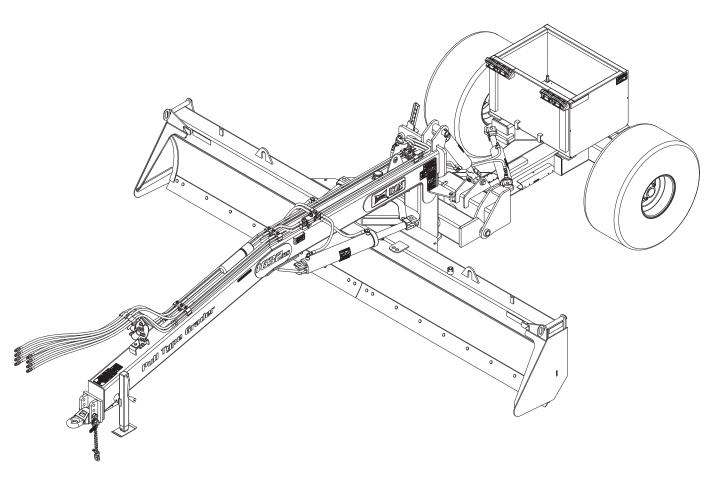


# Model 1432/1432RS/1632/1632RS Pull Type Grader Service and Parts Manual



#### **LANDOLL CORPORATION**

1900 North Street Marysville, Kansas 66508 (785) 562-5381

800-428-5655 ~ WWW.LANDOLL.COM

F-740-0819 08/2019 -- Present

Manuals for the 1432/1432RS/1632/1632RS Grader				
MANUAL NUMBER	MANUAL NAME			
F-740	1432/1432RS/1632/1632RS Service and Parts Manual			

# **Table of Contents**

1	Introduction and Safety Information	
	Introduction  Understanding Safety Statements  Decal Safety  Transporting Safety  Attaching, Detaching, and Storage  Maintenance Safety	1-2 1-2 1-2 1-3
	High Pressure Fluid Safety Protective Equipment Chemical Safety Prepare for Emergencies Tire Safety Safety Chain	1-3 1-3 1-3 1-3 1-3
2	Standard Specifications	
	Model Specification General Torque Specifications (rev. 4/97) Hydraulic Fitting Torque Specifications Introduction Owner Assistance Warranty Registration	2-3 2-4 2-5
3	Assembly and Lubrication  Assembly and Lubrication Check List	
4	Hookup and Operation  Description of Machine Tie Strap Designations Hookup to the Remote Learning to Operate the Grader	4-2
5	Illustrated Parts List	
	General Assembly	
	Grader Assembly Grader Assembly Rear Grader Assembly Front Grader Assembly Bottom Snow/Dirt Skid Assembly Hub & Spindle Assembly 7,000 Lb. Sidewind Jack Assembly	5-6 5-8 5-7 5-8 . 5-1
	Hydraulics Cylinders & Hose Clamps Hydraulic Assembly Cylinder Assembly 4 X 12	. 5-18 . 5-17

#### **TABLE OF CONTENTS**

	Cylinder Assembly 4 X 16	
Electi	rical  Electrical Assembly W/ LED Lights (2 of 2)	5-25
Decal	Decals	
Gaug	e Wheel (Option)	

### 6 Index

ii F-740-0819

# **Introduction and Safety Information**

#### Introduction

The Landoll /Icon Model 1432/1432RS/1632/1632RS Grader is a quality product designed to give years of trouble free performance. By following each section of this manual, your system will perform as designed for you and your operation.

CHAPTER 1 Gives basic instructions on the use of this manual and understanding the safety

statements.

CHAPTER 2 Gives product specifications for the equipment. These specifications supply lengths and

measurements for your equipment. A Standard Bolt Torque Table is provided to give

guidelines for bolt torques to be used when servicing this product.

CHAPTER 3 Contains assembly instructions for your Pull Type Grader. When these procedures are

correctly followed, your equipment should provide you years of trouble-free operation and

service.

CHAPTER 4 Instructs how to operate your equipment before using it, and describes adjustments

needed. Gives practical advice for the care and maintenance of your Landoll equipment.

Drawings in this section locate adjustment points on the equipment.

IF YOU HAVE ANY QUESTIONS CONTACT:
LANDOLL CORPORATION
1900 NORTH STREET
MARYSVILLE, KANSAS 66508

PHONE # (785) 562-5381 or (800) 428-5655 OR

FAX # (888) 527-3909

PARTS LIST Contains various assemblies, subassemblies, and systems. Refer to this section of

manual when ordering Landoll/Icon replacement parts. Order parts from your

Landoll/Icon dealer.

WARRANTY The Warranty Registration form is included with the product documents. Fill it out and

mail it within 15 days of purchase.

NOTE: IMPROPER ASSEMBLY, MODIFICATION, OR MAINTENANCE OF YOUR

LANDOLL MACHINE CAN VOID YOUR WARRANTY.

**COMMENTS** Address comments or questions regarding this publication to:

LANDOLL CORPORATION 1900 NORTH STREET MARYSVILLE, KANSAS 66508 ATTENTION: PUBLICATIONS - DEPT. 55

# **Understanding Safety Statements**

You will find various types of safety information on the following pages and on the machine signs (decals) attached to the vehicle. This section explains their meaning.



The Safety Alert Symbol means ATTENTION! YOUR SAFETY IS INVOLVED!

#### NOTE

Means that failure to follow these instructions could cause damage to the equipment or cause it to operate improperly.

#### **NOTICE**

Special notice - read and thoroughly understand



#### **CAUTION**

Caution means serious equipment or other property damage can occur if instructions on this label are not properly followed.



#### **WARNING**

Warning means serious injury or death can occur if safety measures or instructions on this label are not properly followed.



#### **DANGER**

Danger means a life-threatening situation exists. Death can occur if safety measures or instructions on this label are not properly followed.

#### NOTE

Make sure you read and understand the information contained in this manual and on the machine signs (decals) before you attempt to operate or maintain this vehicle.

The safety statements contained in this manual relate to the operation of the Landoll/Icon Grader.

#### **Decal Safety**

- 1. Examine safety decals and be sure you have the correct safety decals for the implement.
- Keep these signs clean so they can be observed readily. It is important to keep these decals cleaned more frequently than the implement. Wash with soap and water or a cleaning solution as required.
- 3. Replace decals that become damaged or lost. Also, be sure that any new implement components installed during repair include decals which are assigned to them by the manufacturer.
- 4. When applying decals to the implement, be sure to clean the surface to remove any dirt or residue. Where possible, sign placement should protect the sign from abrasion, damage, or obstruction from mud, dirt, oil etc.



#### **DANGER**

- Do not allow anyone to ride on the tractor or implement. Riders could be struck by foreign objects or thrown from the implement.
- Never allow children to operate equipment.
- Keep bystanders away from implement during operation.

#### **Transporting Safety**

#### IMPORTANT

It is the responsibility of the owner/operator to comply with all state and local laws.

 When transporting the implement on a road or highway, use adequate warning symbols, reflectors, lights and slow moving vehicle sign as required. Slow moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.





- Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of the towing vehicle.
- 3. Carry reflectors or flags to mark the tractor and implement in case of breakdown on the road.

1-2 F-740-0819

- Do not transport at speeds over 20 MPH under good conditions. Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.
- Avoid sudden stops or turns because the weight of the implement may cause the operator to lose control of the tractor. Use a tractor heavier than the implement.
- 6. Use caution when towing behind articulated steering tractors; fast or sharp turns may cause the implement to shift sideways.
- 7. Keep clear of overhead power lines and other obstructions when transporting. Know the transport height and width of your implement.

# Attaching, Detaching, and Storage

- 1. Do not stand between the tractor and implement when attaching or detaching implement unless both are not moving.
- 2. Block implement so it will not roll when unhitched from the tractor.
- 3. Store in an area where children normally do not play.

#### **Maintenance Safety**

- Understand the procedure before doing the work.
   Use proper tools and equipment.
- 2. Make sure all moving parts have stopped.
- 3. Do not make adjustments or lubricate implement while it is in motion.
- 4. Block the implement so it will not roll when working on or under it to prevent injury.

#### **High Pressure Fluid Safety**

- Escaping fluid under pressure can be nearly invisible and have enough force to penetrate the skin causing serious injury. Use a piece of cardboard, rather than hands, to search for suspected leaks.
- 2. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.
- Avoid the hazard by relieving pressure before disconnecting hydraulic lines.

#### **Protective Equipment**

- 1. Wear protective clothing and equipment.
- Wear clothing and equipment appropriate for the job. Avoid loose fitting clothing.





 Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection, such as earmuffs or earplugs.

#### **Chemical Safety**

- Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.
- 2. Read chemical manufacture's instructions and store or dispose of unused chemicals as specified.
- 3. Handle chemicals with care and avoid inhaling smoke from any type of chemical fire.
- 4. Store or dispose of unused chemicals as specified by the chemical manufacturer.

#### **Prepare for Emergencies**

- 1. Keep a First Aid Kit and Fire Extinguisher handy.
- 2. Keep emergency numbers for doctor, ambulance, hospital and fire department near the phone.

#### **Tire Safety**

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

#### **Safety Chain**

- Use a chain with a strength rating equal to or greater than the gross weight of towed machinery, which is 10,100 pounds minimum in accordance with ASAE S338.2 specifications. If two or more implements are pulled in tandem, a larger chain may be required. Chain capacity must be greater then the TOTAL weight of all towed implements.
- 2. A second chain should be used between each implement.
- 3. Attach the chain to the tractor drawbar support or specified anchor location. Allow only enough slack in the chain to permit turning. The distance from hitch pin to attachment point or intermediate support point should not exceed 9 inches.
- 4. Replace the chain if any links or end fittings are broken, stretched or damaged.
- 5. Do not use a safety chain for towing.

1-4 F-740-0819

# **Standard Specifications**

# **Model Specification**

Specification Specification					
	Model 1432/1432RS	Model 1632/1632/RS			
Blade Size	14' W X 32" H	16' W X 32" H			
Replaceable Cutting Edge	1/2" X 6" X 7'	1/2" X 6" X 8'			
Blade Swing Left/ Right	50°	50°			
Blade Tilt Side to Side	15°	15°			
Blade Clearance at Full Raised	18"	18"			
Length Overall	23'	23'			
Width Overall with hydraulics attached	9' - 6"	9' - 6"			
Transport Width with hydraulics Unpinned	8' - 4"	8' - 4"			
Shipping Weight (With out Concrete)	5,100lbs/5,460lbs.	5,300lbs/5,660lbs.			
Concrete Option Weight	2,430lbs.	2,430lbs.			
Cylinders Welded Industrial -Blade Swing	5" X 24"	5" X 24"			
Cylinders Welded Industrial - Tilt	4" X 12"	4" X 12"			
Cylinders Welded Industrial - Raise/Lower	4" X 16"	4" X 16"			
Cylinders Welded Industrial - Rear Steer	4" X 16"	4" X 16"			
Hydraulic Hoses	3,000 psi rated	3,000 psi rated			
Hitches	pintle style	pintle style			
Grease Locations	9/10	9/10			
Safety Warning Lights	Standard LED	Standard LED			
Hub & Spindle	8 Bolt 7500 lbs.	8 Bolt 7500 lbs			

	Tire Inflation						
Tire Size	Tire Manufacturer	Ply/Load Rating	Inflation Pressure (Psi) (Max.)				
19L x 16.1 12 ply	Firestone or equivalent	Farm Implement Tread 6600 lbs. @ 30 mph	36 psi				

Recommended Torque Specification For Lug Bolts and Nuts				
Bolt Size Torque (FT. LBS.)				
5/8-18	85- 100 ft - lbs.			

2-2 F-740-0819

# General Torque Specifications (rev. 4/97)

**TORQUE SPECIFIED IN FOOT POUNDS -** This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 331432/1432RS/1632/1432RS/1632/1632RS to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [ ] if using prevailing torque nuts.

