

Technical Bulletin

TB 210

Field Mounting Bracket Installation

This sheet describes procedures to field install mounting brackets on the mast.



WARNING: Failure to install correct brackets and crossmembers can result in mast structural failure, bodily injury and loss of warranty.



WARNING: Mounting bracket and crossmember welding must be performed by a certified welder familiar with this type of fabrication.

1. Disassemble the outer channel from the mast prior to welding.
2. Clean all surfaces to be welded. Remove paint, oil, grease and other contaminants.
3. Locate the lower mounting brackets on the mast rails. Clamp in place with "C" clamps. Protect the mast rail inner surfaces from weld splatter with fiberglass cloth. See Figure 1.

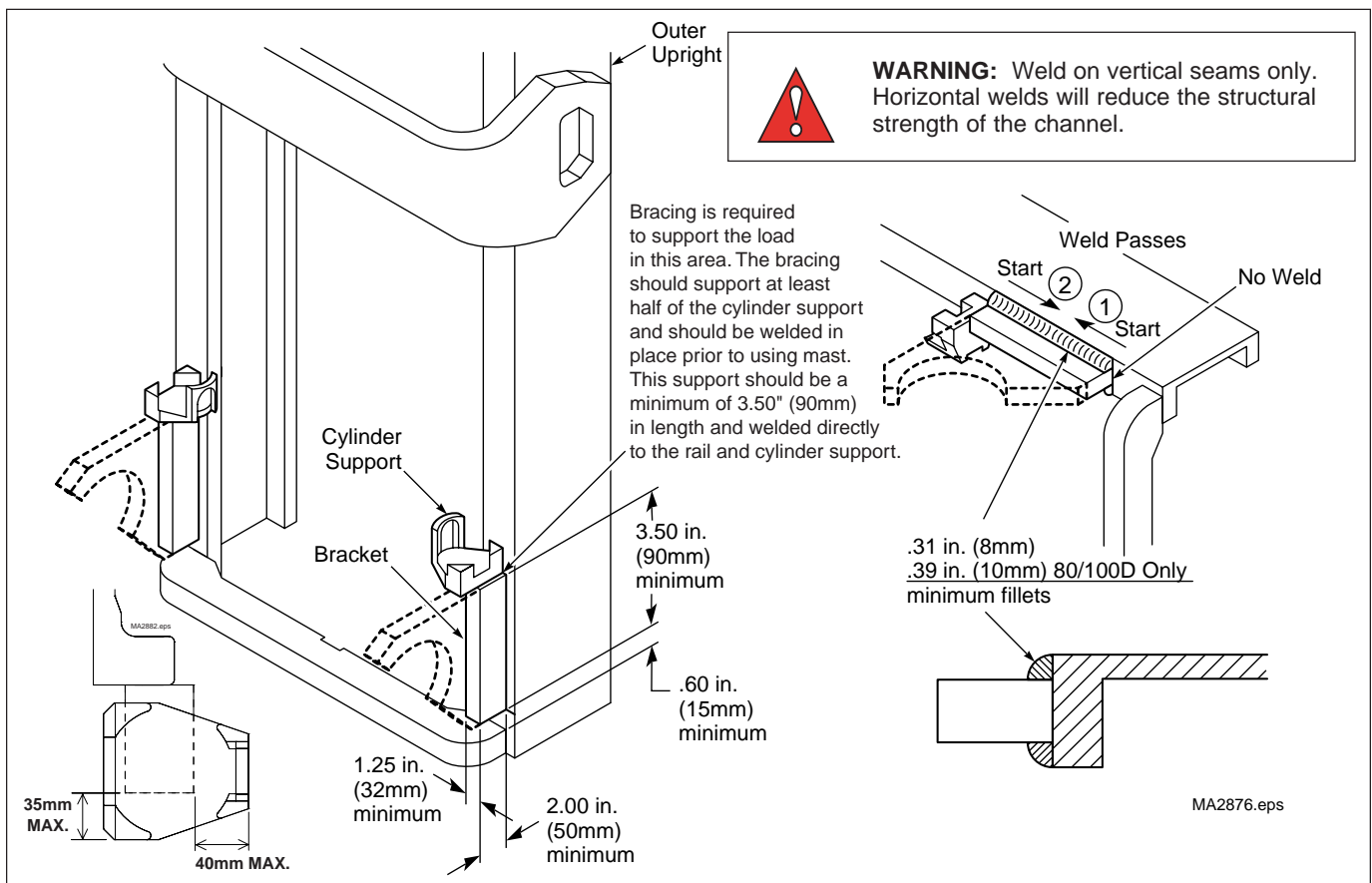


Figure 1. Lower Mounting Brackets

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4. Locate the tilt cylinder brackets on the mast rails. Clamp in place with "C" clamps. Protect the mast rail inner surfaces from weld splatter with fiberglass cloth. See Figure 2.

