An Oshkosh Truck Corporation Company

JLG Industries, Inc.
1 JLG Drive
McConnellsburg, PA 17233-9533
Telephone: (717) 485-5161
Fax: (717) 485-6417

1930ES/2030ES/2630ES KINGPIN REPLACEMENT PROCEDURE

Tools & Equipment Needed:

- Stands and Lifting Equipment capable of lifting/supporting the affected components
- Hand-Held Power Grinder
- Plasma Cutter
- Air Carbon-Arc Equipment
- Torch or Heating Equipment
- Surface Thermometer (0-750°F)
- Electric Welding Equipment
- Minimum 70,000 PSI Yield Strength, Low Hydrogen Rod or Wire
- Standard Welder Tools
- Standard Mechanic Tools
- Paint

Personnel Required:

- Qualified JLG Equipment Mechanic
- Certified Welder

NOTICE

GENERAL REPAIR GUIDELINES:

- This repair procedure provides parts and repair information for a specific discrepancy. It is the responsibility of the entity performing the repairs to determine if the discrepancy can be corrected by this procedure.
- Use all applicable safety precautions while working on, under or around any machinery.
- Reference the service and specifications manuals and illustrated parts manual for safe and proper disassembly/assembly procedures.

WELD REPAIR GUIDELINES:

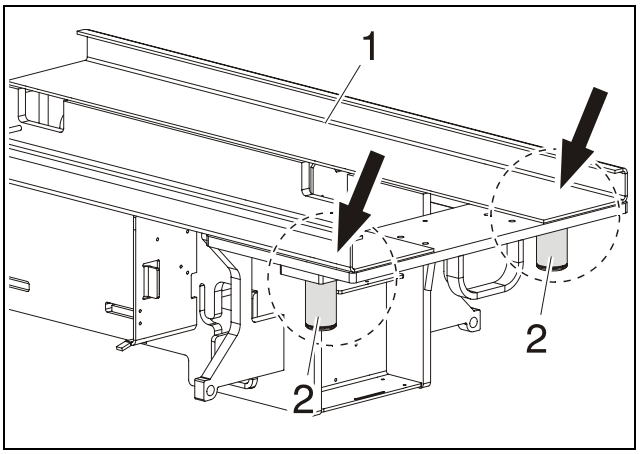
- All welding must be in strict accordance with ANSI/AWS D1.1, EN288-3 or EN288-4, or equivalent Australian standards, as required by applicable standards for aerial work platforms.
- Disconnect the battery of the machine being repaired prior to welding.
- Ground only to the component being welded. Do not ground to any adjacent component or allow pins, wear pads, wire ropes, bearings, gears, seals, valves, electrical wiring, or hoses to be between the grounding position and the area to be welded.
- Failure to comply with the above weld repair guidelines may result in component damage.

Parts/Materials Required:

- Front Kingpin, qty. 1 per side as required:

Model	Kingpin JLG P/N
1930ES (Prior to S/N 0200161931) (USA built machines)	3423034
1930ES (Prior to S/N 1200011007) (Belgium built machines)	3423034
1930ES (S/N 0200161931 to Present) (USA built machines)	3423291
1930ES (S/N 1200011007 to Present) (Belgium built machines)	3423291
2030ES/2630ES	3423041

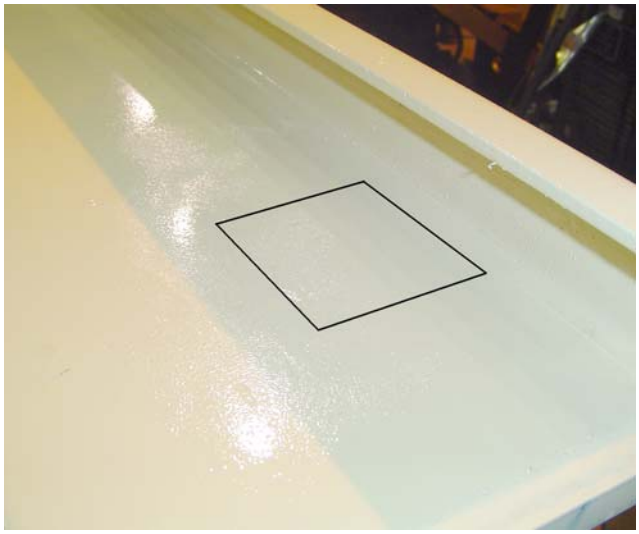
Location(s):



