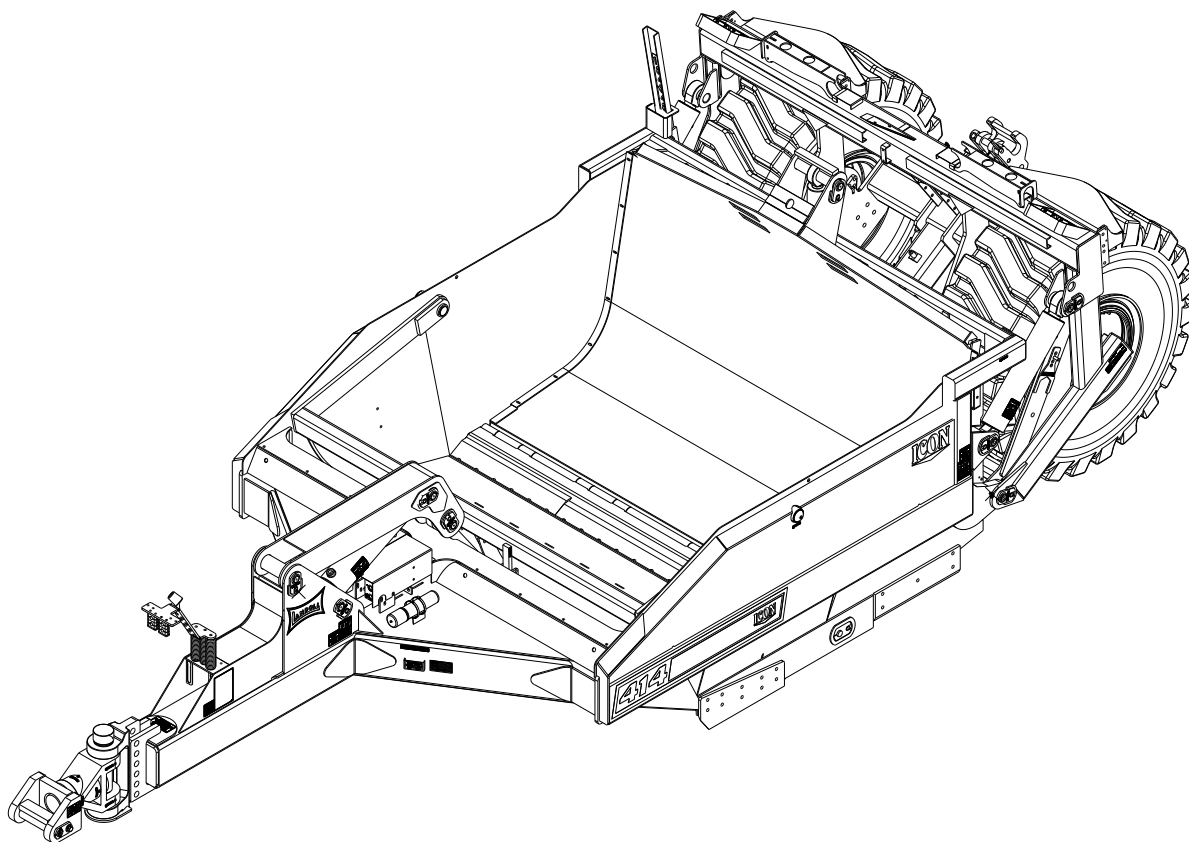




ICON™

Model 414/418 Scraper Service and Parts Manual



LANDOLL CORPORATION

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Safety Information

Introduction

This manual is compiled as a guide for owners and operators of the 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 Icon 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.**)

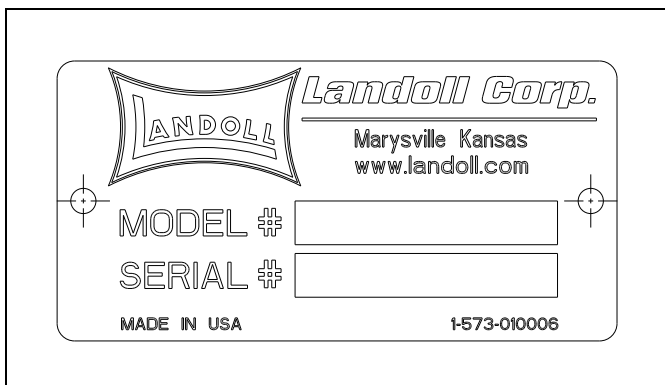


Figure 2-1: ID Plate

Warranty Registration

Be certain to register the grader, by Online registration at www.landoll.com 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 its products at any time without obligation to previously manufactured equipment.

