



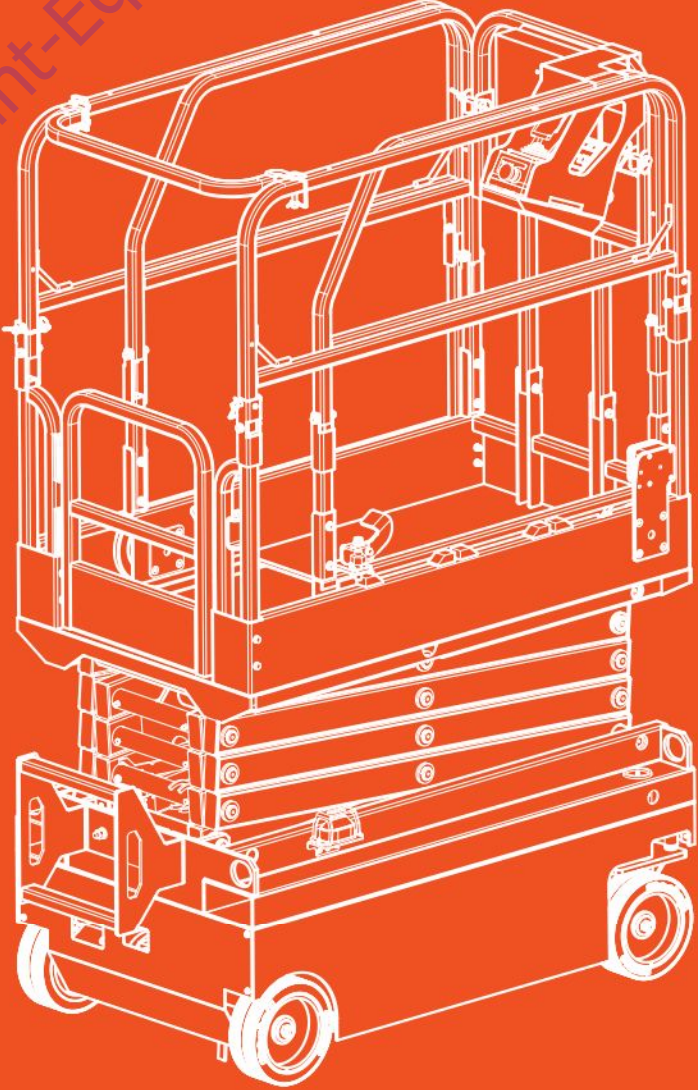
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SERVICE MANUAL

SJ3013 & SJ3014 micro

DC ELECTRIC SCISSORS



238839ABA

December 2020
ANSI & CE

This manual is for MEWPs with serial numbers:

SJ3013 & SJ3014 micro: 09281002 to 09289999

Please refer to the website (www.skyjack.com) for contact information, other serial numbers, the most recent technical manuals, and USB software.

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THIS SAFETY ALERT SYMBOL MEANS ATTENTION!



BECOME ALERT! YOUR SAFETY IS INVOLVED.

The Safety Alert Symbol identifies important safety messages on MEWPs, 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 MEWP.

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Section 1 – Scheduled Maintenance

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 Mobile Elevating Work Platform (MEWP) definition

A mobile machine intended for moving persons, tools, and material to working positions, consisting of a work platform with controls, an extending structure, and a chassis.

1.1-2 Purpose of Equipment

The Skyjack SJ DC Electric Scissor lifts are designed to move personnel, tools, and materials to working positions.

1.1-3 Use of Equipment

The MEWP is a highly maneuverable, mobile work station. Work platform elevation and elevated driving must only be done on a firm, level surface.

1.1-4 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.

1.1-5 Ownership of MEWP

Notify Skyjack of MEWP ownership. If you sell or transfer the ownership of a MEWP, promptly notify Skyjack of the new owner's contact information.

Skyjack needs this information to inform the owner of any updates or additional activities that are necessary to keep the machine in proper working condition.

1.1-6 Optional equipment

This MEWP is designed to accept a variety of optional accessories. Refer to *operation manual* for a list of the optional accessories. Operating instructions for these options are in the operation manual.

For components or systems that are not standard, speak to the Skyjack Service Department. Give the model and serial number for each applicable MEWP.

1.2 Maintenance and Inspection Schedule

The actual operating environment of the work platform governs the use of the maintenance schedule. The inspection points covered in [1.4 Frequent/Periodic/Annual/Pre-Delivery Inspection Checklist](#), indicates the areas of the MEWP to be maintained or inspected and at what intervals the maintenance and inspections are to be performed.

1.2-1 Owner's Annual Inspection Record

It is the responsibility of the owner to arrange quarterly and annual inspections of the MEWP. [1.3 Owner's Annual Inspection Record](#). Owner's Annual Inspection Record is to be used for recording the date of the inspection, owner's name, and the person responsible for the inspection of the work platform.

1.2-2 Replacement Parts

Use only original replacement parts. Parts such as batteries, wheels, railings, etc. with weight and dimensions different from original parts will affect stability of the MEWP and must not be used without manufacturer's consent.

All replacement tires must be of the same size and load rating as originally supplied tires; to maintain safety and stability of MEWP.

Consult Skyjack's Service Department for optional tires specifications and installation.

WARNING

Any unit that is damaged or not operating properly must be immediately tagged and removed from service until proper repairs are completed.

1.2-3 Maintenance and Service Safety Tips

Maintenance and repair should only be performed by personnel who are trained and qualified to service this MEWP.

All maintenance and service procedures should be performed in a well lighted and well ventilated area.

Anyone operating or servicing this MEWP must read and completely understand all operating instructions and safety hazards in this manual and operating manual.

All tools, supports and lifting equipment to be used must be of proper rated load and in good working order before any service work begins. Work area should be kept clean and free of debris to avoid contaminating components while servicing.

Make sure personnel are clear from under unsupported components/systems that are at risk of movement during maintenance.

All service personnel must be familiar with employer and governmental regulations that apply to servicing this type of equipment.

Keep sparks and flames away from all flammable or combustible materials.

Properly dispose of all waste material such as lubricants, rags, and old parts according to the relative law provisions obtaining in the country.

Before attempting any repair work, disconnect the main power connectors.

Keep personnel clear of components, systems or unsupported loads that may move unexpectedly during maintenance procedures.

Preventive maintenance is the easiest and least expensive type of maintenance.

1.2-4 Hydraulic System & Component Maintenance and Repair

The following points should be kept in mind when working on the hydraulic system or any component:

WARNING

Escaping fluid from a hydraulic pressure leak can damage your eyes, penetrate the skin and cause serious injury. Use proper personal protection at all times.

1. Any structure has limits of strength and durability. To prevent failure of structural parts of hydraulic components, relief valves which limit pressure to safe operating values are included in the hydraulic circuits.
2. Tolerance of working parts in the hydraulic system is very close. Even small amounts of dirt or foreign materials in the system can cause wear or damage to components, as well as general faulty operation of the hydraulic system. Every precaution must be taken to assure absolute cleanliness of the hydraulic oil.
3. Whenever there is a hydraulic system failure which gives reason to believe that there are metal particles or foreign materials in the system, drain and flush the entire system and replace the filter cartridges. A complete change of oil must be performed under these circumstances.
4. Whenever the hydraulic system is drained, check the magnets in the hydraulic reservoir for metal particles. If metal particles are present, flush the entire system and add a new change of oil. The presence of metal particles also may indicate the possibility of imminent component failure. A very small amount of fine particles is normal.
5. All containers and funnels used in handling hydraulic oil must be absolutely clean. Use a funnel when necessary for filling the hydraulic oil reservoir, and fill the reservoir only through the filter opening. The use of cloth to strain the oil should be avoided to prevent lint from getting into the system.
6. When removing any hydraulic component, be sure to cap and tag all hydraulic lines involved. Also, plug the ports of the removed components.
7. All hydraulic components must be disassembled in spotlessly clean surroundings. During disassembly, pay particular attention to the identification of parts to assure proper reassembly. Clean all metal parts in a clean mineral oil solvent. Be sure to thoroughly clean all internal passages. After the parts have been dried thoroughly, lay them on a clean, lint-free surface for inspection.
8. Replace all O-rings and seals when overhauling any component. Lubricate all parts with clean hydraulic oil before reassembly. Use small amounts of petroleum jelly to hold O-rings in place during assembly.
9. Be sure to replace any lost hydraulic oil when completing the installation of the repaired component, and bleed any air from the system when required.
10. All hydraulic connections must be kept tight. A loose connection in a pressure line will permit the oil to leak out or air to be drawn into the system. Air in the system can cause damage to the components and noisy or erratic system operation.

