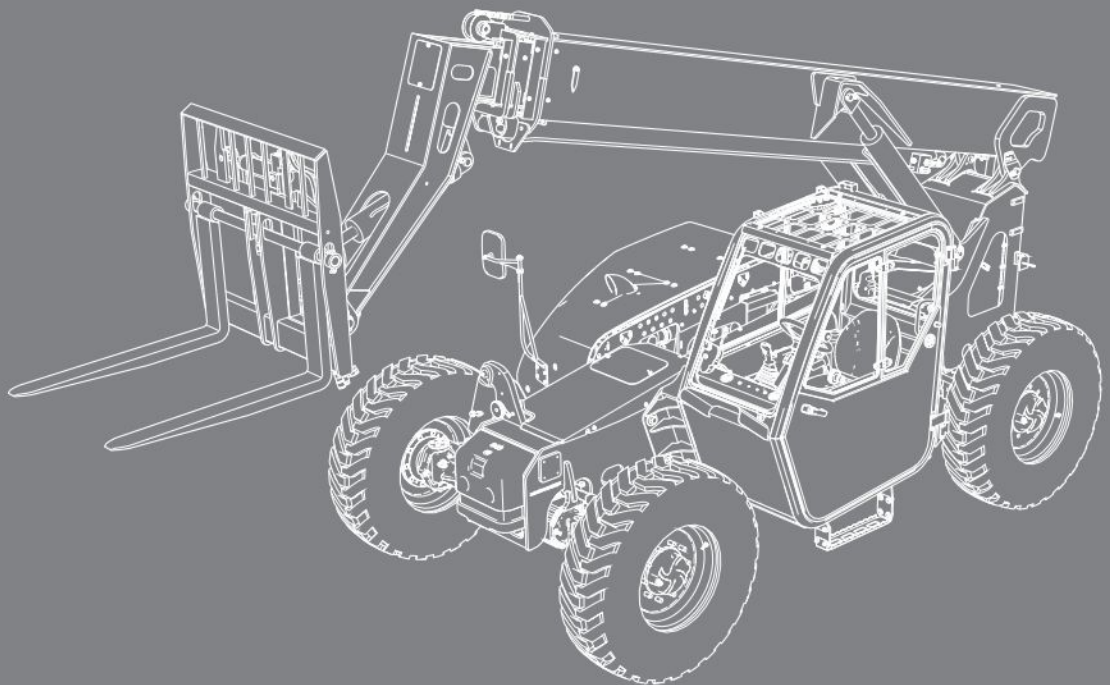


SKYJACK™

OPERATING MANUAL

SJ643 TH & SJ843 TH

TELEHANDLER



216201ADA

July 2018

ANSI/CSA

This manual is based on Serial Number:

SJ643 TH & SJ843 TH: 87 110 609 & Above

Please refer to the website (www.skyjack.com) for
Contact Information other Serial Numbers, most
recent Technical Manuals and USB software.

Original instructions in English.

THIS SAFETY ALERT SYMBOL MEANS ATTENTION!



BE ALERT! YOUR SAFETY IS INVOLVED.

The Safety Alert Symbol identifies important safety messages on telehandlers, safety signs in manuals or elsewhere. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

DANGER

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

WARNING

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

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT

IMPORTANT indicates a procedure essential for safe operation and which, if not followed, may result in a malfunction or damage to the telehandler.

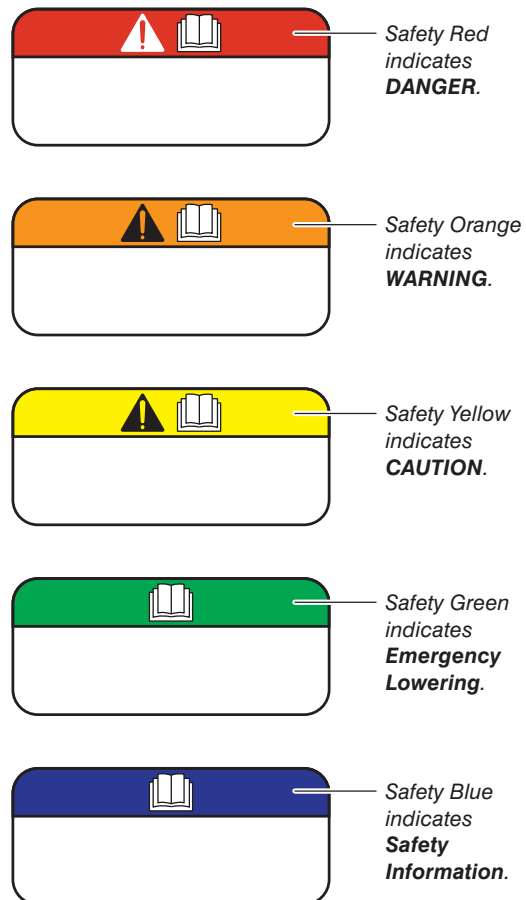


Figure 01 Label Legend

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Section 1 – About Your Telehandler

1.1 Read and Heed

Skyjack is continuously improving and expanding product features on its equipment, therefore, specifications and dimensions are subject to change without notice.

1.1-1 Telehandler Definition

A material handler designed primarily as a fork truck with a pivoting telescopic boom which enables it to pick and place loads at distances as well as various lift heights.

1.1-2 Purpose of Equipment

The Skyjack telehandlers are designed to lift, handle and transport agricultural or industrial products by means of specific attachments.

1.1-3 Use of Equipment

The telehandler is a highly maneuverable variable reach rough terrain forklift. Lifting, handling and driving must be on a flat, level, compacted surface. It can be driven over uneven terrain only when the boom is fully lowered.

1.1-4 Manual

The operating manual is considered a fundamental part of the telehandler. It is a very important way to communicate necessary safety information to users and operators. A complete and legible copy of this manual must be kept in the provided weather-resistant storage compartment on the telehandler at all times.

1.1-5 Operator

The operator must read and completely understand both this operating manual and the hazard identification label located on the telehandler and all other warnings in this manual and on the telehandler. Compare the labels on the telehandler with the labels found within this manual. If any labels are damaged or missing, replace them immediately.

Only trained and authorized personnel shall be permitted to operate the telehandler.

The operator must be familiar with employer's work rules and related government regulations and be able to demonstrate the ability to understand and operate this make and model of telehandler in the presence of a qualified person.

1.1-6 Service Policy and Warranty

Skyjack warrants each new product to be free of defective parts and workmanship for the first 2 years or 3000 hours, whichever occurs first. Any defective part will be replaced or repaired by your local Skyjack dealer at no charge for parts or labor. In addition, all products have a 5 year structural warranty. Contact the Skyjack Service Department for warranty statement extensions or exclusions.

1.1-7 Ownership of Machine

Notify Skyjack of machine ownership. If you have sold or transferred any machine, promptly notify Skyjack of new owner's contact information.

1.1-8 Optional Accessories

The Skyjack telehandler is designed to accept a variety of optional accessories. These are listed under [Section 3.6](#). Operating instructions for these options (if equipped) are located in [Section 5 – Operation](#) of this manual.

For non-standard components or systems, contact the Skyjack Service Department at:

☎: 800 275-9522












📠: 630 262-0006

Include the model and serial number for each applicable telehandler.


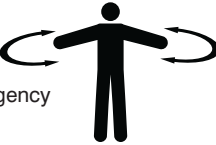












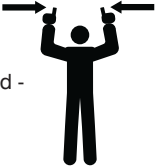

1.1-9 Scope of this Manual

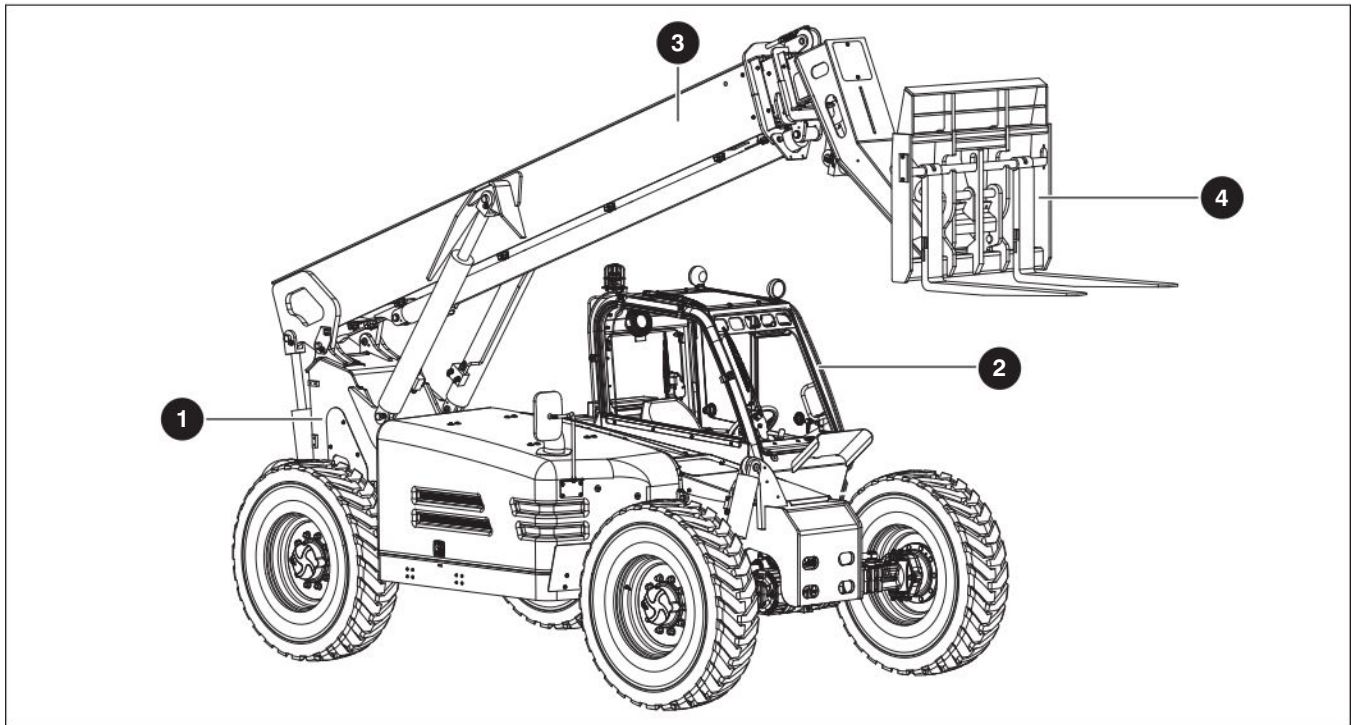
1. This manual applies to the ANSI/ITSDF and CSA versions of the SJ643 TH and SJ843 TH telehandlers.
 - Equipment identified with “ANSI” meets the ANSI/ITSDF B56.6-2016 standard.
 - Equipment identified with “CSA” meets the CSA B335-15 standard.
2. **CSA (Canada):** Operators are required to conform to national, territorial/provincial and local health and safety regulations applicable to the operation of this telehandler.
3. **ANSI/ITSDF (United States):** Operators are required by the current ANSI standards to conform to national, territorial/provincial and local health and safety regulations applicable to the operation of this telehandler.

1.2 Symbols & Nomenclature

Symbol	Description	Symbol	Description
	Diesel Fuel Fuel Tank		Engine Oil Level
	Engine Air Intake		Hydraulic Oil
	Engine Coolant		Hydraulic Oil Level
	Engine Coolant Level		Positive Air Shutoff (Engine high idle)
	Drain Water/Fuel Separator		Transmission Oil Level
	Engine Oil		

1.3 Forklift Hand Signals

1. Stop 	2. Emergency Stop 	3. Retract boom 	4. Extend boom 
5. Raise boom/mast 	6. Lower boom/mast 	7. Hoist load 	8. Lower load 
9. Tilt forks/attachment up 	10. Tilt forks/attachment down 	11. Travel backwards 	12. Travel forwards 
13. Swing attachment left 	14. Swing attachment right 	15. Fork Spread - Closed 	16. Fork Spread - Open 



1.4 Major Assemblies

The telehandler consists of four major assemblies: the frame, boom assembly, attachment and cab.

- ❶ **Frame:** The frame is a one-piece weldment that supports the boom assembly. The parking brake is integral with the axle and is located in the front axle.
- ❷ **Cab:** The cab is the safety structure enclosing the operator. It also furnishes the controls of the telehandler.
- ❸ **Boom Assembly:** The boom is mounted on the frame and consists of telescoping boom sections. SJ643 TH and SJ843 TH telehandlers have three boom sections. The fly boom assembly is welded to the end of last section in the boom assembly and includes a lifting hook for slinging loads. The telehandler is equipped with a carriage tilt cylinder, which is mounted to the inside of the jib. The quick attachment apron is mounted to the jib and is supported by the tilt cylinder.
- ❹ **Attachment:** The attachment is a material-handling device attached to the boom. The standard attachment is a fork-carriage attachment. Refer to [Section 3.6](#) for various optional attachments.

1.5 Serial Number Nameplate

The **serial number nameplate** ❺, located at the front left side of telehandler lists the following:

- Model number
- Serial number
- Maximum capacity
- Maximum lift height
- Maximum machine weight without attachment
- Original supplied attachments
- Year of manufacture
- Voltage

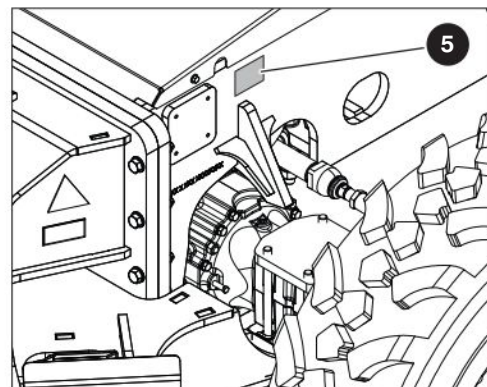


Figure 02 Serial Number Nameplate location

1.6 Operator's Responsibility for Maintenance

WARNING

Maintenance must be performed by trained and competent personnel who are familiar with mechanical procedures.

Death or serious injury could result from the use of a telehandler that is not properly maintained or kept in good working condition.

The operator must ensure that the telehandler has been properly maintained and inspected before using it.

The operator must perform all the daily inspections and function tests found on the Operator's Checklist (see [Section 4.4](#)), even if the operator is not directly responsible for the maintenance of this telehandler.

1.6-1 Maintenance and Inspection Schedule

Refer to Service manual for quarterly (or 250 hours) and annual inspection details.

The actual operating environment of the telehandler may affect the maintenance schedule.

WARNING

Use original or manufacturer-approved parts and components for the telehandler.

NOTE

Refer to Skyjack's website www.skyjack.com for the latest service bulletins prior to performing frequent/periodic or annual inspections.

1.6-2 Owner's Inspections

It is the responsibility of the owner and/or operator to arrange daily, quarterly (or 250 hours) and annual inspections of the telehandler. Refer to the Service manual for recommended maintenance and inspection areas and intervals.

Section 2 – Operator Safety

WARNING

Failure to comply with your required responsibilities in the use and operation of the telehandler can result in serious injury or even death.

A study conducted by St. Paul Travelers showed that most accidents are caused by the failure of the operator to follow simple and fundamental safety rules and precautions.

You, as a careful operator, are the best insurance against an accident. Therefore, proper usage of this telehandler is mandatory. The following pages of this manual should be read and understood completely before operating the telehandler.

Common sense dictates the use of protective clothing when working on or near machinery. Use appropriate safety devices to protect your eyes, ears, hands, feet and body.

Any modifications from the original design are strictly forbidden without written permission from Skyjack.

2.1 Electrocuting Hazard

This telehandler is not electrically insulated. Use extreme caution around high-voltage overhead power lines and parts. Maintain a Minimum Safe Approach Distance (MSAD) of 10 ft from sources of power. If the work requires to be closer than 10 ft, stop and consult a qualified person with respect to electrical transmission and distribution to have appropriate measures taken.

Adhere to all federal/national, state/provincial, or local safety regulations for your own protection.

No part of telehandler or payload must be brought closer to any energized overhead electrical conductor with nominal phase voltage rating as specified below.

Minimum Safe Approach Distance	
Voltage Range	Minimum Safe Approach Distance
≤ 50 KVA	10 feet
> 50 KVA	Stop and consult a qualified person with respect to electrical transmission and distribution to have appropriate measures taken
FAILURE TO AVOID THIS HAZARD WILL RESULT IN DEATH OR SERIOUS INJURY	

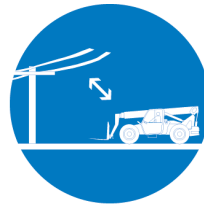
Figure 03 Minimum Safe Approach Distance

DANGER

Never approach any power line with any part of telehandler. Use extreme caution; serious injury or death can result with contact from any power line.

IMPORTANT

Always assume electrical power sources and overhead lines are energized.



MAINTAIN a Minimum Safe Approach Distance from sources of high-voltage power.



DO NOT operate telehandler during lightning or storms.

WARNING

Do not use the telehandler as a ground for welding.

2.2 Safety Precautions

Know and understand the safety precautions before going on to next section.

WARNING

DO NOT operate this telehandler without proper authorization and training. Failure to avoid this hazard can result in serious injury or even death.

WARNING

Failure to heed the following safety precautions results in a tip over, falling, crushing, or other hazards that can result in serious injury or even death.

MAKE SURE all DANGER, WARNING, CAUTION and INSTRUCTIONAL DECALS are in place and can be read. Clean or replace decals as required.

KNOW all national, state/provincial and local rules which apply to your telehandler and jobsite.

WEAR all the protective clothing and personal safety devices issued to you or called for by job conditions.



DO NOT wear loose clothing, dangling neckties, scarves, rings, wristwatches or other jewelry while operating this telehandler.



DO NOT use this telehandler under influence of alcohol or drugs, or if operator's performance is impaired by a medical condition, the influence of prescription or over the counter drugs, or fatigue.



DO NOT climb on this vehicle for any reason.



DO NOT stand on forks. Failure to heed could result in death or serious injury.



DO NOT use carriage or any other portion of the boom for slinging loads unless on a manufacturer's approved attachment point that is supplied with the machine.



DO NOT elevate the boom in windy or gusty conditions.



DO NOT drive with boom elevated.



DO NOT operate on surfaces not capable of holding the weight of the telehandler; including the rated load (e.g., covers, drains, and trenches).



DO NOT maneuver a load while moving. This greatly increases the chance of spills and injury.



DO NOT use frame leveling when boom is elevated. Only use frame leveling when boom is retracted and in lowered position.



DO NOT use the frame leveling mechanism to compensate for swinging loads.



DO NOT enter the danger area under or around the boom when forks are off the ground or while engine is running.



DO NOT lower the boom unless the area below is clear of personnel and obstruction.



DO NOT elevate the boom while the telehandler is on a truck, forklift or other device or vehicle.



ENSURE that there are no personnel or obstructions in the path of travel, including blind spots.

BE AWARE of blind spots when operating the telehandler.



ALWAYS keep head, arms, hands, legs and all other body parts inside the operator's cab.



AVOID jerks and sudden stops.



AVOID entanglement with ropes, cords or hoses.



BE AWARE of all obstructions while traveling.



USE CAUTION when boom is fully extended. The further out the boom is extended, the less load telehandler can support.



USE CAUTION when placing loads at high elevations and on downhill slopes.



IF OPERATION IN AREAS WITH HOLES OR DROP-OFFS IS ABSOLUTELY NECESSARY, ensure that all four wheels have contact with firm surface. Then level the frame. Once frame is level the boom can be elevated. After elevation, the drive function must not be activated.



TRAVEL SLOWLY over rough terrain.



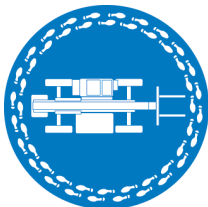
KNOW the weight of the load you are transporting. Never lift more than the lifting capacity at any given extension or elevation of the boom as listed on the capacity charts.



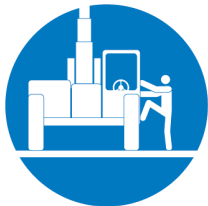
CHECK for cracks and signs of stress.



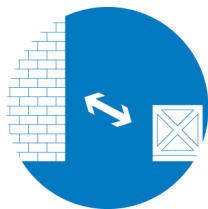
BE AWARE of the telehandler's travel envelope, especially when turning. Keep sufficient clearance at all times between the telehandler and any obstacles or people.



WALK AROUND the telehandler before operation and check for any visible signs of damage or malfunction.



ALWAYS maintain three points of contact when entering vehicle. Use provided hand-holds and steps only.



CHECK for clearance before traveling between obstacles.



ALWAYS wear your seat belt when operating this vehicle.



DRIVE DOWNHILL UNLOADED. Without a load, the back end is the heaviest part of the telehandler. Driving downhill decreases potential for tip-over.



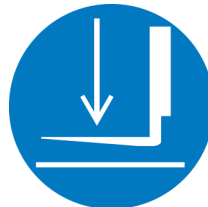
DRIVE UPHILL LOADED. When holding a load, driving uphill decreases potential for load to slip out.



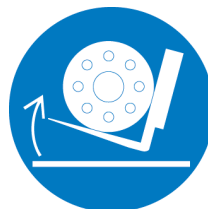
LEVEL FRAME ON SLOPES before elevating the boom.



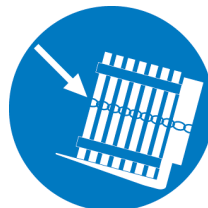
WHEN TRANSPORTING LOADS fully retract the boom, keep the load low to the ground and forks tilted back slightly. This is the most stable position possible for the vehicle.



KEEP forks close to the ground when in motion to increase telehandler stability and decrease potential for injury to others. When fully stopped, lower forks completely to the ground.



TILT forks backward slightly when traveling to decrease potential of load slipping off.



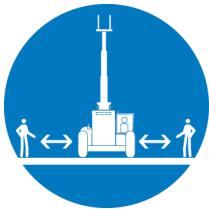
SECURE loose loads with chains or straps to decrease potential of spills or injury to others.



TETHER LOADS that may swing, keeping them close to the ground. Provide ample clearance for personnel to guide the load safely.



SLINGING LOADS is acceptable only when the load is appropriately attached to the lifting hook, a jib boom or the heel of a tilted fork, and the precautions outlined in [Section 5.14](#) are followed.



KEEP OTHERS AWAY at all times during operation.



CHECK lights for proper function before operating.



ENSURE ALL tires are in good condition and lug nuts are properly tightened.



IT IS PERMITTED to install and utilize a platform for elevating personnel provided the conditions mentioned in [Section 5.16](#) are met.

DO NOT alter or disable safety devices.

DO NOT burn or drill holes in forks. Modifying any part of telehandler or attachment affects its capacity and/or stability.

DO NOT try to start the telehandler by pushing or towing. Such operation may cause severe damage to the transmission (refer to [Section 5 – Operation](#)).

IF DRIVING ON ROADS OPEN TO PUBLIC TRAFFIC respect the local regulations.

THE OPERATOR'S CAB provides a falling object protection structure (FOPS) and a rollover protection structure (ROPS). Do not make any modification to this structure. If damaged, the cab cannot be repaired. It must be replaced.

STUNT driving and horseplay are prohibited.

ALWAYS USE FRONT steering when traveling at high speeds; i.e. on highways and public roads.

DO NOT change steering mode while the telehandler is traveling. Change the steering mode only when telehandler is stopped.

ALWAYS look in the direction of travel. Reduce speed and be especially careful when traveling in reverse and/or turning. Bring the telehandler to a complete stop before changing the direction of travel.

STAY CLEAR of pinch points and rotating parts on the material handler. Getting caught in a pinch point or a moving part can cause serious injury or death. Before performing any maintenance on telehandler, follow the shutdown procedure on [Section 5.10](#).

DO NOT position the telehandler against another object to steady the load.

DO NOT operate on slippery surfaces not capable of providing adequate traction to stop, drive or steer the telehandler.

SHUT DOWN by positioning the telehandler in a safe location. Lower boom to ground, apply the park brake, move all controls to neutral and allow engine to idle for 3 to 5 minutes. Stop engine and remove ignition key to prevent unauthorized use.

WARNING

Always move all controls to neutral, engage park brake and shut off engine before exiting the operator's cab.

2.3 Cab Access

WARNING

Entering and exiting the telehandler should only be done using the three points of contact.

Use three points of contact to enter and exit the cab. Face the telehandler when entering or exiting the cab.

Three points of contact means that two hands and one foot or one hand and two feet are in contact with the telehandler or the ground at all times during entering and exiting.

WARNING

Operator should not use any telehandler that:

- does not appear to be working properly.
- has been damaged or appears to have worn or missing parts.
- has alterations or modifications not approved by the manufacturer.
- has safety devices which have been altered or disabled.
- has been tagged or locked out for non-use or repair.
- bears an unapproved attachment.

Failure to avoid these hazards could result in death or serious injury.

2.4 Jobsite Inspection

Be sure to follow all local, provincial/territorial/state and national regulations related to operating variable reach rough terrain forklifts. Do not use the telehandler in hazardous locations.

Perform a thorough jobsite inspection prior to operating the telehandler to identify potential hazards in your work area.

It is the responsibility of the operator to perform a job site inspection and avoid the following hazardous situations:

- holes or drop-offs
- ditches or soft fills
- floor obstructions, bumps or debris
- overhead obstructions
- electrical cords, hoses and high voltage conductors
- hazardous locations
- inadequate surface support to withstand all load forces imposed by the telehandler
- wind and weather conditions
- the presence of unauthorized personnel
- other possible unsafe conditions

Section 3 – Familiarization

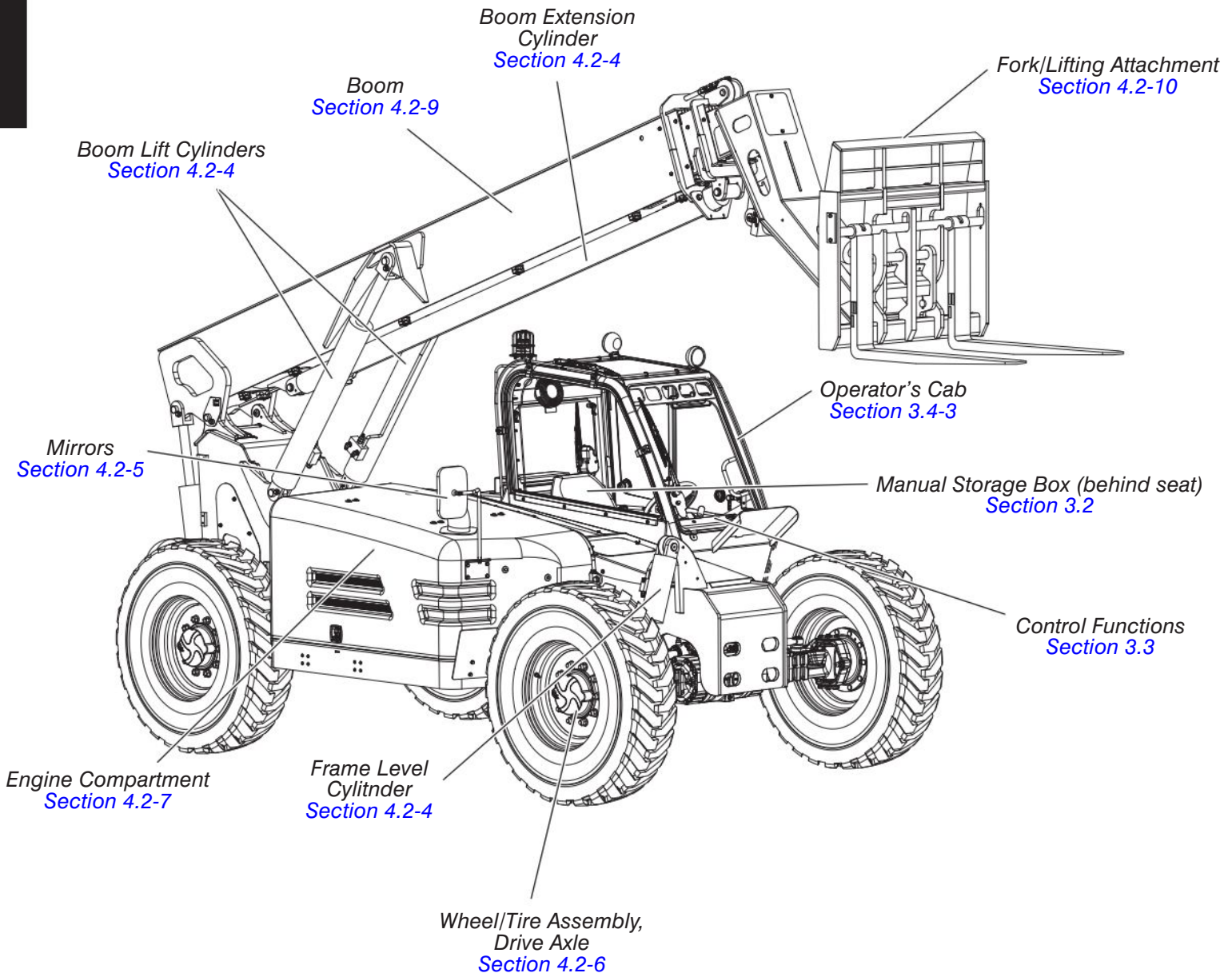
WARNING

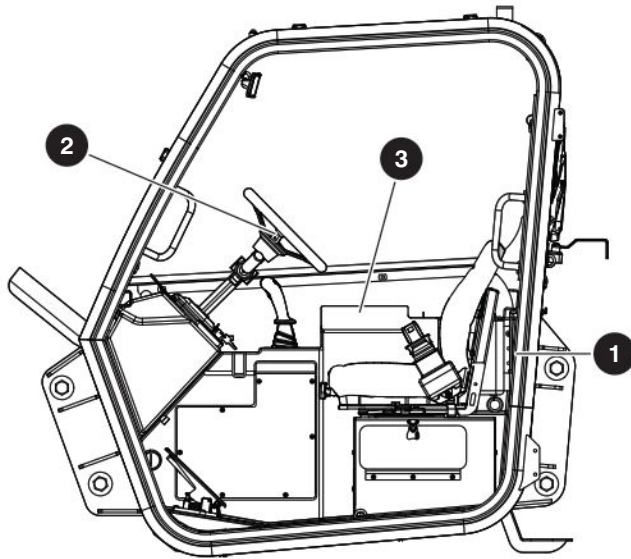
Do not operate this telehandler without proper authorization and training. Failure to avoid this hazard could result in death or serious injury.

