



# ***Operation & Safety Manual***

*Original Instructions  
Keep this manual with machine at all times.*

## ***Models***

***3706PS, 3707PS,  
4014PS, 4017PS***

3706PS, 3707PS & 4014PS  
S/N 1160006593 & After

4017PS  
S/N 1160006867 & After including  
1160006594, 1160006604, 1160006748,  
1160006752, 1160006755, 1160006756

***31200753***

*Revised  
June 27, 2016*





## **REVISION LOG**

November 28, 2012 - A - Original Issue of Manual

August 23, 2013 - B - Revised cover and pages d, 1-7, 2-3 thru 2-8, 2-12, 2-13, 3-2, 3-3, 3-11, 3-12, 3-13, 3-15, 3-20, 3-23, 3-24, 3-32, 3-36, 4-1, 4-5, 4-8, 5-2, 5-5 thru 5-10, 5-28, 5-29, 5-49, 6-2, 7-14, 7-15, 9-1, 9-4, 9-5 & 9-7.

June 27, 2016 - C - Revised rear cover, section one and pages 2-5, 2-6, 2-8, 3-4, 3-11, 3-15, 3-25, 5-2, 5-3, 5-23, 6-2, 6-4, 7-20, 9-3, 9-6, 9-7 & 9-8.

## ***Read This First***

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This manual is a very important tool! Keep it with the machine at all times.

The purpose of this manual is to provide owners, users, operators, lessors, and lessees with the precautions and operating procedures essential for the safe and proper machine operation for its intended purpose.

Due to continuous product improvements, JLG Industries, Inc. reserves the right to make specification changes without prior notification. Contact JLG Industries, Inc. for updated information.

## **Operator Qualifications**

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The operator of the machine must not operate the machine until this manual has been read, training is accomplished and operation of the machine has been completed under the supervision of an experienced and qualified operator. Operation within the U.S.A. requires training per OSHA 1910.178.

Operators of this equipment must possess a valid, applicable driver's license, be in good physical and mental condition, have normal reflexes and reaction time, good vision and depth perception and normal hearing. Operator must not be using medication which could impair abilities nor be under the influence of alcohol or any other intoxicant during the work shift.

In addition, the operator must read, understand and comply with instructions contained in the following material furnished with the material handler:

- This Operation & Safety Manual
- Telehandler Safety Manual (ANSI only)
- All instructional decals and plates
- Any optional equipment instructions furnished

The operator must also read, understand and comply with all applicable Employer, Industry and Governmental rules, standards and regulations.

## **Modifications**

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**Modifications to this machine may affect compliance with Industry Standards and/or Governmental Regulations. Any modification must be approved by JLG.**

This product must comply with all safety related bulletins. Contact JLG Industries, Inc. or the local authorized JLG representative for information regarding safety-related bulletins which may have been issued for this product.

JLG Industries, Inc. sends safety related bulletins to the owner of record of this machine. Contact JLG Industries, Inc. to ensure that the current owner records are updated and accurate.

JLG Industries, Inc. must be notified immediately in all instances where JLG products have been involved in an accident involving bodily injury or death of personnel or when damage has occurred to personal property or the JLG product.

**FOR:**

- Accident Reporting and Product Safety Publications
- Current Owner Updates
- Questions Regarding Product Applications and Safety
- Standards and Regulations Compliance Information
- Questions Regarding Product Modifications

**CONTACT:**

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ProductSafety@JLG.com

## Read This First

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### Other Publications Available

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Service Manual.....	31200800
Parts Manual .....	31200722

**Note:** The following standards may be referenced in this manual:

ANSI is compliant to ANSI/ITSDF B56.6

AUS is compliant to AS 1418.19

CE is compliant to EN1459

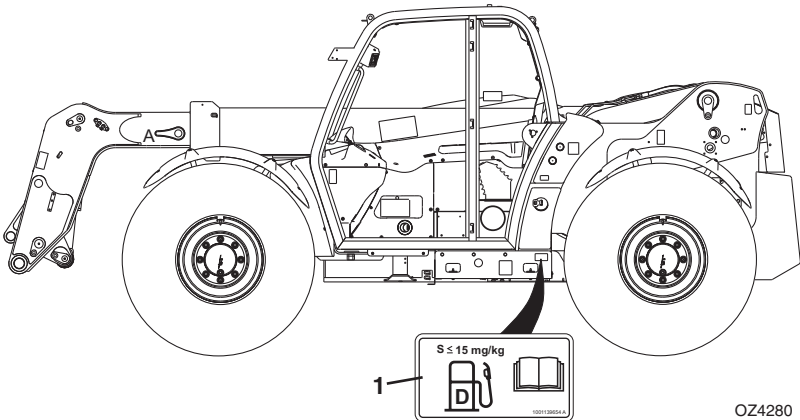
Refer to the machine Serial Number Plate to identify the applicable compliance standard.

### Machine Configuration

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Two configurations of each machine are included in this manual. Determine if machine is equipped with Ultra Low Sulfur Fuel Decal (1) as indicated below.

- If equipped with the Ultra Low Sulfur decal, all specific references to this machine configuration will be referred to as Ultra Low Sulfur (**ULS**) from this point forward.
- If **not** equipped with the Ultra Low Sulfur decal, all specific references to this machine configuration will be referred to as Low Sulfur (**LS**) from this point forward.



OZ4280

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## SECTION 1 - GENERAL SAFETY PRACTICES

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### 1.1 HAZARD CLASSIFICATION SYSTEM

#### Safety Alert System and Safety Signal Words

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**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** indicates a potentiality hazardous situation which, if not avoided, may result in minor or moderate injury.

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### 1.2 GENERAL PRECAUTIONS



Before operation, read and understand this manual. Failure to comply with the safety precautions listed in this manual could result in machine damage, property damage, personal injury or death.

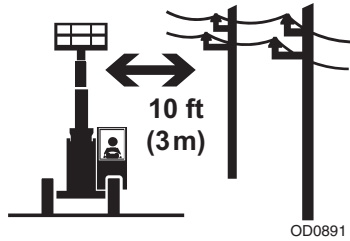
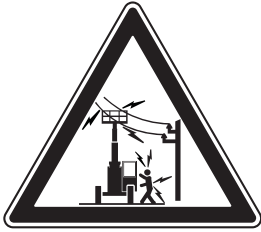
- Hydraulic cylinders are subject to thermal expansion and contraction. This may result in changes to the boom and/or attachment position while the machine is stationary. Factors affecting thermal movement can include the length of time machine is stationary, hydraulic oil temperature, ambient air temperature and boom and/or attachment position.

## Section 1- General Safety Practices

### 1.3 OPERATION SAFETY

**Note:** The manufacturer has no direct control over machine application and operation. Therefore, safety issues listed in this manual are non-exhaustive. The user and operator are responsible for conforming with good safety practices.

#### Electrical Hazards



- This machine is not insulated and does not provide protection from contact or being near electrical current.
- Always check for power lines before raising the boom.
- Maintain distance from electrical lines, apparatus, or any energized (exposed or insulated) parts according to the Minimum Approach Distance (MAD).

Voltage Range (Phase to Phase)	Minimum Approach Distance (MAD)
0 to 50 KV	10 ft (3 m)
Over 50KV to 200 KV	15 ft (5 m)
Over 200 KV to 350 KV	20 ft (6 m)
Over 350 KV to 500 KV	25 ft (8 m)
Over 500 KV to 750 KV	35 ft (11 m)
Over 750 KV to 1000 KV	45 ft (14 m)

**Note:** This requirement shall apply except where employer, local or governmental regulations are more stringent.

- Allow for machine movement and electrical line swaying.
- Maintain a clearance of at least 10 ft (3m) between any part of the machine and its occupants, their tools and their equipment from any electrical line or apparatus carrying up to 50,000 volts. One foot additional clearance is required for every additional 30,000 volts or less.

## ***Section 1- General Safety Practices***

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- The minimum approach distance may be reduced if insulating barriers are installed to prevent contact, and the barriers are rated for the voltage of the line being guarded. These barriers shall not be part of (or attached to) the machine. The minimum approach distance shall be reduced to a distance within the designed working dimensions of the insulating barrier. This determination shall be made by a qualified person in accordance with the employer, local, or governmental requirements for work practices near energized equipment.



**DANGER**

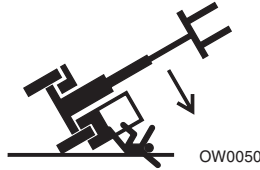
Do not maneuver machine or personnel inside prohibited zone (MAD). Assume all electrical parts and wiring are energized unless known otherwise.

## Section 1- General Safety Practices

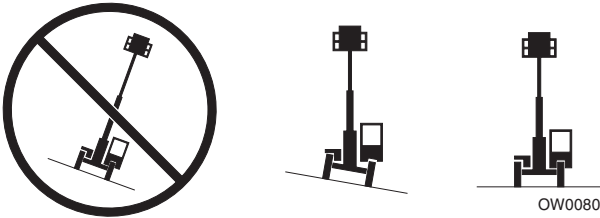
### Tip Over Hazard

#### General

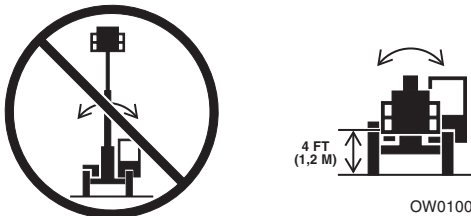
- For additional load requirements, refer to the appropriate capacity chart.



- Never use an attachment without the appropriate JLG approved capacity chart installed on the telehandler.
- Understand how to properly use the capacity charts located in cab.
- **DO NOT** exceed rated lift capacity.
- Be sure that the ground conditions are able to support the machine.
- Be aware of wind conditions. Wind may cause load swing and dangerous side loads.

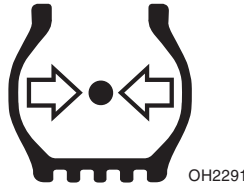


- **DO NOT** raise boom unless frame is level (0 degrees), unless otherwise noted on capacity chart.



- **DO NOT** level machine with boom/attachment above 4 ft (1,2 m).  
(AUS - **DO NOT** level machine with load more than 11.8 in (300 mm) above ground surface.)





- **MAINTAIN proper tire pressure** at all times. If proper tire pressures are not maintained, this machine could tip over.
- Refer to manufacturer's specifications for proper fill ratio and pressure requirements for tires equipped with ballast.



- Always wear seat belt.
- Keep head, arms, hands, legs and all other body parts inside operator's cab at all times.



If telehandler starts to tip over:

- **DO NOT JUMP**
- **BRACE YOURSELF** and **STAY WITH THE MACHINE**
- **KEEP YOUR SEAT BELT FASTENED**
- **HOLD ON FIRMLY**
- **LEAN AWAY FROM THE POINT OF IMPACT**

## Section 1- General Safety Practices

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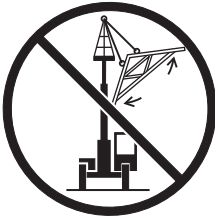
### Non-Suspended Load



OD0901

- **DO NOT** drive with boom raised.

### Suspended Load



OW0150

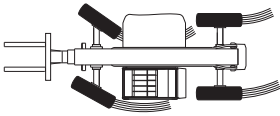
- Tether suspended loads to restrict movement.
- Weight of all rigging (slings, etc.) must be included as part of load.
- **DO NOT** attempt to use telehandler frame-leveling to compensate for load swing.
- Keep heavy part of load closest to attachment.
- Never drag the load; lift vertically.

When driving with a suspended load:

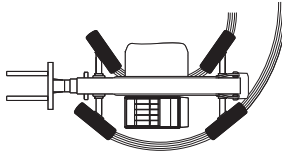
- Start, travel, turn and stop slowly to prevent load from swinging.
- **DO NOT** extend boom.
- **DO NOT** raise the load more than 300 mm (11.8 in) above ground surface or the boom more than 45°.
- **DO NOT** exceed walking speed.

### Travel Hazard

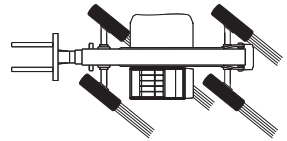
2-WHEEL FRONT STEER



4-WHEEL CIRCLE STEER



4-WHEEL CRAB STEER



OAL2030

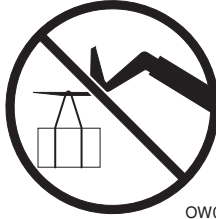
- Steering characteristics differ between steer modes. Identify the steer mode settings of the telehandler being operated.
- **DO NOT** change steer modes while traveling. Steer modes must be changed while telehandler is stationary.
- Visually verify proper wheel alignment after each steer mode change.
- Ensure that adequate clearance is provided for both rear tail swing and front fork swing.
- Look out for and avoid other personnel, machinery and vehicles in the area. Use a spotter if you DO NOT have a clear view.
- Before moving be sure of a clear path and sound horn.
- When driving, retract boom and keep boom/attachment as low as possible while maintaining visibility of mirrors and maximum visibility of path of travel.
- Always look in the direction of travel.
- Always check boom clearances carefully before driving underneath overhead obstructions. Position attachment/load to clear obstacles.
- When driving in high speed, use only front wheel steer (if steering modes are selectable).
- Telehandlers equipped with solid or foam filled tires should not be used in applications requiring excessive roading or driving extended distances. In the event an application requires excessive roading or driving expanded distances, it is recommended to use telehandlers not equipped with solid or foam filled tires.

## Section 1- General Safety Practices

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### Load Falling Hazard

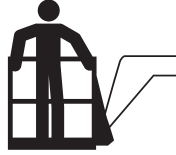
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OW0130

- Never suspend load from forks or other parts of carriage weldment. Use only approved lift points.
- **DO NOT** burn or drill holes in fork(s).
- Forks must be centered under load and spaced apart as far as possible.

## Lifting Personnel



OW0171

- When lifting personnel, **USE ONLY** an approved personnel work platform, with proper capacity chart displayed in the cab.



OD0921

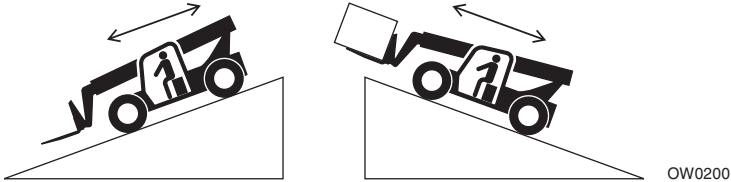
- **DO NOT** drive machine from cab when personnel are in platform.

## Section 1- General Safety Practices

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### Driving Hazards on Slopes

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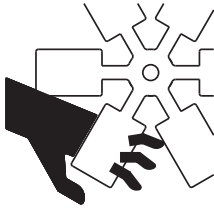


To maintain sufficient traction and braking capabilities, travel on slopes as follows:

- When unloaded, drive with forks pointed downhill.
- When loaded, drive with the forks pointed uphill.
- For additional travel requirements, refer to the appropriate capacity chart.
- To avoid overspeeding the engine and drivetrain when driving down slopes, downshift to a lower gear and use the service brake as necessary to maintain a slow speed. **DO NOT shift into neutral and coast downhill.**
- Avoid excessively steep slopes or unstable surfaces. To avoid tip over **DO NOT** drive across excessively steep slopes under *any* circumstances.
- Avoid turning on a slope. Never engage “inching” or shift to “Neutral” when going downhill.
- **DO NOT** park on a slope.

**Pinch Points and Crush Hazards**

Stay clear of pinch points and rotating parts on the telehandler.



OW0210

- Stay clear of moving parts while engine is running.



OW0220

- Keep clear of steering tires and frame or other objects.



OW0230

- Keep clear from under boom.

## Section 1- General Safety Practices

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OW0240

- Keep clear of boom holes.



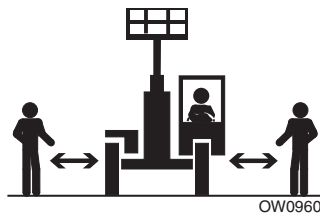
OW0250

- Keep arms and hands clear of attachment tilt cylinder.



OW0260

- Keep hands and fingers clear of carriage and forks.



OW0960

- Keep others away while operating.



Fall Hazard



- Enter using the proper hand holds and steps provided. Always maintain 3-point contact when mounting or dismounting. Never grab control levers or steering wheel when mounting or dismounting the machine.
- **DO NOT** get off the machine until the shutdown procedure on page 4-6 has been performed.



- **DO NOT** carry riders. Riders could fall off machine causing death or serious injury.

## Section 1- General Safety Practices

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### Chemical Hazards

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#### Exhaust Fumes

- **DO NOT** operate machine in an enclosed area without proper ventilation.
- **DO NOT** operate the machine in hazardous environments unless approved for that purpose by JLG and site owner. Sparks from the electrical system and the engine exhaust can cause an explosion.

#### Flammable Fuel



OW0300

- **DO NOT** fill the fuel tank or service the fuel system near an open flame, sparks or smoking materials. Engine fuel is flammable and can cause a fire and/or explosion.

#### Hydraulic Fluid



OW0950

- **DO NOT** attempt to repair or tighten any hydraulic hoses or fittings while the engine is running or when the hydraulic system is under pressure.
- Stop engine and relieve trapped pressure. Fluid in the hydraulic system is under enough pressure that it can penetrate the skin.
- **DO NOT** use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks. Wear gloves to protect hands from spraying fluid.

## **1.4 CLEARSKY (IF EQUIPPED)**

### **Federal Communications Commission (FCC) Information for Users**

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#### **FCC Statement Regarding Interference**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **Section 1- General Safety Practices**

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### **Notice Regarding Radio Frequency Radiation Exposure**

Do not operate your unit when a person is within eight inches (20 centimeters) of the antenna. A person or object within eight inches (20 centimeters) of the antenna could impair call quality and may cause the unit to operate at a higher power level than necessary, as well as expose that person to RF energy in excess of that established by the FCC RF Exposure Guidelines.

**Important:** The unit must be installed in a manner that provides a minimum separation distance of eight inches (20 centimeters) or more between the antenna and persons and just not be co-located or operate in conjunction with any other antenna or transmitter in order to satisfy FCC RF exposure requirements for mobile transmitting devices.

**Important:** To comply with the FCC RF exposure limits and to satisfy the categorical exclusion requirements for mobile transmitters, the requirements described in the following section, "Antenna Installation", must be met.

### **Antenna Installation**

A minimum separation distance of eight inches (20 centimeters) must be maintained between the antenna and all persons.

The combined cable loss and antenna gain must not exceed +7.5 dBi (850 band). The combined cable loss and antenna gain must not exceed +2.5 dBi and total system output must not exceed 2.0W EIRP in the PCS (1900) band in order to comply with the EIRP limit of 24.232 (b). OEM installers must be provided with antenna installation instruction and transmitter operating conditions for satisfying RF exposure compliance.

## SECTION 2 - PRE-OPERATION AND INSPECTION

### 2.1 PRE-OPERATION CHECK AND INSPECTION

**Note:** Complete all required maintenance before operating unit.

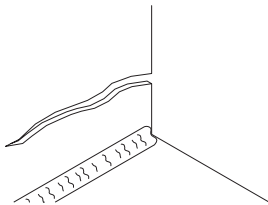


## WARNING

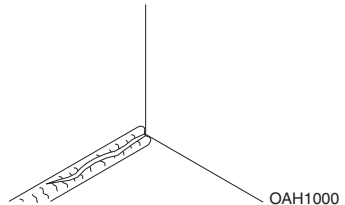
**FALL HAZARD.** Use extreme caution when checking items beyond your normal reach. Use an approved ladder.

The pre-operation check and inspection, performed at beginning of each work shift or at each change of operator, should include the following:

1. **Cleanliness** - Check all surfaces for leakage (oil, fuel or battery fluid) or foreign objects. Report any leakage to the proper maintenance personnel.
2. **Structure** - Inspect the machine structure for dents, damage, weld or parent metal cracks or other discrepancies.



PARENT METAL CRACK



WELD CRACK

3. **Safety Decals** - Ensure all safety decals are legible and in place. Clean or replace as required. See page 2-3 for details.
4. **Operation and Safety Manuals** - Operation & Safety Manual and AEM Safety Manual (ANSI only) located in cab manual holder.
5. **Walk-Around Inspection** - See page 2-10 for details.
6. **Fluid Levels** - Check fluids, including fuel, hydraulic oil, engine oil and coolant. When adding fluids, refer to Section 7 - Lubrication and Maintenance and Section 9 - Specifications to determine proper type and intervals. Before removing filler caps or fill plugs, wipe all dirt and grease away from the ports. If dirt enters these ports, it can severely reduce component life.
7. **Attachments/Accessories** - Ensure correct capacity charts are installed on the telehandler. If provided, reference the Operation & Safety Manual of each attachment or accessory installed for specific inspection, operation and maintenance instructions.

## ***Section 2 - Pre-Operation and Inspection***

---

8. **Operational Check** - Once the walk-around inspection is complete, perform a warm-up and operational check (see page 2-14) of all systems in an area free of overhead and ground level obstructions. See Section 3 - Controls and Indicators for more specific operating instructions.



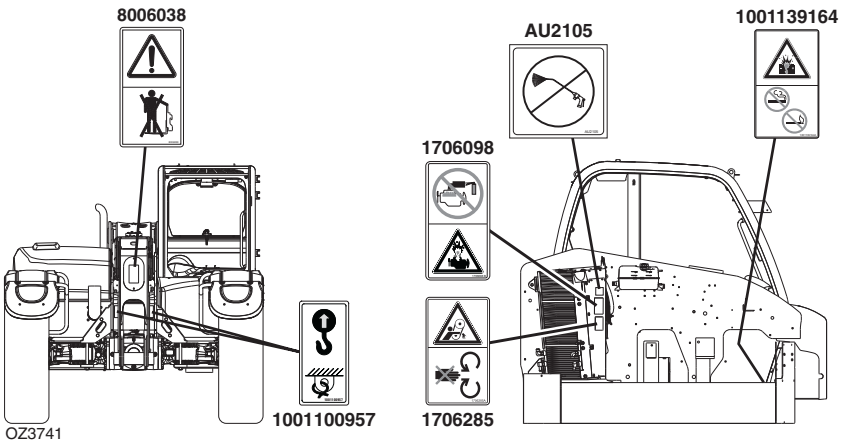
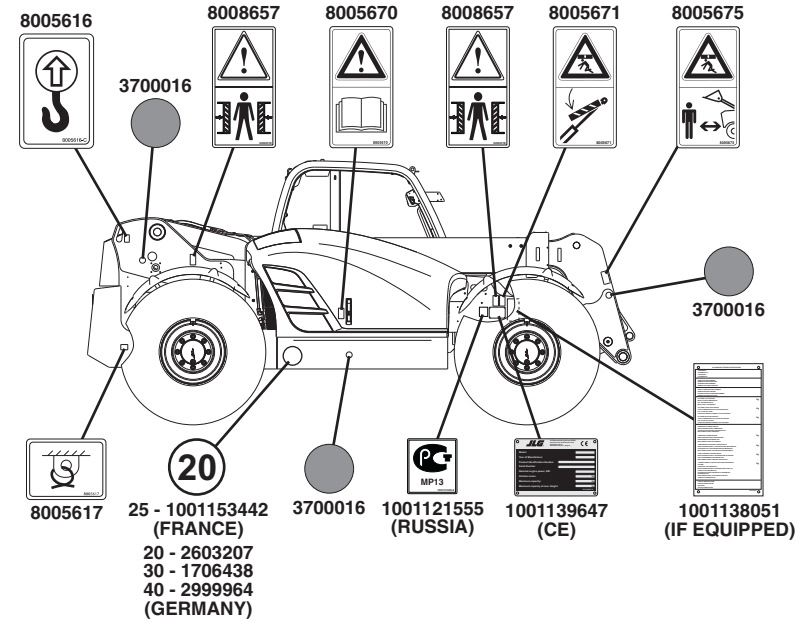
# **WARNING**

If telehandler does not operate properly, immediately bring machine to a stop, lower boom and attachment to ground and stop the engine. Determine cause and correct before continued use.

### 2.2 SAFETY DECALS

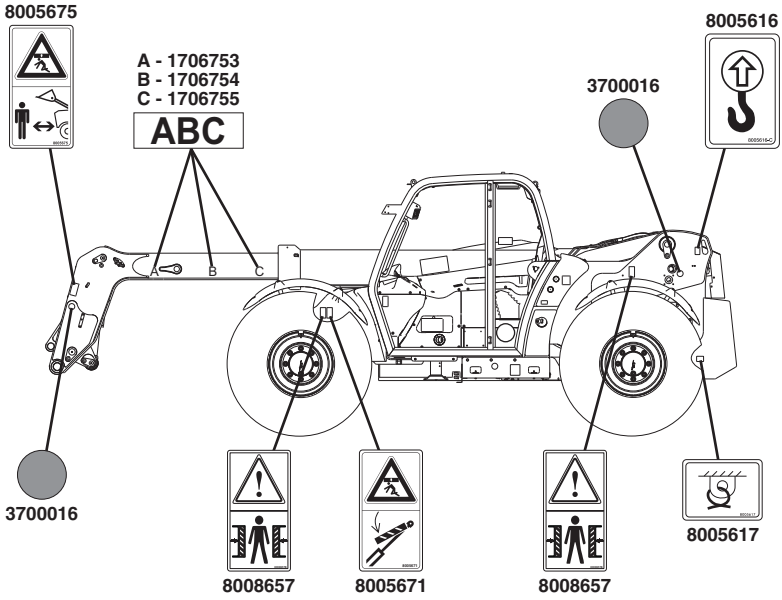
Ensure all **DANGER, WARNING, CAUTION** and instructional decals and proper capacity charts are legible and in place. Clean and replace as required.

#### 3706PS & 3707PS

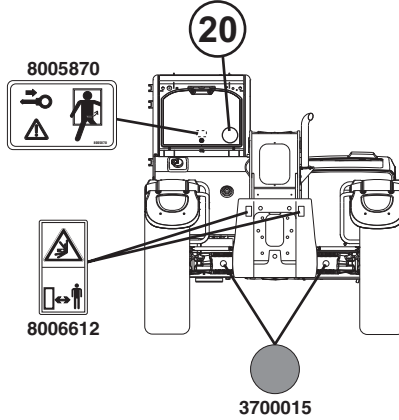


**VIEW OF ENGINE COMPARTMENT  
(COMPONENTS REMOVED FOR CLARITY)**

## Section 2 - Pre-Operation and Inspection



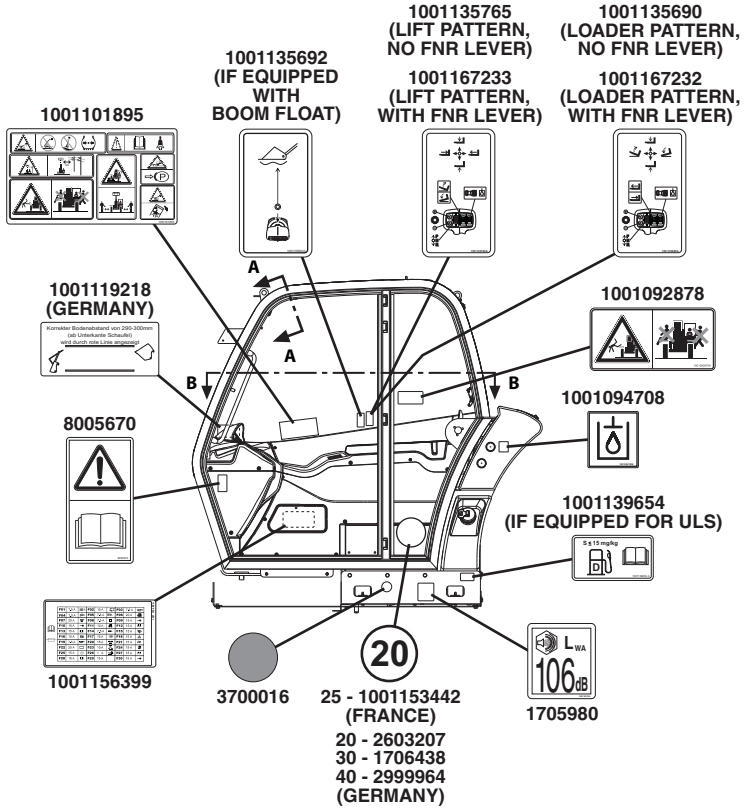
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(FRANCE)  
20 - 2603207  
30 - 1706438  
40 - 2999964  
(GERMANY)