1.2-5 Maintenance Hints

Three simple maintenance procedures have the greatest effect on the hydraulic system performance, efficiency and life. Yet, the very simplicity of them may be the reason they are so often overlooked. They are simply these:

1. Change filters annually. The filters will need to be changed more often depending on the operating conditions. Dirty, dusty, high moisture environments may cause the hydraulic system to be contaminated more quickly.
2. Maintain a sufficient quantity of clean hydraulic oil of the proper type and viscosity in the hydraulic reservoir.
3. Keep all connections tight.

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1.2-6 About this Section

This section contains the maintenance and inspection schedule that is to be performed.

References are made to the procedures in Section 5 that outline detailed step-by-step instructions for checks and replacements.

Service Bulletins

Before performing any scheduled maintenance inspection procedure, refer to service bulletins found in our web site: www.skyjack.com for updates related to service and maintenance of this MEWP.

Maintenance and Inspection

Death or injury can result if the MEWP is not kept in good working order. Inspection and maintenance should be performed by competent personnel who are trained and qualified on maintenance of this MEWP.

WARNING

Failure to perform each procedure as presented and scheduled may cause death, serious injury or substantial damage.

NOTE

Preventive maintenance is the easiest and least expensive type of maintenance.

- Unless otherwise specified, perform each maintenance procedure with the MEWP in the following configuration:
 - MEWP parked on a flat and level surface
 - Disconnect the batteries by disconnecting the main power connectors.
- Repair any damaged or malfunction components before operating MEWP.
- Keep records on all inspections.

1.2-7 Maintenance Instructions

This manual consists of four schedules to be done for maintaining on an MEWP. Inspection schedule frequency is shown below:

Task Frequency















PDI/Frequent/Periodic	B	Perform PDI prior to each delivery, or Frequent Inspection every 200 days or 200 hours.
Annual	C	Perform Scheduled Maintenance Inspections every year.
Additional	*	Perform at time sensitive maintenance intervals.

- Make copies of the maintenance and inspection checklist to be used for each inspection.
- Check the schedule on the checklist for the type of inspection to be performed.
- Place a check in the appropriate box after each item meets the inspection requirements.
- Use the maintenance and inspection checklist and step-by-step procedures in Section 1 to perform these inspections.
- If any inspection receives a fail, tag and remove the MEWP from service.
- If any MEWP component(s) has been repaired, an inspection must be performed again before removing the tag. Place a check in the repair column.

Legend

Pass	P
Not applicable	N/A

Table 1.3 Owner's Annual Inspection Record

 Model _____ SN _____											
 31 Inspection Date											
 Inspector Signature											

⚠ WARNING

Do not use the MEWP if there is no inspection recorded in the last 13 months. If you do not obey, there is a risk of death or serious injury.

IMPORTANT

The owner's annual inspection record is located on the scissor assembly. It must be filled out after an annual inspection has been completed. Do not use the MEWP if an inspection has not been recorded in the last 13 months.

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1.4 Frequent/Periodic/Annual/Pre-Delivery Inspection Checklist



Frequent/Periodic/Annual/PDI Checklist Vertical Mast, Electric Scissor, Micro Scissor & Rough Terrain

Serial Number: Starting with serial number A/B000 000 000 or 01 000 000 and above

Product Owner: _____

Model: _____

Product User: _____

Hourmeter Reading: _____

Date/Time: _____

Inspection Type (Choose one): Pre-delivery Frequent Periodic Annual

Note: This table for pre-delivery inspections (PDI) before each rental, lease or sale and as an instruction for all frequent inspections and annual inspections. Refer to the operation and service manuals for inspection instructions (for example, visual inspection and function tests, torque specs, engine oil, chain inspection intervals, and more).

Inspection Type Schedule	
PDI/Frequent/Periodic	B
Annual	B+C

B – Do the pre-delivery inspection before the machine is sent out or during the frequent inspections at 200 days or 200 hour intervals. For more instructions, refer to the operation and service manuals.
C – Do the scheduled maintenance inspections each year. For more instructions, refer to the operation and service manuals.

P – Pass
N/A – Not Applicable

Put a checkmark in the "Pass" column as you meet the requirements of the inspection of each item. Add a comment if the item does not pass inspection.

Items for Inspection	P	N/A
Service Bulletins. Make sure there are no open service bulletins.	<input type="checkbox"/>	
Annual Inspection. Make sure you complete it within 18 months.	<input type="checkbox"/>	
Labels. In place, correctly attached & you can read them.	<input type="checkbox"/>	
Limit Switches. Correctly installed & no obstructions or damage.	<input type="checkbox"/>	
BASE/ENGINE		
Engine and Components. Do a check on engine and components for any loose, missing, damaged, or failed items. Make sure you do not exceed the recommended fluid, oil and coolant change intervals.	<input type="checkbox"/>	
Engine and Components. Replace the engine oil and filter.	<input type="checkbox"/>	
Engine Intake Air Filter. No damage or missing component. Remove dirt & dust.	<input type="checkbox"/>	
Engine Intake Air Filter. Replace the air filter if necessary.	<input type="checkbox"/>	
Engine Oil. Oil level between "L" and "H". Make sure you do not exceed the oil change interval.	<input type="checkbox"/>	
Radiator. Correctly attached & no damage or missing components. Do a check of coolant level.	<input type="checkbox"/>	
Radiator. Do a check of coolant level & condition & replace if necessary.	<input type="checkbox"/>	
Fuel Tank & Lines. Filler cap, tank, fittings and hoses are tightly closed & no damage or leaks.	<input type="checkbox"/>	
Propane Tank & Lines. Straps are correctly installed to brackets & couplers are tight. Make sure there are no damage or leaks.	<input type="checkbox"/>	
Outriggers. No damage or missing components.	<input type="checkbox"/>	
Pothole Protection. Both sides have no obstructions, dirt or damage.	<input type="checkbox"/>	
Battery/Hydraulic Tray. Trays are latched tightly & no missing components.	<input type="checkbox"/>	
Batteries. No damage, tight connections & sufficient fluid levels. Clean terminals and cable ends.	<input type="checkbox"/>	
Battery Charger. Correctly attached & no damage.	<input type="checkbox"/>	
Steer Assembly. Correctly attached & no damage leaks or missing components.	<input type="checkbox"/>	
Wheel/Tire Assembly. Do a check of all tires for damage, wear & correctly aligned.	<input type="checkbox"/>	
Wheel/Tire Assembly. Wheel nuts torqued as recommended.	<input type="checkbox"/>	
Axles. Correctly attached & no missing components. Tight fittings and hoses & no leaks.	<input type="checkbox"/>	
Axles. Do a check and replace oil if necessary.	<input type="checkbox"/>	
Hydraulic Tank, Pump, Motor & Lines. Filler cap, hoses, and other hydraulic components are closed tightly & no damage or leaks.	<input type="checkbox"/>	
Hydraulic Oil. Level at, or slightly above top mark.	<input type="checkbox"/>	
Hydraulic Oil. Do a check and replace oil and filters if necessary.	<input type="checkbox"/>	
Electrical Components. Do a check on all electrical components such as the motor controller if necessary. Correctly attached & no damage. Tight wire connections and fasteners.	<input type="checkbox"/>	

