Destructive testing on spot welds

SCRS REPAIRER DRIVEN SOCIETY OF COLLISION REPAIR SPECIALISTS

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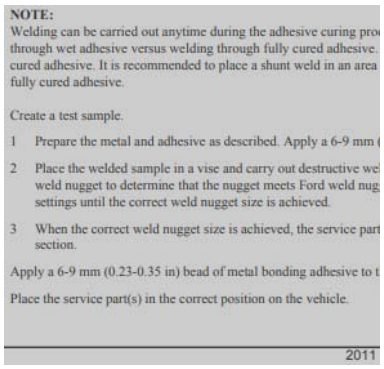
1. Welding machine setup and destructive weld testing is currently a NOT INCLUDED labor operation in all three estimating systems.
   To perform a weld test, cut two pieces of metal (2” x 3”) from the area of vehicle being replaced.



NOTE:
Welding can be carried out anytime during the adhesive curing pro
through wet adhesive versus welding through fully cured adhesive.
cured adhesive. It is recommended to place a shunt weld in an area
fully cured adhesive.

Create a test sample.

1 Prepare the metal and adhesive as described. Apply a 6-9 mm (

2 Place the welded sample in a vise and carry out destructive we
weld nugget to determine that the nugget meets Ford weld nug
settings until the correct weld nugget size is achieved.

3 When the correct weld nugget size is achieved, the service part
section.

Apply a 6-9 mm (0.23-0.35 in) bead of metal bonding adhesive to t

Place the service part(s) in the correct position on the vehicle.

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2. Always follow manufacturer procedural steps for spot welding. Use adhesives that you will be using on the vehicle. Test adhesives, wet or dry, as outlined in the OEM documented procedures.

3. Measure the thickness of the test metal with a caliper.

4. Set the welding machine to proper thickness.

5. Clamp the two pieces of metal together, and overlap by 1/2”. Note that the clamp is isolated with electrical tape.

6. Spot weld a single weld in the center of the coupons.

7. Attach V-jaw pliers to both pieces of the sheet metal. Note how the round part of the pliers will roll into each other.

8. Peel back the two pieces of metal to expose the weld nugget.

9. Measure the diameter of the weld nugget with a caliper. Refer to OEM data to determine nugget measurement formula. If no formula, a rule of thumb is: Thickness of the metal X 5. In the example, .8mm X 5 = 4.0 mm for a good weld.

10. Photograph results, showing caliper measurement, repair order number, date and technician. Attach to the repair order file.

SCRS recognizes the variety of welding equipment used in the collision repair industry, and different OEM requirements to use specific welder types. Labor times for welded replaced parts do not include equipment manufacturer procedural steps for welder setup and/or welding tests and preparation. Each welding machine manufacturer may have its own unique configurations and setup processes. Additionally, many vehicle manufacturers require destructive weld testing to confirm that the technician has met the requirements to properly perform and replicate the weld operation to OEM specifications on the vehicle. There may be vehicle-specific variables that affect the amount of necessary welding machine setup time and pre-weld preparation. Always consult the OEM documented procedures.

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