WARNING

It is the responsibility of the operator to read, completely understand and follow all instructions and warnings contained in this operating manual and on the telehandler.

3.1 Component Identification





3.2 Manual Storage Box

This weather-resistant box is mounted at the back of the operator's seat 1. It contains the operating manual and other important documentation. The operating manual for this make and model of telehandler must remain with the telehandler and should be stored in this box.

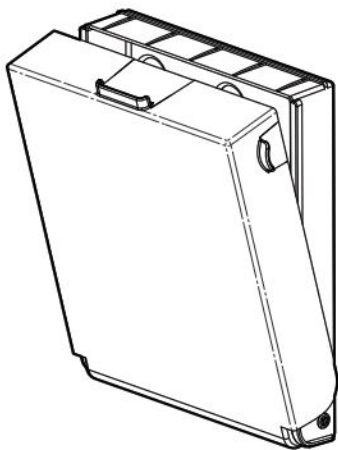
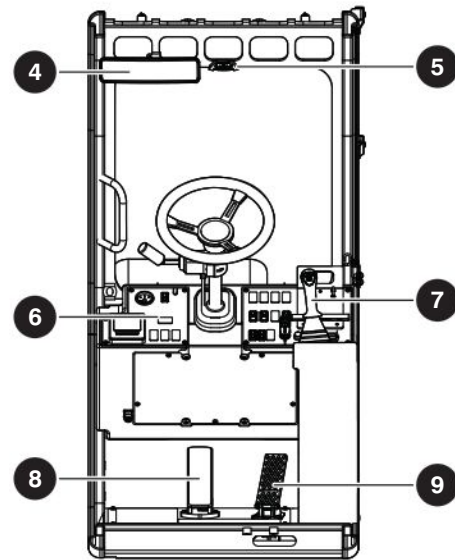


Figure 04 Manual Storage Box

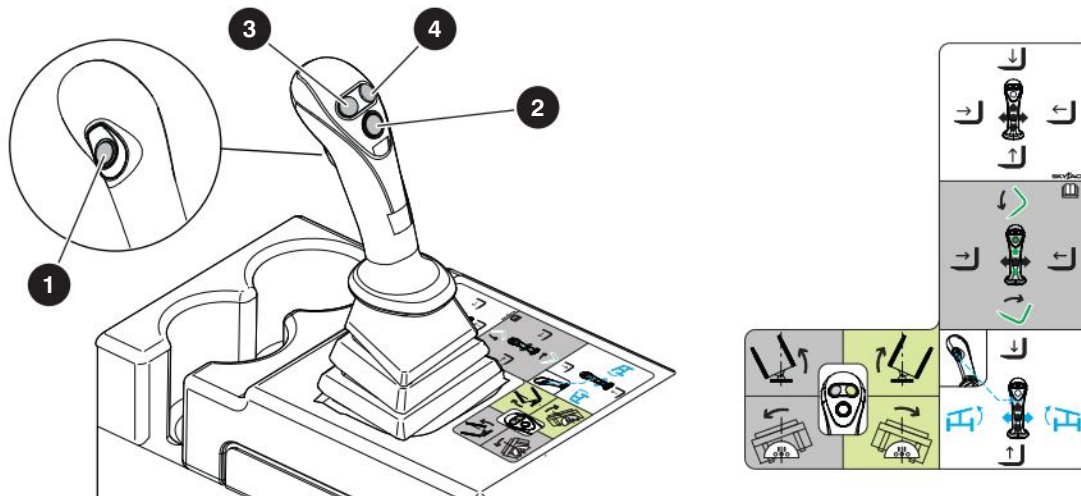


3.3 Control Functions

3.3-1 Operator's Cab Controls





- 2 **Steering Wheel:** Turn the steering wheel to the left or right to steer the telehandler in the corresponding direction. Three steering modes are available (refer to [Section 5.3](#)).
- 3 **Cab Heater and Air Conditioner Controls (If Equipped):** A switch and two knobs to adjust the temperature inside the cab.
- 4 **Rear View Mirror:** Allows the operator to check the surrounding area behind telehandler.
- 5 **Level Indicator:** Located on the upper cross member of the overhead guard. When the ball is centred in the indicator, this indicates that telehandler frame is level.
- 6 **Front Dash:** Location of controls essential to the operation of the telehandler (refer to [Section 3.3-4](#) for details).
- 7 **Multi-functional Joystick:** A control allowing the operator to control boom and attachment operation (refer to [Section 3.3-2](#) or [Section 3.3-3](#) for details).
- 8 **Service Brake Pedal:** The service brake is foot operated and is used to decrease speed or stop.
- 9 **Accelerator Pedal:** Press pedal to increase speed and release pedal to decrease speed.

Standard Multi-functional Joystick

















3.3-2 Standard Multi-functional Joystick

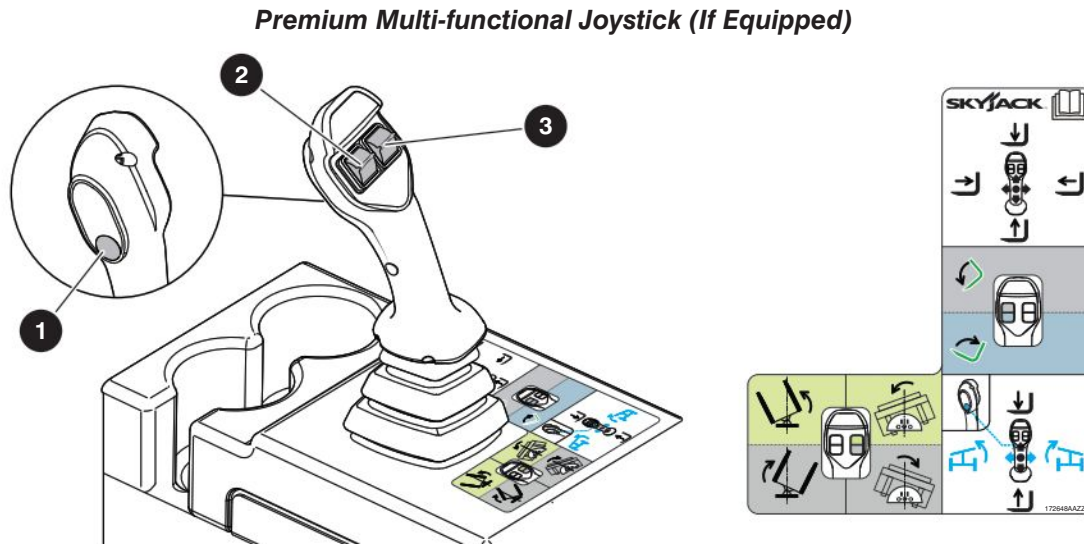
This dual-axis lever is a multi-functional control that includes the following additional controls:

- 1 Frame Level Enable Switch 
- 2 Tilt Enable Button 
- 3 Left Auxiliary Function Button 
- 4 Right Auxiliary Function Button 

These controls allow boom operation (extend or retract and up or down), frame leveling, fork tilt, and auxiliary functions such as carriage side tilt or carriage swing. The lever returns to neutral position when released.

- **Raise the boom** by moving joystick backward .
- **Lower the boom** by moving the joystick forward .
- **Extend the boom** by moving the joystick to the right . **Retract the boom** by moving the joystick to the left .
- **Tilt attachment forward** by pressing and hold attachment tilt enable button  and moving joystick forward .
- **Tilt attachment backwards** by pressing and holding attachment tilt enable button  and moving joystick backward .
- **Frame level right** by pressing and holding frame level enable switch  and moving joystick to the right . **Frame level left** by pressing and holding frame level enable switch  and moving joystick to the left .

- **Left auxiliary function** (if equipped) is operated by pressing and holding the left button .
- **Right auxiliary function** (if equipped) is operated by pressing and holding the right button .



3.3-3 Premium Multi-functional Joystick (If Equipped)

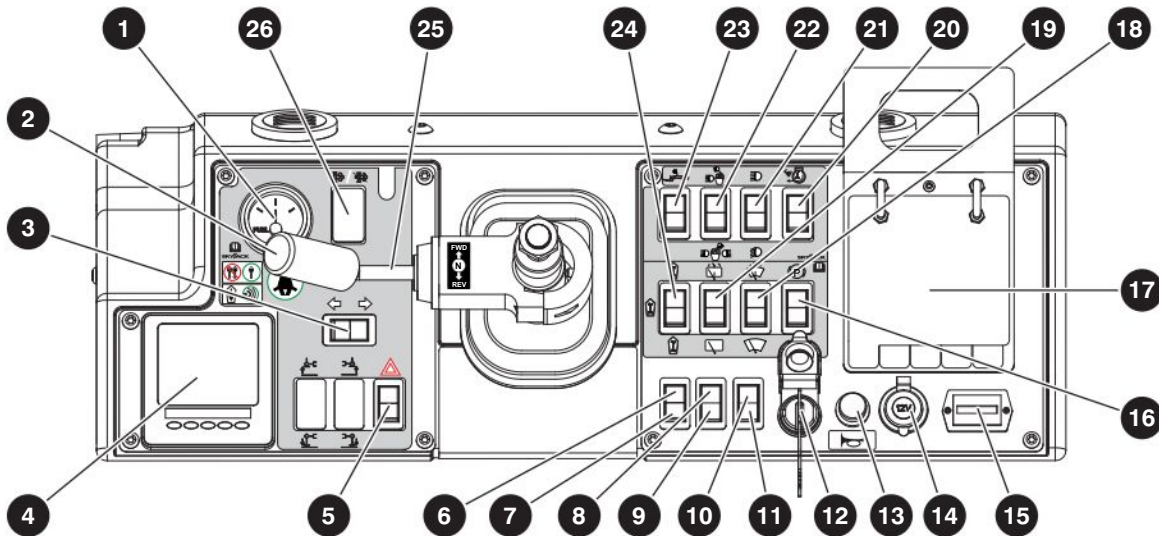
This dual-axis lever is a multi-functional control that includes the following additional controls:

- ❶ Frame Level Enable Switch
- ❷ Attachment Tilt Switch
- ❸ Auxiliary Function Switch

These controls allow boom operation (extend or retract and up or down), frame leveling, fork tilt, and auxiliary functions such as carriage side tilt or carriage swing. The lever returns to neutral position when released.

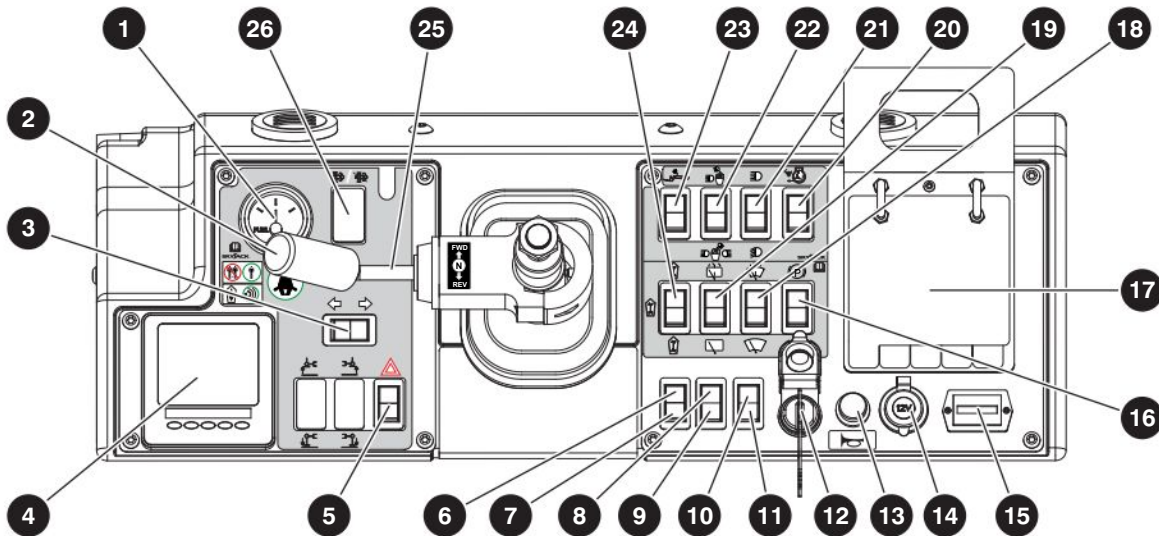
- **Raise the boom** by moving joystick backward .
- **Lower the boom** by moving the joystick forward .
- **Extend the boom** by moving the joystick to the right . **Retract the boom** by moving the joystick to the left .
- **Tilt attachment forward** by holding attachment tilt switch up. **Tilt attachment backwards** by holding attachment tilt switch down.
- **Frame level right** by pressing and holding frame level enable switch and moving joystick to the right . **Frame level left** by pressing and holding frame level enable switch and moving joystick to the left .



- **Left auxiliary function** and **right auxiliary function** (if equipped) are operated by pressing and holding the auxiliary function switch up or down. Hold up for a “left” function, and hold down for a “right” function.

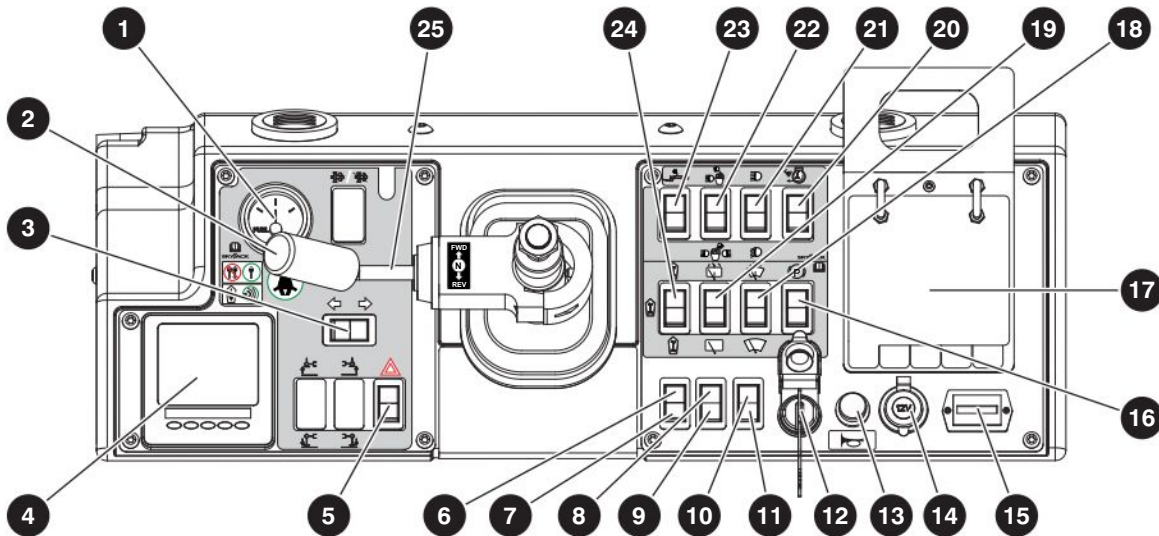






3.3-4 Operator's Cab Dash Controls

- 1 **Fuel Gauge:** Indicates the amount of fuel in the fuel tank. Fill the tank with ultra low sulfur diesel fuel only when the indicator needle moves below the 1/4 tank mark.
- 2 **Transmission Range Selector (If equipped):** Located on the direction control lever. The transmission has three speeds in either direction. Rotate handle grip to select speed range.
- 3 **Left and Right Turn Signals Switch (If Equipped):** This rocker switch controls left and right turn signals located on both the front and rear of the telehandler.
- 4 **Engine Data Display Module:** Allows the operator to select the required engine data such as engine RPM, engine temperature, voltage, and visualize it in the following formats:
 - Analogue display
 - Digital data
 - Graphics
 - Multi-data (a combination of the above)
 - Current alarm messages
 (Refer to [Section 5.11](#) for details).
- 5 **Hazard Warning Light Switch (If Equipped):** The hazard warning light switch activates all four turn signals to indicate an emergency situation.
- 6 **Transmission Oil Temperature Indicator:** This red light indicator illuminates when the transmission oil temperature is not within the normal operating range.
- 7 **Rear Axle Lock Indicator:** This red light indicates frame leveling is in slow/controlled mode, or locked mode when park and/or service brakes are applied.
- 8 **Glow Plug Indicator:** This light illuminates until glow plugs have completed their timed cycle. When the lamp goes out, the engine is ready to be started.



- 9 Frame Level and Boom Interlock Indicator:** Illuminates when the boom is elevated above 40° and telehandler frame is off level by more than 4°. For more details, see [Section 3.4-6](#) and [Section 3.4-5](#).
- 10 Positive Air Shut-off Valve Indicator (If Equipped):** Illuminates red for a few seconds when testing the functionality of positive air shut-off valve.
- 11 Reserve Brake Pressure Charge Indicator (If Equipped):** This light illuminates when reserve brake accumulator pressure is low.
- 12 Ignition Switch:** This is a three position, anti-restart switch.
- When in OFF position, it turns the engine off and key can be removed.
 - When in ON position, it provides power to ignition and auxiliary circuits.
 - When in START position, it starts the engine; when released, key returns to ON position.
- 13 Horn Button:** When depressed, the horn button activates an audible warning.
- 14 12 Volt Power Port:** A convenient 12 Volt power port is located on the dashboard.
- 15 Hourmeter:** This gauge records accumulated operating time of the telehandler.
- 16 Park Brake Switch/Indicator:** This switch controls the spring applied, hydraulically released parking brake. Apply the parking brake by pressing the switch at the end marked (P) when the engine is running. When the brake is on, the red warning light illuminates.
- 17 Capacity Charts:** This set of charts indicates operating limits specific to a telehandler model and attachments. Refer to [Section 5.12](#).
- 18 Front and Top Windshield Wiper/Washer Switch (If Equipped)** : This switch activates the wiper and the washer for the front and top windshields. Press top portion to activate washer/wiper. Press bottom portion to activate wiper.
- 19 Rear Windshield Wiper/Washer Switch** : This switch activates the wiper and the washer for the rear windshield. Press top portion to activate washer/wiper. Press bottom portion to activate wiper.



- 20 Positive Air Shutoff Valve Test Switch (If Equipped)**  : This switch is used for testing the functionality of the positive air shut-off valve. It allows the operator to shut off the air supply to the engine if the engine continues running after the main power is shut down. (Refer to [Section 3.5-1](#)).
- 21 Road Lights Switch (If Equipped)**  : This switch activates the front headlights and rear tail lights.
- 22 Work Lights Switch (If Equipped)**  : This switch activates the front and rear work lights located on top of operator's cab.
- 23 Boom Lights Switch (If Equipped)**  : The boom light switch controls the light at the end of the boom.
- 24 Steer Mode Switch:** This switch has three positions to allow selection of four-wheel steer, front steer and crab steer.
- 25 Direction Control Lever:** This lever allows forward or reverse travel. The center position is neutral. To select forward travel, lift from lock position and move the direction control lever to the FWD forward position; for reverse travel move lever to REV.

3.4 Safety Features and Devices

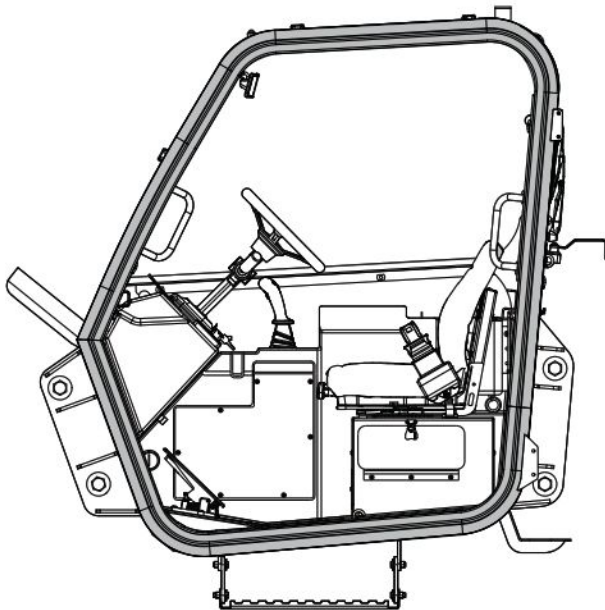
3.4-1 Reverse Alarm

The alarm produces an audible sound when REV is selected on the direction control lever.

3.4-2 Parking Brake

This spring-applied, hydraulically-released brake is activated by pressing the parking brake switch on the dash. It must be applied when parking the machine or in an emergency. In the event of hydraulic pressure loss, the parking brake will automatically activate.

3.4-3 Operator's Cab



The operator's cab allows vision from all sides and is equipped with a falling object protection structure (FOPS) and a rollover protection structure (ROPS).

⚠ WARNING

Do not make any modification to FOPS or ROPS structures. If damaged, the cab cannot be repaired. It must be replaced.

A fully-enclosed cab with windows and door is available as an option. Included in this option are the windshield wiper(s), interior light and air heater/defroster. Air conditioner is also available as an option for fully enclosed cab.

3.4-4 Operator's Seat



- 1 Seat Belt:** The operator's seat is equipped with a seat belt. Use this seat belt at all times when operating telehandler.

⚠ WARNING

The seat belt must be worn at all times.

- 2 Seat:** The telehandler seat is equipped with devices which allow for the adjustment of seat ride smoothness and distance from the controls. Adjust the seat so that foot pedals, steering wheel and instrument panel controls are within easy reach of the operator.
- 3 Fore and Aft Lock Lever:** This lever is located on the left side of the seat. Pushing the lever to the left unlocks the seat, allowing fore and aft adjustment.
- 4 Ride Control (If Equipped):** The ride control is located at the front of the seat and is operated by means of a rotary knob. Clockwise rotation decreases the firmness while counterclockwise rotation increases the firmness.

3.4-5 Boom Interlock

The boom interlock feature does not allow the frame to be levelled beyond 4° left or 4° right when the boom is above 40°, and prevents the boom from raising above 40° if the frame level is greater than 4° in left or right directions.

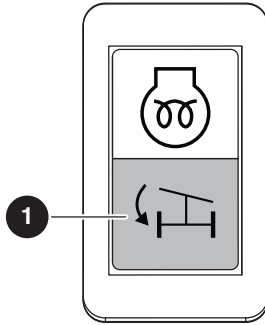


Figure 05 Frame Level and Boom Interlock Light

When activated, the **Frame Level and Boom Interlock Light 1** illuminates on the dash in the operator's cab (see [Section 3.3-4](#)).

3.4-6 Frame Level

Allows the operator to laterally level the telehandler on uneven ground before elevating a load or before travelling across a slope. Leveling the frame increases stability of the telehandler.

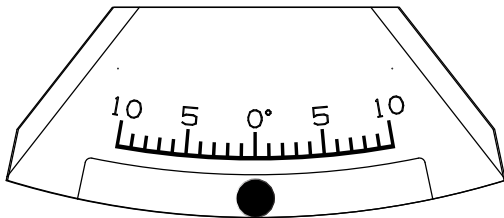


Figure 06 Frame Level Indicator

The frame level indicator, mounted above the windshield in the operator's cab, displays the current frame level measurement. For details on how to level the frame, see [Section 5.5](#).

3.5 Optional Equipment

The following descriptions are for identification, explanation and locating purposes only.

3.5-1 Positive Air Shutoff Switch (If Equipped)

This system provides emergency over-speed shutdown protection for the engine. The engine will shut down and a red indicator light on the dash will illuminate for a few seconds.

When red indicator light is illuminated, telehandler will have no power and engine will not turn on.

3.5-2 Reserve Braking System (If Equipped)

In addition to the service brake, telehandlers equipped with this option have a secondary braking system.

When the red warning light illuminates, stop the telehandler immediately and have it serviced by a trained technician.

WARNING

Do not operate telehandler when red indicator light is illuminated. Stop telehandler and have it serviced by a qualified/competent repair personnel.

3.5-3 Flashing Beacon (If Equipped)

The flashing beacon is located on top of the operator's cab. This light is operational when key is in on | position.

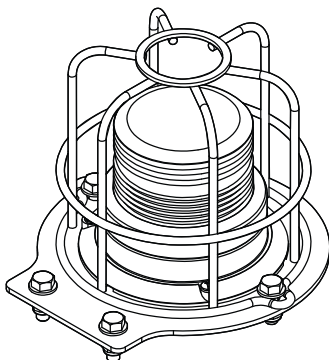


Figure 07 Flashing Beacon

3.5-4 Road Lights, Boom Lights & Work Lights (If Equipped)

The boom lights are mounted at the front of the main boom section.

The work lights are mounted on the frame as well as on top of the operator's cab.

The road lights (front headlights and taillights) have two settings; high beam and low beam headlights.

3.5-5 Fire Extinguisher (If Equipped)

The fire extinguisher is mounted to the frame at the rear left side of the telehandler, beside the engine air intake access door.

3.5-6 Back-up Sensor with Display Buzzer (If Equipped)

The back-up display buzzer is mounted to the dash inside the cab and warns the operator of objects behind the telehandler. When an object is detected, the buzzer beeps continuously and the **range indicator lights** ❶ illuminate. As objects become closer, beeping increases in frequency and more range indicator lights illuminate.

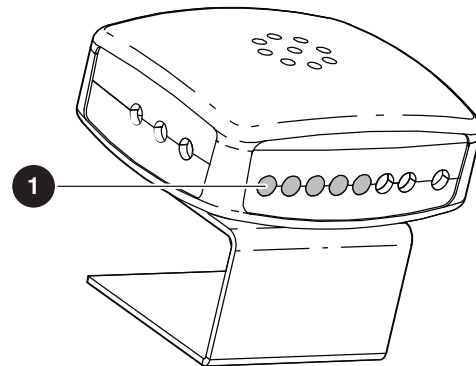


Figure 08 Back-up Display Buzzer

- ❶ **Range Indicator Lights:** These lights illuminate from left to right to indicate a relative distance to the closest detected object.

3.5-7 Back-up Sensor/Camera with Monitor (If Equipped)

The back-up monitor is mounted on the dash inside the cab and operational when the key switch is in on position. When active, the monitor displays the area behind the telehandler. A green **status symbol** ③ indicates the sensor and camera are connected and no objects are detected.

When in reverse and objects are detected, the monitor beeps, the status symbol turns red, and **range symbols** ② indicate distance to the objects. As objects become closer the range symbols increase in number and change to red. Five symbols indicate immediate proximity.

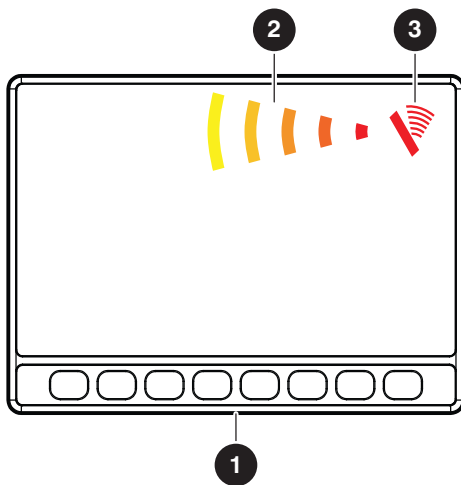


Figure 09 Back-up Monitor and Symbols

- ① Back-up Monitor
- ② Range Indicator symbols
- ③ Sensor/Camera status symbol

3.6 Optional Attachments

The Skyjack TH series telehandler is designed to accept a variety of optional “Quick Attach” attachments aside from regular fork carriage attachment.

3.6-1 Side Tilt Carriage

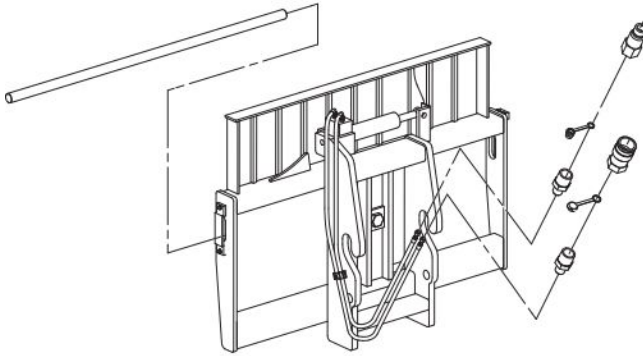


Figure 10 Side Tilt Carriage

The side tilt carriage allows carriage to tilt to either side.

Installation Procedure

1. Remove fork attachment or other attachment from boom and connect side tilt carriage attachment (refer to [Section 5.13-1](#) and [Section 5.13-2](#)).

Operation

1. Ensure the side tilt carriage attachment is positioned perpendicular to the load.
2. To operate using the **Standard Multi-functional Joystick**:
 - To tilt carriage left, hold left auxiliary function button down.
 - To tilt carriage right hold right auxiliary function button down.
3. To operate using the **Premium Multi-functional Joystick (if equipped)**:
 - To tilt carriage left, hold auxiliary function switch up.
 - To tilt carriage right, hold auxiliary function switch down.
4. Handle load the same as regular fork carriage attachment (refer to [Section 5.8](#) and [Section 5.9](#)).

3.6-2 Swing Carriage

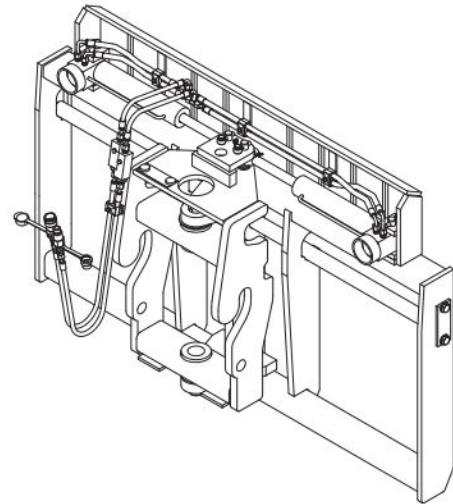


Figure 11 Swing Carriage

Swing carriage allows forks to swing left or right, reducing the needed turn angle of telehandler when placing loads. This is used for maneuvering loads in tight locations.