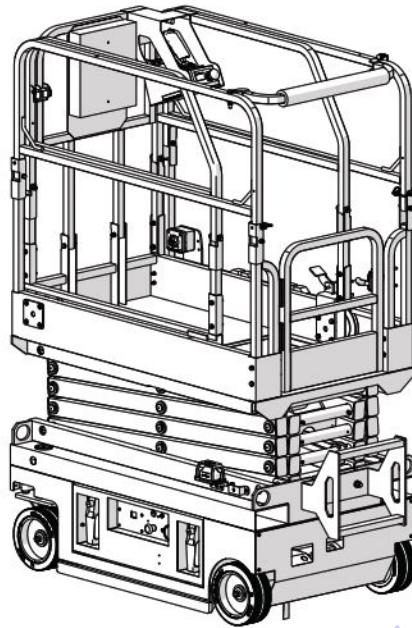
Items for Inspection	P	N/A
Manifolds. Tight fittings and hoses & no damage or leaks. Tight wire connections, no missing components & correctly working valves.	<input type="checkbox"/>	
Main Power Disconnect Switch. Cables tight & in working order.	<input type="checkbox"/>	
Base Controls. Operate switches and make sure they all operate correctly. No damage or missing components.	<input type="checkbox"/>	
Drakes. Correctly attached & no damage or leaks.	<input type="checkbox"/>	
Drakes. Do a check on disc wear and replace if necessary.	<input type="checkbox"/>	
Base Weldment. No deformation or cracks.	<input type="checkbox"/>	
Grease Points. No obstructions, dirt, or damage. Add grease if necessary.	<input type="checkbox"/>	
Ladder. Correctly attached & no damage.	<input type="checkbox"/>	
LIFTING MECHANISM - SCISSORS		
Maintenance Support(s). Correctly attached & no damage.	<input type="checkbox"/>	
Scissor Assembly & Dumpers. Correctly attached, no deformation/damage. Cables & wires installed with no damage.	<input type="checkbox"/>	
Sliders & Rollers. Correctly attached & no obstructions, dirt, or damage/wear.	<input type="checkbox"/>	
Lift Cylinder(s). No damage or missing components. Tight fittings and hoses & no leaks. Correctly installed.	<input type="checkbox"/>	
Angle Transducer. Correctly attached & no damage.	<input type="checkbox"/>	
Scissor Pins. Correctly attached & no damage.	<input type="checkbox"/>	
LIFTING MECHANISM - MAST		
Mast Assembly. No damage, cracks or deformation.	<input type="checkbox"/>	
Mast Assembly. Lubricate the mast as recommended.	<input type="checkbox"/>	
Chains, Rollers & Control Cables. No damage or missing components.	<input type="checkbox"/>	
Wear Pads. No damage/wear or missing components. Fasteners tight.	<input type="checkbox"/>	
Tilt Sensor. Correctly attached & no damage.	<input type="checkbox"/>	
PLATFORM		
Railings and Gate. Correctly attached & no damage or missing components.	<input type="checkbox"/>	
Fall-Protection Anchorage. Attachment rings correctly attached & no damage.	<input type="checkbox"/>	
AC Power Socket. No obstructions, dirt, or damage.	<input type="checkbox"/>	
Platform Control Console. Operate the switches and make sure they all operate correctly. No damage or missing components.	<input type="checkbox"/>	
Manual Storage Box. In storage box, in good condition and you can read them.	<input type="checkbox"/>	
Powered Extension Control Console. Operate switches and make sure they all operate correctly. No damage or missing components.	<input type="checkbox"/>	
Extension Platform. Correctly attached & no damage or missing components.	<input type="checkbox"/>	
Function Tests. Refer to the operation manual for your serial number for information on how to run these tests.		PASS FAIL

Comments: _____

193B4LAE

The undersigned has made sure that all items in the list have received an inspection.
 The undersigned has left the machine owner of all inconsistencies in the inspection and corrected them before machine operation.

Owner: Print Name _____ Signature _____ Date: (DD/MM/YY) _____
 User: Print Name _____ Signature _____ Date: (DD/MM/YY) _____



1.5 General inspections

Do an inspection of the MEWP in this sequence:

⚠ WARNING

Do not operate a MEWP that does not function correctly. Lock and tag the MEWP, and remove it for servicing. Only a qualified service technician must repair the MEWP. If you do not obey, there is a risk of death or serious injury.

⚠ WARNING

Turn the main power disconnect switch to the off position before you do the visual and daily maintenance inspections. If you do not obey, there is a risk of death or serious injury.

⚠ CAUTION

Make sure that the MEWP is on a firm, level surface before you do the visual and daily maintenance inspections. If you do not obey, there is a risk of machine damage.

1.5-1 Service Bulletins (B)

Go to www.skyjack.com and use your machine's serial number to find related open service bulletins.

1.5-2 Annual Inspections (B)

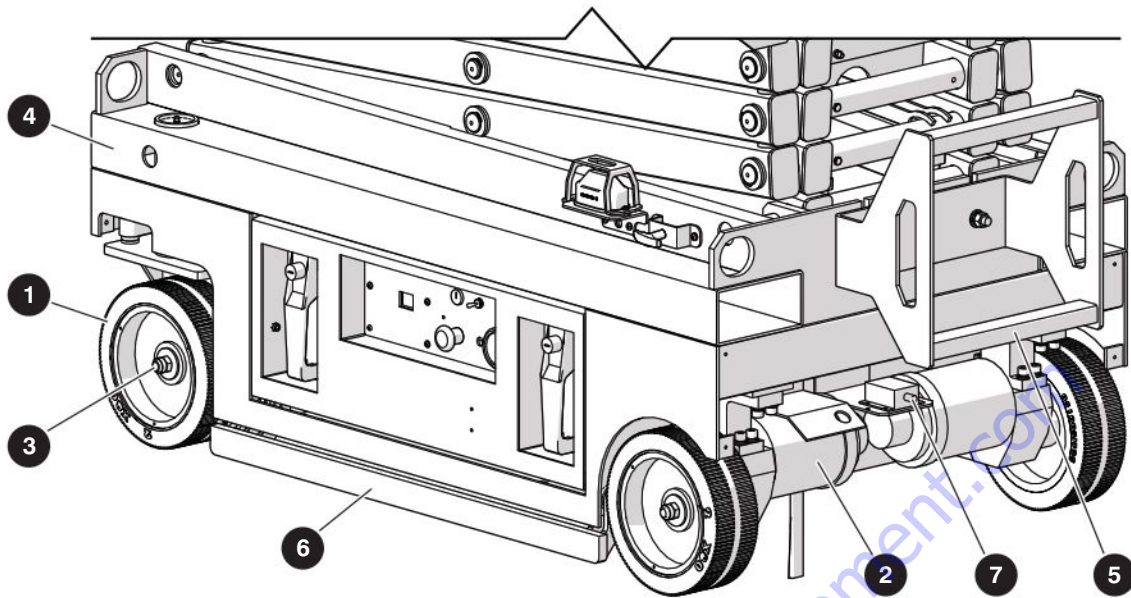
Do a check on the machine's service record to find information about previous service performed.