UNC SIZE		AE de 2		AE ide 5		AE ide 8	UNF SIZE		AE de 2		AE ide 5		AE ide 8
1/4-20	4	[5]	6	[7]	9	[11]	1/4-28	5	[6]	7	[9]	10	[12]
5/16-18	8	[10]	13	[13]	18	[22]	5/16-24	9	[11]	14	[17]	20	[25]
3/8-16	15	[19]	23	[29]	35	[42]	3/8-24	17	[21]	25	[31]	35	[44]
7/16-14	24	[30]	35	[43]	55	[62]	7/16-20	27	[34]	40	[50]	60	[75]
1/2-13	35	[43]	55	[62]	80	[100]	1/2-20	40	[50]	65	[81]	90	[112]
9/16-12	55	[62]	80	[100]	110	[137]	9/16-18	60	[75]	90	[112]	130	[162]
5/8-11	75	[94]	110	[137]	170	[212]	5/8-18	85	[106]	130	[162]	180	[225]
3/4-10	130	[162]	200	[250]	280	[350]	3/4-16	150	[188]	220	[275]	320	[400]
7/8-9	125	[156]	320	[400]	460	[575]	7/8-14	140	[175]	360	[450]	500	[625]
1-8	190	[237]	408	[506]	680	[850]	1-14	210	[263]	540	[675]	760	[950]
1-1/8-7	270	[337]	600	[750]	960	[1200]	1-1/8-12	300	[375]	660	[825]	1080	[1350]
1-1/4-7	380	[475]	840	[1050	1426	[1782]	1-1/4-12	420	[525]	920	[1150]	1500	[1875]
1-3/8-6	490	[612]	1010	[1375]	1780	[2225]	1-3/8-12	560	[700]	1260	[1575]	2010	[2512]
1-1/2-6	650	[812]	1460	[1825]	2360	[2950]	1-1/2-12	730	[912]	1640	[2050]	2660	[3325]
1-3/4-5	736	[920]	1651	[2063]	2678	[3347]	1-3/4-12	920	[1150]	2063	[2579]	3347	[4183]

#### **METRIC:**

Coarse thread metric class 10.9 fasteners and class 10.0 nuts and through hardened flat washers, phosphate coated, Rockwell "C" 38-45. Use value in [ ] if using prevailing torque nuts.

Nominal thread diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)	Nominal Thread Diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque
6	10 [14]	7 [10]	20	385 [450]	290 [335]
7	16 [22]	12 [16]	24	670 [775]	500 [625]
8	23 [32]	17 [24]	27	980 [1105]	730 [825]
10	46 [60]	34 [47]	30	1330 [1470]	990 [1090]
12	80 [125]	60 [75]	33	1790 [1950]	1340 [1450]
14	125 [155]	90 [115]	36	2325 [2515]	1730 [1870]
16	200 [240]	150 [180]	39	3010 [3210]	2240 [2380]
18	275 [330]	205 [245]			

**Table 2-1: General Torque Specifications** 

# Hydraulic Fitting Torque Specifications

#### TORQUE IS SPECIFIED IN FOOT POUNDS- 37° JIC, ORS, & ORB (REV. 10/97)

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 331432/1432RS/1632/1432RS/1632/1632RS to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [ ] if using prevailing torque nuts.

#### **Parker Brand Fittings**

Dash Size	37 Degree JIC	O-Ring (ORS)	O-Ring Boss (ORB)
-4	11-13	15-17	13-15
-5	14-16		21-23
-6	20-22	34-36	25-29
-8	43-47	58-62	40-44
-10	55-65	100-110	58-62
-12	80-90	134-146	75-85
-16	115-125	202-218	109-121
-20	160-180	248-272	213-237
-24	185-215	303-327	238-262
-32	250-290		310-340

#### **Gates Brand Fittings**

Dash Size	37 Degree JIC	O-Ring (ORS)	O-Ring Boss (ORB)
-4	10-11	10-12	14-16
-5	13-15		
-6	17-19	18-20	24-26
-8	34-38	32-40	37-44
-10	50-56	46-56	50-60
-12	70-78	65-80	75-83
-14		65-80	
-16	94-104	92-105	111-125
-20	124-138	125-140	133-152
-24	156-173	150-180	156-184
-32	219-243		

#### **Aeroquip Brand Fittings**

Dash Size	37 Degree JIC	O-Ring (ORS)	O-Ring Boss (ORB)
-4	11-12	10-12	14-16
-5	15-16		16-20
-6	18-20	18-20	24-26
-8	38-42	32-35	50-60
-10	57-62	46-50	75-80
-12	79-87	65-70	125-135
-14			160-180
-16	108-113	92-100	200-220
-20	127-133	125-140	210-280
-24	158-167	150-165	270-360
-32	245-258		

**Table 2-2: Hydraulic Fitting Torque Specifications** 

2-4 F-740-0819

#### Introduction

This manual is compiled as a guide for owners and operators of the Pull Type Grader. Read it carefully so as to be able to follow the suggestions made. Please take time to understand the proper maintenance schedule and SAFE operation of your equipment.

In the event that a new and inexperienced operator is placed in charge of running the equipment, they should read and understand, that part of the manual for proper maintenance and SAFE operation, and to be trained in regard by an experienced operator.

#### **Owner Assistance**

If customer service or repairs are needed, contact your loon dealer. They have trained personnel, parts and service equipment specially designed for Icon products. Your machine's parts should only be replaced with Icon parts. Have the Serial Number and complete Model Number available when ordering parts from your Icon dealer *See Figure 2-1*.



Figure 2-1: ID Plate

#### **Warranty Registration**

Be certain to register the grader, by online registration at <u>www.landoll.com</u> within 10 days of purchase or lease, in order to be on file at Landoll and eligible for Warranty.

Take time to read and understand the Warranty for this product. That Warranty is printed in the Owner's Manual *See Figure 2-2*, and a separate copy enclosed in the packet.

ICON/Landoll reserves the right to make changes and/or add improvements to it's products at any time without obligation to previously manufactured equipment.

ICON/Landoll recommends a maximum horsepower of the pulling tractor for your grader to be 300 hp. Additional power may shorten the life of your grader and will alter the Warranty.

Please take time to complete the following information for your personal reference, should you need to contact your Dealer with questions or parts needs.

MODEL	
SERIAL #	
DATE OF PURCHASE	
DEALER NAME	

We at ICON/Landoll wish to thank you for purchasing our product. We have spent considerable time and effort to research, design, test and develop this machine and are confident it will serve you in the use for which it was designed.

# LANDOLL CORPORATION Product Warranty

LANDOLL CORPORATION 1600 W. 8<sup>th</sup> St. Beloit KS 67420 (referred to as LANDOLL in this document)

LANDOLL shall Warrant workmanship and materials on the ICON Farm Products for a period of 12 months from the date of original purchase, lease, or rental, from the original Dealer, and in accordance with the following terms and conditions.

Should any part or component fail within the Warranty period, and under normal use conditions, LANDOLL shall supply a new part or component for replacement through the original Dealer. Cost of normal ground freight, for that part or component to the Dealer, shall be paid by LANDOLL. Repair and replacement labor cost, from the original Dealer, shall be paid by LANDOLL at a rate negotiated by LANDOLL.

No further expense shall be paid by LANDOLL, including but not limited to, loss of time or income.

LANDOLL shall not provide Warranty on any part or component that has failed due to abuse, misuse, alteration, improper maintenance, or normal wear. Failure occurring while being pulled by a tractor in excess of engine horsepower, as described in the owners manual and/or posted on the machine, is considered abuse and misuse and shall not receive Warranty. Warranty applies only to normal. intermittent agricultural use, and not commercial or industrial use.

In regard to some components manufactured by other companies and sold by LANDOLL, including but not limited to tires, said Warranty shall be provided solely by that manufacturing company.

This Warranty applies to products sold in the United States and Canada, and is made expressly in place of all other warranties, expressed or implied.

Figure 2-2: Product Warranty

2-6 F-740-0819

# **Assembly and Lubrication**

# **Assembly and Lubrication Check List**

- 1. Install and pin pivot frame to tongue frame.
- 2. Pin rear frame to center pivot frame
- 3. Attach grader hitch and assure proper movement.
- 4. Install pivot pins, and insert all retaining clips.
- 5. Install lift/tilt pivot cylinders. Install all cylinder pins and retaining clips.
- 6. Install box ends and components. Fold and check to assure they function properly.
- Install axle and wheel components. Visually inspect tires.
- 8. Route hydraulic lines and tighten.
- Install safety lighting components, route wiring, and install plug retainer. Cycle and check lighting system with 12 volt system tester.
- 10. Lubricate all moving components with high temp grease.
- 11. Fill hydraulic systems with Mobil 424 hydraulic oil using hydraulic pump, activate all moving parts and bleed air from the system. Hold 3000 psi. hydraulic pressure against all cylinders, fittings, and hoses.
- 12. Check hydraulic components for leaks.
- 13. Recheck that all retainers are installed.
- 14. Assure the rear steer components function properly.
- 15. Clean and touch up paint the machine.
- 16. Attach operators manual and container.
- 17. Apply the safety, operations, and lube identification decals. Attach plastic envelope with warranty info, and this check list, at the front of the hose holder.
- 18. For ease of transporting, assure that the blade is level, and in the transport position before leaving shop.

#### **Lubrication Maintenance**

- Table 3-1 specifies the number and the period of lubrication points on the 1432/1432RS/1632/1632RS Grader. Proper maintenance of your machine will, under normal operating conditions, help to keep it operating at or near its peak performance for an extended period of time. Proper maintenance is also a condition of keeping your warranty in good status See Figure 3-1.
- When lubricating the 1432/1432RS/1632/1632RS, SAE multi-purpose EP grease, or EP grease with 3-51432 molybdenum sulfide is recommended. Wipe soil from fittings before greasing. Replace any lost or broken fittings immediately.
- 3. Regular lubrication will extend service life, particularly in severe operating conditions.

#### **Storage**

- The service life of the 1432/1432RS/1632/1632RS
   Grader will be extended by proper off-season storage
   practices. Prior to storing the unit, complete the
   following procedures:
  - a. Completely clean the unit.
  - Inspect the machine for worn or defective parts.
     Replace as needed.
  - Repaint all areas where the original paint is worn off.
  - d. Grease all exposed metal surfaces of shanks, points and discs.
  - e. Apply a light coating of oil or grease to exposed cylinder rods to prevent them from rusting.
  - f. Lubricate each point of the machine as stated in "Lubrication Maintenance" on page 3-1.
- 2. Store the unit in a shed or under a tarpaulin to protect it from the weather. The ground tools and tires should rest on boards, or some other object, to keep them out of the soil.

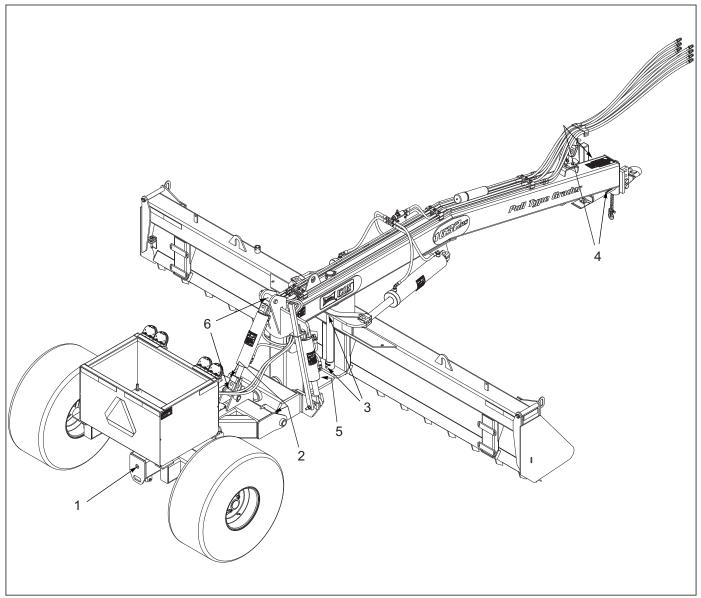


Figure 3-1: Lubrication Schedule

	LUBRICATION TABLE				
ITEM	DESCRIPTION	NO. OF LUBE POINTS	INTERVAL		
1	REAR AXLE PIVOT	1	DAILY		
2	REAR AXLE SUPPORT PIN	2	DAILY		
3	CENTER BLADE PIN	2	DAILY		
4	HITCH PIVOT	2	DAILY		
5	CENTER PIVOT	1	DAILY		
6	LIFT CYLINDER PIN	2	DAILY		

**Table 3-1: Lubrication Table** 

3-2 F-740-0819

# **Hookup and Operation**

#### **Description of Machine**

The 1432/1432RS/1632/1632RS Grader utilizes 3 or 4 hydraulic valves on the tractor, allowing it to function in four different directions.

The Grader has the ability to:

- raise to a clearance from bit to ground of 30 inches while lowering to a negative cut.
- tilt from side to side approximately 15 degrees to accomplish slope cuts and ditching.
- swing of the blade approximately 50 degrees, left or right,
- control of the rear steer, 5' in either direction. All of these functions can be done on the go, or while the grader is stopped.

#### **Tie Strap Designations**

Color coded tie straps and markers are attached at the tip end of the hoses to identify the four pairs of hydraulic lines to the grader.

- Black tie is used on the hoses that raise and lower of the blade.
- Yellow tie is used on hoses that tilt of the blade.
- White tie is used on hoses that swing of the blade.
- Blue tie is used on hoses that shift the rear.