Installation Procedure

1. Remove fork attachment or other attachment from boom and connect swing carriage attachment (refer to [Section 5.13-1](#) and [Section 5.13-2](#)).
2. Connect auxiliary hydraulic hoses to swing carriage attachment cylinders.

Operation

1. Using optional attachment controller, ensure the swing carriage attachment is positioned perpendicular to the load.
2. To operate using the **Standard Multi-functional Joystick**:
 - To swing carriage left, hold left auxiliary function button down.
 - To swing carriage right hold right auxiliary function button down.
3. To operate using the **Premium Multi-functional Joystick (if equipped)**:
 - To swing carriage left, hold auxiliary function switch up.
 - To swing carriage right, hold auxiliary function switch down.
4. Handle load the same as regular fork attachment (refer to [Section 5.8](#) and [Section 5.9](#)).

3.6-3 Block Forks

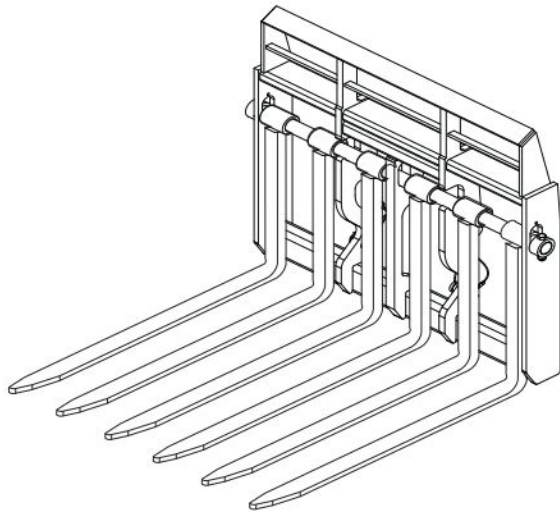


Figure 12 Block Forks

The block forks are used primarily to load/unload and place cubes of concrete or cement blocks. Block forks are designed to be accepted on all carriages provided they are equidistant.

Installation Procedure

1. Refer to [Section 5.13-4](#) to change the forks.

IMPORTANT

Ensure the forks are equally spaced.

Operation

1. Using optional attachment controller, ensure the carriage attachment and forks are positioned perpendicular to the load.
2. Handle load the same as regular fork attachment ensuring all forks are in contact with the load at all times (refer to [Section 5.8](#) and [Section 5.9](#)).

3.6-4 Jib Boom

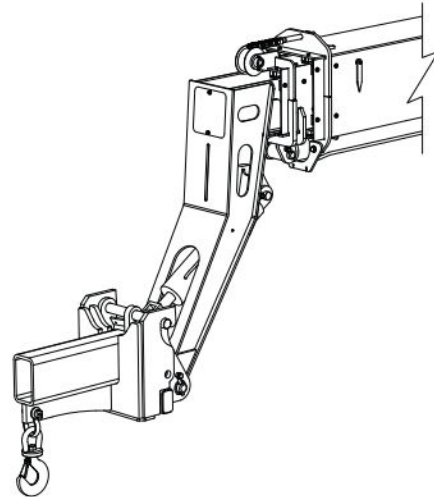


Figure 13 Jib Boom

A jib boom is an attachment with a hook or jib eye load connection. This connection is used for extending the forward reach and lift height of the telehandler at the expense of load capacity.

Installation Procedure

1. Remove fork attachment or other attachment from boom and connect truss boom attachment (refer to [Section 5.13-1](#) and [Section 5.13-2](#)).

Operation

1. Using boom controller, adjust jib boom over the center of the load.
2. Attach load to the hook using sufficient chains/cables.
3. While helpers guide the load, position load at placement point.

3.6-5 Loader Bucket

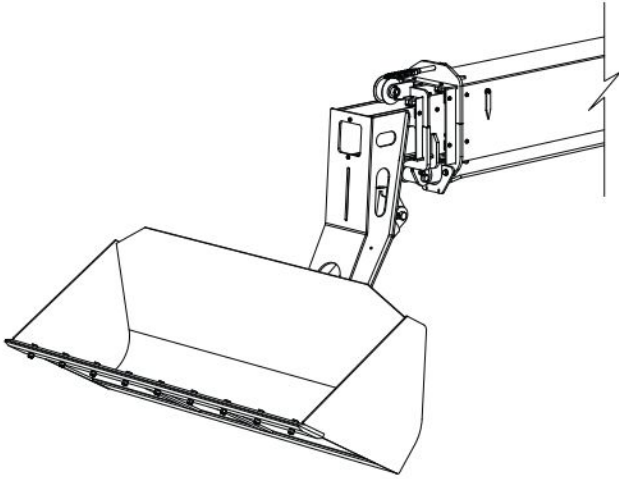


Figure 14 Loader Bucket

A loader bucket has a high back and straight sides for cutting into piles of low density materials. This attachment is used for light material handling such as snow removal or transporting of grains and other loose materials. Material buckets are not meant for excavation as high twisting loads can damage the boom.

Installation Procedure

1. Remove fork attachment or other attachment from boom and connect material bucket (refer to [Section 5.13-1](#) and [Section 5.13-2](#)).

Operation

1. Raise or lower boom to appropriate height for loading material from stockpile.
2. Position telehandler so that it is perpendicular to the stockpile. Drive slowly and smoothly into pile to load bucket.
3. Tilt bucket backwards enough to retain the load and back away from pile.
4. Drive to the unloading point and keep bucket approximately 4 ft above the ground.
5. Tilt bucket forward to dump load.

3.6-6 Truss Boom

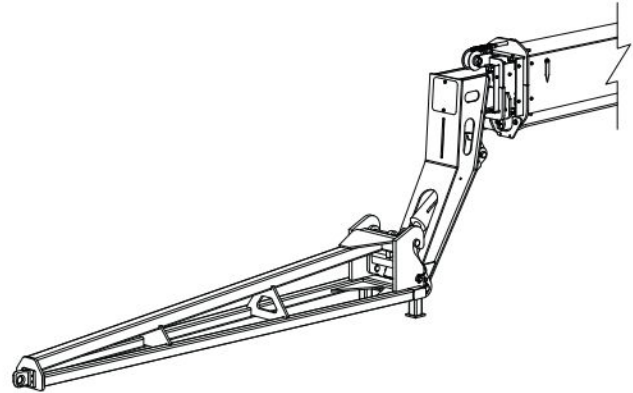


Figure 15 Truss Boom

A truss boom is an attachment with a hook or jib eye load connection. This connection is used for extending the forward reach and lift height of the telehandler at the expense of load capacity.

WARNING

Mounting truss boom changes center of gravity of telehandler. Consult capacity charts specific to attachment before handling loads.

Installation Procedure

1. Remove fork attachment or other attachment from boom and connect truss boom attachment (refer to [Section 5.13-1](#) and [Section 5.13-2](#)).

Operation

1. Using boom controller, adjust truss boom over the center of the load.
2. Attach load to the pintle hook using sufficient chains/cables.
3. While helpers guide the load, position load at placement point.

3.6-7 Fork Positioner

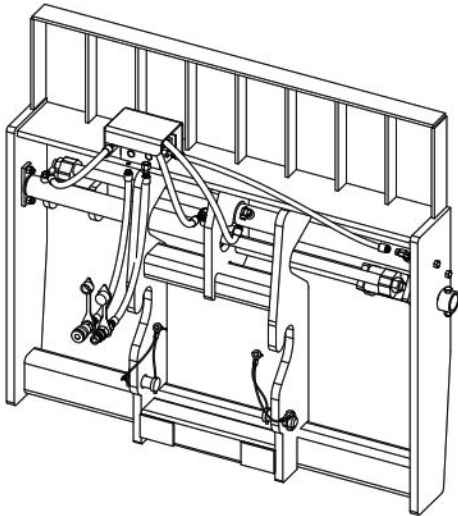


Figure 16 Fork Positioner

The fork positioner attachment allows operators to accurately and easily adjust the distance between forks to suit different size pallets.

Installation Procedure

1. Remove fork attachment or other attachment from boom and connect fork positioner attachment (refer to [Section 5.13-1](#) and [Section 5.13-2](#)).
2. Connect auxiliary hydraulic hoses.

Operation

1. To operate using the **Standard Multi-functional Joystick**:
 - To move forks further apart, hold left auxiliary function button down.
 - To bring forks closer together hold right auxiliary function button down.
2. To operate using the **Premium Multi-functional Joystick (if equipped)**:
 - To move forks further apart, hold auxiliary function switch up.
 - To bring forks closer together, hold auxiliary function switch down.
3. Handle load the same as regular fork attachment (refer to [Section 5.8](#) and [Section 5.9](#)).

3.6-8 Personnel Work Platform

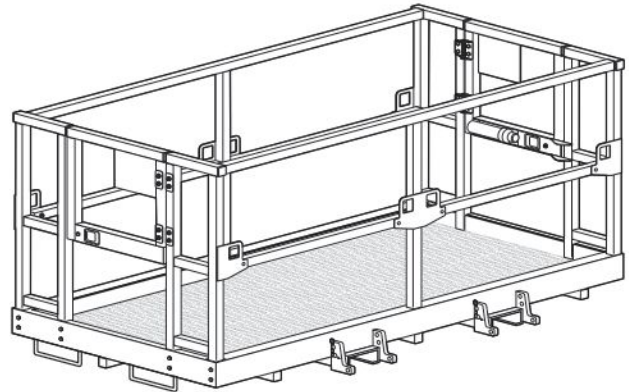


Figure 17 Personnel Work Platform

Personnel work platforms enable occupants, their equipment and materials to be safely lifted to elevated working positions.

Refer to [Section 5.16](#) and the operating manual of the personnel work platform for details on safely installing and operating the work platform.

Section 4 – Pre-operation

4.1 Operator's Responsibility

It is the responsibility of the operator, prior to each work shift, to perform the following:

1. Visual and Daily Maintenance Inspections

- Designed to discover any damage of components before the telehandler is put into service.
- Completed before the operator performs the function tests.

WARNING

Failure to locate and repair damage, and discover loose or missing parts may result in an unsafe operating condition.

2. Function Tests

- Designed to discover any malfunctions before the telehandler is put into service.

IMPORTANT

The operator must understand and follow the step-by-step instructions to test all telehandler functions.

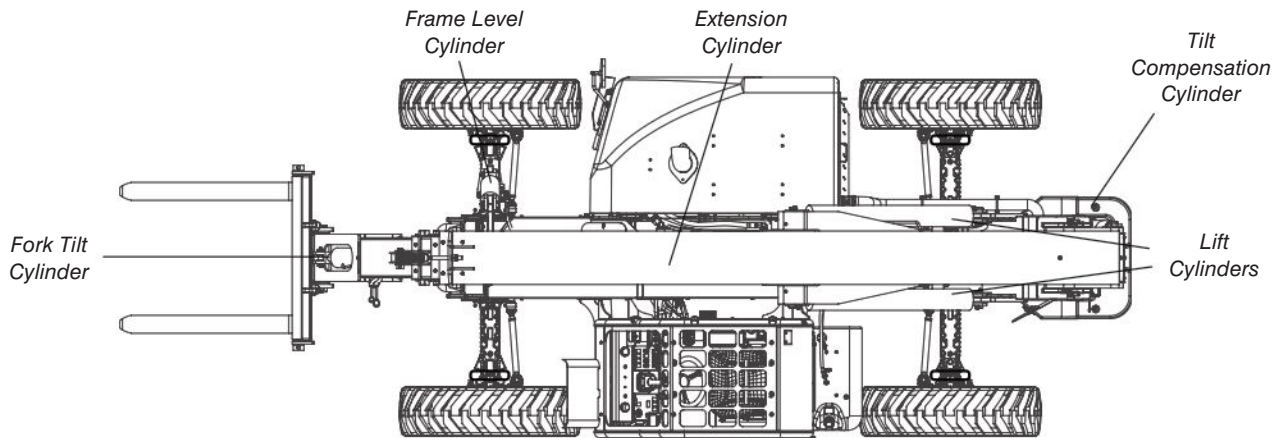
The operator should make a copy of the Operator's Checklist (see [Section 4.4](#)) and fill out the visual and daily maintenance inspections and the function tests sections while performing the items outlined in this section.

IMPORTANT

If telehandler is damaged or any unauthorized variation from factory-delivered condition is discovered, telehandler must be tagged and removed from service.

Repairs to the telehandler may only be made by a qualified service technician. After repairs are completed, the operator must perform visual and daily maintenance inspections & function tests again.

Scheduled maintenance inspections shall only be performed by a qualified service technician.



4.2 Visual & Daily Maintenance Inspections

Before performing the visual and daily maintenance inspections, ensure that the telehandler is parked on a firm level surface.

Begin the visual and daily maintenance inspections by checking each item in sequence for the conditions listed in this section.

WARNING

To avoid injury, do not operate a telehandler until all malfunctions are corrected.

WARNING

To avoid possible injury, ensure telehandler power is off during your visual and daily maintenance inspections.

NOTE

While performing visual and daily inspections in different areas, be aware to also inspect all switches, electrical and hydraulic components.

4.2-1 Labels

Refer to the [Section 8 – Labels](#) in this manual and determine that all labels are in place and are legible.

4.2-2 Electrical

Maintaining the electrical components is essential to good performance and service life of the telehandler.

Ensure proper operation of all gauges.

Inspect the following areas for chafed, corroded and loose wires:

- boom wiring harnesses
- frame wiring harnesses
- cab wiring harnesses

Ensure electrical devices are properly secured with no signs of visible damage. Ensure there are no loose or missing parts.

4.2-3 Hydraulic

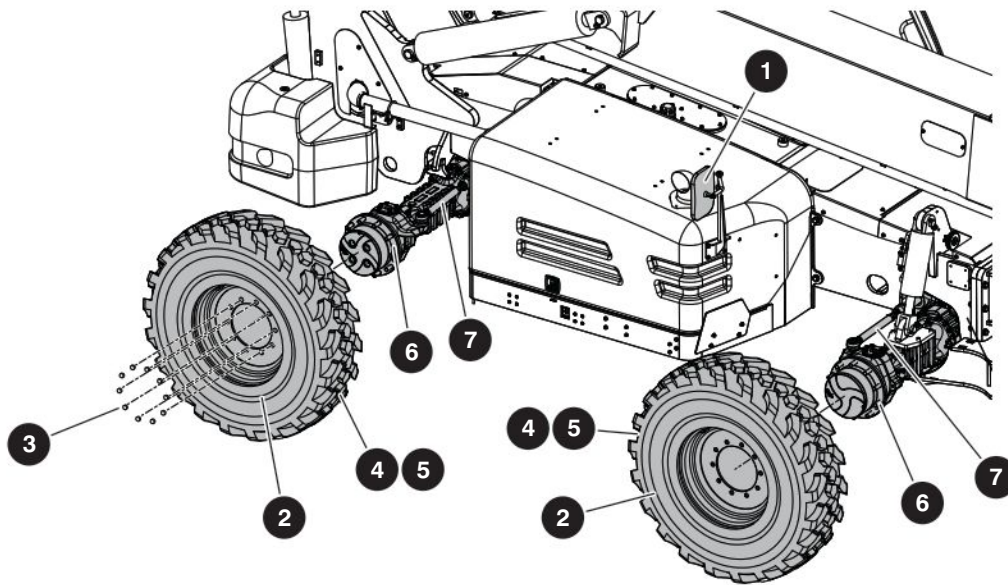
Maintaining the hydraulic components is essential to good performance and service life of the telehandler. Perform a visual inspection and check for leaks around the following areas:

- hydraulic tank, filter(s), fittings, hoses, pump, and frame surface
- all hydraulic cylinders
- all hydraulic manifolds
- underside of the frame
- ground area under the telehandler

4.2-4 Cylinders

Ensure all cylinders are properly secured and there is no evidence of leakage or signs of visible damage.

Grease weekly and check pins and bushings to ensure there is no evidence of damage.



4.2-5 Mirrors

Ensure **mirrors 1** are properly secured, and with no signs of visible damage.

4.2-6 Frame

2 Wheel/Tire Assembly: Tire and/or wheel failure could result in a telehandler tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

- Check all tire treads and sidewalls for cuts or cracks that expose the cord plies.
- Check for punctures, holes and unusual wear.
- Check each wheel rim for damage and cracked welds.
- Check each **lug nut 3** for proper torque to ensure none are loose. Refer to [Section 7.3](#) for wheel/tire specifications.

4 Air-filled Tires: To safeguard maximum stability, achieve optimum telehandler handling and minimize tire wear, it is essential to maintain proper pressure in all air-filled tires. Refer to tire pressure label.

- Check each tire with an air pressure gauge and add air as needed.

WARNING

An improperly inflated tire may cause death or serious injury.

5 Foam-filled Tires: Tire condition can vary significantly depending on telehandler use, job site environment and preventative maintenance

measures. Inspect tires periodically and pay extra attention to the following:

- Check for punctures or holes. Ensure they do not exceed a diameter of 1 in.

WARNING

If any tire does not meet the criteria outlined above, remove telehandler from service and replace wheel/tire immediately.

WARNING

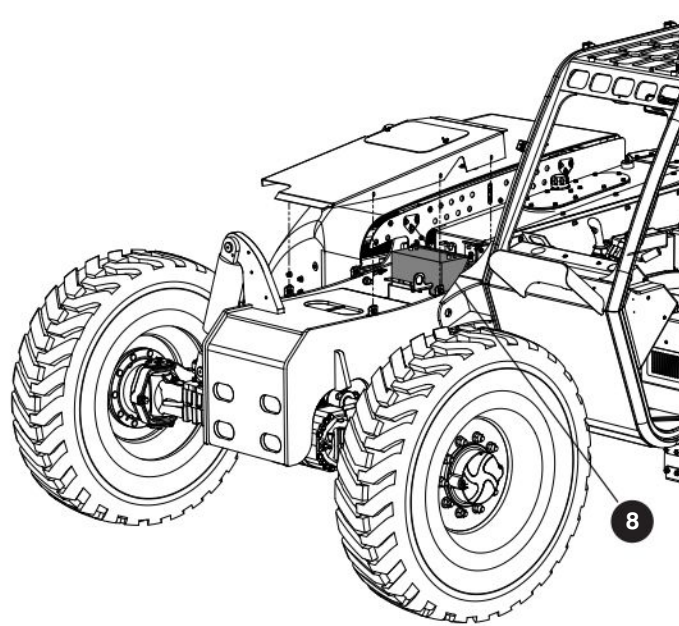
Do not use tires other than those specified for this machine. Do not mix different types of tires. Tires other than those specified can adversely affect stability. Failure to operate with matched, approved tires in good condition can result in death or serious injury. Replace tires with exact, Skyjack-approved types only.

6 Drive Axles

- Ensure drive axles are properly secured, there are no loose or missing parts, all fittings and hoses are properly tightened and there is no evidence of oil leakage.

7 Steer Cylinder

- Ensure steer cylinders are properly secured, there are no loose or missing parts, all fittings and hoses are properly tightened and there is no evidence of hydraulic oil leakage.



- 8 Battery:** Proper battery condition is essential to good engine performance and operational safety. Improper fluid levels or damaged cables and connections can result in engine component damage and hazardous conditions.

⚠ WARNING

Battery acid is extremely corrosive. Wear proper eye and facial protection as well as appropriate protective clothing. If contact occurs, immediately flush with cold water and seek medical attention.

1. Check battery case for damage.
2. Clean battery terminals and cable ends thoroughly with a terminal cleaning tool or wire brush.
3. Ensure all battery connections are tight.
4. If applicable, check battery fluid level. If plates are not covered by at least 1/2" (13 mm) of solution, add distilled or demineralized water.
5. Replace battery if damaged or incapable of holding a lasting charge.

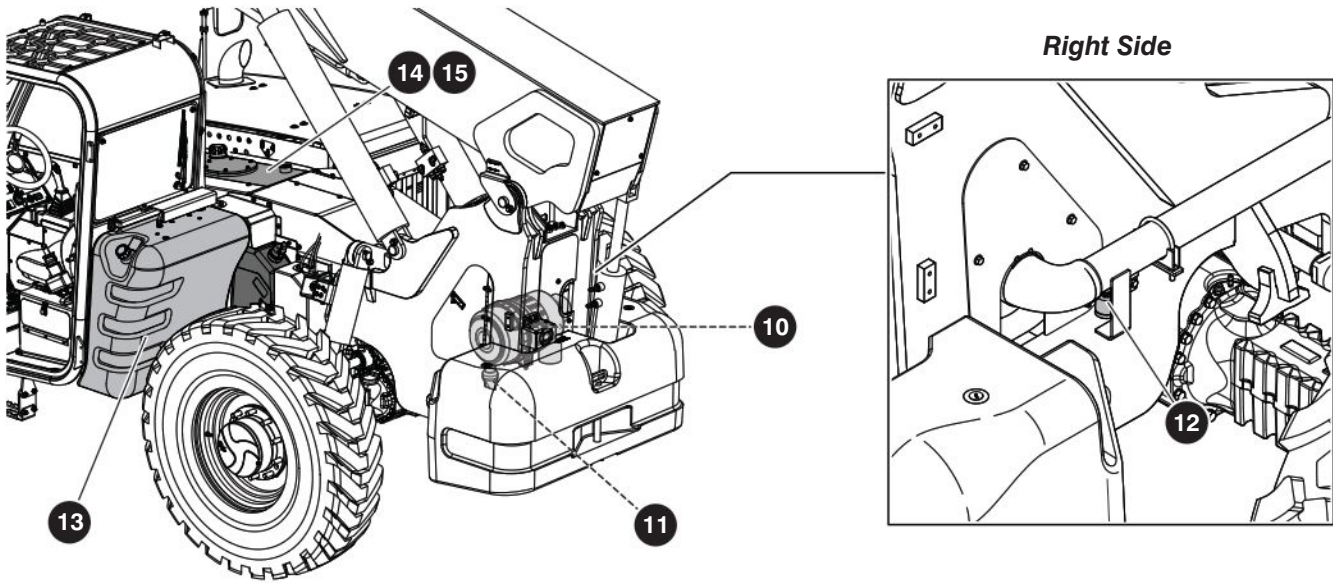
⚠ WARNING

Use original or manufacturer-approved parts and components for the telehandler.

⚠ WARNING



Explosion hazard. Keep flames and sparks away. Do not smoke near batteries.



10 Engine Intake Air Filter

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure **air cleaner vacuumator valve 11** is free from dirt or dust by squeezing the valve lips.
- Check **air cleaner service indicator 12** and replace filter element if needed.

13 Fuel Tank 

IMPORTANT

Before using your telehandler ensure there is enough fuel for expected use.

- Ensure fuel filler cap is secure.
- Ensure tank shows no visible damage and no evidence of fuel leakage.
- **Fuel Leaks:** Failure to detect and correct fuel leaks will result in an unsafe condition. An explosion or fuel fire may cause death or serious injury. Perform a visual inspection around the following areas:
 - hoses and fittings
 - fuel pump
 - fuel filter
 - fuel tank

 WARNING

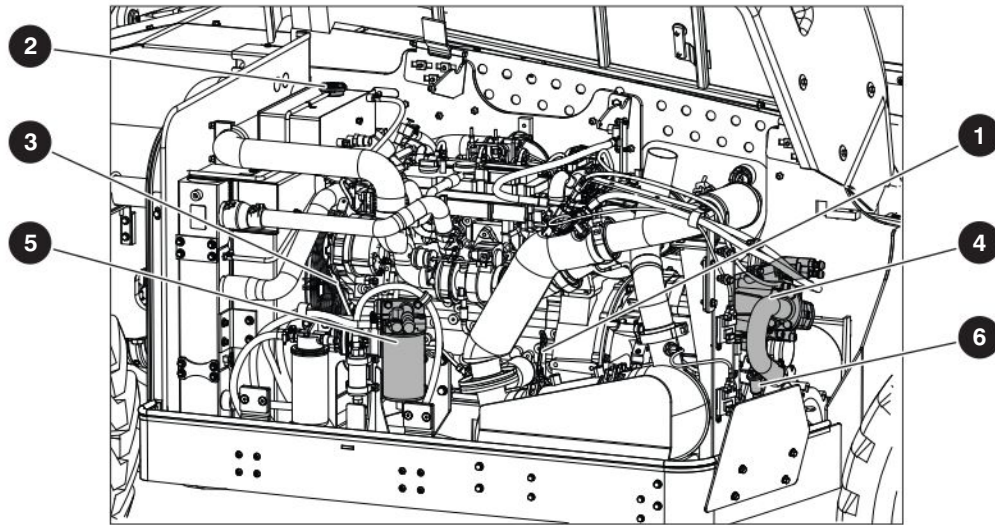
Engine fuels are combustible. Inspect the telehandler in an open, well-ventilated area away from heaters, sparks and flames. Always have an approved fire extinguisher within easy reach.

14 Hydraulic Oil Tank

- Ensure hydraulic filler cap is secure.
- Ensure tank shows no visible damage and no evidence of hydraulic oil leakage.

15 Hydraulic Oil 

- Be sure that the boom is in the lowered and stowed position, and then visually inspect the sight gauge located at the rear of the hydraulic oil tank.
- Add fresh, clean hydraulic oil as required. Refer to [Section 7.4](#) for recommended oil type.




4.2-7 Engine Compartment


- Ensure compartment cover is secure and in proper working order.

WARNING

Beware of hot engine components.

- Engine Oil Level on Dipstick** 

Maintaining the engine components is essential to good performance and service life of the telehandler.

 - Oil level should be between the “L” low and “H” high marks. Add oil as needed. Refer to [Section 7.4](#) for recommended oil type.
- Engine Coolant** 

WARNING

Pressurized fluid present in radiator. Never open radiator cap when engine is hot.

- Check coolant level on radiator.
 - Add coolant as required.
- Belts**
 - Ensure belts are in good working condition and have correct tension. Replace if belts are cracked, frayed, or have chunks of material missing. Refer to service manual for proper replacement procedure.


- Hydraulic Oil Pump**

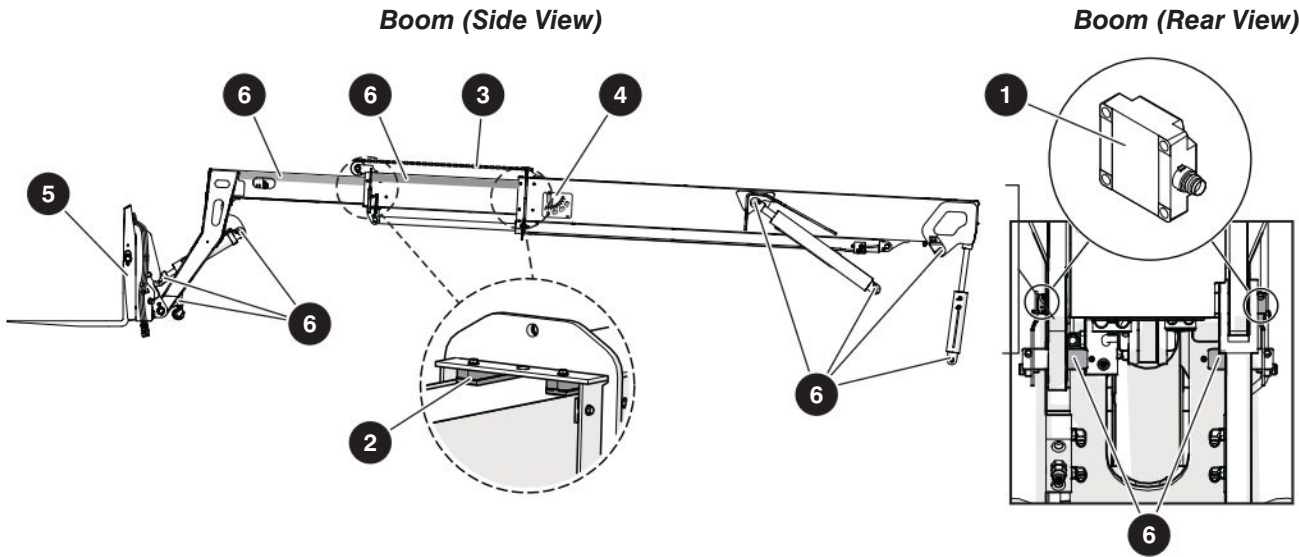
- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts are properly tightened.
- Ensure all fittings and hoses are properly tightened and there is no evidence of hydraulic oil leakage.

- Fuel/Water Separator** 

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all fittings and hoses are properly tightened and there is no evidence of fuel leaks.
- Drain water by opening water drain plug at bottom of filter. Close tightly after inspection.

4.2-8 Transmission

- Ensure transmission shifter is working properly and there is no evidence of damage.
- Check oil level on Transmission Oil Dipstick**  :
 - With park brake engaged and transmission shifter in “N” neutral position, start engine.
 - Oil level should be in the “safe” zone. Add oil as needed. Refer to [Section 7.4](#) for recommended oil type.



4.2-9 Boom

- Ensure there are no loose or missing parts and there is no visible damage.
- Ensure all bolts and pins are properly tightened.
- Ensure there are no visible cracks in welds or structure and there are no signs of deformation.
- Ensure all hoses are properly tightened and there is no evidence of hydraulic leakage.

1 Boom Angle Switches

- Ensure boom angle switches are properly secured with no signs of visible damage.

2 Slide Pads

- Ensure all bolts are tight, there is no visible damage to the slide pads and that no parts are missing.

3 Chains

- Ensure there are no loose or missing parts and there is no visible damage

4 Boom Angle Indicator

- Ensure all bolts are tight, and there is no visible damage and indicator swings freely.

4.2-10 Lifting Attachment

- 5 Ensure attachment is properly positioned and secured. (Refer to [Section 5.13](#)).
- Ensure there are no loose or missing parts and there is no visible damage.

