

Frame Repair and Reinforcement

Special Tool(s) / General Equipment

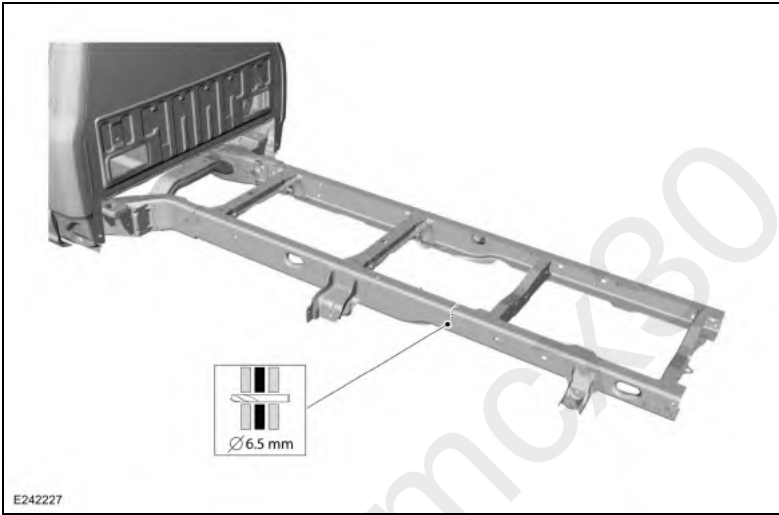
6.5 mm Drill Bit
Spherical Cutter
Grinder
Plasma Cutter
Air Body Saw
15 mm Drill Bit
MIG/MAG Welding Equipment
Locking Pliers

Repair

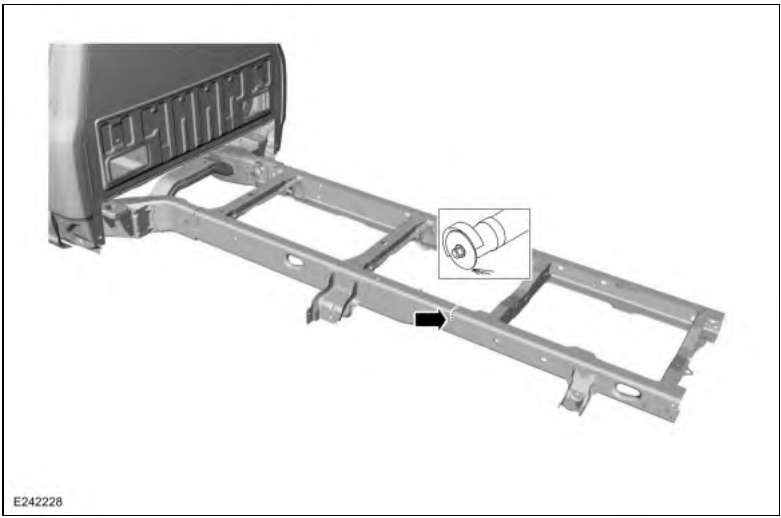
NOTICE: Frame stress crack repairs can only be performed on chassis cab style open channel frames. Stress crack repairs on frames used on pick up trucks should should not be attempted.

NOTE: The following procedure is intended as a general guideline to repair frame stress cracks. Due to frame high-strength materials used, welding should be kept to a minimum.

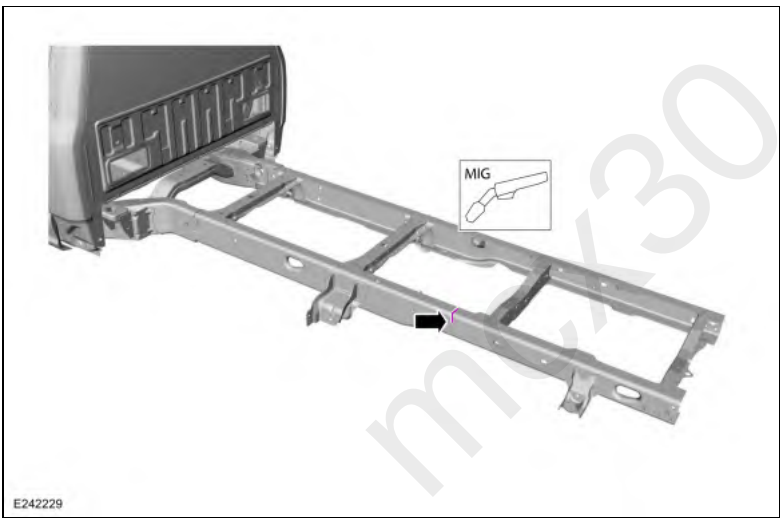
- 1. Drill a 6.5 mm (1/4 inch) hole at the base of the crack to reduce possibility of the crack spreading.
Use the General Equipment: 6.5 mm Drill Bit



- 2. Bevel grind the crack **on both sides** of the frame to allow full weld penetration.
Use the General Equipment: Grinder

