



Upgrade Single Phase 32A or 40A Wall Connector to 80A

Classification	Repair Bulletin	Section/Group	50 - External Charging Connectors	Country/Region	Hong Kong, China
Year	2014-2015	Model	Model S	Version	Dual Chargers

Bulletin Classification: This repair bulletin provides instructions and guidelines for a noted condition or a customer concern. The information provided can address a broad range of known or perceived issues with the operation of Tesla vehicles. This bulletin might not be VIN-specific. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla Motors assumes no liability for injury or property damage due to a failure to properly follow these instructions or repairs attempted by unqualified individuals.

Condition

Model S customers in Hong Kong and China currently have Wall Connectors that are capable of charging up to 32A or 40A single phase. Some of these customers have dual chargers and were told that they would be able to charge at up to 80A single phase.

Correction

Perform this procedure to upgrade the 32A or 40A Wall Connector to charge at up to 80A single phase.

NOTE: This 80A upgrade procedure is intended for existing customers in Hong Kong and China who have already installed 80A capable circuit breakers and wiring. The Wall Connector cannot charge at a higher rate than can be supported by the building wiring and circuit breaker.

Required Part(s):	Part Number	Description	Quantity
	1054958-00-A	ASY,VC,EU,1P,80A,GEN1 WC	1
	1011861-00-B	CBL CLAMP, 21.6MM,EXL9330	1
	1020396-00-A	CBL CLAMP,23MM,7.1MM,ZNC	1
	1011908-00-B	GROMMET,21.6MM,28.6MM,7.08MM,EPDM	1
	1018870-00-A	SCR,M5-0.8X20,PH,TORX,STL,ZNC	2
	1054963-00-A	LBL,EU,1PH,80A,WC	1

Shop supplies:

Paint pen

These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Manual.

Special Tool(s): 1063276-00-A HPWC field programmer 80A

Correction Description	Correction	Time
Inspection Only; Wall Connector Upgrade Not Required	S011550001	0.05
Upgrade 32A Or 40A Wall Connector To Allow Charging At 80A	S021550001	0.50

Procedure

⚠ WARNING: Only licensed electricians or technicians who have been trained in High Voltage Awareness are permitted to perform this procedure. Proper personal protective equipment (PPE) and insulating HV gloves with a minimum rating of class 00 (500V) must be worn any time a high voltage cable is handled. Refer to service bulletin SB-13-92-003, “High Voltage Awareness Care Points” for additional safety information.

NOTE: Service Manual procedures 50022002 and 50024002 are required to perform this upgrade. Provide the third-party electrician with a printed copy of Service Manual procedures 50022002 and 50024002.

1. Turn off the electricity to the Wall Connector at the circuit breaker.

⚠ WARNING: Electricity must be turned off at the circuit breaker before continuing this procedure. Failure to follow this requirement might result in serious injury or death due to exposure to high voltage.

2. Remove the 2 screws and washers that secure the front cover of the Wall Connector (Figure 1).



Figure 1

3. Remove the front cover of the Wall Connector.

⚠ CAUTION: Do not damage the white ribbon cable when removing the front cover.

4. Check the inside of the front cover:

- If “SB-15-50-001 applied” is written on the inside of the front cover, the Wall Connector has already been upgraded. Reassemble the Wall Connector and discontinue this procedure.
- If either “SI-14-50-001 applied” or “SB-15-50-002 applied” is written on the inside of the front cover, continue to the next step of this procedure.
- If there is no writing on the inside of the front cover, continue to the next step of this procedure.

⚠ WARNING: Proper personal protective equipment (PPE) and insulating HV gloves with a minimum rating of class 00 (500V) must be worn while performing the next step.

5. Use a properly rated voltmeter or multimeter to check for voltage between the L1 and L2 terminals (Figure 2).

⚠ WARNING: Due to the risk of electrocution, do not continue this procedure if any voltage reading is more than 10V.

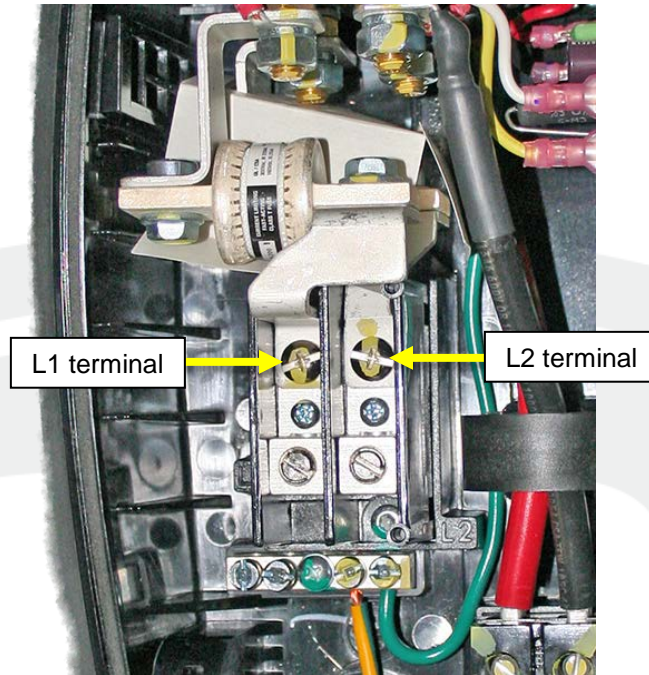


Figure 2

6. Remove the Wall Connector handle and cable assembly (refer to Service Manual procedure 50024002).

7. Cut the wires that secure the handle to the cable assembly as shown (Figure 3).

NOTE: Cutting the wires ensures that no one uses the assembly in the future.