#### NOTE

The decal is located on the tongue of the machine (See Figure 4-1)

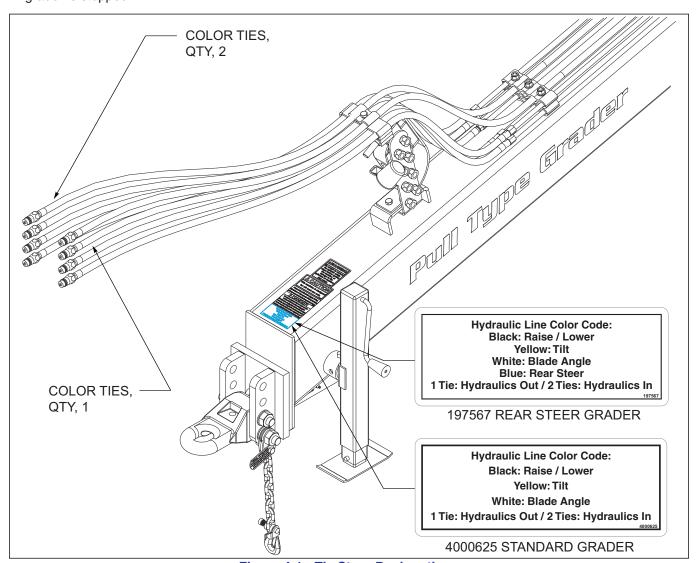


Figure 4-1: Tie Strap Designations

#### **Hookup to the Remote**

Hookup of the hydraulic hoses to the remote can be done in any way to suit individual needs. The following method is suggested: Raise/Lower of the blade to #1 valve. Tilt of the blade to #2, and swing of blade to #3, and #4 to control rear steer.



#### **WARNING**

Before angling the blade, make sure the grader is taken out of transport position. And be certain that the cylinder stops are removed before use.



#### **CAUTION**

When digging in a populated area, it is recommended that a call be made to area utilities to establish the local of any buried pipes, lines, or structures. When digging in open area, research and know the local of any underground structures and objects.

Striking the blade and bit against surface or buried objects can cause damage to the grader and is considered as abuse to the machine.

#### **NOTICE**

Operator abuse will not be a warranty item.

#### **Learning to Operate the Grader**

Be patient for the first few hours of learning to operate the grader. Time and experience will produce expert results. Any type of blade machine has the tendency to create a "washboard" effect if grading is done with too much speed. Slow down and do the job right. The second tendency of any blade machine is to side draft if the blade is cutting deep and enough power is applied. Practice centering the cut on the blade to balance the draft. Operating the Grader at a higher speed may not get the job done quicker, and may provide less than quality results. It is also recommended that the weight box be filled prior to use. This will also aid in preventing side draft, and bounce.

Responsible operation and proper maintenance will provide many hours of expert results and a durable machine.



#### **CAUTION**

This machine is not intended for highway use, it should be used off road only.

If public roadway travel is necessary, be certain of regulations concerning width, lighting, and safety chain requirements.

4-2 F-740-0819

# **Illustrated Parts List**

# **General Assembly**

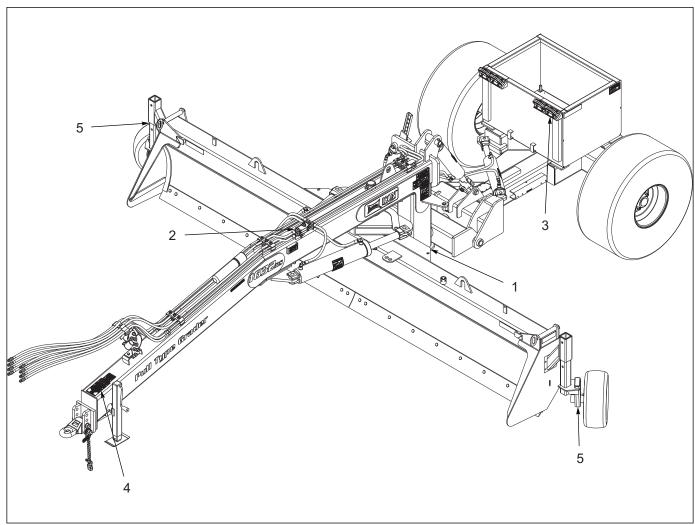


Figure 5-1: General Assembly

### **General Assembly**

ITEM	PART NO.	DESCRIPTION	QTY.
1	5-3 - 5-12	GRADER ASSEMBLY	
2	5-14 - 5-21	HYDRAULICS	
3	5-23 - 5-26	ELECTRICAL	
4	5-28 - 5-31	DECALS	
5	5-32 - 5-33	GAUGE WHEEL (OPTION)	

# **Grader Assembly**

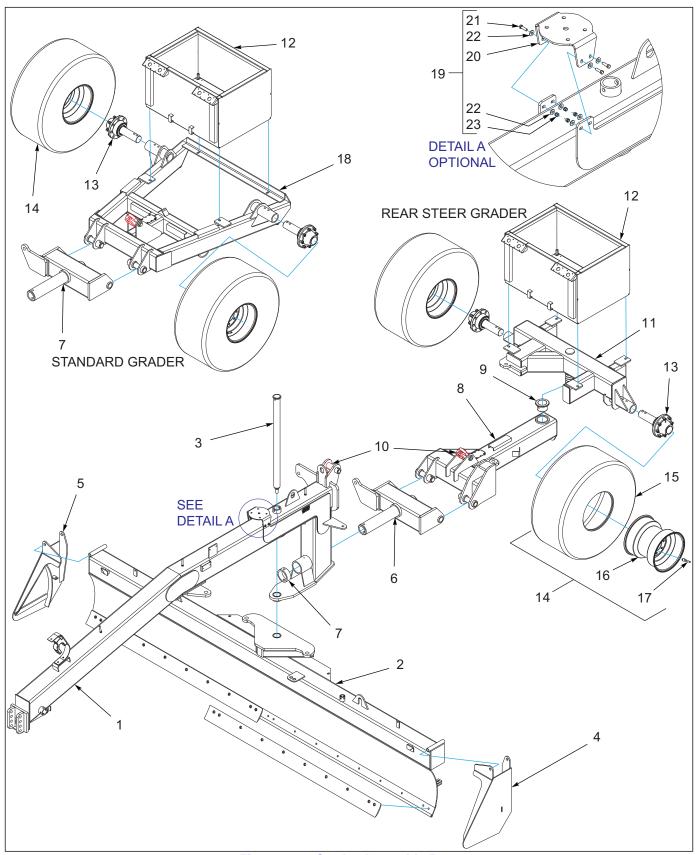


Figure 5-2: Grader Assembly Rear

5-2 F-740-0819

# **Grader Assembly Rear**

ITEM	PART NO.	DESCRIPTION	QTY.
1	ICO2183	TONGUE WLDMT FRAME 1632	1
2	ICO2205	1432 MOWBOARD	1
2	ICO2182	1632 MOWBOARD WLDMT	1
3	GRA2044	UG16 PIN WLDMT CENTER BLADE	1
4	ICO2154	ICON 1632 BOX END LEFT	1
5	ICO2153	ICON 1632 BOX END RIGHT	1
6	ICO1051	CENTER PIVOT FRAME WLDMT UG16	1
7	ICO1069	AG16C CENTER PIVOT RETAINER	1
8	ICO2324	REAR STEER WLDMT	1
9	4001271	BUSHING 4 OD-3.5 ID SM.FLANGED	2
10	ICO1075	PIVOT WLDMT CYLINDER	2
11	ICO2325	AXLE WLDMT REAR STEER	1
12	ICO2187	WLDMT, WEIGHT BOX 1632	13
13	ICO0361	HUB/AXLE ASSY (SEE PAGE 5-11)	2
14	173240	TIRE AND WHEEL ASSY 19L X 16. (INCLUDES ITEMS 15-17)	2
15	4001244	TIRE 19X16.1 GRADER OPTION	1
16	4001245	WHEEL 16X16.1 GRADER OPTION	1
17	TR571	VALVE STEM	1
18	ICO2186	1632 REAR AXLE SUPPORT	1
19	218928	KIT, SINGLE GPS MOUNT, 1632 (INCLUDES ITEMS 21-24) (OPTIONAL)	1
20	218915	BRACKET, GPS MOUNT	1
21	1-654-010051-06	SCREW,HEX CAP 3/8-16UNCX1-1/4	4
22	1-861-010032-11	WASHER, FLAT 3/8 W ZP/CD	8
23	1-512-010005-05	NUT, HEX, SLFLKG GRB 3/8-16	4

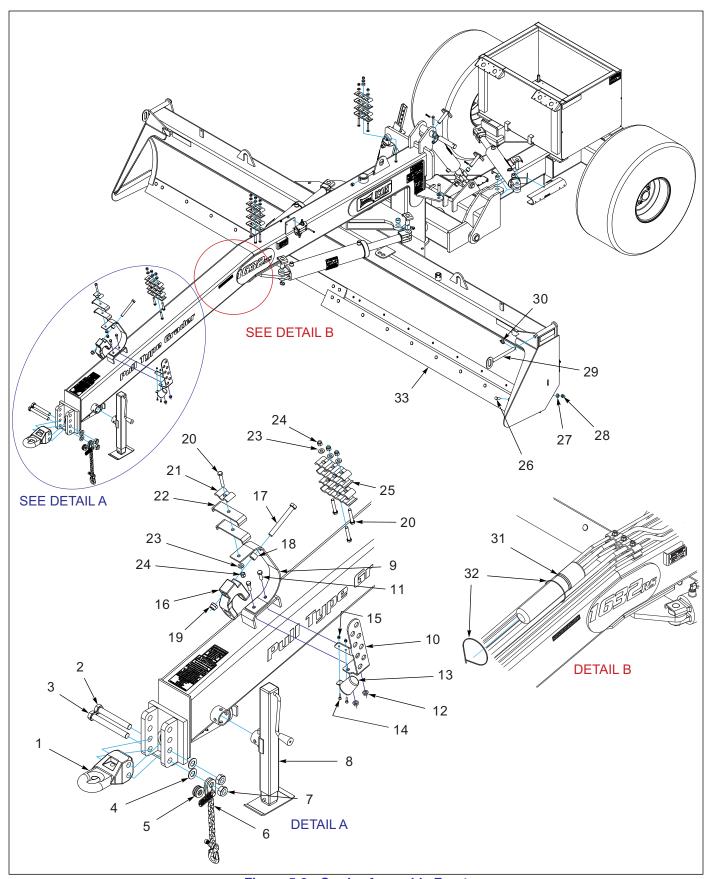


Figure 5-3: Grader Assembly Front

5-4 F-740-0819

# **Grader Assembly Front**

ITEM	PART NO.	DESCRIPTION	QTY	<b>7</b> _
		1432 GRADER	*	
		1632 GRADER		*
1	4001501	HITCH, PINTLE CAST, CAT III HD	1	1
2	1-654-010125-20	SCREW,1-8UNCX7-1/2 HX CP GR8	1	1
3	1-654-010125-22	SCREW HX CP 1-8UNCX8-1/2G8ZP	1	1
4	622-3511-010	WASHER, FLAT 1" MIL-CARB SAE	2	2
5	1-861-010032-24	WASHER FL 1IN NARROW ZP	3	3
6	141434	SAFETY CHAIN 21,000LB	1	1
7	118652	NUT HX SLFLKG W/NYL 1-8 ZP	2	2
8	140647	JACK, SIDE WIND 7000/8000 LB (SEE PAGE 5-12)	1	1
9	ICO0004	HOSE STAND 1/4x2.5x24	1	1
10	202230	PLATE, HYD HOSE HOLDER	1	1
11	1-654-010055-03	SCREW,HEX CAP,1/2-13UNCX1-1/2	2	2
12	1-510-010003-09	NUT,1/2-13 FLANGE HD,SERRATED	2	2
13	2-368-010287	HARNESS, STOR-A-WAY	1	1
14	1-654-010047-06	SCREW,HX CP 1/4-20UNCX1 GR5	2	2
15	1-512-010005-01	NUT,HEX,SLFLKG GRB 1/4-20	2	2
16	4001503	HITCH TONGUE CAST U CLEVIS	1	1
17	120876	SCREW,HEXCAP,3/4-10X6-1/2 GR8	1	1
18	9602016	RD TUBE,1-1/8 OD X .78 ID X7/8	1	1
19	110-0238	3/4-10 ESNA NUT ZP 41NE-120	1	1
20	1-654-010055-09	SCREW,HX CP,1/2-13UNCX3 GR5	1	1
21	ICO0226	REAR SIDE PIPE CLAMP	1	1
22	ICO0544	CLAMP, HYD LINE 2X5-1/4	2	2
23	622-3511-005	WASHER, FLAT 1/2 MIL-CARB SAE	4	4
24	W915665-4	NUT, 1/2-13 NYLOCK GR 5 ZP	4	4
25	ICO0223	SIDE PIPE CLAMP	12	12
26	172791	BOLT, PLOW 5/8-11 X 2 GR8	18	20
27	622-3511-007	WASHER, FLAT 5/8 MIL-CARB SAE	18	20
28	63D10ER	NUT HEX 5/8-11 UNC GR8	18	20
29	ICO1096	PIN WLDMT BOX END	2	2
30	134912	PIN, LYNCH 1/4 X 1-1/4	2	2
31	1-116-010019	BOX, MANUAL STORAGE	1	1
32	4000750	CABLE TIE,14" BLACKHD 21047	2	2
33	4000126	CUTTING EDGE, 7' GRADER BLADE	2	
33	4000127	CUTTING EDGE, 8' GRADER BLADE		2