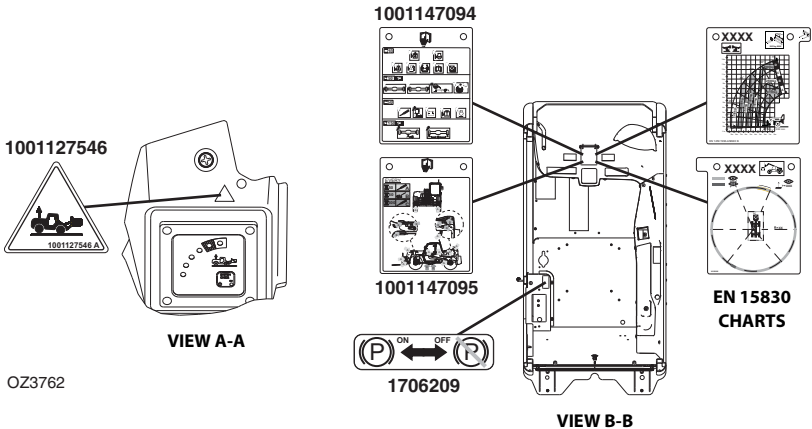
OZ3751



## Section 2 - Pre-Operation and Inspection



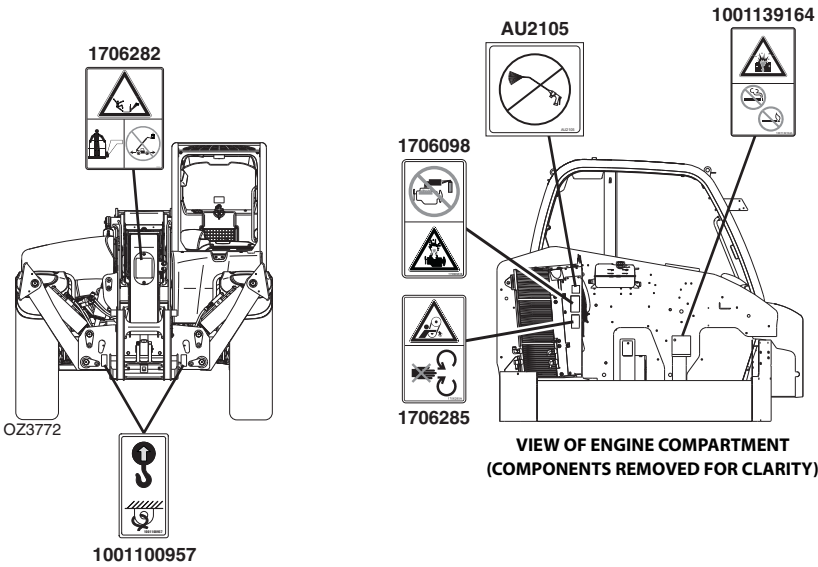
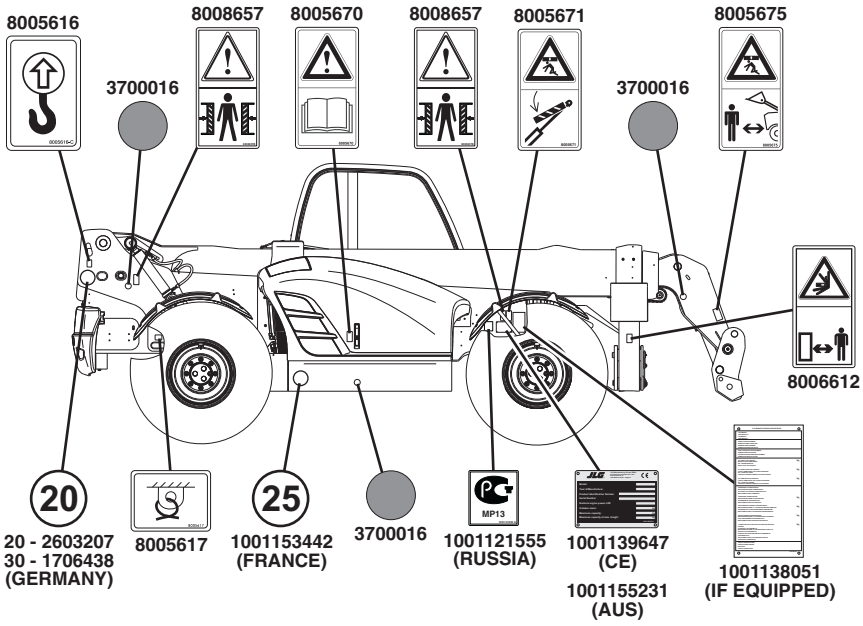
### CAPACITY CHARTS



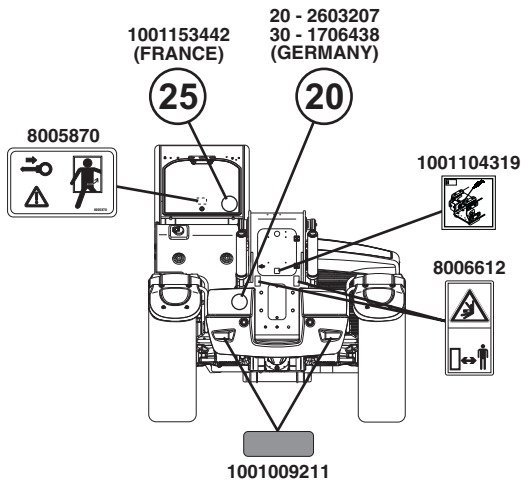
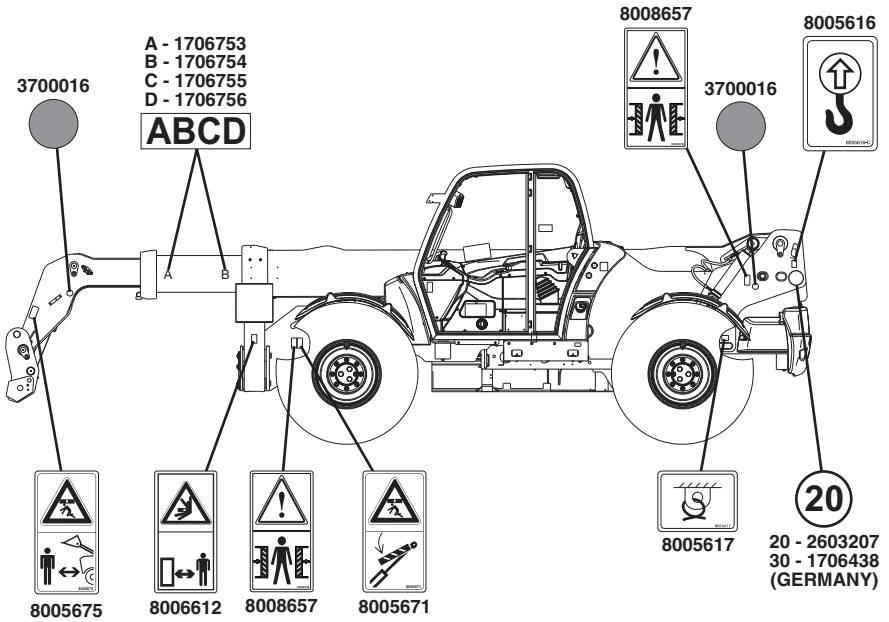
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# Section 2 - Pre-Operation and Inspection

## 4014PS & 4017PS

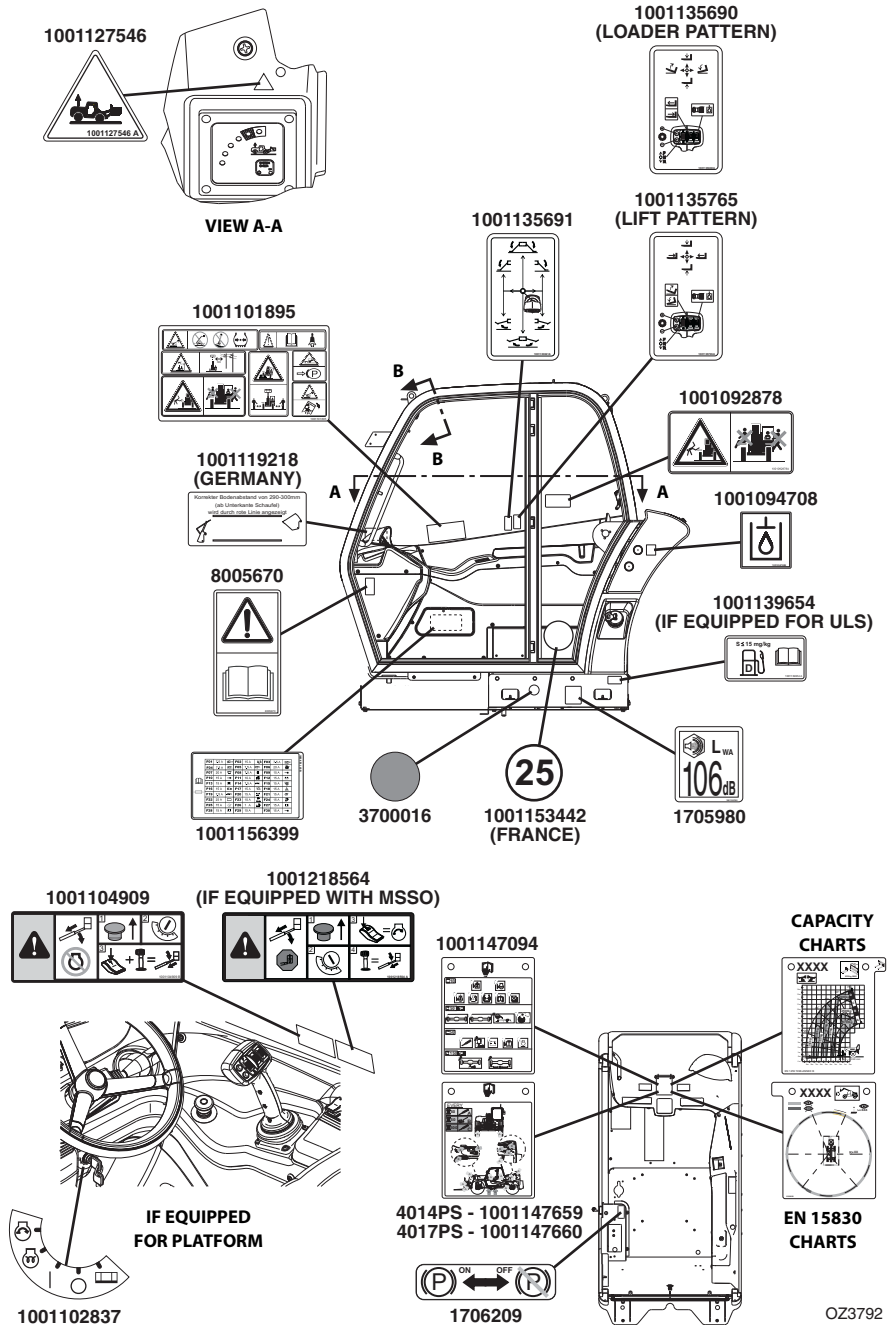


## Section 2 - Pre-Operation and Inspection



OZ3781

## Section 2 - Pre-Operation and Inspection

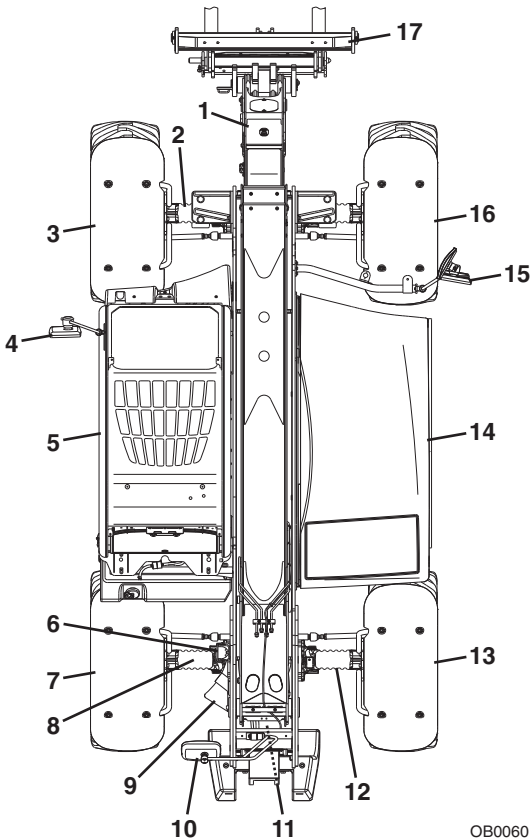


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## Section 2 - Pre-Operation and Inspection

### 2.3 WALK-AROUND INSPECTION

#### 3706PS & 3707PS



OB0060

Begin your walk-around inspection at item 1, as noted below. Continue to your right (counterclockwise when viewed from top) checking each item in sequence.

**INSPECTION NOTE:** On all components, make sure there are no loose or missing parts, that they are securely fastened and no visible leaks or excessive wear exists in addition to any other criteria mentioned. Inspect all structural members including attachment for cracks, excessive corrosion and other damage.

**1. Boom Sections and Lift, Tilt, Extend/Retract, Compensating (Slave) Cylinders -**

- Check front, top, side and rear wear pads for presence of grease.
- Pivot pins secure; hydraulic hoses undamaged, not leaking.

**2. Front Axle -** Steer cylinders undamaged, not leaking; pivot pins secure (if equipped); hydraulic hoses undamaged, not leaking.

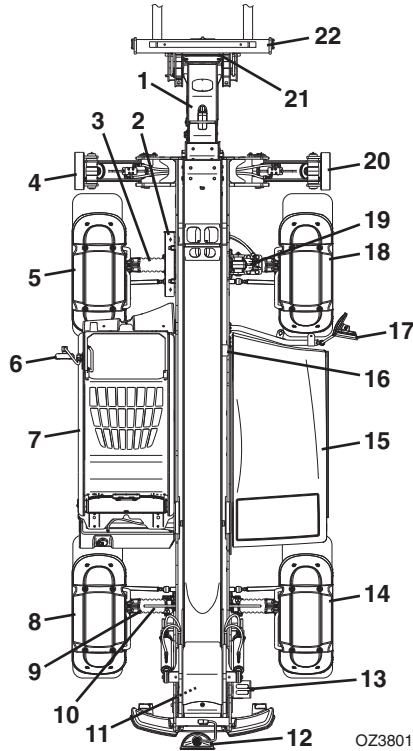
## ***Section 2 - Pre-Operation and Inspection***

---

- 3. Wheel/Tire Assembly** - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
- 4. Mirror** - Clean and undamaged.
- 5. Cab and Electrical** -
  - General appearance; no visible damage.
  - Frame level indicator(s) and window glass undamaged and clean.
  - Gauges, switches, joystick, foot controls and horn operational.
  - Check seat belt for damage, replace belt if frayed or cut webbing, damaged buckles or loose mounting hardware.
- 6. Boom Prop** (if equipped) - See inspection note.
- 7. Wheel/Tire Assembly** - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
- 8. LSI Sensor** - See inspection note.
- 9. Wheel Chock** (if equipped) - See inspection note.
- 10. Mirror** - Clean and undamaged.
- 11. Main Control Valve** - See inspection note.
- 12. Rear Axle** - Steer cylinders undamaged, not leaking; pivot pins secure; hydraulic hoses undamaged, not leaking.
- 13. Wheel/Tire Assembly** - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
- 14. Engine Compartment** -
  - Drive belts, check condition and replace as required.
  - Engine mounts - See inspection note.
  - Battery cables tight, no visible damage or corrosion.
  - Engine cover properly secured.
- 15. Mirrors** - Clean and undamaged.
- 16. Wheel/Tire Assembly** - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
- 17. Attachment** - Properly installed, see "*Attachment Installation*" on page 5-11.

## Section 2 - Pre-Operation and Inspection

### 4014PS & 4017PS



Begin your walk-around inspection at item 1, as noted below. Continue to your right (counterclockwise when viewed from top) checking each item in sequence.

**INSPECTION NOTE:** On all components, make sure there are no loose or missing parts, that they are securely fastened and no visible leaks or excessive wear exists in addition to any other criteria mentioned. Inspect all structural members including attachment for cracks, excessive corrosion and other damage.

- 1. Boom Sections and Lift, Tilt, Extend/Retract, Compensating (Slave) Cylinders -**
  - Check front, top, side and rear wear pads for presence of grease.
  - Pivot pins secure; hydraulic hoses undamaged, not leaking.
- 2. Boom Prop (if equipped) - See inspection note.**
- 3. Front Axle - Steer cylinders undamaged, not leaking; pivot pins secure (if equipped); hydraulic hoses undamaged, not leaking.**
- 4. Left Outrigger - Pins secure; hydraulic hoses and cylinder undamaged, not leaking.**



## ***Section 2 - Pre-Operation and Inspection***

---

5. Wheel/Tire Assembly - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
6. Mirror - Clean and undamaged.
7. Cab and Electrical -
  - General appearance; no visible damage.
  - Frame level indicator(s) and window glass undamaged and clean.
  - Gauges, switches, joystick, foot controls and horn operational.
  - Check seat belt for damage, replace belt if frayed or cut webbing, damaged buckles or loose mounting hardware.
8. Wheel/Tire Assembly - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
9. Rear Axle - Steer cylinders undamaged, not leaking; pivot pins secure; hydraulic hoses undamaged, not leaking.
10. LSI Sensor - See inspection note.
11. Main Control Valve - See inspection note.
12. Mirror - Clean and undamaged.
13. Wheel Chock (if equipped) - See inspection note.
14. Wheel/Tire Assembly - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
15. Engine Compartment -
  - Drive belts, check condition and replace as required.
  - Engine mounts - See inspection note.
  - Battery cables tight, no visible damage or corrosion.
  - Engine cover properly secured.
16. Boom Sensor - See inspection note.
17. Mirrors - Clean and undamaged.
18. Wheel/Tire Assembly - Properly inflated and secured; no loose or missing lug nuts. Inspect for worn tread, cuts, tears or other discrepancies.
19. Frame Level Cylinder - Pins secure; hydraulic hoses undamaged, not leaking.
20. Right Outrigger - Pins secure; hydraulic hoses and cylinder undamaged, not leaking.
21. Platform Recognition Sensor (AUS - if equipped for platform): See inspection note.
22. Attachment - Properly installed, see "Attachment Installation" on page 5-11.

## ***Section 2 - Pre-Operation and Inspection***

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### **2.4 WARM-UP AND OPERATIONAL CHECKS**

#### **Warm-Up Check**

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During warm-up period, check:

1. Heater, defroster and windshield wiper (if equipped).
2. Check all lighting systems (if equipped) for proper operation.
3. Adjust mirrors for maximum visibility.



## **WARNING**

**CUT/CRUSH/BURN HAZARD.** Keep engine cover closed while engine is running.

#### **Operational Check**

---

When engine warms, perform an operational check:

1. Service brake and parking brake operation.
2. Forward and reverse travel.
3. Each gear.
4. Steering in both directions with engine at low idle (steering lock to lock will not be reached). Check in each steering mode
5. Horn and back-up alarm. Must be audible from inside operators cab with engine running.
6. All joystick functions - operate smoothly and correctly.
7. Perform any additional checks described in Section 8.

## **2.5 OPERATOR CAB**

The telehandler is equipped with an open or enclosed ROPS/FOPS cab.



# **WARNING**

Never operate telehandler unless the overhead guard, cab structure and right side glass or screen are in good condition. Any modification to this machine must be approved by JLG to assure compliance with ROPS/FOPS certification for this cab/machine configuration. If the overhead guard or cab structure is damaged, the **CAB CANNOT BE REPAIRED**. It must be **REPLACED**.

## Section 2 - Pre-Operation and Inspection

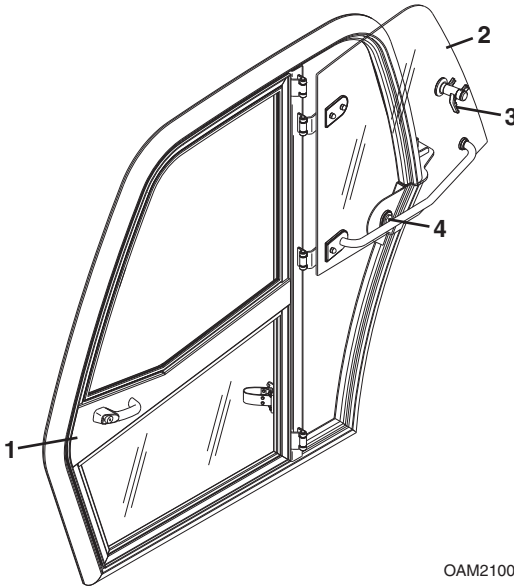
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### 2.6 WINDOWS

Keep all windows clean and unobstructed.

#### Cab Door Window

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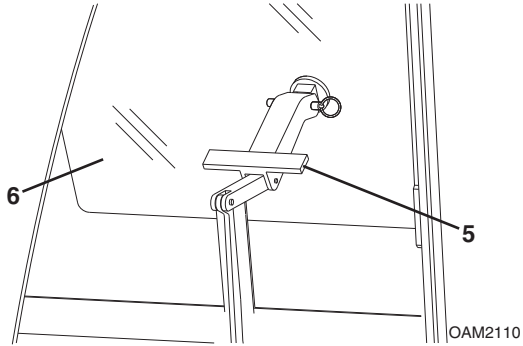


OAM2100

- Cab door (1) must be closed during operation.
- During operation the cab door window (2) must either be latched open or closed.
- Open the cab door window using lever (3) and secure it in the latch (4).
- Press the release inside the cab to unlatch the window.

**Rear Window**

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- Lift lever (4) and push to open the rear window (5).
- Lift lever and pull to close.

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## **SECTION 3 - CONTROLS AND INDICATORS**

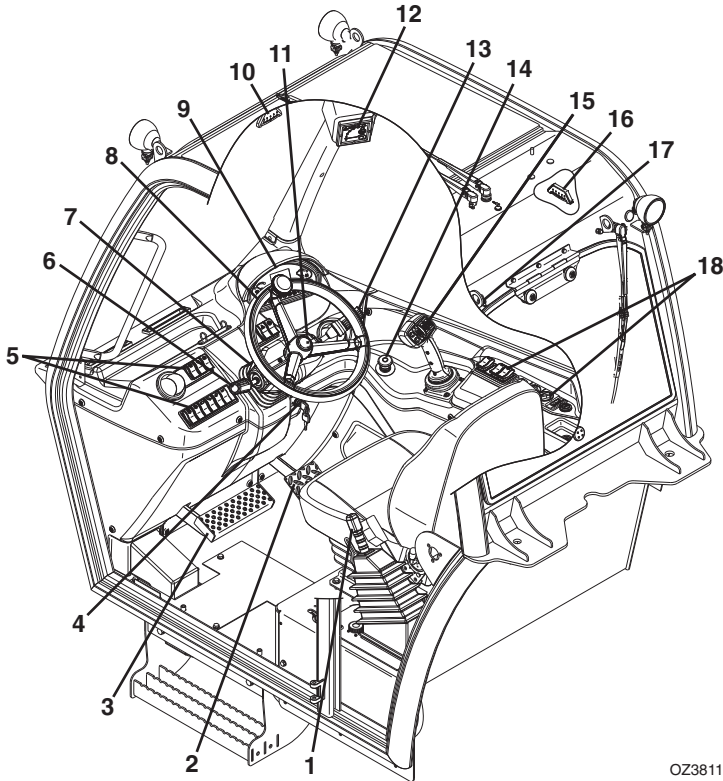
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### **3.1 GENERAL**

This section provides the necessary information needed to understand control functions.

## Section 3 - Controls and Indicators

### 3.2 CONTROLS



OZ3811

1. Park Brake: See page 3-11.
2. Accelerator Pedal: Pressing down the pedal increases engine and hydraulic speed.
3. Service Brake Pedal: The further the pedal is depressed, the slower the travel speed.
4. Ignition Switch: Key Activated. See page 3-10.
5. Front Console Switches: See page 3-24.
6. Transmission Control Lever (if equipped): See page 3-12.
7. Steering Column Adjuster: See page 3-16.
8. Steering Wheel: Turning the steering wheel to the left or right steers the machine in the corresponding direction. Three steering modes are available. See "Steer Modes" on page 3-30.
9. Instrument Panel: See page 3-4.



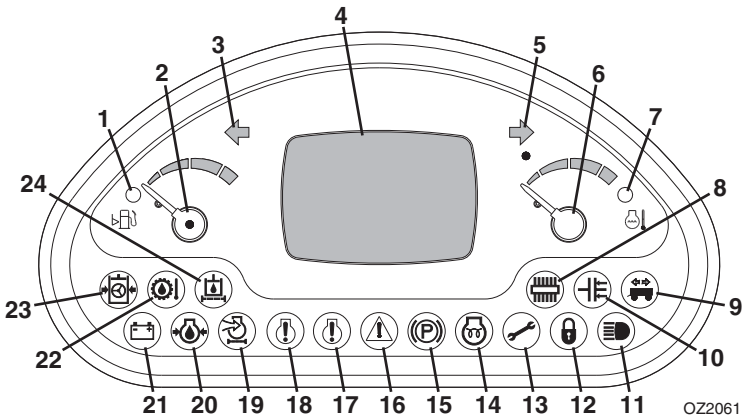
## ***Section 3 - Controls and Indicators***

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10. Frame Level Indicator: Enables operator to determine the left to right level condition of the telehandler.
11. Keypad: See page 3-8.
12. LSI Indicator: See page 3-14.
13. Accessory Control Lever: See page 3-27.
14. Power/Emergency Stop Switch (if equipped for platform): Push down to shut off power and stop engine.
15. Boom Joystick and Transmission Control: See page 3-18.
16. Longitudinal Level Indicator (AUS): Enables operator to determine the front to back level condition of the telehandler.
17. Power Outlet: 12V receptacle.
18. Right Console Switches: See page 3-25.

## Section 3 - Controls and Indicators

### Instrument Panel



1. **Low Fuel Indicator:** Illuminates and buzzer sounds briefly when fuel level is low.
2. **Fuel Gauge:** Indicates amount of fuel in fuel tank.
3. **Left Turn Signal Indicator:** Illuminates when left turn signal is active.
4. **Display Screen:** See page 3-6.
5. **Right Turn Signal Indicator:** Illuminates when right turn signal is active.
6. **Engine Temperature Gauge:** Indicates engine operating temperature.
7. **Engine Temperature Warning Indicator:** Illuminates and buzzer sounds when engine temperature is too high.
8. **Continuous Auxiliary Hydraulics Indicator:** Illuminates when continuous auxiliary hydraulics are active.
9. **Trailer Turn Signal Indicator:** Illuminates when trailer turn signal is activated.
10. **Clutch Lock Indicator:** Illuminates when clutch lock feature is engaged.
11. **High Beam Indicator:** Illuminates when high beam lights are on.
12. **Anti Theft Indicator:** Illuminates and buzzer sounds briefly at start-up when anti theft feature is active. Enter anti theft code, see page 3-28.
13. **Maintenance Indicator:** Illuminates and buzzer sounds briefly when regular scheduled maintenance is required.
14. **Engine Preheat Indicator:** Illuminates with ignition key in position II. Indicator goes out when start temperature is reached.
15. **Park Brake Indicator:** Illuminates when park brake is applied. See page 3-11.

## Section 3 - Controls and Indicators

16. **System Distress Indicator:** Illuminates and buzzer sounds when critical machine and engine faults exist.
17. **Engine Fault Critical Indicator:** Illuminates and buzzer sounds when a critical engine fault exists.
18. **Engine Fault Warning Indicator:** Illuminates and buzzer sounds when engine is operating outside the normal range.
19. **Air Filter Restriction Indicator:** Illuminates and buzzer sounds briefly when air filter(s) require maintenance.
20. **Engine Oil Pressure Indicator:** Illuminates and buzzer sounds when engine oil pressure is too low.
21. **Battery Charge Indicator:** Illuminates when battery is at low charge or charging system is not functioning properly.
22. **Transmission Oil Temperature Indicator:** Illuminates and buzzer sounds when transmission oil temperature is too high.
23. **Steering Pressure Indicator:** Illuminates and buzzer sounds when steering pressure is too low.
24. **Hydraulic Filter Restriction Indicator:** Illuminates and buzzer sounds briefly when hydraulic filter requires maintenance.

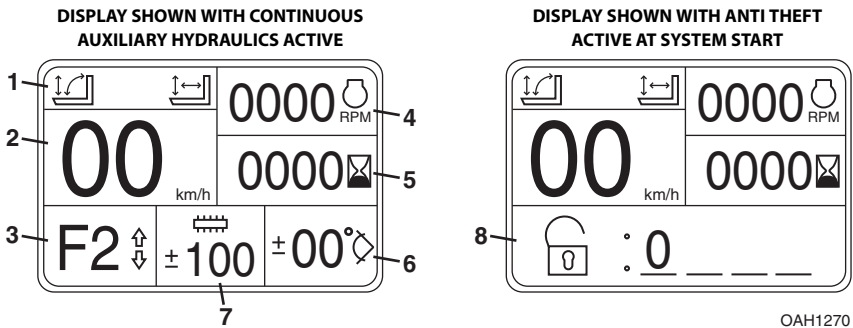
# NOTICE

**EQUIPMENT DAMAGE.** When the engine fault, system distress or a red indicator illuminates (except park brake), immediately bring machine to a stop, lower boom and attachment to ground and stop the engine. Determine cause and correct before continued use.

**Note:** All indicators (except high beam and turn signals) perform a bulb check at system start up.

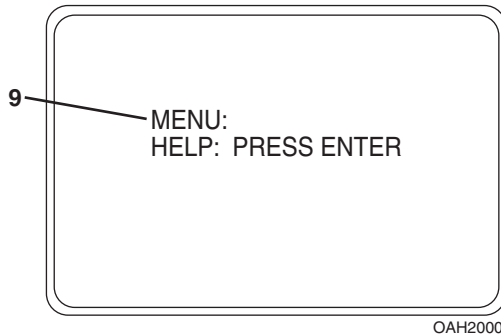
## Section 3 - Controls and Indicators

### Display Screen



1. **Joystick Mode:** Displays current joystick mode. Joystick mode can be changed by the machine owner in Operator Tools Menu (level 2 password required). See Service Manual for information.
  - a. Loader Joystick Pattern - Displays loader joystick pattern icon on left when active. See page 3-21.
  - b. Lift Joystick Pattern - Displays lift joystick pattern icon on right when active. See page 3-18.
2. **Speed and Power to Platform:**
  - a. Speed - Telehandler travel speed displayed in kilometers per hour (km/h) or miles per hour (m/h).
  - b. Transfer Power to Platform (if equipped for platform) - Assists with transferring power to platform. Refer to the Platform Operation & Safety Manual.
3. **Driving Direction and Gear:** Displays current driving condition.
  - a. Direction - Forward (F), Neutral (N) or Reverse (R).
  - b. Gear - First (1), Second (2), Third (3), Fourth (4) or, if equipped, Fifth (5), Sixth (6).
4. **Engine Speed:** Displays engine speed in revolutions per minute (rpm).
5. **Operating Hours:** Displays total hours of telehandler operation.
6. **Boom Angle:** Displays boom angle in degrees. 0 degrees indicates horizontal.
7. **Continuous Auxiliary Hydraulics, Steering Mode Change and Platform Status:**
  - a. Continuous Auxiliary Hydraulics - Displays flow value (-100% to +100%) when continuous auxiliary hydraulics is activated. See Section 5 - Attachments and Hitches for details.
  - b. Steering Mode Change - Assists with steering mode change. See "Steer Modes" on page 3-30 for details.
  - c. Platform Status (if equipped for platform) - Displays status when platform is installed.

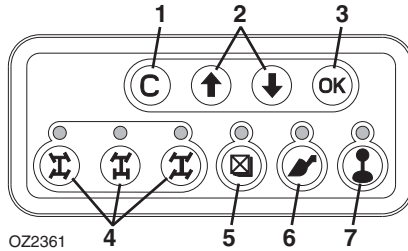
8. **Anti Theft Code Entry:** If active, the four digit code must be entered after system start. See "Anti Theft" on page 3-28 for details.



9. **Menus:** Menus display fault codes and other machine information while allowing modification of some operating parameters. Depress and hold the C and OK buttons on the keypad to access menus.
- Help - Displays active fault code. Depress OK button again and use keypad arrows to cycle through the last 25 fault codes. Active faults are denoted with an asterisk.
  - Operator Tools - Speed, Temperature and Oil Pressure units and Steering Alignment Mode can be modified by the operator. Customer or Service level access code required to modify additional items.
    - Machine Speed - Select units (km/h or m/h) to be displayed.
    - Engine Temperature - Select units (Celsius or fahrenheit) to be displayed.
    - Steering Alignment Mode - Select mode (manual or all wheel assisted) to be used when changing steering modes, see page 3-30.
  - Personalities - View performance parameters. Customer or Service level access code required to modify parameters.
  - Access Level - Code entry determines access level.
    - Operator (Level 3) - No code required.
    - Customer (Level 2) - See Service Manual for information.
    - Service (Level 1) - Manufacturer service representative only.
  - Diagnostics - View diagnostic information.
  - System Test - Performs test of all system inputs and outputs.
  - Machine Setup - View machine configurations. Service level access code required to modify configurations.
  - Calibrations - Customer or Service level access code required.