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. 8th St. Beloit KS 67420
(referred to as LANDOLL in this document)

LANDOLL shall Warrant workmanship and materials on the **ICON Industrial Products** for a period of 270 calendar day 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

Understanding Safety Statements

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

NOTICE

Special notice - read and thoroughly understand.



CAUTION

Proceed with caution. Failure to heed caution may cause injury to person or damage product.



WARNING

Proceed with caution. Failure to heed warning will cause injury to person or damage product.



DANGER

Proceed with extreme caution. Failure to heed notice will cause injury or death to person and/or damage product.

NOTE

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

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 Grader.

NOTE

You should read and understand the information contained in this manual and on the machine decals before you attempt to operate or maintain this equipment.

- Examine safety decals and be sure you have the correct safety decals for the machine. Order replacement decals through your Icon dealer.
- Keep these signs clean so they can be observed readily. It is important to keep these decals cleaned more frequently than the machine. Wash with soap and water or a cleaning solution as required.
- Replace decals that become damaged or lost. Also, be sure that any new machine components installed during repair include decals which are assigned to them by the manufacturer.
- When applying decals to the machine, 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

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

Safety Decals

See Decal Listing for decal locations.

NOTE

Replace all missing or damaged safety signs/decals.

Pinching or Crushing Danger

1. Moving parts that are operated by hydraulic pressure can cause serious injury or death.
2. Use extreme caution when working around any moving part.
3. Do not allow any person to be on or near the machine while it is in motion.

Moving Parts

1. Be aware of all moving parts of the machine.
2. Do not allow anyone to be near, or on the machine while operating any moving part.

Danger

1. Read and understand the operator's manual before using the machine.
2. Allow no person to operate the machine before reading the manual and being instructed on proper operation.

Caution

1. This machine is designed for off road use only.

Danger, High Pressure

1. High pressure fluid can cause serious damage to hands and eyes.
2. Carefully relieve pressure before attempting any
3. adjustments.
4. Tighten all fittings before applying pressure.

NOTE

*If fluid is sprayed into eyes or injected into skin, **see a doctor immediately!***

Lubrication

1. Lubrication information is placed near each zerk.
2. Proper maintenance should be followed to assure the working life of the machine.

Proper Notification

1. Contact the proper authorities before you dig.
2. 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 areas, research and know the local of any underground structures and objects.
3. Striking the blades or bits against buried objects can cause damage to the machine, and is considered as abuse to the unit.

Storage Recommendations

NOTE

If the machine is being stored or not in use for a long period of time, it is recommended that a coating of heavy grease be applied to the exposed chrome cylinder rods. This will help to protect the coating from moisture and rust during this time.

Standard Specifications

Model Specification

Specification		
	Model 414	Model 418
Capacity Struck	11.2 yd	16.1 yd
Capacity Heaped	14 yd	18 yd
Shipping Weight	20,500 lbs	23,200 lbs
Width of Cut	10'	11'
Overall Width	10' - 11"	11' - 11"
Transport Height	8' - 10"	8' - 10"
Replaceable Cutting Edge Center	7/8" X 16" X 48"	7/8" X 16" X 60"
Replaceable Cutting Edge Outside	7/8" X 13" X 35.75"	7/8" X 13" X 35.75"
Ground Clearance Full Raised	18"	18"
Maximum Cut Depth	9"	9"
Length Overall	27' - 6"	27' - 6"
Cylinders Lift	5" X 22"	5" X 22"
Cylinders Gate	6-1/2" X 22"	6-1/2" X 22"
Cylinders Push Off	4" X 50"	4" X 50"
Hydraulic Hoses	3,000 psi rated	3,000 psi rated
Hydraulics use a Sequencing Valve and requires 2 Tractor Remotes	2 Valve System	2 Valve System
Hitches	Cast 360° Swivel	Cast 360° Swivel
Grease Locations	25 total	25 total
Safety Warning Lights	Standard LED	Standard LED
Hub & Spindle	20 Bolt 48,500lbs.	10 Bolt 25,000lbs.