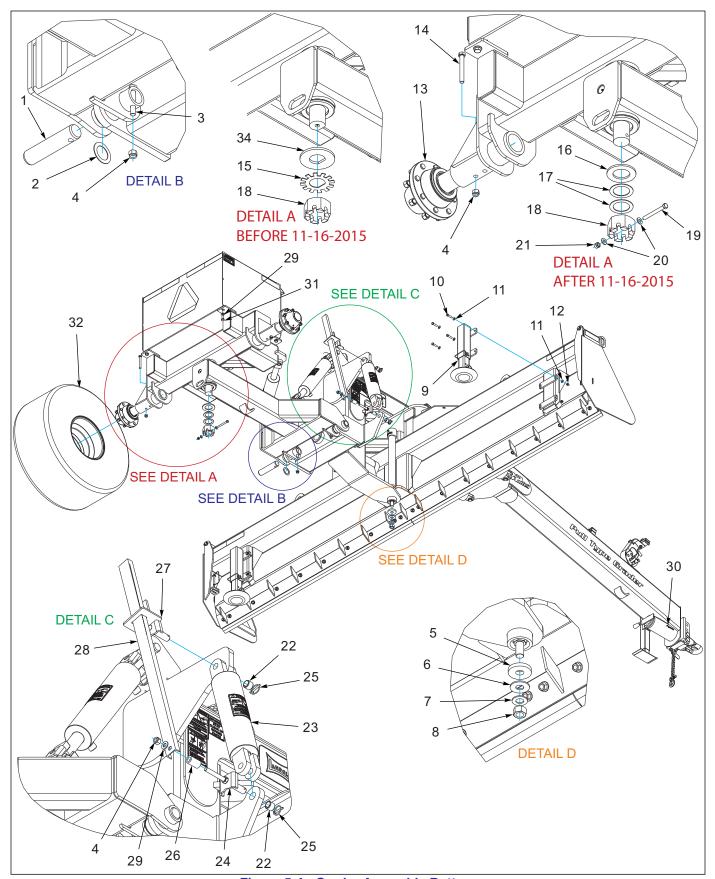


Figure 5-4: Grader Assembly Bottom

5-6 F-740-0819

# **Grader Assembly Bottom**

ITEM	PART NO.	DESCRIPTION	QTY.
1	ICO0372	REAR AXLE SUPPORT PIN	2
2	172926	WASHER MACHINE 2	4
3	172829	SCREW HX CP 5/8-11X4 GR8	2
4	103-0625	NUT ESNA 5/8-11	2
5	SCR2160	WASHER LOAD SHARING PIN	1
6	1-861-010032-25	WASHER FL 1IN WIDE ZP	1
7	622-3511-010	WASHER, FLAT 1" MIL-CARB SAE	1
8	172839	NUT HEX 1-8 GR8 ZP	1
9	179183	ASSY, GRADER SNOW/DIRT SKID (SEE PAGE 5-8)	2
10	1-654-010055-05	SCREW,HEX CAP,1/2-13UNCX2 GR5	8
11	1-861-010032-14	WASHER, FLAT 1/2" N ZP/CD	16
12	1-510-010003-09	NUT,1/2-13 FLANGE HD,SERRATED	8
13	ICO0361	HUB/AXLE ASSY (SEE PAGE 5-11)	2
14	172830	SCREW HX CP 5/8-11X5 GR8	2
15	ICO2255	10YD HITCH RETAINER	1
16	622-3511-018	WASHER FLAT 2-1/2 MIL-CARB SAE	1
17	184125	WASHER, GANG SHAFT	2
18	172892	NUT HX SLOT 2-1/2-4 ZP	1
19	179259	SCREW,HX CAP,1/2-13X4-1/2GR8	1
20	622-3511-005	WASHER, FLAT 1/2 MIL-CARB SAE	2
21	1-512-010005-09	NUT,HEX,SLFLKG, 1/2-13 GRB	1
22	2-150-010008	BUSHING 1-1/40DX1IDX1 STEEL	2
23	4000857	HYDCYL - 4X12W CLEVIS 22-1/4" (SEE PAGE 5-19)	1
24	ICO1077	UG16 CYL PIN W/ DEPTH GAUGE MO	1
25	134912	PIN, LYNCH 1/4 X 1-1/4	2
26	ICO1082	AG16C DEPTH GAUGE SPACER	1
27	ICO1076	UG16 CYL PIN W/DEPTH GAUGE SLI	1
28	ICO1079	1632 DEPTH GAUGE	1
29	622-3511-007	WASHER, FLAT 5/8 MIL-CARB SAE	5
30	5000	ZERK FITTING 1/8NPT	1
31	172827	SCREW HX CP 5/8-11X1-1/2 GR8	4
32	173240	TIRE AND WHEEL ASSY 19L X 16.1 (SEE PAGE 5-3)	2
33	ICO2254	10YD WEAR WASHER	1

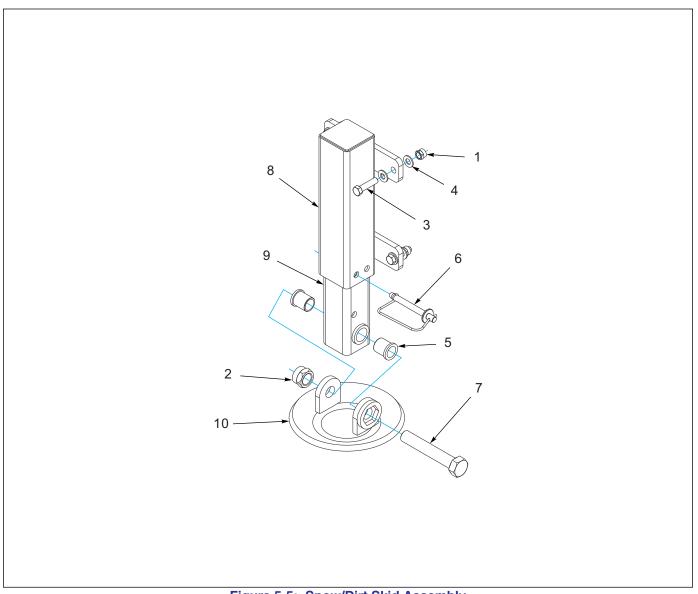


Figure 5-5: Snow/Dirt Skid Assembly

### **Snow/Dirt Skid Assembly**

ITEM	PART NO.	DESCRIPTION	QTY.
	179183	ASSY, GRADER SNOW/DIRT SKID	
1	1-512-010005-09	NUT,HEX,SLFLKG, 1/2-13 GRB	2
2	1-512-010005-19	NUT 1-8 HEX SLF-LOCKING GRB	1
3	1-654-010055-05	SCREW,HEX CAP,1/2-13UNCX2 GR5	2
4	1-861-010032-14	WASHER, FLAT 1/2" N ZP/CD	4
5	144264	BEARING FLANGE	2
6	155971	PIN, HARROW ADJ	1
7	172580	SCREW HEX CAP 1-8UNCX6 GR8 ZP	1
8	179184	WLDMT, GRADER SNOW/DIRT SKID	1
9	179187	WLDMT, GRADER SNOW/DIRT SKID	1
10	179190	WLDMT, GRADER SNOW/DIRT SKID	1

5-8 F-740-0819

Table provided for general use.	
NOTES:	

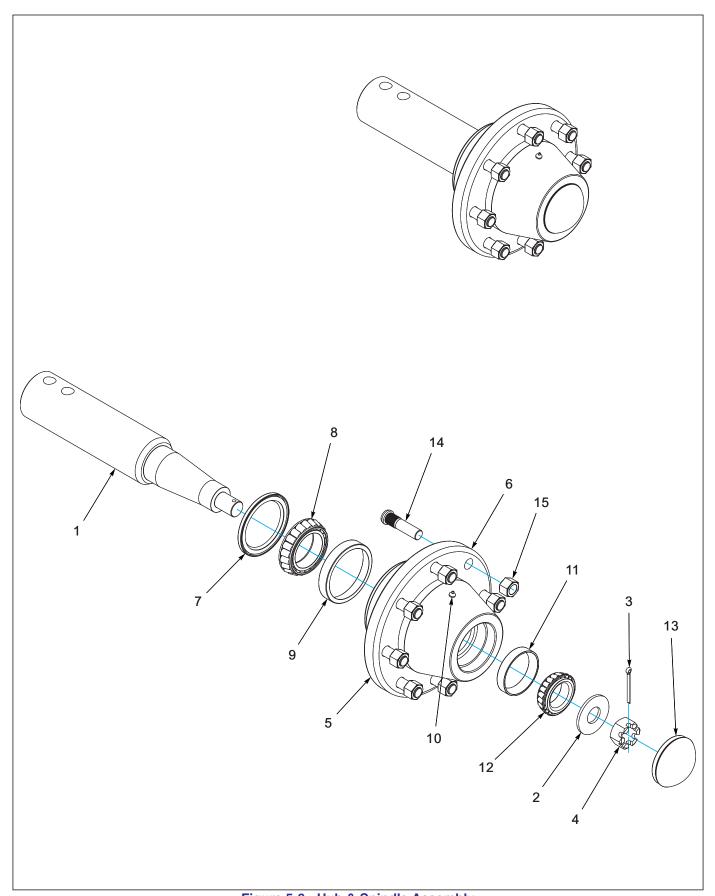
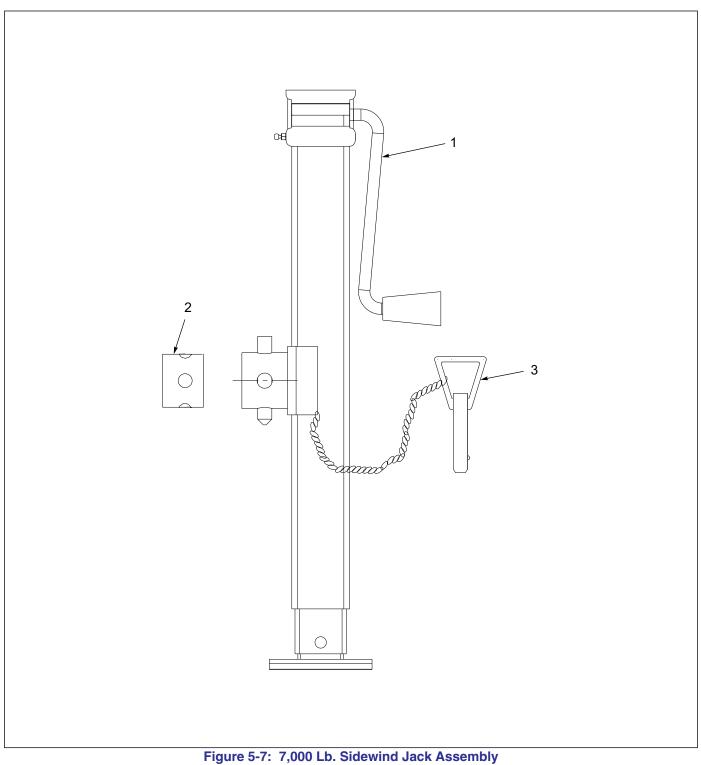


Figure 5-6: Hub & Spindle Assembly

5-10 F-740-0819

# **Hub & Spindle Assembly**

ITEM	PART NO.	DESCRIPTION	QTY.
-	ICO0361	HUB/AXLE ASSY	
1	ICO0360	HD16 AXLE 8500#	1
2	1-861-010032-25	WASHER FL 1IN WIDE ZP	1
3	110-4224	PIN,COTTER-3/16 X 2IN LG	1
4	1-516-010001-20	NUT, HX SLOT 1-14	1
5	4001057	HUB 7500# 8 BOLT SET 75-8	1
6	4001058	HUB 75-8 HUB 281180	1
7	4001062	HUB 80 SEAL CR29968	1
8	4001061	HUB 80 CONE INNER 387AS ARMST	1
9	4001059	HUB 80 CUP INNER ARM 382A	1
10	5000	ZERK FITTING 1/8NPT	1
11	4000580	HUB 80 CUP OUTER LM501310	1
12	4000582	HUB 80 CONE OUTER LM501349	1
13	4000585	HUB 80 HUB CAP1609	1
14	4001060	HUB 75-8 BOLTS 5/8-18 STUD	8
15	4001517	HUB 75-8 NUT 5/8-18	5



### 7,000 Lb. Sidewind Jack Assembly

ITEM	PART NO.	DESCRIPTION	QTY.
	140647	JACK, SIDEWIND 7000LB	
1	500171	HANDLE FOR JACK	1
2	142194	5/8" PIN (WELD TO IMPLEMENT FRAME)	1
3	141250	TUBE, RD, JACK MOUNT	1