## Section 3 - Controls and Indicators

### Keypad



1. **C** (Clear or escape): Use in conjunction with display screen. Returns user interface one level during navigation. If at top level menu, depress and hold for one second to exit.
2. **Up/Down Arrows**: Use in conjunction with display screen. Navigate menu selections and change adjustable values.
3. **OK** (Enter): Use in conjunction with display screen. Confirms user interface inputs.
4. **Steer Mode**: Three steer modes available: 4-Wheel Circle Steer, 2-Wheel Front Steer and 4-Wheel Crab Steer. Illuminated LED indicates current steer mode. See page 3-30.

**Note:** If machine is shut-down during steer mode change, it must be completed at restart.

5. **LSI Override**: Momentarily disables the automatic function cut-out. LED flashes while activated. Depress and hold up to 30 seconds while operating joystick to momentarily disable the automatic function cut-out.



## WARNING

**TIP OVER HAZARD.** Exceeding lift capacity of the telehandler could damage the equipment and/or cause tip over.

6. **Bucket Mode**: LED lit while activated. Increases response to boom functions.
7. **Joystick Function**: LED lit while activated. Boom, auxiliary hydraulics and outrigger functions are enabled. Deactivate this function before traveling on public roads. See "Road Operation (CE)" on page 4-10.

**Note:** All LEDs perform a bulb check at system start up.

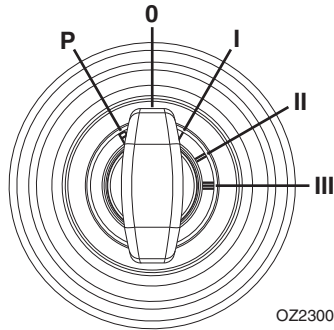
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## Section 3 - Controls and Indicators

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### Ignition

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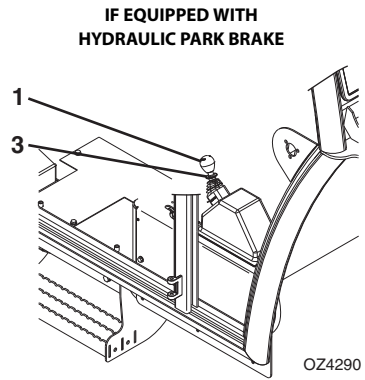
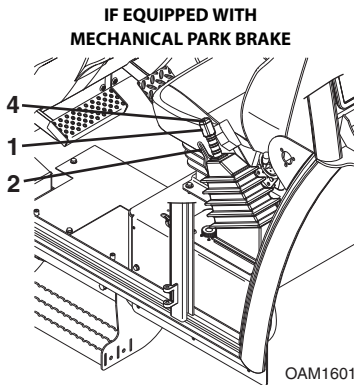


- Position **0** - Engine off.
- Position **I** - Voltage available for all electrical functions.
- Position **II** - Wait to start engine until preheat indicator on instrument panel goes out.
- Position **III** - Engine start. In the event the engine does not start, rotate key to position 0 then back to position III to re-engage the starter.
- Position **P** (if equipped for platform) - Power transferred to platform.

**Note:** Key is removable in the 0 and P positions.



### Park Brake



The park brake lever (1) controls the application and release of the park brake.

#### If Equipped with Mechanical Park Brake

- Pull lever back to apply park brake.
- Squeeze release (2) and push lever forward to release park brake.
- Park brake cable can be adjusted with the knob (4). Turn clockwise to increase park brake force. Turn counterclockwise to decrease park brake force.

#### If Equipped with Hydraulic Park Brake

- Pull lever back to apply park brake.
- Lift detent ring (3) and push lever forward to release park brake.



## WARNING

**MACHINE ROLL-AWAY HAZARD.** Always move park brake lever to "ON" position, lower boom to ground and stop engine before leaving cab.



## WARNING

**CRUSH HAZARD.** Applying park brake while traveling will cause unit to stop abruptly and could cause load loss. To stop the machine in an emergency, apply the park brake.

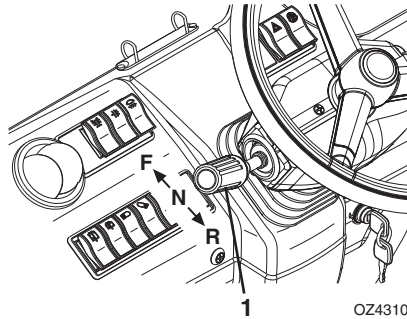
### Parking Procedure

1. Using service brake, stop telehandler in an appropriate parking area.
2. Follow "Shut-Down Procedure" on page 4-3.

## Section 3 - Controls and Indicators

### Transmission Control Lever (if equipped)

#### Direction of Travel Selection



Transmission control lever (1) engages forward or reverse travel.

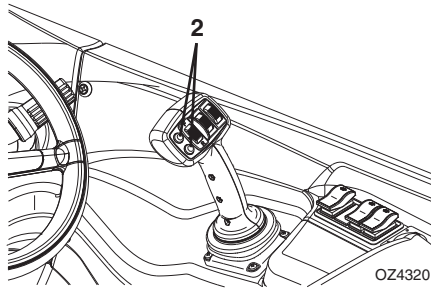
- Push lever forward for forward travel; pull lever rearward for reverse travel. Move lever to centered position for neutral.
- Forward or reverse travel can be selected while in any gear.
- When traveling in reverse, the back-up alarm will automatically sound.
- Drive in reverse and turn only at slow rates of speed.
- If clutch lock is activated, do not increase engine speed with the transmission in forward or reverse and the service brake depressed in an attempt to get quicker hydraulic performances. This could cause unexpected machine movement.



## WARNING

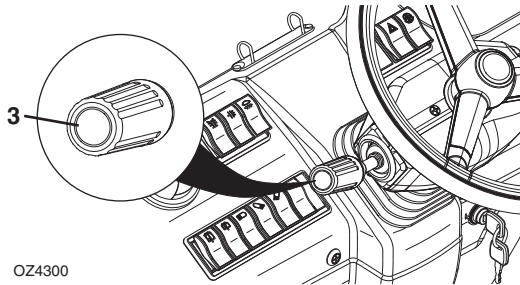
**TIP OVER/CRUSH HAZARD.** Bring telehandler to a complete stop before shifting transmission. A sudden change in direction of travel could reduce stability and/or cause load to shift or fall.

**Gear Selection**



Gear selection is made with joystick buttons (2). See page 3-20 or page 3-23 for details.

**Horn**



Horn button (3) is located on the end of transmission control lever.

- Depress to sound horn.

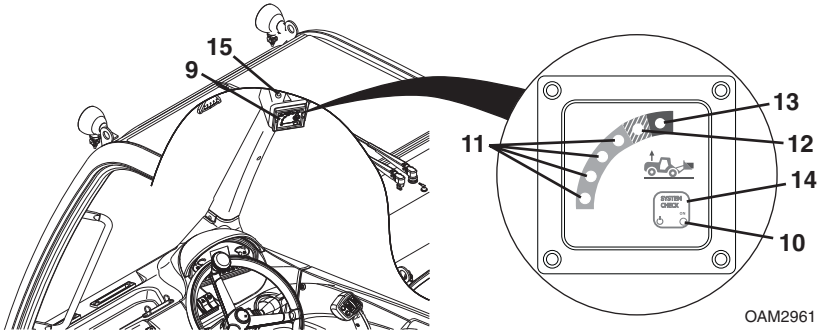
## Section 3 - Controls and Indicators

### Load Stability Indicator - LSI



# WARNING

**TIP OVER HAZARD.** The LSI considers only longitudinal stability limitations, observe all operating parameters. Failure to follow operating parameters of the telehandler could damage the equipment and/or cause tip over.



The LSI (9) provides visual and audible indication of forward stability limitations when machine is static on firm, level surface.

- Green LED (10) will illuminate when LSI power is on.
- When approaching forward stability limitations LEDs progressively illuminate, green (11), then orange (12) and finally red (13).
- If the red LED illuminates the warning buzzer also sounds.

The LSI has two modes:

#### **Active Mode (3706PS, 3707PS, 4014PS & 4017PS)**

- As the telehandler reaches forward stability limitations and the red LED (13) illuminates, the automatic function cut-out is activated. All boom, frame level and outrigger functions are disabled except for boom retract (CE & AUS) and boom lift (CE). Retract boom to re-enable functions.
- In some instances the LSI system may slow down or stop boom functions if operated close to forward stability limitations. When LEDs begin to flash, certain functions can not be operated. Retract boom and/or return the joystick to neutral position for a short period to allow system to reset and LEDs to stop flashing before proceeding with operation.

### Passive Mode (3706PS & 3707PS)

- The orange LED (15) illuminates when the park brake is not applied and transmission is in forward or reverse.
- When approaching forward stability limitations, visual and audible indication is provided and the automatic function cut-out and/or slow down feature is disabled.
- When boom is fully retracted, machine cut-out features are disabled. Visual and audible indication is provided when approaching forward stability limitations.
- Travel in accordance with the requirements set forth in Section 1- General Safety Practices.
- Test LSI (14) at the beginning of each work shift. See Section 8 - Additional Checks.
- When placing a load, ensure axles are not fully steered in either direction.

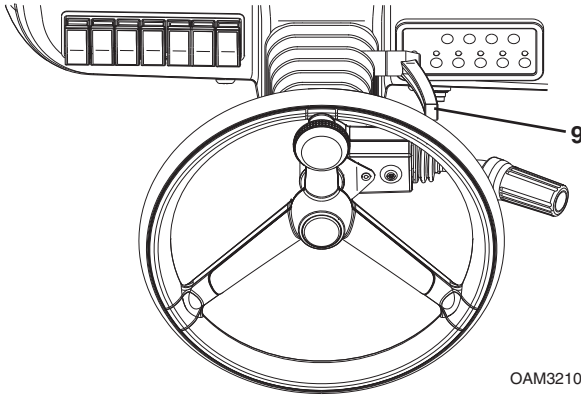


## WARNING

**TIP OVER HAZARD.** If the green, orange and red LEDs flash and warning buzzer sounds, retract and lower boom immediately. Determine cause and correct before continued use.

## Section 3 - Controls and Indicators

### Steering Column Adjuster



- Follow “Shut-Down Procedure” on page 4-3.
- Turn lever (9) counterclockwise to unlock.
- Place steering column in desired position.
- Turn lever clockwise to lock.



## WARNING

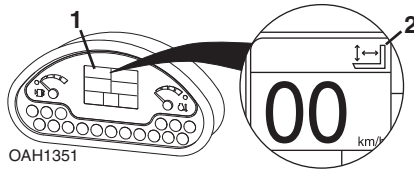
**TIP OVER/CRUSH HAZARD.** Bring telehandler to a complete stop and shutdown engine before adjusting steering column. A sudden change in direction of travel could reduce stability and/or cause load to shift or fall.

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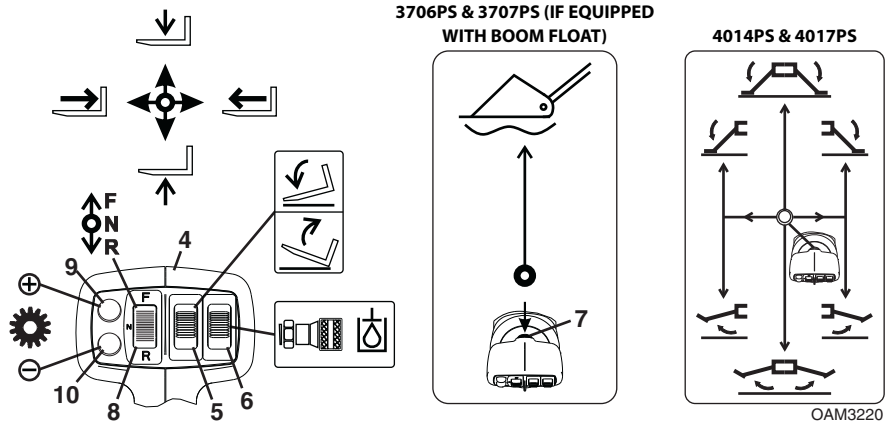
## Section 3 - Controls and Indicators

### Joystick

#### Lift Joystick Pattern



Verify the lift joystick pattern icon (2) is active on the display (1) and the joystick decal located inside the cab matches the machine controls.



The joystick (4) controls the boom, attachment, auxiliary hydraulics, outrigger and transmission functions.

#### Boom Functions

- Move the joystick back to lift boom; move joystick forward to lower boom; move joystick right to extend boom; move joystick left to retract boom.
- The speed of boom functions depends upon the amount of joystick travel in corresponding direction. Increasing engine speed will also increase function speed.
- For two simultaneous boom functions, move the joystick between quadrants. For example; moving the joystick forward and to the left will lower and retract boom simultaneously.



## WARNING

**TIP OVER/CRUSH HAZARD.** Rapid, jerky operation of controls will cause rapid, jerky movement of the load. Such movements could cause the load to shift or fall or could cause the machine to tip over.



### Attachment Functions

Attachment tilt is controlled by the roller switch (5).

- Push the roller switch up to tilt attachment down; push the roller switch down to tilt attachment up.

### Auxiliary Hydraulic Functions

Auxiliary Hydraulics roller switch (6) controls function of attachments that require hydraulic supply for operation. See Section 5 - Attachments and Hitches for approved attachments and control instructions.

### Boom Float Function (3706PS & 3707PS, if equipped)

Joystick trigger button (7) controls boom float. Boom float allows free movement of boom (lift/lower) while the attachment follows ground contours.

- With boom retracted and lowered, press and hold the button; move the joystick forward to activate boom float. Button and joystick position must be held to maintain boom float.
- Release button to deactivate boom float and move joystick to neutral position.

### Outrigger Functions (4014PS & 4017PS)

Joystick trigger button (7) controls both outriggers.

- Press and hold the button; move the joystick forward to lower both outriggers; move the joystick back to raise both outriggers.
- Press and hold the button; move the joystick left then forward to lower the left outrigger; move the joystick left then back to raise the left outrigger.
- Press and hold the button; move the joystick right then forward to lower the right outrigger; move the joystick right then back to raise the right outrigger.
- Outriggers operable with boom at any extension and below 20 degrees or with boom fully retracted and below 55 degrees.



## WARNING

**TIP OVER HAZARD.** Outriggers increase stability and load capacity only if they are used properly. Using outriggers on soft surfaces could cause telehandler to tip over. Always ensure surface can support telehandler and load.

## Section 3 - Controls and Indicators

---

### Transmission Control

**Note:** Transmission control lever (see page 3-12) takes priority over joystick transmission controls.

Transmission switch (8) engages forward or reverse travel.

- Depress top of switch for forward travel; Depress bottom of switch for reverse travel. Move switch to centered position for neutral.
- Forward or reverse travel can be selected while in any gear.
- When traveling in reverse, the back-up alarm will automatically sound.
- Travel at slow rates of speed when making turns and driving in reverse.



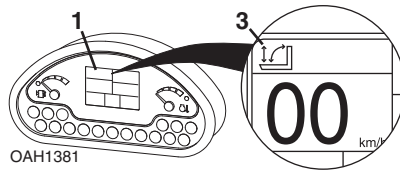
## WARNING

**TIP OVER/CRUSH HAZARD.** Bring telehandler to a complete stop before shifting transmission. A sudden change in direction of travel could reduce stability and/or cause load to shift or fall.

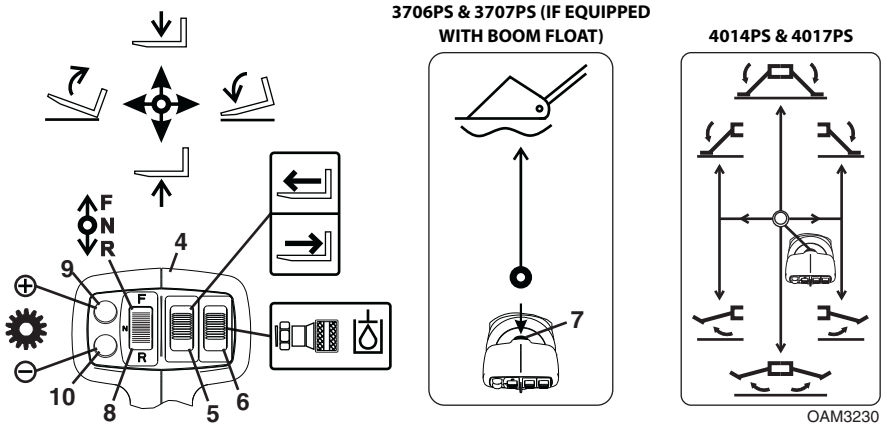
Gear selection is controlled by buttons (9 & 10).

- Depress upshift button (9) to select a higher gear; Depress downshift button (10) to select a lower gear.
- The Transmission is equipped with either six forward and three reverse gears or four forward and three reverse gears. Default gear at start-up is third gear.
- Select the appropriate gear for the task being performed. **Use a lower gear when transporting a load.** Use a higher gear only when driving unloaded for longer distances.
- Slow down prior to downshifting. **Do not downshift more than one gear at a time.**

### Loader Joystick Pattern



Verify the loader joystick pattern icon (3) is active on the display (1) and the joystick decal located inside the cab matches the machine controls.



The joystick (4) controls the boom, attachment, auxiliary hydraulics, outrigger and transmission functions.

#### Boom Functions

- Move the joystick back to lift boom; move joystick forward to lower boom.
- Extend/retract is controlled by the roller switch (5). Push roller switch up to extend boom; push roller switch down to retract boom.
- The speed of boom functions depends upon the amount of joystick travel in corresponding direction. Increasing engine speed will also increase function speed.
- For two simultaneous boom functions, move the joystick between quadrants. For example; moving the joystick forward and to the left will lower boom and tilt attachment up simultaneously.



## WARNING

**TIP OVER/CRUSH HAZARD.** Rapid, jerky operation of controls will cause rapid, jerky movement of the load. Such movements could cause the load to shift or fall or could cause the machine to tip over.

## Section 3 - Controls and Indicators

---

### Attachment Functions

Attachment tilt is controlled by the joystick.

- Move joystick right to tilt down; move joystick left to tilt up.

### Auxiliary Hydraulic Functions

Auxiliary Hydraulics roller switch (6) controls function of attachments that require hydraulic supply for operation. See Section 5 - Attachments and Hitches for approved attachments and control instructions.

### Boom Float Function (3706PS & 3707PS, if equipped)

Joystick trigger button (7) controls boom float. Boom float allows free movement of boom (lift/lower) while the attachment follows ground contours.

- With boom retracted and lowered, press and hold the button; move the joystick forward to activate boom float. Button and joystick position must be held to maintain boom float.
- Release button to deactivate boom float and move joystick to neutral position.

### Outrigger Functions (4014PS & 4017PS)

Joystick trigger button (7) controls both outriggers.

- Press and hold the button; move the joystick forward to lower both outriggers; move the joystick back to raise both outriggers.
- Press and hold the button; move the joystick left then forward to lower the left outrigger; move the joystick left then back to raise the left outrigger.
- Press and hold the button; move the joystick right then forward to lower the right outrigger; move the joystick right then back to raise the right outrigger.
- Outriggers operable with boom at any extension and below 20 degrees or with boom fully retracted and below 55 degrees.



## WARNING

**TIP OVER HAZARD.** Outriggers increase stability and load capacity only if they are used properly. Using outriggers on soft surfaces could cause telehandler to tip over. Always ensure surface can support telehandler and load.

### Transmission Control

**Note:** Transmission control lever (see page 3-12) takes priority over joystick transmission controls.

Transmission switch (8) engages forward or reverse travel.

- Depress top of switch for forward travel; Depress bottom of switch for reverse travel. Move switch to centered position for neutral.
- Forward or reverse travel can be selected while in any gear.
- When traveling in reverse, the back-up alarm will automatically sound.
- Travel at slow rates of speed when making turns and driving in reverse.



## WARNING

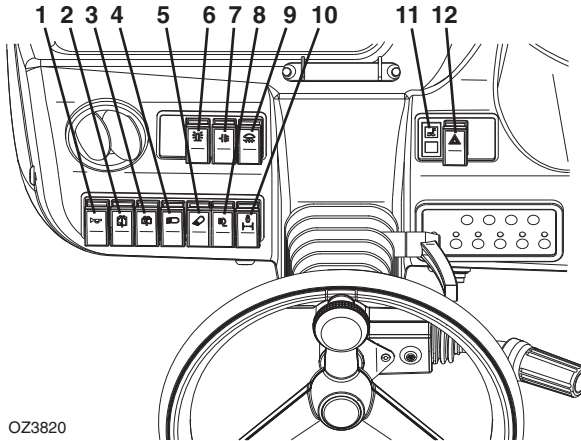
**TIP OVER/CRUSH HAZARD.** Bring telehandler to a complete stop before shifting transmission. A sudden change in direction of travel could reduce stability and/or cause load to shift or fall.

Gear selection is controlled by buttons (9 & 10).

- Depress upshift button (9) to select a higher gear; Depress downshift button (10) to select a lower gear.
- The Transmission is equipped with either six forward and three reverse gears or four forward and three reverse gears. Default gear at start-up is third gear.
- Select the appropriate gear for the task being performed. **Use a lower gear when transporting a load.** Use a higher gear only when driving unloaded for longer distances.
- Slow down prior to downshifting. **Do not downshift more than one gear at a time.**

## Section 3 - Controls and Indicators

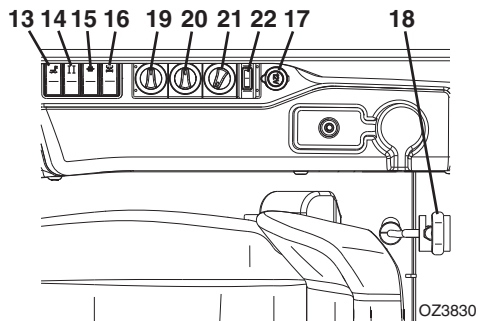
### Front Console Switches



OZ3820

1. Horn Switch (if equipped): Depress and hold to sound horn.
2. Roof Wiper Switch (if equipped): On/Off switch.
3. Rear Wiper Switch (if equipped): On/Off switch.
4. Driving Lights Switch (if equipped): On/Off switch.
5. Front and Rear Cab Work Lights Switch (if equipped): On/Off switch.
6. Beacon Light Switch (if equipped): On/Off switch. Place magnetic base of beacon on cab roof. Power supplied by 12V receptacle at rear left of cab roof.
7. Clutch Lock Switch: Depress front of switch to activate system and keep transmission engaged while depressing service brake. Depress back of switch to deactivate system and have transmission disengage while depressing service brake.
8. Boom Work Lights Switch (if equipped): On/Off switch.
9. Fog Lights Switch (if equipped): On/Off switch.
10. Hydraulic Quick Attach Switch (if equipped): Used in conjunction with the joystick to hydraulically lock or unlock an attachment.
11. Boom Ride Control Indicator (3706PS & 3707PS, if equipped): Illuminates when boom ride control system is activated.
12. Hazard Lights Switch (if equipped): On/Off switch.

### Right Console Switches

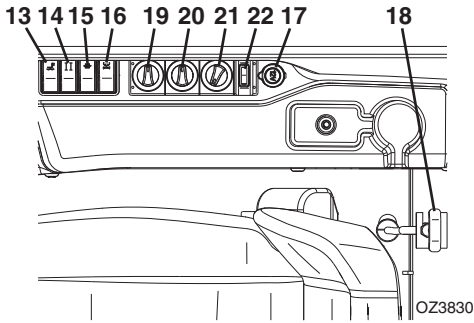


- 13. Boom Ride Control Switch** (3706PS & 3707PS, if equipped): Depress switch to activate boom ride control. While activated and traveling 5 kph (3 mph) or faster, the system acts to cushion boom movement. Depress switch again to deactivate boom ride control.  
Auxiliary Power Switch (4014PS & 4017PS, if equipped for platform): Depress and hold in place to engage auxiliary power. See “*Emergency Lowering of Boom If Equipped for Platform*” on page 6-3.
- 14. Second Auxiliary Hydraulics Switch** (3706PS & 3707PS, if equipped): Depress switch to activate second auxiliary hydraulics on boom. See Section 5 - Attachments and Hitches for approved attachments and control instructions.  
Machine Safety System Override (MSSO)(CE, if equipped)(4014PS & 4017PS, if equipped for platform): Provides emergency override of function controls that are locked out as in the event of Load Sense System activation. See “*Emergency Lowering of Boom If Equipped for Platform*” on page 6-3.
- 15. Continuous Auxiliary Hydraulics Switch:**

  - a. Depress and release switch for continuous operation of hydraulic powered attachments. Set continuous auxiliary hydraulic level (-100% to 100%) within 10 seconds using the keypad up/down arrow buttons (see page 3-8). See Section 5 - Attachments and Hitches for approved attachments and control instructions.
  - b. Relieves auxiliary hydraulic circuit pressure. See page 5-22.
- 16. Hydraulic Hitch Switch** (3706PS & 3707PS, if equipped): Controls position of hydraulic hitch. Depress and hold right side of switch to raise hitch. Depress and hold left side of switch to lower hitch. See page 5-55 for control instructions.  
Frame Level Switch (4014PS & 4017PS): Controls the left to right frame level. Depress right side of switch to rotate frame right; depress left side of switch to rotate frame left. Frame level operable with boom below 20 degrees. If equipped with boom retracted switch, frame level operable with boom below 20 degrees or with boom fully retracted and between 20 and 55 degrees.
- 17. Power Outlet:** 12V receptacle.
- 18. Hydraulic Hitch Safety Hook Release** (3706PS & 3707PS, if equipped): Pull to release safety hooks on hydraulic hitch. See page 5-55 for control instructions.

## Section 3 - Controls and Indicators

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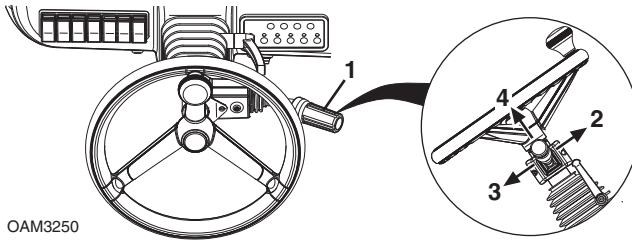
### Heater and Air Conditioning Controls (if equipped)

- 19. Fan Speed Switch: Adjustable rotary switch.
- 20. Recycle/Fresh Air Switch: Adjustable rotary switch.
- 21. Temperature Control Switch: Adjustable rotary switch.
- 22. Air Conditioning Switch: On/Off switch.



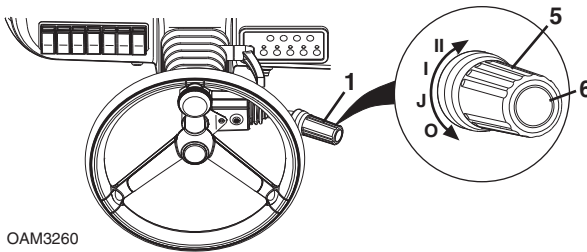
## Accessory Control Lever

### Turn Signals and Low/High Beam Headlights



- Push accessory control lever (1) forward (2) to activate left turn signal.
- Pull lever backward (3) to activate right turn signal.
- The lever must be manually returned to the center position to deactivate either turn signal. The lever will not cancel automatically after a turn.
- Pull lever up (4) to switch between low and high beam headlights.

### Front Windshield Wiper

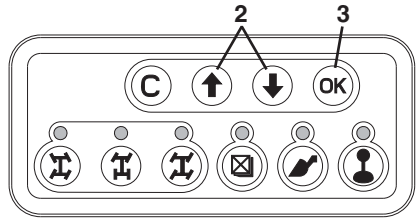
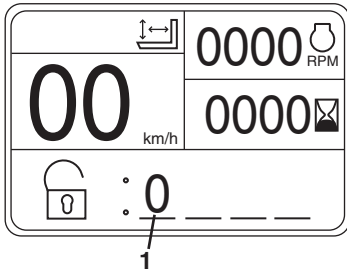


- Rotate hand grip (5) to activate front windshield wiper.  
O - Off, J - Interval (not used), I - Continuous or II - Fast
- Depress end of lever (6) to activate windshield wiper fluid.

## Section 3 - Controls and Indicators

### 3.3 ANTI THEFT

Machines with the anti theft feature active require entering a numeric code before operation to prevent unauthorized use. Code entry is accomplished using the display and keypad.



OAH1430

1. Turn ignition switch to position I. If anti theft is active, the display (1) will prompt the operator for a numeric code.
2. Use the up/down arrow buttons (2) to select the first digit.
3. Depress OK button (3) to confirm and move to the next digit.
4. Continue until the code is complete.
5. If an incorrect code is entered, the buzzer will sound briefly and the display will prompt the operator again for the numeric code.
6. If the correct code is entered, normal start up can continue.

**Note:** If the anti theft feature is active and the current access code is not known, it may be viewed or changed by the machine owner in Operator Tools Menu (level 2 password required). See Service Manual for information.

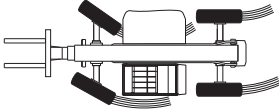
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## Section 3 - Controls and Indicators

### 3.4 STEER MODES

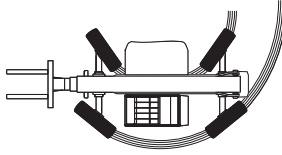
Three steer modes are available for operator use.

2-WHEEL FRONT STEER

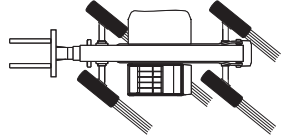


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4-WHEEL CIRCLE STEER



4-WHEEL CRAB STEER

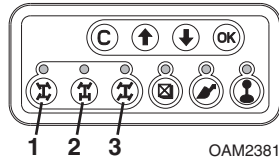


**Note:** 2-Wheel Front Steer mode is required for travel on public roads.

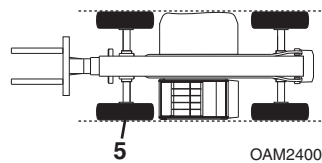
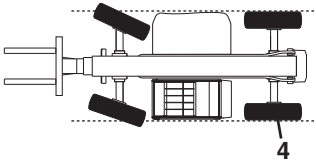
### Manual Steering Alignment Mode Change

If manual steering alignment mode is active under the Operator Tools menu (see page 3-7), use the following procedure for steer mode change.