1.5-3 Labels (B)

Refer to the operation manual for the labels. Make sure all the labels are in the correct location, are in good condition, and you can read them.

1.5-4 Pothole protection limit switches (B)

Make sure the **pothole protection limit switches** ① are correctly attached, there is no visible damage, and the movement is not blocked.



1.6 Base inspection

1 Wheel/tire assembly (B, C)

- **B - Frequent/periodic/pre-delivery inspection**
 - Do a check on all the tire treads and sidewalls for cuts, cracks, and unusual wear.
 - Do a check on each wheel for damage, and cracked welds.
 - Make sure the wheels are correctly aligned vertically and horizontally.
 - Make sure the **wheel motors** 2 have no loose or missing parts and there is no visible damage

WARNING

Do not use tires other than the tires that Skyjack specifies for this MEWP. Do not mix different types of tires or use tires that are not in good condition. Only replace the tires with the same types that are approved by Skyjack. The use of other tires can make the MEWP less stable. If you do not obey, there is a risk of death or serious injury.

3 Wheel nuts

- Make sure the wheel nuts are tight.

4 Base weldment (B)

- Make sure that the base shows no signs of visible damage, deformation, or cracks in the weldments.

5 Ladder (B)

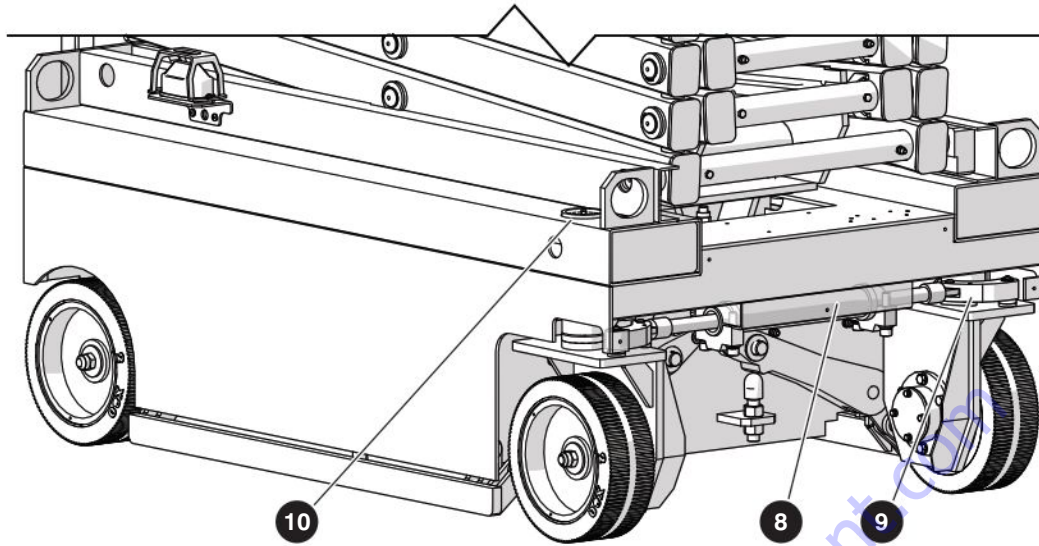
- Make sure the ladder is correctly attached.
- Make sure there are no loose or missing parts.
- Make sure there is no visible damage.

6 Pothole protection device

- Make sure there are no loose or missing parts.
- Make sure there is no visible damage.
- Make sure there is no dirt and blockages.

7 Tilt Switch (B)

- Make sure that the angle transducer is correctly attached.

**8 Steer cylinder (B)**

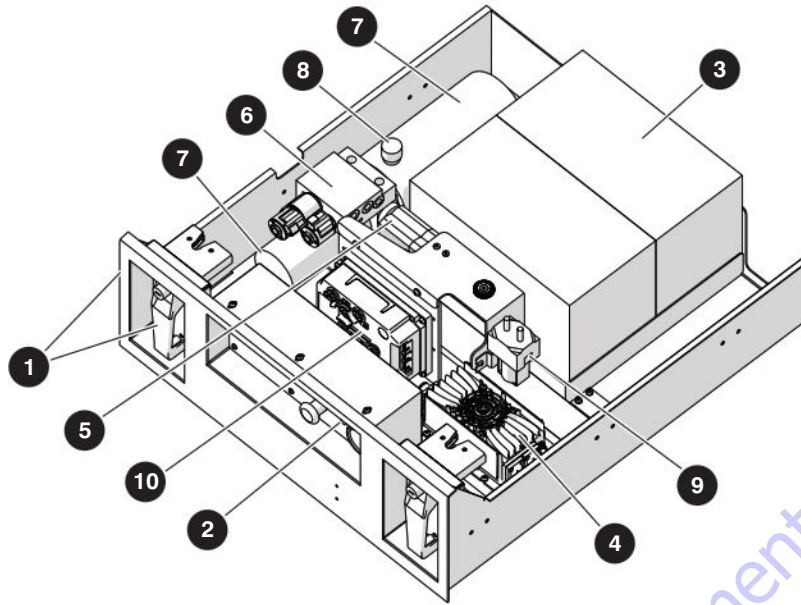
- Make sure that the steer cylinder assembly is correctly installed.
- Make sure there are no loose or missing fasteners.
- Make sure there is no visible damage.

9 Steer linkages assembly (B)

- Make sure there are no loose or missing fasteners and lock-pins.
- Make sure that the steer linkages and bushings are correctly attached.
- Make sure there is no visible damage.

10 Grease points (B)

- Make sure there is no visible damage.
- Add grease if necessary.



1.6-1 System components tray

1 Tray

- Make sure that the system components tray latches correctly and is in good condition.

2 Base controls (B)

- Make sure there is no visible damage, and all the switches are in their off/neutral positions.

3 Batteries (B)

WARNING

Explosion hazard. Keep flames and sparks away. Do not smoke near the batteries. Batteries release explosive gas while you charge them. Charge the batteries in a well-ventilated area. If you do not obey, there is a risk of death or serious injury.

WARNING

Corrosion hazard. Do not touch battery acid. Wear the correct PPE. If the battery acid touches you, immediately flush the area with cold water and get medical aid.

- Do an inspection of the battery case for damage.
- Make sure all the battery connections are tight.

WARNING

Only use original or manufacturer-approved parts and components for the MEWP. If you do not obey, there is a risk of death, serious injury, or machine damage.

4 Battery charger

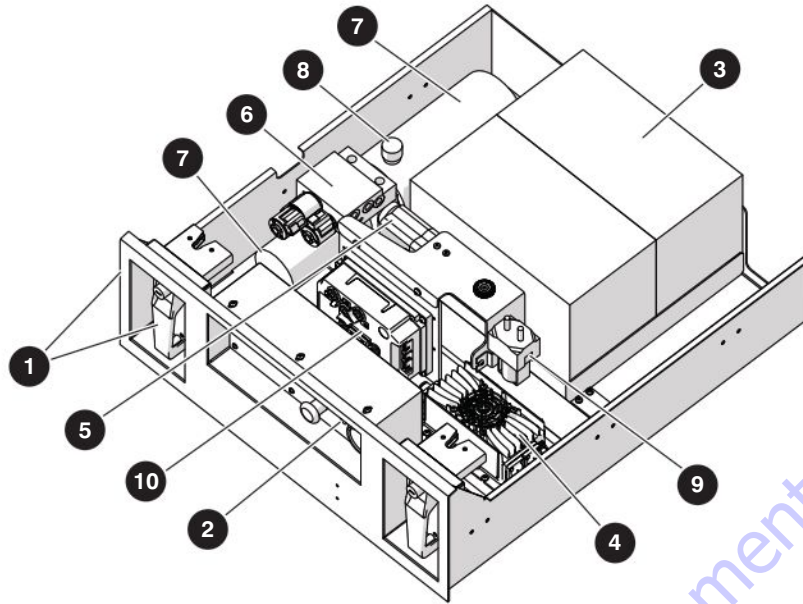
- Make sure that the battery charger is correctly installed, and in good condition.
- Make sure there is no visible damage.