5-12 F-740-0819

Table provided for general use.	
NOTES:	

# **Hydraulics**

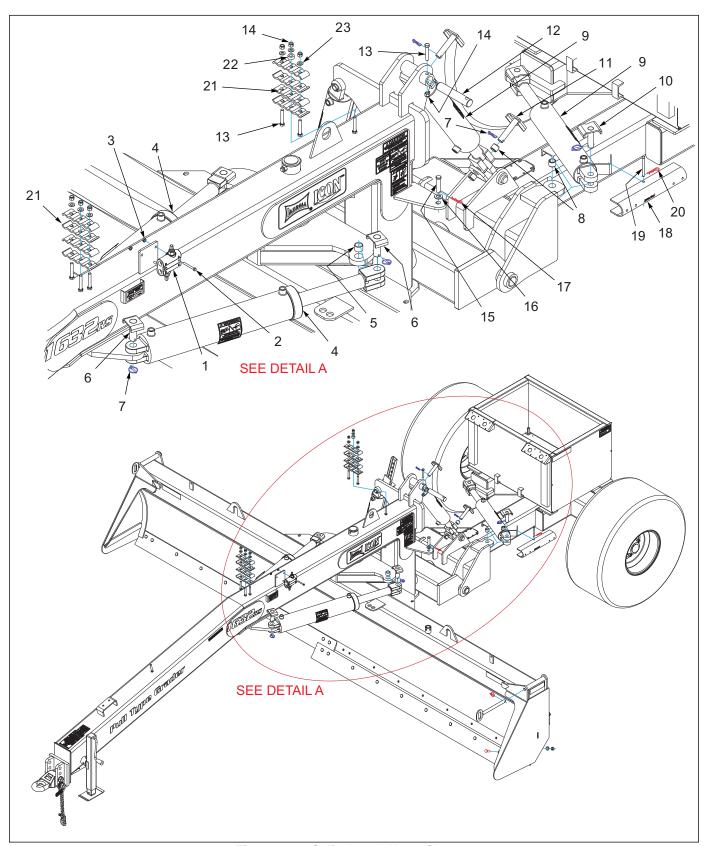


Figure 5-8: Cylinders & Hose Clamps

5-14 F-740-0819

# Cylinders & Hose Clamps

ITEM	PART NO.	DESCRIPTION	QT	Υ.
		1432/1632 GRADER STANDARD	*	
		1432RS/1632RS GRADER REAR STEER		*
1	5000855	HYD VALVE CUSHION DRV1HH-25-25	1	1
2	1-654-010049-12	SCREW,HX CAP,5/16-18UNCX2-3/4	2	2
3	126561	NUT,FLG HD,SERRATED,5/16-18ZP	2	2
4	4000859	HYDCYL - 5X24W CLEVIS 36-1/4"	2	2
5	4000096	BUSHING, 150125100	4	4
6	GRA1599	PIN, CYLINDER - 1-1/4"	4	4
7	134912	PIN, LYNCH 1/4 X 1-1/4	6	8
8	2-150-010008	BUSHING 1-1/4ODX1IDX1 STEEL	4	6
9	4000858	HYDCYL - 4X16W CLEVIS 26-1/4"		2
10	GRA1600	PIN,CYLINDER - 1"		2
11	ICO0477	PIN,CYLINDER - 1" WLDMT	2	2
12	ICO1078	CYLINDER PIVOT PIN	2	2
13	1-654-010055-09	SCREW,HX CP,1/2-13UNCX3 GR5	2	2
14	W915665-4	NUT, 1/2-13 NYLOCK GR 5 ZP	2	2
15	4001442	PIN, 821 SAFETY 3/4X3 GR8	1	1
16	622-3511-008	WASHER, FLAT 3/4 MIL-CARB SAE	1	1
17	4001443	PIN, BRIDGE 3 X 5/32	1	1
18	ICO1080	STOP, CYLINDER - 16"	1	1
19	1408090	CLEVIS PIN .375X4 ZP	1	1
20	1-557-010403	HAIRPIN 1/8	1	1
21	ICO0223	SIDE PIPE CLAMP	8	8
22	ICO0090	PIN SPACER, ø5/8" X 9/16"	2	2
23	622-3511-005	WASHER, FLAT 1/2 MIL-CARB SAE	6	6

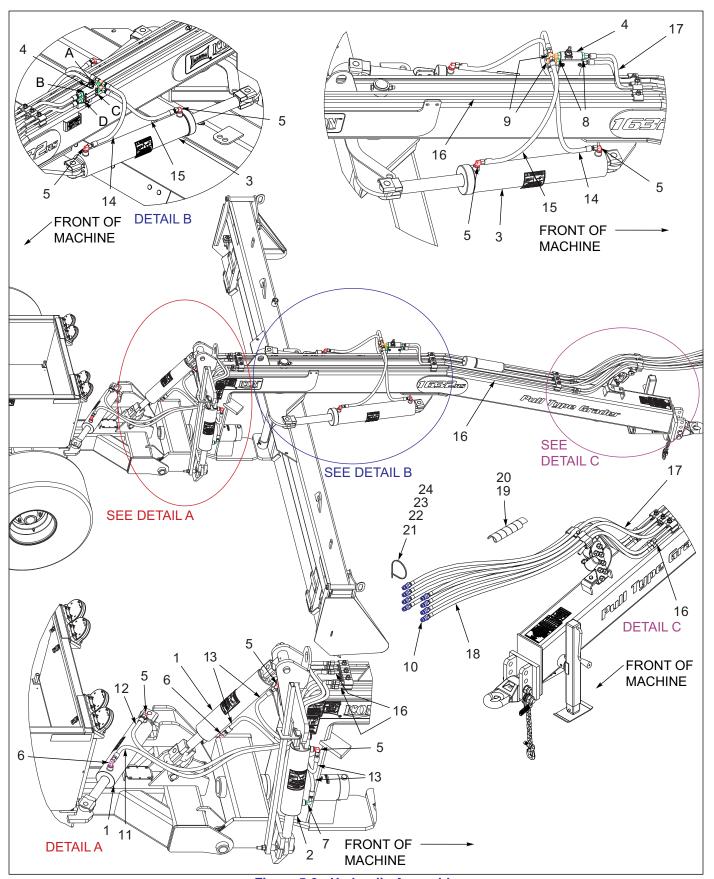


Figure 5-9: Hydraulic Assembly

5-16 F-740-0819

# **Hydraulic Assembly**

ITEM	PART NO.	DESCRIPTION	Q <sup>-</sup>	ΓY.
		1432/1632 GRADER STANDARD	*	
		1432RS/1632RS GRADER REAR STEER		*
1	4000858	HYDCYL - 4X16W CLEVIS 26-1/4" (LIFT & REER STEER) (SEE PAGE 5-19)	1	2
2	4000857	HYDCYL - 4X12W CLEVIS 22-1/4" (TILT) (SEE PAGE 5-20)	1	1
3	4000859	HYDCYL - 5X24W CLEVIS 36-1/4" (ANGLE) (SEE PAGE 5-21)	2	2
4	5000855	HYD VALVE CUSHION DRV1HH-25-25	1	1
5	2062-8-8S	ADAPTER, 90, #8 O-RING-TUBE	6	7
6	141826	ELBOW 90 1/16 RES	2	3
7	141827	ELBOW 90 3/40RB3/4JIC 1/32REST	1	1
8	202702-12-8S	ADAPTER, #12 O-RING #8 TUBE	4	4
9	40-0669-01	TEE,SWIVEL NUT BRANCH,-8	2	2
10	141828	COUPLER,MALE 3/4-16 O-RING	6	8
11	179195	HOSE 3/8X78 #8JIC MALE X #8JIC (ROD END)		1
12	179196	HOSE 3/8X86 #8JIC MALE X #8JIC (BASE END)		1
13	5000889	HOSE ASSY 3/8X45 #8JIC X #8JIC	4	4
14	5000858	HOSE ASSY 3/8X22 #8JIC SWIVL	2	2
15	5000859	HOSE ASSY 3/8X30 #8JIC SWIVL	2	2
16	5000893	HYD, TUBE 8FJ-124"-8FJ .049W	4	6
17	5001150	HOSE 3/8X161 #8JIC X #8 ORING	2	2
18	5000979	HOSE ASSY 3/8X93 #8JIC X #8ORB	4	6
19	5000595	HOSE WRAP, 1-1/4" BLACK		AR
20	5000934	HOSE WRAP 1/4 HOSE	AR	AR
21	4000722	CABLE TIE 7-1/4 CLEAR 21724	3	3
22	4000723	CABLE TIE, 8" BLACK HD	3	3
23	4000724	CABLE TIE,7 1/2" YELLOW 21524	3	3
24	179208	CABLE TIE, 7-1/2" BLUE, 21526		3

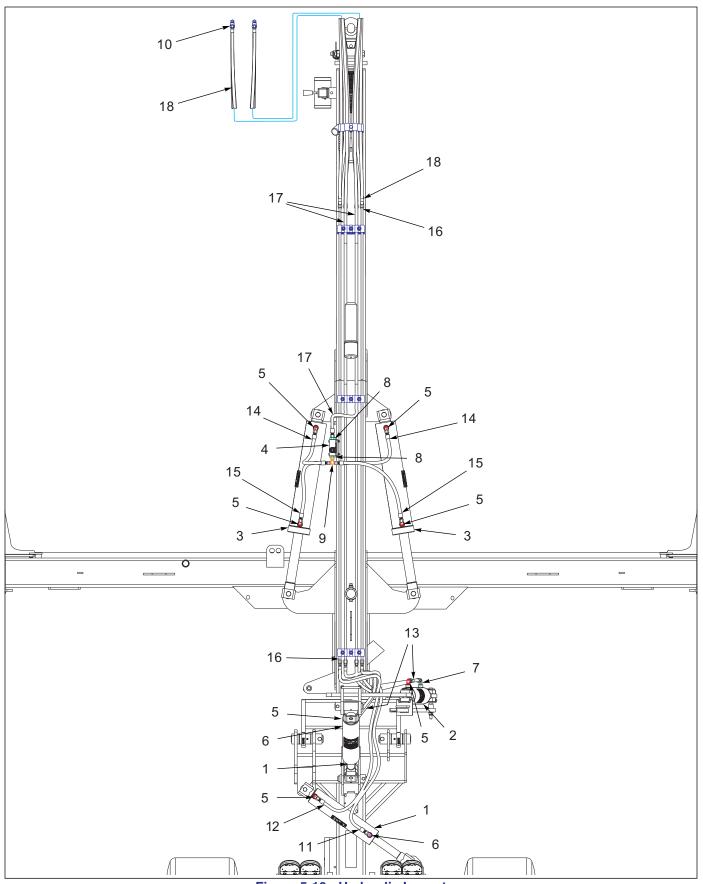


Figure 5-10: Hydraulic Layout

5-18 F-740-0819

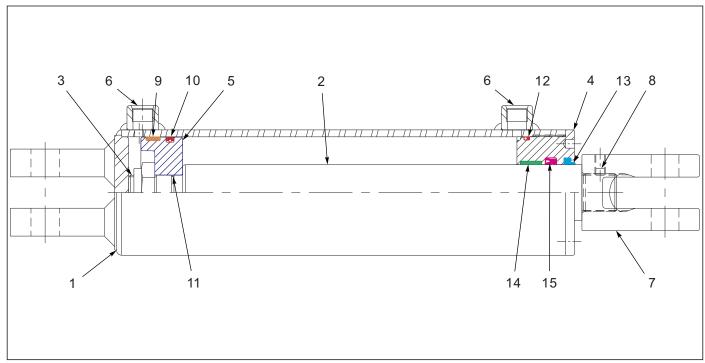


Figure 5-11: Cylinder Assembly - 4 X 12

## Cylinder Assembly 4 X 12

ITEM	PART NO.	DESCRIPTION	QTY.
	4000857	HYDCYL - 4X12W CLEVIS 22-1/4"	
1		CASE WELDMENT	1
2	180906	PISTON ROD	1
3		NUT LOCK THN CLR 1-1/4-12UNF	1
4	180904	HEAD	1
5		PISTON	1
6		PLUG PLASTIC #8 SAE SHIPPING	2
7		CLEVIS CAST Ø1 X 1-3/8 THD	1
8		SCREW SET, 3/8-16UNC X 1/2	1
9		PISTON BUSHING	1
10		O-RING	1
11		O-RING	1
12		O-RING	1
13		WIPER	1
14		DU BUSHING	1
15		U-CUP	1
16	4000642	SEAL KIT (NOT SHOWN) (INCLUDES ITEMS 9-14)	