1. Frame 2. Kingpins

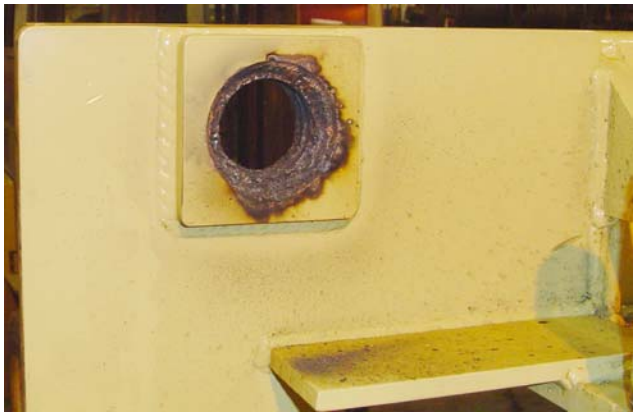
Procedures:

1. Remove components, as required, to facilitate repair of the front kingpin. Safely support the components to alleviate pressure or stresses at affected repair area(s).
2. Mark a square section of the arm retainer channel' (4.5 in. x 4.5 in.) directly above the Kingpin as shown below.



3. Using the plasma cutter, remove the square section of arm retainer channel' above kingpin as shown below. Do not discard removed section.

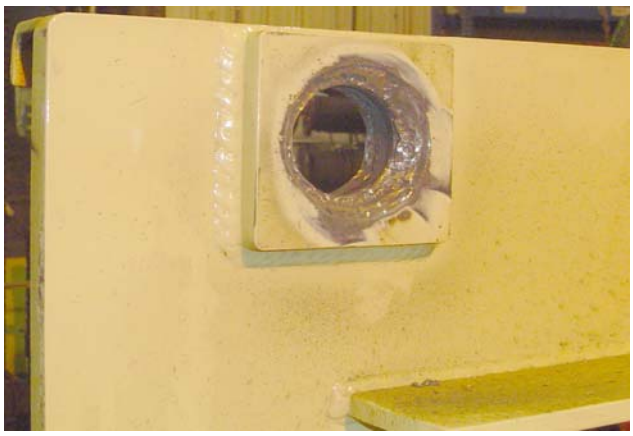
4. Using a hand-held power grinder or air carbon-arc equipment, remove the damaged front kingpin from the frame weldment.
   a. On underside of doubler plate, carbon-arc toward kingpin.
   b. On top, carbon-arc away from kingpin.



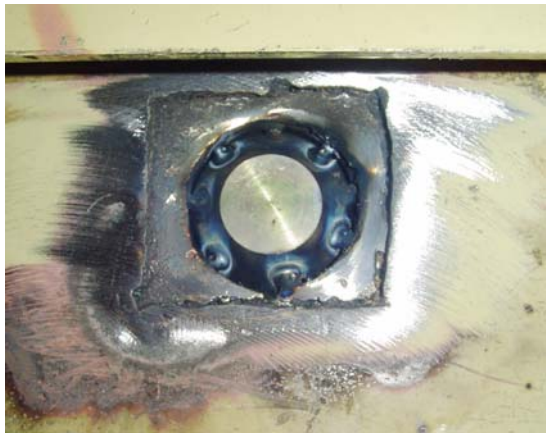
NOTICE

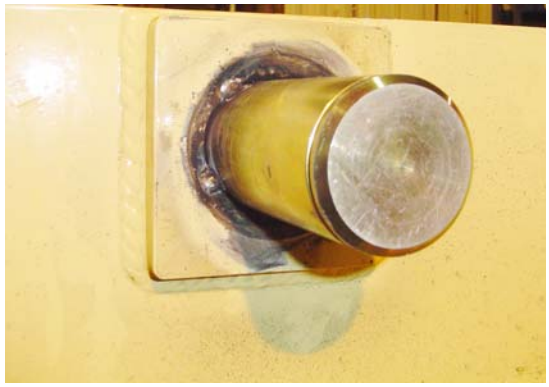
DO NOT DAMAGE THE FRAME WELDMENT DURING THE ABOVE PROCEDURE.