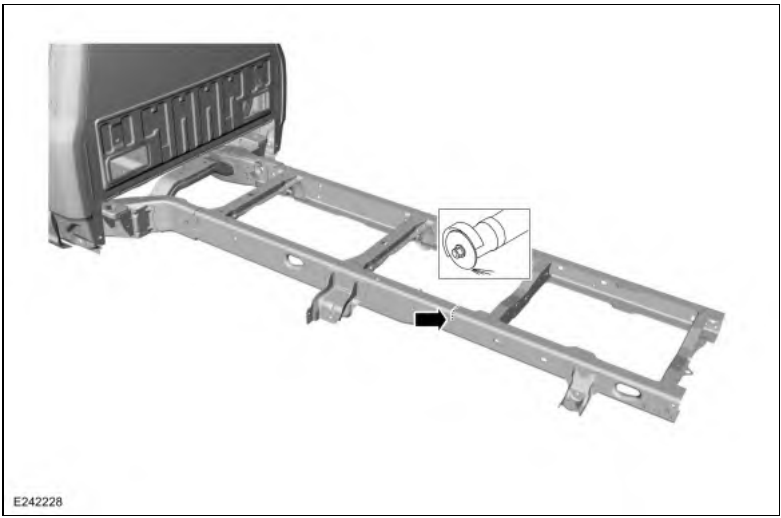


3. Completely MIG weld the crack **on both sides** of the frame.
Use the General Equipment: MIG/MAG Welding Equipment



4. **NOTE:** Use caution to avoid excess thinning of the metal.

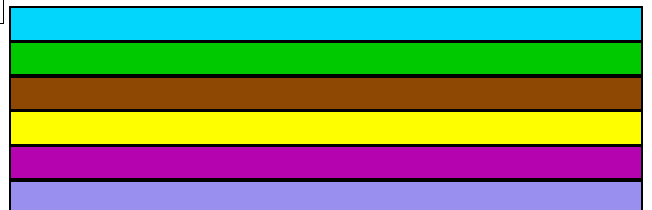
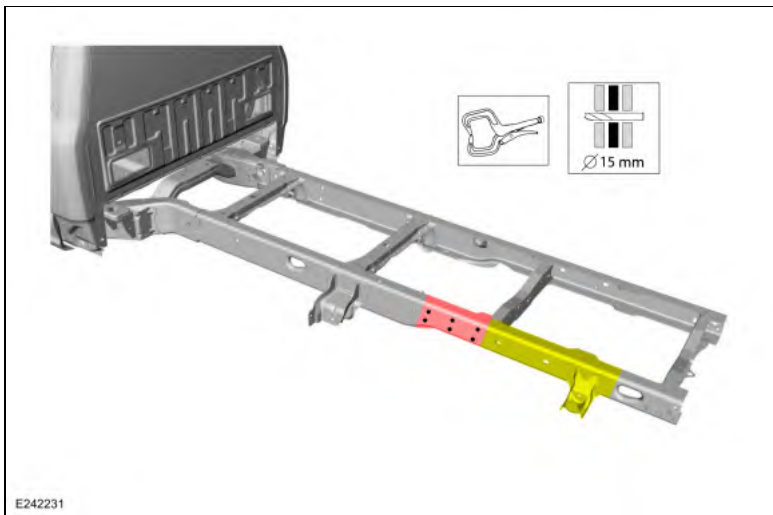
Grind the weld bead **on both sides** of the repair.
Use the General Equipment: Grinder



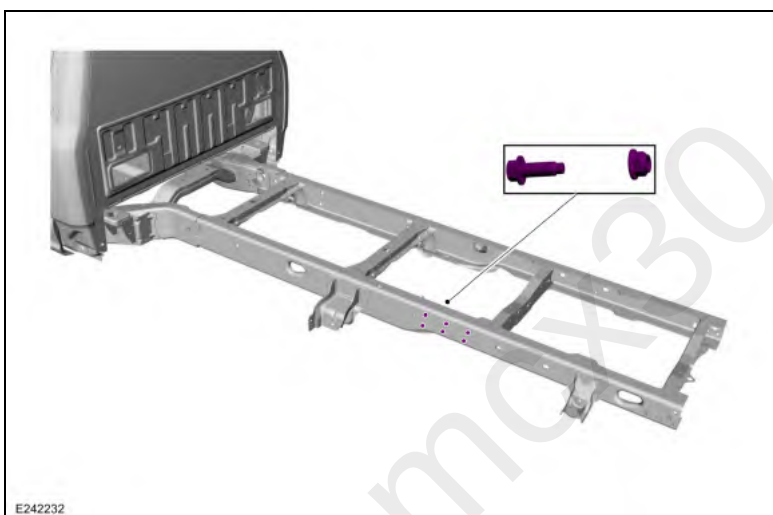
5. Create a reinforcement of comparable steel extending at least 50 mm beyond the repair **each side**.
Use the General Equipment: Air Body Saw
Use the General Equipment: Spherical Cutter
Use the General Equipment: Plasma Cutter



6. Install the reinforcement on the inboard side of the frame, clamp and drill fastener holes.
Refer to: Drilling Precautions (502-02 Full Frame and Body Mounting, General Procedures).
Use the General Equipment: Locking Pliers
Use the General Equipment: 15 mm Drill Bit



7. Install 13 mm (1/2 inch) SAE flange head grade 8 bolts and nuts.
Torque: 115 lb.ft (156 Nm)



8. Refinish the entire repair using a Ford approved paint system.
9. Restore corrosion protection.
Refer to: Corrosion Prevention (501-25 Body Repairs - General Information, General Procedures).