

# SKID STEER ROOT GRAPPLE RAKE

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60RAKEv2, 72RAKEv2, 84RAKEv2

113312, 113212, 113112



## Operator's Manual



Read the Operator's Manual entirely. When you see this symbol, the subsequent instructions and warnings are serious follow without exception. Your life and the lives of others depend on it!

1. Before purchasing or using, always ensure your loader operating capacity is 2x the weight of the grapple. For example, if the grapple is 500-lbs, your loader should have at least a 1,000-lbs operating capacity. Refer to your user manual or dealer if needed to confirm your machine's capabilities.
2. Do not overload the grapple by using a loader that is too large for the grapple's design. For example, our Economy Root Grapple Series has a max recommended loader capacity of 2,000-lbs. If your skid steer has a lift capacity higher than 2,000-lbs, contact Titan support and we can refer you to a grapple better designed for your machine. All of our recommended loader capacity ranges are on Titan's website and the specification chart below in this manual. Never exceed the grapple's upper capacity limit, as this can void your warranty claim if the grapple is damaged.
3. Selecting the correct grapple for use-case is essential. Please review this entire document to ensure you are planning to use the grapple properly and for the correct application. Each grapple is specifically designed for different purposes; there are certain advantages and disadvantages of each. Using a grapple for an application different than what is intended for can void the warranty. Refer to our website product pages or call Titan Customer Service with questions to learn more.
4. Consider the proper grapple width. For ideal performance, the grapple should match or be slightly wider than the width of your loader (with some exceptions, such as our Log Grapple *HDSTGRAP* or Stump Bucket Grapple *LOGGP*).

## IMPORTANT SAFETY INFORMATION

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### THESE ARE STANDARD PRACTICES THAT MAY NOT APPLY TO THE PRODUCTS DESCRIBED IN THIS MANUAL.

#### SAFETY AT ALL TIMES

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them. Do not allow anyone to operate this equipment who has not thoroughly read and comprehended this manual. Do not allow anyone who has not adequately trained in the safe operation of the equipment.

- The operator should be familiar with all functions of the unit.
- Operate implement from the driver's seat only.
- Make sure all guards and shields are in place and secured before operating the tool.
- Do not leave a tractor or implement unattended with the engine running.
- Dismounting from a moving tractor could cause severe injury or death.
- Do not allow anyone to stand between tractor and implement while backing up to implement.
- Keep hands, feet, and clothing away from power-driven parts.
- Wear snug-fitting clothing to avoid entanglement with moving parts.
- Watch out for wires, trees, etc., when raising implements. Make sure all persons are clear of the working area.
- Turning the tractor too tight may cause implement to ride upon wheels. This activity could result in injury or equipment damage.
- Do not carry passengers on the tool at any time.



#### LOOK FOR THE SAFETY ALERT SYMBOL

The **SAFETY ALERT SYMBOL** indicates a potential hazard to personal safety, and individuals must take safety precautions. When you see this symbol, be alert and carefully read the message that follows it. In addition to the design and configuration of equipment, hazard control and accident prevention depend on the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage.

#### BE AWARE OF SAFETY ALERT WORDS

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**DANGER:** Indicates imminently hazardous practices. A situation that, if not avoided, will result in death or severe injury. The signal word is limited to the most extreme situation, typically for machine components that, for functional purposes, cannot be guarded.

**WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or severe injury, and includes hazards that are exposed when guards remove. Use warnings to

alert against unsafe practices.

**CAUTION:** Indicates a potentially hazardous situation that may result in minor or moderate injury if not avoided. It may also be used to alert against unsafe practices.

### **FOR YOUR PROTECTION**

Thoroughly read and understand the “Safety Label” section, read all instructions noted on them.

### **SHUTDOWN AND STORAGE**

- Lower machine to the ground, put the tractor in park, turn off the engine, and remove the key.
- Detach and store implements in an area where children typically do not play

### **USE SAFETY LIGHTS AND DEVICES**

- Slow-moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are challenging to see, especially at night.
- Flashing warning lights and we recommend turn signals whenever driving on the public road.