**Note:** Steer mode will change immediately after selection.



1. Bring machine to a stop using service brake. If front steer mode (2) is active and rear wheels are aligned, go directly to step 4.

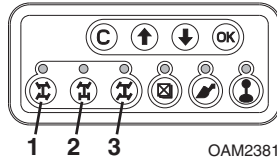


2. With circle steer (1) or crab steer (3) mode active, turn the steering wheel until the left rear wheel (4) is aligned with the side of the machine.
3. Select front steer mode (2).
4. Turn the steering wheel until the left front wheel (5) is aligned with the side of the machine.
5. Wheels are now aligned. Select desired steer mode.

## All Wheel Assisted Steering Alignment Mode Change

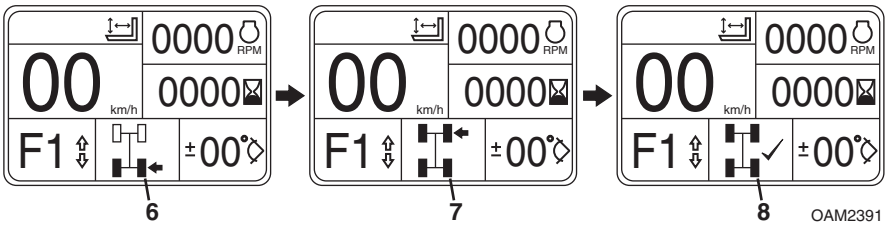
If all wheel assisted steering alignment mode is active under the Operator Tools menu (see page 3-7), use the following procedure for steer mode change.

1. Bring machine to a stop using service brake.



2. Select desired steer mode: circle steer (1), front steer (2) or crab steer (3).

**Note:** Selected steer mode LED will flash and display will show steering alignment screens until the change is complete. After steering alignment is complete, steer mode LED will illuminate solid.



3. Turn the steering wheel until the rear wheels are centered (6). This step will be skipped if changing from front steer mode and rear wheels are already centered.
4. Turn the steering wheel until the front wheels are centered (7). This step will be skipped if changing to front steer mode.
5. Wheels are now aligned and steer mode change is complete (8).

**Note:** Avoid turning steering wheel while machine is shut down. If wheels are not correctly aligned, manual adjustment may be required. See page 3-30.

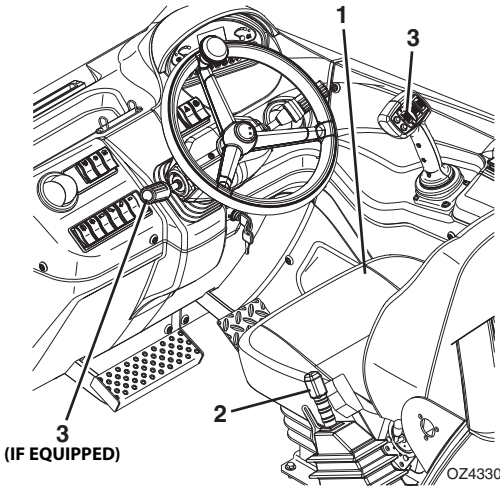
## Section 3 - Controls and Indicators

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### 3.5 OPERATOR SEAT

#### Operator Presence

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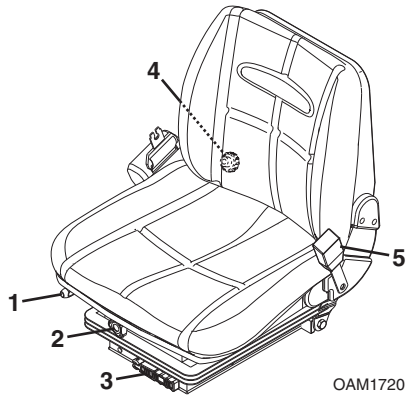
The operator seat (**1**) is equipped with an operator presence system. Engine start and hydraulic functions are prohibited if operator is not present. If the system detects a loss of pressure during operation, after a two second delay one of the following will occur:

1. With the park brake (**2**) engaged and transmission in neutral (**3**):
  - Hydraulic controls are disabled. (Continuous Auxiliary function permitted)
  - Upon returning to seated position, hydraulic controls are enabled.
2. With the park brake (**2**) disengaged and transmission in neutral (**3**):
  - Hydraulic controls are disabled and horn sounds continuously. (Continuous Auxiliary function permitted)
  - Upon returning to seated position, hydraulic controls are enabled and horn will cease.
3. With the park brake (**2**) disengaged and transmission in forward or reverse (**3**):
  - Hydraulic controls are disabled, horn sounds continuously and transmission shifts to neutral.
  - Upon returning to seated position, hydraulic controls are enabled and horn will cease. Return transmission to neutral to allow system to reset prior to reengaging forward or reverse travel.

### Adjustments

Prior to starting the engine adjust seat for position and comfort.

#### Mechanical Suspension Seat

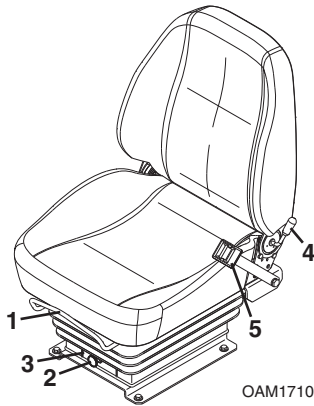


1. **Fore/Aft:** Use handle to move seat fore and aft.
2. **Height:** Use knob to adjust height of the seat.
3. **Suspension:** Use the knob to adjust the suspension to the appropriate weight setting.
4. **Backrest:** Use knob to adjust backrest angle.
5. **Seat Belt:** Always fasten seat belt during operation. If required, a 76 mm (3 in) seat belt is available.

## Section 3 - Controls and Indicators

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### Pneumatic Suspension Seats



1. Fore/Aft: Use handle to move seat fore and aft.
2. Suspension: Use the knob to adjust the suspension to the appropriate weight setting.
3. Weight: Displays current weight setting.
4. Backrest: Use lever to adjust backrest angle.
5. Seat Belt: Always fasten seat belt during operation. If required, a 76 mm (3 in) seat belt is available.



**Seat Belt**

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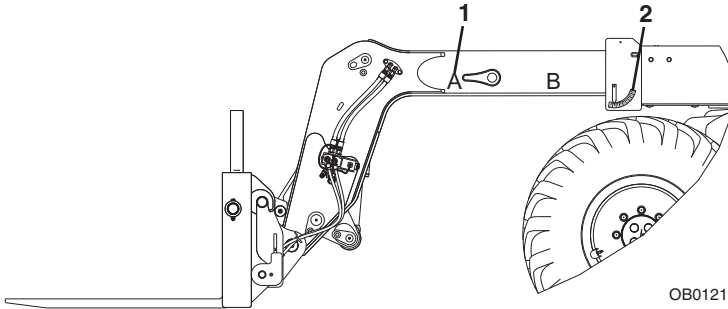
Fasten seat belt as follows:

1. Grasp both free ends of the belt making certain that belt webbing is not twisted or entangled.
2. With back straight in the seat, couple the retractable end (male end) of the belt into the receptacle (buckle) end of the belt.
3. With belt buckle positioned as low on the body as possible, pull the retractable end of the belt away from the buckle until it is tight across the lap.
4. To release belt latch, depress red button on the buckle and pull free end from buckle.

## Section 3 - Controls and Indicators

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### 3.6 BOOM INDICATORS



#### Boom Extension

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- The boom extension indicators (1) are located on the left side of the boom. Use these indicators to determine boom extension when using the capacity chart (see *“Use of the Capacity Chart”* on page 5-5).

#### Boom Angle (AUS)

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- The boom angle indicator (2) is located on the left side of the boom. Use this indicator to determine boom angle when using the capacity chart (see *“Use of the Capacity Chart”* on page 5-5).

## SECTION 4 - OPERATION

### 4.1 ENGINE

**Note:** Refer to Engine Operation & Maintenance Manual for additional information.

#### Starting the Engine

This machine can be operated under normal conditions in temperatures of -20°C to 48°C (0°F to 118°F). Consult JLG for operation outside this range or under abnormal conditions.

1. Make sure all controls are in "Neutral" and all electrical components (lights, heater, defroster, etc.) are turned off. Apply park brake.
2. If equipped for platform, pull the power/emergency stop switch up.
3. Turn ignition switch to position I. If active, enter anti theft code.
4. Turn ignition switch to position II and wait for engine preheat indicator on instrument panel to go out.
5. Turn ignition switch to position III to engage starting motor. Release key immediately when engine starts. If engine fails to start within 20 seconds, release key and allow starting motor to cool for a few minutes before trying again.
6. After engine starts, observe engine oil pressure indicator. If indicator remains on for more than five seconds, stop engine and determine cause before restarting engine.
7. Warm up engine at approximately 1/2 throttle.

**Note:** Engine will not start unless transmission is in "Neutral" and park brake is applied.



## WARNING

**UNEXPECTED MOVEMENT HAZARD.** Always ensure that transmission is in neutral and the service brake is applied before releasing park brake. Releasing park brake in either forward or reverse could cause the machine to move abruptly.



## WARNING

**ENGINE EXPLOSION.** Do not spray ether into air intake for cold weather starting.

## Section 4 - Operation

---

### Battery Boosted Starting

---



OW0530

If battery-boost starting (jump-start) is necessary, proceed as follows:

- Never allow vehicles to touch.
- Ensure boosting vehicle engine is running.
- Connect the positive (+) jumper cable to positive (+) post of discharged battery.
- Connect the opposite end of positive (+) jumper cable to positive (+) post of booster battery.
- Connect the negative (-) jumper cable to negative (-) post on booster battery.
- Connect opposite end of negative (-) jumper cable to ground point on machine away from discharged battery.
- Follow standard starting procedures.
- Remove cables in reverse order after machine has started.



## WARNING

**BATTERY EXPLOSION HAZARD.** Never jump start or charge a frozen battery as it could explode. Keep sparks, flames and lighted smoking materials away from the battery. Lead acid batteries generate explosive gases when charging. Wear safety glasses.

### Normal Engine Operation

---

- Observe instrument panel and display frequently to be sure all systems are functioning properly.
- **Be alert for unusual noises or vibration.** When an unusual condition is noticed, park machine in safe position and perform shut-down procedure. Report condition to your supervisor or maintenance personnel.
- **Avoid prolonged idling.** If the engine is not being used, turn it off.

### Shut-Down Procedure

---

When parking the telehandler, park in a safe location on flat level ground and away from other equipment and/or traffic lanes.

1. Apply the park brake.
2. Shift the transmission to "Neutral."
3. Lower forks or attachment to the ground.
4. Operate engine at low idle for 3 to 5 minutes. **DO NOT over rev engine.**
5. Shut off engine and remove ignition key.
6. If equipped for platform, push the power/emergency stop switch down.
7. Exit telehandler properly.
8. Turn off electrical master switch (if equipped).
9. Block wheels (if necessary).

## Section 4 - Operation

---

### 4.2 OPERATING WITH A NON-SUSPENDED LOAD

#### Lift Load Safely

---

- You must know the weight and load center of every load you lift. If you are not sure of the weight and load center, check with your supervisor or with the supplier of the material.



## WARNING

**TIP OVER HAZARD.** Exceeding lift capacity of the telehandler could damage the equipment and/or cause tip over.

- Know the rated load capacities (refer to Section 5) of the telehandler to determine the operating range in which you can safely lift, transport and place a load.

#### Picking Up a Load

---

- Note the conditions of the terrain. Adjust travel speed and reduce amount of load if conditions warrant.
- Avoid lifting double-tiered loads.
- Make sure load is clear of any adjacent obstacles.
- Adjust spacing of forks so they engage the pallet or load at maximum width. See "Adjusting/Moving Forks" on page 5-23.
- Approach load slowly and squarely with fork tips straight and level. **NEVER** attempt to lift a load with just one fork.
- **NEVER** operate telehandler without a proper and legible capacity chart in the operator cab for the telehandler/attachment combination you are using.

### Transporting a Load

---



- After engaging the load and resting it against the backrest, tilt the load back to position it for travel. Travel in accordance with the requirements set forth in Section 1- General Safety Practices and Section 5 - Attachments and Hitches.
- If equipped, boom ride control mode (see page 3-25) is recommended for transport of a load over longer distances. When activated, the boom ride control system acts to cushion boom movement.

### Leveling Procedure

---

1. Position machine in best location to lift or place load.
2. Apply parking brake and shift transmission to NEUTRAL.
3. Observe level indicator(s) to determine whether machine must be leveled prior to lifting load. If equipped, level machine with frame level switch (see page 3-25) or outrigger controls (see page 3-19 or 3-22).
4. Move boom/attachment to 1,2 m (4 ft) off ground.  
(AUS - Move boom so forks are no more than 300 mm (11.8 in) above ground surface.)

### Important things to remember:

- Never raise the boom/attachment more than 1,2 m (4 ft) above ground unless telehandler is level.  
(AUS - Never raise the forks more than 300 mm (11.8 in) above ground surface unless telehandler is level.)
- The combination of frame leveling and load could cause the telehandler to tip over.

## **Section 4 - Operation**

---

### **Placing a Load**

---

Before placing any load be sure that:

- The landing point can safely support the weight of the load.
- The landing point is level; front to back and side to side.
- Use the capacity chart to determine safe boom extension range. See *"Use of the Capacity Chart"* on page 5-5.
- Align forks at the level load is to be placed, then position boom slowly until load is just above area where it is to be placed.
- Lower the boom until the load rests in position and the forks are free to retract.

### **Disengaging a Load**

---

Once the load has been placed safely at the landing point, proceed as follows:

1. With the forks free from the weight of the load, the boom can be retracted and/or the telehandler can be backed away from under the load if surface will not change level condition of telehandler.
2. Lower the carriage.
3. The telehandler can now be driven from the landing location to continue work.



---

## 4.3 OPERATING WITH A SUSPENDED LOAD

---

### Lift Load Safely

---

- You must know the weight and load center of every load you lift. If you are not sure of the weight and load center, check with your supervisor or with the supplier of the material.



## WARNING

**TIP OVER HAZARD.** Exceeding lift capacity of the telehandler could damage the equipment and/or cause tip over.

- Know the rated load capacities (refer to Section 5) of the telehandler to determine the operating range in which you can safely lift, transport and place a load.

### Picking Up a Suspended Load

---

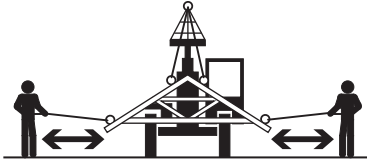
- Note the conditions of the terrain. Adjust travel speed and reduce amount of load if conditions warrant.
- Avoid lifting double-tiered loads.
- Make sure load is clear of any adjacent obstacles.
- **NEVER** operate telehandler without a proper and legible capacity chart in the operator cab for the telehandler/attachment combination you are using.
- Only use approved lifting devices rated for the lifting of the load.
- Identify the proper lifting points of the load, taking into consideration the center of gravity and load stability.
- Ensure to always properly tether loads to restrict movement.
- Refer to “*Use of the Capacity Chart*” on page 5-5 for proper lifting guidelines in addition to the appropriate capacity chart in the operator cab.

## Section 4 - Operation

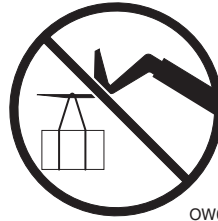
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### Transporting a Suspended Load

---



OZ3160



OW0130

- Travel in accordance with the requirements set forth in Section 1- General Safety Practices and Section 5 - Attachments and Hitches.
- For additional requirements, refer to the appropriate capacity chart in the operator cab.

#### **Important things to remember:**

- Ensure the boom is fully retracted.
- Never raise the load more than 300 mm (11.8 in) above ground surface or the boom more than 45°.
- The combination of frame leveling and load could cause the telehandler to tip over.
- The guide persons and operator must remain in constant communication (verbal or hand) and be in visual contact with the operator at all times.
- Never place the guide persons between the suspended load and the telehandler.
- Only transport the load at walking speed, 0.4 m/s (0.9 mph), or less.

#### **Leveling Procedure**

---

1. Position machine in best location to lift or place load.
2. Apply parking brake and shift transmission to NEUTRAL.
3. Observe level indicator(s) to determine whether machine must be leveled prior to lifting load. If equipped, level machine with frame level switch (see page 3-25) or outrigger controls (see page 3-19 or 3-22).
4. Move boom so load is no more than 300 mm (11.8 in) above ground surface and boom/or boom is raised no more than 45°.

### Placing a Suspended Load

---

Before placing any load be sure that:

- The landing point can safely support the weight of the load.
- The landing point is level; front to back and side to side.
- Use the capacity chart to determine safe boom extension range. See *"Use of the Capacity Chart"* on page 5-5.
- Align load at the level load is to be placed, then position boom slowly until load is just above area where it is to be placed.
- Ensure that the guide persons and operator remain in constant communication (verbal or hand) when placing the load.

### Disengaging a Suspended Load

---

- Never place the guide persons between the suspended load and the telehandler.
- Once at the destination of the load, ensure to bring the telehandler to a complete stop and apply the park brake prior to disengagement of the lifting devices and tethers.

## Section 4 - Operation

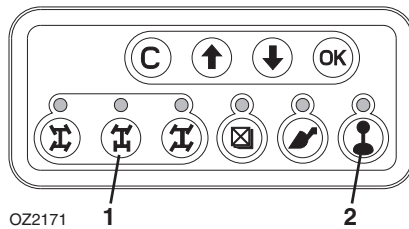
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### 4.4 ROAD OPERATION (CE)

1. Preparation
  - a. Remove load from attachment.
  - b. Remove any large amounts of dirt from machine.
  - c. Check lights and mirrors and adjust if necessary.

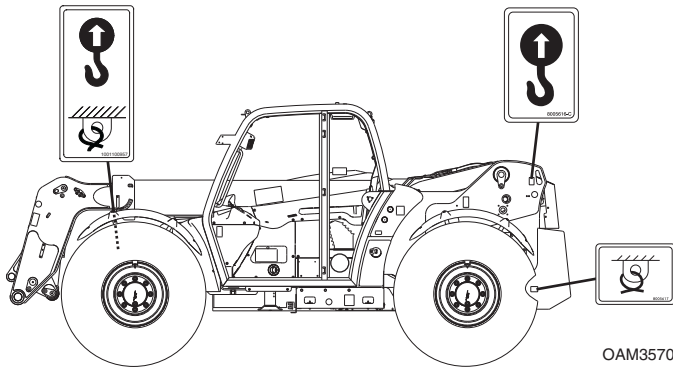
**Note:** Be sure to follow all local and federal/provincial traffic regulations.

2. Lower boom. Lowest part of attachment should be approximately 30 cm (12 in) above the ground.
3. Fully tilt attachment back.
4. Place protective shield over front bucket edge: remove or reposition carriage forks toward the machine and secure to the carriage.



5. Depress button (2) to deactivate joystick function and disable all joystick controlled functions. Joystick function LED will go out.
6. Deactivating the joystick function automatically changes steer mode to front wheel steering (1). See "Steer Modes" on page 3-30 for details.
7. Machine is now ready for road operation.

## 4.5 LOADING AND SECURING FOR TRANSPORT



### Tiedown

1. If equipped, level the telehandler prior to loading.
2. Using a spotter, load the telehandler with boom as low as possible.
3. Once loaded, apply parking brake and lower boom until boom or attachment is resting on deck. Move all controls to "Neutral," stop engine and remove ignition key.
4. Secure machine to deck by passing chains through the designated tiedown points as shown in the figure.
5. Do not tiedown front of boom.

**Note:** The user assumes all responsibility for choosing the proper method of transportation and tie-down devices, making sure the equipment used is capable of supporting the weight of the vehicle being transported and that all manufacturer's instructions and warnings, regulations and safety rules of their employer, the Department of Transportation and/or any other local, state or federal/provincial laws are followed.



## WARNING

**TELEHANDLER SLIDE HAZARD.** Before loading telehandler for transport, make sure deck, ramps and telehandler wheels are free of mud, snow and ice. Failure to do so could cause telehandler to slide.

## **Section 4 - Operation**

---

### **Lifting**

---

- When lifting machine, it is very important that the lifting device and equipment is attached only to designated lifting points. If machine is not equipped with lifting lugs contact JLG Product Safety for information.
- Make adjustments to the lifting device and equipment to ensure the machine will be level when elevated. The machine must remain level at all times while being lifted.
- Ensure that the lifting device and equipment is adequately rated and suitable for the intended purpose. See Section 9 - Specifications for machine weight or weigh machine.
- Remove all loose items from machine prior to lifting.
- Lift machine with smooth, even motion. Set machine down gently. Avoid quick or sudden motions that could cause shock loads to machine and/or lifting devices.

---

## **SECTION 5 - ATTACHMENTS AND HITCHES**

---

### **5.1 APPROVED ATTACHMENTS**

To determine if an attachment is approved for use on the specific telehandler you are using, perform the following prior to installation.

- The attachment type, weight, dimensions and load center must be equal to or less than the data shown on a capacity chart located in the operator cab.
- The model on the capacity chart must match the model telehandler being used.
- Hydraulically powered attachments must only be used on machines equipped with auxiliary hydraulics.

If any of the above conditions are not met, do not use the attachment. The telehandler may not be equipped with the proper capacity chart or the attachment may not be approved for the model telehandler being used. Contact JLG or the local distributor for further information.

---

### **5.2 UNAPPROVED ATTACHMENTS**

Do not use unapproved attachments for the following reasons:

- Range and capacity limitations for “will fit,” homemade, altered, or other non-approved attachments cannot be established.
- An overextended or overloaded telehandler can tip over with little or no warning and cause serious injury or death to the operator and/or those working nearby.
- The ability of a non-approved attachment to perform its intended function safely cannot be assured.



## **WARNING**

Use only approved attachments. Attachments which have not been approved for use with your telehandler could cause machine damage or an accident.

## Section 5 - Attachments and Hitches

### 5.3 JLG SUPPLIED ATTACHMENTS

**Note:** All attachments listed are for use with the standard quick attach.

#### Standard Quick Attach

Attachment	Part Number	3706PS 3707PS			4014PS 4017PS			AUS
		CE	CIS**	AMEPR*	CE	CIS**	AMEPR*	
Carriage, 1185 mm	1170028	X	X	X	X	X	X	
	1001152655	X	X	X				
	1001107333	X	X	X	X	X	X	
	1001112618	X	X	X	X	X	X	
	1001107581							X
Carriage, FEM	1001172675	X	X	X				
	1001172687				X	X	X	
	1001172689							X
Side Shift Carriage, 1200 mm	1170002	X	X	X	X	X	X	
Carriage, Fork Rotator 1270 mm	1001132959							X
Fork Positioning Carriage, 1225 mm	1001091313	X	X	X	X	X	X	
Fork, 50x100x1200 mm	2340030	X	X	X	X	X	X	
Fork, Narrow 50x100x1200 mm	2340041	X	X	X	X	X	X	
Fork, 50x100x1200 mm	1001100911	X	X	X	X	X	X	
Fork, 60x100x1200 mm	1001107586							X
Fork, 50x120x1250 mm	1001117945	X	X	X				
Fork Extension, 50x100 mm	1001112559	X	X	X	X	X	X	
Fork Extension, 60x100 mm	1001112560							X
Bucket, 0,9 m <sup>3</sup>	0930015	X	X	X	X	X	X	X
Bucket, 1,8 m <sup>3</sup>	0930016	X	X	X	X	X	X	X
Bucket with Teeth, 0,8 m <sup>3</sup>	4805670	X	X	X	X	X	X	
Bucket with Teeth, 1,0 m <sup>3</sup>	4802100	X	X	X	X	X	X	X
Bucket, Multi-Purpose, 1,0 m <sup>3</sup>	0930003	X	X	X	X	X	X	X
Bucket, Multi-Purpose, 0,52 m <sup>3</sup>	1001128891	X	X	X	X	X	X	X
Bucket, Grapple, 1,0 m <sup>3</sup>	0930004	X	X	X	X	X	X	X
Fork Mounted Concrete Bucket, 500L	0240158	X	X	X	X	X	X	
Concrete Bucket Mixer, 500 L	1001106930	X	X	X	X	X	X	
Truss Boom, 2 m	1001101442							X
	1001175721							X
Truss Boom, 3,4 m	0240063	X	X	X	X	X	X	
Truss Boom, 3,6 m	0240110	X	X	X	X	X	X	



## Section 5 - Attachments and Hitches

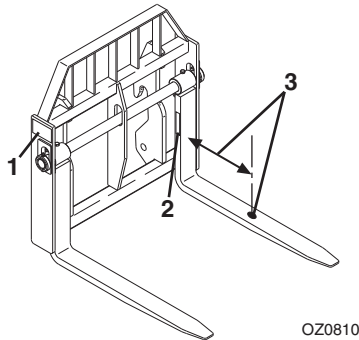
Attachment	Part Number	3706PS 3707PS			4014PS 4017PS			
		CE	CIS**	AMEPR*	CE	CIS**	AMEPR*	AUS
Fork Mounted Hook	2700118	X	X	X	X	X	X	
Quick Attach Mounted Hook	1170058	X	X	X	X	X	X	X
Volvo Adapter	1001173150	X	X	X				
	1001173156				X	X	X	
	1001173160							X
Platform, 1,8 m	1001156461				X			
	1001177926					X		
	1001207695						X	
	1001159690							X
Platform, 4,5 m	1001156462				X			
	1001177927					X		
	1001207696						X	
	1001159691							X

\*Africa, Middle East, Pacific Rim (AMEPR)

\*\*Commonwealth of Independent States (CIS)

## Section 5 - Attachments and Hitches

### 5.4 TELEHANDLER/ATTACHMENT/FORK CAPACITY



OZ0810

Prior to installing the attachment verify it is approved and the telehandler is equipped with the proper capacity chart. See "Approved Attachments" on page 5-1.

To determine the maximum capacity of the telehandler and attachment, use the **smallest** of the following capacities:

- Capacity stamped on the attachment identification plate (1).
- Fork capacities and load centers are stamped on the side of each fork (2) (if equipped). This rating specifies the maximum load capacity that the individual fork can safely carry at the maximum load center (3). Total attachment capacity is multiplied by the number of forks on the attachment (if equipped), up to the maximum capacity of the attachment.
- Maximum capacity as indicated on the proper capacity chart. See "Approved Attachments" on page 5-1.
- When the load rating of the telehandler differs from the capacity of the forks or attachment, the lower value becomes the overall load capacity.

Use the proper capacity chart to determine maximum capacity at various machine configurations. Lifting and placing a load may require use of more than one capacity chart based on machine configuration.

Other than block forks, all forks should be used in matched pairs, block forks used in matched sets.



## WARNING

Never use an attachment without the appropriate JLG approved capacity chart installed on the telehandler.

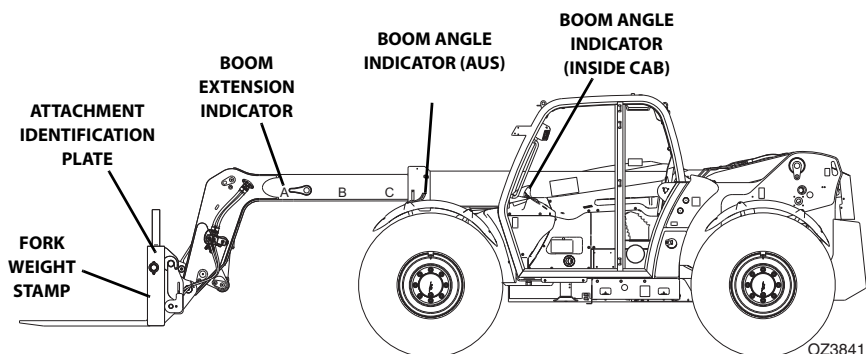
### 5.5 USE OF THE CAPACITY CHART

To properly use the capacity chart (see page 5-6), the operator must first determine and/or have the following:

1. An approved attachment. See "Approved Attachments" on page 5-1.
2. The proper Capacity Chart.
3. Weight of the load being lifted.
4. Load placement information:
  - a. HEIGHT where the load is to be placed.
  - b. DISTANCE from the front tires of the telehandler where the load is to be placed.
5. On the capacity chart, find the line for the height and follow it over to the distance.
6. The number in the load zone where the two cross is the maximum capacity for this lift. If the two cross at a division between zones, the smaller number must be used.

The number in the load zone must be equal to or greater than the weight of the load to be lifted. Determine the limits of the load zone on the capacity chart and keep within these limits.

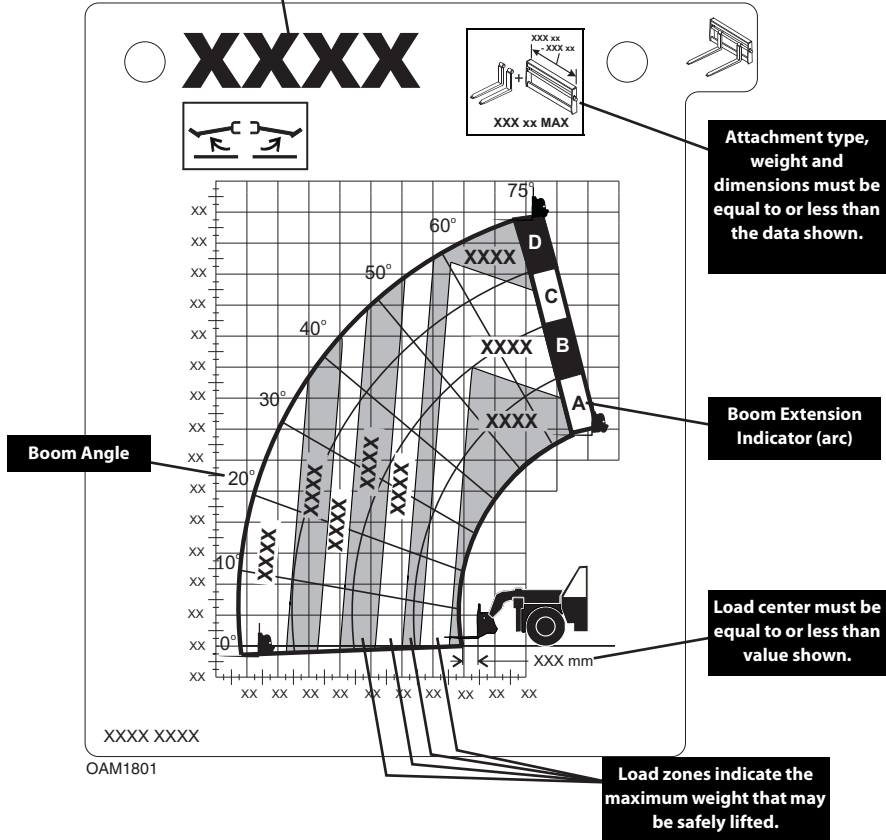
### Capacity Indicator Locations



## Section 5 - Attachments and Hitches

### Sample Capacity Chart (CE)

This Capacity Chart may be used with this model ONLY. The telehandler model is indicated on the boom or chassis. Model XXXX is used for demonstration purposes only.