4.2-11 Grease Fittings

Maintaining properly greased components is essential for good performance and service life of the telehandler. If components are improperly greased, it could result in component damage.

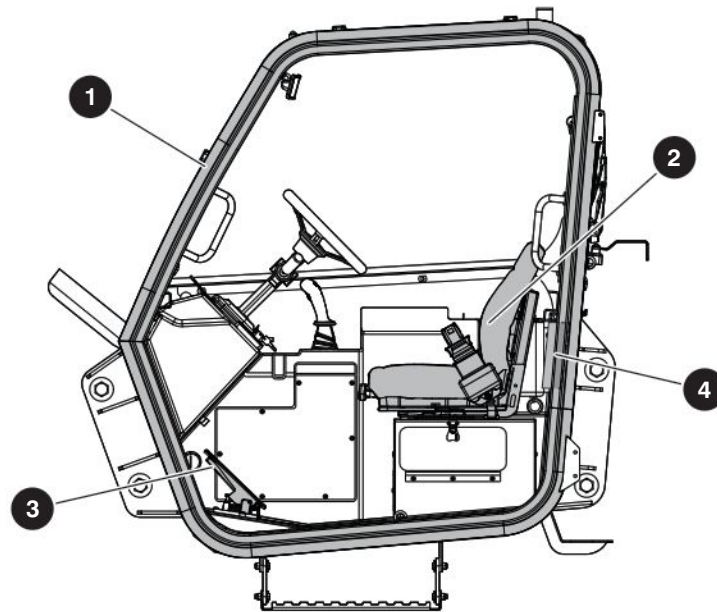
- 6 Greased component locations

WARNING

Ensure that there are no personnel or obstructions in maintenance area.

Greasing intervals are based on average telehandler usage. Use of telehandler may vary significantly and greasing frequency must be adjusted to obtain maximum service life.

Refer to the Daily & Weekly Maintenance Chart located inside operator's cab for grease points location and service intervals.



4.2-12 Operator's Cab

1 Rollover and Falling Object Protective Structure (ROPS/FOPS)

- Ensure there is no visible damage.

WARNING

Do not modify, drill or alter the operator's cab in any way.

2 Seat

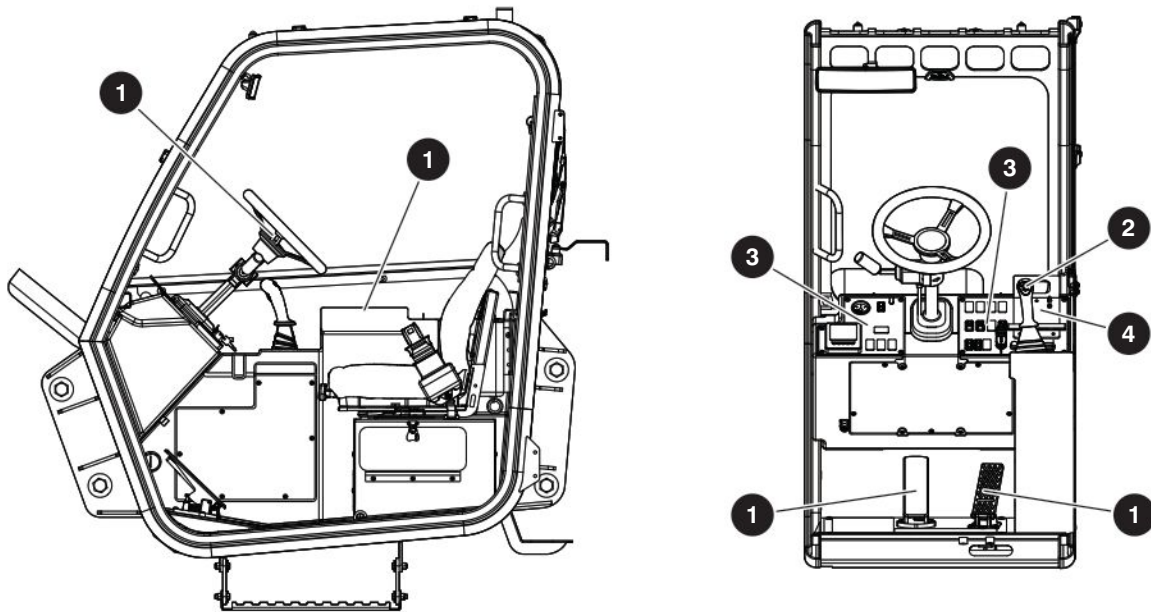
- Ensure seat is properly secured with no sign of visible damage.
- Ensure seat belt is working properly with no sign of visible damage.

3 Pedals

- Ensure brake and accelerator pedals are secure, no loose or missing parts, no sign of visible damage and movements are not obstructed.

4 Manual

- Ensure that the manual storage box is present and in good condition.
- Ensure a copy of operating manual, and other important documentation are enclosed in manual storage box.
- Ensure manual is legible and in good condition.
- Always return manual to the manual storage box after use.



4.2-13 Operator's Cab Controls

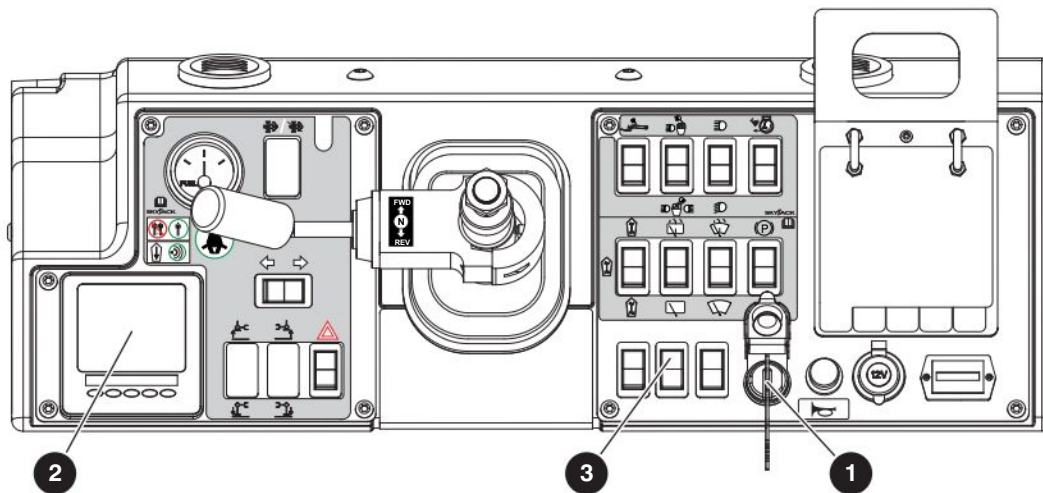
⚠ WARNING

Ensure that you maintain three points of contact to enter/exit the cab.

- Use the steps of telehandler to access operator's cab.
- Ensure door and windows (if equipped) are secure and in proper working order.
- Ensure **operator's cab controls** ① (refer to [Section 3.3-1](#)) are secured with no sign of visible damage.
- Ensure **multi-function joystick** ② (refer to [Section 3.3-2](#) or [Section 3.3-3](#)) is secured, movements are not obstructed and, with no sign of visible damage.
- Ensure **operator's dash controls** (refer to [Section 3.3-4](#)) ③ are properly secured, returned to their neutral position, with no sign of visible damage.
- Ensure **capacity charts** ④ are in place and are legible.

⚠ WARNING

Do not operate the telehandler if capacity charts are missing or not legible.



4.3 Function Tests

Function tests are designed to discover any malfunctions before telehandler is put into service. The operator must understand and follow step-by-step instructions to test all telehandler functions.

Prior to performing function tests, be sure to read and understand [Section 5 – Operation](#).

IMPORTANT

Never use a malfunctioning telehandler. If malfunctions are discovered, telehandler must be tagged and placed out of service. Repairs to telehandler must only be made by a qualified service technician. After repairs are completed, the operator must perform visual and daily maintenance inspections & function tests again.

WARNING

Ensure that there are no personnel or obstructions in test area and that there is sufficient room to test all telehandler functions.

4.3-1 Test Starter Operation

WARNING

Entering and exiting the telehandler must only be done using the three points of contact method.

1. Enter cab and close door (if equipped).

WARNING

The seat belt must be worn at all times.

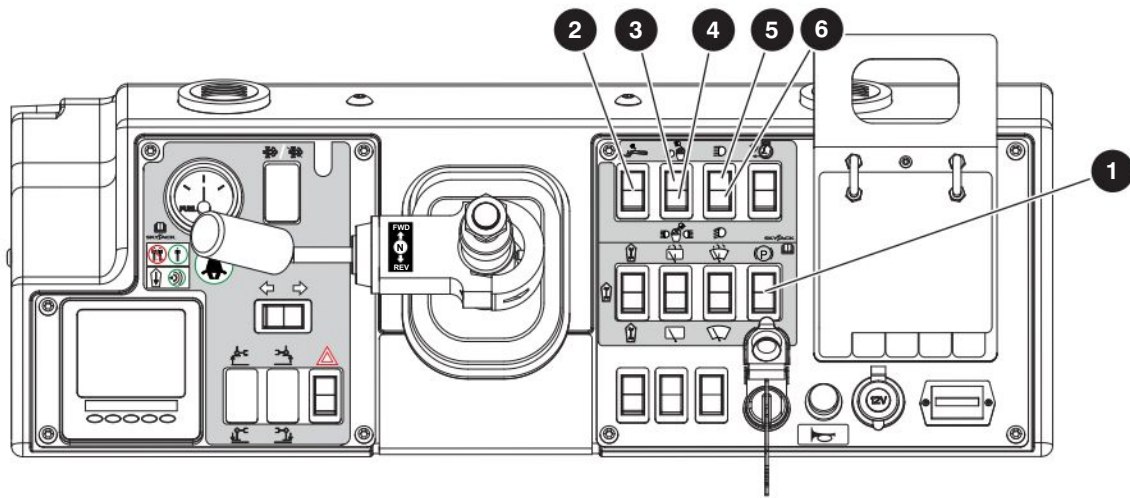
2. Sit in the driver's seat and fasten seat belt.
3. Using a spotter, adjust the mirrors.
4. Ensure parking brake is engaged and shift lever is in neutral. Ensure all controls/switches are in neutral position
5. Insert key into **ignition switch 1** and select on | position.
 - **Result: Engine data display module 2 and glow plug indicator light 3 should turn on.**
6. Wait until glow plug indicator light turns off then turn the key to start position until engine starts then return key to on | position.

WARNING

DO NOT over crank the starter. Do not crank for more than 15 seconds. Wait for 15 minutes before attempting to start engine again. If engine fails to start after multiple attempts, contact qualified/competent repair personnel.

IMPORTANT

If the DEUTZ Engine Display Module displays an error message when engine is running, immediately shut down the telehandler and have it serviced.



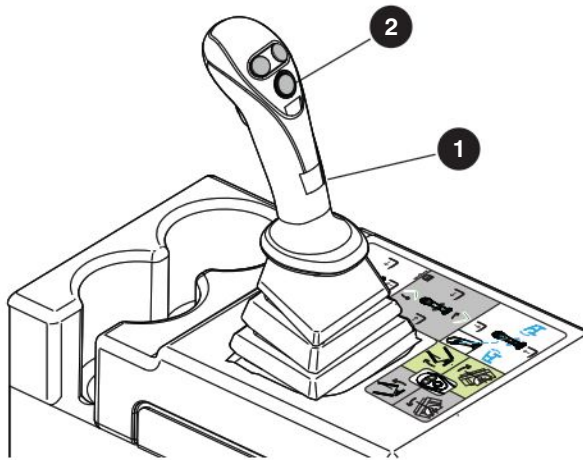
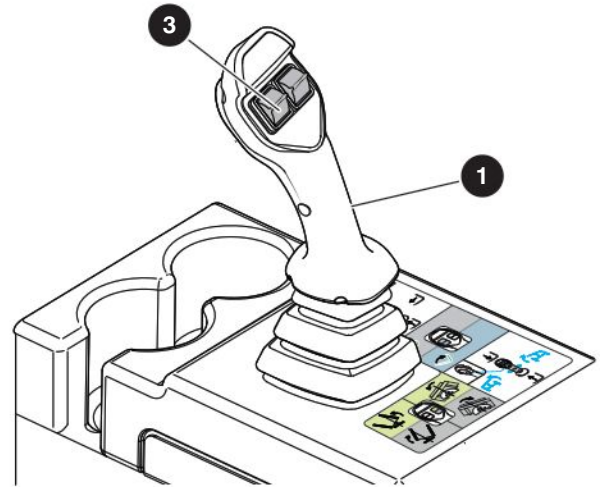
4.3-2 Test Horn

1. Push horn  on steering wheel.

- **Result:** Horn should sound.

4.3-3 Test Lights (If Equipped)

1. Use a spotter to check if all lights are working well. The spotter should maintain a safe distance from telehandler.
2. Turn **parking brake switch** ① to off position.
 - **Result:** Rear brake lights should turn off.
3. Depress service brake pedal.
 - **Result:** Rear brake lights should turn on.
4. Select **boom lights switch** ② (if equipped) to on position.
 - **Result:** Boom lights should turn on.
5. Select the **front work lights switch** ③ (if equipped) to on position.
 - **Result:** Front work lights should turn on.
6. Select the **front/rear work lights switch** ④ (if equipped) to on position.
 - **Result:** Front/rear work lights should turn on.
7. Select **high beam headlights switch** ⑤ to on position.
 - **Result:** High beam headlights & taillights should turn on.
8. Select **low beam headlights switch** ⑥ to on position.
 - **Result:** low beam headlights and tail light should turn on.

Standard Multi-functional Joystick**Premium Multi-functional Joystick
(If Equipped)****4.3-4 Test Boom Functions****⚠ WARNING**

Ensure there are no personnel or obstructions in test area and there is sufficient room to test all telehandler functions.

1. Ensure the park brake is engaged.
2. Raise the boom by moving the **joystick 1** backward.
 - **Result:** Boom should raise and boom angle indicator should be functioning.
3. Extend the boom by moving the joystick to the right.
 - **Result:** Boom should extend and boom extension indicators are visible.
4. Retract the boom by moving the joystick to the left.
 - **Result:** Boom should retract.
5. Lower the boom by moving the joystick forward.
 - **Result:** Boom should lower.
6. Lower the boom until attachment is approximately 2 feet above the ground.

4.3-5 Test Attachment Functions**Standard Multi-functional Joystick:**

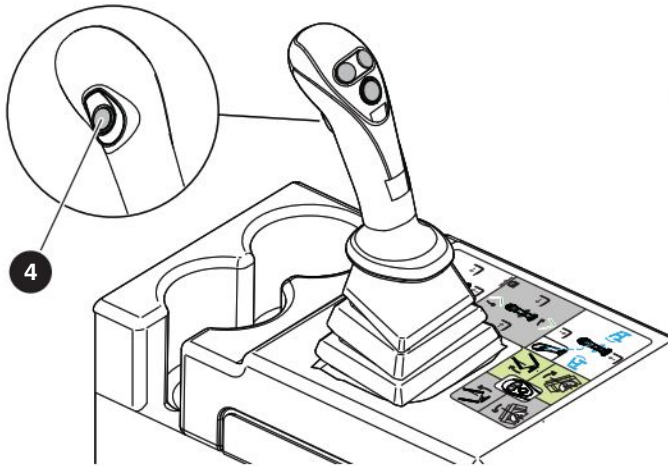
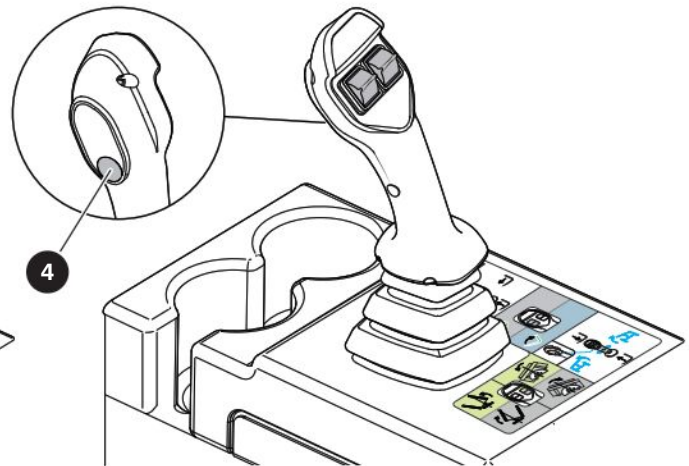
1. Tilt attachment forward by pressing and holding the **carriage tilt enable button 2** while moving the joystick forward.
 - **Result:** Attachment should tilt forward.
2. Tilt attachment backward by pressing and holding the carriage tilt enable button while moving the joystick backward.
 - **Result:** Attachment should tilt backward.

Premium Multi-functional Joystick (If Equipped):

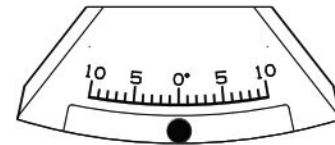
1. Tilt attachment forward by pressing and holding the **attachment tilt switch 3** up.
 - **Result:** Attachment should tilt forward.
2. Tilt attachment backward by pressing and holding the attachment tilt switch down.
 - **Result:** Attachment should tilt backward.

**NOTE**

Ensure to test all attachment functions if telehandler is equipped with optional attachments. Refer to [Section 3.6](#) and [Section 5.13](#) for details about each attachment and installation/operation.

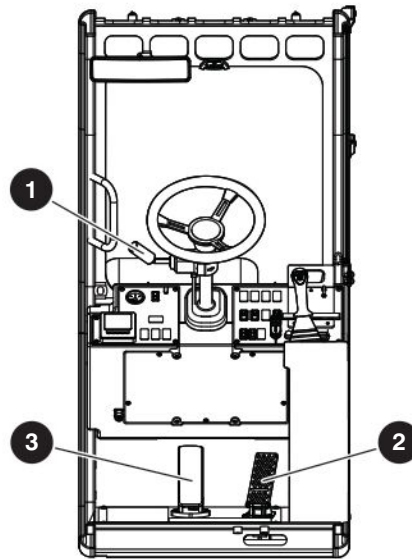
Standard Multi-functional Joystick**Premium Multi-functional Joystick (If Equipped)****4.3-6 Test Frame Leveling and Level Indicator**

1. Ensure park brake is engaged, boom fully retracted and below 40°.
2. Tilt the frame to the right by pressing and holding **frame level enable switch** ④ and moving the joystick to the right.
 - **Result:** Frame should tilt to the right, and frame level indicator should indicate movement to the right.
3. Tilt frame to the left by pressing and holding frame level enable switch and move the joystick to the left.
 - **Result:** Frame should tilt to the left, and frame level indicator should indicate movement to the left.
4. Level the machine by pressing and holding frame level enable switch and moving the joystick to the right. Frame level indicator should be at 0°.

**Figure 18** Frame Level Indicator**4.3-7 Test Boom Interlock**

1. Ensure park brake is engaged, transmission shifter in neutral, boom fully retracted and below 30°.
2. Frame level left and stop when the frame level indicator (see [Figure 18](#)) reads over 5° and less than 6°.

3. Raise the boom.
 - **Result:** boom should raise then stop raising at 40° and the interlock light should illuminate.
4. Frame level left.
 - **Result:** Frame should NOT tilt to the left.
5. Frame level right.
 - **Result:** Frame should tilt to the right in slow mode, interlock light should go out, then frame level function should stop before 5° and the interlock light should re-illuminate.
6. Level the machine until frame level indicator reads 0°.
 - **Result:** Frame should tilt to the left and interlock light should go out.
7. Raise the boom above 40°.
 - **Result:** Boom should raise fully.

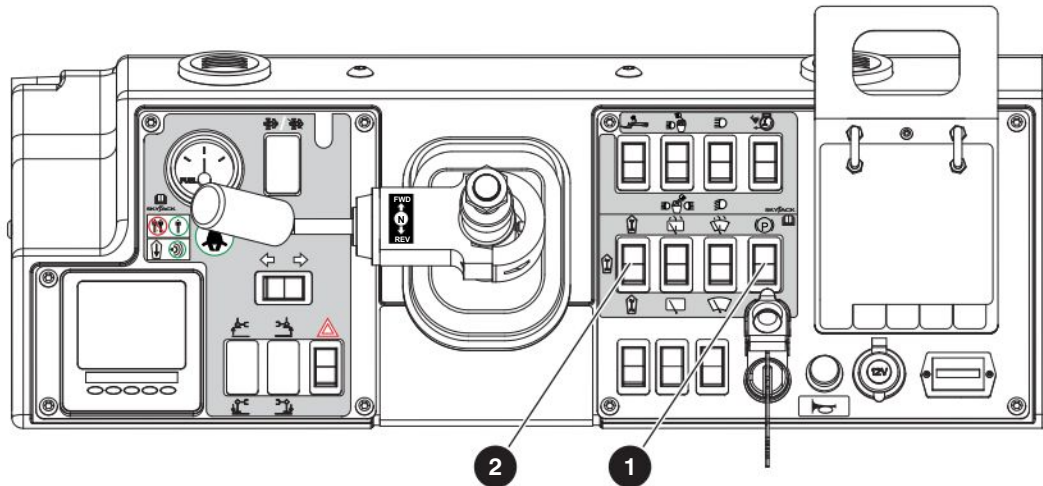


4.3-8 Test Accelerator Pedal

1. Ensure parking brake is engaged and **transmission range selector** ① is in neutral.
2. Press **accelerator pedal** ② slowly.
 - **Result:** The engine RPM should increase.
3. Release the accelerator pedal.
 - **Result:** The engine RPM should decrease.

4.3-9 Test Reverse Alarm, Driving & Service Brake

1. Ensure park brake is engaged and transmission is in neutral.
2. Depress **service brake pedal** ③ and ensure path of intended motion is clear.
3. Release parking brake.
 - **Result:** Parking brake indicator light should turn off.
4. Move transmission lever to REV reverse position and release the service brake pedal slowly.
 - **Result:** Telehandler should move backward and reverse alarm should sound.
5. Depress service brake pedal slowly.
 - **Result:** Telehandler should stop.
6. Move transmission shifter to FWD (1st gear for powershift transmission), and slowly release the service brake pedal.
 - **Result:** Telehandler should slowly move forward.
7. Depress service brake pedal slowly.
 - **Result:** Telehandler should stop.
8. Return transmission lever to neutral position and engage parking brake.



4.3-10 Test Parking Brake

WARNING

The seat belt must be worn at all times.

1. Ensure telehandler is on a firm, level surface.
2. Ensure the path of intended travel is clear and area around telehandler is clear of any personnel or obstructions.
3. Depress service brake, move **parking brake switch 1** to off position.
 - **Result:** Parking brake indicator light should turn off.
4. Move transmission lever to FWD (1st gear, for powershift transmission), and gradually release the service brake pedal.
 - **Result:** Telehandler should roll forward.
5. Move parking brake switch to on position.
 - **Result:** Parking brake should engage, telehandler should stop immediately (less than two seconds), and parking brake indicator light should illuminate.

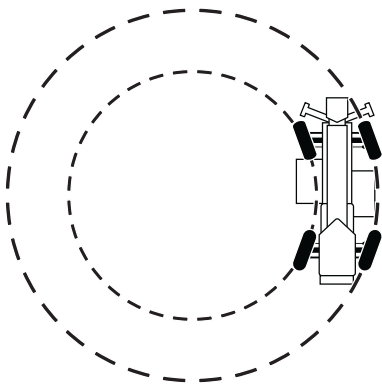


Figure 19 Four-wheel Steering

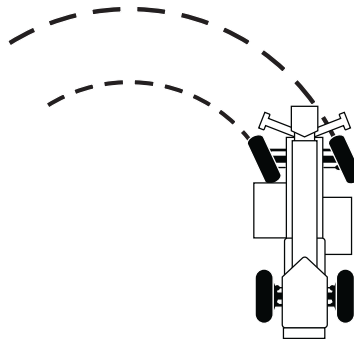


Figure 20 Front Steering

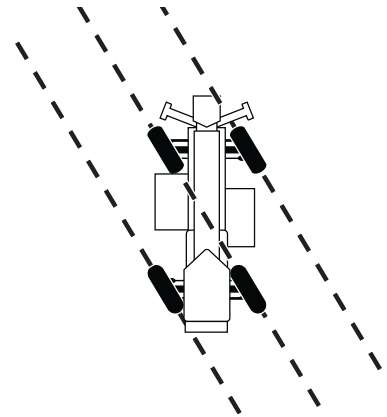


Figure 21 Crab Steering

4.3-11 Test Steering

CAUTION

Before changing steering modes, bring all four wheels into alignment (i.e., in the straight-ahead position).

WARNING

Before driving on public roads and highways check the alignment of the wheels and drive with FRONT steering only.

WARNING

Do not change steer mode while telehandler is traveling.

NOTE

Avoid steering the wheels while telehandler is stationary.

1. Four-wheel Steering (Figure 19)

1. Ensure path of intended motion is clear.
2. Ensure all four wheels are aligned straight ahead.
3. Depress and hold service brake pedal. Release parking brake
4. Press the upper portion of the **steering mode selector switch** **2** for four-wheel steering.
5. Turn the steering wheel to the left or right and drive forward.


- **Result:** Telehandler should move in the chosen direction, producing a turning circle, with front wheels pointing in the opposite direction to the rear wheels.
6. Steer telehandler straight ahead until all four wheels are aligned.
 7. Depress service brake pedal until the telehandler stops.

WARNING


Do not use four wheel steering mode when driving on public roads and highways.

Do not travel at high speeds (3rd gear, for powershift transmission) when using four wheel steering mode.

2. Front Steering (Figure 20)

1. Select steering mode selector switch to middle position  for front steering.
2. Turn steering wheel to the left or right and drive forward.
 - **Result:** Only front wheels of the telehandler should turn in the chosen direction.
3. Steer telehandler straight ahead until all four wheels are aligned.
4. Depress service brake pedal until telehandler stops.

3. Crab Steering (Figure 21)

1. Press the lower portion of the steering mode selector switch to backward  for crab steering.
2. Turn the steering wheel left or right and drive forward.
 - **Result:** Telehandler should move in chosen direction with both front and rear wheels in the same direction.
3. Steer telehandler straight ahead until all four wheels are aligned.
4. Depress service brake pedal until telehandler stops.

4.3-12 Test Back-up Sensor with Display Buzzer (If Equipped)

1. Ensure engine is running and key is in on position | .
2. Ensure parking brake is engaged and transmission is in reverse.
3. Depress and hold service brake pedal. Release parking brake.
 - **Result:** Range indicator lights on the back-up sensor should illuminate and beep if an object is detected behind telehandler.
4. Engage parking brake.

4.3-13 Test Back-up Sensor/Camera with Monitor (If Equipped)

1. Ensure engine is running and key is in on position | .
 - **Result:** Monitor is active and displays area behind telehandler.
2. Ensure parking brake is engaged and transmission is in reverse.
3. Depress and hold service brake pedal. Release parking brake.
 - **Result:** Range symbols should appear on the monitor and beep if an object is detected behind telehandler.
4. Engage parking brake.

Table 4.4 Operator's Checklist



Operator's Checklist

Serial Number: _____
 Model: _____
 Hourmeter Reading: _____
 Date: _____
 Time: _____

Operator's Name (Printed): _____
 Operator's Signature: _____

Each item shall be inspected using the appropriate section of the Skyjack operating manual. As each item is inspected, check the appropriate box.

P PASS
F FAIL

R REPAIRED
N/A NOT APPLICABLE

	N/A	P	F	R
Visual and Daily Maintenance Inspections				
Labels				
Electrical				
Hydraulic				
Cylinders				
Mirrors				
Frame				
Wheel/Tire Assembly				
Air-filled Tires				
Foam-filled Tires				
Drive Axles				
Steer Cylinder				
Battery				
Outriggers				
Engine Intake Air Filter				
Fuel Tank				
Fuel Leaks				
DEF Tank				
Hydraulic Oil Tank				
Hydraulic Oil				
Engine Compartment				
Engine Oil Level on Dipstick				
Engine Coolant				
Belts				
Hydraulic Pump				
Fuel/Water Separator				
Transmission				
Oil Level on Dipstick				
Boom				
Boom Angle Switch				

	N/A	P	F	R
Slide Pads				
Chains				
Boom Angle Indicator				
Lifting Attachment				
Grease Fittings				
Operator's Cab				
ROPS/FOPS				
Seat				
Pedals				
Manual Storage Box/Manual				
Operator's Cab Controls				
Function Tests				
Operator's Cab Controls				
Test Starter Function				
Test Horn				
Test Lights (if equipped)				
Test Boom Functions				
Test Attachment Functions				
Test Frame Leveling and Level Indicator				
Test Boom Interlock and RAS System				
Test Accelerator Pedal				
Test Reverse Alarm, Driving and Service Brake				
Test Parking Brake				
Test Steering				
Test Outriggers (if equipped)				
Test Back-up Sensor with Display Buzzer (if equipped)				
Test Back-up Sensor/Camera with Monitor (if equipped)				

1235AB

NOTE: Make a copy of this page or visit the Skyjack website at www.skyjack.com for a printable copy.

Section 5 – Operation

This section provides the necessary information needed to operate the telehandler. Read and completely understand the operating manual and all warnings and instruction labels (refer to [Section 8 – Labels](#)) on the telehandler.

WARNING

DO NOT operate this telehandler without proper authorization and training. Doing so could result in death or serious injury.

Before operating this telehandler, perform the following tasks:

1. Visual and daily maintenance inspections (see [Section 4.2](#))
2. Function tests (see [Section 4.3](#))
3. Jobsite inspection (see [Section 2.4](#))
4. If, as a result of the risk assessment, the need for rescue planning is identified, a system of communication shall be established between people working on the platform and nominated support personnel trained in the use of ground controls for platform retrieval.

WARNING

An operator should not use any telehandler that:

- does not appear to be working properly.
- has been damaged or appears to have worn or missing parts.
- has alterations or modifications not approved by the manufacturer.
- has safety devices which have been altered or disabled.
- has been tagged or blocked out for non-use or repair.

Failure to avoid these hazards could result in death or serious injury.

