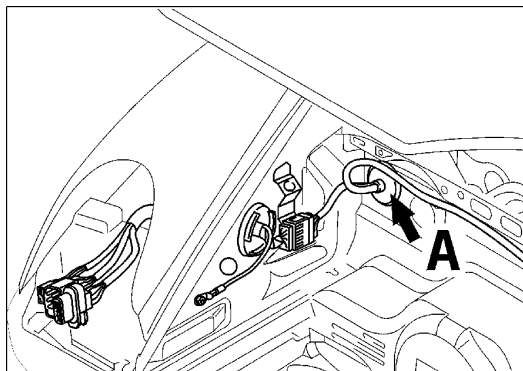


Figure 1

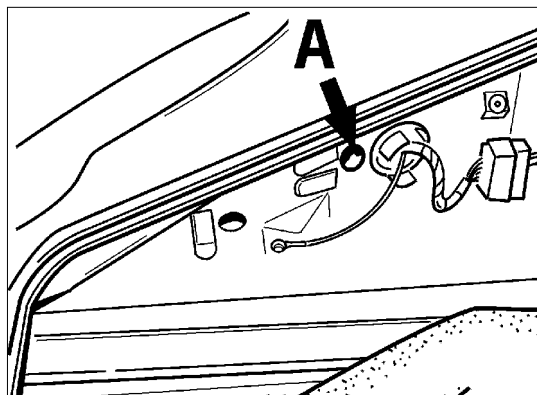


Figure 2

Installation: (cont'd)

- De-burr both holes and apply etching-primer to prevent corrosion.
- Treat both holes with polish after the specified drying time has elapsed.
- Vacuum any drillings from the luggage compartment.

1.6 Remove plugs (Figure 2 and 3, Item A).

2. Perform voltage supply connections.

2.1 Insulate (wrap) the BK/RE wire (1.5 mm²) of the new Litronic harness with electrical tape. Route the BK/RE wire through the 3 mm hole (previously drilled in step 1.4) toward the right windshield washer spray jet.

2.2 Detach and disconnect the 2-pin plug for the right washer jet.

2.3 Locate the BK/YE wire (1.0 mm²) from the 2 pin spray jet plug housing (Pin 1, harness side). Strip back approx. 5 mm of the insulation.

2.4 Combine the BK/YE (1.0 mm²) spray jet wire with the BK/RE (1.5 mm²) Litronic harness wire. Solder the combined wires and insulate with electrical tape.

2.5 Reconnect spray jet connector and reattach to mounting bracket.

2.6 Attach the BK/RE wire to a nearby harness and/or components with electrical tape or tie wraps. Ensure the wire cannot be chafed. Wrap with electrical tape if necessary.

2.7 Route and connect the brown wire (1.5 mm²) of the Litronic harness to the lug of ground point 1. (Figure 4, Item A)
Tightening torque: 9.7 Nm (7 ftlb).

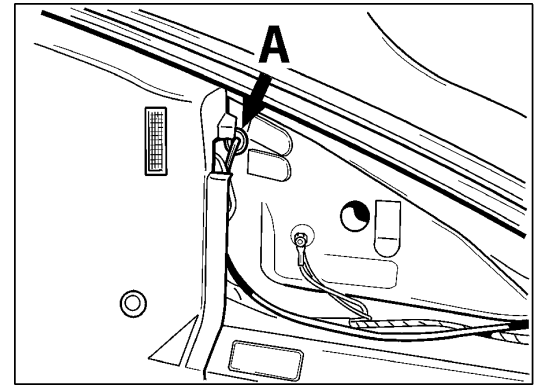


Figure 3

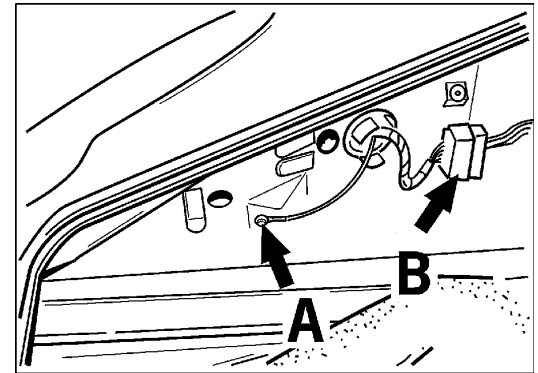


Figure 4

3. Perform headlight connections.

Model years 1999 to 2001 use steps 3.11 to 3.16

Model years 2002 and up, use steps 3.21 to 3.28

3.11 Detach and disconnect connector X1/2 on right wall of the luggage compartment. (Black 21-pin connector, Figure 4, Item B)

3.12 Locate the white wire (1.5 mm²) from connector X1/2 (Pin 2, harness side). Strip back approx. 5 mm of the insulation.

Installation: (cont'd) **3.13** Combine the white wire (1.5 mm²) of the vehicle harness with the white Litronic harness wire (0.35 mm²). Solder the combined wires and insulate with electrical tape.

3.14 Reconnect connector X1/2 and reattach it to it's mount.

3.15 Run the 4-wire long branch of the Litronic harness through the hole on the left side of the luggage compartment. Secure harness grommet into the hole. Attach the harness to nearby components/wires with electrical tape or tie wraps, ensuring the wire cannot be chafed.