**Note:** This is a sample capacity chart **only!** **DO NOT** use this chart, use the one located in your operator cab.



## WARNING

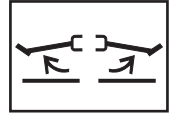
**TIP OVER HAZARD.** All loads shown on rated capacity chart are based on machine being on firm ground with frame level (see page 4-5); the forks being positioned evenly on carriage; the load being centered on forks; proper size tires being properly inflated; and the telehandler being in good operating condition.

## Section 5 - Attachments and Hitches

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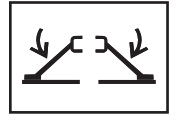
To identify the proper capacity chart on telehandlers equipped with outriggers, refer to the following icons which may be located on the capacity chart.

- Use when lifting a load with outriggers up.



OAL1090

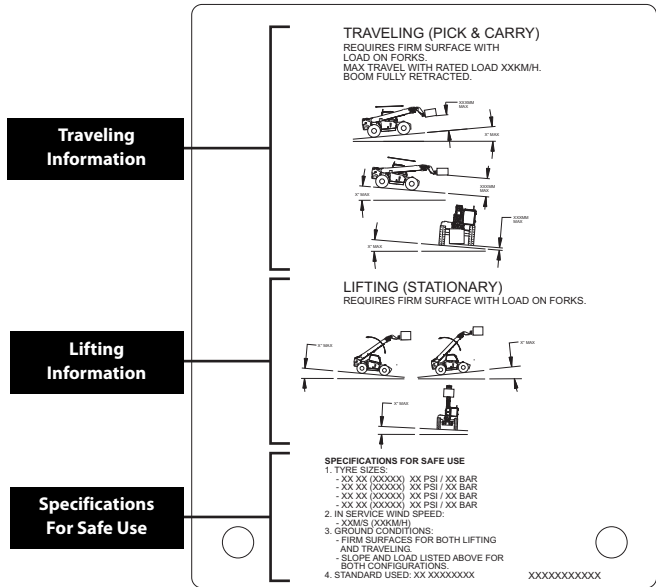
- Use when lifting a load with outriggers down.



OAL1100

# Section 5 - Attachments and Hitches

## Sample Capacity Chart (AUS)

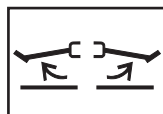


 **WARNING**

**TIP OVER HAZARD.** All loads shown on rated capacity chart are based on machine being on firm ground with frame level (see page 4-5); the forks being positioned evenly on carriage; the load being centered on forks; proper size tires being properly inflated; and the telehandler being in good operating condition.

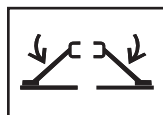
To identify the proper capacity chart on telehandlers equipped with outriggers, refer to the following icons which may be located on the capacity chart.

- Use when lifting a load with outriggers up.



OAL1090

- Use when lifting a load with outriggers down.



OAL1100

## Section 5 - Attachments and Hitches

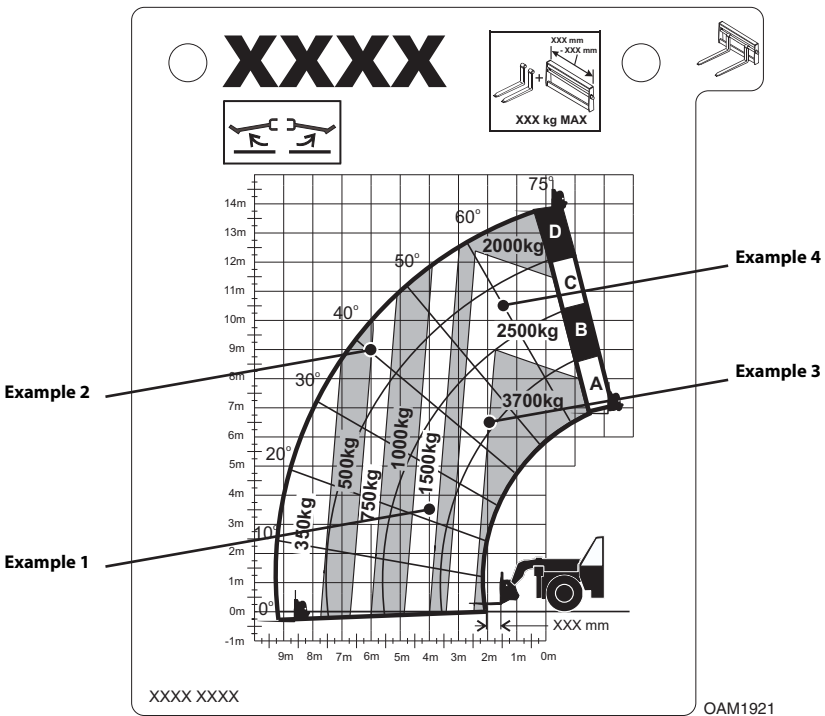
### Example

A contractor owns a model xxxx telehandler with a fork carriage. He knows this attachment may be used with his model since:

- The attachment style, weight, dimensions and load center match the attachment data on the capacity chart.
- The capacity chart is clearly marked for model xxxx and corresponds with machine configuration being used.

Below are examples with various conditions the contractor may encounter and whether or not the load may be lifted.

	Load Weight	Distance	Height	OK to Lift
1	1250 kg (2755 lb)	4,0m (13.1 ft)	3,5m (11.5 ft)	Yes
2	750 kg (1653 lb)	6,0m (19.7 ft)	9,0m (29.5 ft)	NO
3	2500 kg (5512 lb)	2,0m (6.6 ft)	6,5m (21.3 ft)	Yes
4	3000 kg (6614 lb)	1,5m (4.9 ft)	10,5m (34.4 ft)	NO

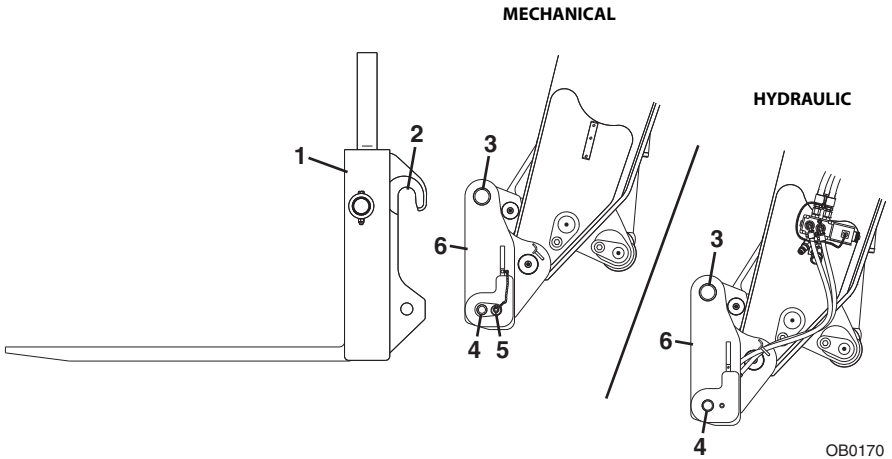


**Note:** This is a sample capacity chart **only!** **DO NOT** use this chart, use the one located in your operator cab.



## 5.6 ATTACHMENT INSTALLATION

### Quick Attach



1. Attachment
2. Attachment Pin Recess
3. Attachment Pin
4. Lock Pin
5. Retainer Pin (mechanical quick attach)
6. Quick Attach (attachment tilt control in cab, see page 3-18 or 3-21)



## WARNING

**CRUSH HAZARD.** Always be certain that carriage or attachment is properly positioned on boom and is secured by lock pin and retainer pin. Failure to ensure proper installation could permit carriage/attachment/load to disengage.

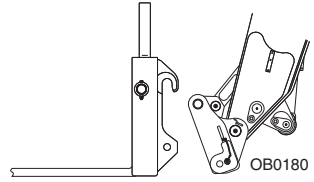
## Section 5 - Attachments and Hitches

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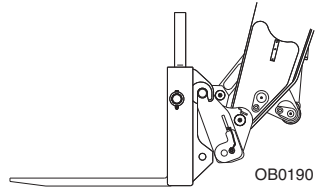
### Mechanical Quick Attach

This installation procedure is designed for one-person operation. Prior to exiting cab, perform "Shut-Down Procedure" on page 4-3.

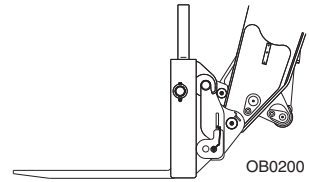
1. Tilt quick attach forward to provide clearance.  
Check to be sure lock pin and retainer pin is out.



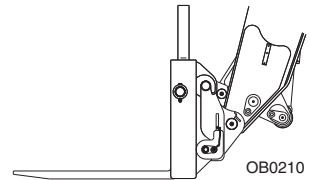
2. Align attachment pin with recess in attachment.  
Raise boom slightly to engage attachment pin in recess.



3. Tilt quick attach back to engage attachment.



4. Insert lock pin and secure with retainer pin.



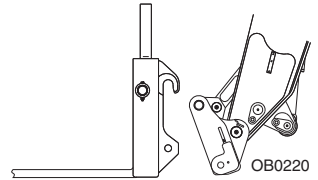
5. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.

## Section 5 - Attachments and Hitches

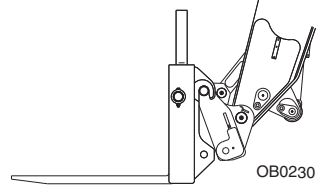
### Hydraulic Quick Attach

This installation procedure is designed for one-person operation.

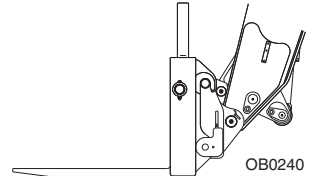
1. Tilt quick attach forward to provide clearance.  
Check to be sure lock pin is disengaged.



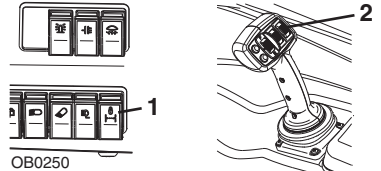
2. Align attachment pin with recess in attachment.  
Raise boom slightly to engage attachment pin in recess.



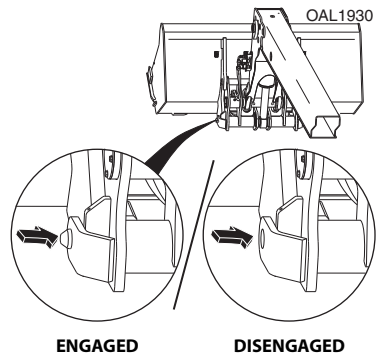
3. Tilt quick attach back to engage attachment.



4. Press and hold button (1) and at the same time push roller switch down (2) to engage lock pin or push roller switch up to disengage lock pin.



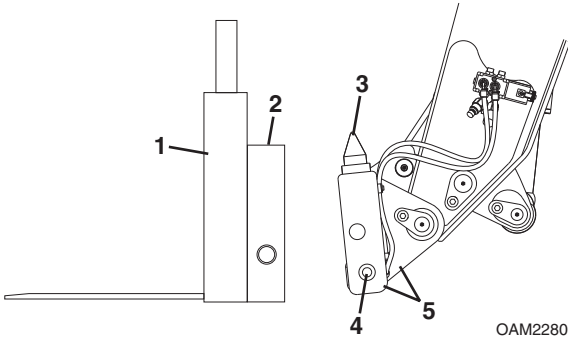
5. Raise boom to eye level and visually check that the lock pin protrudes through the hole.  
If the pin does not protrude through the hole, place the attachment on the ground and return to step 2.



6. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.

## Section 5 - Attachments and Hitches

### JD Quick Attach



1. Attachment
2. Attachment Point Opening
3. Quick Attach Point
4. Lock Pin
5. JD Quick Attach (attachment tilt control in cab, see page 3-18 or 3-21)



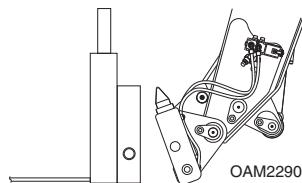
## WARNING

**CRUSH HAZARD.** Always be certain that carriage or attachment is properly positioned on boom and is secured by lock pin. Failure to ensure proper installation could permit carriage/attachment/load to disengage.

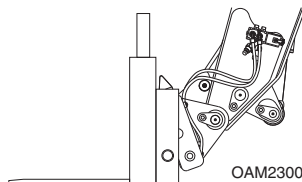
## Section 5 - Attachments and Hitches

This installation procedure is designed for one-person operation.

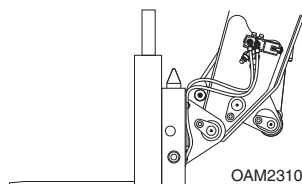
1. Tilt attach forward to provide clearance. Check to be sure lock pin is disengaged.



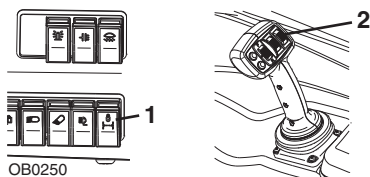
2. Align quick attach point with opening in attachment. Raise boom slightly to engage quick attach point in opening.



3. Tilt quick attach back to engage attachment.



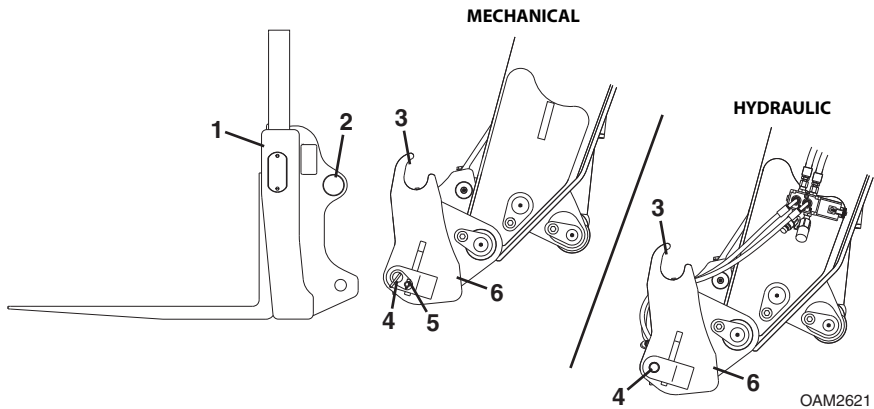
4. Press and hold button (1) and at the same time push roller switch down (2) to engage lock pin or push roller switch up to disengage lock pin.



5. Raise boom to eye level and visually check that the lock pin protrudes through the attachment hole. If the pin does not protrude through the attachment hole, place the attachment on the ground and return to step 2.
6. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.

## Section 5 - Attachments and Hitches

### Manitou Quick Attach



1. Attachment
2. Attachment Pin
3. Attachment Pin Recess
4. Lock Pin
5. Retainer Pin (mechanical quick attach)
6. Manitou Quick Attach (attachment tilt control in cab, see page 3-18 or 3-21)



## WARNING

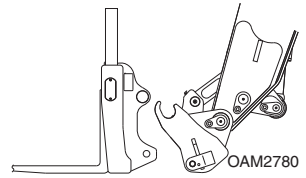
**CRUSH HAZARD.** Always be certain that carriage or attachment is properly positioned on boom and is secured by lock pin. Failure to ensure proper installation could permit carriage/attachment/load to disengage.

## Section 5 - Attachments and Hitches

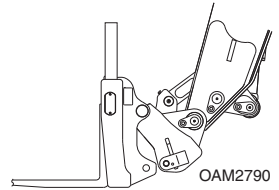
### Mechanical Quick Attach

This installation procedure is designed for one-person operation. Prior to exiting cab, perform "Shut-Down Procedure" on page 4-3.

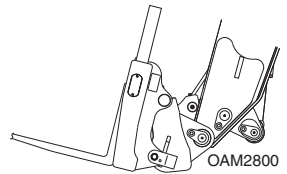
1. Tilt quick attach forward to provide clearance.  
Check to be sure lock pin and retainer pin is out.



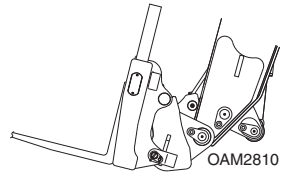
2. Align attachment pin recess with attachment pin.  
Raise boom slightly to engage attachment pin in recess.



3. Tilt quick attach back to engage attachment.



4. Insert lock pin and secure with retainer pin.



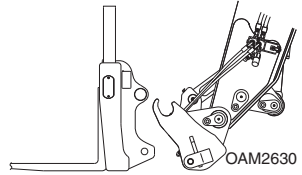
5. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.

## Section 5 - Attachments and Hitches

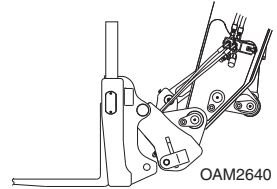
### Hydraulic Quick Attach

This installation procedure is designed for one-person operation.

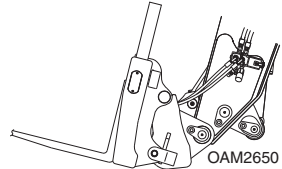
1. Tilt quick attach forward to provide clearance.  
Check to be sure lock pin is disengaged.



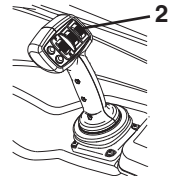
2. Align attachment pin recess with attachment pin.  
Raise boom slightly to engage attachment pin in recess.



3. Tilt quick attach back to engage attachment.



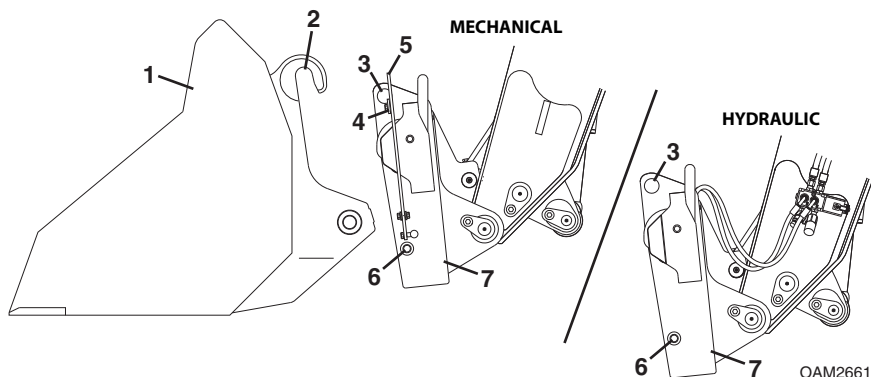
4. Press and hold button (1) and at the same time push roller switch down (2) to engage lock pin or push roller switch up to disengage lock pin.



5. Raise boom to eye level and visually check that the lock pin protrudes through the attachment hole. If the pin does not protrude through the attachment hole, place the attachment on the ground and return to step 2.
6. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.



JCB Quick Attach



1. Attachment
2. Attachment Pin Recess
3. Attachment Pin
4. Hook (mechanical quick attach)
5. Lock Pin Handle (mechanical quick attach)
6. Lock Pin
7. JCB Quick Attach (attachment tilt control in cab, see page 3-18 or 3-21)



## WARNING

**CRUSH HAZARD.** Always be certain that carriage or attachment is properly positioned on boom and is secured by lock pin. Failure to ensure proper installation could permit carriage/attachment/load to disengage.

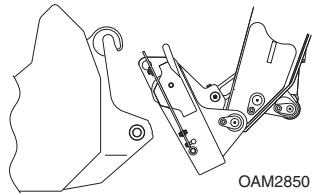
## Section 5 - Attachments and Hitches

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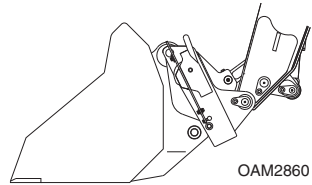
### Mechanical Quick Attach

This installation procedure is designed for one-person operation. Prior to exiting cab, perform "Shut-Down Procedure" on page 4-3.

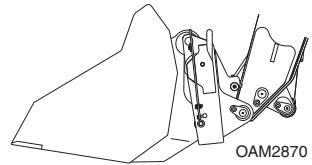
1. Tilt quick attach forward to provide clearance. Unhook lock pin handle and pull to disengage lock pin.



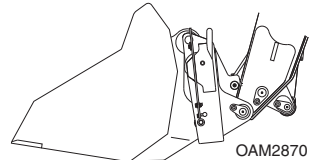
2. Align attachment pin with recess in attachment. Raise boom slightly to engage attachment pin in recess.



3. Tilt quick attach back to engage attachment.



4. Push lock pin handle to engage quick attach lock pin and secure with hook.

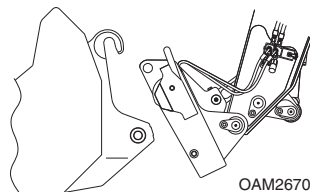


5. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.

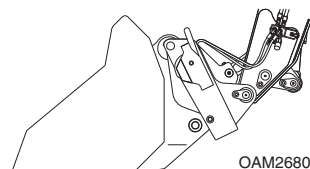
### Hydraulic Quick Attach

This installation procedure is designed for one-person operation.

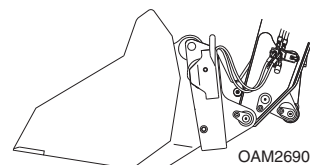
1. Tilt quick attach forward to provide clearance.  
Check to be sure lock pin is disengaged.



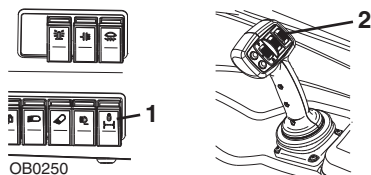
2. Align attachment pin with recess in attachment.  
Raise boom slightly to engage attachment pin in recess.



3. Tilt quick attach back to engage attachment.



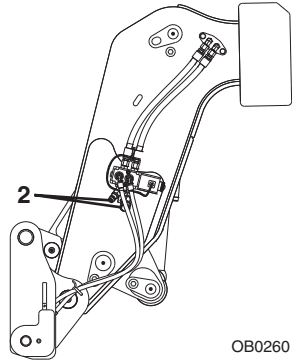
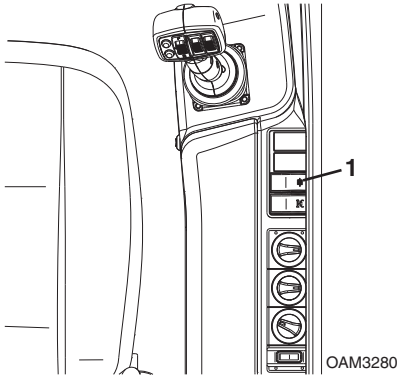
4. Press and hold button (1) and at the same time push roller switch down (2) to engage lock pin or push roller switch up to disengage lock pin.



5. Raise boom to eye level and visually check that the lock pin protrudes through the attachment hole. If the pin does not protrude through the attachment hole, place the attachment on the ground and return to step 2.
6. If attachment is equipped, connect auxiliary hydraulic hoses. See "Hydraulic Operated Attachment" on page 5-22.

## Section 5 - Attachments and Hitches

### Hydraulic Operated Attachment



1. Install attachment (see page 5-11 or 5-14).
2. Lower attachment to ground.
3. Quickly depress and release continuous auxiliary hydraulics switch (1) twice. Depress again and hold to relieve pressure at both auxiliary fittings (2).

**Note:** *Depressing of auxiliary hydraulics switch three times must be accomplished within two seconds. If buzzer sounds or continuous auxiliary hydraulics indicator illuminates, repeat step 3.*

4. Perform "Shut-Down Procedure" on page 4-3.
5. Connect attachment hoses to both auxiliary fittings.

### 5.7 ADJUSTING/MOVING FORKS

Carriages may have different locations where forks can be positioned. Two different methods can be used for repositioning, depending upon the carriage structure.

**Note:** *Apply a light coating of appropriate lubricant to ease sliding of forks or fork bar.*

**To slide forks:**

1. Ensure attachment is properly installed. See "Attachment Installation" on page 5-11.
2. If equipped, loosen fork locking bolt.
3. Elevate attachment to approximately 1,5 m (5 ft) and tilt carriage forward until fork heel is free from attachment.
4. Stand at the side of the carriage. To slide fork toward the center of the carriage, push the fork near the fork eye. To slide fork toward the edge of the carriage, pull the fork near the fork eye. To avoid pinching, do not place fingers or thumb between the fork and carriage structure.
5. If equipped, tighten fork locking bolt.

**If removing fork bar is necessary:**

1. Rest forks on ground.
2. If equipped, loosen fork locking bolt.
3. Remove fork bar.
4. Reposition forks.
5. Reinstall the fork bar and fork bar retaining mechanism(s).
6. If equipped, tighten fork locking bolt.

## Section 5 - Attachments and Hitches

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### 5.8 ATTACHMENT OPERATION

- Capacities and range limits for the telehandler change depending on the attachment in use.
- Separate attachment instructions must be kept in manual holder in cab with this Operation & Safety Manual. An additional copy must be kept with the attachment if it is equipped with a manual holder.

**Note:** Operations described within this section reference the Lift joystick pattern. Refer to page 3-21 if utilizing the Loader joystick pattern.

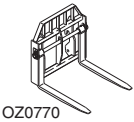
## NOTICE

**EQUIPMENT DAMAGE.** Some attachments may contact the front tires or machine structure when the boom is retracted and the attachment is rotated. Improper use of attachment may result in attachment or machine structural damage.

## NOTICE

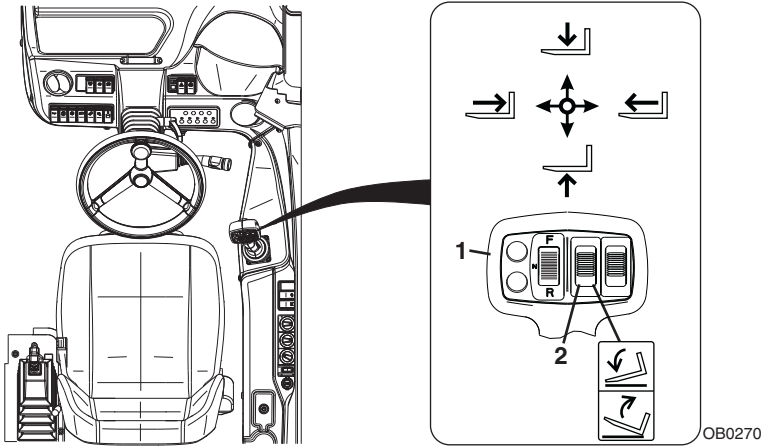
**EQUIPMENT DAMAGE.** Avoid contact with any structure or object when lifting a load. Maintain clearance around boom structure and load. Failure to maintain clearance may result in attachment or machine structural damage.

## Carriage w/Forks



Use Carriage Attachment Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls carriage tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

### Installation Procedure:

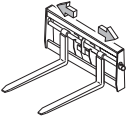
- Refer to "Attachment Installation" on page 5-11.

### Equipment Damage Precautions:

- Do not use forks as a lever to pry material. Excessive prying forces could damage forks or machine structure.
- Do not attempt to lift loads that are attached or connected to another object.

## Section 5 - Attachments and Hitches

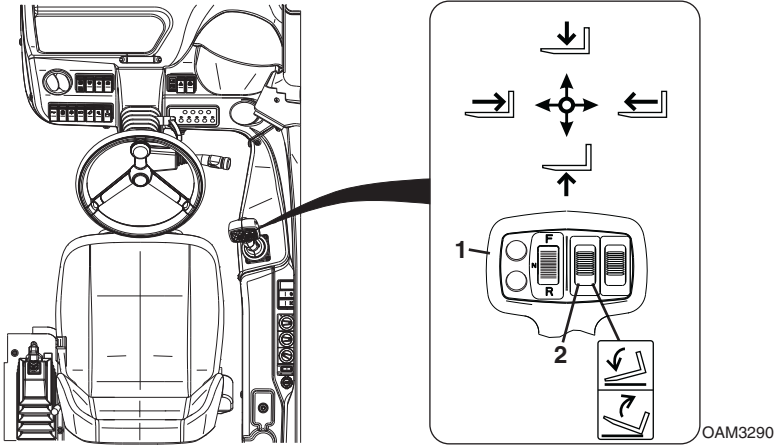
### Side Shift Carriage



OAL1540

Use Side Shift Carriage Capacity Chart

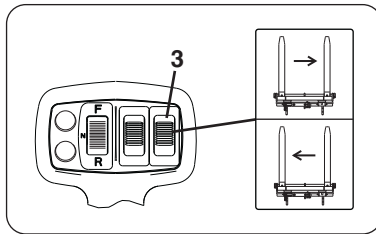
To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls carriage tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.





### To Side Shift:

The attachment auxiliary hydraulic roller switch (3) controls side shift.

- Push roller switch down to shift forks left.
- Push roller switch up to shift forks right.

### Installation Procedure:

- Refer to "Attachment Installation" on page 5-11.



## WARNING

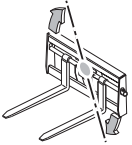
**CRUSH HAZARD.** Do not use side shift to push or pull objects or load. Failure to comply could cause object or load to fall.

### Equipment Damage Precautions:

- Do not use forks as a lever to pry material. Excessive prying forces could damage forks or machine structure.
- Do not attempt to lift loads that are attached or connected to another object.

## Section 5 - Attachments and Hitches

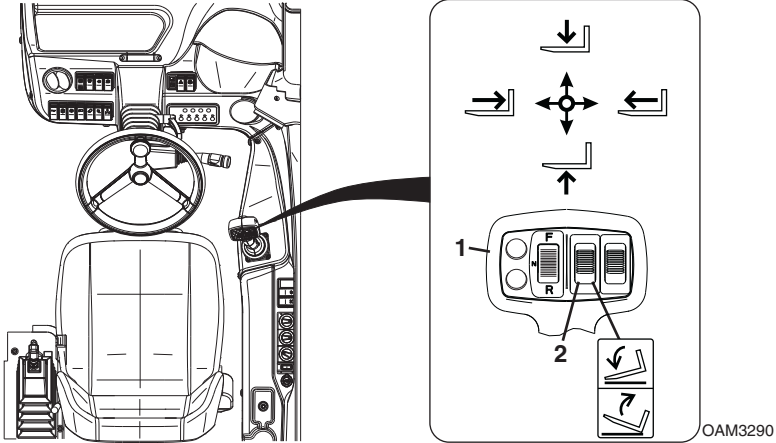
### Fork Rotator Carriage



OAL1550

Use Fork Rotator Carriage Capacity Chart

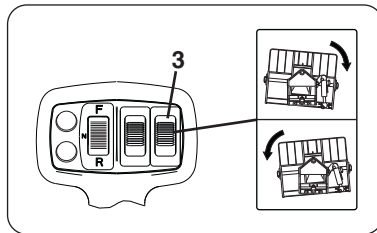
To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls carriage tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.