5 Main Power Connector (B)

- Make sure the connector is in good condition.
- Make sure all cable connections are tight.
- Make sure there is no visible damage.

6 Manifold

- Make sure all fittings and hoses are correctly tightened.
- Make sure there is no indication of hydraulic leakage.
- Make sure there are no loose wires or missing fasteners.



7 Hydraulic pump and motor (B)

- Make sure there are no loose or missing parts.
- Make sure there is no visible damage.
- Make sure all bolts are correctly tightened.
- Make sure all fittings and hoses are correctly tightened and there are no hydraulic leaks.

8 Hydraulic oil level (B, C)

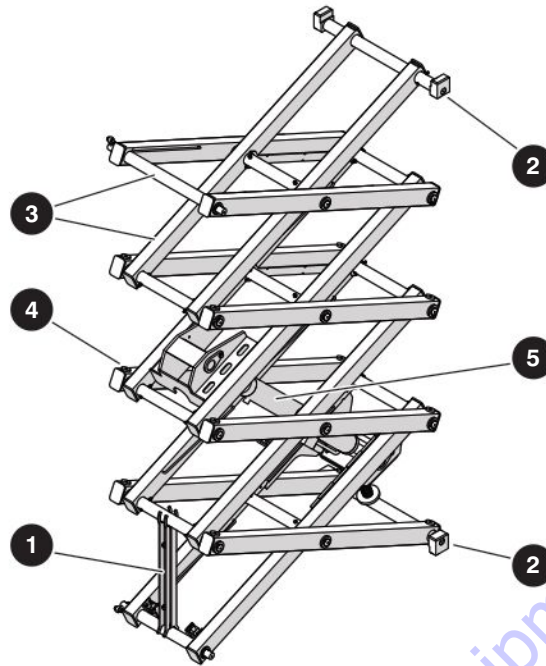
- **B - Frequent/periodic/pre-delivery inspection**
 - Fully lower the platform.
 - Do a check of the oil level on the dipstick of the hydraulic filler cap. Add oil if it is necessary.
- **C - Annual inspection**
 - Do a check of the hydraulic oil for contamination and make sure the filter is in good condition.
 - Replace the hydraulic oil and filters if necessary.

9 Electrical components (B)

- Do a check on these areas for chafed, corroded, and loose wires:
 1. Base to platform cables and wiring harness
 2. Battery tray wiring harnesses
 3. Hydraulic and electrical wiring harnesses.

10 Motor controller (B)

- Make sure the motor controller is correctly attached, and there is no visible damage.
- Make sure there are no loose wires or missing fasteners.



1.7 Lift mechanism inspection

1. Raise the platform and deploy the maintenance supports.

1 Maintenance support (B)

- Make sure that the maintenance supports are correctly attached and show no visible damage.

2 Sliders (B)

- Make sure that the sliders on the left and right side of the MEWP are correctly attached.
- Make sure there is no visible damage.
- Make sure there is no dirt or blockages in the slider paths.

3 Scissor assembly (B)

- Make sure that **the scissor assembly shows no signs of visible damage, deformation, or cracks in the weldments.**
- Make sure **all the pins and fasteners are correctly installed.**
- Make sure that **the cables and wires have the correct routing, and show no signs of wear and/or physical damage.**

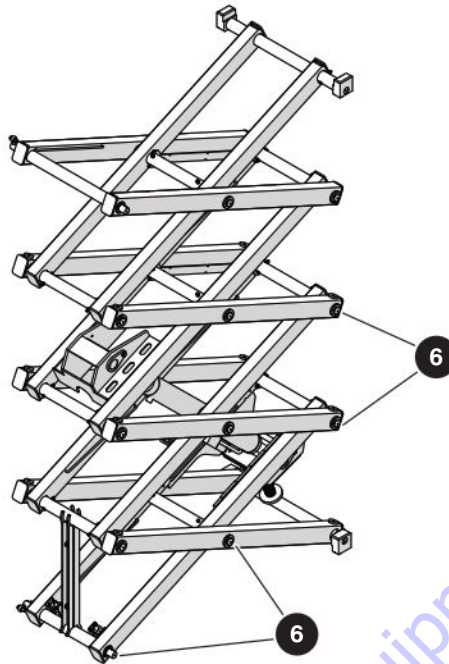
4 Scissor bumpers (B)

- Make sure that the bumpers are correctly attached and have no visible damage.

5 Lift cylinder and pressure transducer (B)

- Make sure that the lift cylinder is correctly installed.
- Make sure the pressure transducer is correctly installed.
- Make sure there is no visible damage.
- Make sure there are no loose or missing fasteners.
- Make sure there is no indication of leaks or damage.
- Make sure there are no loose or missing wires.

2. Retract the maintenance support into the storage bracket.
3. Fully lower the platform.



6 Scissor pin inspection (B)

⚠ WARNING

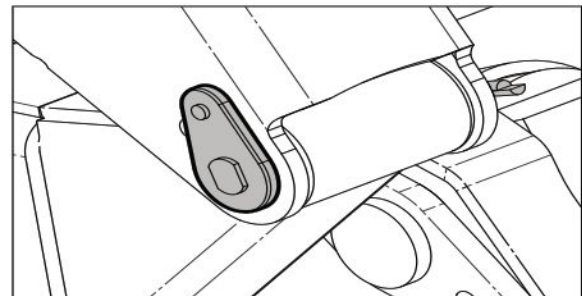
Units that show signs of damage must be immediately removed from service and repaired by a qualified technician. Speak to the Skyjack service department for directions on how to repair the unit.

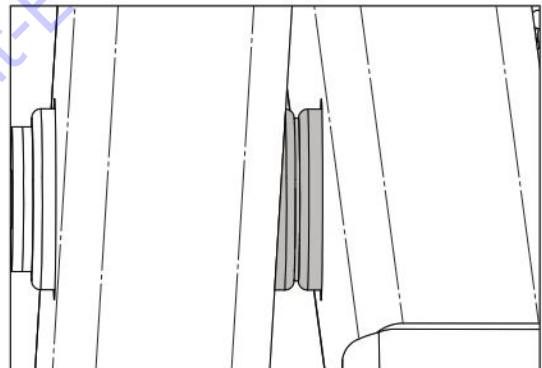
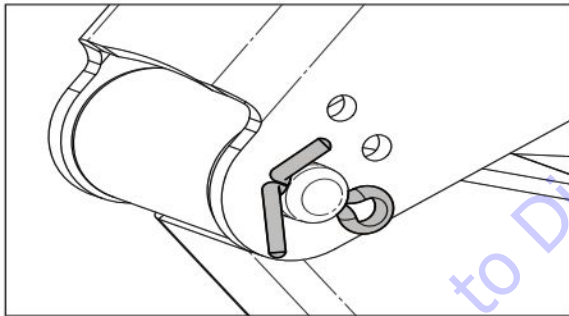
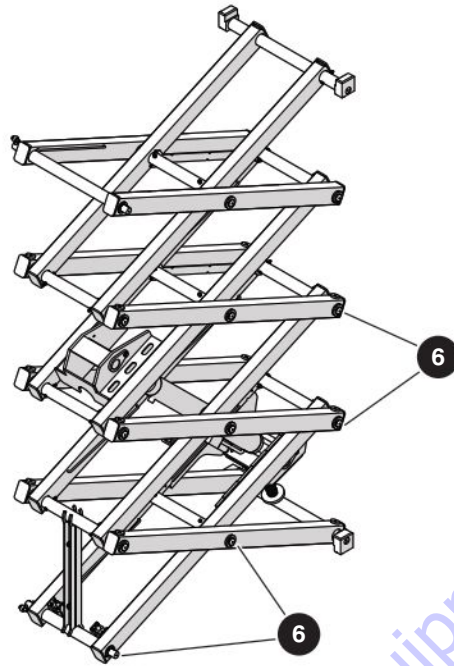
1. Do an inspection of the scissor pin connections. Look for signs of damage on the pins and scissor arms. These signs can include:
 - Noise can be heard from seized pins.
 - Rust near the pin joint
 - Cracks in welds of adjacent metals
 - Dust or metal shaving from worn components
 - Broken or missing pin retainer bolts
 - Broken or missing pin retainers
 - Rotated pin
 - Elongated or enlarged pin hole

