



An Oshkosh Corporation Company

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

# Instruction Sheet

## JLG Model 2646ES/3246ES Kingpin Replacement Procedure

### **CAUTION**

USE ALL APPLICABLE SAFETY PRECAUTIONS WHILE WORKING ON, AROUND OR UNDER MACHINERY.

### SPECIAL TOOLS REQUIRED:

- Stands and lifting equipment capable of lifting/supporting the affected components.
- Plasma Cutter
- Air carbon-arc equipment
- Hand held power grinder
- 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's tools
- Standard mechanics 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:

Table 1-1.

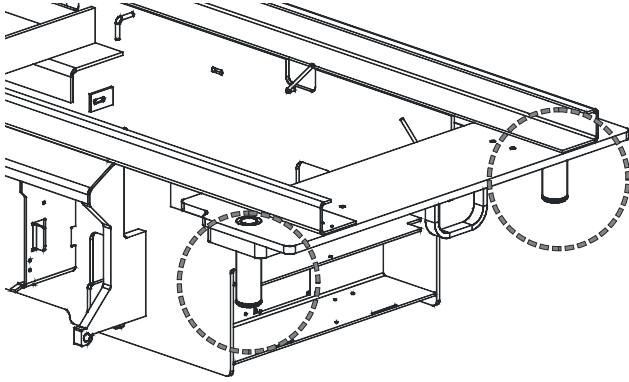
Model(s)	Kingpin JLG P/N:
2646ES / 3246ES	3423041

**A**  
10-26-2009

**3128703**

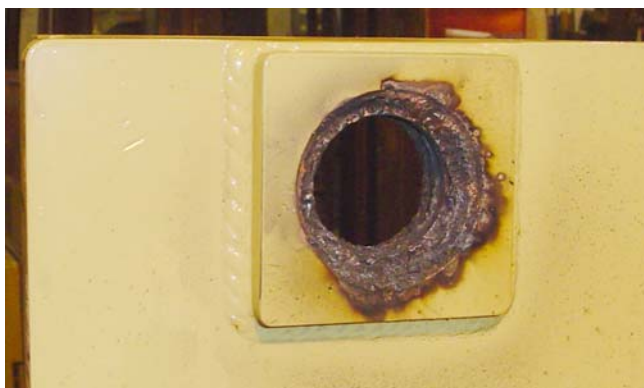
An Oshkosh Corporation Company

## KINGPIN LOCATION(S):



## PROCEDURE:

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



### NOTICE

DO NOT DAMAGE THE FRAME WELDMENT DURING THE ABOVE PROCEDURE.

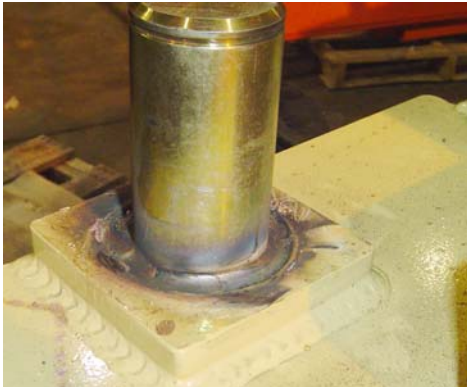
3. Perform Non-Destructive Testing (NDT), such as magnetic particle, dye-penetrant, or other acceptable means, on the weld between the frame and the hub plate.
4. Dress the frame weldment in preparation for reinstalling the new front kingpin.
5. Using a hand-held grinder, chamfer the kingpin hole on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



6. Locate the front kingpin in to position. Ensure that the front kingpin fits properly into the frame weldment as shown in the illustration below. Tack weld into position as shown in the enclosed illustration (see figure: 1-15).



7. Heat only the minimum area required, heat the kingpins to approximately 400°F (204° C).
8. Weld kingpin into place using the recommended weld material with types and sizes as shown in the enclosed illustration.



**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.*

9. 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.



10. Clean, prime, and paint the affected areas.
11. Reassemble all components and prepare the unit for operation.
12. 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.
13. Inspect the repair areas for discrepancies. All discrepancies must be properly corrected before returning the machine to service.

# KINGPIN REPLACEMENT MODEL(S): 2646ES AND 3246ES