### **TRANSPORT MACHINERY SAFELY**

- Comply with state and local laws
- The maximum transport speed for implement is 20 mph, DO NOT EXCEED. Never travel at a rate that does not allow adequate control of steering and stopping. Some rough terrain requires a slower speed.
- Sudden braking can cause a towed load to swerve and upset. Reduce speed if the towed load is not equipped with brakes.

Use the following maximum speed – tow load weight ratios as a guideline:

- 20 mph when weight is less than or equal to the weight of the tractor.
- 10 mph when weight is double the weight of the tractor.

**IMPORTANT:** Do not tow a load that is more than double the weight of the tractor

### **KEEP RIDERS OFF MACHINERY**

- Riders obstruct the operator’s view; they could be struck by foreign objects or thrown from the machine.
- Never allow children to operate equipment.
- Practice Safe Maintenance
- Understand procedure before doing work. Use proper tools and equipment; refer to Operator’s Manual for additional information.
- Work in a clean, dry area
- Lower the implement to the ground, put the tractor in park, turn off the engine, and remove the key before maintenance.
- Allow implement to cool completely.
- Do not grease or oil implement while it is in operation.
- Inspect all parts. Make sure details are in good condition and installed correctly.

- Remove the buildup of grease, oil, or debris.
- Remove all tools and unused parts from implementation before operation.

### **PREPARE FOR EMERGENCIES**

- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy
- Keep emergency numbers for doctor, ambulance, hospital, and fire department near the phone.

### **WEAR PROTECTIVE EQUIPMENT**

- Wear protective clothing and equipment appropriate for the job. Avoid loose-fitting clothing.
- Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- Operating equipment safely requires the full attention of the operator. Avoid wearing radio headphones while operating machinery.

### **AVOID HIGH-PRESSURE FLUIDS HAZARD**

- Escaping fluid under pressure can penetrate the skin causing severe injury.
- Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- Ensure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- If an accident occurs, see a doctor immediately. Remember, any fluid injected into the skin must be treated within a few hours, or gangrene may result.

### **TIRE SAFETY**

- Tire changing can be dangerous, and trained personnel should be the only ones using correct tools and equipment.
- When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- When removing and installing wheels, use wheel handling equipment adequate for the weight involved.

## LIFTING A LOAD

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1. Approach the load with grapple jaws fully open. Always ensure you are approaching and lifting loads with weight centered on grapple. Do not attempt to lift loads that are off-center.
2. Once the lower tines are underneath the load, close the jaws fully to secure the load. Once the jaws are clamping the load, immediately release pressure. Do not continue to apply hydraulic pressure on the jaw once it's fully closed, as this can cause over-pressurization and cause damage to the structure and/or hydraulic components.
3. Once the load is secure, tilt the grapple slightly backward to secure the load, and then proceed with transport. Again, the load should always be centered. Release and re-clamp as needed.
4. Do not yank or pull at loads, trees, or brush with the upper jaw. Do not ram with the upper jaw. The upper jaw is simply intended to secure loads on the lower tines. Putting additional strain on the upper jaw (other than clamping down on loose loads) can damage the grapple and hydraulic components.
5. Do not push, pull or yank on structures with the grapple. Grapples are intended for lifting/transporting loose loads, and our Rake Series can be utilized to rip roots/certain debris from the ground. Contact Titan support to consider another product designed for pushing, pulling, or yanking structures.
6. Never attempt to pry large objects such as rocks, large stumps, or large roots from the ground using the lower tines. While some of our grapple models are intended for raking, the implement is not designed for prying up objects deeply set in the ground.
7. Never hook or chain a load to the grapple tines for lifting.