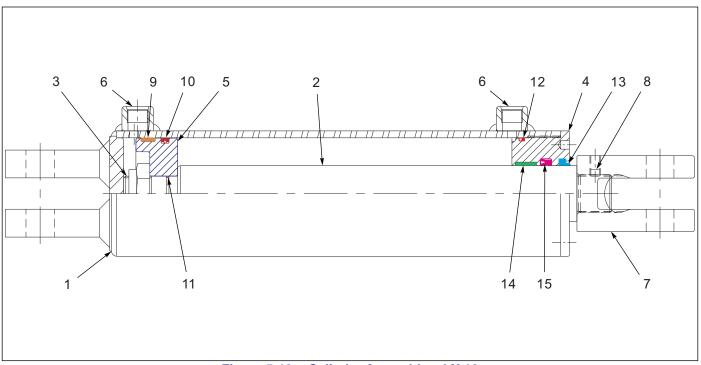


Figure 5-12: Cylinder Assembly - 4 X 16

## Cylinder Assembly 4 X 16

ITEM	PART NO.	DESCRIPTION	QTY.
	4000858	HYDCYL - 4X16W CLEVIS 26-1/4"	
1		CASE WELDMENT	1
2	180903	PISTON ROD	1
3		NUT LOCK THN CLR 1-1/4-12UNF	1
4	180904	HEAD	1
5		PISTON	1
6		PLUG PLASTIC #8 SAE SHIPPING	2
7		CLEVIS CAST Ø1 X 1-3/8 THD	1
8		SCREW SET, 3/8-16UNC X 1/2	1
9		PISTON BUSHING	1
10		O-RING	1
11		O-RING	1
12		O-RING	1
13		WIPER	1
14		DU BUSHING	1
15		U-CUP	1
16	4000642	SEAL KIT (NOT SHOWN) (INCLUDES ITEMS 9-14)	

5-20 F-740-0819

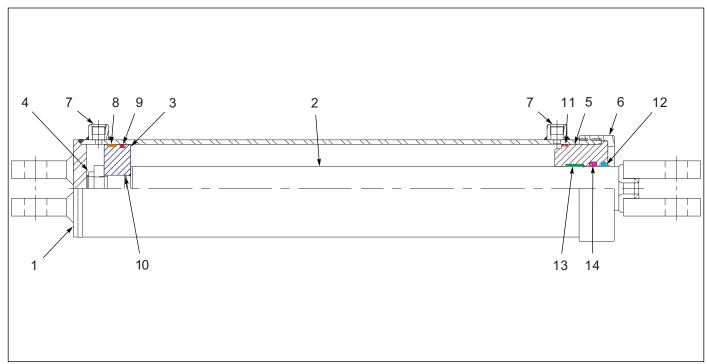


Figure 5-13: Cylinder Assembly - 5 X 24

## Cylinder Assembly 5 X 24

ITEM	PART NO.	DESCRIPTION	QTY.
	4000859	HYDCYL - 5X24W CLEVIS 36-1/4"	
1		CASE WELDMENT	1
2	180901	PISTON ROD	1
3		PISTON	1
4		NUT LOCK THN CLR 1-1/4-12UNF	1
5	180902	HEAD	1
6	216164	RING THREADED	1
7		PLUG PLASTIC #8 SAE SHIPPING	2
8		PISTON BUSHING	1
9		O-RING	1
10		O-RING	1
11		O-RING	1
12		WIPER	1
13		DU BUSHING	1
14		U-CUP	1
15	4000643	SEAL KIT (NOT SHOWN) (INCLUDES ITEMS 8-14)	

### **TABLE OF CONTENTS**

### **ILLUSTRATED PARTS LIST**

Table provided for general use.					
NOTES:					

5-22 F-740-0819

## **Electrical**

7-PIN CONNECTOR	4-PIN TOWER	2-PIN TOWER	CIRCUIT
1	D	А	GROUND
2	-	-	WORK LAMPS
3	В	-	LEFT FLASHING & TURN
4	-	-	STOP LAMPS
5	А	-	RIGHT FLASHING & TURN
6	С	-	TAIL LAMPS
7	_	В	SWITCHED POWER (12 V)

### **MAIN WARNING LIGHT HARNESS - WIRING CHART**

	1	2	3	4	5
	2-PIN TOWER	3-PIN TOWER	6-PIN SHROUD	3-PIN TOWER	2-PIN TOWER
BLACK LEFT TURN			А	O	
WHITE GROUND	А	А	В	A	А
BROWN TAIL LIGHT		В	C	В	
YELLOW LEFT TURN			D		В
GREEN RIGHT TURN	В		E		
RED RIGHT TURN		С	F		

**REAR WARNING LIGHT HARNESS - WIRING CHART** 

Figure 5-14: Electrical Assembly W/ LED Lights (1 of 2)

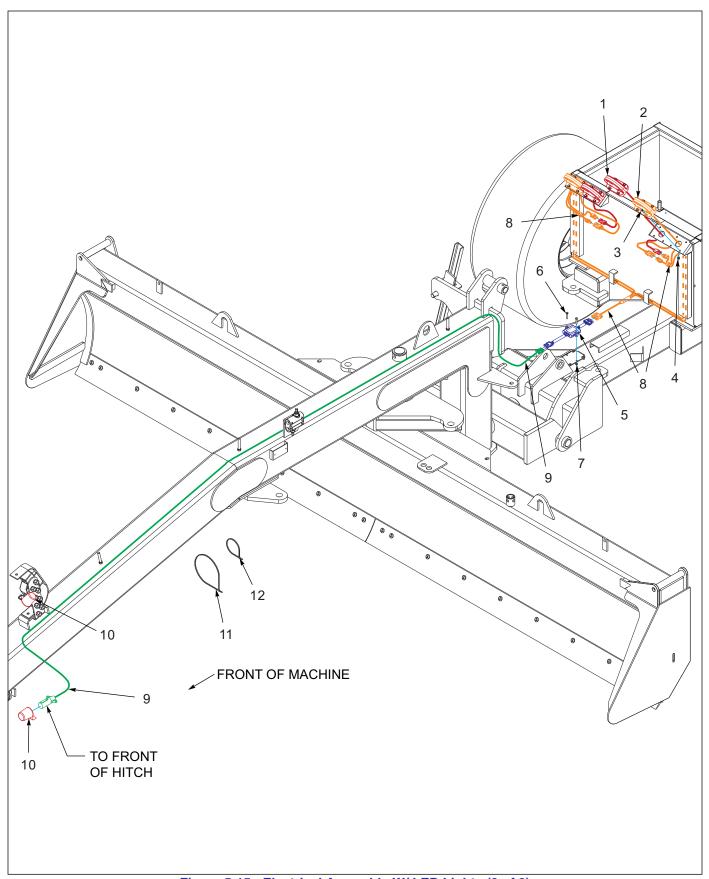


Figure 5-15: Electrical Assembly W/ LED Lights (2 of 2)

5-24 F-740-0819

# Electrical Assembly W/ LED Lights (2 of 2)

ITEM	PART NO.	DESCRIPTION	QTY.
	200339	KIT 25' X 6' LED LIGHTS	
1	174435	LAMP, AG RED SINGLE LED	2
2	174436	LAMP, AG AMBER SINGLE LED	2
3	1-654-010047-07	SCREW,HX CP 1/4-20UNCX1-1/4G5	8
4	142779	NUT,FLANG SERRATED 1/4-20	8
5	174437	MODULE, AG FLASHER CONTROL	1
6	1-654-010047-08	SCREW HX CP,1/4-20UNCX1-1/2G5	2
7	1-512-010005-01	NUT,HEX,SLFLKG GRB 1/4-20	2
8	200347	REAR HARNESS, WARN LIGHT, 6'	1
9	200344	FRONT HARNESS,WRN LIGHTS, 25'	1
10	2-368-010287	HARNESS, STOR-A-WAY	1
11	105874	TIE,STRAP PLSTC 21.5-24X.301	1
12	4000723	CABLE TIE, 8" BLACK HD	4

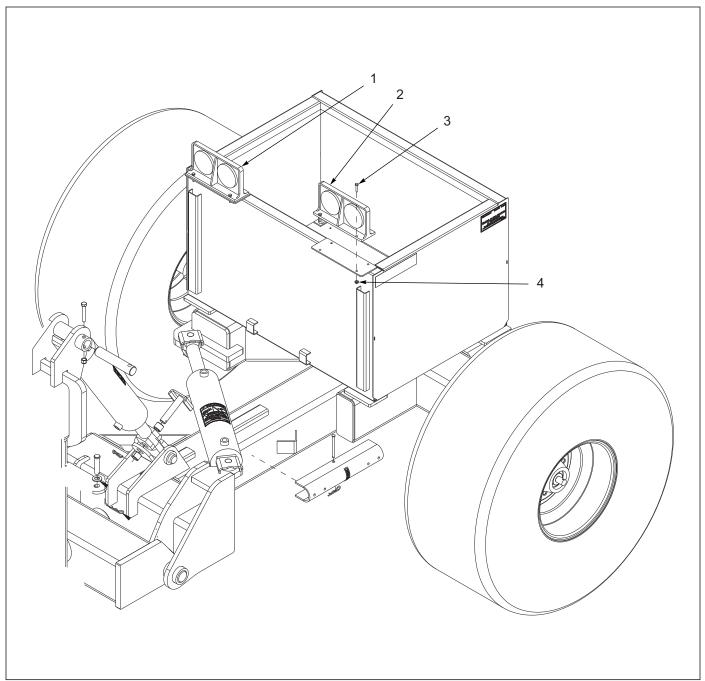


Figure 5-16: Light Kit Before 6-1-2016

# **Light Kit Before 6-1-2016**

ITEM	PART NO.	DESCRIPTION	QTY.
	2000620	OPTION, 1632 LIGHT KIT	
1	4001301	LIGHTS, MODULAR RIGHT-W/BRAKE	1
2	4001300	LIGHTS, MODULAR LEFT-W/BRAKE 0	1
3	1-654-010047-07	SCREW,HX CP 1/4-20UNCX1-1/4G5	8
4	142779	NUT,FLANG SERRATED 1/4-20	8
5	LT0001	LIGHTS,FRONT LIGHT HARNESS 29 (NOT SHOWN)	1
6	LT0056	LIGHTS, REAR HARNESS5'X5'(NOT SHOWN)	1

5-26 F-740-0819

Table provided for general use.				
NOTES:				

### **Decals**

Hydraulic Line Color Code: Black: Raise / Lower Yellow: Tilt White: Blade Angle 1 Tie: Hydraulics Out / 2 Ties: Hydraulics In

Hydraulic Line Color Code: Black: Raise / Lower Yellow: Tilt White: Blade Angle Blue: Rear Steer 1 Tie: Hydraulics Out / 2 Ties: Hydraulics In

Do not allow anyone to ride on or to be near this machine while it is in motion or being cycled. Do not service or adjust this machine while the tractor is running. Lower all hydraulic elevated components to the down position before service or adjustment, or if necessary, safely block those components in position.

Always contact utilities before digging. Striking objects above or below ground will abuse the blade and may cause considerable damage to the Grader.

## **A CAUTION**

This machine is designed for off road use only.

## AWARNING

Be certain to remove the cylinder safety stops before cycling the machine, or damage to the cylinders or machine, may occur.

### Pull Type Grader Rear Steer Grader

Safety/Operations/Parts/Manual 1

7





9

10





High pressure fluid hazard! To prevent serious injury or death:

- Carefully relieve pressure on system before adjusting, repair, or disconnect
- Wear proper hand and eye protection when servicing.

  Repair or replace all bad components.

11



**AWARNING** 

STAY **CLEAR OF MOVING PARTS** 



To prevent serious injury or death from pinching and crushing:

- Keep all persons and objects clear of this machine while any part is in motion
- Do not crawl in or under this machine while the tractor is running. Place the safety stops on the hydraulic cylinders before servicing.

