Product Safety & Reliability Department Telephone: 877-JLG-SAFE Facsimile: 301-745-3713 E-mail Address: productsafety@jlg.com



Attn: Safety or Service Manager

Subject: JLG Manufactured Telehandler Products Subjected to Partial or Full Submersion in Water

Sir/Madam:

Pursuant to your inquiry for information regarding the noted subject, JLG, Industries, Inc. Product Safety & Reliability Department submits the following:

In the event the machine owner determines it is appropriate to repair and return the subject machine back into service after it was subjected to partial (or full) submersion in water, JLG recommends completion of the enclosed repair and inspection procedures prior to returning the machine to service. Additionally, the referenced machine must be current with all inspection requirements with all discrepancies corrected prior to return to service. Lastly ensure that all decals/placards are legible and properly installed (positioned) on the machines and the Operator's and Safety Manuals and other appropriate publications are located within the designated manual storage compartments.

Each affected machine must have a thorough inspection performed by a qualified JLG equipment mechanic with all discrepancies properly corrected before returning the machine to service. The enclosed repair and inspection procedure is intended to provide general criteria for inspection and repair for a variety of JLG manufactured telehandler products subjected to partial or full submersions in water. It is the responsibility of the entity performing the inspection and repair to determine if the discrepancy can be corrected by this procedure.

The entity performing the enclosed repairs and inspections is ultimately responsible for the quality of repairs and inspections as specified. The current owner of the machine is responsible for the overall safe and proper operating condition.

Should you have any questions, or require additional information, please advise.

Sincerely,

JLG INDUSTRIES, INC. Product Safety and Reliability Department

PROCEDURE:Repair and inspection of discrepancies due to complete or partial
submersion in waterMODEL:JLG Manufactured Telehandler Products

Tools and Equipment Required:

Standard mechanics tools

Personnel Required:

Qualified JLG equipment mechanic

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

IMPORTANT: REFERENCE THE SERVICE AND SPECIFICATIONS MANUAL AND ILLUSTRATED PARTS MANUAL FOR SAFE AND PROPER DISASSEMBLY/ASSEMBLY PROCEDURES.

Procedure:

- 1. Replace all electrical and control system components submerged in water. This includes, but is not limited to the following (if equipped):
 - a. Any control modules, circuit boards, control cards, controllers, or similar machine control components,
 - b. All wiring harnesses,
 - c. All sensors and switches,
 - d. Batteries,
 - e. Battery cables.
- 2. Replace all hydraulic components (if equipped) including all control valve assemblies, flow dividers, pilot operated joysticks, pumps, hoses, filters and screens, and cylinder holding valves.
- 3. Disassemble all hydraulic cylinders and inspect for discrepancies (if equipped). Replace all packing and seals and thoroughly flush and clean. Inspect all cylinder attachment pins for straightness, corrosion, or other discrepancies. Replace all pin attachment and retaining hardware. Replace components as wear or damage necessitates.
- 4. Inspect the fork carriage and attachment(s) area for any discrepancies. Replace or repair items (not replaced in earlier steps) as wear or damage necessitates.

- 5. Disassemble, clean, and inspect all boom sections and quick-attach assembly. Replace extend and retract chains and all attachment hardware. Replace components as wear or damage necessitates.
- 6. Disassemble, clean and flush all axle and drive system components. Visually inspect all seals, wipers, and rings for discrepancies. Replace all drive motor attachment hardware. Replace component parts as wear or damage necessitates.
- 7. Transmission Assembly Thoroughly drain, flush and refill the transmission and transfer case. Replace the transmission filter. If further repair or evaluation of the transmission is needed, contact your local JLG servicing entity for additional information.
- 8. Engine Assembly Contact the engine manufacturer for appropriate inspection and repair of the engine, exhaust and aftertreatment (if equipped) after water intrusion. Thoroughly flush the fuel tank and fuel delivery system, and DEF Tank and DEF delivery system (if equipped).
- 9. Thoroughly drain, flush and refill the hydraulic reservoir. Replace tank if damage is evident. Cycle all functions. Take a sample of the oil with the Hydraulic Fluid Analysis kit (p/n 7020354) to determine if contamination exists. If contamination is present, ensure all cylinders are retracted and repeat this step.
- 10. Thoroughly clean and visually inspect all chassis, cab, axle, and transfer carriage components (if equipped). Replace component parts as wear or damage necessitates.
- 11. Thoroughly inspect the following components; replace component parts as wear or damage necessitate:
 - a. All decals and placards,
 - b. All tire and wheel assemblies; replace all wheel attachment hardware.
- 12. Reassemble all components and prepare the machine for operation. Load with the rated capacity and cycle all functions a minimum of five (5) times to ensure safe and proper operation.
- All discrepancies must be properly corrected before returning the machine to service.