Tire Inflation

Tire Size	Tire Manufacturer	Ply/Load Rating	Inflation Pressure (Psi) (Max.)
26.5 X 25 (414)	Titan or equivalent	28 Ply 48,500LBS. @ 30MPH	51 psi
20.5 X 25 (418)	Titan or equivalent	20 Ply 20,900LBS. @ 5MPH	65 psi

Recommended Torque Specification For Lug Bolts and Nuts

Bolt Size	Torque (FT. LBS.)
3/4-16	250-265 ft. lbs.

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 cap-screws 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 33% 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 cap-screws. Use value in [] if using prevailing torque nuts.

UNC SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8	UNF SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 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 3-1: 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 33% 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 3-2: Hydraulic Fitting Torque Specifications

Scheduled Maintenance

A quality high temperature grease should be used when lubricating the machine. Most areas of lube are scheduled daily, (8 to 10 hours or running). There are app. 26 grease zerks on all ICON models, that should be greased daily. And an additional 2 zerks per axle, that should be greased weekly, with 3 pumps of grease. Reference to their location is listed in the grease guide, at the front of this book.

All bolts are torqued at the factory during assembly. After 24-36 hours of running, the Dealer service should recheck the torque on the hitch, wheel, axle, and pin retaining bolts. Each time the machine is greased, the operator or maintenance should look at these areas and the bolts involved, to be sure none are working loose. After each 1000 hours of operation with the machine, the above mentioned locations should be checked, and retorqued, per the torque chart at the back of the book. The axle nuts should be adjusted the initial dealer visit. Adjustment procedure is described in the back of this manual.

For safety, identification, and general information, all missing or damaged decals on the machine should be replaced.

The ICON earthmovers have the interior of the bowl painted with a carbon base graphite paint, which rejects dirt. Should that paint wear off over a period of time, replacement paint may be ordered by the gallon through the original dealer.

The cutting bits for the earthmovers are available through ICON. The bevel is reversed as compared to the normal bits, in order to make loading easier in tough ground. The reverse bevel will not have the same longevity in wear as the normal bevel. Replacement bits may be ordered from ICON, or you Dealer, refer to the cutting edge section of this manual for size and part number.

All retaining pins have replaceable bushings. Watch the pin locations in action to review for loose and worn operation.

Remember, the longevity of your machine will depend on proper operation and maintenance.

Warning!

To prevent a hazardous situation, which if not avoided can result in injury or death, read and follow these instructions!

Read and understand the operator's manual before operating the machine. Allow no one to operate the machine before reading the manual and being instructed on the proper operation.

Before servicing the machine, block the wheels, shut off the tractor, set the brakes, and remove the key. If working under the machine, block the machine up for a safe and secure working area. Apply any safety stops provided.