### To Rotate:

The attachment auxiliary hydraulic roller switch (3) controls carriage rotation.

- Push roller switch down to rotate left.
- Push roller switch up to rotate right.

### Installation Procedure:

- Refer to “Attachment Installation” on page 5-11.



## WARNING

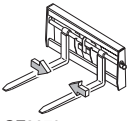
**CRUSH HAZARD.** Do not use rotation to push or pull objects or load. Failure to comply could cause object or load to fall.

### Equipment Damage Precautions:

- Do not use forks as a lever to pry material. Excessive prying forces could damage forks or machine structure.
- Do not attempt to lift loads that are attached or connected to another object.

## Section 5 - Attachments and Hitches

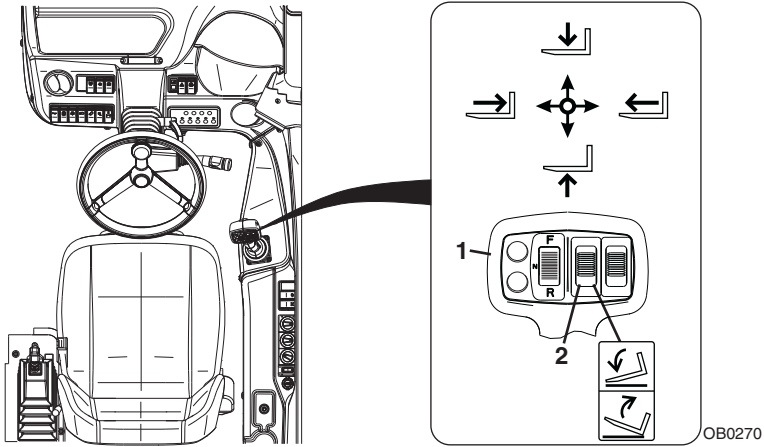
### Fork Positioning Carriage



OZ3670

Use Fork Positioning Carriage Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/  
Fork Capacity" on page 5-4.

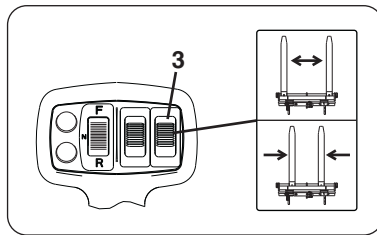


OB0270

The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls carriage tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.



OB0280

### To Fork Position:

The attachment auxiliary hydraulic roller switch (3) controls fork position.

- Push roller switch down to shift forks in.
- Push roller switch up to shift forks out.

### Installation Procedure:

- Refer to "Attachment Installation" on page 5-11.



## WARNING

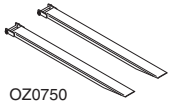
**CRUSH HAZARD.** Do not use rotation to push or pull objects or load. Failure to comply could cause object or load to fall.

### Equipment Damage Precautions:

- Do not use forks as a lever to pry material. Excessive prying forces could damage forks or machine structure.
- Do not attempt to lift loads that are attached or connected to another object.

## Section 5 - Attachments and Hitches

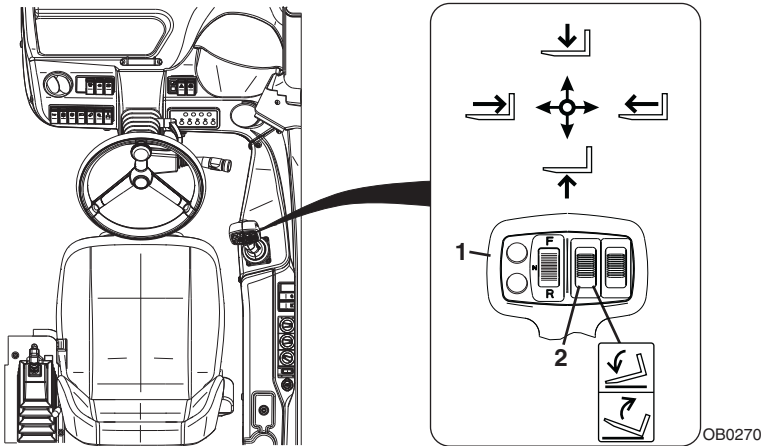
### Fork Extension



Use Carriage Attachment Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.

**Note:** The maximum capacity of the carriage when equipped with fork extensions may be reduced to the capacity indicated on the fork extensions. If the load exceeds the capacity of the fork extension contact JLG to obtain forks and/or fork extensions of the proper load rating and length.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls carriage tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

#### Installation Procedure:

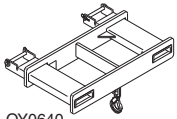
- Ensure carriage is properly installed. Refer to "Attachment Installation" on page 5-11.
- Ensure length and cross section of the parent fork arm is equal to or exceeds the parent fork arm blade length stamped into the fork extension.
- Secure the fork extensions to the forks by sliding the fork extension onto the parent fork and install the retaining pin behind the vertical shank of the fork.

### **Equipment Damage Precautions:**

- The heavy part of the load must be against the carriage backrest.
- Do not allow load center of gravity to be in front of tip of the supporting fork.
- Do not pick up a load or pry materials with the tip of a fork extensions.

## Section 5 - Attachments and Hitches

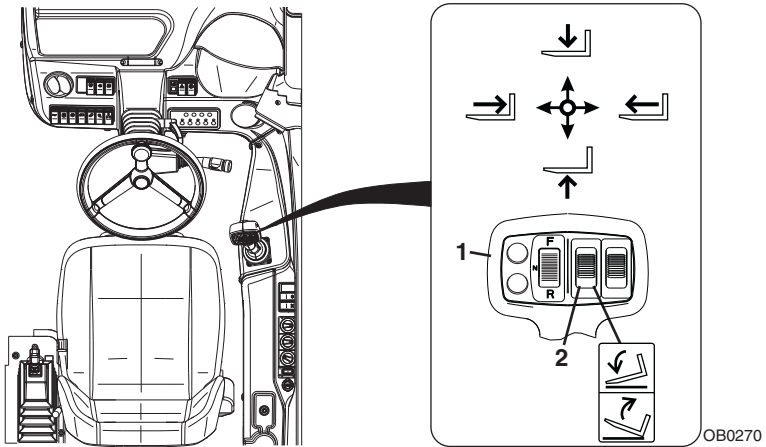
### Fork Mounted Hook



Use Fork Mounted Hook Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.

**Suspend loads in accordance with requirements set forth in Section 1- General Safety Practices.**



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls fork mounted hook tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

#### Installation Procedure:

- Ensure carriage is properly installed. Refer to "Attachment Installation" on page 5-11.
- Secure the fork mounted hook to the forks by sliding the fork mounted hook onto the parent forks and install the retaining pin behind the vertical shank of the fork.

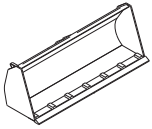


### **Operation:**

- Pallet or lumber forks of an appropriate load rating must be used. Do not use with cubing or block forks.
- Weight of rigging must be included as part of total load being lifted.
- Do not use with mast carriage attachment.
- Do not use fork mounted hook with attachments capable of rotating (i.e. side tilt and swing carriages) without disabling the rotation feature(s).

## Section 5 - Attachments and Hitches

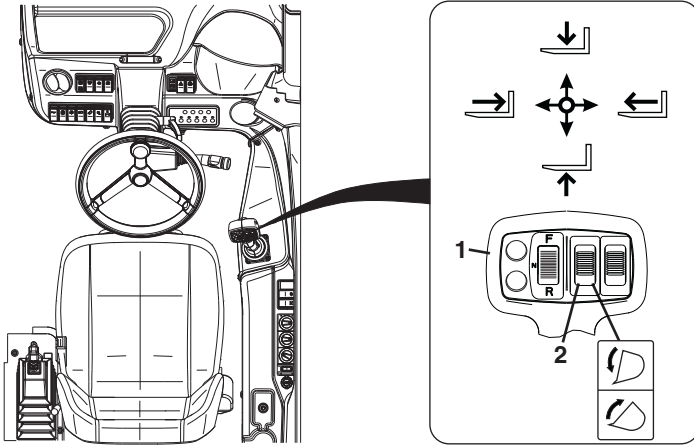
### Bucket



OZ0730

Use Appropriate Bucket Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.



OAM3320

The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls bucket tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

#### Installation Procedure:

- Refer to "Attachment Installation" on page 5-11.

### **Operation:**

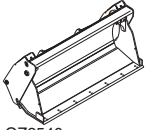
- Raise or lower boom to appropriate height for loading material from stockpile.
- Align telehandler with face of stockpile and drive slowly and smoothly into pile to load bucket.
- Tilt bucket up far enough to retain load and back away from pile.
- Travel in accordance with requirements set forth in Section 1- General Safety Practices.
- Tilt bucket down to dump load.

### **Equipment Damage Precautions**

- Except for lifting or dumping a load, the boom must be fully retracted for all bucket operations.
- Do not corner-load bucket. Distribute material evenly within the bucket. Bucket capacity charts are for evenly distributed loads only.
- Do not use bucket as a lever to pry material. Excessive prying forces could damage bucket or machine structure.
- Do not attempt to load material which is hard or frozen. This could cause severe damage to quick attach or machine structure.
- Do not use bucket for "back dragging." This could cause severe damage to quick attach.

# Section 5 - Attachments and Hitches

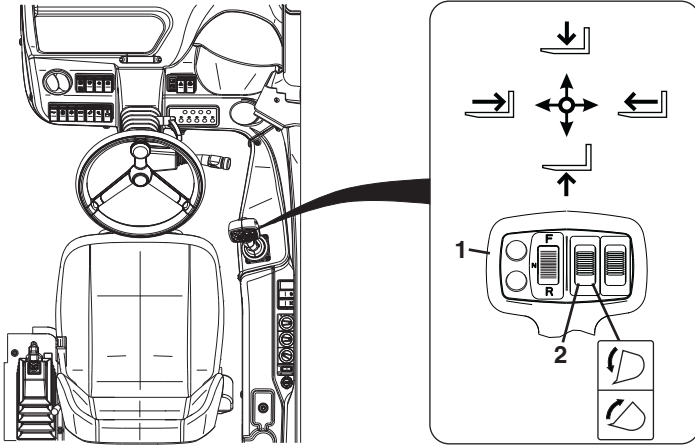
## Multi-Purpose Bucket



OZ2540

Use Multi-Purpose Bucket Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.

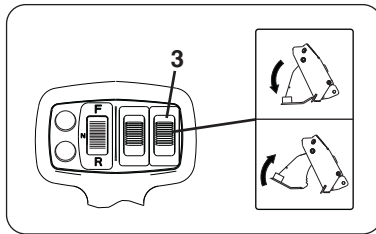


OAM3320

The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls bucket tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.



OAM3330

### **To open/close bucket:**

The attachment auxiliary hydraulic roller switch (3) controls open/close movement of the bucket.

- Push roller switch down to open bucket.
- Push roller switch up to close bucket.

### **Installation Procedure:**

Refer to "Attachment Installation" on page 5-11.

### **Operation:**

- Raise or lower boom to appropriate height and close bucket for loading material from stockpile.
- Align telehandler with face of stockpile and drive slowly and smoothly into pile to load bucket.
- Tilt bucket up far enough to retain load and back away from pile.
- Travel in accordance with requirements set forth in Section 1- General Safety Practices.
- Open bucket or tilt bucket down to dump load.

### **Equipment Damage Precautions**

- Except for lifting or dumping a load, the boom must be fully retracted for all bucket operations.
- Do not corner-load bucket. Distribute material evenly within the bucket. Bucket capacity charts are for evenly distributed loads only.
- Do not use bucket as a lever to pry material. Excessive prying forces could damage bucket or machine structure.
- Do not attempt to load material which is hard or frozen. This could cause severe damage to quick attach or machine structure.
- Do not use bucket for "back dragging." This could cause severe damage to quick attach.

## Section 5 - Attachments and Hitches

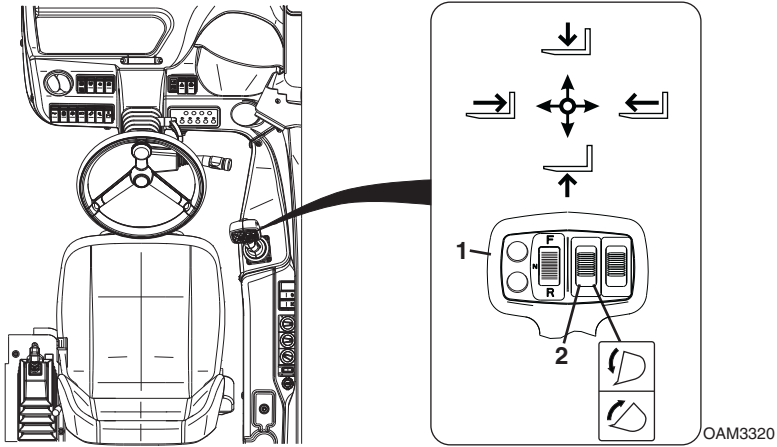
### Grapple Bucket



OZ1450

Use Grapple Bucket Capacity Chart

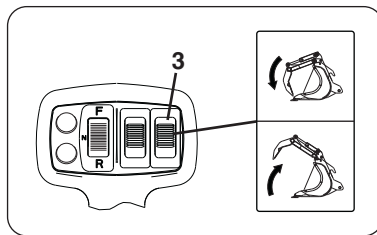
To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls bucket tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.



### **To open/close grapple:**

The attachment auxiliary hydraulic roller switch (3) controls open/close movement of the grapple.

- Push roller switch down to open grapple.
- Push roller switch up to close grapple.

### **Installation Procedure:**

- Refer to "Attachment Installation" on page 5-11.

### **Operation:**

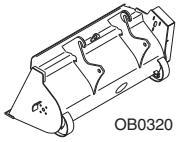
- Raise or lower boom to appropriate height and open grapple for loading material from stockpile.
- Align telehandler with face of stockpile and drive slowly and smoothly into pile to load bucket.
- Tilt bucket up far enough to retain load, close grapple and back away from pile.
- Travel in accordance with requirements set forth in Section 1- General Safety Practices.
- Open grapple and tilt bucket down to dump load.

### **Equipment Damage Precautions**

- Except for lifting or dumping a load, the boom must be fully retracted for all bucket operations.
- Do not corner-load bucket. Distribute material evenly within the bucket. Bucket capacity charts are for evenly distributed loads only.
- Do not use bucket as a lever to pry material. Excessive prying forces could damage bucket or machine structure.
- Do not attempt to load material which is hard or frozen. This could cause severe damage to quick attach or machine structure.
- Do not use bucket for "back dragging." This could cause severe damage to quick attach.

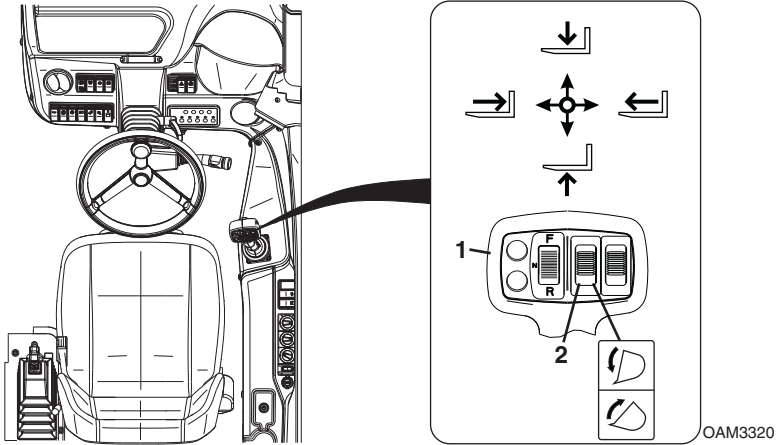
## Section 5 - Attachments and Hitches

### Concrete Bucket Mixer



Use Appropriate Bucket Capacity Chart

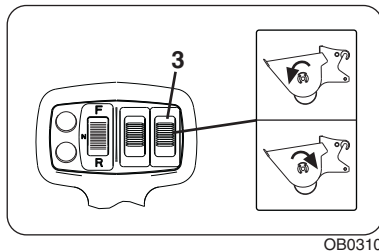
To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls bucket tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.





### **To control mixer:**

The attachment auxiliary hydraulic roller switch (3) controls the bucket mixer.

- Push roller switch down to rotate rearward.
- Push roller switch up to rotate forward.

### **Installation Procedure:**

- Refer to “Attachment Installation” on page 5-11.

### **Operation:**

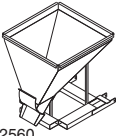
- Close bucket gate, level bucket and fully retract and lower boom to load material.
- Distribute material evenly within the bucket. Bucket capacity charts are for evenly distributed loads only.
- Load center will vary depending on the amount of material in the bucket. Always ensure compliance with the capacity chart.
- Travel in accordance with requirements set forth in Section 1- General Safety Practices.
- Position bucket and open bucket gate to release load.

### **Equipment Damage Precautions**

- Transport the concrete bucket as low as practical at a slow speed and without rapid side to side movement.

## Section 5 - Attachments and Hitches

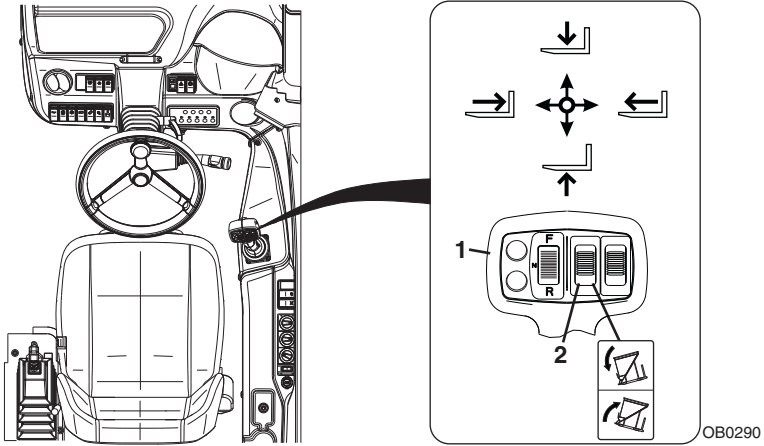
### Concrete Bucket - Fork Mounted



OZ2560

Use Appropriate Carriage Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/  
Fork Capacity" on page 5-4.

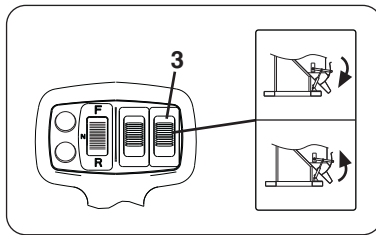


OB0290

The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls bucket tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.



OB0300

### **To open/close bucket gate:**

The attachment auxiliary hydraulic roller switch (3) controls the bucket gate.

- Push roller switch down to open gate.
- Push roller switch up to close gate.

### **Installation Procedure:**

- Ensure carriage is properly installed. Refer to “Attachment Installation” on page 5-11.
- Secure the concrete bucket to the forks by sliding the concrete bucket onto the parent forks and install the retaining pin behind the vertical shank of the fork.

### **Operation:**

- Close bucket gate, level bucket and fully retract and lower boom to load material.
- Distribute material evenly within the bucket. Bucket capacity charts are for evenly distributed loads only.
- Load center will vary depending on the amount of material in the bucket. Always ensure compliance with the capacity chart.
- Travel in accordance with requirements set forth in Section 1- General Safety Practices.
- Position bucket and open bucket gate to release load.

### **Equipment Damage Precautions**

- Transport the concrete bucket as low as practical at a slow speed and without rapid side to side movement.

## Section 5 - Attachments and Hitches

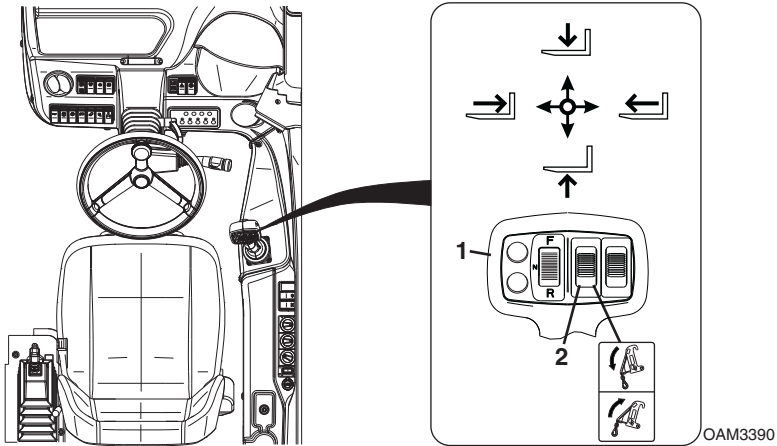
### Quick Attach Mounted Hook



Use Quick Attach Mounted Hook Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.

**Suspend loads in accordance with requirements set forth in Section 1- General Safety Practices.**



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls quick attach mounted hook tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

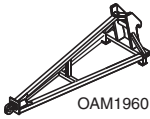
#### Installation Procedure:

- Refer to "Attachment Installation" on page 5-11.

#### Operation:

- Weight of rigging must be included as part of total load being lifted.

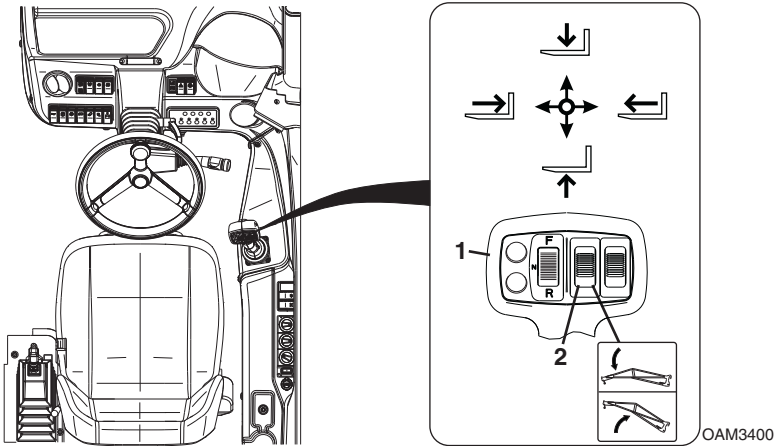
### Truss Boom



Use Truss Boom Capacity Chart

To determine maximum capacity, refer to "Telehandler/Attachment/Fork Capacity" on page 5-4.

**Suspend loads in accordance with requirements set forth in Section 1- General Safety Practices.**



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls truss boom tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

#### Installation Procedure:

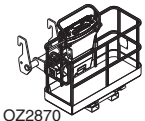
- Refer to "Attachment Installation" on page 5-11.

#### Operation:

- Weight of rigging must be included as part of total load being lifted.

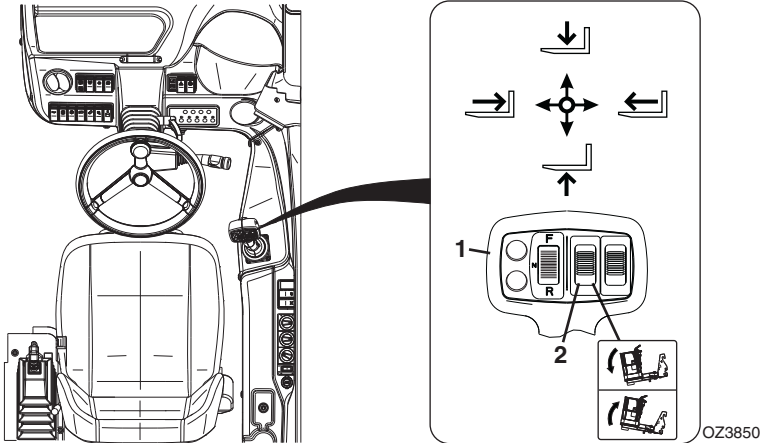
## Section 5 - Attachments and Hitches

### Platform



Use Platform Capacity Chart

To determine maximum capacity, refer to capacity decal on platform.



The joystick (1) controls movement of the boom.

The attachment tilt roller switch (2) controls platform tilt.

- Push roller switch down to tilt up.
- Push roller switch up to tilt down.

#### Installation Procedure:

- Refer to "Attachment Installation" on page 5-11.

#### Operation from Cab

- The platform is to be only used on machines specifically designed to accept the platform. Refer to the Platform Operation & Safety Manual.
- Machine travel is limited to first gear.
- Function speeds are reduced.
- Boom can only be raised up to 10 degrees.

### 5.9 HITCHES AND TRAILER BRAKES

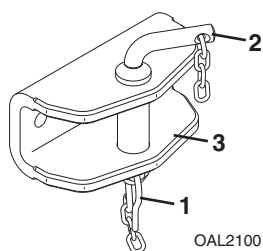
Machines may be equipped with various types of hitches. If not previously installed, secure hitch to machine with hardware supplied with installation.

Maximum towing capacity shall be the smallest of the hitch and telehandler capacities. Refer to page 9-9 for details.

**Note:** Ensure hitch is in lowest position when towing trailer. Speed and/or load may need reduced if traveling on ground which is not level.

### Retrieval Hitch

---



#### Connecting for retrieval:

1. Remove safety pin (1) and pull pin (2) from hitch (3).
2. Place pin through hitch and retrieval device. Secure pin with safety pin.

**Note:** Retrieval devices are not intended for trailer towing applications.

## Section 5 - Attachments and Hitches

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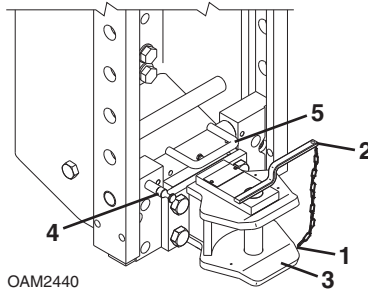
### Pin Hitch - CUNA C (Italy)

---

#### Hitch Capacities

Maximum combined weight of trailer and load ..... 6000 kg (13 225 lb)

Maximum vertical load at hitch interface ..... 1500 kg (3305 lb)



#### Connecting trailer for towing:

1. Remove safety pin (1) and pull pin (2) from hitch (3).
2. Align machine and tow eye of trailer.
3. Place pin through hitch and tow eye. Secure pin with safety pin.
4. If equipped, connect trailer harness to trailer plug.
5. If equipped, connect trailer hydraulics to rear auxiliary fittings.

#### Adjusting Hitch Height:

1. Pull lock pin (4) and lift handle (5) to release locking mechanism.
2. Move hitch to desired height.
3. Lower handle. When locking mechanism engages, lock pin will return to locked position.

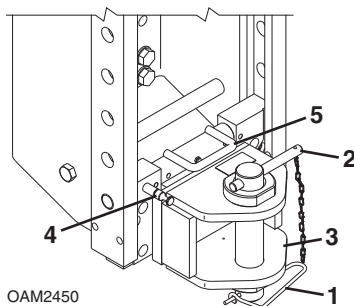


### Pin Hitch - CUNA D2 (Italy)

#### Hitch Capacities

Maximum combined weight of trailer and load .....12 000 kg (26 450 lb)

Maximum vertical load at hitch interface.....2000 kg (4400 lb)



#### Connecting trailer for towing:

1. Remove safety pin (1) and pull pin (2) from hitch (3).
2. Align machine and tow eye of trailer.
3. Place pin through hitch and tow eye. Secure pin with safety pin.
4. If equipped, connect trailer harness to trailer plug.
5. If equipped, connect trailer hydraulics to rear auxiliary fittings.

#### Adjusting Hitch Height:

1. Pull lock pin (4) and lift handle (5) to release locking mechanism.
2. Move hitch to desired height.
3. Lower handle. When locking mechanism engages, lock pin will return to locked position

## Section 5 - Attachments and Hitches

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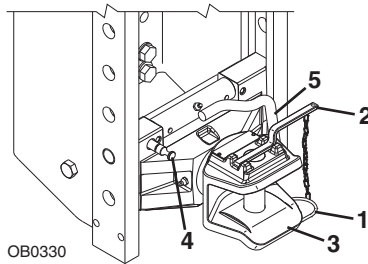
### EEC Manual Pin Hitch

---

#### Hitch Capacities

Maximum combined weight of trailer and load ..... 12 000 kg (26 450 lb)

Maximum vertical load at hitch interface ..... 2500 kg (5500 lb)



#### Connecting trailer for towing:

1. Remove safety pin (1) and pull pin (2) from hitch (3).
2. Align machine and tow eye of trailer.
3. Place pin through hitch and tow eye. Secure pin with safety pin.
4. If equipped, connect trailer harness to trailer plug.
5. If equipped, connect trailer hydraulics to rear auxiliary fittings.

#### Adjusting Hitch Height:

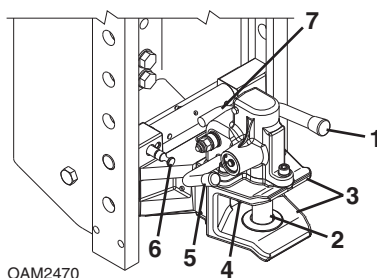
1. Pull lock pin (4) and lift handle (5) to release locking mechanism.
2. Move hitch to desired height.
3. Lower handle. When locking mechanism engages, lock pin will return to locked position

### EEC Auto Hitch

#### Hitch Capacities

Maximum combined weight of trailer and load .....12 000 kg (26 450 lb)

Maximum vertical load at hitch interface .....2500 kg (5500 lb)



#### Connecting trailer for towing:

1. Rotate lever (1) until pin (2) fully retracts.
2. Align hitch mouth (3) and tow eye of trailer.
3. Reverse machine toward trailer.
4. After the tow eye contacts trigger (4), the pin and lever will be released.
5. If equipped, connect trailer harness to trailer plug.
6. If equipped, connect trailer hydraulics to rear auxiliary fittings.