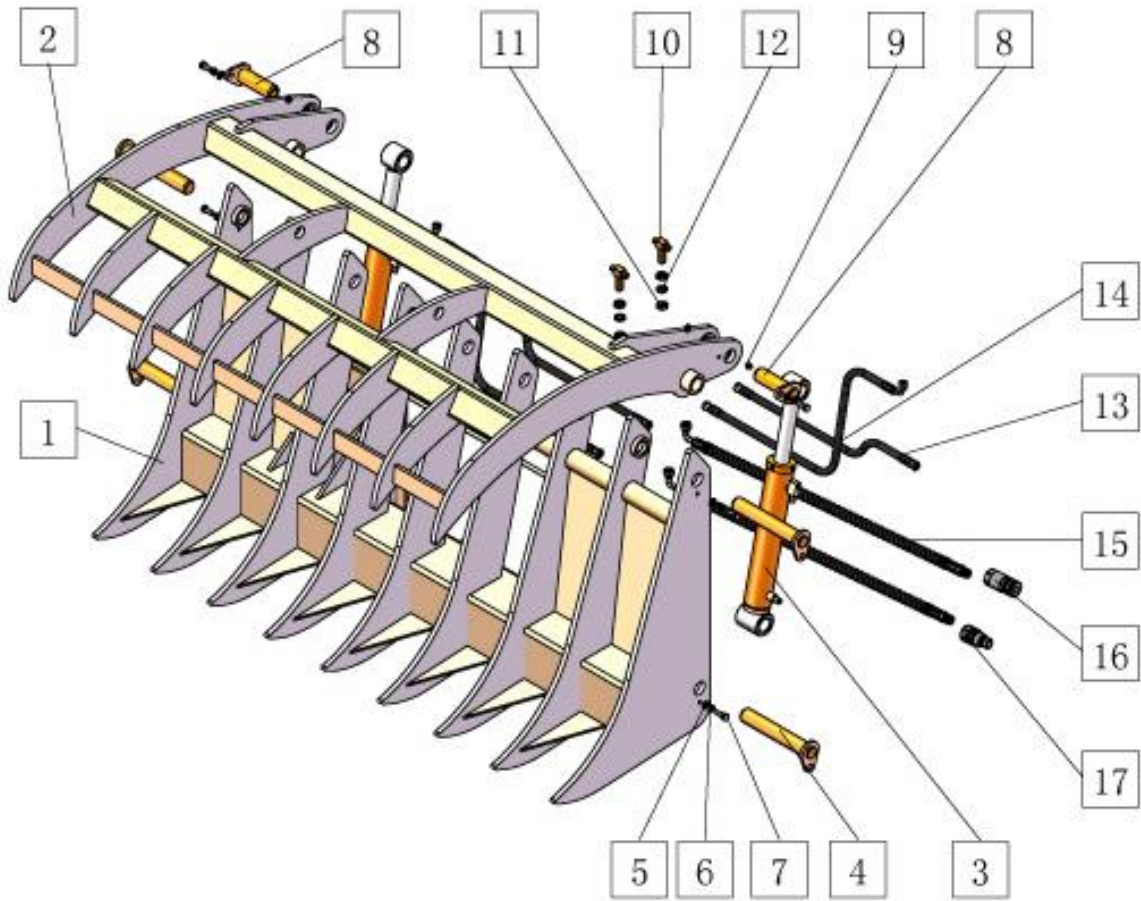
## RAKING

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1. When using grapples upper jaws to back drag or rake the ground, the jaws must be FULLY OPEN. Raking with the jaws only partially opened can cause severe damage to the grapple and its hydraulic components. Damaging the grapple in this manner can void warranties.

**Never attempt to pry large objects such as rocks, large stumps, or large roots from the ground using the lower tines. While some of our grapple models can be used for raking, the implement is not designed for prying up large objects deeply set in the ground.**