2. Remove damaged pins and bushings. Do an inspection of the scissor bore after removing the applicable pins and bushings. Look for signs of damage, elongation and ovality of the hole.
3. If there is no structural damage to the scissor arms, replace the pins and bushings with new components.

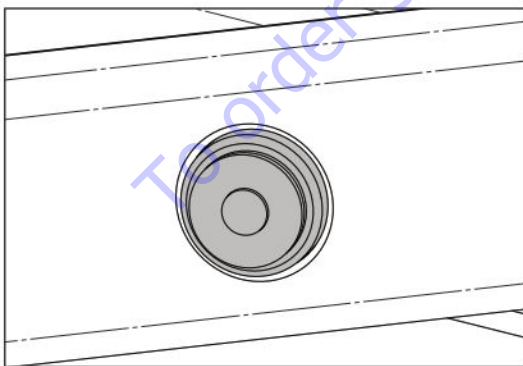
Examples of pivot pin connections with no damage:

- No rust
- Pin has not rotated
- Area is clear of dust or metal shavings
- Pin retainers are installed

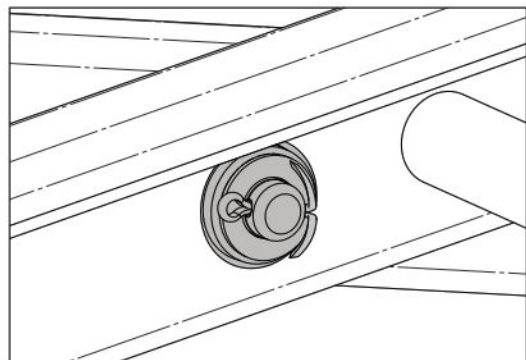




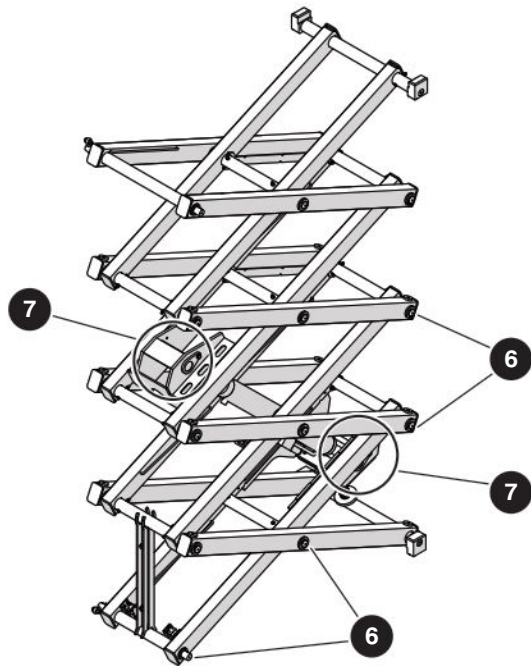
Center Pin - Middle



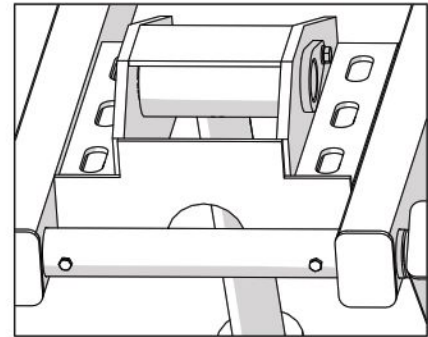
Center Pin - Outer



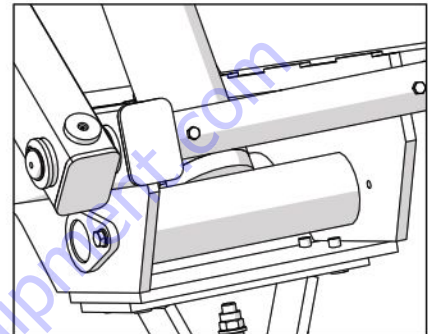
Center Pin - Inner



Upper cylinder mount area

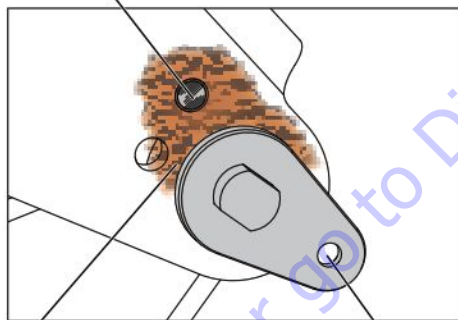


Lower cylinder mount area



Examples of damaged pin connections:

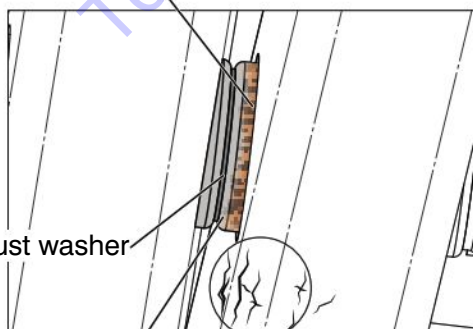
Broken retainer bolt



Rust around the pin

Rotated pin

Rust around pin boss



Thrust washer

Broken pin boss

Stress cracks

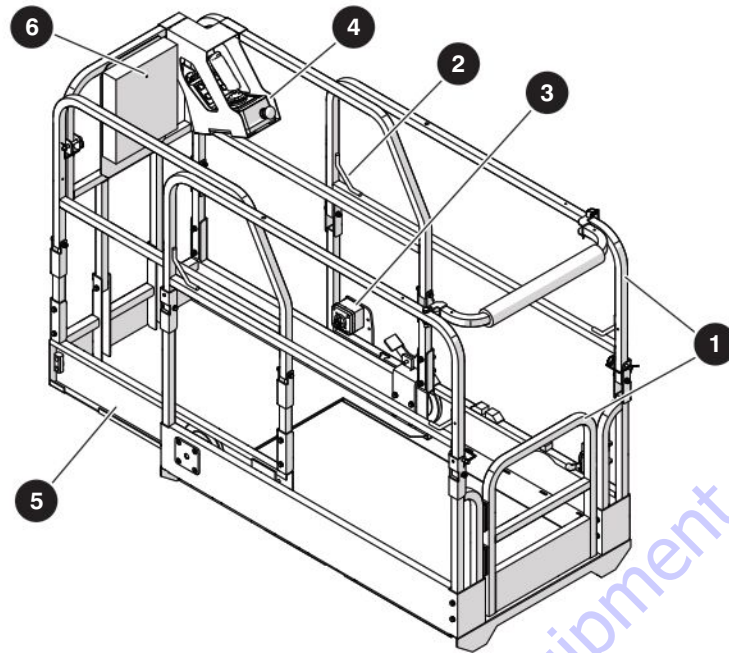
7 Cylinder mount inspection (B)

This inspection must be done as part of the scissor assembly inspection.