3.16 Go to step 3.3.

3.21 Locate the white wire in the Litronic wiring harness. You must extend the white Litronic wire to connector X1/1, located on the left side of the luggage compartment. Using a piece of white wire (0.35 mm²) in diameter, 4 feet long, strip one end and solder it to the white Litronic harness wire. Insulate the connection with electrical tape.

3.22 Secure the extended white wire to the 4-wire long branch of the Litronic harness using electrical tape.

3.23 Run the 4-wire long branch of the Litronic harness through the hole on the left side of the luggage compartment, and run the extended white wire to the white 21-pin connector (X1/1). Secure harness grommet into the hole. Attach the harness to nearby components/wires with electrical tape or tie wraps, ensuring the wire cannot be chafed.

3.24 Detach and disconnect connector X1/1 on left wall of the luggage compartment.

3.25 Locate the white/black wire (1.5 mm²) from connector X1/1 (Pin 2, harness side). Strip back approx. 5 mm of the insulation.

3.26 Combine the white/black wire (1.5 mm²) of the vehicle harness with the extended white Litronic harness wire (0.35 mm²). Solder the combined wires and insulate with electrical tape.

3.27 Reconnect connector X1/1 and reattach it to it's mount.

3.28 Go to step 3.3.

3.3 Run the 4-wire short branch of the Litronic harness through the hole on the right side of the luggage compartment. Secure harness grommet into the hole.

3.4 Insert the 4 wires at each headlight into the supplied connectors according to the following table:

Color	Cross Section	Instructions
Pink	0.5 mm ²	Insert in pin 1 of the 4-pin plug.
Green	0.5 mm ²	Insert in pin 2 of the 4-pin plug.
Gray	0.5 mm ²	Insert in pin 3 of the 4-pin plug.
Violet	0.5 mm ²	Insert in pin 4 of the 4-pin plug.

3.5 Attach the harness in the wheel housings to nearby components/wires (Figure 5, Item A).

4. Install headlight control unit.

Installation: (cont'd) **4.1** Connect the headlight control unit to the Litronic wiring harness.

4.2 Remove the protective film from the Velcro strips on the control unit and attach the control unit to the side member/right wall of the luggage compartment. The plug should be facing upward as shown in Figure 6.

5. Install Litronic headlights.

5.1 Transfer the reflectors from the old headlights to the new.

5.2 Coat the side edges of the headlight with soap to ease installation.

5.3 Position Litronic headlights before mounting. Connect the 4-pin plug at the rear of each headlight. Ensure the plug fully engages. Insert headlights into the body and lock with locking tool.

Note: If the headlights cannot be locked, or if a high degree of force is necessary to lock the headlights, the basic mounting position of the headlights must be adjusted.

5.4 Ensure correct seating of the headlights in the body (see *Technical Manual*, Group 9, Section 94 15 05).

6. Concluding work

6.1 Check fuses A9 and A10 for the left and right dipped beams (low beams). Both fuses must have a 15 amp rating. If 7.5 amp fuses exist in positions A9 and A10, they must be replaced with 15 amp fuses.

6.2 Connect battery and set clock.

6.3 Perform a function test.

6.4 Install the luggage compartment carpeting, brake booster cover panel, amplifier and CD changer, if equipped.

6.5 Install spare wheel.

6.6 Check headlight adjustment. Adjust if necessary. (*Technical Manual*, Group 0, pages 03-8 and 03-9).

6.7 Input radio code if necessary.

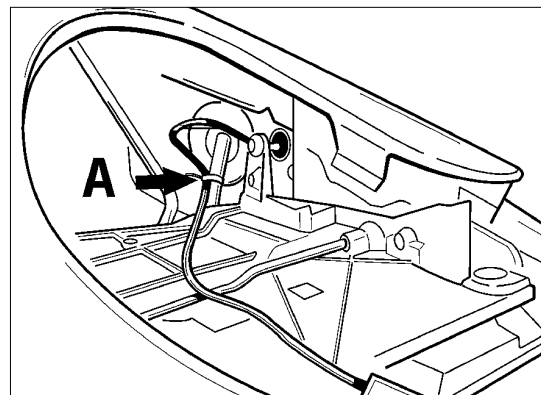


Figure 5

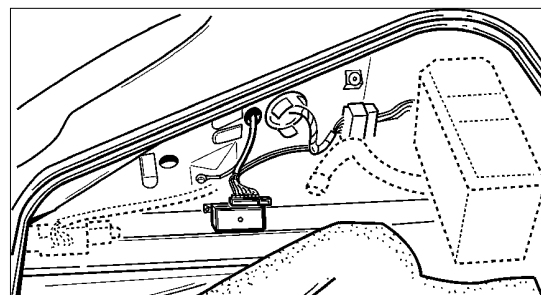


Figure 6

Working Time:	Labor Operation	Time Units	Description
	94 15 24 00	180 TU	Install Litronic headlights, both sides <i>Includes: Disconnecting and connecting battery, routing electrical leads, installing control unit, performing function test, checking and adjusting headlights.</i> <i>Without: CD changer remove and install (separate labor operation)</i>
Literature:	Boxster Technical Manual, Groups 0/9, sections: 03 20 00 - Maintenance 94 15 19 - Removing and installing main headlights 94 15 05 - Headlights - basic adjustment in the body Equipment Information Bulletin, #9801		

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