WARNING

DO NOT operate telehandler under engine power in an enclosed space. Use only in an open or well-ventilated area.

5.1 Starting the Engine

⚠ WARNING

Entering and exiting the telehandler must only be done using the three points of contact method.

1. Enter cab and close door (if equipped).
2. Sit in the driver's seat and fasten seat belt.

⚠ WARNING

The seat belt must be worn at all times.

3. Ensure parking brake is on and gear selector in neutral position.
4. To start the engine, turn the ignition switch to on position. Turn the key to start position.

5.2 Driving the Telehandler

5.2-1 Driving on Level Terrain

⚠ WARNING

- Be aware of blind spots when operating the telehandler.
- Ensure that there are no personnel or obstructions in the path of travel, including blind spots.
- When traveling at high rate of speed, use front wheel steering mode.
- Slow the telehandler prior to turning.
- Always look at the direction of travel.
- Travel in reverse only at slow rate of speed. Drive only as fast as conditions allow.
- Keep attachment or load low (18 - 24 in) to the ground which gives the best visibility and stability.

The telehandler is equipped with a powershift transmission or a continuously variable transmission. The transmissions have forward and reverse gears and the powershift transmission has speed ranges available in both directions.

1. Depress service brake pedal then lift and move transmission control lever to the desired direction of travel.
2. Release parking brake.
3. Select first gear (If equipped)

4. Slowly release service brake pedal.
5. Depress accelerator pedal slowly to increase speed.
6. **If equipped with the Powershift transmission:** Twist the transmission hand grip to select higher gear until the desired speed is reached. Select appropriate gear for the task being performed. Select lower gear when transporting load, traveling through deep mud, rough terrain, or slopes. Select higher gears only when traveling long distances on smooth terrain without a load.
7. Always bring the telehandler to a complete stop before changing the direction of travel.

5.2-2 Driving on Slopes

⚠ WARNING

Driving on slopes or inclines can be dangerous and may result in forklift tip-over or loss of load.

- Avoid excessively steep slopes or unstable surfaces. Do not drive across excessively steep slopes under any circumstances.
- Avoid turning on slopes, if at all possible.

1. Keep load low and proceed with caution.
2. Reduce travel speed and downshift to a lower gear (if available) before reaching a slope.
3. Ascend and descend slopes with the "heavy end" of the telehandler pointing up the slope.
 - **Without Load:** When the telehandler has no load, the rear is considered the "heavy end." Travel with the attachment pointed downhill.
 - **With Load:** When the telehandler is carrying a load, the front is considered the "heavy end." Travel with the attachment pointed uphill.

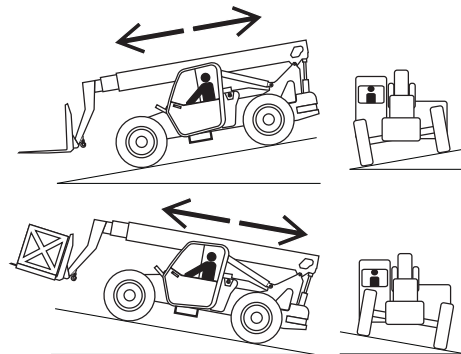


Figure 22 Driving on a Slope

4. When driving across a slope, keep frame level.

5.3 Steering the Telehandler

Steering is controlled by means of the steering wheel in conjunction with the steering mode selector rocker switch for the type of steering desired.

5.3-1 Four-wheel Steering

This steer mode is most commonly used on the job site and will give the smallest turn radius available.

⚠ WARNING

Do not use four wheel steering mode when driving on public roads and highways.

Do not travel at high speeds (3rd gear for powershift transmission) when using four wheel steering mode.

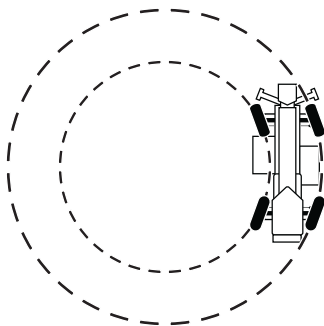


Figure 23 Four-wheel Steering

5.3-2 Front Steering (Two-Wheel)

Two-wheel steer is used during road travel in order to reduce the risk of possible overturn due to oversteering.

📌 NOTE

Loss of electrical power will allow front steering only.

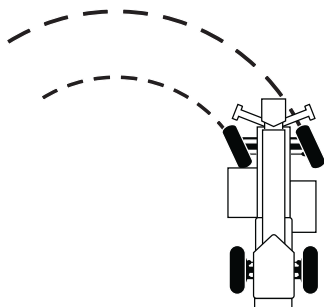


Figure 24 Front Steering

5.3-3 Crab Steering

The crab steer is used for maneuvering into tight spots.

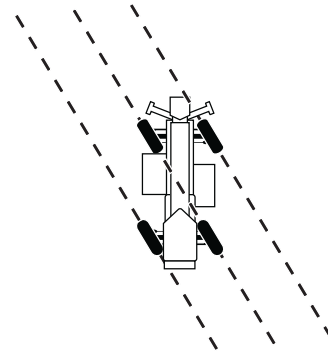


Figure 25 Crab Steering

5.4 Operating the Boom

5.4-1 Raising or Lowering Boom

WARNING

Ensure that there are no personnel or obstructions and there is sufficient room to perform all telehandler functions.

1. To raise the boom, move the joystick backward.
To lower the boom, move the joystick forward.
2. Release the joystick to stop.

5.4-2 Extending or Retracting Boom

WARNING

Ensure that there are no personnel or obstructions and there is sufficient room to perform all telehandler functions.

1. To extend the boom, move the joystick to the right. To retract the boom, move the joystick to the left.
2. Release the joystick to stop.

5.5 Leveling the Telehandler

1. Tilt the frame to the right by pressing and holding the frame level enable switch and move the joystick to the right.
2. Tilt the frame to the left by pressing and holding frame level enable switch and move the joystick to the left.
3. Release the joystick to stop.

5.6 Tilting the Attachment

Standard Multi-functional Joystick:

1. Tilt attachment forward by pressing and holding the tilt enable button while moving the joystick forward.
 - **Result:** Attachment should tilt forward.
2. Tilt attachment backward by pressing and holding the carriage tilt enable button while moving the joystick backward.
 - **Result:** Attachment should tilt backward.

Premium Multi-functional Joystick (If Equipped):

1. Tilt attachment forward by pressing and holding the attachment tilt switch up.
 - **Result:** Attachment should tilt forward.
2. Tilt attachment backward by pressing and holding the attachment tilt switch down.
 - **Result:** Attachment should tilt backward.



NOTE

Refer to [Section 3.6](#) for details about optional attachment operation.

5.7 Handling Loads

WARNING

- Before commencing operation, familiarize yourself with the capacity charts specific to telehandler model and attachment.
- Know the weight of the load and the most extreme height and distance required to pick or place the load.
- Do not lift load on a gradient steeper than 5%.
- Never position the load behind front face of the tires.
- Never drive the telehandler with the boom raised.
- Ensure not to exceed telehandler lift capacity (refer to capacity charts). Exceeding lift capacity could cause tip-over resulting in death or serious injury.
- When performing lift operation where the operator cannot see load at all times, the operator has to be assisted by a spotter using approved hand signals (refer to [Section 1.3](#)).

1. Drive as close as possible to load pickup/ placement site.
2. Place transmission shifter into neutral position and engage parking brake.
3. Level the frame before lifting the load.
4. Use attachment to pickup/place the load. Refer to procedures outlined in [Section 3.6](#) for specific attachment uses.
5. If using fork attachment, tilt forks backward to stabilize the load.

5.8 Handling Loads at Ground Level

⚠ WARNING

- Handle only loads within the rated capacity as shown on the capacity charts mounted on the telehandler.
- Ensure the capacity chart used corresponds to the attachment fitted to the telehandler.
- Use only manufacturer's approved attachments. The use of non-approved attachments may cause telehandler instability and tip-over, which may result in severe injury or death to operators or bystanders.
- Ensure that the load center for the load is at or within 24 in of forks (refer to [Figure 26](#)).
- Use a spotter when possible to assist in handling the load (refer to [Section 1.3](#)).

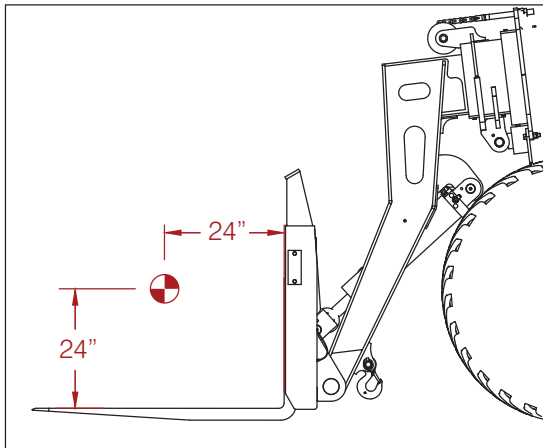


Figure 26 Load Center

5.8-1 Picking up a Load

1. Move the transmission lever to neutral and apply parking brake.
2. Check that the telehandler is level using the level indicator. Adjust frame level if necessary.
3. Ensure the forks are as far apart as possible for the width of the load. This increases the stability of the load and the lift.
4. Approach load slowly with forks straight ahead and perpendicular to the load.

5. Insert forks under the load; making sure not to extend forks past the load so that any loads or equipment behind the load being lifted are not damaged, then raise it 5 to 10 in.
6. Tilt forks backwards and fully retract boom



NOTE

If the forks are longer than the load, move the forks under the load so that the tips of the forks do not extend beyond the load. Lift the load from the surface. Move backward a few centimeters (inches), then lower the load onto the surface and move forward to engage the load against the carriage. Tilt the forks backward just far enough to lift the load from the surface. When the boom is raised from the surface level, the tips of the forks move in an arc.

5.8-2 Transporting a Load

⚠ WARNING

When transporting a load, always travel according to jobsite and weather conditions.

1. Travel with caution to placement site with load kept as low to the ground as possible.
2. Keep load against carriage and forks tilted backward. This position keeps the load on the forks and provides better forward and side stability.
3. Apply brakes smoothly to bring telehandler to a complete stop before applying parking brakes.

5.8-3 Placing a Load

1. Move the transmission lever to neutral and apply parking brake.
2. Check that the telehandler is level using the level indicator. Adjust frame level if necessary.
3. Extend boom to the desired reach and tilt forks forward in a horizontal position.
4. Place load in a horizontal position then lower boom until load is completely off the forks. Do not apply downward force with the forks.
5. Free the forks gradually by lowering and retracting the boom alternately.
6. When forks are clear of the load, fully retract the boom and return to transport position.

5.9 Handling Loads at Variable Heights

WARNING

- Handle only loads within the rated capacity as shown on the capacity charts mounted on the telehandler.
- Ensure the capacity chart used corresponds to the attachment fitted to the telehandler.
- Use only manufacturer's approved attachments. The use of non-approved attachments may cause telehandler instability and tip-over, which may result in severe injury or death to operators or bystanders.
- Ensure that the load center for the load is at or within 24 in of forks (refer to [Figure 26](#)).
- Deploy outriggers to stabilize the telehandler during operations involving heavy loads.
- Use a spotter when possible to assist in handling the load (refer to [Section 1.3](#)).

5. Extend and lower the boom to insert the forks under load; making sure not to extend forks past the load so that any loads or equipment behind the load being lifted are not damaged, then raise it 5 to 10 in.
6. Tilt forks backwards. Fully retract the boom, then check telehandler stability before transporting the load (refer to [Section 5.8-2](#)).

5.9-2 Placing a Load

1. Move transmission lever to neutral and apply parking brake.
2. Check that the telehandler is level using the level indicator. Adjust frame level if necessary.
3. Raise and extend boom until the load is perpendicular over placement point.
4. Place the load in a horizontal position and lower boom until the load is completely off the forks. Do not apply downward force with the forks.
5. Free the forks gradually by lowering and retracting the boom alternately.
6. When forks are clear of the load, fully retract the boom and return to transport position.

5.9-1 Picking up a Load

1. Move transmission lever to neutral and apply parking brake.
2. Check that telehandler is level using the level indicator. Adjust frame level if necessary.
3. Ensure the forks are as far apart as possible for the width of the load. This increases the stability of the load and the lift.
4. Approach load slowly, raise and extend the boom until the forks are perpendicular to the load.

5.10 Parking and Shutting Down the Telehandler

CAUTION

Operator should observe the following when parking the telehandler.

- Avoid parking on slopes or near excavation, ditches or soft fills. If parking on slopes cannot be avoided, ensure frame is leveled and telehandler is positioned at a right angle across the slope.
- Avoid parking on roads or highways. If it cannot be avoided, ensure to display warning flags during the day and flares or flashing lights at night.

1. Position telehandler on a firm and level surface.

WARNING

Always engage parking brake before leaving the cab.

2. Bring telehandler to a full stop.
3. With foot on service brake, engage parking brake.
4. Move transmission shift lever to neutral position.
5. Release service brake and ensure machine doesn't roll.
6. Retract boom fully and position attachment on ground.
7. Allow engine to idle for 3 to 5 minutes.
8. Shut off engine and remove key.

WARNING

Ensure that you maintain three points of contact to mount/dismount the cab.

9. Exit the telehandler.
10. Chock or block wheels to prevent telehandler from rolling.

5.11 DEUTZ Engine Data Display Module

The DEUTZ Display combines a graphic LCD display with five function buttons at the bottom of the screen (see Figure 27).

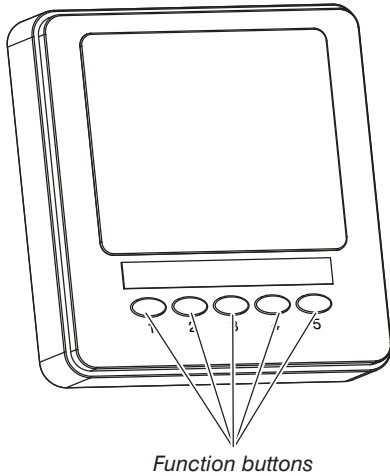


Figure 27 Engine Data Display Module

5.11-1 Function Buttons

1. Pressing any button calls up the main buttons menu.
2. The positioning of the symbols above the relevant button allows the button function to be changed. The buttons correspond to the following functions:

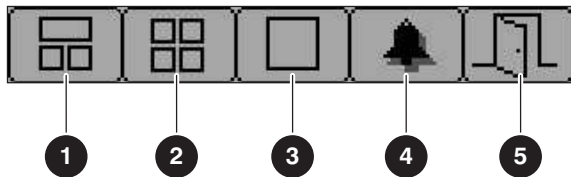


Figure 28 Main Buttons Menu

- 1 Engine Main Display
- 2 Quad Display
- 3 Graphic Display
- 4 Error Messages
- 5 Exit

5.11-2 Contrast & Illumination Settings

1. Pressing **button 5** calls up the Contrast and Illumination menu when the menu symbols are not displayed.

2. Adjust illumination using **button 1** for dimming or **button 2** for brightening the illumination.

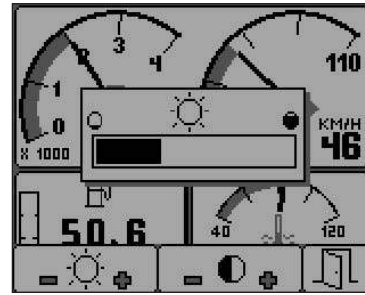


Figure 29 Setting Screen Illumination

3. Adjust contrast by using **button 3** to decrease contrast and **button 4** to increase the contrast.

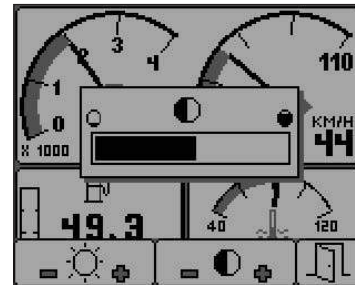


Figure 30 Setting Screen Contrast

5.11-3 Engine Main Display

1. To show the engine main display, press any button to display the menu symbols, then press **button 1**.

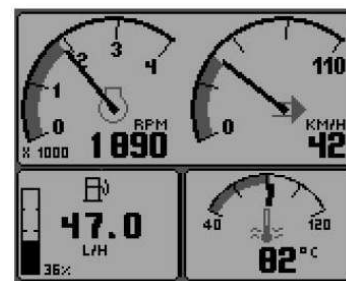


Figure 31 Main Screen

2. The top window shows two scales: engine RPM and coolant level. The bottom left window shows the instantaneous fuel consumption while the right window shows the coolant temperature.
3. Pressing **button 1** repeatedly, will display various parameters such as; fuel consumption, average fuel consumption per route and operating hours per route traveled.

5.11-4 Quad Display

This display gives the user rapid access to four displays, each of which can show four instruments. Information can be shown in either digital or analog format.

1. To select the quad display, press any button to display the menu symbols and then press **button 2**.

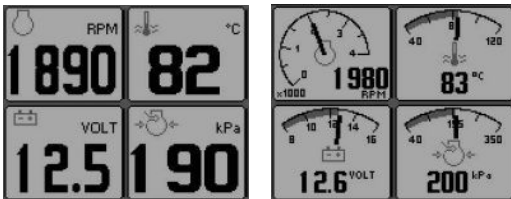


Figure 32 Digital and Analog Quad Display

2. The screens are displayed in sequence as a response to repeatedly pressing **button 2**
3. Using the setting mode allows the user to set every instrument shown on the screen in order to be able to display various engine parameters from a long list.
4. The setting mode is activated by pressing **button 5** when the menu is visible.
5. The menu as shown in the figure below appears in the setting mode.

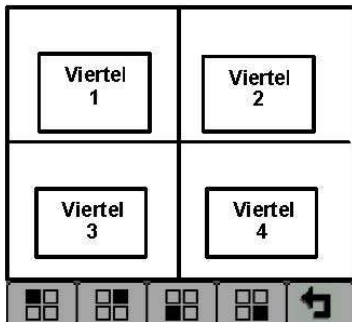


Figure 33 Quad Display Settings

6. Pressing **button 1** causes the top left display to roam through all available engine parameters. Pressing **button 2** roams through the top right display, etc.
7. Quit the display by pressing **button 5**.

5.11-5 Graphic Display

The graphic display shows data trends in a large window and functions like an analog data recorder.

1. To access the graphic display, press any button to display the main menu symbols, then press **button 3**.

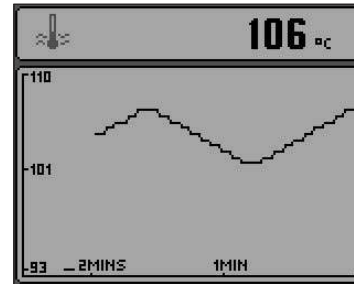


Figure 34 Example of Graphic Display

Showing Coolant Temperature

- The required time grid can be set in the configuration menu from 2, 10 or 30 minutes to 1, 2, 4 or 8 hours.
- The maximum and minimum values of the Y-axis that define the range of the display are automatically adapted to give an optimal overview of the visible data.
- The data to be displayed can be selected by repeatedly pressing **button 3** when in graphic display mode.

5.11-6 Error Messages

If a new error message is received, the DEUTZ display will beep and a flashing popup window will open with the latest error messages and details.

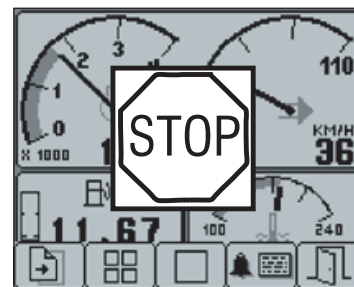


Figure 35 Error Message Popup

1. The error list is displayed by pressing any button. The errors that have been read appear in black text on a grey background. New messages that have not been read appear as emphasized grey text on a black background.

The most recent error is automatically displayed when the error list is called up.

2. If the list is longer than the screen section, you can browse through the list using **buttons 1** and **2**.



Figure 36 Error Message

3. The error list cannot be exited until all alarms have been acknowledged by pressing **button 3**. The error list display can be viewed at any time by pressing **button 4**.

5.11-7 Display Configuration

Configuration mode allows the user to set various operating parameters and modes of the DEUTZ Display. This includes setting the units (metric or US customary), measuring range settings or engine service intervals.

4. The configuration menu can be called up by pressing and holding down **button 5** for at least 3 seconds.
5. To secure the configuration display, the display prompts you to enter a PIN number before accessing the configuration menu. The default PIN is 1111.

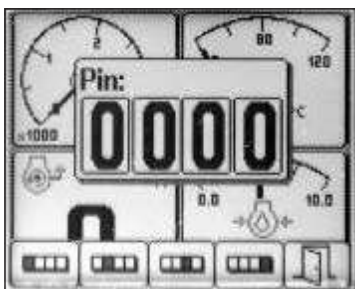


Figure 37 PIN Pop-up

6. Press **buttons 1, 2, 3, 4**, and finally press **button 5** to confirm the information.



Figure 38 PIN Number Entry

7. The configuration menu is displayed once the pin number has been entered.
8. **Buttons 1** and **2** allow scrolling up and down the menu, while **button 4** calls up the highlighted selection.
9. Use **button 5** to exit configuration menu or browse back a level.



NOTE

Refer to the service manual of this telehandler for a list of error codes.

5.12 Use of the Capacity Charts

The capacity charts are located in the operator’s cab. They are used to determine maximum load capacity for telehandler equipped with different attachment combinations.

To properly use a particular capacity chart, the operator must first determine the following:

1. Ensure the capacity chart is for the specific telehandler model and the attachment.
2. Determine the weight of the load to be lifted.
3. Ensure that the load center for the load is at or within the load center specified for the attachment.
4. Determine the height where the load is to be picked or placed.

5. Determine the reach where the load is to be picked or placed
6. The maximum capacity is determined by the intersection lines between height and reach on the capacity chart. If the intersection of the lines occurs at a division between capacity zones, the smaller of the two capacity values must be used.



NOTE

The weight of the load must be equal to or less than the number in the capacity zone.



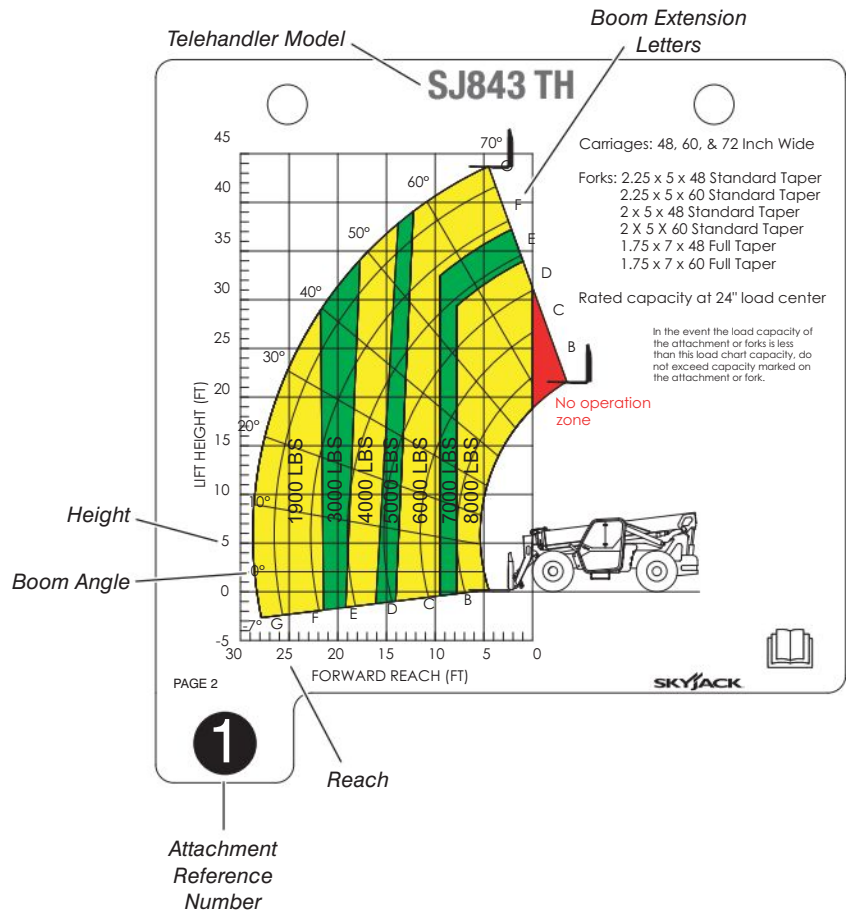
WARNING

When handling loads, ensure that boom extension indicator and boom angle indicator remain within previously determined/calculated capacity zone.

SAMPLE ONLY - USE CHART IN CAB



Attachment Reference Numbers

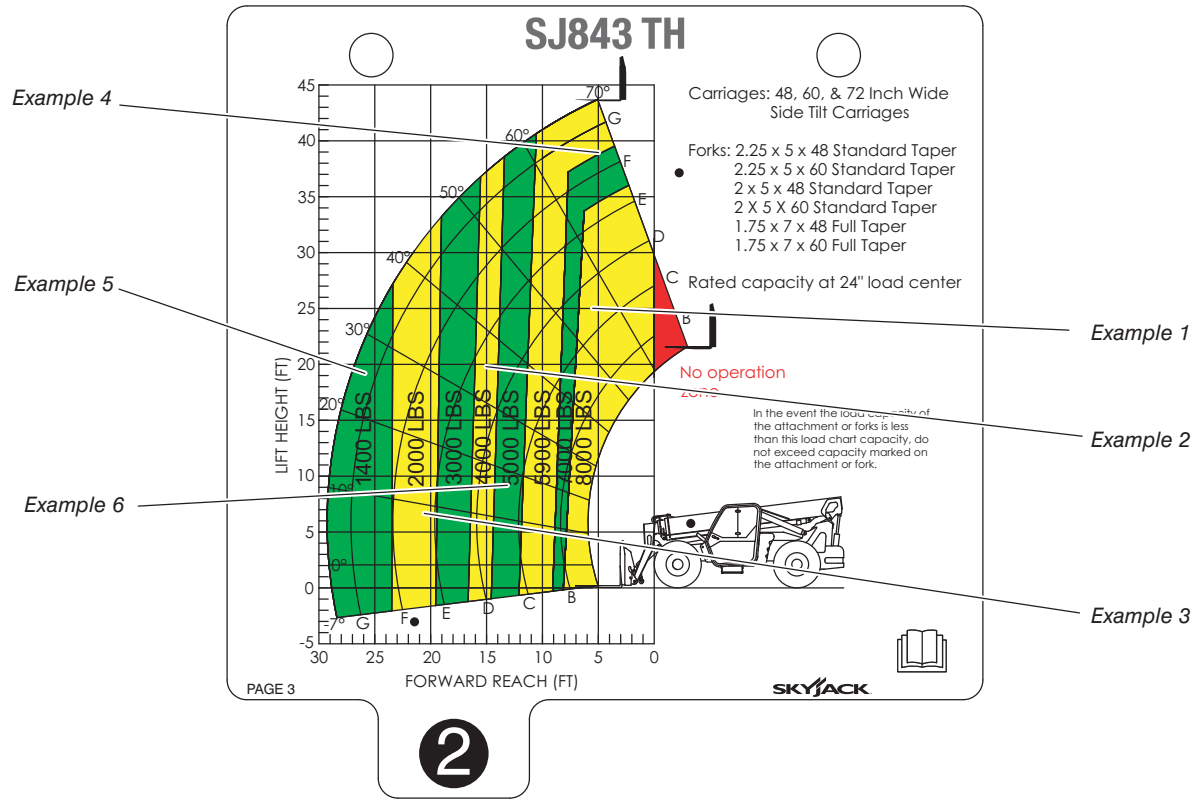


5.12-1 Examples on Reading the Capacity Chart

The Operator must verify that the capacity chart corresponds with both telehandler and attachment model number.

The following scenarios show various conditions the operator may encounter:

SAMPLE ONLY - USE CHART IN CAB



2

Examples	Load Weight	Forward Reach	Lift Height	Boom Angle	Boom	Capacity	OK to Lift
1	7200 lb (3 266 kg)	6 ft (1.8 m)	25 ft (7.6 m)	54°	C	8000 lb (3 629 kg)	YES
2	5700 lb (2 585 kg)	15 ft (4.6 m)	20 ft (6.1 m)	34°	D	4000 lb (1 814 kg)	NO
3	3600 lb (1 633 kg)	21 ft (6.4 m)	7 ft (2.1 m)	9°	E	2000 lb (907 kg)	NO
4	5500 lb (2 495 kg)	5 ft (1.5 m)	38 ft (11.6 m)	67°	F	5900 lb (2 676 kg)	YES
5	1380 lb (626 kg)	26 ft (7.9 m)	17 ft (5.2 m)	22°	G	1400 lb (635 kg)	YES
6	5100 lb (2 313 kg)	12 ft (3.7 m)	10 ft (3 m)	19°	C	5000 lb (5 000 kg)	NO

NOTE
 This is a sample capacity chart only! DO NOT use this capacity chart. Use chart inside cab.

NOTE
 If the intersection occurs on a bold line separating the capacity regions, the smaller of the two capacity values must be used.

5.13 Attachments Installation and Adjustment

Several attachments aside from the frequently used attachment/fork combination are available for use with the telehandler. Installation and operation of other approved attachments are covered in this section.

5.13-1 Installing Attachments Using the Quick Attach Feature

1. Fasten the tethered pin assemblies to the apron using the pins, washers, and cotter pins (see [Figure 39](#)).
2. Ensure the apron is in the tilted forward position with the quick attach pins hanging from the tether.
3. Position the attachment on level ground.
4. Locate the boom so that the apron upper bar can be raised and tilted backwards to engage the attachment and lift it clear of the ground.

5. Engage the attachment as described in step 4, aligning the holes in the attachment for the installation of the quick attach pins at a working height.
6. Install the quick attach pins and secure them with lynch pins to the outside of the attachment.

5.13-2 Removing Attachments Using the Quick Attach Feature

1. Position the boom so the attachment is just above level ground.
2. Shut down engine.
3. Move the quick attach pins and lynch pins from the apron and attachment and leave them in a hanging position.
4. Start engine.
5. Lower boom and tilt the apron forward (while retracting the boom) to clear the attachment.