**60" ROOT GRAPPLE RAKE PARTS DIAGRAM / EXPLODED VIEW**

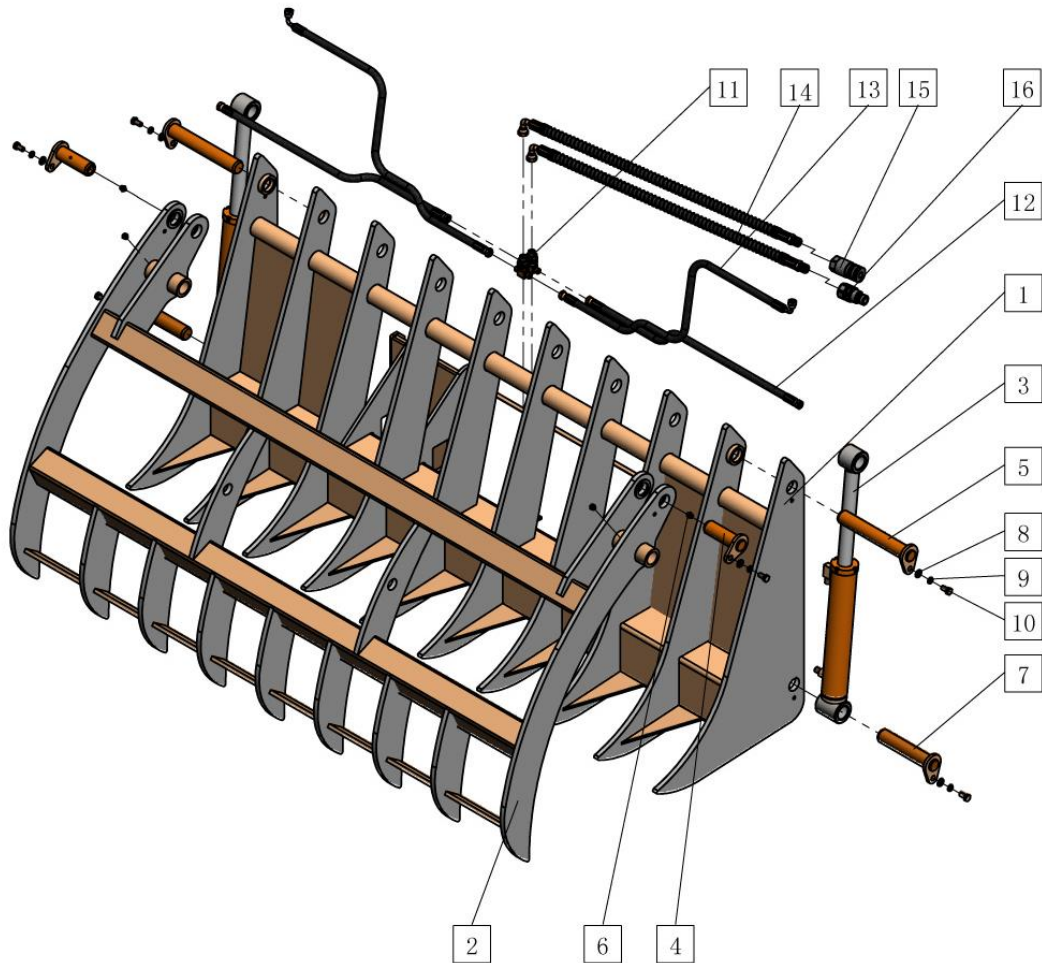


KEY	DESCRIPTION	QTY	KEY	DESCRIPTION	QTY
(1)	UPPER JAW	1	(10)	T-CONNECTOR	2
(2)	LOWER JAW	1	(11)	HEXA NUT G3/8"	4
(3)	HYDRAULIC CYLINDER	2	(12)	SPRING WASHER 16	2
(4)	PIN-1	4	(13)	OIL HOSE - FEED	2
(5)	FLAT WASHER 10	6	(14)	OIL HOSE - RETURN	2
(6)	SPRING WASHER 10	6	(15)	MAIN OIL HOSE	2
(7)	HEXA BOLT M10x25	6	(16)	FLAT FACE COUPLER -	1
(8)	PIN-2	2	(17)	FLAT FACE COUPLER - MALE	1
(9)	GREASE ZERK	4			

**ASSEMBLY INSTRUCTIONS**

This product is sold in full assembly. No assembling is required.