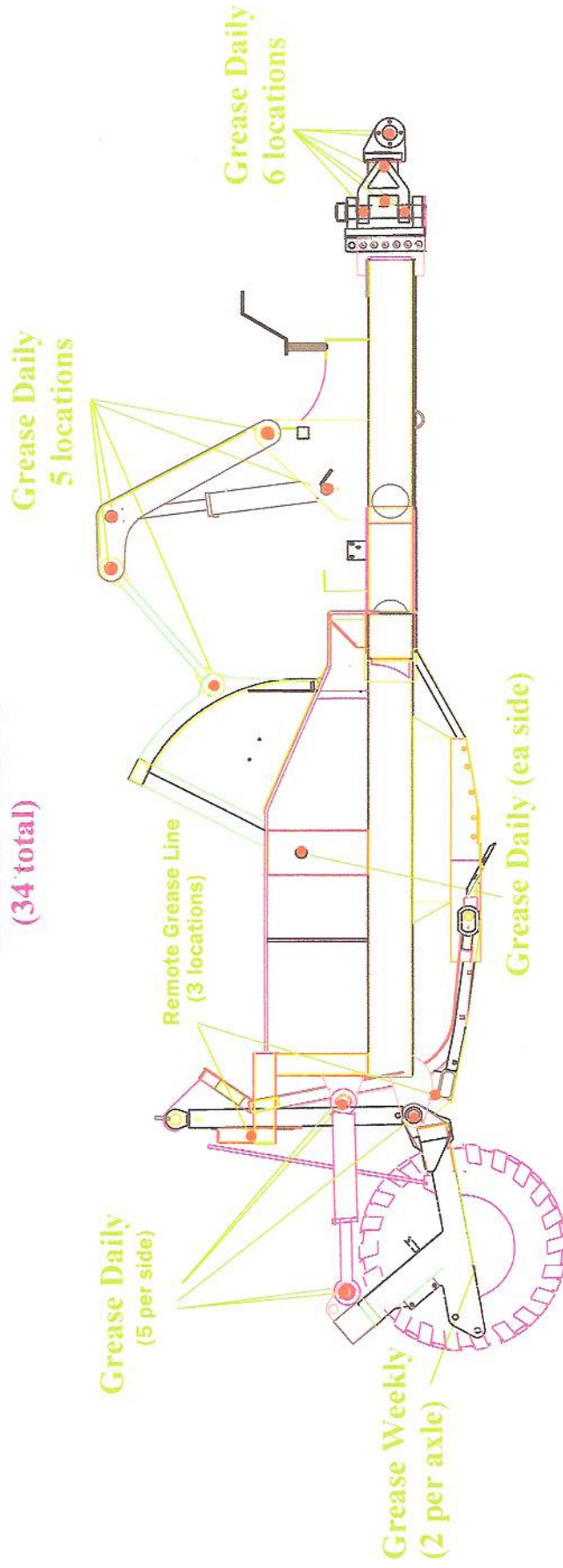
When working with hydraulic lines, cylinders, or fittings, wear protective clothing and safety glasses to guard against high pressure oil leaks.

Do not allow anyone on, or near the machine while it is running, or in motion.

Do not operate the machine on a steep incline or slope that could create an imbalance or rollover.

Grease Guide For 400 Series Earthmovers

Grease Guide (34 total)



About the ICON Limited Warranty.....

The ICON 400 Series scraper is designed with rear lowering and a push bumper (optional) on the rear. The responsibility of use of this push bumper is left up to the discretion of the owner and operator.

When push loading a pull type scraper, there are many issues to contend with so as not to damage the scraper or the pull type tractor. The most important is the operator. The push tractor can be an issue. Size and power must be kept within reasonable range. Should the pull tractor operator put the scraper bit too deep into the ground, damage can occur due to undue stress on the frog of the scraper. A straight push is necessary. Out of line or side stress can damage the rear frame and possibly the scraper tires. Hard hits on link up with the push bumper can also damage the machine. Whether loading single or tandem machines, care must be taken not to jackknife the machines. Trained operators and common sense will create less damage and downtime. When pushing in a bogged down or stuck condition, extreme care must be taken so as not to side stress or damage the rear frame.

Due to the many ways in which the scraper can be damaged while pushing.

ICON will not Warranty damage to the scraper occurred while pushing.



NOTE: The ICON hitch is designed for safety, and one man operation — However, as with any moving part, the potential for injury is present. Be aware of your surroundings while backing. Make certain no one is between the scraper and the tractor while backing. Keep hands, feet and all body parts away from any machine component that pivots, swings, or moves in any way, to avoid a potential injury.



Back the power unit into position, attach the hydraulic lines. Pull the snap pin and slide the lock down pin out, allowing the lock down ears to pivot forward.