1. Do a structural inspection of the cylinder mount areas. Look for signs of damage to the mounts.

These signs can include:

- Broken, loose or missing pins or bolts
- Cracks in welds or the surrounding metal, or rust forming in the area.



1.8 Platform inspection

⚠ WARNING

Fall Hazard. Use the three points of contact principle when you use the MEWP to enter or exit the platform. If you do not obey, there is a risk of death or serious injury.

1. Use the MEWP ladder to enter the platform.
2. Close the gate.

1 Railings and gate (B)

- Make sure there are no loose or missing parts, and there is no visible damage.
- Make sure that the lock-pins and fasteners are correctly locked.
- Make sure that the **platform railings** are in the correct position and locked with lock-pins.
- Make sure that the **gate** is in good condition and operates correctly.

2 Fall-protection anchorages (B)

- Make sure that the fall-protection anchorages are correctly installed.
- Make sure there is no visible damage.

3 AC power socket (B)

- Make sure there is no visible damage.

4 Platform control console (B)

- Make sure that the control console is locked with lock-pins.
- Make sure that the platform control cable is correctly locked, and there is no visible damage.
- Make sure all the switches operate correctly.

5 Extension platform (B)

- Make sure that the extension platform is correctly installed.
- Make sure there is no visible damage or missing components.
- Make sure the lock-pins are correctly attached.

6 Manual storage box (B)

- Make sure that the operation manual and other important documents are in the manual storage box.
- Make sure that the documents are in good condition, and you can read them.
- Always put the manuals and other documents back in the storage box after use.

3. Use the MEWP ladder to exit the platform.

1.9 Function Tests

Do the function tests to find malfunctions in the MEWP before it is put into service. The operator must understand and follow the step-by-step instructions in the operation manual to do all the MEWP functions.

IMPORTANT

Do not operate a MEWP that does not function correctly. Lock and tag the MEWP, and remove it for servicing. Only a qualified service technician must repair the MEWP. If you do not obey, there is a risk of death or serious injury.

- After repairs are completed, the operator must do a pre-operation inspection and a series of function tests again before putting MEWP into service.
- Before you do the function tests, read and understand the “Start Operation” section of the operation manual.
- Before you do the function tests, look for the operation manual with the same serial number as your MEWP. The operation manual has the instructions on which tests to do and how to do them correctly and successfully.

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Section 2 – Maintenance Tables and Diagrams

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Table 2.1 Torque specifications for fasteners (US)

Size	Torque Type	SAE2		SAE 5		SAE 8	
		Dry	Lubed	Dry	Lubed	Dry	Lubed
4-40	(in-lb)	(5)	(4)	(8)	(6)	(12)	(9)
	Nm	0.6	0.5	0.9	0.7	1.4	1.0
4-48	(in-lb)	(6)	(5)	(9)	(7)	(13)	(10)
	Nm	0.7	0.6	1.0	0.8	1.5	1.1
6-32	(in-lb)	(10)	(8)	(16)	(12)	(23)	(17)
	Nm	1.1	0.9	1.8	1.4	2.6	1.9
6-40	(in-lb)	(12)	(9)	(18)	(13)	(25)	(19)
	Nm	1.4	1.0	2.0	1.5	2.8	2.1
8-32	(in-lb)	(19)	(14)	(30)	(22)	(41)	(31)
	Nm	2.1	1.6	3.4	2.5	4.6	3.5
8-36	(in-lb)	(20)	(15)	(31)	(23)	(43)	(32)
	Nm	2.3	1.7	3.5	2.6	4.9	3.6
10-24	(in-lb)	(27)	(21)	(43)	(32)	(60)	(45)
	Nm	3.1	2.4	4.9	3.6	6.8	5.1
10-32	(in-lb)	(31)	(23)	(49)	(36)	(68)	(51)
	Nm	3.5	2.6	5.5	4.1	7.7	5.8
1/4-20	(in-lb) ft-lb	(66)	(50)	8	(75)	12	9
	Nm	7.5	5.6	11	8.5	16	12
1/4-28	(in-lb) ft-lb	(76)	(56)	10	(86)	14	10
	Nm	8.6	6.3	14	9.7	19	14
5/16-18	ft-lb	11	8	17	13	25	18
	Nm	15	11	23	18	34	24
5/16-24	ft-lb	12	9	19	14	25	20
	Nm	16	12	26	19	34	27
3/8-16	ft-lb	20	15	30	23	45	35
	Nm	27	20	41	31	61	47
3/8-24	ft-lb	23	17	35	25	50	35
	Nm	31	23	47	34	68	47
7/16-14	ft-lb	32	24	50	35	70	55
	Nm	43	33	68	47	95	75
7/16-20	ft-lb	36	27	55	40	80	60
	Nm	49	37	75	54	108	81
1/2-13	ft-lb	50	35	75	55	110	80
	Nm	68	47	102	75	149	108
1/2-20	ft-lb	55	40	90	65	120	90
	Nm	75	54	122	88	163	122

Size	Torque Type	SAE2		SAE 5		SAE 8	
		Dry	Lubed	Dry	Lubed	Dry	Lubed
9/16-12	ft-lb	70	55	110	80	150	110
	Nm	95	75	149	108	203	149
9/16-18	ft-lb	80	60	120	90	170	130
	Nm	108	81	163	122	230	176
5/8-11	ft-lb	100	75	150	110	220	170
	Nm	136	102	203	149	298	230
5/8-18	ft-lb	110	85	180	130	240	180
	Nm	149	115	244	176	325	244
3/4-10	ft-lb	175	130	260	200	380	280
	Nm	237	176	353	271	515	380
3/4-16	ft-lb	200	150	300	220	420	320
	Nm	271	203	407	298	569	434
7/8-9	ft-lb	170	125	430	320	600	460
	Nm	230	169	583	434	813	624
7/8-14	ft-lb	180	140	470	360	660	500
	Nm	244	190	637	488	895	678
1-8	ft-lb	250	190	640	480	900	680
	Nm	339	258	868	651	1220	922
1-12	ft-lb	270	210	710	530	1000	740
	Nm	366	285	963	719	1356	1003
1-14	ft-lb	280	210	730	540	1020	760
	Nm	380	285	990	732	1383	1030
1 1/8-7	ft-lb	350	270	800	600	1280	960
	Nm	475	366	1085	813	1735	1302
1 1/8-12	ft-lb	400	300	880	660	1440	1080
	Nm	542	407	1193	895	1952	1464
1 1/4-7	ft-lb	500	380	1120	840	1820	1360
	Nm	678	515	1519	1139	2468	1844
1 1/4-12	ft-lb	550	420	1240	920	2000	1500
	Nm	746	569	1681	1247	2712	2034
1 3/8-6	ft-lb	670	490	1460	1100	2380	1780
	Nm	908	664	1979	1491	3227	2413
1 3/8-12	ft-lb	750	560	1680	1260	2720	2040
	Nm	1017	759	2278	1708	3688	2766
1 1/2-6	ft-lb	870	650	1940	1460	3160	2360
	Nm	1180	881	2630	1979	4284	3200
1 1/2-12	ft-lb	980	730	2200	1640	3560	2660
	Nm	1329	990	2983	2224	4827	3606

NOTE: Lubed includes lubricants such as lubrizing, oil, grease, or uncured Loctite.