**Note:** Use lever (5) to lower pin (2) after disconnecting from trailer.

#### Adjusting Hitch Height:

1. Pull lock pin (6) and lift handle (7) to release locking mechanism.
2. Move hitch to desired height.
3. Lower handle. When locking mechanism engages, lock pin will return to locked position

## Section 5 - Attachments and Hitches

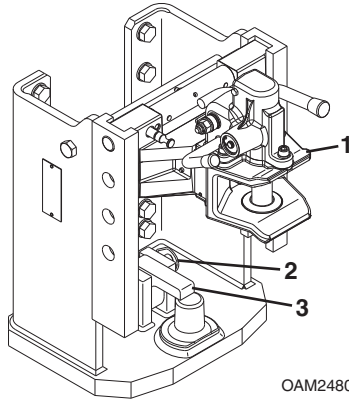
### Piton Frame and EEC Auto Hitch

#### Hitch Capacities

Maximum combined weight of trailer and load ..... 12 000 kg (26 450 lb)

Maximum vertical load at hitch interface ..... 2500 kg (5500 lb)

**Note:** See page 5-53 for Auto Hitch information.



OAM2480

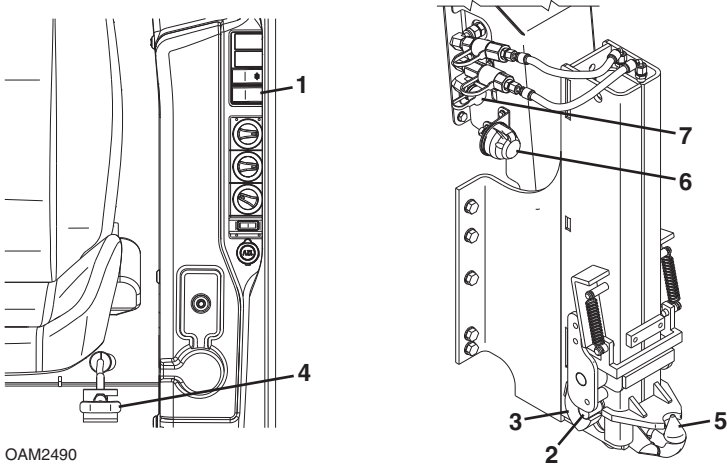
#### Connecting trailer for towing:

1. Raise Auto Hitch (1) to highest position.
2. Remove safety pin (2) and lift locking latch (3).
3. Insert safety pin to hold locking latch in the up position.
4. Align machine and tow eye of trailer.
5. Remove safety pin and lower locking latch. Secure locking latch with safety pin.
6. If equipped, connect trailer harness to trailer plug.
7. If equipped, connect trailer hydraulics to rear auxiliary fittings.

## Hydraulic Hitch

### Hitch Capacities

Maximum combined weight of trailer and load .....	12 000 kg (26 450 lb)
Maximum vertical load at hitch interface.....	2000 kg (4400 lb)

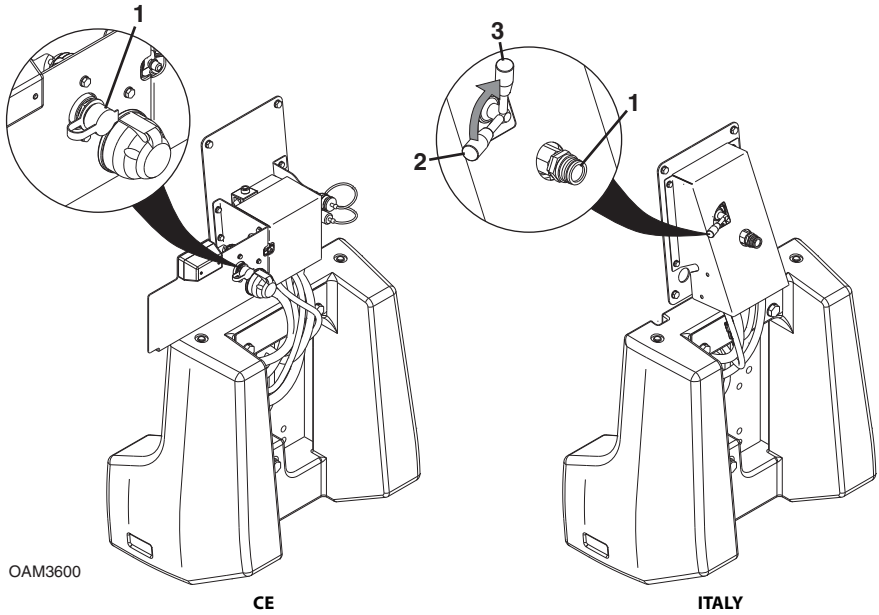


### Connecting trailer for towing:

1. Depress and hold right side of hydraulic hitch switch (1) to raise hitch safety posts (2) off safety hooks (3).
2. Pull safety hook release (4).
3. Depress and hold left side of hydraulic hitch switch to lower the hitch (5) to the required height.
4. Reverse machine until the hitch is under the center of the tow eye.
5. Depress and hold right side of hydraulic hitch switch to raise hitch until the safety hooks are engaged.
6. If equipped, connect trailer harness to trailer plug (6).
7. If equipped, connect trailer brake line to trailer coupling (7). See page 5-56.

## Section 5 - Attachments and Hitches

### Trailer Brakes



#### Connecting trailer brake system:

##### CE

1. Ensure trailer is properly connected for towing.
2. Connect trailer brake line to machine coupling (1).

##### Italy

1. Ensure trailer is properly connected for towing.
2. Lever should be in horizontal position (2).
3. Connect trailer brake line to machine coupling (1).
4. Lift lever to vertical position (3).

## **SECTION 6 - EMERGENCY PROCEDURES**

---

### **6.1 TOWING A DISABLED PRODUCT**

**The following information assumes the telehandler cannot be moved under its own power.**

- Before moving the telehandler, read all of the following information to understand options available. Then select the appropriate method.
- Machine mounted retrieval devices provide suitable means to attach a tow rope, chain or tow bar only in the event the telehandler becomes stuck or disabled. Retrieval devices are not intended for trailer towing applications.
- The steering system permits manual steering if engine or power assist feature fails; however, **steering will be slow and will require much greater force.**
- **DO NOT** attempt to tow a telehandler that is loaded or the boom/attachment is raised above 1,2 m (4 ft).

### **Moving Short Distances**

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- If it is only necessary to move telehandler a short distance, less than 30 m (100 ft), it is permissible to use a vehicle of sufficient capacity to tow the unit with no previous preparation.

### **Moving Longer Distance**

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- See Service Manual for information.
- Dependant on local regulations the appropriate machine Service Manual should be kept in the cab of homologated machines at all times.

**Contact the local distributor for specific instructions if neither of these methods are applicable.**

## ***Section 6 - Emergency Procedures***

---

### **6.2 EMERGENCY LOWERING OF BOOM**

In the event of total loss of engine power or hydraulic pump failure with an elevated load, the situation must be properly evaluated and dealt with on an individual basis. **Contact the local distributor for specific instructions.**

Secure the telehandler using the following procedures:

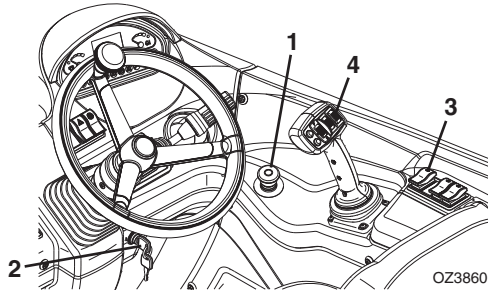
1. Clear the area around telehandler of all personnel.
2. Apply parking brake and shift transmission to NEUTRAL.
3. Block all four wheels.
4. Section off a large area under the boom to restrict any personnel from entering this area.
5. See Service Manual for information.



## **6.3 EMERGENCY LOWERING OF BOOM IF EQUIPPED FOR PLATFORM**

### **Auxiliary Power System**

In case of an emergency or engine failure an auxiliary power system is available in the cab.



1. Verify the power/emergency stop switch (1) is not depressed and the ignition switch (2) is in position I.
2. Depress auxiliary power switch (3) and hold in place to engage auxiliary power system.
3. While holding the switch, operate the boom joystick (4) until the attachment is at ground level.
4. Release the auxiliary power switch and depress the emergency stop switch.



## **WARNING**

**TIP OVER HAZARD.** To be used for retracting then lowering. Only use the extend or lift functions if necessary and limit their duration. Extending/lifting could damage the equipment and/or cause tip over.

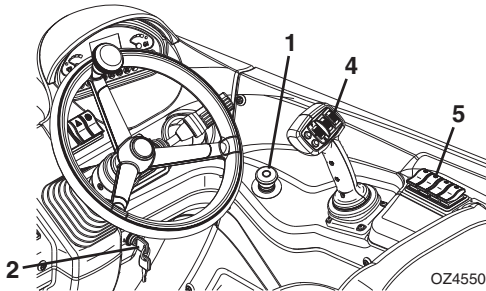
## Section 6 - Emergency Procedures

### Machine Safety System Override (MSSO)(CE, if equipped)

The MSSO is only to be used to retrieve an operator that is pinned, trapped or unable to operate the machine and function controls are locked out from the platform due to a platform overload situation.

**Note:** If the MSSO is used, the fault indicator will flash and a fault code is set in the JLG Control System which must be reset by a qualified JLG Service Technician.

**Note:** No functional checks of the MSSO system are necessary. The JLG Control system will set a Diagnostic Trouble Code if the control switch is faulty.



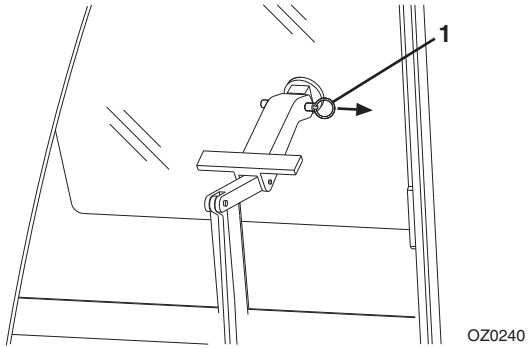
1. Verify the power/emergency stop switch (1) is not depressed and the ignition switch (2) is in position P.
2. Depress top of MSSO switch (5) and hold in place to start engine. Release after engine starts. Switch will stay in middle position.
3. Operate the boom joystick (4) until the attachment is at ground level.
4. Depress bottom of MSSO switch to shut off engine.
5. Depress the emergency stop switch.



## WARNING

**TIP OVER HAZARD.** To be used for retracting then lowering. Only use the extend or lift functions if necessary and limit their duration. Extending/lifting could damage the equipment and/or cause tip over.

**6.4 CAB EMERGENCY EXIT**



- In an emergency the rear window can be used to exit the telehandler.
- Remove the latch pin (1). The window is then free to swing open.

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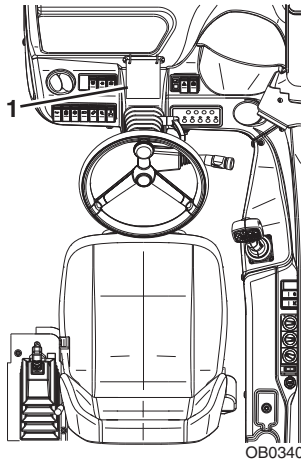
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## SECTION 7 - LUBRICATION AND MAINTENANCE

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### 7.1 INTRODUCTION

Service the product in accordance with the maintenance schedule on the following pages.



The lubrication and maintenance charts (1) contain instructions that must be followed to keep this product in good operating condition. The Operation & Safety Manual and Service Manual contain more detailed service information with specific instructions.

### Clothing and Safety Gear

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- Wear all the protective clothing and personal safety devices issued to you or called for by job conditions.
- **DO NOT** wear loose clothing or jewelry that can get caught on controls or moving parts.

## Section 7 - Lubrication and Maintenance

---

### 7.2 GENERAL MAINTENANCE INSTRUCTIONS

**Prior to performing any service or maintenance on the telehandler, follow the shut-down procedure on page 4-3 unless otherwise instructed. Ensure telehandler is level, for proper fluid readings.**

- Clean lubrication fittings before lubricating.
- After greasing telehandler, cycle all functions several times to distribute lubricants. Perform this maintenance procedure without attachment installed.
- Apply a light coating of engine oil to all linkage pivot points.
- Intervals shown are for normal usage and conditions. Adjust intervals for abnormal usage and conditions.
- Check all lubricant levels when lubricant is cool. For ease of filling hydraulic reservoir, use a funnel with a hose or flexible tube for best results.



## WARNING

**CUT/CRUSH/BURN HAZARD.** Do not perform service or maintenance on the machine with the engine running.

7.3 SERVICE AND MAINTENANCE SCHEDULES

10 & 1st 50 Hour Maintenance Schedule



**EVERY**  
**10** ⌚

Check Fuel Level	Check Engine Oil Level	Check Hydraulic Oil Level	Check Tire Condition & Pressure	Check Engine Coolant Level
Check Transmission Oil Level	Check Cab Air Prefilter	Additional Checks - Section 8		

**1st**  
**50** ⌚

Check Axle Differential Oil Level	Check Wheel End Oil Levels	Check Boom Chain & Tension (4014 & 4017)	Check Wheel Lug Nut Torque

OZ3870

## Section 7 - Lubrication and Maintenance

### 50 & 1st 250 Hour Maintenance Schedule



**EVERY**

**50** 



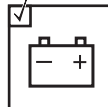
Drain Fuel/  
Water  
Separator



Check Air Filter



Lubrication  
Schedule



Check  
Battery



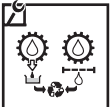
Check Washer  
Fluid Level  
(if equipped)



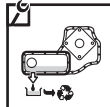
Check Cab  
Air Filter

**1<sup>st</sup>**

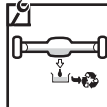
**250** 



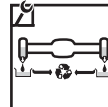
Change  
Transmission  
Oil & Filter



Change  
Transfer Case  
Oil



Change Axle  
Differential Oil



Change Wheel  
End Oil

OB0440

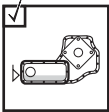


## Section 7 - Lubrication and Maintenance

### 250 & 500 Hour Maintenance Schedule



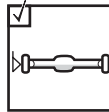
EVERY  
250 



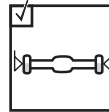
Check Transfer  
Case Oil Level



Check  
Fan Belt



Check Axle  
Differential Oil  
Level



Check Wheel  
End Oil Levels



Check Boom  
Wear Pads



Check Boom  
Chain & Tension  
(4014 & 4017)

EVERY  
500 



Change Fuel  
Filters



Change Engine  
Oil and  
Filter



Change  
Air Filter  
Elements



Check Wheel  
Lug Nut  
Torque



Lubrication  
Schedule



Check LSI  
Calibration

OZ3880

# Section 7 - Lubrication and Maintenance

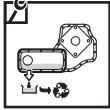
## 1000, 1500 & 3000 Hour Maintenance Schedule



**EVERY**  
**1000** 



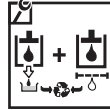
Change  
Transmission  
Oil & Filter



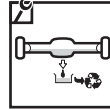
Change  
Transfer Case  
Oil



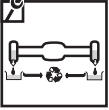
Check  
Air Intake  
System



Change  
Hydraulic  
Fluid & Filters



Change Axle  
Differential Oil



Change Wheel  
End Oil

**EVERY**  
**1500** 



Change  
Engine Coolant

**EVERY**  
**3000** 



Change  
Fan Belt

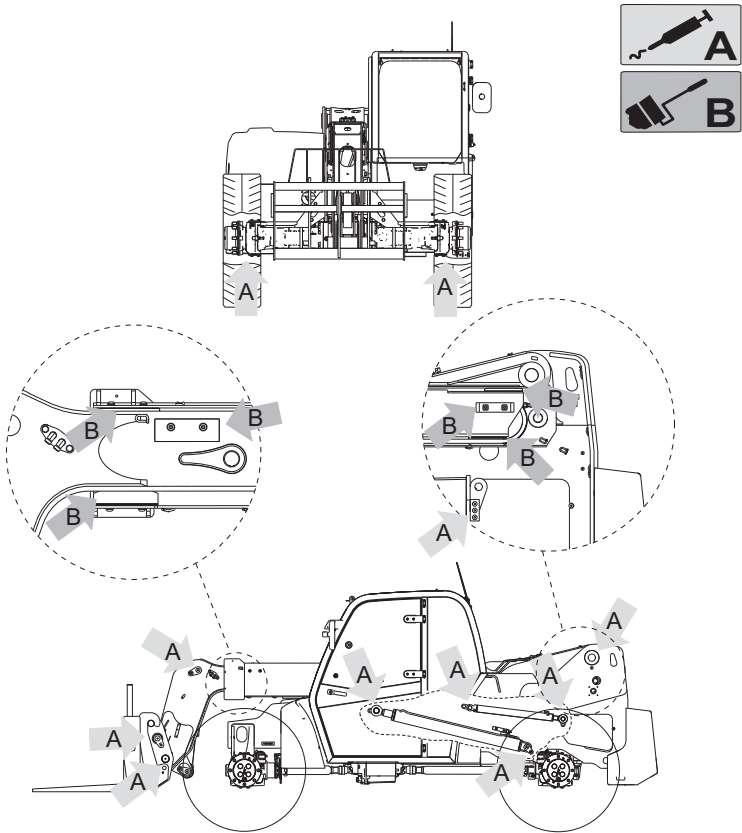
OB0371

7.4 LUBRICATION SCHEDULES

50 Hour Lubrication Schedule

3706PS & 3707PS

EVERY  
50 

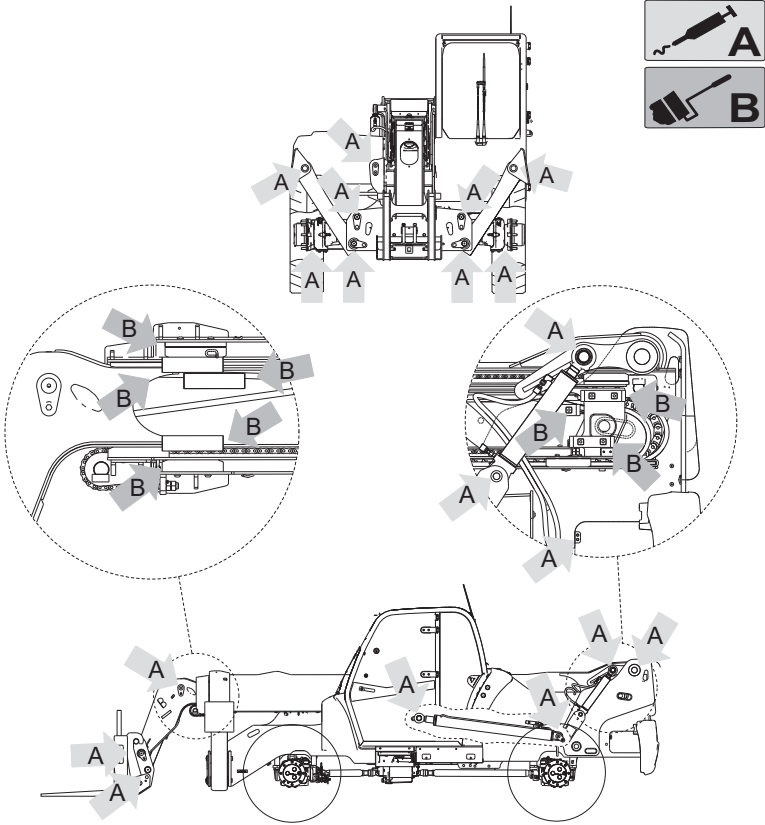


OAM2411

# Section 7 - Lubrication and Maintenance

4014PS

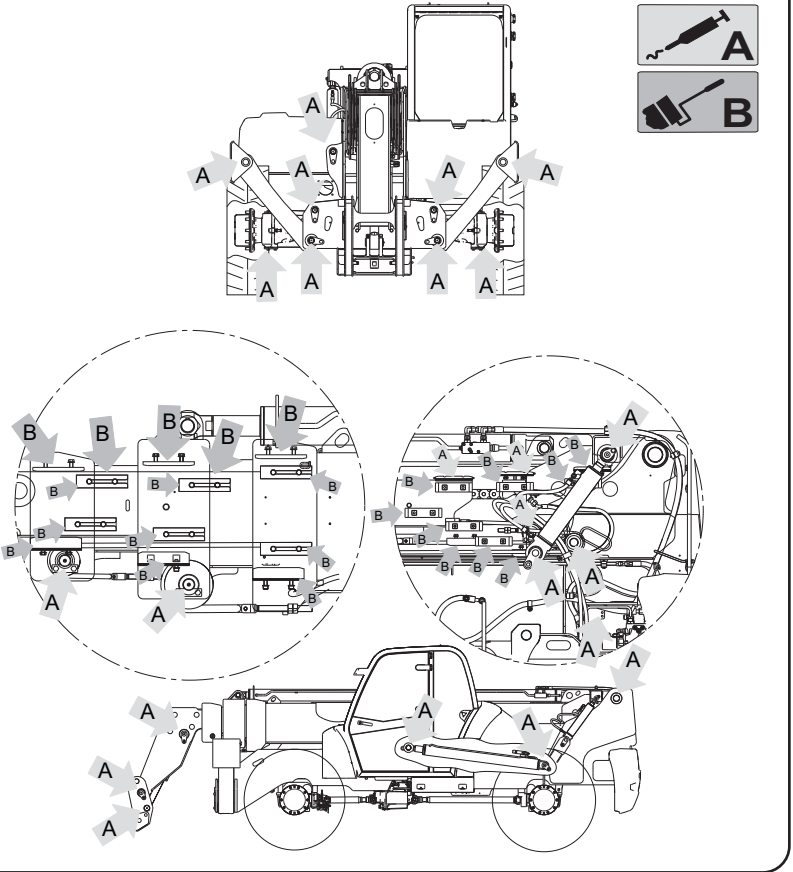
**EVERY**  
**50** 



OAM2202

4017PS

EVERY  
50 



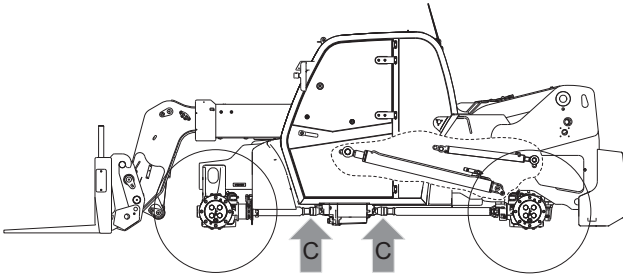
OAM2891

## Section 7 - Lubrication and Maintenance

### 500 Hour Lubrication Schedule

3706PS & 3707PS

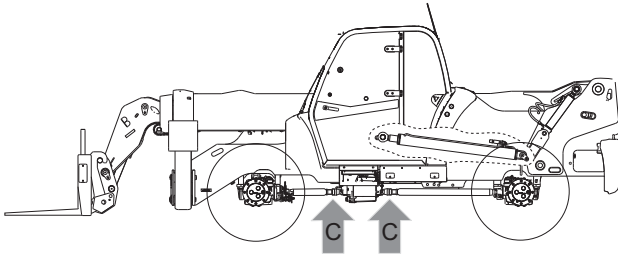
EVERY  
500 



OAM2421

4014PS & 4017PS

EVERY  
**500** 



OAM2212

## Section 7 - Lubrication and Maintenance

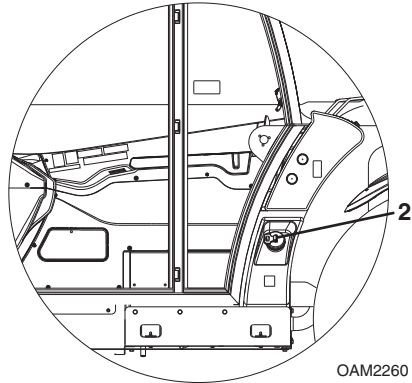
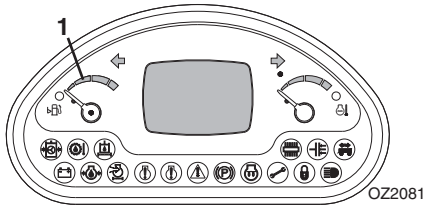
### 7.5 OPERATOR MAINTENANCE INSTRUCTIONS

#### Fuel System

##### A. Fuel Level Check

10   
OW0970

  
OW0990



1. Check fuel gauge (1) located on instrument panel in cab.
2. If fuel is low, proceed to fuel source and perform "Shut-Down Procedure" on page 4-3.
3. Turn fuel tank cap (2) to remove from filler neck.
4. Add diesel fuel as needed.
5. Replace fuel tank cap.

**Note:** Replenish diesel fuel at end of each work shift to minimize condensation.

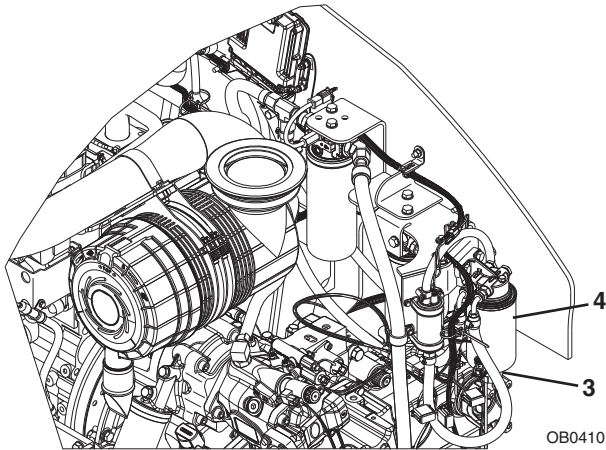
## NOTICE

**EQUIPMENT DAMAGE.** Do not allow machine to run out of fuel during operation. See Engine Operation & Maintenance Manual for details prior to servicing.



### B. Drain Fuel/Water Separator

50   
OW0980



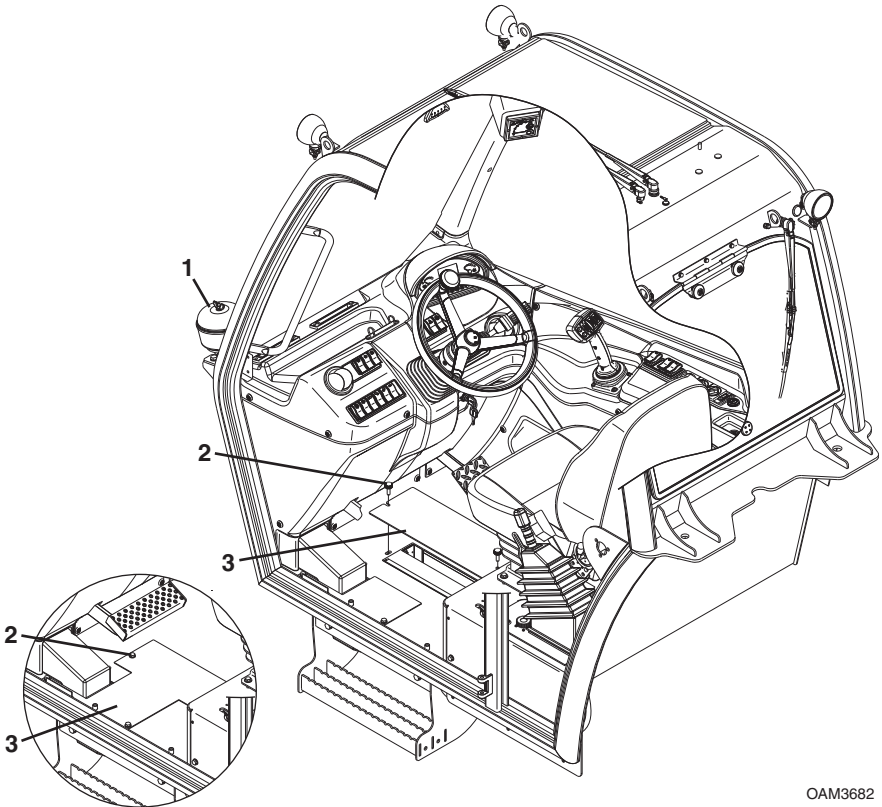
1. Perform "Shut-Down Procedure" on page 4-3.
2. Open engine cover.
3. Loosen drain cock (3) on underside of fuel filter (4) and allow all water to drain into a glass until clear fuel is visible. Tighten drain cock.
4. Close and secure engine cover.

## Section 7 - Lubrication and Maintenance

### Cab Air Filters (if equipped)

#### A. Cab Air Prefilter Check

**10**   
OW0970



**EARLY PRODUCTION**

OAM3682

1. Perform "Shut-Down Procedure" on page 4-3.
2. If equipped, locate cab air precleaner (1) on front of cab.
3. Loosen wing nut and remove cover.
4. Remove dust from bowl.
5. Replace bowl and secure cover.

### Cab Air Filter Check

**50**   
OW0980



1. Perform “*Shut-Down Procedure*” on page 4-3.
2. Remove floor mat from cab.
3. Remove bolts **(2)** and panel **(3)** from cab floor.
4. Remove cab air filter and inspect.
5. If filter is not damaged, clean and place back in cab floor. If damaged, replace filter.
6. Replace floor panel and secure.
7. Replace floor mat.

## Section 7 - Lubrication and Maintenance

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### Tires

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#### A. Tire Air Pressure Check



1. Perform "Shut-Down Procedure" on page 4-3.
2. Remove valve stem cap.
3. Check tire pressure.
4. Add air if required. See page 9-3 for tire pressures.
5. Replace valve stem cap.

#### B. Tire Damage

For pneumatic tires, when any cut, rip or tear is discovered that exposes sidewall or tread area cords in the tire, measures be taken to remove the product from service immediately. Arrangements must be made for replacement of the tire or tire assembly.

For polyurethane foam filled tires, when any of the following are discovered, measures must be taken to remove the product from service immediately. Arrangements must be made for replacement of the tire or tire assembly.

- a smooth even cut through the cord piles which exceeds 7,5 cm (3 in) in total length.
- any tears or rips (ragged edges) in the cord plies which exceeds 2,5 cm (1 in) in any direction
- any punctures which exceed 2,5 cm (1 in) in diameter.

If a tire is damaged but within the above noted criteria, the tire must be inspected daily to ensure the damage has not propagated beyond the allowable criteria.

#### C. Tire and Wheel Replacement

It is recommended that a replacement tire to be the same size, ply and brand as originally installed. Refer to the appropriate parts manual for ordering information. If not using an approved replacement tire, the replacement tires must have the following characteristics:

- Equal or greater ply/load rating and size of original.
- Tire tread contact width equal or greater than original.
- Wheel diameter, width and offset dimensions equal to the original.
- Approved for the application by the tire manufacturer (including inflation pressure and maximum tire load).

## Section 7 - Lubrication and Maintenance

Unless specifically approved by JLG, do not replace a foam filled or ballast filled tire assembly with a pneumatic tire. Due to size variations between tire brands, when selecting and installing a replacement tire ensure both tires on the axle are the same.