WARNING

Visually check the attachment is correctly coupled and secured to the boom before operating the telehandler.

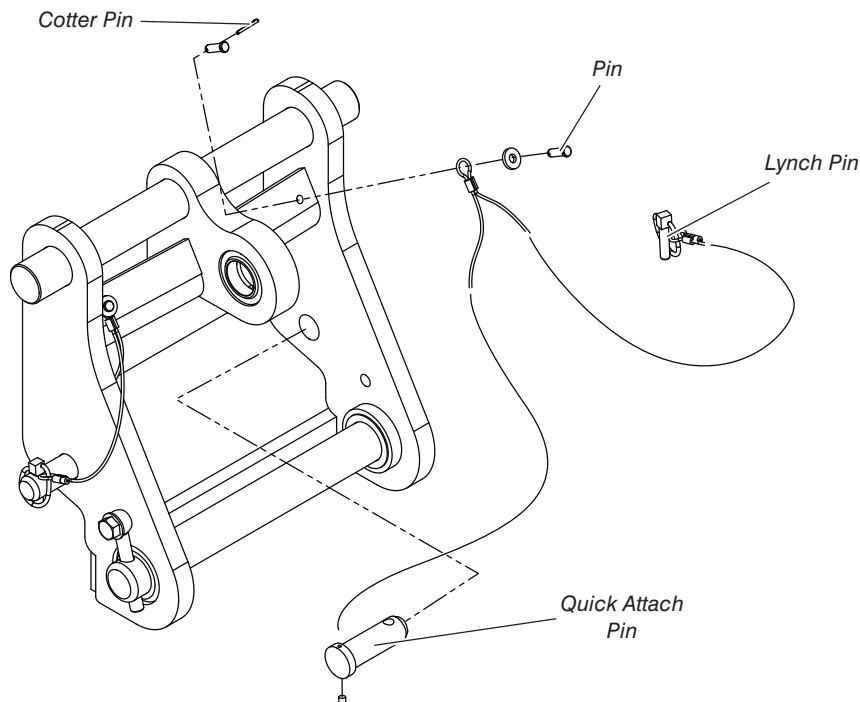


Figure 39 Quick Attach Feature

5.13-3 Adjusting Forks

1. Adjust the location of both forks manually to suit a pallet pocket spacing as follows:
2. Raise the boom until fork eye is approximately shoulder high.
3. Tilt the attachment forward until the fork pivots on the bar, and no longer resting on the carriage's bottom rail (see [Figure 40](#)). This prevents binding on the bar, thus aiding its repositioning.

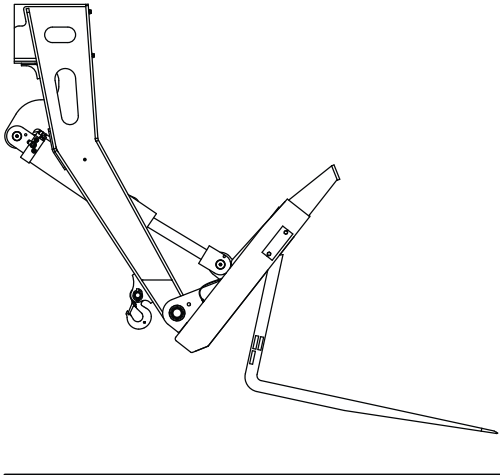


Figure 40 Fork Pivoting on the Bar

4. Grasping the fork near its eye, push the fork along the bar until it is in the desired position.

CAUTION

Be careful not to pinch fingers between the fork and any portion of the attachment.

5.13-4 Changing Forks

The carriage/fork combination is the most frequently used combination. Different loads may require changing forks with different ratings.

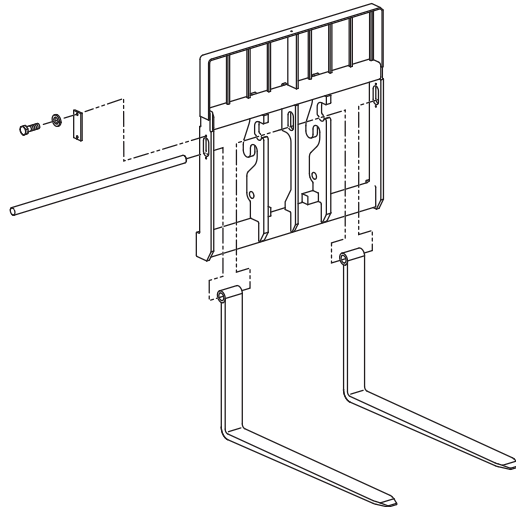


Figure 41 Changing Forks

1. Lower the boom with fork contacting the ground until approximately half of the fork float is used up.
2. Remove fork bar collars from fork bar.
3. Draw the bar out of the fork eye, being careful that the fork doesn't fall over, causing possible injury (see [Figure 41](#)).
4. Reverse steps 1 to 3 to install the replacement fork.

5.14 Slinging Loads

⚠ WARNING

Slings loads from appropriate attachment or lifting hook to the jib boom or a tilted fork ONLY.

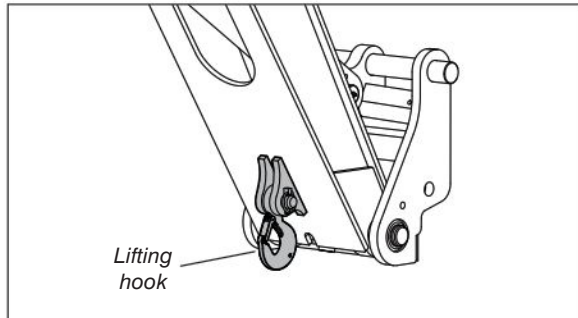


Figure 42 Lifting Hook

1. Slinging of loads must only be performed following a complete risk assessment by a qualified person regarding the rigging and guiding of any such load.
2. The rated capacity of the unit and attachment at the sling position must not be exceeded. The sling must be in good repair and restrained from movement at all times.
3. Retract the boom as far as is practical during pick and carry operations.
4. Perform all boom and traveling operations slowly and smoothly to prevent the load from swinging. Avoid turning if possible.
5. Only lift the load vertically and never drag it horizontally.
6. Transport the load with the bottom of the load and the mast as low as possible.
7. Use guide lines to restrain load swing whenever possible.

5.15 Third-Party Attachments

Skyjack's variable reach Rough Terrain Forklifts (RTFL), are designed to lift and/or handle industrial products by means of various attachments. Skyjack does not certify the design of third-party attachments. Skyjack does not assume any responsibility or liability for damages resulting from the use of third-party attachments on any of its THS RTFLs.

It is permissible to install and utilize third-party attachments provided they do not elevate personnel, and the following conditions are met:

⚠ WARNING

Be sure to follow all conditions, regulations and instructions outlined below and all requirements of the local authorities. Failure to do so may result in serious injury or death.

- The combined mass of the attachment and load shall not exceed that of the RTFL load chart for the applicable load center. The rated capacity of the attachment shall not be exceeded.
- In addition to the RTFL operating instructions, all instructions provided by the manufacturer of the attachment must be followed and any additional requirements of local authorities should also be followed.
- Attachments shall be designed and constructed according to ANSI/ITSDF B56.6-2016 and CSA B335, including markings identifying the combined RTFL and attachment weight, and the RTFL capacity with the attachment at maximum elevation and load laterally centered.
- The attachment must be securely attached to the RTFL, per the attachment manufacturer's instructions.
- Prior to using the attachment on each shift, the RTFL operator must visually examine the attachment for structural integrity and perform the daily inspection and function tests on the RTFL. Any equipment defects must be repaired before the attachment or RTFL can be used.

5.16 Platforms for Elevating Personnel

⚠ WARNING

Be sure to follow all conditions, regulations and instructions outlined below and all requirements of the local authorities. Failure to do so may result in serious injury or death.

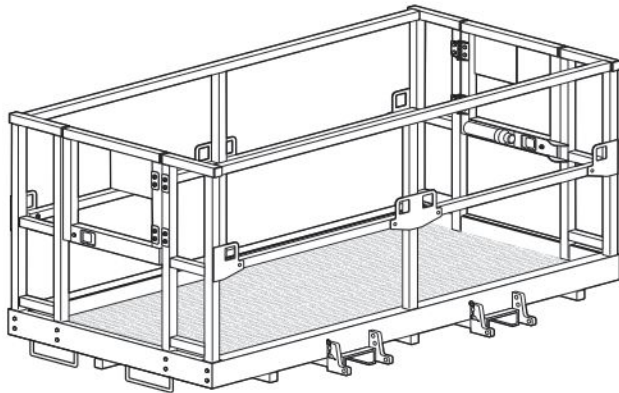


Figure 43 Personnel Work Platform attachment

A rough terrain forklift truck shall not be used to lift people unless there is no other practical option. Only Skyjack approved platforms for elevating personnel (with appropriate load chart, and supporting installation and operating instructions), in compliance with ANSI/ITSDF B56.6/ CSA B335, are permissible.

⚠ WARNING

Never use a platform that has unapproved modifications or is damaged. Failure to identify and avoid these hazards could result in death or serious injury.

5.16-1 Disabling Tilt Functions on Side Tilt Carriage Attachment



NOTE

To be used only when installing approved Personnel Work Platform

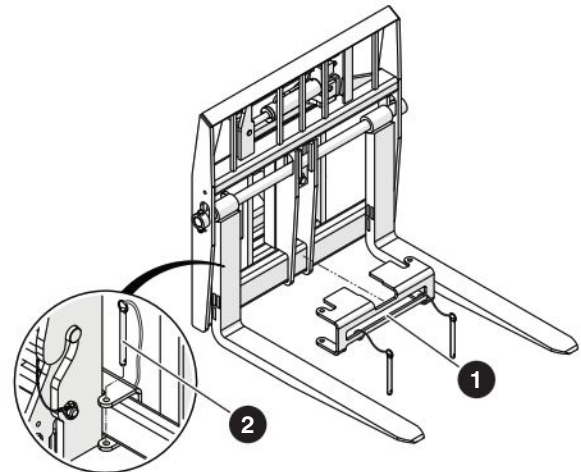


Figure 44 Side Tilt Carriage Locking Device

1. Position the boom so the attachment is just above ground level.
2. Tilt the carriage until it is horizontally aligned with the machine frame so the side tilt carriage locking device ① can be properly installed.
3. Shut down the engine.
4. Install the side tilt carriage locking device in place, as shown in figure 44. Secure it with the quick release pins ② on both sides of the carriage.

5. After the locking device is installed, disconnect the auxiliary hydraulic hoses and cover them with the existing caps. Refer to figure 45.

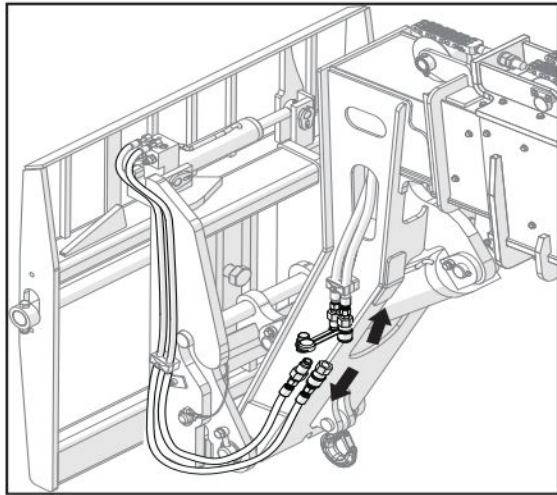


Figure 45 Auxiliary Hydraulics disconnection

6. Secure the carriage hoses between the carriage and the platform as shown in figure 46.

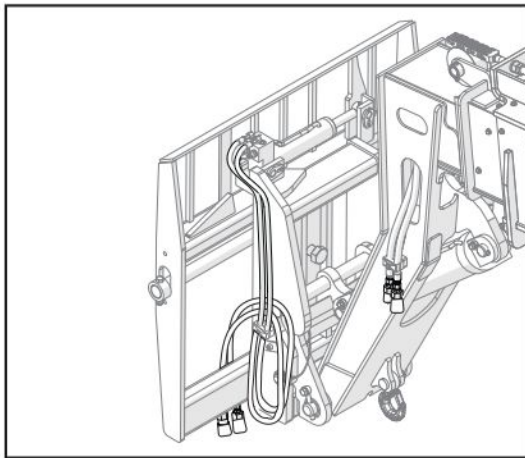


Figure 46 Hydraulic Hoses

7. Secure the locking device to the Personnel Work Platform as shown in figure 47 when the platform is not in use.



NOTE

Ensure the Personnel Work Platform pins are moved to the upper cut out hole of the platform pockets, to properly secure the locking device.

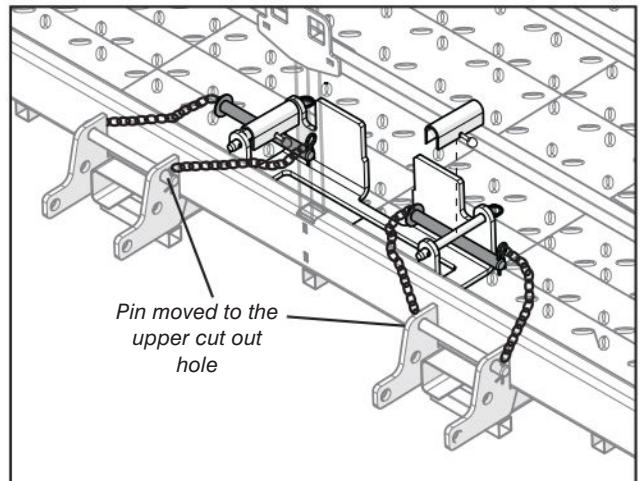


Figure 47 Auxiliary Function Locking Devices

5.16-2 Disabling Swing Functions on Swing Carriage Attachment



NOTE

To be used only when installing approved Personnel Work Platform

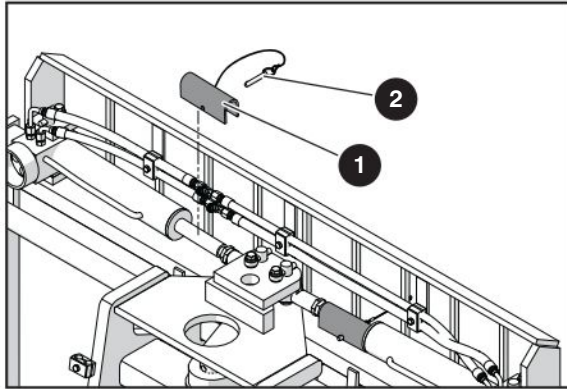


Figure 48 Swing Carriage Locking Device

1. Position the boom so the attachment is just above ground level.
2. Swing the carriage until it is centered (both cylinders equally extended) so the swing carriage locking device 1 can be properly installed.
3. Shut down the engine.
4. Install the swing carriage locking device on both swing cylinders as shown in figure 48. Secure them with the quick release pins 2.
5. After the locking device is installed, disconnect the auxiliary hydraulic hoses and cover them with the existing caps. Refer to figure 49.

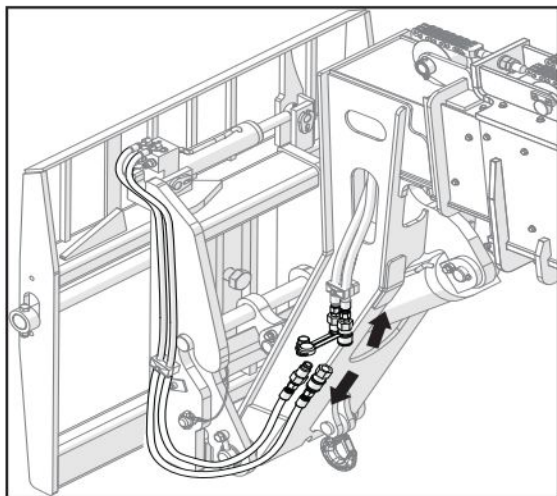


Figure 49 Auxiliary Hydraulics disconnection

6. Secure the carriage hoses between the carriage and the platform as shown in figure 50.

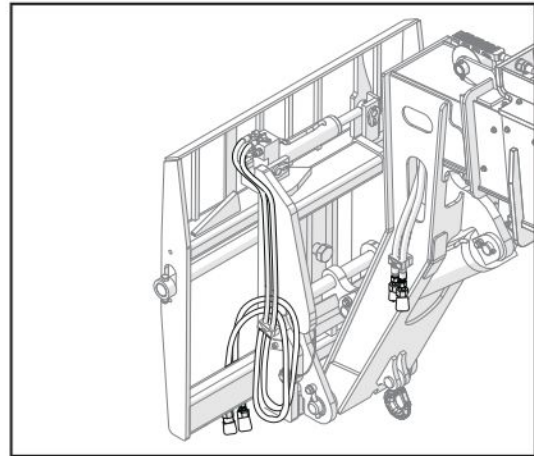


Figure 50 Hydraulic Hoses

7. Secure the locking device to the Personnel Work Platform as shown in figure 51 when the platform is not in use.



NOTE

Ensure the Personnel Work Platform pins are moved to the upper cut out hole of the platform pockets, to properly secure the locking device.

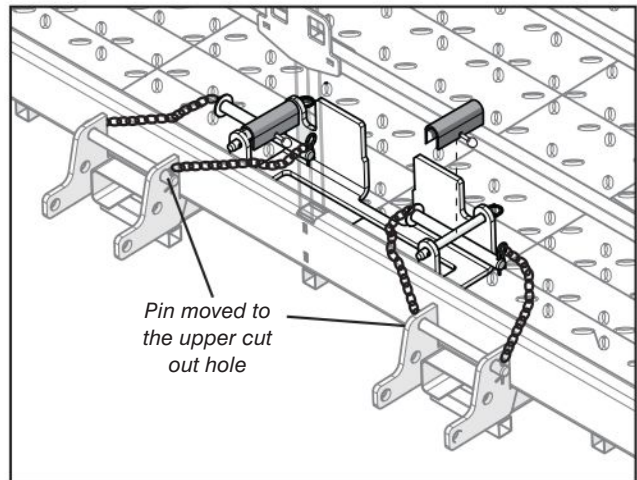


Figure 51 Auxiliary Function Locking Devices

5.16-3 Installing Personnel Work Platform Using Forks

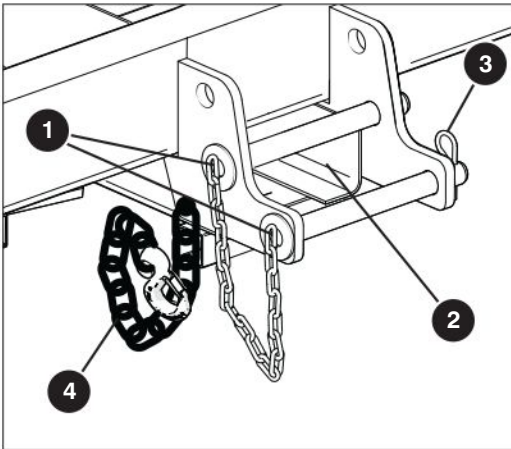


Figure 52 Fork pocket components

1. Remove the bottom **steel retaining pin** ①.
2. Slowly insert the forks into the platform fork pockets ②.

WARNING

Forks must not protrude beyond any part of the platform. Do not use forks that are longer than 48 inches.

WARNING

End fork loops are to be used only for positioning the platform. Never use fork loops to secure or elevate personnel or platform.

3. Install the two steel retaining pins behind the heel of each fork. Ensure each pin is secured with a hairpin cotter ③. See figure 53.

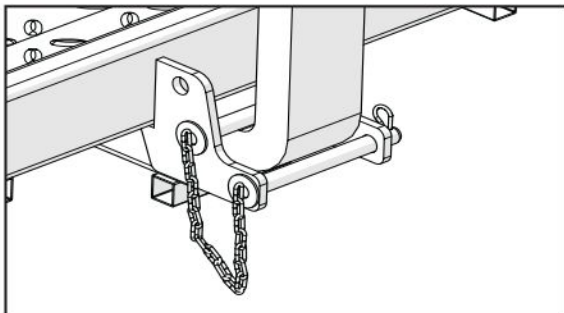


Figure 53 Fork Secured

4. Secure the safety chain ④ around a strong part of the fork carriage and secure it with the locking grab hook. Ensure chains are not slack and installed as close to a straight, horizontal pull as is possible. The chain angle must not exceed 45 degrees. See figure 54.

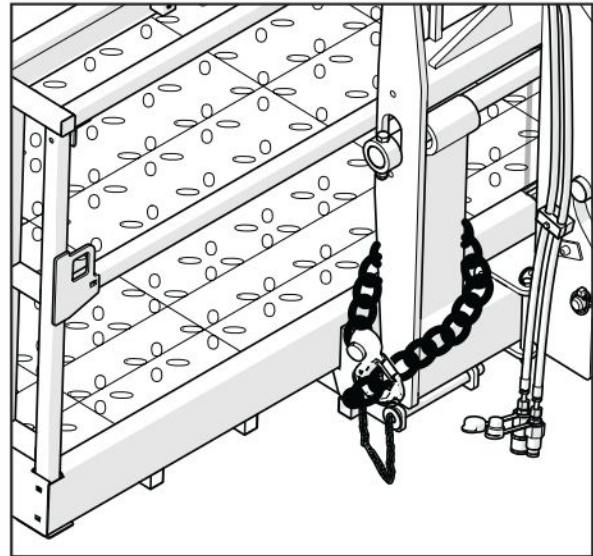


Figure 54 Safety Chain Secured

5.16-4 Platform Operation

- Drive telehandler to area where work is to be performed. Mark area to warn of overhead personnel.

WARNING

Do not drive the telehandler while the platform is occupied.

- Using the capacity charts, determine the maximum height and reach for the weight to be lifted. Never exceed the lifting capacity at any given extension or elevation of the boom as listed on the capacity charts. See [Section 5.12](#) for details.
- The work platform must be levelled before it is raised to the desired height. The telehandler's frame levelling and fork tilting functions must not be used while the work platform is occupied.
- Once the telehandler is properly positioned and ready to lift personnel, engage the parking brake and place transmission in neutral.
- Secure platform entrance gates. Platform occupants must not sit, stand or climb on the guardrails. Ladders and other devices must not be used to increase the reach of the platform.
- All personal fall protection equipment must be attached only to approved anchorage points on the platform. Only one lanyard may be attached to any anchorage point.

WARNING

Never exceed rated lift capacity as shown on the information plate on the platform or on the capacity charts.

- Lift and lower personnel only at their request. Sound horn to alert platform occupants before lifting or lowering the platform.
- Follow all operational and safety guidelines in the telehandler and platform operating manuals. Perform all movements with caution and as slowly and smoothly as practical.

WARNING

Personnel on the platform could be seriously injured if the platform comes into contact with any obstructions. Ensure the path of the platform is clear and avoid entanglement with ropes, cords or hoses.

- Once the work platform is at the desired height, shut down the engine, place the transmission in neutral and engage the parking brake.

NOTE

Always lower the platform to the ground and allow occupants to exit the platform before repositioning the telehandler.

NOTE

Keep platform occupants in direct line of sight at all times.

WARNING

DO NOT lower the platform or boom unless the area below is clear of personnel and obstruction.

Section 6 – Additional Procedures

6.1 Refueling Procedure

6.1-1 Diesel Fuel

This section provides the operator with a procedure on how to refuel telehandler with diesel fuel.

IMPORTANT

Before using your telehandler ensure there is enough fuel for expected use.


- **Fill diesel tank with ultra low sulfur diesel only.**
- **Use extreme caution while refueling telehandler.**
- **Ensure that engine and all systems are turned off before refueling.**
- **Refuel the telehandler only in a well ventilated area away from open flame and other sources of ignition, authorized by your employer and supervisor.**
- **To minimize possible static electricity fires, ensure filler nozzle touches rim of filler opening to aid the dissipation of static electricity.**
- **Never try to start telehandler if you smell diesel.**

WARNING

Do not smoke in an area where telehandlers are stored or refueled.

1. Ensure engine and all systems are turned off.
2. Open fuel cap.
3. Carefully pour diesel fuel into the tank, ensuring no spillage occurs.
4. Close and secure fuel cap.
5. Ensure there are no leaks in fuel system.
6. Wipe up any spilled fuel.
7. Dispose of rags in an approved container.

6.2 Lifting Skyjack SJ643 TH & SJ843 TH

1. Fully retract and lower boom.
2. Turn ignition switch to the off  position. Remove the key.
3. Block the rear axle by placing wood between the frame and the axle.

WARNING

Use rigging with load capacity sufficient to withstand telehandler weight. Refer to the serial plate of the telehandler for specific weight.

4. Properly adjust rigging to ensure telehandler remains level during lifting. See Center of gravity location.

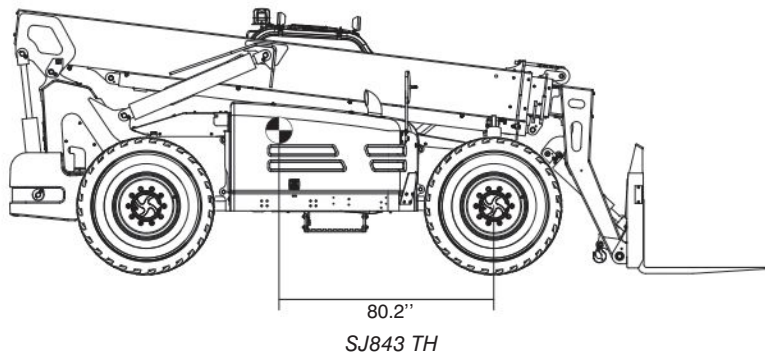
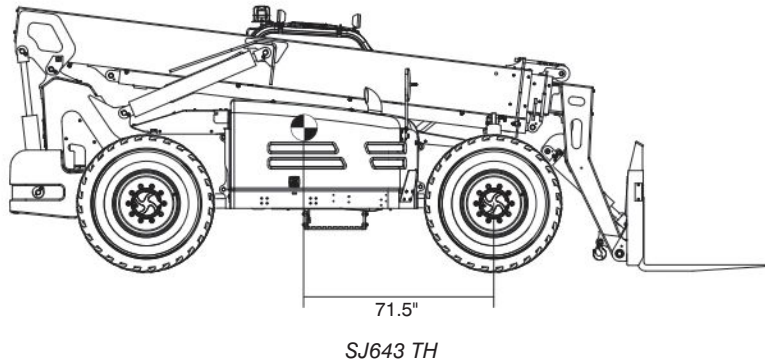


Figure 55 Center of gravity

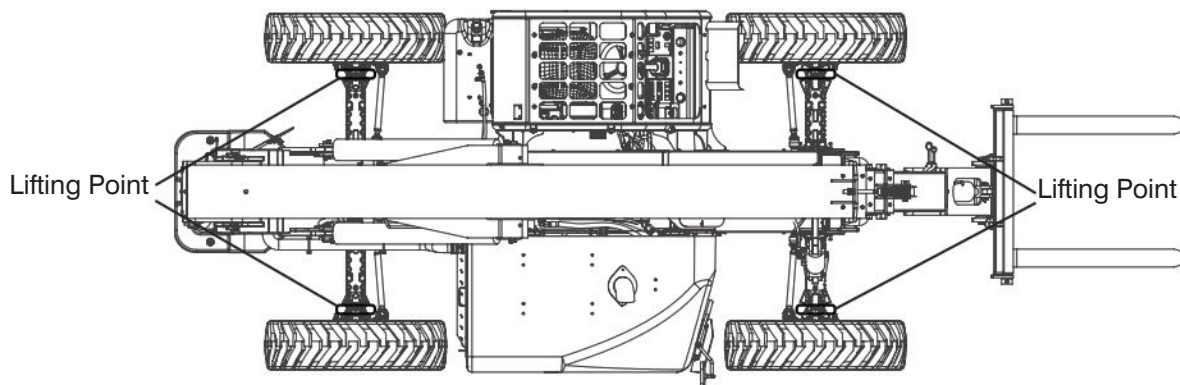


Figure 56 Lifting points

6.3 Loading, Tie-downs and Transporting

Know all national, state/provincial and local rules which apply to transporting of telehandlers.

Only qualified personnel shall operate machinery during loading and transporting.

Ensure vehicle capacity and loading equipment hoists, chains, straps, etc., are sufficient to withstand maximum telehandler weight.

The transport vehicle must be parked on a level surface and must be secured to prevent rolling while telehandler is being loaded or unloaded.

IMPORTANT

All turbo-engine air cleaner and exhaust must be sealed during transport.

1. Ensure telehandler is level prior to loading.
2. Fully lower and retract boom.
3. Ensure ramps are correctly positioned.

4. Using a spotter, carefully drive telehandler onto the transporting vehicle.
5. Once telehandler is loaded, apply parking brake and rest the attachment flat on the vehicle.
6. Move all controls to neutral position.
7. Turn key switch to off position and remove key before transporting.
8. Chock telehandler wheels (if necessary).
9. Remove all loose items.
10. Anchor down telehandler to transport surface using tie-down points (see [Figure 58](#)) and secure the forks to the platform using sufficient straps (see [Figure 57](#)).

WARNING

Inspect telehandler for loose or unsecured items.