## 72" ROOT GRAPPLE RAKE PARTS DIAGRAM / EXPLODED VIEW



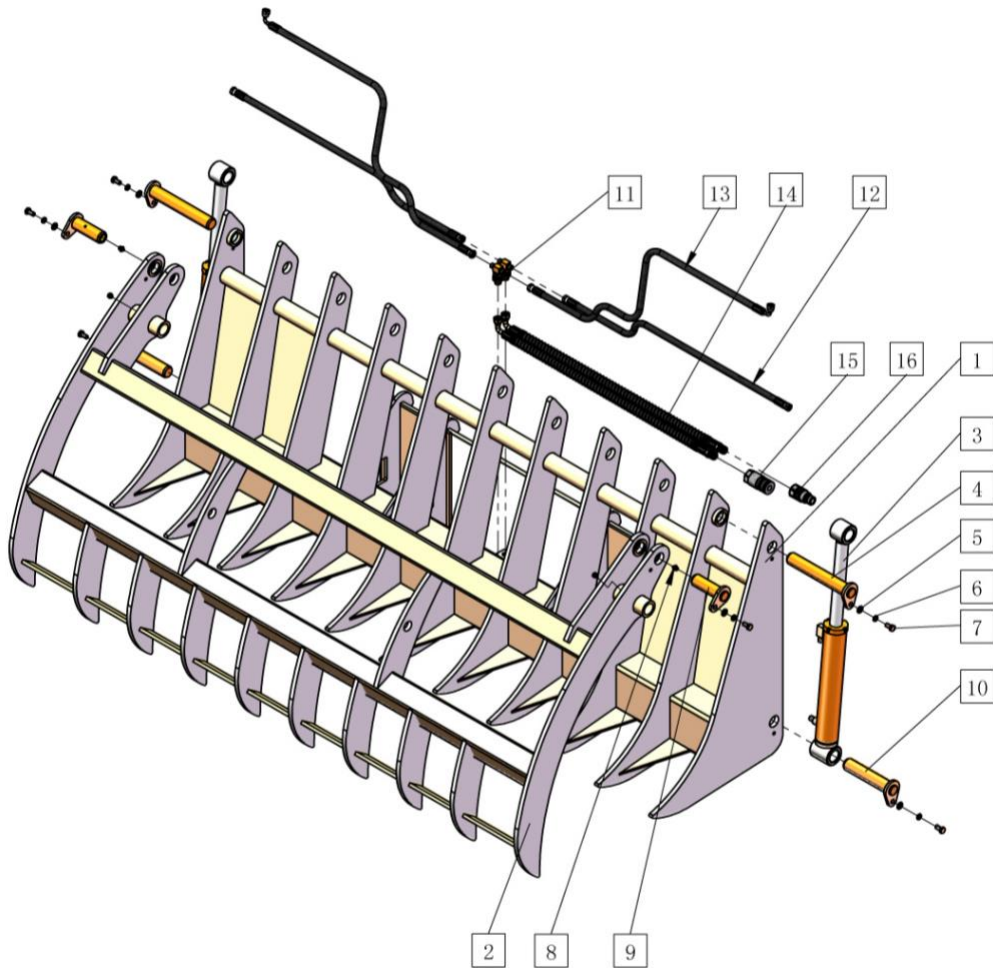
KEY	DESCRIPTION	QTY	KEY	DESCRIPTION	QTY
(1)	UPPER JAW	1	(9)	SPRING WASHER 10	6
(2)	LOWER JAW	1	(10)	HEXA BOLT M10x20	6
(3)	HYDRAULIC CYLINDER	2	(11)	T-CONNECTOR	2
(4)	PIN-1	2	(12)	OIL HOSE - FEED	2
(5)	PIN-2	2	(13)	OIL HOSE - RETURN	2
(6)	GREASE ZERK	4	(14)	MAIN OIL HOSE	2
(7)	PIN-3	2	(15)	FLAT FACE COUPLER -	1
(8)	FLAT WASHER 10	6	(16)	FLAT FACE COUPLER - MALE	1

### ASSEMBLY INSTRUCTIONS

This product is sold in full assembly. No assembling is required.