5. Perform Non-Destructive Testing (NDT), such as magnetic particle, dye-penetrant, or other acceptable means, on the weld between the frame and the hub plate.
6. Dress the frame weldment in preparation for reinstalling the new front kingpin.
7. Using a hand-held grinder, chamfer the kingpin hole on the bottom of the frame weldment kingpin doubler plate as shown below.



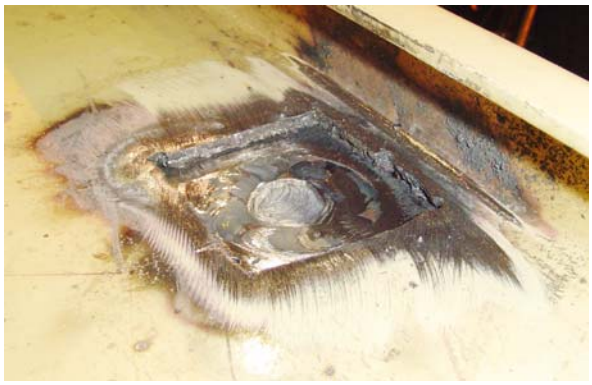
8. Locate the front Kingpin into position. Ensure that the front Kingpin fits properly into the frame weldment as shown in the illustration below. Tack weld into position as shown below. **Please note the critical dimension (Kingpin Height) is different for the 1930ES based on the serial number. (Refer to the illustrations on pages 5 and 6)**

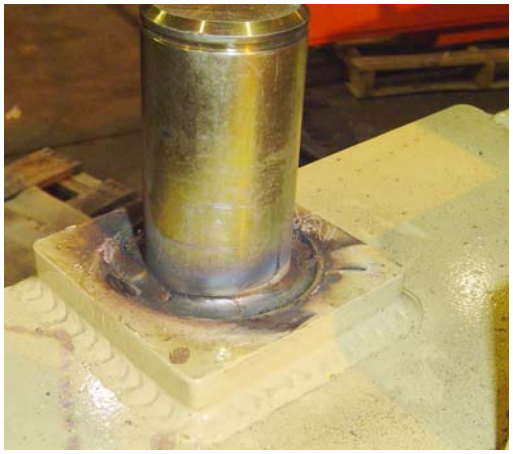




9. **This step is not required for 1930ES machines with S/N 0200161931 to Present (USA built) and S/N 1200011007 to Present (Belgium built).** Heating only the minimum area required, heat the kingpin to approximately 400°F (204°C).