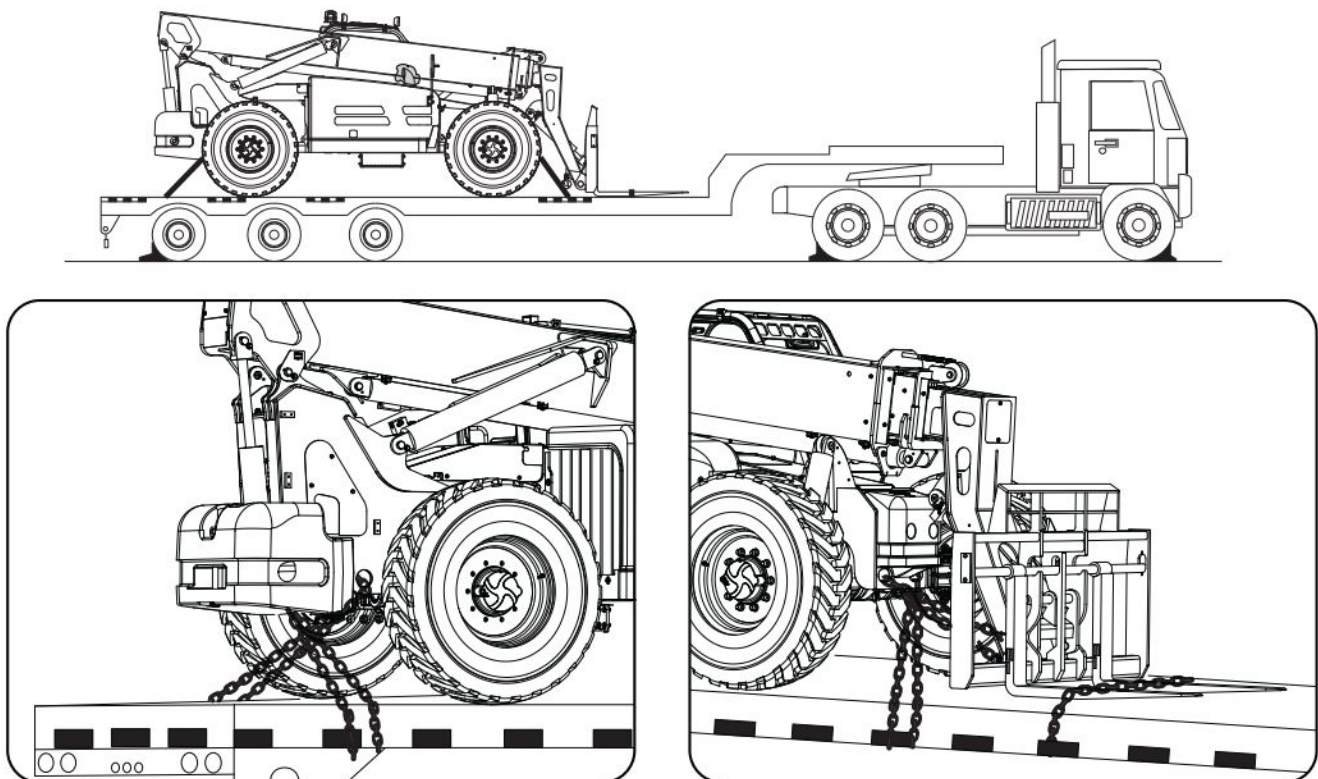


Figure 57 Tie-down points

6.4 Towing the Telehandler

IMPORTANT

- Use this procedure only to remove telehandler from mud or other places where it cannot move under its own power. When possible, repair telehandler on site.
 - Always chock wheels of the disabled telehandler to prevent accidental movement while preparing for towing. This is especially important if the failure occurs on an incline.
 - Before towing, ensure there are no obstructions around or between telehandler and towing vehicle.
 - The spotter must maintain a safe distance and must always be visible to the operator inside telehandler's cab.
 - Ensure the towing vehicle, chains, tow bar, etc., are suitable for the job. The telehandler weight is stamped on the serial number nameplate (see Section 1.5).
1. Lower or raise boom enough so that front tie-down points are fully accessible.
 2. Carefully fasten tow chains to tie-down points on either front or rear of telehandler frame.
 3. Remove chocks from wheels.
 4. Enter cab and fasten seat belt.

5. Ensure transmission gear selector is in neutral and the transmission lever neutral lock switch is in the "N" neutral position.
6. Start the engine.
7. Release park brake.
8. Start towing the telehandler while operating the steering and brakes.
9. Move telehandler to a compact level surface.
10. Apply park brake.
11. Turn off engine and remove key from ignition switch.

⚠ WARNING

Ensure that you maintain three points of contact to mount/dismount the cab.

12. Exit the telehandler.
13. Chock or block wheels to prevent telehandler from rolling.

⚠ WARNING

Poor traction can cause telehandler or towing vehicle to slide. Grades can require additional distance to stop the telehandler. Be careful if traction conditions are poor or the machine is on an incline.

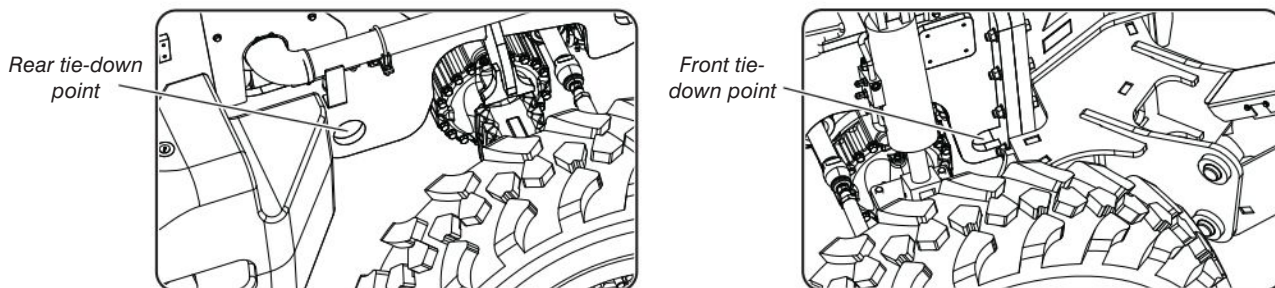


Figure 58 Front and rear tie-down point locations

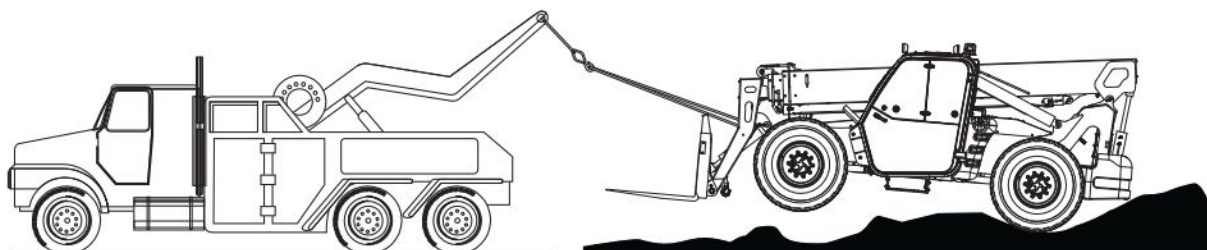


Figure 59 Towing the telehandler from front tie-down points

6.5 Using the Telehandler as a Tow Vehicle

⚠ WARNING

Do not exceed rated towing capacity. Failure to do so may result in death or serious injury.

⚠ WARNING

Maximum towing capacity of the telehandler is determined with **NO LOAD ON BOOM**. Never attempt to operate the boom or lift any load while telehandler is being utilized as a tow vehicle.

6.5-1 Towing Pin

The **towing pin** ① utilizes the telehandler as a towing vehicle and is located at the rear of the telehandler as shown in the figure below.

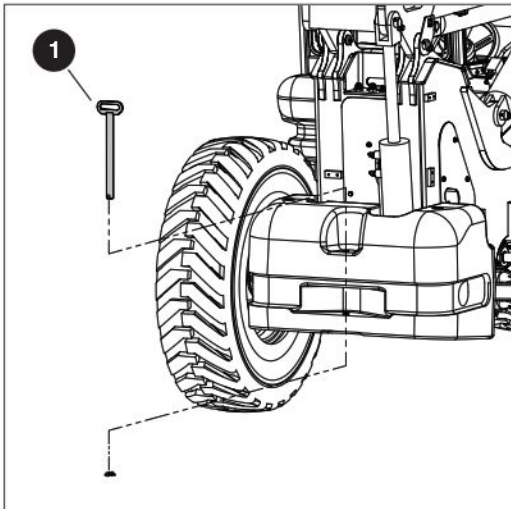


Figure 60 Towing Pin

6.5-2 Pintle Hitch (If Equipped)

The **pintle hitch** ② utilizes the telehandler as a towing vehicle and is mounted and connected to a tapped plate located at the rear of the telehandler as shown below.

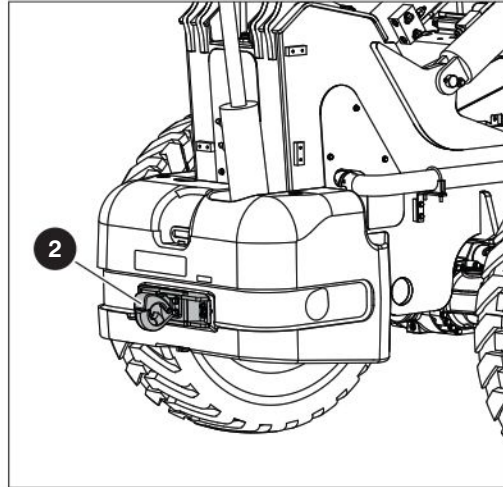


Figure 61 Pintle Hitch at rear of telehandler

Section 7 – Specifications

Table 7.1 Standard and Optional Equipment

Models	SJ643 TH	SJ843 TH
Standard Equipment		
48" / 60" / 72" QA 10K Fork Carriages	*	*
Air Filled Tires	*	*
Diesel Engine	*	*
Engine Block Heater	*	*
Four-wheel drive	*	*
Frame Leveling System	*	*
Lifting Hook	*	*
Open Operator's Cab	*	*
Operator horn	*	*
Reverse/Backup Alarm	*	*
Spring-applied Hydraulically Released Parking Brake	*	*
Three-Speed Transmission	*	*
Three-Mode Steering	*	*
Optional Equipment		
1.75 Cu. Yd. Bucket Loader Attachment	*	*
12 ft. Truss Boom	*	*
2 ft. Jib Boom	*	*
48" / 60" / 72" Side-Tilt Fork Carriages	*	*
72" Swing Carriage	*	*
Back-up Sensor/ Back-up Camera and Sensor	*	*
Enclosed Operator's Cab	*	*
Enclosed Operator's Cab with A/C	*	*
Fire Extinguisher	*	*
Flashing Beacon	*	*
Foam Filled Tires	*	*
Fork Positioner	*	*
Four-Wheel Fenders	*	*
Pintle Hitch	*	*
Positive Air Shut-off System	*	*
Premium Multi-function Joystick	*	*
Reserve Brake System	*	*
Road/Work/Boom Lights	*	*
Continuously Variable Transmission	*	*

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Table 7.2 Specifications and Features

Models		SJ643 TH	SJ843 TH
Standard Engine			
Type	Deutz 2.90 L Tier 4 Final		
Cylinders	4		
Horsepower @ 2600 RPM	74 HP		
Capacity	177 cu in (2900 cm ³)		
Torque @ 1600 RPM	221 lb ft (300 N-m)		
Idle Speed*	1200 – 1250 RPM		
Fuel type	Diesel		
Transmission			
Powershift	Type	Powershift with soft shift	
	Speeds forward	3	
	Speeds reverse	3	
CVT	Type	Continuously Variable Transmission - Two Range Powershift	
	Speeds forward	2	
	Speeds reverse	1	
Travel Speeds			
Powershift	Range 1	3 mph (4.80 km/h)	
	Range 2	6 mph (9.70 km/h)	
	Range 3	16 mph (25 km/h)	
CVT	Range	0 mph (0 km/h) - 15 mph (24 km/h)	
Electrical			
Negative ground	12 Volts		
Alternator	95 Amps		
Battery	90 Amps		
Backup Alarm	107 dBm		
Dimensions			
Wheelbase	128 in (325.12 cm)		
Overall width	102 in (259.08 cm)		
Overall height	95.25 in (241.94 cm)		
Overall length (less forks)	232 in (590 cm)		
Ground clearance	19 in (48.26 cm)		
**Maximum weight without attachment	19,880 lb (9017,42 kg)	21,780 lb (9,879.24 kg)	
Turn radius (inside)	2.7 ft. (82.44 cm)		
Turn radius (outside)	13 ft. (396.24 cm)		
Boom			
Number of sections	3		
Maximum lift height	43 ft 4 in (13.20 m)		
Maximum forward reach	28 ft 7 in (8.71 m)		
Standard Forks	2.25 in x 5 in x 48 in (standard tapered forks)		
Carriage rollback	20°		
Carriage forward tilt	92.5°		

* Engine idle speed is measured with 5% droop when in gear.

** Add 400 lb (181.437 kg) to the maximum weight for machines with CVT

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Table 7.3 Tire/Wheel Specifications

Models SJ643 TH & SJ843 TH					
	FILL	Size	Pressure	Ply Rating	Wheel Nuts Torque
PRIMEX G3000	AIR	13.00 X 24 TG G-2	87 psi (600 Kpa)	16	"442 ft.-lb. (600 Nm)"
	FOAM		-		
GPX Rough Terrain L3 R Grade Rock XT (Hard Surface)	AIR	13.00 X 24 L3 GPX	80 psi (552 Kpa)		
	FOAM		-		
GALAXY GIRAFFE XLW	AIR	13.00 X 24 14 PR	87 psi (600 Kpa)		
	FOAM		-		
SOLDAIR	-	50.787 X 8.5 X 13.00 X 24	N/A	-	
SOLIDBOSS	-	50 X 13.00 X 24	N/A	-	
BLACKSTONE	FOAM	13.00 X 24	-	16	

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 WARNING

Do not use tires other than those specified for this machine. Do not mix different types of tires. Tires other than those specified can adversely affect stability. Failure to operate with matched, approved tires in good condition can result in serious injury or even death. Replace tires with the exact, Skyjack-approved types only.

IMPORTANT

For proper function of each axle differential, all four wheels must have same tire size installed at all times. Failure to comply with this requirement reduces the life of the differentials and reduce overall mobility of telehandler.

Table 7.4 Recommended Fluids/Lubrications

SJ643 TH & SJ843 TH			
Engine			
Fuel Type	Ultra Low Sulfur Diesel (EN 590, ASTM D975)		
Fuel Tank Capacity	35.7 gal (142 L)		
Recommended Oil Type	SAE 15W40 GR.SH, CD CF		
Engine Oil Capacity	9.5 quart (9.0 L)		
Coolant Type (Standard)	COOLANT-ANTIFREEZE 50/50 PREMIX *		
Coolant Type (Cold Weather Option)	COOLANT-ANTIFREEZE 60/40 PREMIX *		
Coolant Tank Capacity	3.7 gal (14 L)		
Transmission			
Powershift	Oil Type	ATF DEXRON 3	
	Capacity	16.9 Quart (16 L)	
CVT	Oil Type	CVT Case: VALVOLINE INVARITORC 205	Dropcase: ATF DEXRON 3
	Capacity	18 L	0.90 L
Axles			
Differential	Mobilube HD		
Front Axle Capacity	8.0 quart (7.5 L)		
Rear Axle Capacity	8.0 quart (7.5 L)		
Planetary Wheel Ends	SAE 80W-90EP		
Capacity	1.3 quart (1.2 L)		
Hydraulic Oil			
Standard Factory Fill	ATF Dexron 3		
Type	Multipurpose ATF		
Tank Capacity	43.85 gal (166 L)		
Grease Points			
Type	EP2 Grease		

* Refer to manufacturer's manual.

 WARNING

Do not mix hydraulic oil of different types or use oils of types other than those originally supplied with this equipment. Doing so can severely damage hydraulic components. A full hydraulic oil system flush must be performed prior to adding a new type of hydraulic oil. Consult Skyjack service department.

Section 8 – Labels

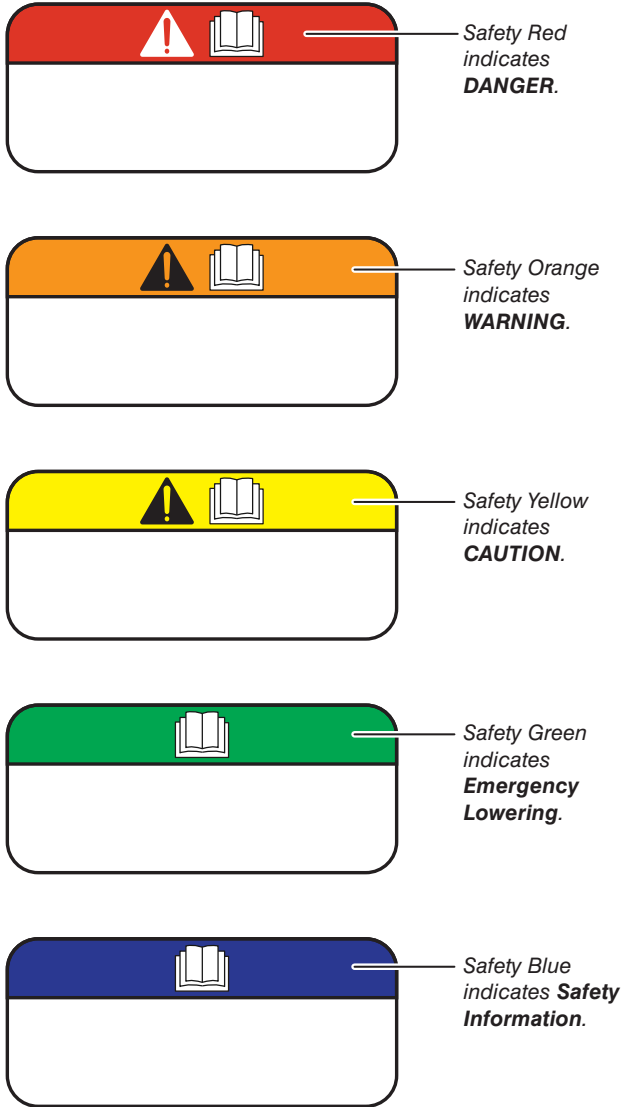
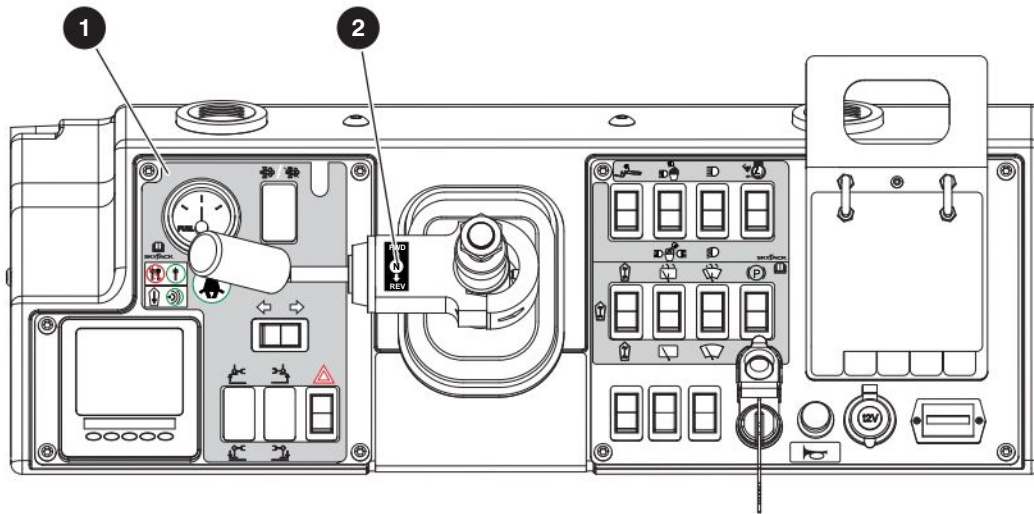


Figure 62 Label legend

8.1 Models SJ643 TH & SJ843 TH

Operator's Cab Controls




Description


Label Pictorial


1 Left Side Dash Panel


Turn Signals Switch (if equipped)

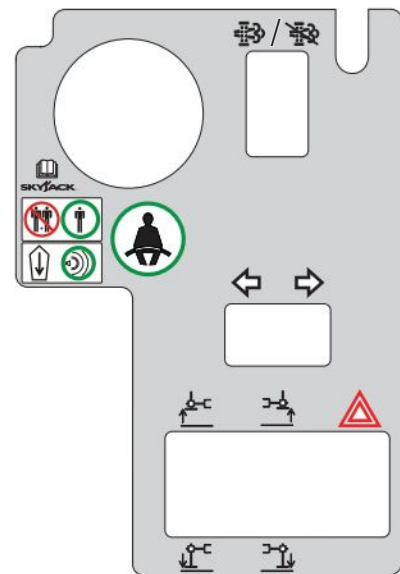
- Select ← to signal left.
- Select → to signal right.

Hazard Warning Light Switch (if equipped). 

Always wear seat belt. 

Absolutely no riders. 

This vehicle is equipped with a backup alarm sound. 

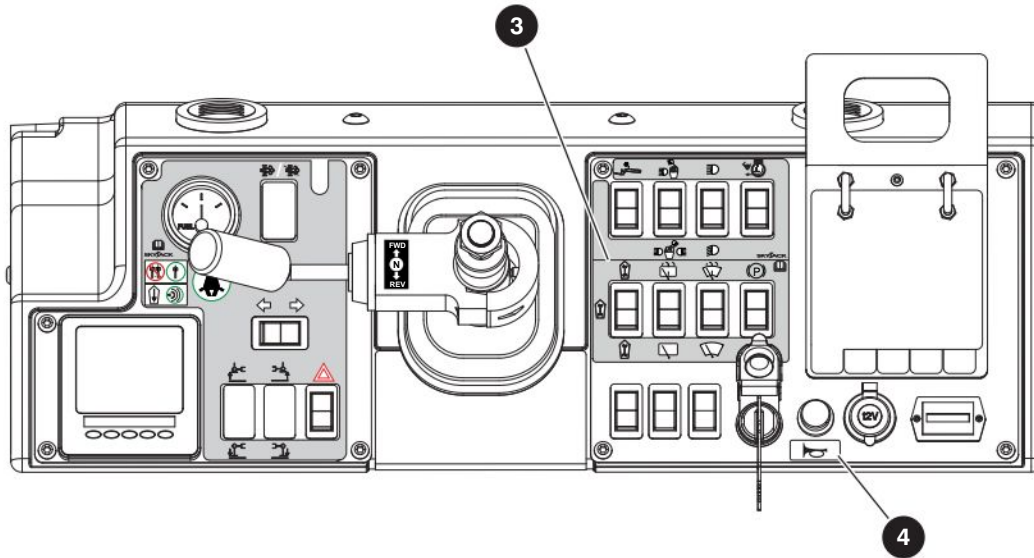


2 Transmission Range Selector

Transmission gear selector



Operator's Cab Controls (continued)



Description

Label Pictorial

3 Right Side Dash Panel

Boom Lights Switch (if equipped)

- Select to turn on boom lights.

Front and Rear Work Lights Switch (if equipped)

- Select to turn on front work lights.
- Select to turn on front and rear work lights.

High/Low Headlights and Taillights Switch (if equipped)

- Select to turn on high beam headlights and tail lights.
- Select to turn on low beam headlights and tail lights.

Positive Air Shutoff Switch (if equipped)

- Select to trigger the positive air shutoff valve.

Steering Mode Switch

- Select for four wheel steering.
- Select for front steering.
- Select for crab steering.

Rear Windshield Washer/Wiper Switch

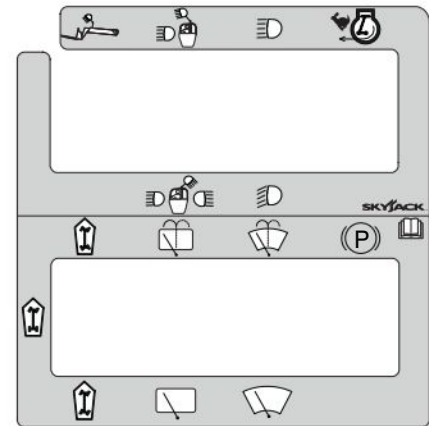
- Select to turn on. Select to turn on wiper.

Front and Top Windshield Wiper Switch

- Select to turn on. Select to turn on wiper.

Park Brake Switch

- Select to engage park brake.

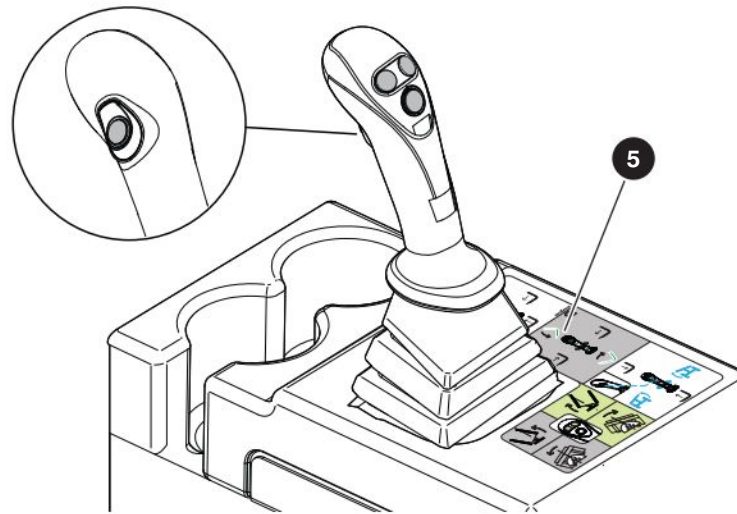


4 Horn

Horn label



Operator's Cab Controls (continued)

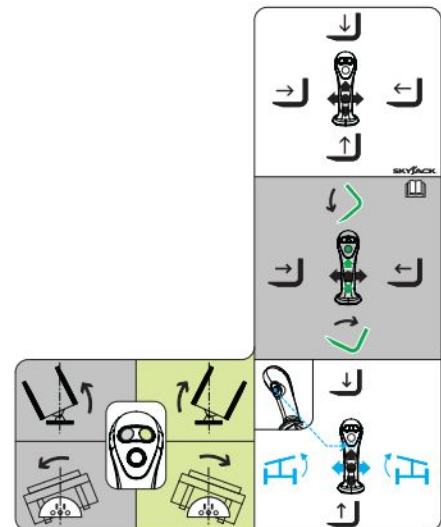


Description	Label Pictorial
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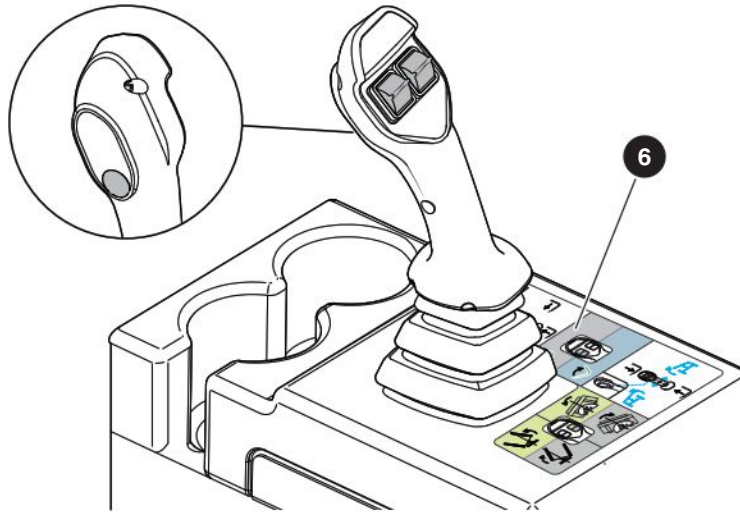
5 Standard Multi-function Joystick

The multi-function single controls boom operation, frame leveling, fork tilt, and auxiliary functions.

- Move joystick forward or backward to raise or lower the boom.
- Move joystick right or left to extend or retract the boom.
- Press and hold middle button and move joystick forward to tilt attachment forward.
- Press and hold middle button and move joystick rearward to tilt attachment backward.
- Press and hold frame level enable switch and move joystick to the left to level the frame to the left.
- Press and hold frame level enable switch and move joystick to the right to level the frame to the right.
- Use optional attachment function switches to control the auxiliary functions of optional attachments.



Operator’s Cab Controls (continued)



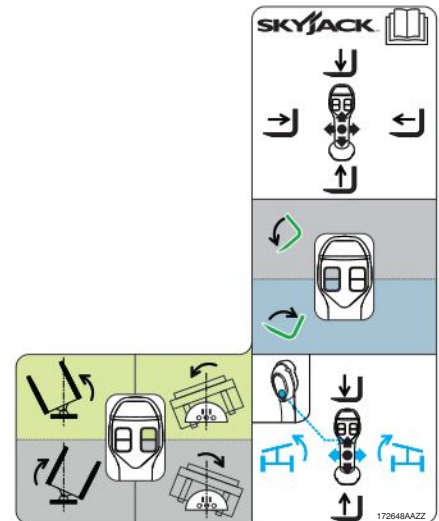
Description

Label Pictorial

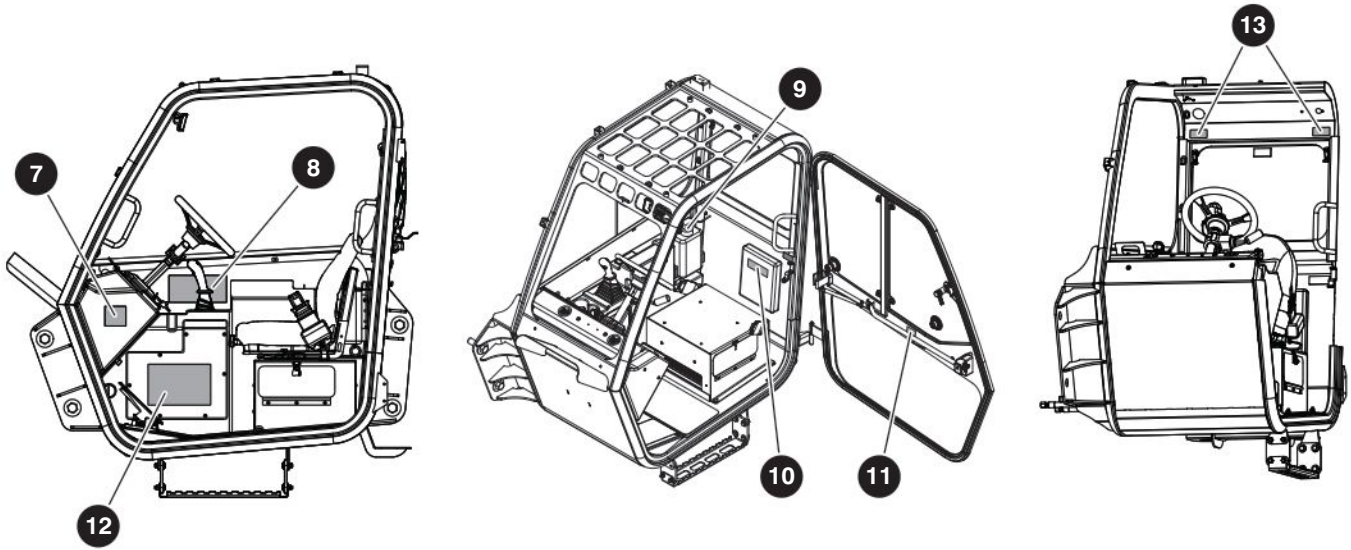
6 Premium Multi-function Joystick (If Equipped)

The multi-function single controls boom operation, frame leveling, fork tilt, and auxiliary functions.

