


BR-15-92-010 R2 February 20, 2020		Tesla, Inc. Body Repair Technical Note
Model:	Vehicle System:	Region:
All	92 - Tools and Equipment	All

Approved GMA Welding Wires for Structural Repairs

Body Repair Tech Notes provide information about Tesla-approved methods and practices for body repair. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla assumes no liability for injury or property damage due to a failure to properly follow these instructions or for repairs attempted by unqualified individuals.

This Body Repair Tech Note supersedes BR-15-92-010 R1, dated 28-Jul-17. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

Use only approved GMA (gas metal arc) welding wire for structural repairs on Tesla vehicles.

⚠ WARNING: Failure to follow all welding safety precautions, including the use of personal protective equipment, could result in serious injury or property damage. Only technicians who have successfully met Tesla's requirements for welding training are authorized to weld structural components on Tesla vehicles.

⚠ WARNING: To maintain vehicle crash integrity, use the welding wires specified in this document to perform GMA welding on Tesla vehicles.

⚠ CAUTION: Before GMA welding, make sure that the structural adhesive is dry to the touch.

⚠ CAUTION: Before GMA welding, perform a test weld using material of the same gauge and type to make sure that the welding equipment settings produce a satisfactory joint.

Approved GMA Welding Wire

Use only the approved GMA welding wires listed below for structural repairs on Tesla vehicles.

Material	Approved Welding Wire	Part Number	Thickness
Aluminum	ER4145	AlcoTec: 414505047	1.2 mm diameter
		Lincoln Electric: ED037457	
		Tesla: 1022767-00-A	
Mild Steel	ER70S-6 (any)	Vendor-specific	.8 mm diameter
	Bohler Union X96	Pro-Spot: 50-7040	.9 mm diameter
High-Strength Steel	Bohler Union X96	Pro-Spot: 50-7040	.9 mm diameter
Ultra High-Strength Steel	Bohler Union X96	Pro-Spot: 50-7040	.9 mm diameter

☰ NOTE: Part numbers were current at the time of publication. Use the revision listed or later, unless otherwise specified in the [Parts Manual](#).

☰ NOTE: All Tesla-approved welders use 5 lb spools of welding wire.

For information on the material used for specific body components on Tesla vehicles, refer to:

- **Model S:** [BR-19-10-001](#), “Model S Body Structure Materials and Allowed Operations.”
- **Model X:** [BR-19-10-002](#), “Model X Body Structure Materials and Allowed Operations.”
- **Model 3:** [BR-17-10-005](#), “Model 3 Body Structure Materials and Allowed Operations.”
- **For all other models:** Refer to the model-specific Body Repair Procedures manual section “Body Structure Materials and Allowed Operations.”

For feedback on the accuracy of this document, email BodyRepair@tesla.com.