## 84" ROOT GRAPPLE RAKE PARTS DIAGRAM / EXPLODED VIEW



KEY	DESCRIPTION	QTY	KEY	DESCRIPTION	QTY
(1)	UPPER JAW	1	(9)	PIN-2	2
(2)	LOWER JAW	1	(10)	PIN-3	2
(3)	HYDRAULIC CYLINDER	2	(11)	T-CONNECTOR	2
(4)	PIN-1	2	(12)	OIL HOSE - FEED	2
(5)	FLAT WASHER 10	6	(13)	OIL HOSE - RETURN	2
(6)	SPRING WASHER 10	6	(14)	MAIN OIL HOSE	2
(7)	HEXA BOLT M10x20	6	(15)	FLAT FACE COUPLER -	1
(8)	GREASE ZERK	4	(16)	FLAT FACE COUPLER - MALE	1

### ASSEMBLY INSTRUCTIONS

This product is sold in full assembly. No assembling is required.

**SPECIFICATION CHARTS**

<b>MODEL</b>	<b>60" ROOT GRAPPLE RAKE</b>
<b>MPN</b>	<b>60RAKEv2</b>
<b>OPENING HEIGHT</b>	<b>48-IN.</b>
<b>OVERALL WIDTH</b>	<b>60-IN.</b>
<b>TEETH LENGTH</b>	<b>24-IN.</b>
<b>SIDE THICKNESS</b>	<b>0.5-IN.</b>
<b>MIN LOADER RATED OPERATING CAPACITY</b>	<b>1,516 LB</b>
<b>MAX LOADER RATED OPERATING CAPACITY</b>	<b>2,900 LB</b>
<b>PRODUCT WEIGHT</b>	<b>650 LB.</b>

<b>MODEL</b>	<b>72" ROOT GRAPPLE RAKE</b>
<b>MPN</b>	<b>72RAKEv2</b>
<b>OPENING HEIGHT</b>	<b>48-IN.</b>
<b>OVERALL WIDTH</b>	<b>72-IN.</b>
<b>TEETH LENGTH</b>	<b>24-IN.</b>
<b>SIDE THICKNESS</b>	<b>0.5-IN.</b>
<b>MIN LOADER RATED OPERATING CAPACITY</b>	<b>1,660 LB</b>
<b>MAX LOADER RATED OPERATING CAPACITY</b>	<b>2,900 LB</b>
<b>PRODUCT WEIGHT</b>	<b>825 LB.</b>

<b>MODEL</b>	<b>84" ROOT GRAPPLE RAKE</b>
<b>MPN</b>	<b>84RAKEv2</b>
<b>OPENING HEIGHT</b>	<b>48-IN.</b>
<b>OVERALL WIDTH</b>	<b>84-IN.</b>
<b>TEETH LENGTH</b>	<b>24-IN.</b>
<b>SIDE THICKNESS</b>	<b>0.5-IN.</b>
<b>MIN LOADER RATED OPERATING CAPACITY</b>	<b>1,798 LB</b>
<b>MAX LOADER RATED OPERATING CAPACITY</b>	<b>2,900 LB</b>
<b>PRODUCT WEIGHT</b>	<b>910 LB.</b>

## **ACKNOWLEDGEMENT OF RISK AND RELEASE OF LIABILITY**

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The use of any equipment, including this one, involves the potential risk of injury. Apart from any warranty claim that might be presented for a claimed defect in material or workmanship of the product, you accept and assume full responsibility for any and all injuries, damages (both economic and non-economic), and losses of any type, which may occur, and you fully and forever release and discharge Titan, its insurers, employees, officers, directors, associates, and agents from any and all claims, demands, damages, rights of action, or causes of action, present or future, whether the same be known or unknown, anticipated, or unanticipated, resulting from or arising out of the use of said equipment.

This equipment must be used with care by capable and competent individuals under supervision, if necessary.

## **TITAN LIMITED WARRANTY: TERMS, EXCLUSIONS AND LIMITATIONS OF REMEDIES**

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This product comes with a one (1) year limited warranty that can be found at [www.palletforks.com/warranty.html](http://www.palletforks.com/warranty.html). Please review the same for all details regarding the Titan Limited Warranty.

**THE TITAN LIMITED WARRANTY FOUND AT [WWW.PALLETFORKS.COM/WARRANTY.HTML](http://WWW.PALLETFORKS.COM/WARRANTY.HTML) IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY DISCLAIMED.**



**NEED HELP? CONTACT US FIRST.**

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