- Move joystick forward or backward to raise or lower the boom.
- Move joystick right or left to extend or retract the boom.
- Hold left switch up to tilt attachment forward.
- Hold left switch down to tilt attachment backward.
- Press and hold frame level enable switch and move joystick to the left to level the frame to the left.
- Press and hold frame level enable switch and move joystick to the right to level the frame to the right.
- Hold right switch up or down to control the auxiliary functions of optional attachments. Refer to [Section 3.6](#) for details for each optional attachment.

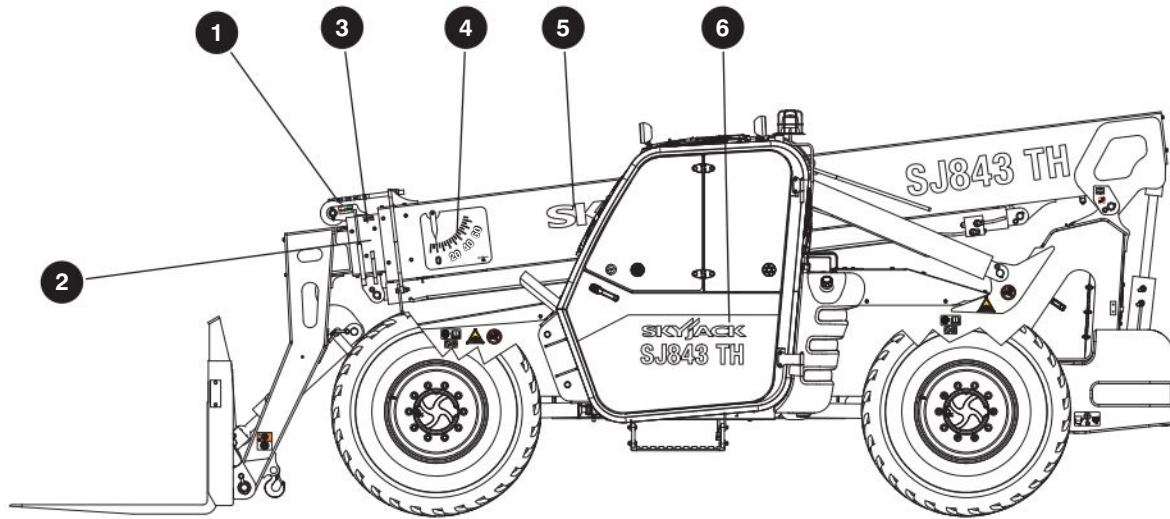


Operator's Cab



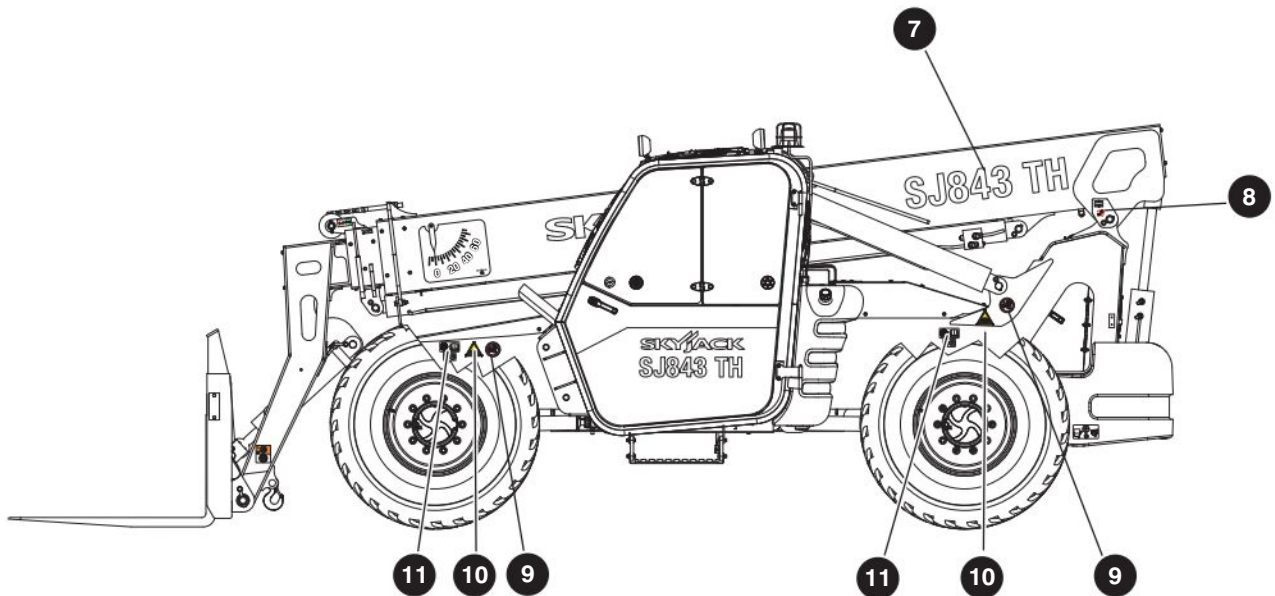
Description	Label Pictorial
<p>7 Transportation Reminder Ensure engine air cleaner, and exhaust are sealed during transportation.</p>	
<p>8 Hazard Identification Read and understand outlined risks associated with this telehandler prior to operation.</p>	
<p>9 Windshield Washer Fluid Container Windshield Washer fluid</p>	
<p>10 Manual Storage Box Indicates location of operating manual and other important documentation.</p>	
<p>11 Open Door (If Equipped) Squeeze to open cab door.</p>	
<p>12 Daily & Weekly Maintenance Chart Grease points and lubrication intervals chart</p>	
<p>13 Emergency Exit Procedure</p>	

Left Side



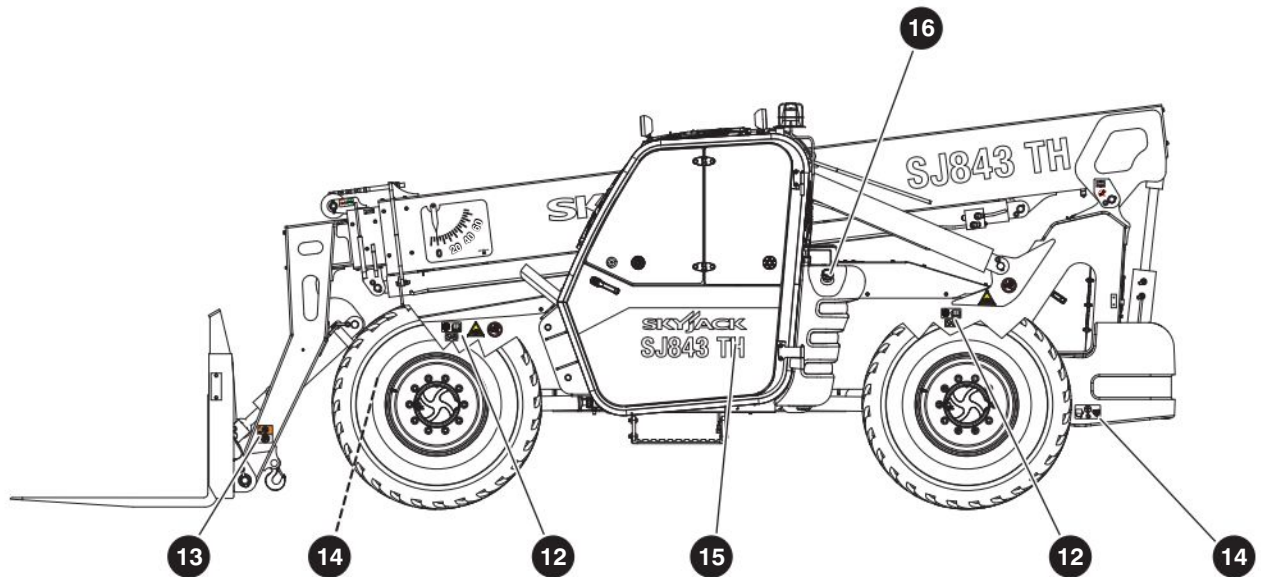
Description	Label Pictorial
<p>1 Keep Chains Tight Ensure chains are tight.</p>	
<p>2 Extension Letters Boom extension labels</p>	<p>A B C D</p>
<p>3 Grease Grease point</p>	
<p>4 Rotation Angle Boom rotation angle label</p>	
<p>5 Skyjack Logo Skyjack logo - 51" White</p>	
<p>6 Skyjack Logo Skyjack logo - 25" White</p>	

Left Side (continued)



Description	Label Pictorial
<p>7 Model Number Product identifier - 25" White</p>	
<p>8 Warning - Do Not Alter Do not alter or disable limit switches or other safety devices.</p>	
<p>9 Keep Clear Keep clear.</p>	
<p>10 Body Crushing Hazard Danger - Body crushing hazard</p>	
<p>11 Wheel Specifications Refer to manual for wheel type, offset, pressure and torque.</p>	

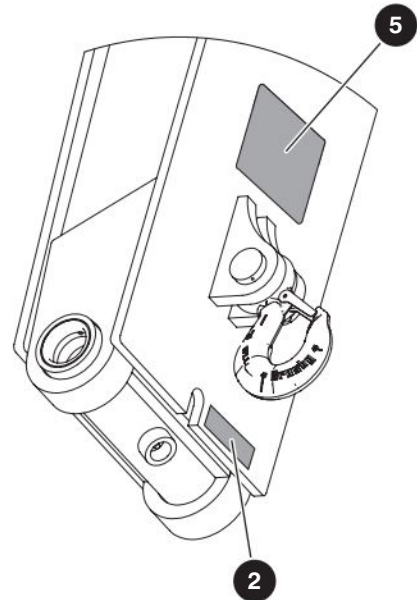
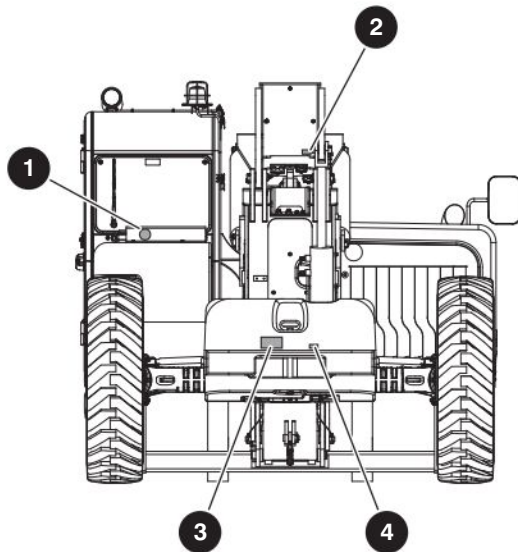
Left Side (continued)



Description	Label Pictorial
<p>12 Tire Pressure or Foam Filled Tires* Indicates rated tire pressure or foam filled tires. *Tire pressure will vary, may not be as shown.</p>	
<p>13 Unpinned Attachment Unpinned attachment warning</p>	
<p>14 Tie-down Points Only use these points for tying down.</p>	
<p>15 Model Number Product identifier - 25" White</p>	<p>SJ843 TH</p>
<p>16 Ultra-low Sulfur Diesel Fuel Only Refill fuel tank with ultra-low sulfur diesel fuel only.</p>	

Rear

Lifting Hook on Jib



Description

Label Pictorial

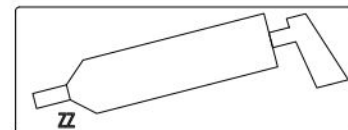
1 No Smoking

Do not smoke near this location.



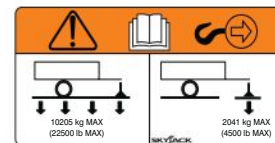
2 Grease

Grease point



3 Towing Capacity

Telehandler's maximum towing capacity & tongue weight



4 Warning – No Step

No step warning

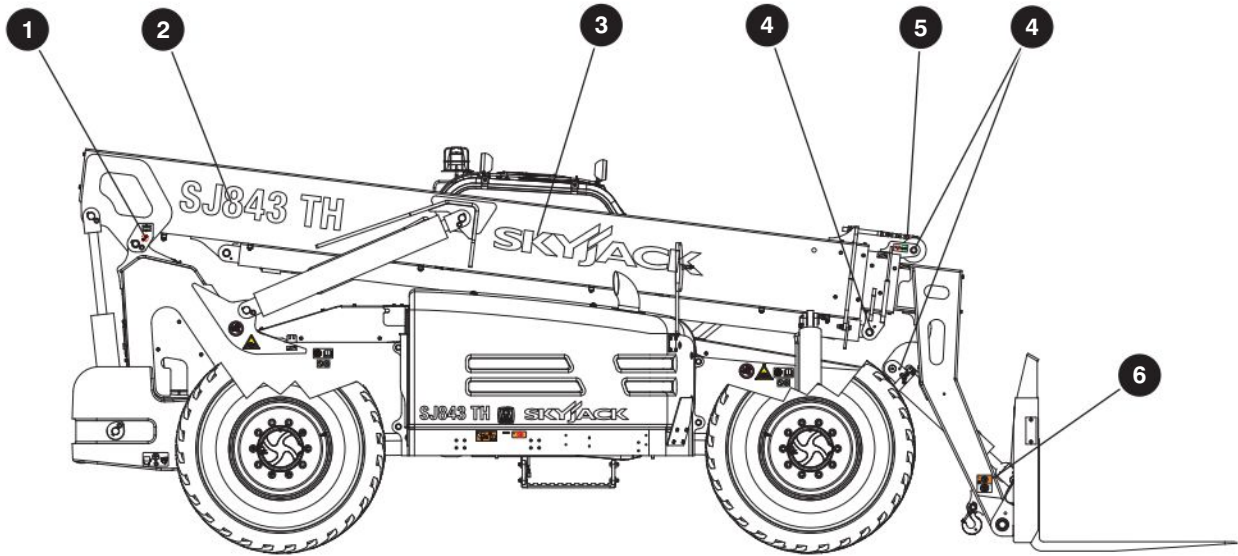


5 Lifting Hook Capacity Warning

Refer to operator's manual and capacity chart inside cab.

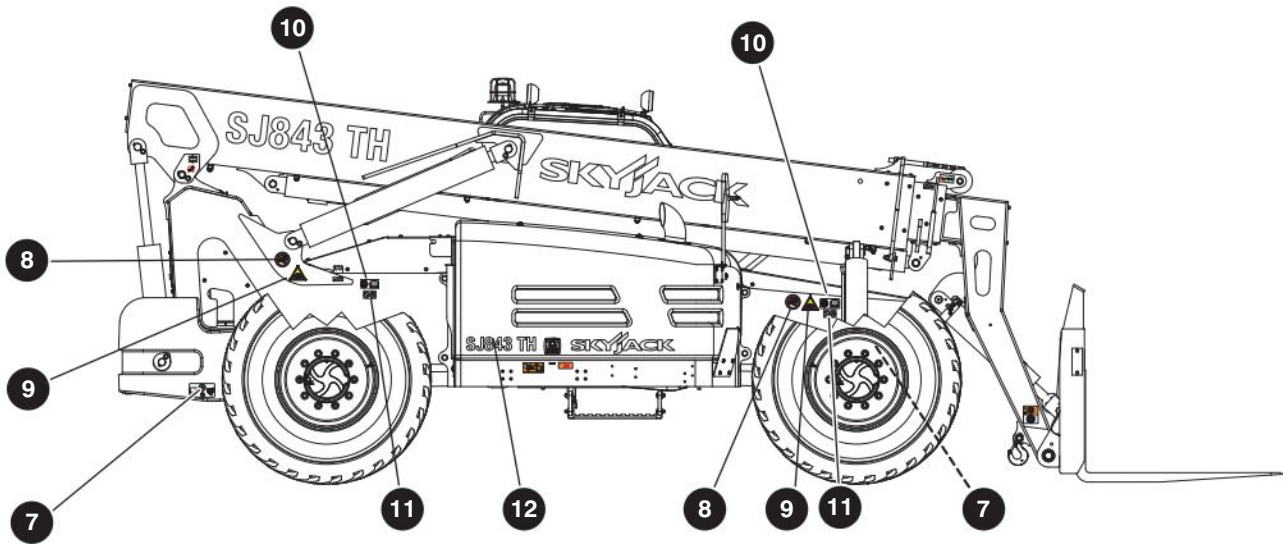


Right Side



Description	Label Pictorial
<p>1 Warning - Do Not Alter Do not alter or disable limit switches or other safety devices.</p>	
<p>2 Model Number Product identifier - 25" White</p>	
<p>3 Skyjack Logo Skyjack logo - 51" White</p>	
<p>4 Grease Grease point</p>	
<p>5 Keep Chains Tight Ensure chains are tight.</p>	
<p>6 Unpinned Attachment Unpinned attachment warning</p>	

Right Side (continued)



Description

Label Pictorial

7 Tie-down Points

Only use these points for tying down.



8 Keep Clear

Keep clear.



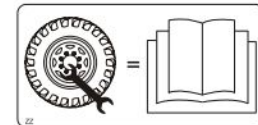
9 Body Crushing Hazard

Danger - Body crushing hazard



10 Wheel Specifications

Refer to manual for wheel type, offset, pressure and torque.



11 Tire Pressure or Foam Filled Tires*

Indicates rated tire pressure or foam filled tires.

*Tire pressure will vary, may not be as shown.

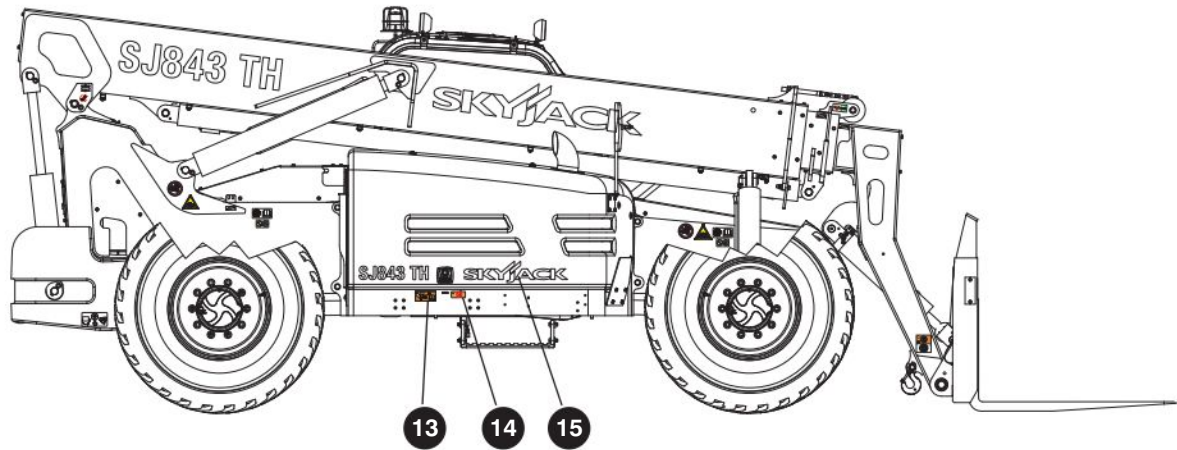


12 Model Number

Product identifier - 17" White

SJ843 TH

Right Side (continued)



Description

Label Pictorial

- 13 Crushing Hazard**
Danger - Crushing hazard



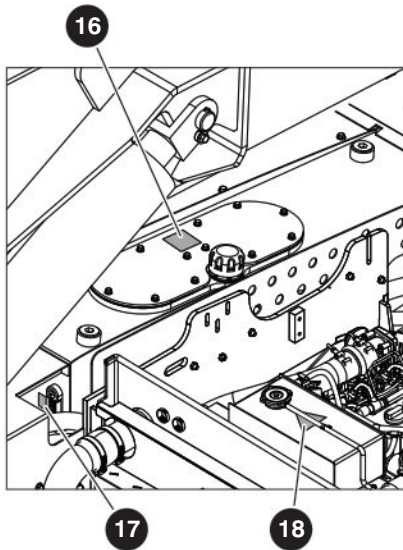
- 14 Warning – No Step**
No step warning



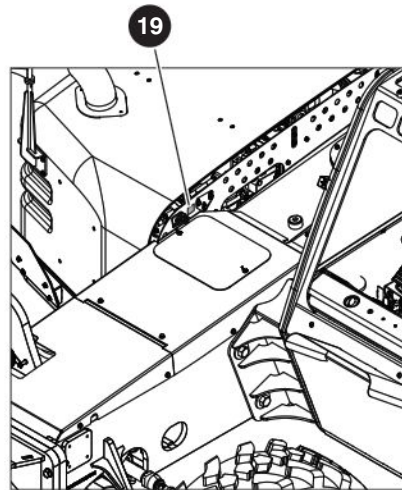
- 15 Skyjack Logo**
Skyjack logo - 17” White



Engine Compartment and Frame

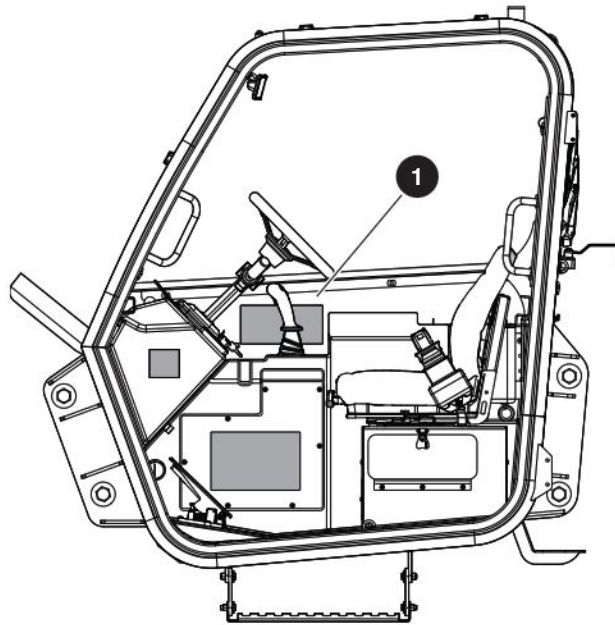


Frame



Description	Label Pictorial
<p>16 Hydraulic Oil ATF Dexron III Refill Hydraulic oil tank with ATF Dexron III hydraulic oil.</p>	
<p>17 Hydraulic Oil Level Indicates minimum/maximum oil level.</p>	
<p>18 Caution - Coolant Fill Point Refer to service manual for coolant fill instructions.</p>	
<p>19 Main Power Disconnect Switch For use during maintenance only. Rotate clockwise to turn on main power, rotate counterclockwise to turn off main power, insert padlock into position.</p>	

California Proposition



Description

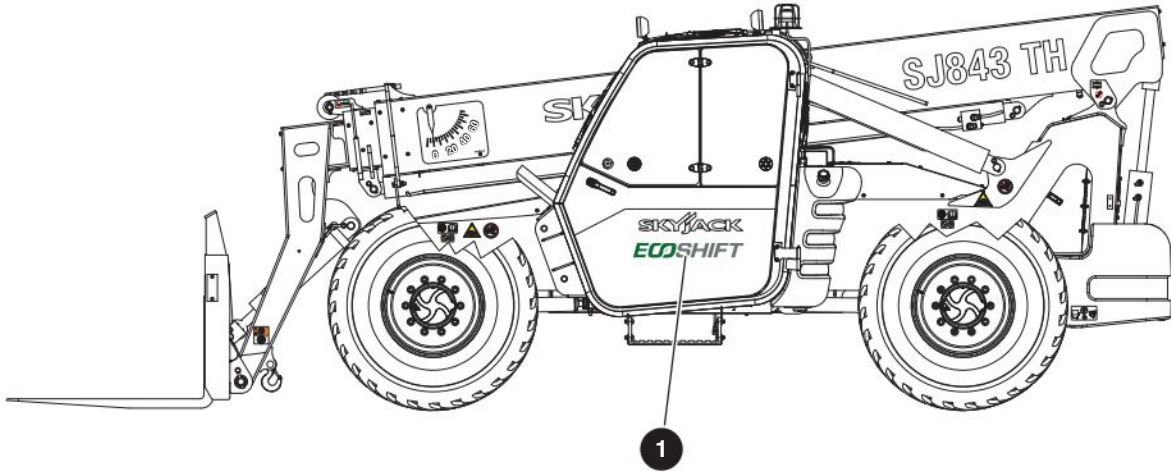
Label Pictorial

1 Warning - California Proposition 65

Cancer and Reproductive Harm
<https://www.p65warnings.ca.gov/>.



CVT Transmission (If Equipped)



Description

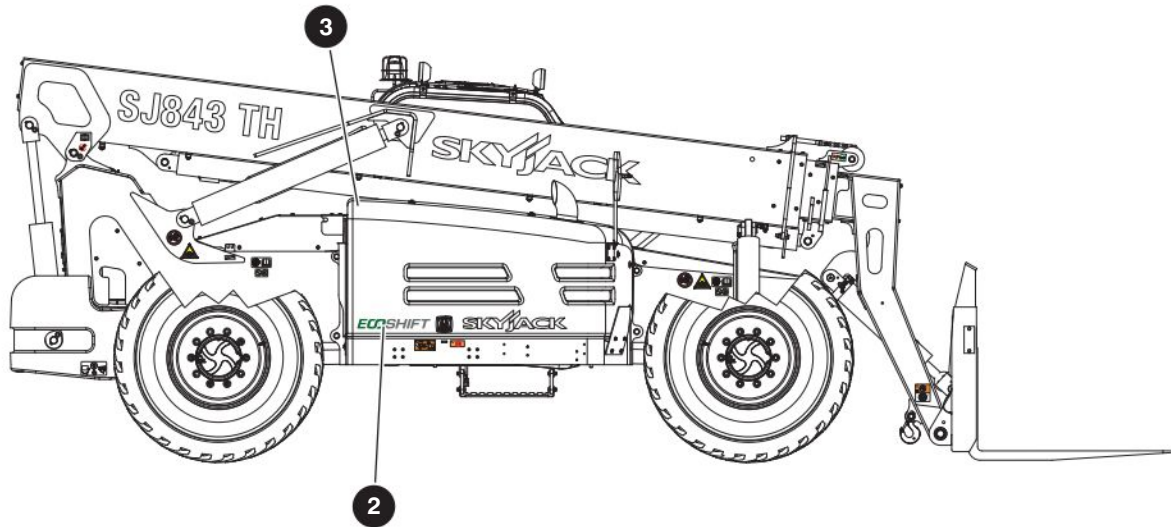
Label Pictorial

1 EcoShift Logo

CVT Transmission identifier - 25''



CVT Transmission (If Equipped)



Description

Label Pictorial

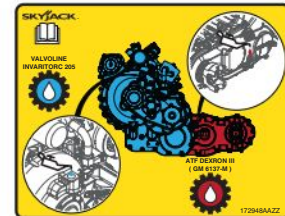
2 EcoShift Logo

CVT Transmission identifier - 17"



3 CVT Transmission Oil

Refill with transmission oil VALVOLINE INVARITORC 205.



Section 9 – Unique Skyjack Features

Your Skyjack telehandler may be equipped with the following unique features:

ACCESSORYZERS™

Having equipment with features and functionality that allow you and your customers to do more is a vital part of the utilization equation. Skyjack offers a range of accessory products to further expand a given product's adaptability and your power to offer a truly flexible rental choice.

AXLDRIVE™

Skyjack's mechanical "axle based" drive system gives positive traction and excellent rough ground "terrain-ability". This is achieved using an automatic or manual (model dependent) locking differential on the rear axle and limited slip differential on the front axle. This means machines can climb grades of up to 30% in the case of Rough Terrain Scissors Lifts, and 50% in the case of Boom Lifts. This industry leading terrain capability means one can use the Skyjack Rough Terrain Scissor Lifts and Boom Lifts in the most challenging of conditions.

FLEXCAB™

Skyjack's TH series telehandlers feature an innovative cab design that allows fleet operators to easily convert between open and enclosed cabs with simple hand tools, providing increased flexibility for fleet movement and fast response to customer demands. Easily sourced flat glass panels with no custom curved profiles and a bolt-on/bolt-off window retention system ensures minimal downtime and incurred costs for repairing damaged glass in the field.

READYHOOK™

Skyjack's yoke mounted lifting hook is fitted as standard on TH series telehandlers. With capacities that match the maximum lift capability of the telehandler the hook allows the safe under-slinging of loads and avoids the practice of using the forks as an underslung lifting device.

SKYCODED™

At the heart of every Skyjack machine, proven and simplistic control systems using Skyjack's color coded and numbered wiring system make our machines the easiest to trouble shoot and repair. – Black #14 is for the lift function on a 3219, and it is lift on a 63AJ. Using an analog based control system allows Skyjack AWP's to operate using a simplified system with fewer and less expensive components – less maintenance and lower costs.

SMARTORQUE™

Skyjack's TH series of telehandlers use a low horse power, high torque engine that has been engineered to provide the necessary torque and hydraulic performance found in higher horse power engines. This provides the benefit of lower acquisition costs and the employment of minimal emission controlling modules that otherwise are both expensive and complicated. SMARTORQUE™ means no diesel particulate filter (DPF), no diesel exhaust fluid (DEF) and no other active exhaust after treatment on standard engines for Tier IV Final.



WARNING

Cancer and Reproductive Harm-
<https://www.p65warnings.ca.gov/>.

SKYJACK™

www.skyjack.com