10. Weld Kingpin into place using the recommended weld material with types and sizes as shown below.

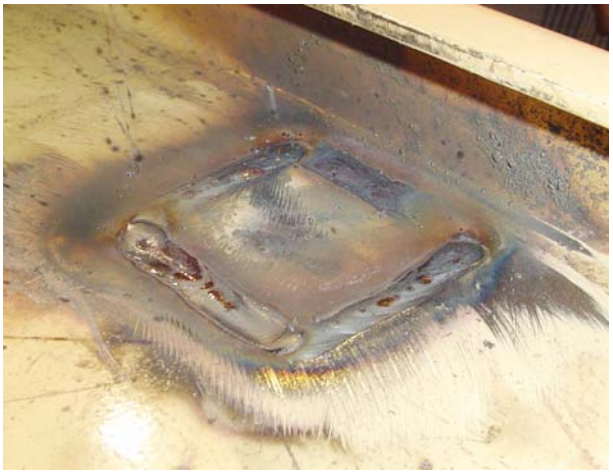




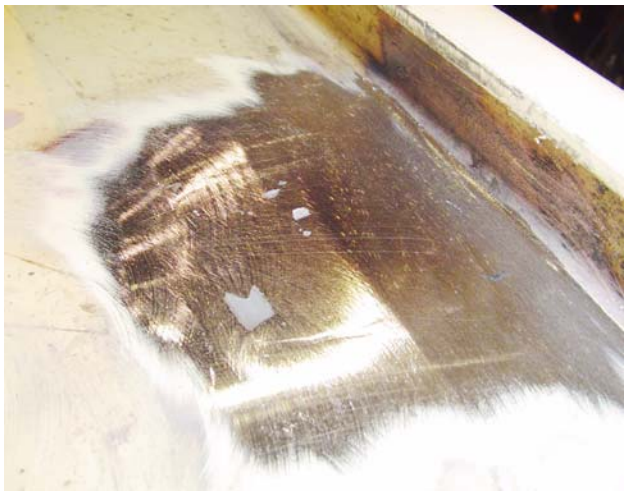
NOTE: *Damage to the structural integrity of the metal may occur when heated in excess of 450°F (232°C). Use a surface thermometer to monitor the temperature of the discrepancy area.*

11. Inspect all repair procedure welds using a magnetic particle, dye-penetrant or other acceptable weld inspection method to determine the quality of the weld. If the quality is found to be unacceptable, according to the above listed standards, air carbon-arc, cut, and /or grind to remove affected area(s). Reweld affected area(s) using recommended weld materials and procedures. Repeat weld inspection procedure.

12. Reinstall the square section removed from the arm retainer channel in step #3. Section and arm retainer channel may require grinding in order to fit and weld properly. Weld into place using recommended weld material with required types and sizes shown in the attached illustration.