Figure 3

8. Discard the handle and cable assembly.

9. Remove and discard the 2 screws that secure the plastic strain relief base to the base of the Wall Connector housing (Figures 4 and 5).

NOTE: The plastic strain relief base might be black or white in color.

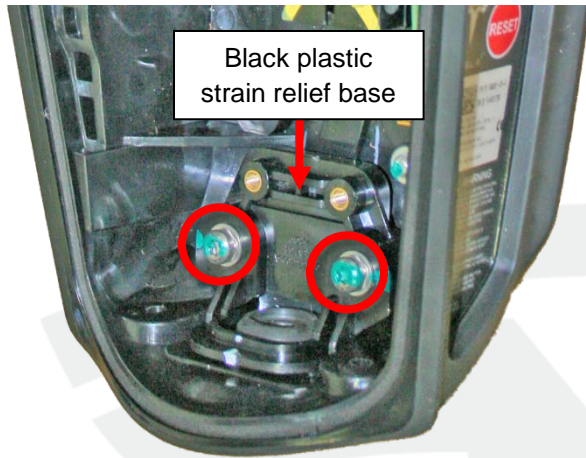


Figure 4

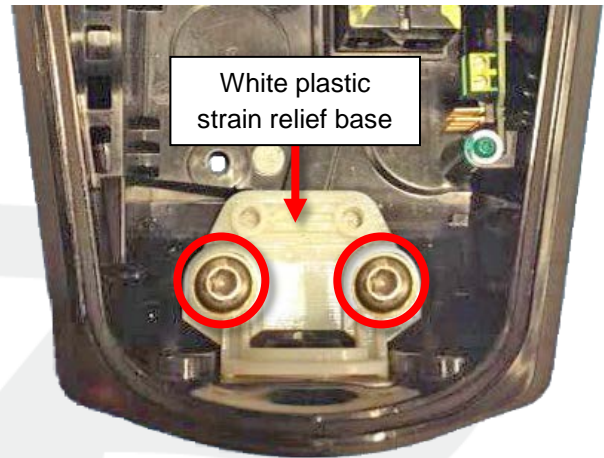


Figure 5

10. Remove the plastic strain relief base from the housing by pushing it towards the top of the Wall Connector. Discard the plastic strain relief base, O-ring, and grommet.
11. Plug the power cable into the 80A programmer.
12. Plug the adapter and power supply assembly into a wall outlet.
13. Locate the pin header on the printed circuit board assembly (PCBA) along the right hand side of the Wall Connector housing (Figure 6).



Figure 6

14. Install the adapter at the end of the ribbon cable onto the pin header (Figure 7).

NOTE: Ensure that the 80A programmer (1063276-00-A) is being used. The correct programmer has “80A” imprinted at the top of the casing.

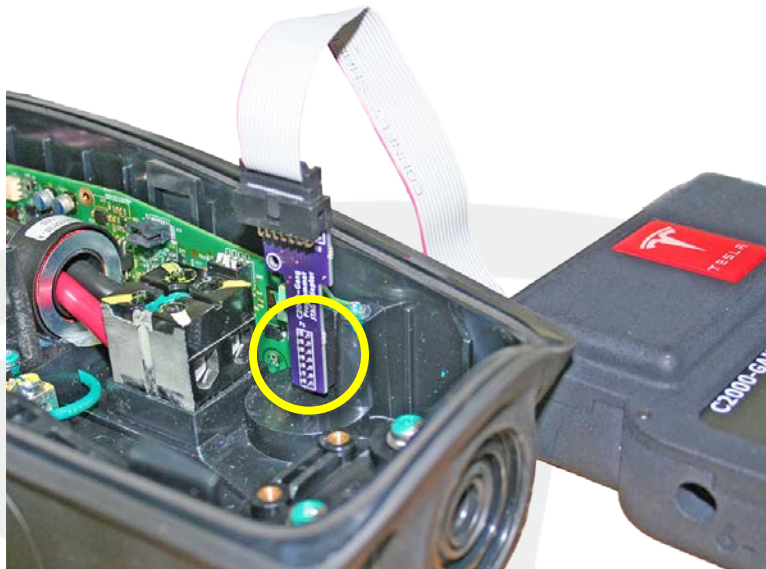


Figure 7

15. Once the display screen on the programmer is lit, press the “Go” button on the bottom right (Figure 8).

NOTE: The programmer automatically updates the firmware on the Wall Connector. The screen displays: *Start, Download, Erase, Write, then Finished.*



Figure 8

16. When the display screen displays “Finished”, ensure that the display has a check mark under the “1” on the left side (Figure 9).