14

oin mowboard transport pin, swing mowboard away from tires before using hydraulics to lower machine. Failure to do so, could result in tire or mowboard damage

15

Safety Stop

Tire Pressure: 19 x 16.1

35 psi

Wheel Bolt Torque-150 ft. Lbs. (Check

17

# **Grease Daily**

18

**Figure 5-17: Decals (1 of 2)** 

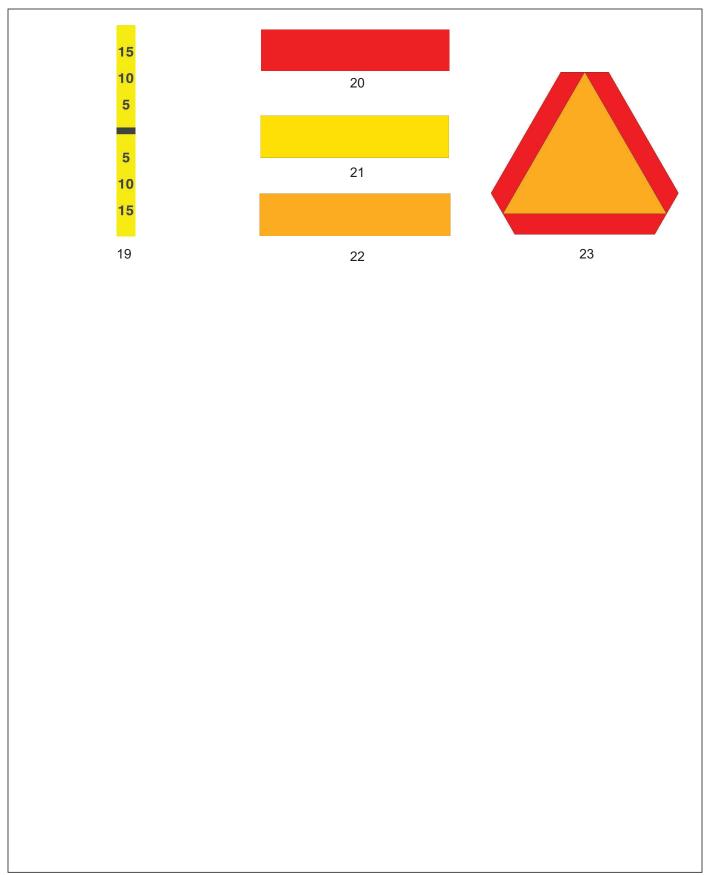


Figure 5-18: Decals (2 of 2)

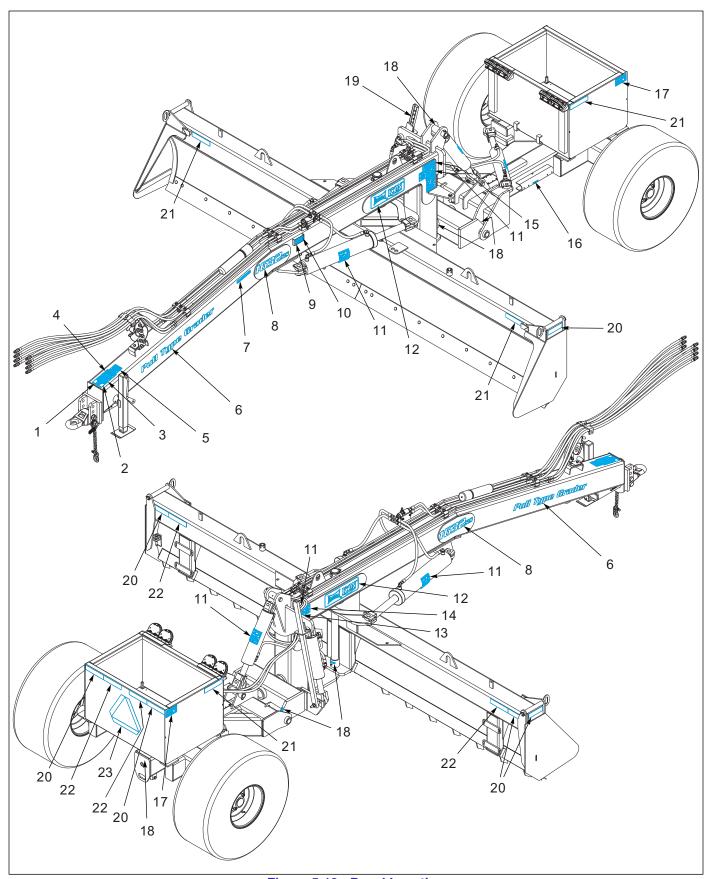


Figure 5-19: Decal Location

5-30 F-740-0819

## Decals

ITEM	PART NO.	DESCRIPTION		QT	QTY.		
	187372	KIT, 1432 DECAL	*				
	200353	KIT, 1432RS DECAL		*			
	2000602	KIT, 1632 DECAL			*		
	197568	KIT, 1632RS DECAL				*	
1	4000625	DECAL, HYD LINE COLOR CODE	1		1		
1	197567	DECAL, HYD COLOR CODE, RS		1		1	
2	4001550	DECAL, DANGER NO RIDING	1	1	1	1	
3	4001484	DECAL "ALWAYS CONTACT UTILITIE	1	1	1	1	
4	4001516	DECAL-OFF ROAD ONLY	1	1	1	1	
5	4001446	DECAL "WARNING-REMOVE CYL.STOP	1	1	1	1	
6	4001246	DECAL, PULL TYPE GRADER	2		2		
6	197563	DECAL, REAR STEER GRADER		2		2	
7	4000935	DECAL "SAFETY/OPERATIONS/PARTS	1	1	1	1	
8	4001526	DECAL #1432 4" TALL	1				
8	200354	DECAL, 1432RS MODEL		1			
8	4001502	DECAL, 1632 MODEL			1		
8	197566	DECAL, 1632RS MODEL				1	
9	1-573-010006	PLACARD, NAME	1	1	1	1	
10	156010	RIVET, BLIND .156X1/2 GRIP	2	2	2	2	
11	4000931	DECAL "WARNING" HIGH PRESSURE	5	5	5	5	
12	4001522	DECAL, LANDOLL/ICON, 5-1/2X17	2	2	2	2	
13	4000372	DECAL WARN MOVING PARTS 3-1/2	2	2	2	2	
14	4000940	DECAL "DANGER" PINCHING/CRUSHI	2	2	2	2	
15	4001527	DECAL "CAUTION- UNPIN MOWBOARD	1	1	1	1	
16	4001445	DECAL "SAFETY STOP" 3/4X2 3/4	1	1	1	1	
17	4001558	DECAL 19X16.1 35PSI TIRE PRES	2	2	2	2	
18	4000938	DECAL "GREASE DAILY"	9	10	9	10	
19	4001426	DECAL 16C GRADER DEPTH GAUGE	1	1	1	1	
20	528933	REFLECTOR - RED	4	4	4	4	
21	528934	REFLECTOR - YELLOW	4	4	4	4	
22	528938	STRIPE, ORANGE	4	4	4	4	
23	4000335	DECAL SLOW MOVING 1FP-C	1	1	1	1	

# **Gauge Wheel (Option)**

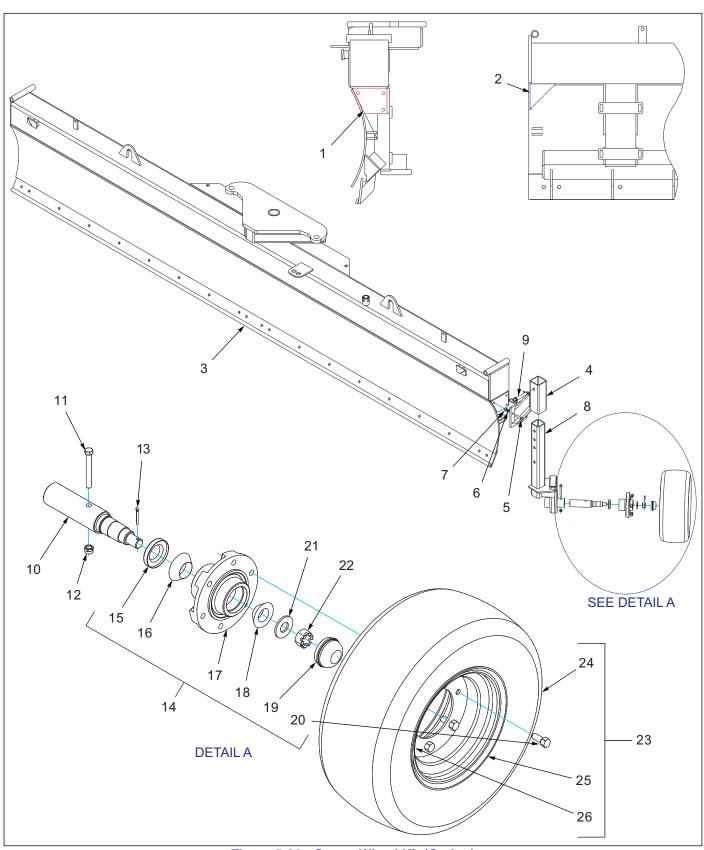


Figure 5-20: Gauge Wheel Kit (Option)

5-32 F-740-0819

# Gauge Wheel Kit (Option)

ITEM	PART NO. DESCRIPTION		QTY.		
	2000631	KIT GAUGE WHL OPT LH W/WELD ON (SHOWN)	*		
	2000636	KIT GAUGE WHL OPT RH W/WELD ON		*	
1	9303018	2000631 PLATE 1/2"	1	1	
2	9303022	2000631 PLATE 1/2"	1	1	
3	ICO2182	1632 MOWBOARD WLDMT	REF	REF	
4	ICO2225	GAUGE WHEEL SUPPORT	1	1	
5	1-654-010055-05	SCREW,HEX CAP,1/2-13UNCX2 GR5	3	3	
6	1-861-010034-13	WASHER, LKG HLCL SPR, 1/2	3	3	
7	61D8ER	NUT, HEX 1/2-13UNC GR5 ZP	3	3	
8	ICO2234	GAUGE WHEEL STAND LH SIDE	1		
8	ICO2226	GAUGE WHEEL STAND RH SIDE		1	
9	4001311	3/4 x 4 HITCH PIN	1	1	
10	141245	SPINDLE, GAUGE WHEEL	1	1	
11	141808	SCREW HX CP7/16-14UNCX3-1/2G5	1	1	
12	101988	NUT,HEXSLF-LKG 7/16-14 GRB	1	1	
13	1-557-010362-40	PIN, COTTER 5/32X1-1/4	1	1	
14	1-406-010010	HUB ASSY 6 BOLT (INCLUDES ITEMS 15-20)	1	1	
15	1-659-010004	1-5/8 ID GREASE SEAL	1	1	
16	1-076-010009	CONE INNER	1	1	
17	1-406-010012	HUB 6 BOLT W/CUPS	1	1	
18	1-076-010007	CONE INNER	1	1	
19	1-161-010003	CAP 6BOLT HUB	1	1	
20	1-104-010002	WHEEL BOLT1/2X1-3/8 S	6	6	
21	1-861-010004	WASHER SPINDLE 7/8	1	1	
22	100966	NUT, HEX SLOTTED 7/8-14	1	1	
23	141271	TIRE AND WHEEL ASSY, FRT YELLOW (INCLUDES ITEMS 24-26)	1	1	
24	160151	TIRE 20.5X8 10/8 PLY	1	1	
25	160155	WHEEL 10X6 6 BOLT	1	1	
26	TR416	VALVE STEM TUBELESS TIRE	1	1	

### **TABLE OF CONTENTS**

### **ILLUSTRATED PARTS LIST**

Table provided for general use.				
NOTES:				

