



An Oshkosh Corporation Company

Iowa Mold Tooling Co., Inc.

500 Highway 18 West • P.O. Box 189 • Garner, IA 50438-0189 • P: (641) 923-3711 • F: (641) 923-6063

03/18/2014

To: SDP Manufacturing

Sub: Fiberglass boom retrofit process

Tools and supplies required:

1" hole saw with 1/4" pilot drill; tape measure; 6" to 12" square; wax (china) marker; 5/16" drill bit; 1" diameter 82 degree counter sink; 3/8-16 UNC tap; tap handle; shop vacuum; deburring tool; center punch; high strength (red) thread locker; cordless or corded 3/8" electric drill (an air drill may be used if less than 300 rpm)

NOTE: DO NOT use any kind of oil in this process – no lubrication or cutting oils of any kind. Oil is not required nor recommended for drilling on these booms. Set up in an assured clear area where the boom may be extended. All four (4) stabilizers must be deployed before starting this process.

Procedure for testing the adhesive used to attach the fiberglass to the metal insert tubing:

1. Go to Fig 31 for details on how to make a stop/test block for steps 2 through 5.
2. Extend the last/stinger extension boom fully (see Fig 1).
3. Using the wax (china) marker, draw a line on the fiberglass boom along the end of the 2nd extension boom (see Fig 2).
4. Place the stop/test block over the fiberglass portion of the last/stinger boom (see Fig 3).
5. Using the controls for the crane, retract the last/stinger boom fully until the hydraulics dead-head against the stop/test block (see Fig 4).
6. Again, fully extend the last/stinger boom. Remove the stop/test block. Observe the line drawn in step 2. It should align with the end of the 2nd extension boom as marked in step 2 (see Fig 5).
7. If the line on the boom is now out past the edge of the 2nd extension (see Fig 6), the fiberglass boom assembly must be replaced. If the line is as originally marked, proceed to the next step.
8. Observe the end of the last/stinger boom outer end of the fiberglass. If the insert here has pulled out (see Fig 7), the fiberglass boom must be replaced. If it is as originally assembled, proceed to the next steps.

Procedure for adding bolt to the inner end of the last/stinger extension boom:

9. Extend last/stinger extension boom fully (see Fig 1).
10. Extend 2nd extension boom approximately 16 inches for the EZ5500 or 40 inches for the EZ3000 (see Fig 8).
11. Measure back from end of 2nd extension boom end (see Figs 8 & 9) 11-1/8 inches for the EZ5500 or 35-1/4 inches for the EZ3000. Mark line with wax marker.
12. Extend line vertically past the vertical centerline of the 2nd extension boom (see Fig 10).



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13. Measure down from the top of the 2nd extension boom four (4) inches and mark with a wax marker (see Fig 11).
14. Use a center punch and mark this point (see Fig 12).
15. Using the 1" hole saw and the shop vacuum, drill through the 2nd extension boom being careful not to cut in to the fiberglass boom with the hole saw. The pilot drill will drill thru the fiberglass boom (and metal insert tube). Be sure to remove the 1" slug from the boom (see Figs 13 & 14)
16. Remove any burrs in the hole of the 2nd extension boom.
17. Using the 5/16" drill bit and the shop vacuum, drill through the fiberglass boom and the metal insert tube inside the fiberglass boom (see Fig 15).
18. Using the 1" diameter 82 degree countersink bit and the shop vacuum, countersink the hole in the fiberglass until the O.D. of the countersink is the same size as the head on the supplied 3/8-16 UNC flat head, stainless steel bolt, approximately 7/8" diameter (see Figs 16 & 17).
19. Using the 3/8-16 UNC tap, the tap handle, and the shop vacuum, thread the hole through the fiberglass boom and the metal insert tube inside the fiberglass boom (see Fig 18).
20. Apply thread locker to the supplied bolt (see Fig 19).
21. Thread the bolt into the fiberglass and the metal insert tube inside the fiberglass boom.
CAUTION: Hand tighten only - do not use any power tools on the stainless steel bolt. The threads will gall-up and you will not be able to properly torque the bolt.
22. Torque the bolt to 30 ft-lb (see Fig 20).
23. Use an air nozzle to blow any remaining chips down inside the tube (see Fig 21).
24. Repeat steps 3 through 15 for the opposite side of the 2nd extension boom.