NOTE: A check mark under the “1” indicates that the firmware update was successful. Disregard all numbers other than “1”.

NOTE: If the firmware update was unsuccessful (an “X” is displayed under “1”), disconnect the power cord from the programmer for 30 seconds, ensure all connections are tight, re-connect the power cord, then perform step 15 again.



✓ Figure 9

17. Remove the adapter from the pin header on the PCBA.

18. Unplug the power cable from the programmer and the wall outlet.

19. Use a pointed non-conductive object such as a plastic pen to adjust the DIP switches to set the operating current based on the capacity of the circuit breaker being used (Figure 10).

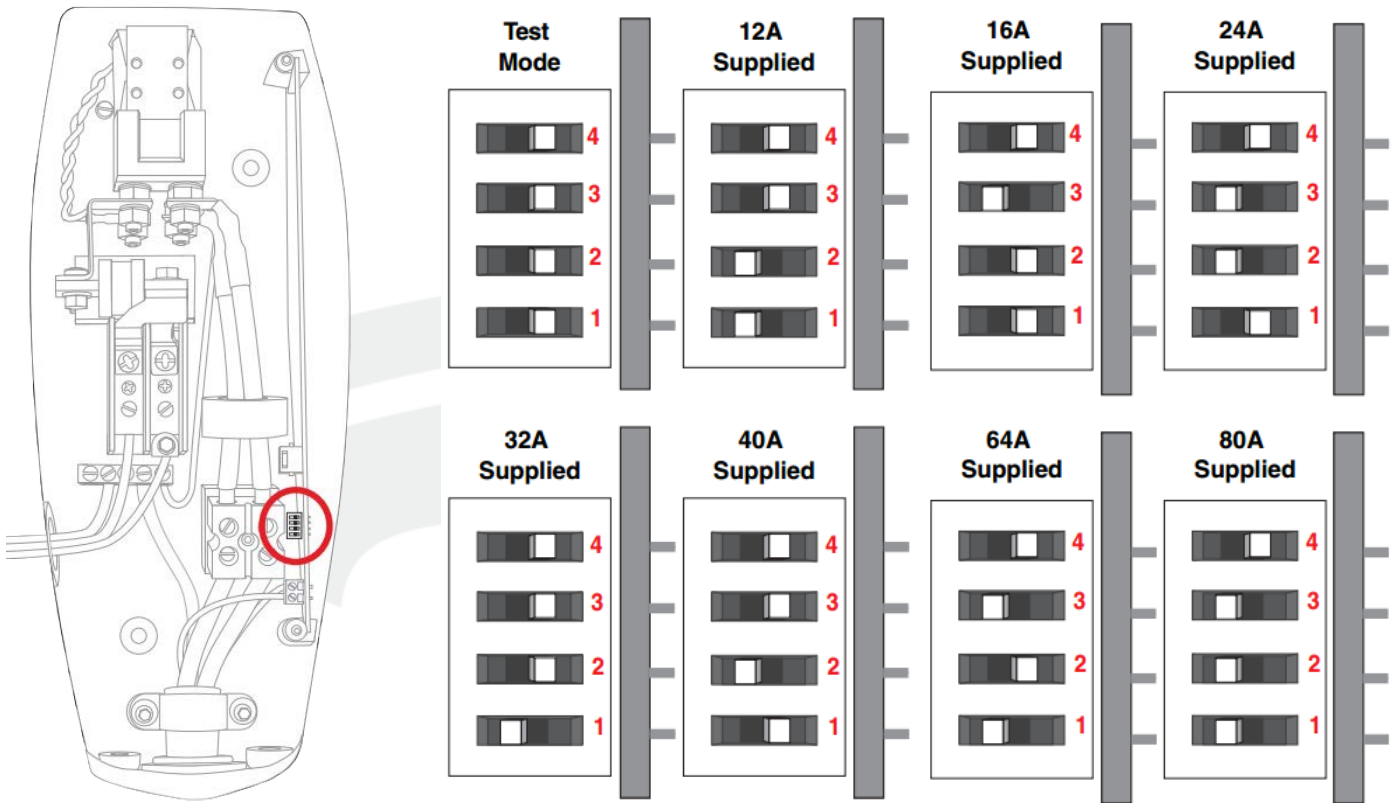


Figure 10

20. Use a paint pen to write on the inside of the Wall Connector's front cover:

SB-15-50-001 applied <today's date>

21. On the left hand side of the casing, apply the 80A label over the existing label (Figure 11).



Figure 11

22. Install the new 80A Wall Connector handle and cable assembly (refer to Service Manual procedure 50022002).
23. Turn on the electricity to the Wall Connector at the circuit breaker.
24. Ensure that the vehicle is able to charge at the selected current setting.