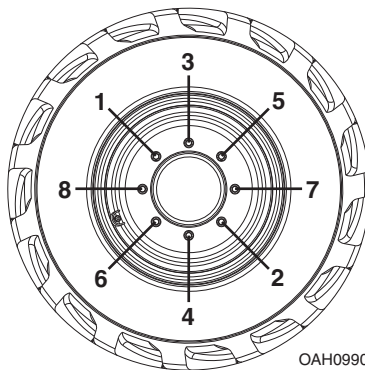
The rims installed have been designed for stability requirements which consist of track width, tire pressure and load capacity. Size changes such as rim width, center piece location, larger or smaller diameter, etc., without written factory recommendations, may result in unsafe condition regarding stability.

### E. Wheel Installation

Torque lug nuts after first 50 hours and after each wheel installation.

**Note:** If machine is equipped with directional tire assemblies, the wheel and tire assemblies must be installed with the directional tread pattern "arrows" facing in the direction of forward travel.

1. Install wheel lug washers.
2. Start all nuts by hand to prevent cross threading. DO NOT use a lubricant on threads or nuts.
3. Tighten lug nuts in an alternating pattern as indicated in figure. See page 9-3 for torque value.



## WARNING

**TIP OVER HAZARD.** Lug nuts must be installed and maintained at the proper torque to prevent loose wheels, broken studs and possible separation of wheel from the axle.

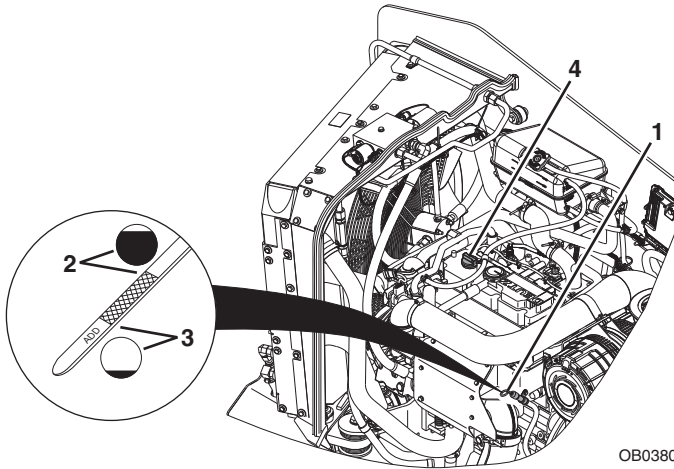
## Section 7 - Lubrication and Maintenance

### Engine Oil

#### A. Engine Oil Level Check

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OW0970

  
OW1020

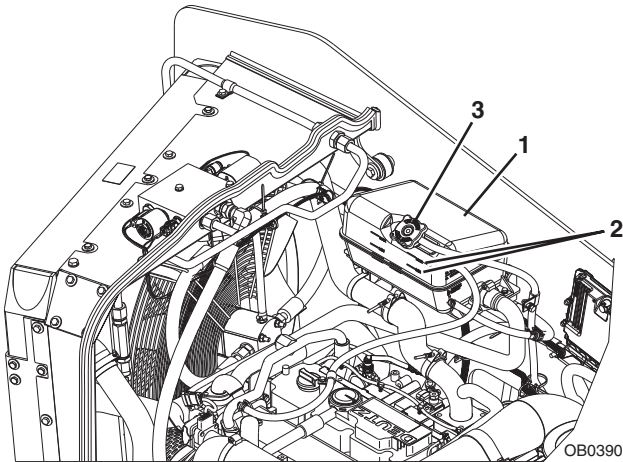


1. Perform "Shut-Down Procedure" on page 4-3.
2. Open engine cover.
3. Remove dipstick (1) and check oil mark. The oil should be between the full (2) and add (3) marks within the crosshatched area of the dipstick.
4. Replace dipstick.
5. If oil is low, remove oil fill cap (4) and add motor oil to bring oil up to the full mark in the crosshatch area.
6. Replace oil fill cap.
7. Close and secure engine cover.

### Engine Cooling System

#### A. Engine Coolant Level Check

**10**   
OW0970



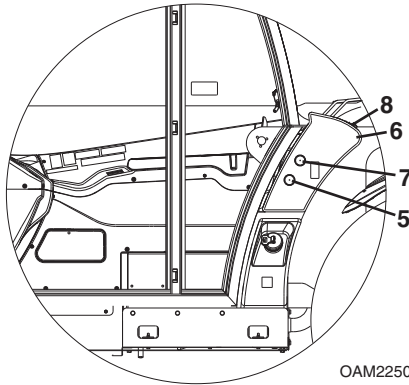
1. Perform "Shut-Down Procedure" on page 4-3.
2. Open engine cover.
3. Check coolant level in surge tank (1). Coolant should be between the Min and Max (2) marks.
4. If coolant is low, allow fluid to cool.
5. Remove surge tank cap (3) slowly. Add coolant as required.
6. Replace surge tank cap.
7. Close and secure engine cover.

## Section 7 - Lubrication and Maintenance

### Hydraulic Oil

#### A. Hydraulic Oil Level Check

10   
OW0970



1. If equipped, ensure outriggers are fully raised.
2. Perform "Shut-Down Procedure" on page 4-3.
3. (4014PS, 4017PS)(3706PS, 3707PS Prior to SN 1160007654) If hydraulic oil is cold, check fluid level at the sight gauge (5) on the hydraulic tank (6). The oil level should be visible in the gauge window.  
If hydraulic oil is warm, check fluid level at the sight gauge (7) on the hydraulic tank. The oil level should be visible in the gauge window.  
(3706PS, 3707PS SN 1160007654 to Present) With the hydraulic oil cold, check fluid level at the sight gauge (5) on the hydraulic tank (6). The oil level should be visible in the gauge window.
4. If hydraulic oil is low, remove oil fill cap (8). Add hydraulic fluid to bring oil up to the center of the appropriate gauge window.
5. Replace hydraulic oil fill cap.

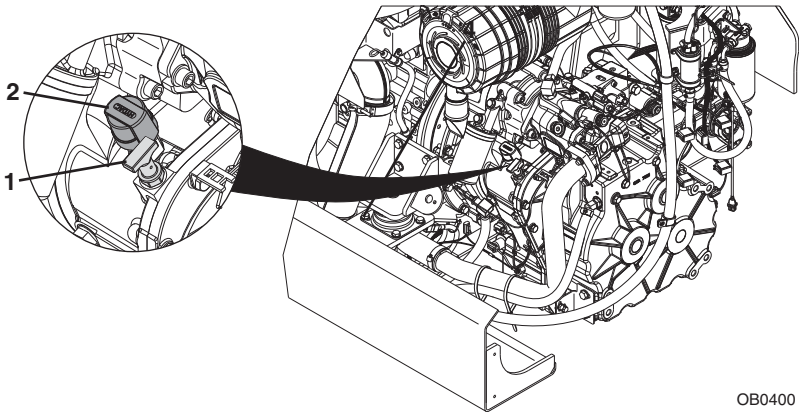


### Transmission Oil

#### A. Transmission Oil Level Check

10   
OW0970

  
OW1050



OB0400

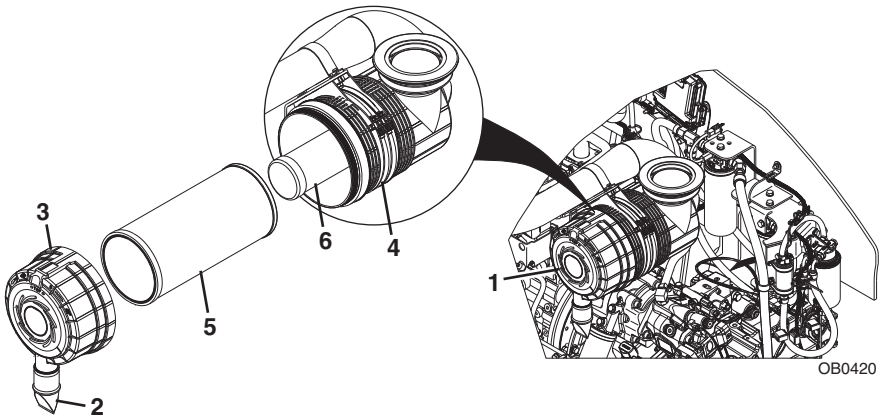
1. Check transmission oil level with engine at idle and transmission oil cold.
2. Apply park brake, shift transmission to Neutral and lower forks or attachment to the ground.
3. Open the engine cover.
4. Remove the transmission dipstick (1) and check oil level. The oil level should be between the Min and Max marks.
5. Replace transmission dipstick.
6. If oil is low, remove plug (2) and add fluid as required.
7. Replace plug.
8. Close and secure the engine cover.

## Section 7 - Lubrication and Maintenance

### Air Intake System

#### A. Air Filter Check

50   
OW0980



1. Perform "Shut-Down Procedure" on page 4-3.
2. Open engine cover.
3. Locate air cleaner (1) and remove dust from vacuumator valve (2) by squeezing bottom of valve to allow loose particles to fall out.
4. Close and secure engine cover.

**Note:** Only remove cover to service elements as restriction indicator indicates. Excessive access to check elements can lead to premature element failure.

### **B. Element Change (as restriction indicator indicates)**

If Air Filter Restriction Indicator remains on after start up or illuminates while operating machine, perform the following:

1. Perform "Shut-Down Procedure" on page 4-3.
2. Unlock air cleaner cover (3), turn counterclockwise and remove from air cleaner canister (4).
3. Remove outer primary element (5) and inspect for damage. Damaged elements should not be reused.
4. Thoroughly clean the interior of the air cleaner canister and vacuator valve.
5. Replace inner safety element (6) after every third primary element change. If replacing the inner safety element at this time, carefully slide the element out and replace with new element.
6. Slide the new primary element over the inner element making sure the sealing edge is flush with the base of the air cleaner.
7. Position air cleaner cover in place, turn clockwise and lock into position.
8. Close and secure engine cover.

**Note:** *An inner safety element should never be washed or reused. Always install a new element.*

## Section 7 - Lubrication and Maintenance

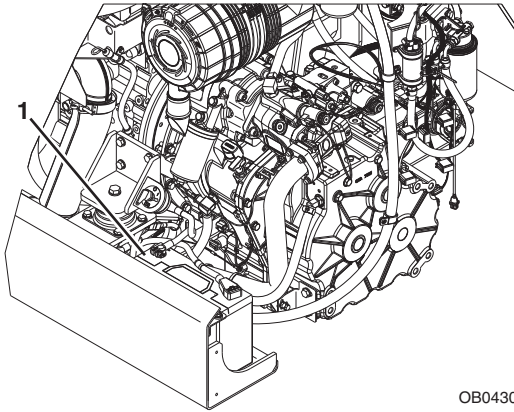
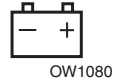
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### Battery

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#### A. Battery Check

**50**   
OW0980

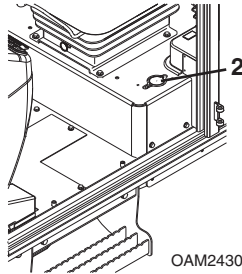


1. Perform “*Shut-Down Procedure*” on page 4-3.
2. Open engine cover.
3. Wearing eye protection, visually inspect the battery (1). Check terminals for corrosion. Replace battery if it has a cracked, melted or damaged case.
4. Close and secure engine cover.

**Windshield Washer System (if equipped)**

**A. Windshield Washer Fluid Level Check**

**50**   
OW0980



1. Perform “*Shut-Down Procedure*” on page 4-3.
2. The windshield washer fluid should be visible in the reservoir (**2**).
3. If washer fluid level is low, add fluid as needed.

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## SECTION 8 - ADDITIONAL CHECKS

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### 8.1 GENERAL

If any of the following test results cannot be achieved, the system is not functioning properly and the machine must be removed from service and repaired before continued operation.

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### 8.2 LOAD STABILITY INDICATOR SYSTEM

#### A. Load Stability Indicator System Test



The Load Stability Indicator (LSI) is intended to continuously monitor the forward stability of the telehandler. To check this feature, perform the following:

1. **Fully retract and level boom, with no load. Do not raise the boom during this test.**
2. Level frame using level in cab (if equipped).
3. Press the system check button on the LSI display. This will cause all LEDs to flash on and an audible warning to sound. This indicates that the system is functioning properly.

## Section 8 - Additional Checks

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### 8.3 BOOM INTERLOCK (4014PS & 4017PS)

#### A. Boom Interlock System Test



Boom interlock system operates in three modes. With boom at any extension and angle below 20 degrees, outrigger and frame level functions are operable. With boom fully retracted and raised between 20 and 55 degrees, outriggers and frame level are operable. With boom at any extension and raised above 55 degrees, outriggers and frame level are not operable. To check the system, perform the following:

- 1. Test system with machine on a level surface and no load.**
2. Shift transmission to neutral and engage park brake.
3. Ensure outriggers and frame level functions are properly functioning. Lower then raise outriggers. Rotate frame in each direction.
4. Keep outriggers raised and level machine using level in cab.
5. Raise boom to between 20 and 55 degrees and extend approximately 1 m (39 in).
6. Attempt to lower outriggers then rotate frame. Neither function should respond.
7. Fully retract boom and raise above 55 degrees.
8. Attempt to lower outriggers then rotate frame. Neither function should respond.
9. Lower boom fully.



## **8.4 AUXILIARY POWER (IF EQUIPPED FOR PLATFORM)**

### **A. Auxiliary Power System Test**



The auxiliary power system is available in case of an emergency or engine failure. To check this feature, perform the following:

1. **Test system with machine on a level surface and no load.**
2. Lower attachment to ground and shut-off engine.
3. Verify the power/emergency stop switch is not depressed and the ignition switch is in position I.
4. Depress auxiliary power switch and hold in place to engage auxiliary power system.
5. While holding auxiliary power switch operate each boom joystick function briefly to ensure proper operation
6. Release auxiliary power switch, turn ignition switch to position 0 and depress the power/emergency stop switch.

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## SECTION 9 - SPECIFICATIONS

### 9.1 PRODUCT SPECIFICATIONS

#### Fluids and Capacities

##### Engine Crankcase Oil

Capacity with Filter Change.....8,0 L (8.5 qt)

##### Type of Oil

-10°C to 40°C (14°F to 104°F) ..... SAE 15W-40

-15°C to 40°C (5°F to 104°F) ..... SAE 10W-40

-30°C to 30°C (-22°F to 86°F) ..... SAE 15W-40

##### Specification

If Equipped for ULS ..... API CJ-4

If Equipped for LS.....API CI-4

##### Fuel Tank

Capacity ..... 150 L (39.6 gal)

##### Type of Fuel

Standard..... #2 Diesel

Cold Weather.....Blend of #1 and #2 Diesel

##### Specification

If Equipped for ULS ..... Ultra Low Sulfur ( $S \leq 15$  mg/kg)

If Equipped for LS..... Low Sulfur ( $S \leq 500$  mg/kg)

##### Cooling System

System Capacity ..... 25,0 L (26 qt)

##### Type of Coolant

Standard.....50/50 Ethylene Glycol & Water

Cold Weather.....60/40 Ethylene Glycol & Water

##### Hydraulic System

##### System Capacity

##### 3706PS & 3707PS

Prior to SN 1160007654 .....135 L (36 gal)

SN 1160007654 to Present.....115 L (30 gal)

4014PS & 4017PS .....145 L (38 gal)

Reservoir Capacity to Full Mark ..... 90 L (24 gal)

Auxiliary Hydraulic Circuit Max Flow .....80 lpm (21.1 gpm)

Type of Oil ..... Mobilfluid 424 Hydraulic Fluid

## Section 9 - Specifications

---

### Transmission System

Capacity with Filter Change ..... 18,0 L (19 qt)

Type of Oil ..... Mobilfluid 424 Hydraulic Fluid

### Transfer Case

Capacity ..... 2,75 L (2.9 qt)

Type of Oil ..... Mobilfluid 424 Hydraulic Fluid

### Axles

#### Differential Housing Capacity

3706PS & 3707PS

Front Axle ..... 10,5 L (11.1 qt)

Rear Axle ..... 11,5 L (12.2 qt)

4014PS & 4017PS

Front & Rear Axle ..... 11,5 L (12.2 qt)

#### Wheel End Capacity

3706PS & 3707PS ..... 0,8 L (0.8 qt)

4014PS ..... 0,9 L (1.0 qt)

4017PS ..... 1,5 L (1.6 qt)

Type of Oil ..... Mobilfluid 424 Hydraulic Fluid

Mobilube HDLS 80W-90

Shell Spirax LS

Esso Torque Fluid 62

Selenia Ambra STF 80W-90

### Air Conditioning System (if equipped)

System Capacity ..... 1,35 kg (3.0 lb)

Type of Refrigerant ..... R-134a Tetrafluoroethane

### Grease

Wear Pad, Cylinder & Axle ..... Multipurpose Grease (NLGI Grade 2)

Boom Chain ..... Schaffer 200S Silver Streak

**Tires**

3706PS & 3707PS

15.5-25 L-2 .....	4,0 bar (58 psi)
15.5/80-24 TR01 .....	4,25 bar (62 psi)
15.5/80-24 SGI .....	4,0 bar (58 psi)
15.5 R25 XHA TL (3707PS only) .....	4,25 bar (62 psi)
Maximum travel distance per hour of service .....	16 km (10 mi)
460/70 R24 XMCL .....	4,0 bar (58 psi)
460/70 R24 Bibload .....	4,0 bar (58 psi)
500/70 R24 (3707PS only) .....	3,0 bar (44 psi)
400/80-24 .....	4,0 bar (58 psi)
440/80-24 (3707PS only) .....	3,5 bar (51 psi)

4014PS

15.5/80-24 TR01 .....	4,25 bar (62 psi)
15.5-25 L-2 .....	4,0 bar (58 psi)
400/80-24 .....	4,5 bar (65 psi)
440/80-24 .....	4,0 bar (58 psi)

4017PS

14-24 TG02 .....	4,25 bar (61 psi)
14-24 SGG-2A .....	5,25 bar (76 psi)
400/80-24 .....	5,0 bar (73 psi)
460/65 R24 .....	4,5 bar (65 psi)

**Wheel Lug Nut**

Torque

3706PS, 3707PS & 4014PS .....	360 ±20 Nm (265 ±15 lb-ft)
4017PS .....	460 ±20 Nm (340 ±15 lb-ft)

## Section 9 - Specifications

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### Performance

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#### Maximum Lift Capacity

3706PS.....	3700 kg (8157 lb)
3707PS.....	3700 kg (8157 lb)
4014PS	
Outriggers Engaged .....	4000 kg (8818 lb)
Outriggers Not Engaged.....	3700 kg (8157 lb)
4017PS.....	4000 kg (8818 lb)

#### Maximum Lift Height

3706PS.....	6,1 m (20.0 ft)
3707PS.....	7,3 m (24.0 ft)
4014PS.....	13,7 m (44.9 ft)
4017PS	
Outriggers Engaged .....	17,3 m (56.8 ft)
Outriggers Not Engaged.....	15,2 m (49.9 ft)

#### Capacity at Maximum Height

3706PS .....	2500 kg (5512 lb)
3707PS .....	2000 kg (4409 lb)
4014PS	
CE	
Outriggers Engaged.....	3000 kg (6614 lb)
Outriggers Not Engaged .....	1750 kg (3858 lb)
AUS	
Outriggers Engaged.....	2500 kg (5512 lb)
Outriggers Not Engaged .....	1250 kg (2756 lb)
4017PS	
Outriggers Engaged .....	3000 kg (6614 lb)
Outriggers Not Engaged.....	1000 kg (2205 lb)

#### Maximum Forward Reach

3706PS.....	3,1 m (10.2 ft)
3707PS.....	3,8 m (12.3 ft)
4014PS.....	9,2 m (30.3 ft)
4017PS.....	12,7 m (41.7 ft)

## Section 9 - Specifications

### Capacity at Maximum Forward Reach

3706PS & 3707PS .....	1500 kg (3307 lb)
4014PS	
CE	
Outriggers Engaged .....	1000 kg (2205 lb)
Outriggers Not Engaged .....	350 kg (772 lb)
AUS	
Outriggers Engaged .....	1150 kg (2535 lb)
Outriggers Not Engaged .....	300 kg (661 lb)
4017PS	
CE	
Outriggers Engaged .....	500 kg (1102 lb)
Outriggers Not Engaged .....	0 kg (0 lb)
AUS	
Outriggers Engaged .....	450 kg (992 lb)
Outriggers Not Engaged .....	0 kg (0 lb)

### Reach at Maximum Height

3706PS .....	0,8 m (2.6 ft)
3707PS .....	0,7 m (2.3 ft)
4014PS .....	0,5 m (1.6 ft)
4017PS	
Outriggers Engaged .....	2,1 m (6.9 ft)
Outriggers Not Engaged .....	6,0 m (19.7 ft)

### Maximum Travel Speed (see note)

3706PS & 3707PS	
4 Speed .....	32 kph (19.9 mph)
6 Speed .....	40 kph (24.9 mph)
4014PS & 4017PS .....	32 kph (19.9 mph)

### Frame Leveling

3706PS & 3707PS .....	0 degrees
4014PS & 4017PS .....	10 degrees

### Maximum Travel Grade (boom in travel position)

Gradeability .....	45%
Side Slope .....	8.75%

**Note:** Refer to machine specific documents and/or plates for local governmental requirements and/or restrictions.

## Section 9 - Specifications

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### Dimensions

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#### Overall Height

3706PS.....	2646 mm (104 in)
3707PS.....	2616 mm (103 in)
4014PS.....	2831 mm (111 in)
4017PS.....	2998 mm (118 in)

#### Overall Width

3706PS & 3707PS.....	2402 mm (95 in)
4014PS.....	2445 mm (96 in)
4017PS.....	2513 mm (99 in)

#### Track Width

3706PS & 3707PS.....	1988 mm (78 in)
4014PS.....	2036 mm (80 in)
4017PS.....	2078 mm (82 in)

#### Wheelbase

3706PS.....	2975 mm (116 in)
3707PS.....	3075 mm (120 in)
4014PS & 4017PS.....	3200 mm (126 in)

#### Length at Front Wheels

3706PS.....	3637 mm (143 in)
3707PS.....	4027 mm (159 in)
4014PS & 4017PS.....	4439 mm (175 in)

#### Overall Length (less Forks)

3706PS.....	4791 mm (189 in)
3707PS.....	5228 mm (206 in)
4014PS.....	6545 mm (258 in)
4017PS.....	6802 mm (268 in)

#### Ground Clearance

3706PS & 3707PS.....	422 mm (17 in)
4014PS & 4017PS.....	358 mm (14 in)

#### Turning Radius Over Tires

3706PS.....	3700 mm (146 in)
3707PS.....	3750 mm (148 in)
4014PS.....	3805 mm (150 in)
4017PS.....	3920 mm (154 in)



## Section 9 - Specifications

### Outside Turning Radius

3706PS .....	7270 mm (286 in)
3707PS .....	7442 mm (293 in)
4014PS .....	7636 mm (301 in)
4017PS .....	7637 mm (301 in)

### Maximum Operating Weight (no attachment)

3706PS .....	8200 kg (18,078 lb)
3707PS .....	8600 kg (18,960 lb)
4014PS	
CE .....	9916 kg (21,861 lb)
AUS .....	10,266 kg (22,633 lb)
4017PS .....	12,605 kg (27,789 lb)

### Distribution of Maximum Operating Weight

(no attachment, boom level and fully retracted)

#### Front Axle

3706PS .....	3970 kg (8,752 lb)
3707PS .....	3980 kg (8,774 lb)
4014PS	
CE .....	5040 kg (11,111 lb)
AUS .....	5215 kg (11,497 lb)
4017PS .....	6181 kg (13,626 lb)

#### Rear Axle

3706PS .....	4230 kg (9,326 lb)
3707PS .....	4620 kg (10,185 lb)
4014PS	
CE .....	4876 kg (10,750 lb)
AUS .....	5051 kg (11,136 lb)
4017PS .....	6424 kg (14,162 lb)

## Section 9 - Specifications

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### Maximum Ground Bearing Pressure

#### 3706PS

15.5-25 L-2 .....	Not Available at Publication
15.5/80-24 TR01 .....	Not Available at Publication
15.5/80-24 SGI.....	Not Available at Publication
460/70 R24 XMCL.....	11,5 kg/cm <sup>2</sup> (164 lb/in <sup>2</sup> )
460/70 R24 Bibload.....	Not Available at Publication
400/80-24 .....	11,5 kg/cm <sup>2</sup> (164 lb/in <sup>2</sup> )

#### 3707PS

15.5-25 L-2 .....	Not Available at Publication
15.5/80-24 TR01 .....	Not Available at Publication
15.5/80-24 SGI.....	Not Available at Publication
15.5 R25 XHA TL .....	Not Available at Publication
460/70 R24 XMCL .....	11,5 kg/cm <sup>2</sup> (164 lb/in <sup>2</sup> )
460/70 R24 Bibload.....	Not Available at Publication
500/70 R24 .....	10,5 kg/cm <sup>2</sup> (149 lb/in <sup>2</sup> )
400/80-24 .....	11,5 kg/cm <sup>2</sup> (164 lb/in <sup>2</sup> )
440/80-24 .....	9,6 kg/cm <sup>2</sup> (137 lb/in <sup>2</sup> )

#### 4014PS

400/80-24 .....	12,7 kg/cm <sup>2</sup> (181 lb/in <sup>2</sup> )
440/80-24 .....	10,8 kg/cm <sup>2</sup> (154 lb/in <sup>2</sup> )

#### 4017PS

14-24 TG02 .....	9,0 kg/cm <sup>2</sup> (128 lb/in <sup>2</sup> )
14-24 SGG-2A .....	Not Available at Publication
400/80-24 .....	Not Available at Publication
460/65 R24 .....	Not Available at Publication

**Declaration of Vibration**

**According to Standard EN13059**

Seat	Average Weighted Whole Body Acceleration	
	3706PS & 3707PS	4014PS & 4017PS
Mechanical Suspension	0,5 m/s <sup>2</sup> (1.6 ft/s <sup>2</sup> )	0,7 m/s <sup>2</sup> (2.3 ft/s <sup>2</sup> )
Pneumatic Suspension	0,6 m/s <sup>2</sup> (2.0 ft/s <sup>2</sup> )	0,6 m/s <sup>2</sup> (2.0 ft/s <sup>2</sup> )

**Noise Emission Level**

**According to Directive 2000/14/EC**

- The telehandler is approved under the applicable EC directives.
- The LWA sound power level is shown on the machine.  
75 kW (100 hp) & 90 kW (120 hp) Engine106 dB
- To avoid any increase in noise emission, after maintenance and repair work, all panels and other sound absorbing materials must be replaced in their original condition. Do not modify the machine in such a manner as to increase noise emissions.

**Machine Towing Capacity**

**Note:** Refer to machine specific documents and/or plates for local governmental requirements and/or restrictions.

Unbraked.....	3.000 kg (6,614 lb)
Independently Braked.....	12.000 kg (26,455 lb)
Inertia Braked.....	8.000 kg (17,637 lb)
Hydraulic or Pneumatic Braked.....	12.000 kg (26,455 lb)

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# TRANSFER OF OWNERSHIP

**To Product Owner:**

**If you now own but ARE NOT the original purchaser of the product covered by this manual, we would like to know who you are. For the purpose of receiving safety-related bulletins, it is very important to keep JLG Industries, Inc. updated with the current ownership of all JLG products. JLG maintains owner information for each JLG product and uses this information in cases where owner notification is necessary.**

**Please use this form to provide JLG with updated information with regard to the current ownership of JLG products. Please return completed form to the JLG Product Safety & Reliability Department via facsimile or mail to address as specified below.**

**Thank You,  
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Hagerstown, MD 21742  
USA  
Telephone: +1-717-485-6591  
Fax: +1-301-745-3713**

**NOTE: Leased or rented units should not be included on this form.**

**Mfg. Model:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Previous Owner:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Country:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_

**Date of Transfer:** \_\_\_\_\_

**Current Owner:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_

**Country:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_

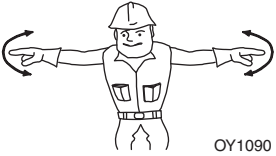
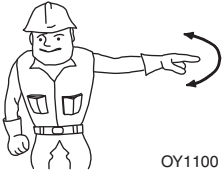

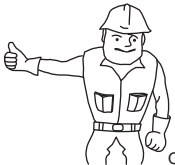
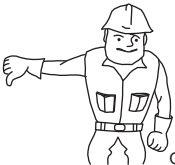
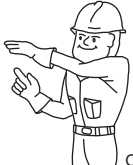
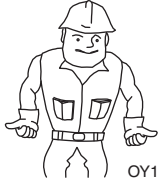
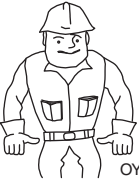
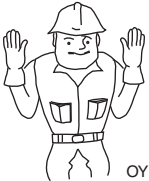
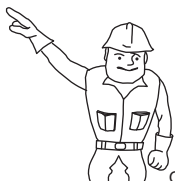
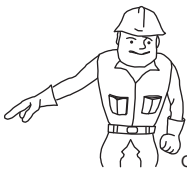
**Who in your organization should we notify?**

**Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_



# Hand Signals

 <p>OY1090</p> <p>EMERGENCY STOP - With both arms extended laterally, hands open downward, move arms back and forth.</p>	 <p>OY1100</p> <p>STOP - With either arm extended laterally, hand open downward, move arm back and forth.</p>	 <p>OY1110</p> <p>STOP ENGINE - Draw thumb or forefinger across throat.</p>
 <p>OY1120</p> <p>RAISE BOOM - With either arm extended horizontally, fingers closed, point thumb upward.</p>	 <p>OY1130</p> <p>LOWER BOOM - With either arm extended horizontally, fingers closed, point thumb downward.</p>	 <p>OY1140</p> <p>MOVE SLOWLY - Place one hand motionless in front of hand giving motion signal. (Raise load slowly shown)</p>
 <p>OY1150</p> <p>EXTEND BOOM - With both hands clenched, point thumbs outward.</p>	 <p>OY1160</p> <p>RETRACT BOOM - With both hands clenched, point thumbs inward.</p>	 <p>OY1170</p> <p>THIS FAR TO GO - With hands raised and open inward, move hands laterally, indicating distance to go.</p>
 <p>OY1180</p> <p>TILT FORKS UP - With one arm held at side, extend other arm upward at about 45 degrees.</p>	 <p>OY1190</p> <p>TILT FORKS DOWN - With one arm held at side, extend other arm downward at about 45 degrees.</p>	

**Special Signals** - When signals for auxiliary equipment functions or conditions not covered are required, they shall be agreed upon in advance by the operator and signalman.



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