USE OF HEAT WHILE REPAIRING DAMAGED STRUCTURAL & NON-STRUCTURAL COMPONENTS
POSITION STATEMENT

Structural Components

Structural components are designed to help ensure occupant safety and structural integrity of the vehicle. If this type of component becomes damaged, it requires repair and/or replacement. Some repair methods may require damaged areas to be heated and "pulled" to relieve stress before disassembly.

If heat is used to straighten structural high-strength steels, advanced high-strength steel or ultra high-strength steel, the component must be replaced. If the damaged component requires heat for making a pull, the adjacent component, to which it is attached, must not be affected by heat transfer. Cold straightening may be used without replacement of the component.

Heat produced by oxy-fuel cutting torches and other heating/cutting equipment has a negative effect on the high-strength steels' microstructure, making the affected steel incapable of meeting manufacturer requirements. Always validate the type of steel being repaired or replaced and follow the procedures required for welding and joining those steel strengths.

Some steels are unable to weld or may be difficult to weld using standard body shop equipment such as MIG/MAG welders and squeeze-type resistance spot welders. Steels, such as press-hardened steel (PHS), TRIP steel (TR, TRC), TRIP assisted bainitic steel (TB, TBC), or quenching and partitioning steel (QP, QPC), may present certain joining challenges. Refer to individual model repair procedures for joining/welding requirements.

Non-Structural Components

Damaged, non-structural mild steel components will require repair or replacement. Mild steel, in non-structural applications, can be repaired or replaced using common methods that apply heat or produce heat during the repair procedure.

Damaged non-structural, mild steel components may require heat for the purposes of straightening the metal. If the damaged component requires heat for straightening, heat may be used to realign the component. If the mild steel component is attached to any type of high-strength steel component, heat must not transfer to the adjacent high-strength steel component.

Heat produced from stud welding guns, cut-off wheels, oxy-fuel torches and MIG welding operations, when used properly, is acceptable for use on mild steel, non-structural components. Always confirm the type of steel being repaired or replaced and verify heat application exclusions prior to attempting a repair.

Note: Under no circumstance is a repair of any safety-related component acceptable. No cold straightening or heat-added repair/replacement procedure may be used in proximity of a safety-related component, including, but not limited to, restraint mounting areas, supplemental restraint mounting areas, occupant safety structure, impact safety, impact bars, intrusion beams and roll-over protection. Ignoring these requirements will seriously compromise occupant safety in a future collision event, reduce the engineered qualities, and decrease durability and reliability of the vehicle.

This statement supersedes any previously released information by FCA US LLC.