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Table 2.2 Torque specifications for fasteners (metric)

Size	Torque Type	SAE2		SAE 5		SAE 8	
		Dry	Lubed	Dry	Lubed	Dry	Lubed
M5 x 0.80	(in-lb)	(54)	(41)	(78)	(59)	(12)	(9)
	Nm	6.1	4.6	8.8	6.7	1.4	1.0
M6 x 1.00	(in-lb)	(92)	(69)	(133)	(99)	(13)	(10)
	Nm	10.4	7.8	15	11.2	1.5	1.1
M7 x 1.00	(in-lb)	(156)	(116)	(222)	(167)	(23)	(17)
	Nm	17.6	13.1	25.1	18.9	2.6	1.9
M8 x 1.25	(in-lb)	(225)	(169)	(333)	(242)	(25)	(19)
	Nm	25.4	19.1	37.6	27.3	2.8	2.1
M10 x 1.50	ft-lb	37	28	53	40	(41)	(31)
	Nm	50	38	72	54	4.6	3.5
M12 x 1.75	ft-lb	65	49	93	69	(43)	(32)
	Nm	88	66	126	94	4.9	3.6
M14 x 2.00	ft-lb	104	78	148	111	(60)	(45)
	Nm	141	106	201	150	6.8	5.1
M16 x 2.00	ft-lb	161	121	230	172	(68)	(51)
	Nm	218	164	312	233	7.7	5.8
M18 x 2.50	ft-lb	222	167	318	238	12	9
	Nm	301	226	431	323	16	12
M20 x 2.50	ft-lb	314	235	449	337	14	10
	Nm	426	319	609	457	19	14
M22 x 2.50	ft-lb	428	321	613	460	25	18
	Nm	580	435	831	624	34	24
M24 x 3.00	ft-lb	543	407	776	582	25	20
	Nm	736	552	1052	789	34	27
M27 x 3.00	ft-lb	796	597	1139	854	45	35
	Nm	1079	809	1544	1158	61	47
M30 x 3.50	ft-lb	1079	809	1543	1158	50	35
	Nm	1463	1097	2092	1570	68	47
M33 x 3.50	ft-lb	1468	1101	2101	1576	70	55
	Nm	1990	1493	2849	2137	95	75
M36 x 4.00	ft-lb	1886	1415	2699	2024	80	60
	Nm	2557	1918	3659	2744	108	81

NOTE: Lubed includes lubricants such as lubrizing, oil, grease, or uncured Loctite.

1375AA

Table 2.3 Torque specifications for hydraulic couplings & hoses

Hydraulic Coupling Torque Chart O-Ring Port Connectors				
SAE Size	Steel Ports		Non-ferrous Ports	
	ft-lb	Nm	ft-lb	Nm
4	14-16	20-22	9-10	12-13
6	24-26	33-35	15-16	20-21
8	50-60	68-78	30-36	41-47
10	72-80	98-110	43-48	60-66
12	125-135	170-183	75-81	102-110
16	200-220	270-300	120-132	162-180
20	210-280	285-380	126-168	171-228
24	270-360	370-490	162-216	222-294
32	-	-	-	-

Hose End Torque Chart for JIC									
Size		Steel				Brass			
Dash	Frac.	ft-lb		Nm		ft-lb		Nm	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
-4	1/4"	10	11	13	15	5	6	6.75	9
-6	3/8"	17	19	23	26	12	15	17	20
-8	1/2"	34	38	47	52	20	24	27.66	33
-10	5/8"	50	56	69	76	34	40	46.33	55
-12	3/4"	70	78	96	106	53	60	72.33	82
-16	1"	94	104	127	141	74	82	100.5	111
-20	1 1/4"	124	138	169	188	75	83	101.5	113
-24	1 1/2"	156	173	212	235	79	87	107	118
-32	2"	219	243	296	329	158	175	214	237

Hose End Torque Chart for Flat-Face O-Ring Seal (Steel)					
Size		Torque Specification			
Dash	Frac.	ft-lb		Nm	
		Min.	Max.	Min.	Max.
-4	1/4"	10	12	14	16
-6	3/8"	18	20	24	27
-8	1/2"	32	40	43	54
-10	5/8"	46	56	60	75
-12	3/4"	65	80	90	110
-14	1"	65	80	90	110
-16	1 1/4"	92	105	125	240
-20	1 1/2"	125	140	170	190
-24	2"	150	180	200	245

1276AA

Table 2.4 Specifications & Features

Models	SJ3013 & SJ3014 micro	
Weight *	820 kg (1808 lb)	
Overall width	0.76 m (29.92 in)	
Overall length (Platform Retracted)	1.49 m (58.66 in)	
Overall length (Platform Extended)	1.8 m (70.87 in)	
Platform Size - Inside (Platform Retracted)	1.28 m x 0.76 m (50.39 in x 29.92 in)	
Platform Size - Inside (Platform Extended)	1.8 m x 0.76 m (70.87 in x 29.92 in)	
Height		
	<i>ANSI</i>	<i>CE</i>
Working Height	6.23 m (20 ft 5.23 in)	6.4 m
Platform Elevated Height	4.4 m (14 ft 5.23 in)	4.4 m
Stowed Height (Railings Down)	1.59 m (62.60 in)	1.59 m
Stowed Height (Railings Up)	2.02 m (79.53 in)	2.05 m
Drive Height	Full	
Standard Operating Times		
Lift Time (No Load)	23 s	
Lower Time (No Load)	19 s	
Lift Time (Rated Load)	25 s	
Lower Time (Rated Load)	18 s	
Chassis		
Normal Drive Speed	3.0 km/h (1.9 mph)	
Elevated Drive Speed	0.8 km/h (0.5 mph)	
Gradeability (Ramp Angle)	25%	
Tires (Solid Rubber)	230M	
Sound Pressure Level at Platform Level		
Does not exceed:	70 dB(A)	

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Table 2.5 Maximum platform capacities (evenly distributed)

Model	Wind rating	Total platform capacity		Extension platform capacity		Manual side force	Tilt cutout setting (side-to-side x front-to-back)
		kg	Persons	kg	Persons		
SJ3013 & SJ3014 micro	0 m/s [0 mph]	240 kg (529 lb)	2 Persons	100 kg (220 lb)	1 Person	400 N 90 lbf	2.5° × 3.5°

2079AB

NOTE

Occupants and materials are not to exceed the rated load. Refer to the capacity label at the entrance of the platform and the front kick plate for more information and models equipped with options.

Table 2.6 Floor loading pressure

Model		Weights				Pressures			
		MEWP weight		Max weight per wheel		LCP**		OFL**	
		kg	lb	kg	lb	N/mm ²	psi	N/mm ²	psf
SJ3013 & SJ3014 micro	Min*	820	1808	265	584	0.57	82	0.013	271
	Max*	1060	2337						

2080AB

- * **Min:** Minimum MEWP weight (Unloaded platform, no options/attachments)
Max: Maximum MEWP weight (Platform loaded to capacity with options/attachments)

Wheel is the weight that can be experienced on one wheel.

Note: This is more than 25% of the machine weight due to possible weight distribution over the machine and platform.

- ** **LCP:** Local Concentrated Pressure is a measure of how hard the MEWP presses on the area in direct contact with the floor/tire.
OFL: Overall Floor Load (Pressure) is a measure of the average load the MEWP imparts on the whole surface directly underneath the chassis. This has been calculated by dividing the MEWP weight by the overall floor area occupied by the MEWP (on wheels).

Note: The floor covering (e.g., tile, carpet, etc.) or the structure (e.g., beams) of the operating surface must be able to withstand more than the values indicated above.

Note: The LCP or OFL that an individual surface can withstand varies from structure to structure and is generally determined by the engineer or architect for that particular structure.

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