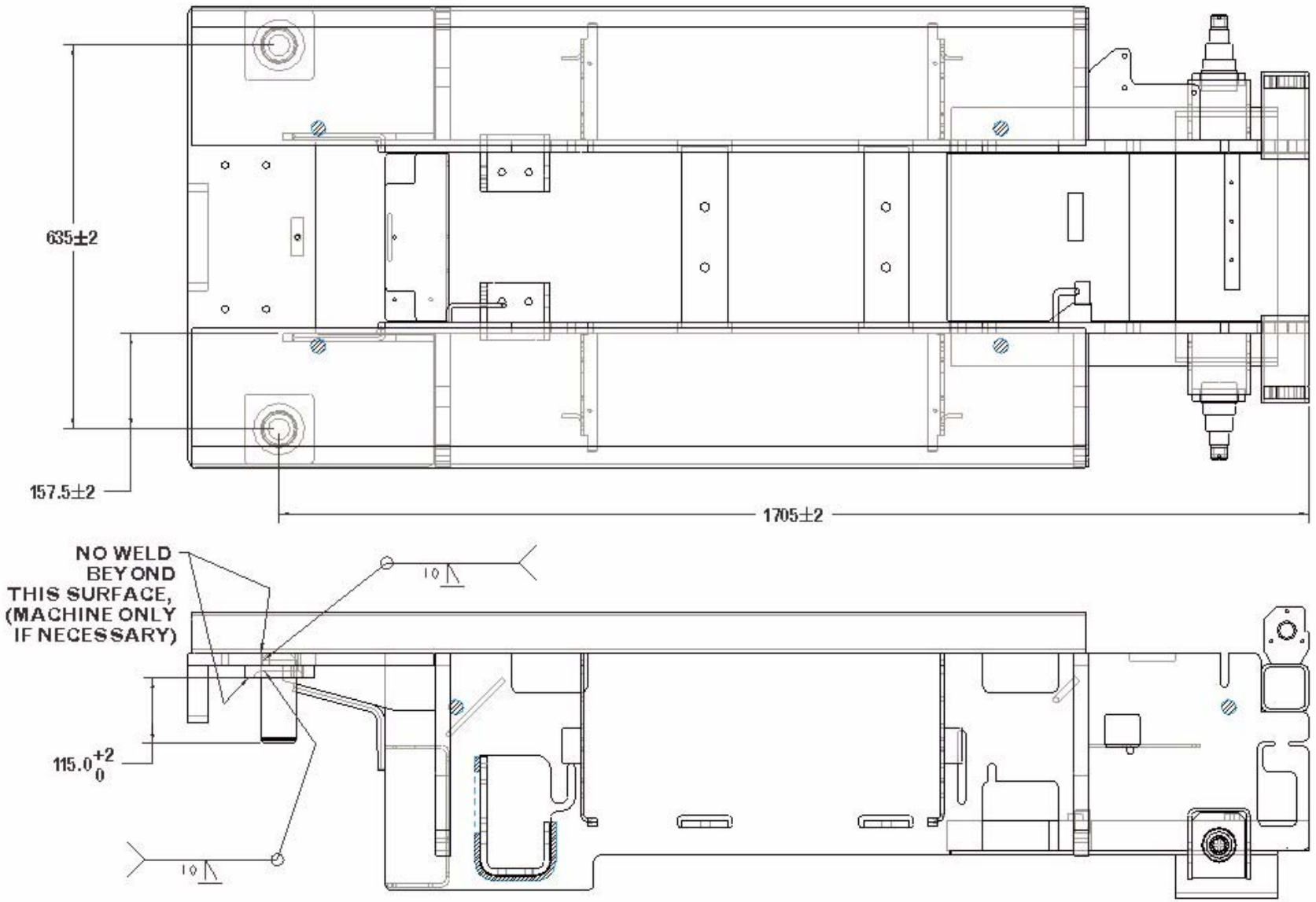


13. Arm retainer channel **MUST** be ground flush where removed section was welded to allow proper wear pad operation.

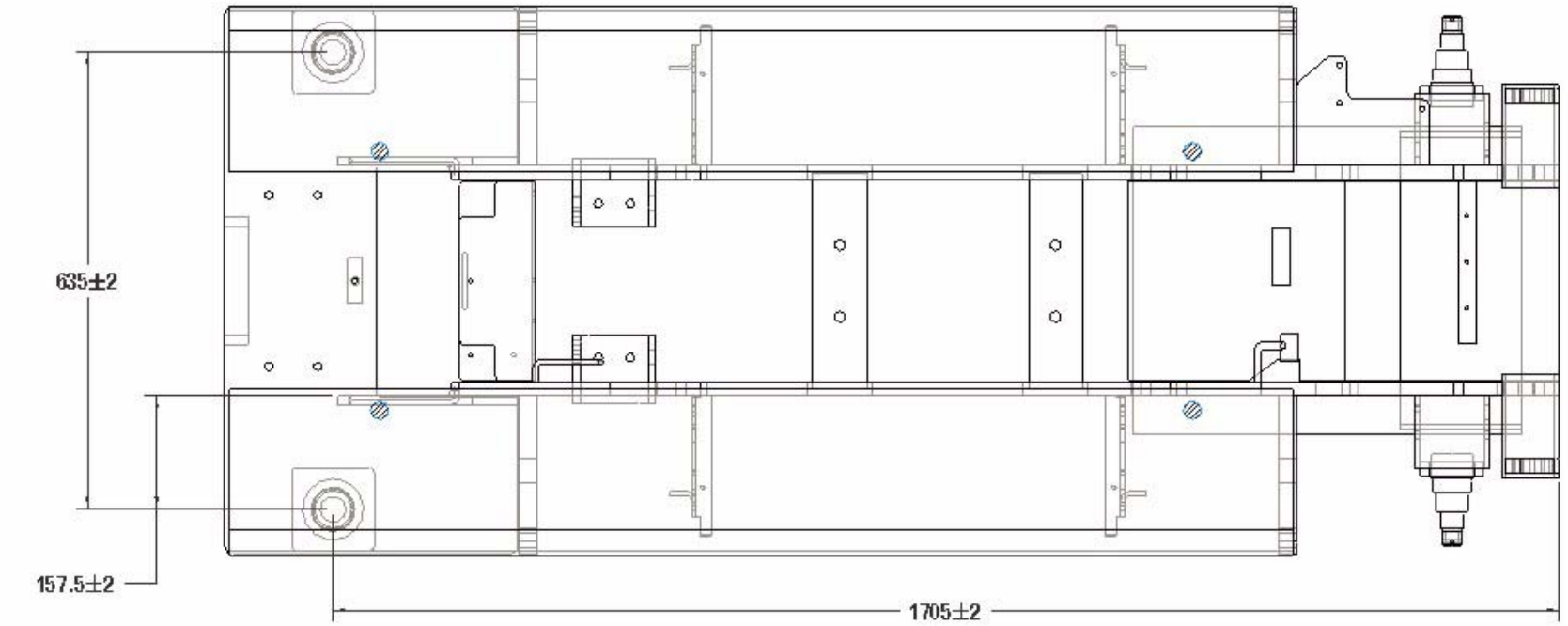


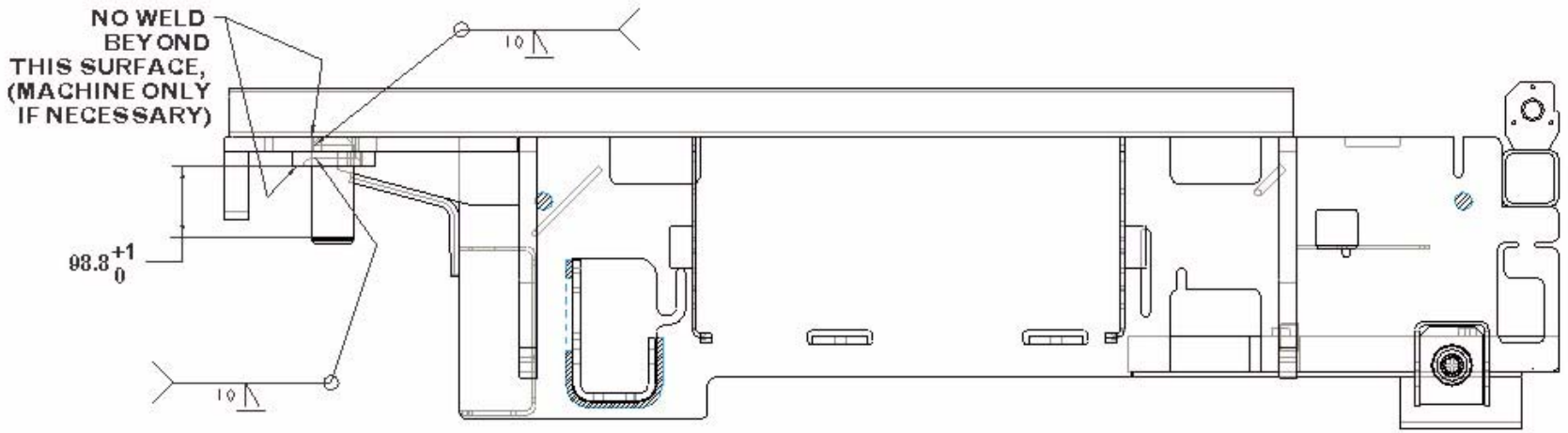
14. Clean, prime, and paint the affected areas.
15. Reassemble all components and prepare the unit for operation.
16. With the rated load placed in the platform, verify the proper operation of the drive, steer and lift functions a minimum of five times before returning the machine to operation.
17. Inspect the repair areas for discrepancies. All discrepancies must be properly corrected before returning machine to service.

KINGPIN REPLACEMENT
MODEL: 1930ES (PRIOR TO S/N 0200161931 - USA BUILT)
MODEL: 1930ES (PRIOR TO S/N 1200011007 - BELGIUM BUILT)



KINGPIN REPLACEMENT
MODEL: 1930ES (S/N 0200161931 TO PRESENT - USA BUILT)
MODEL: 1930ES (S/N 1200011007 TO PRESENT - BELGIUM BUILT)





KINGPIN REPLACEMENT
MODEL(S): 2030ES AND 2630ES