5-34 F-740-0819

# Index

8       5-33       1-516-0         525       5-7       1-557-0         4       5-25       155971         010007       5-33       156010         010009       5-33       1-573-0         238       5-5       160151         010002       5-33       160155         224       5-11       1-654-0         010019       5-5       1-654-0         010003       5-33       1-654-0         2       5-5       1-654-0         1       5-15       1-654-0         2       5-5       1-654-0         1       5-15       1-654-0         2       5-5       1-654-0         1       5-15       1-654-0         1       5-15       1-654-0         1       1-654-0       1-654-0         1       1-654-0       1-654-0         2       5-5       5-7       5-15         1       1-654-0       1-654-0         1       1-654-0       1-654-0         2       5-5       5-7       1-654-0         3       1-654-0       1-654-0         4       5-12       1-654-0
00966       5-33       1-516-01000         01988       5-33       1-557-01036         03-0625       5-7       1-557-01040         05874       5-25       155971         -076-010007       5-33       156010         -076-010009       5-33       156010         10-0238       5-5       160151         -104-010002       5-33       160155         -104-010019       5-5       1-654-01004         -161-010003       5-33       1-654-01004         18652       5-5       1-654-01004         20876       5-5       1-654-01005         34912       5-5, 5-7, 5-15       1-654-01005         -406-010010       5-33       1-654-01005         40647       5-5, 5-12       1-654-01012         408090       5-15       1-654-01012         41250       5-12       1-72791         41245       5-33       172580         41271       5-33       172829         41808       5-33       172839         41826       5-17       172839         41827       5-17       172892         41828       5-17       172926         42194       5
38       5-33       1-557-010362-1-557-010403         625       5-7       1-557-010403         74       5-25       1-557-010403         155971       155010       155971         150010       1-573-010006       1-573-010006         238       5-5       160151       160155         -010002       5-33       160155       1-654-010047-         -010019       5-5       1-654-010047-       1-654-010047-         -010003       5-33       1-654-010049-       1-654-010049-         -10101       5-33       1-654-010055-       1-654-010055-         -010010       5-33       1-654-010055-       1-654-010055-         -010012       5-33       1-654-010125-       1-654-010025-         -010012       5-33       1-654-010125-       1-654-010125-         -01001       5-33       1-654-0100125-       1-654-0100125-         -01001       5-33       1-654-0100125-       1-654-0100125-         -01001       5-33       1-72800       1-72800         -01001       5-33       172827       172829         -01001       5-33       172829       172829         -01       5-5       5-12       172829
0625       5-7       1-557-010403         374       5-25       155971       155971         6-010009       5-33       156010       1-573-010006         0238       5-5       160151       1-60155       160155       160155       160155       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010047-0       1-654-010051-0       1-654-010051-0       1-654-010051-0       1-654-010055-0       1-654-010055-0       1-654-010055-0       1-654-010055-0       1-654-010055-0       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010125-2       1-654-010055-0       1-654-010055-0       1-654-010125-2       1-654-010055-0       1-65
4       5-25       155971         010007       5-33       156010         010009       5-33       1-573-010006         238       5-5       160151         010002       5-33       160155         224       5-11       1-654-010047-06         010019       5-5       1-654-010047-07         010003       5-33       1-654-010047-08         2       5-5       1-654-010049-12         6       5-5       1-654-010051-06         1       5-15       1-654-010055-03         010010       5-33       1-654-010055-03         010012       5-33       1-654-010125-22         7       5-5, 5-12       1-654-010125-22         90       5-15       1-654-010055-03         1       5-33       172580         0       5-12       1-654-010004         1       5-33       172827         1       5-33       172829         1       5-33       172829         1       5-5       172829         2       5-17       172839         3       172926       173240
10007   5-33   156010   1-573-010006   388   5-5   160151   160155   160109   5-33   160155   160109   5-5   1654-010047-06   1-654-010047-07   1-654-010049-12   1-654-010055-03   1-654-010055-05   1-654-0100
3-010009       5-33       1-573-010006         10238       5-5       160151         1-010002       5-33       160155         1-224       5-11       1-654-010047-06         3-010019       5-5       1-654-010047-07         1-010003       5-33       1-654-010047-08         52       5-5       1-654-010049-12         76       5-5       1-654-010051-06         12       5-5, 5-7, 5-15       1-654-010055-03         12       5-5, 5-7, 5-15       1-654-010055-03         1-654-010055-03       1-654-010055-09         3-010010       5-33       1-654-010125-20         47       5-5, 5-12       1-654-010125-20         145       5-3       172580         150       5-3       172827         171       5-3       172827         172       5-3       172839         26       5-17       172839         27       5-17       172892         28       5-17       172926         94       5-12       173240
0238       1-573-010006         4-010002       5-3         4224       5-11         6-010019       5-5         1-010003       5-33         352       5-5         376       5-5         561       5-15         5012       5-5, 5-7, 5-15         6-010010       5-33         6-010010       5-33         6-010012       5-33         367       5-5, 5-12         3690       5-15         245       5-33         250       5-12         271       5-33         334       5-5         358       5-33         359       5-12         261       7-2         271       5-33         352       1-654-010055-09         1-654-010125-20       1-654-010125-22         1-659-010004       1-659-010004         271       5-33         372       172829         372       172829         372       172839         372       172839         372       172926         372       172926         372       173240 </td
44-010002     5-33     160151       4224     5-11     1-654-010047-06       6-010019     5-5     1-654-010047-07       352     5-5     1-654-010049-12       376     5-5     1-654-010049-12       361     5-15     1-654-010051-06       302     5-5, 5-7, 5-15     1-654-010055-03       36-010010     5-33     1-654-010055-05       3647     5-5, 5-12     1-654-010125-20       3690     5-15     1-654-010125-22       245     5-33     172580       250     5-12     172791       271     5-33     172827       308     5-33     172829       326     5-17     172839       327     5-17     172892       328     5-17     172926       194     5-12     173240
-4224       5-11       160155         16-010019       5-5       1-654-010047-06         51-010003       5-33       1-654-010047-07         652       5-5       1-654-010049-12         876       5-5       1-654-010051-06         561       5-15       1-654-010055-03         912       5-5, 5-7, 5-15       1-654-010055-03         106-010010       5-33       1-654-010055-09         16-010012       5-33       1-654-010125-20         8090       5-15       1-654-010025-02         245       5-33       172580         250       5-12       172791         271       5-33       172827         434       5-5       172829         808       5-33       172830         826       5-17       172839         827       5-17       172892         194       5-12       173240
6-010019       5-5         1-010003       5-3         352       1-654-010047-08         376       5-5         361       5-15         361       5-15         362       1-654-010051-06         361       5-15         362       1-654-010055-03         36-010010       5-33         36-010012       5-33         3647       5-5, 5-12         36990       5-15         245       5-3         250       5-12         271       5-3         334       5-5         368       5-33         372       5-17         388       5-33         372       5-17         388       5-37         372       5-17         388       5-37         399       172839         172829       172839         172839       172892         172892       173240
61-010003       5-33       1-654-010047-07         1652       5-5       1-654-010049-12         1876       5-5       1-654-010051-06         1561       5-15       1-654-010055-03         1912       5-5, 5-7, 5-15       1-654-010055-05         106-010010       5-33       1-654-010055-09         106-010012       5-33       1-654-010125-20         10647       5-5, 5-12       1-654-010125-22         108090       5-15       1-659-010004         245       5-33       172580         250       5-12       172791         271       5-33       172827         434       5-5       172829         808       5-33       172830         826       5-17       172839         827       5-17       172892         194       5-12       173240         2779       5-25, 5-26       173240
652       5-5         876       5-5         561       5-15         912       5-5, 5-7, 5-15         06-010010       5-33         06-010012       5-33         647       5-5, 5-12         8090       5-15         245       5-33         250       5-12         271       5-33         434       5-5         808       5-33         826       5-17         827       5-17         828       5-17         194       5-12         173240       173240
876       5-5         561       5-15         912       5-5, 5-7, 5-15         06-010010       5-33         1-654-010055-03       1-654-010055-05         1-654-010055-09       1-654-010055-09         1-654-010125-20       1-654-010125-20         8090       5-15         245       5-33         250       5-12         271       5-33         434       5-5         808       5-33         826       5-17         827       5-17         828       5-17         194       5-12         173240       173240
1-654-010051-06         161       5-15         1-654-010055-03         1-654-010055-05         1-654-010055-05         1-654-010055-09         1-654-010055-09         1-654-010125-20         1-654-010125-20         1-654-010125-22         1-659-010004         1-6
1-654-010055-03 1-654-010055-05 1-654-010055-05 1-654-010055-05 1-654-010055-09 1-654-010125-20 1-654-010125-20 1-654-010125-22 1-654-010125-22 1-654-010125-22 1-654-010125-22 1-654-010125-22 1-654-010125-20 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72800 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-72890 1-7280 1-7
1-654-010055-05 1-654-010055-09 1-654-010055-09 1-654-010125-20 1-72890 1-72839 1-72892 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926 1-72926
6-010010       5-33         6-010012       5-33         647       5-5, 5-12         6090       1-654-010125-22         645       5-33         659-010004       1-659-010004         650       5-12         671       5-33         672       172791         673       172827         674       172827         675       172829         676       5-17         677       5-17         678       5-17         679       5-25         5-25       5-26
6-010012       5-33         647       5-5, 5-12         1-654-010125-20         1-659-010004         1-659-010004         172580         172791         172827         172829         172830         172839         172829         172829         172829         172829         172829         172829         172829         172829         172829         172829         172829         172829         172829         172829         172820         172820         172820         172820         172820         172820         172820         172820         172820         172820         172820         172820         172820         172820         172820         173240
47       5-5, 5-12         090       5-15         45       5-33         50       5-12         71       5-33         34       5-5         08       5-33         26       5-17         27       5-17         28       5-17         94       5-12         79       5-25, 5-26
090       5-15         45       5-33         50       5-12         71       5-33         34       5-5         08       5-33         26       5-17         27       5-17         28       5-17         94       5-12         79       5-25         5-15       172890         173240
45     5-33       50     5-12       71     5-33       34     5-5       08     5-33       26     5-17       27     5-17       28     5-17       94     5-12       79     5-25, 5-26
1250     5-12       1271     5-33       1434     5-5       1808     5-33       172829     172829       1826     5-17       1827     5-17       1828     5-17       2194     5-12       2779     5-25, 5-26
271     5-33       434     5-5       808     5-33       826     5-17       827     5-17       828     5-17       194     5-12       779     5-25, 5-26       172827       172829       172830       172892       173240
434       5-5         808       5-33         826       5-17         827       5-17         828       5-17         194       5-12         779       5-25, 5-26
308     5-33       326     5-17       327     5-17       328     5-17       172839     172892       172926     172926       17292     173240       779     5-25, 5-26
326     5-17       327     5-17       328     5-17       172839     172892       172892     172926       172926     173240       17292     5-25, 5-26
172839 27
172892 28 5-17 94 5-12 173240 79 5-25, 5-26
172926 94 5-12 173240 79 5-25. 5-26
79
174435
1264
0-010003-09
12-010005-01
512-010005-05 <i>5-3</i> 179184

179187 <i>5-8</i>	218928
179190 <i>5-8</i>	<b>2-368-010287</b> <i>5-5</i> , <i>5-25</i>
179195 <i>5-17</i>	4000096
179196 <i>5-17</i>	4000126
179208 <i>5-17</i>	4000127
179259 <i>5-7</i>	4000335
180901 <i>5-21</i>	4000372
180902 <i>5-21</i>	4000580
180903 5-20	4000582
180904 5-19, 5-20	4000585
180906 5-19	4000625
184125	4000642
1-861-010004	4000643
1-861-010032-11 5-3	4000722
1-861-010032-14 5-7, 5-8	4000723
1-861-010032-24 5-5	4000724
1-861-010032-25 5-7, 5-11	4000750
1-861-010034-13 5-33	4000857
187372 <i>5-31</i>	4000858
197563	4000859 5-15, 5-17, 5-21
197566	4000931
197567	4000935
197568	4000938
2000602 5-31	4000940
2000620 5-26	4001057
2000631 5-33	4001058
2000636 5-33	4001059
200339 5-25	4001060
200344	4001061
200347 5-25	4001062
200353 5-31	4001244
200354	4001245
202230 5-5	4001246
202702-12-8S	4001271
2062-8-8S <i>5-17</i>	4001300
2-150-010008	4001301
216164	4001311
218915	4001426

4001442	622-3511-008 5-15
4001443	622-3511-010 <i>5-5</i> , <i>5-7</i>
4001445	622-3511-018 <i>5-7</i>
4001446 5-31	63D10ER
4001484	9303018
4001501	9303022 5-33
4001502	9602016 5-5
4001503	
4001516	G
4001517	
4001522	GRA1599 <i>5-15</i>
4001526	GRA1600 5-15
4001527 5-31	GRA2044 5-3
4001550	
4001558	1
40-0669-01	<u> </u>
5000	ICO0004 5-5
5000595	ICO0090 5-15
5000855	ICO0223 5-5, 5-15
5000858	ICO0226 5-5
5000859	ICO0360 5-11
5000889	ICO0361 5-3, 5-7, 5-11
5000893	ICO0372 5-7
5000934	ICO0477 5-15
	ICO0544 <i>5-5</i>
5000979	ICO1051 5-3
	ICO1069 5-3
500171	ICO1075 5-3
5-18 5-1	ICO1076 5-7
5-24 <i>5-1</i>	ICO1077 5-7
5-26	ICO1078 5-15
528933	ICO1079 5-7
528934	ICO1080 5-15
528938	ICO1082 5-7
5-30 5-1	ICO1096
5-6 5-1	ICO2153
61D8ER 5-33	ICO2154
622-3511-005	ICO2182 5-3, 5-33
622-3511-007	132132 3-0, 3-00

ICO2183 5-3
ICO2186 5-3
ICO2187 5-3
ICO2205 5-3
ICO2225 <i>5-33</i>
ICO2226 5-33
ICO2234 5-33
ICO2254 5-7
ICO2255 5-7
ICO2324 5-3
ICO2325 <i>5-3</i>
L
LT0001 5-26
LT0056
S
SCR2160 5-7
т
TR416
TR571
w
W915665-4 5-5. 5-15

6-4 F-740-0819

### **Document Control Revision Log:**

Date	Form #	New/Updated	Improvement(s): Description and Comments
01/16/2009	N/A	New	Initial Release
03/23/2016	F-740-1213	Update	Added Form # and updated to newer FrameMaker format.
08/22/2019	F-740-0819	Update	Updated complete manual.



Equipment from Landoll Corporation is built to exacting standards ensured by ISO 9001 registration at all Landoll manufacturing facilities.

## Model 1432/1432RS/1632/162RS

## Pull Type Grader Service and Parts Manual

Re-Order Part Number F-740-0819

### LANDOLL CORPORATION

1900 North Street Marysville, Kansas 66508 (785) 562-5381

800-428-5655 ~ WWW.LANDOLL.COM



Copyright 2014. Landoll Corporation

"All rights reserved, including the right to reproduce this material or portions thereof in any form."

Scan to go to www.landoll.com



F-740-0819 08/2019-Present