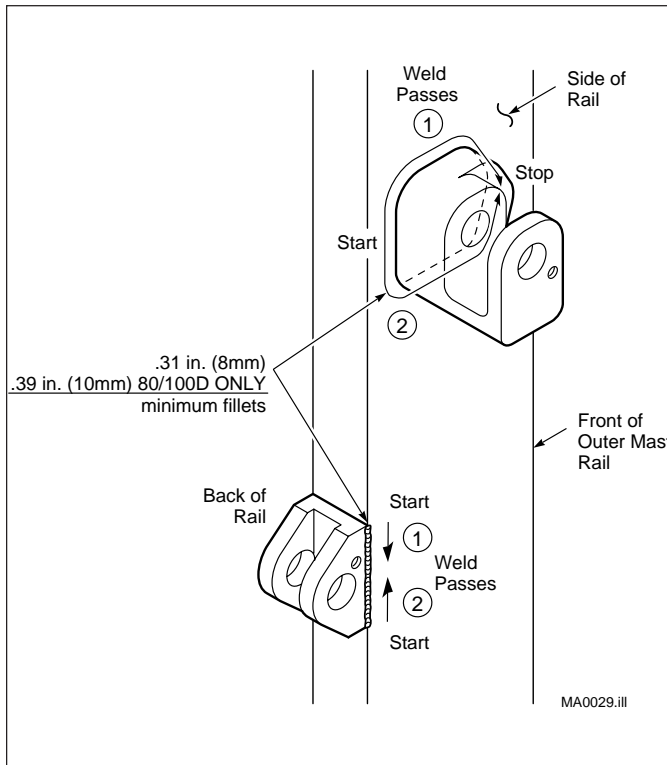


Figure 2. Tilt Cylinder Anchor Brackets.

5. Preheat the weld area to 100° F (38° C) before welding. Do not weld in a drafty area.
6. **WELD METHOD A** – Attach the ground wire to the outer upright. Weld using FCAW (Flux Core Arc Weld) AWS E70T-5 1/16 in. (1.5 mm) diameter wire with 100% CO₂ shielding gas. Use the location and fillet size shown holding a close arc. Do not oscillate or use a wash bead pattern. Let the welds slow cool.

WELD METHOD B - Attach the ground wire to the outer upright. Weld using GMAW (Gas Metal Arc Welding) AWS ER 70 S-6, 0.45 in. diameter wire with 92% Argon, 8% CO₂ to 75% Argon, 25% CO₂ shielding gas. Use the location and fillet size shown holding a close arc. Do not oscillate or use a wash bead pattern. Let the welds slow cool.

NOTE: This information should not be interpreted as the basis for warranty claims unless so designated.

WELD METHOD C – Attach the ground wire to the outer upright. Weld using E-7018 low hydrogen 5/32 in. (4 mm) electrodes. Use reverse polarity or a AC welding machine set at 145-225 amps. **Do not use electrodes exposed to moisture without first re-drying them at 200° F (75° C) for 2 hours.** Use the location and fillet size shown holding a close arc. Do not oscillate or use a wash bead pattern. Let the welds slow cool.



WARNING: Weld areas that will be vertical seams when the mast is standing upright only. **DO NOT WELD ANY HORIZONTAL SEAMS. SEE FIGURES 1 and 2.**

7. Weld in the horizontal position only. Weld each bracket in two passes. See Figures 1 and 2. Run the first weld from the bottom of the bracket to midpoint. Run the second weld from the top of the bracket to midpoint and overlap the first weld to eliminate arc craters.
8. Remove slag and inspect the weld. The following defects are not allowed: undercut, overlap, stress cracks, craters and porosity. Clean the weld area and repaint.
9. The measurement shown in Figure 3 should be taken after welding and cooling the mast. This dimension must be maintained for the uprights to operate properly.
10. Reassemble the mast.

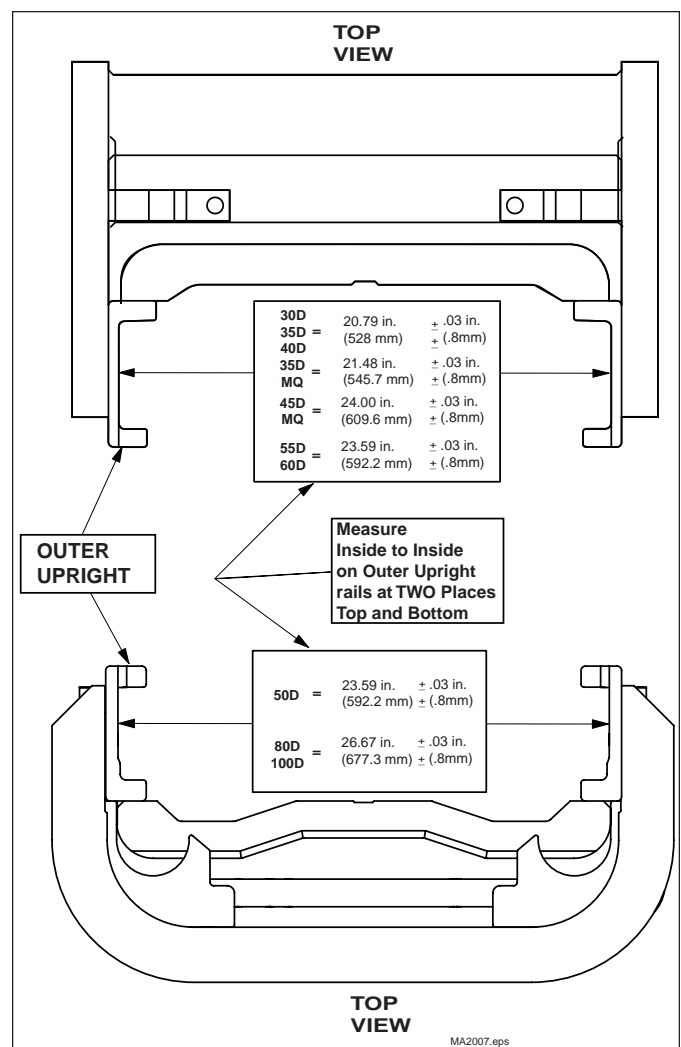


Figure 3. Dimensional Inspection.