Procedure for adding bolt to the outer end of the last/stinger extension boom:

25. Measure back from the end of the last/stinger extension boom 4" (see Fig 22). Mark line with wax marker.
26. Extend line vertically past the vertical centerline of the 2nd extension boom (see Fig 23).
27. Measure down from the top of the last/stinger extension boom 3.50 inches and mark with a wax marker (see Fig 24).
28. Use a center punch and mark this point (see Fig 25). **CAUTION:** use a soft touch when center punching the fiberglass boom to avoid damaging the glass.
29. Using the 5/16" drill bit, drill through the fiberglass boom and the metal insert tube inside the fiberglass boom (see Fig 26).
30. Using the 1" diameter 82 degree countersink bit, countersink the hole in the fiberglass until the O.D. of the countersink is the same size as the head on the supplied 3/8-16 UNC flat head, stainless steel bolt, approximately 7/8" diameter (see Fig 27).



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31. Using the 3/8-16 UNC tap, the tap handle, thread the hole through the fiberglass boom and the metal insert tube inside the fiberglass boom (see Fig 28).
32. Apply thread locker to the supplied bolt (see Fig 29).
33. Install bolt into the fiberglass and the metal insert tube inside the fiberglass boom.
CAUTION: Hand tighten only - do not use any power tools on the stainless steel bolt. The threads will gall-up and will you will not be able to properly torque the bolt.
34. Torque the bolt to 30 ft-lb (see Fig 30).
35. Repeat steps 24 through 33 on the opposite side of the last/stinger extension boom.

Figures:



Fig 1

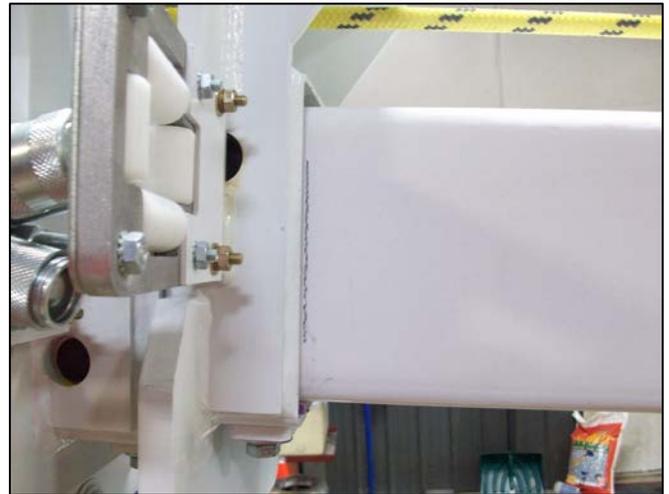


Fig 2



Fig 3



Fig 4



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Fig 5



Fig 6



Fig 7



Fig 8



Fig 9



Fig 10



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Fig 11



Fig 12



Fig 13



Fig 14



Fig 15



Fig 16



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Fig 17



Fig 18



Fig 19



Fig 20



Fig 21



Fig 22



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Fig 23

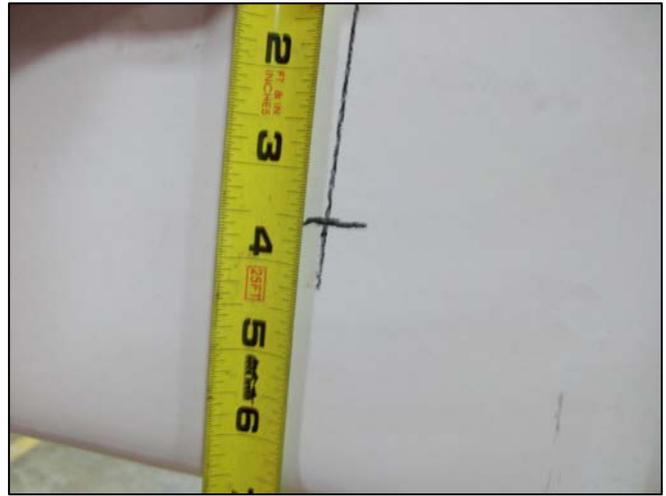


Fig 24

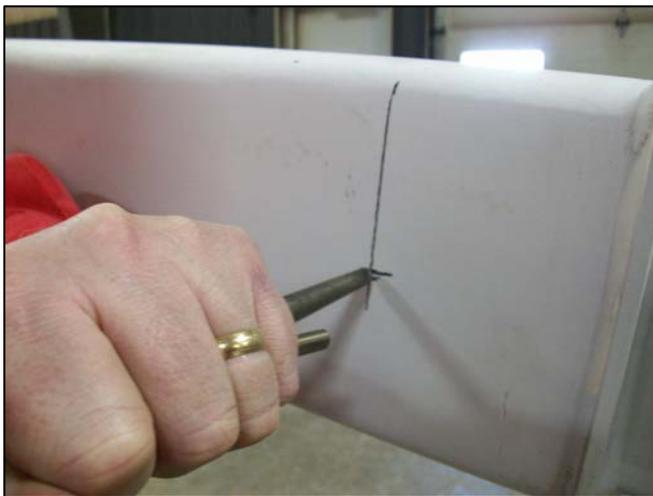


Fig 25



Fig 26



Fig 27

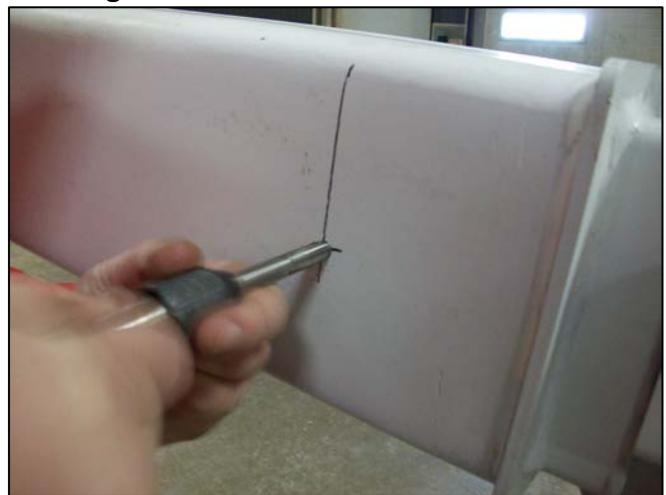


Fig 28



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Fig 29



Fig 30

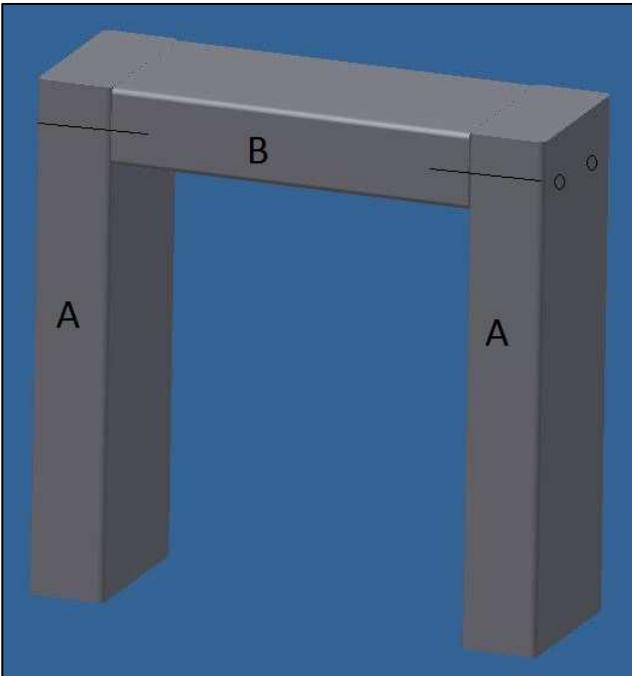


Fig 31

To build the stop/test block, shown to the left, use construction grade 2 x 4 lumber. Cut the pieces so that all ends are square.

Item A: (2) pieces 10.00 inches long

Item B: (1) piece 7-1/8 inches long

Screw together with (4) #8 or #10 x 3-1/2 inch long deck/multipurpose screws as shown by the black lines.

This may also be found at:

www.sdpmfg.com Click on "Support", then "Service Bulletins & Documents", then "5500 & 55M Boom Pull Procedure". It can be found on the last page.