(shown in the adjoining photo)

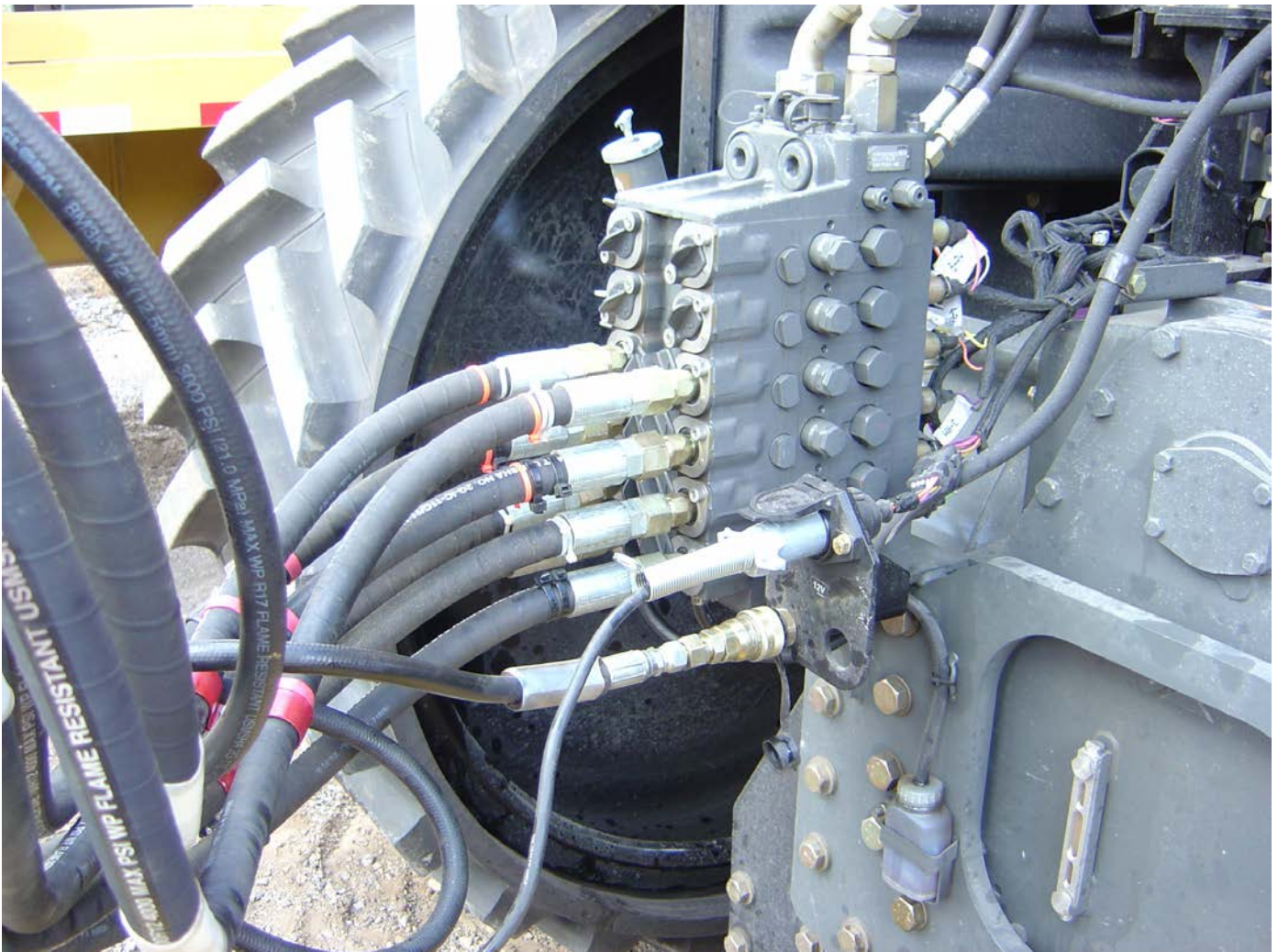
Position the swivel hitch above the quick hitch, and hydraulically lower it into the cradle of the quick hitch. Pivot the lock down ears over the adapter and replace the lock down pin and snap pin. Valve #1 should be placed in the #1 outlet (raise/lower) # 2 should control the gate/wall.

If the machines are being pulled as a tandem unit, Valve #3 should control the gate/wall of the tandem machine and Valve #4 should control the raise/lower of the tandem machine.

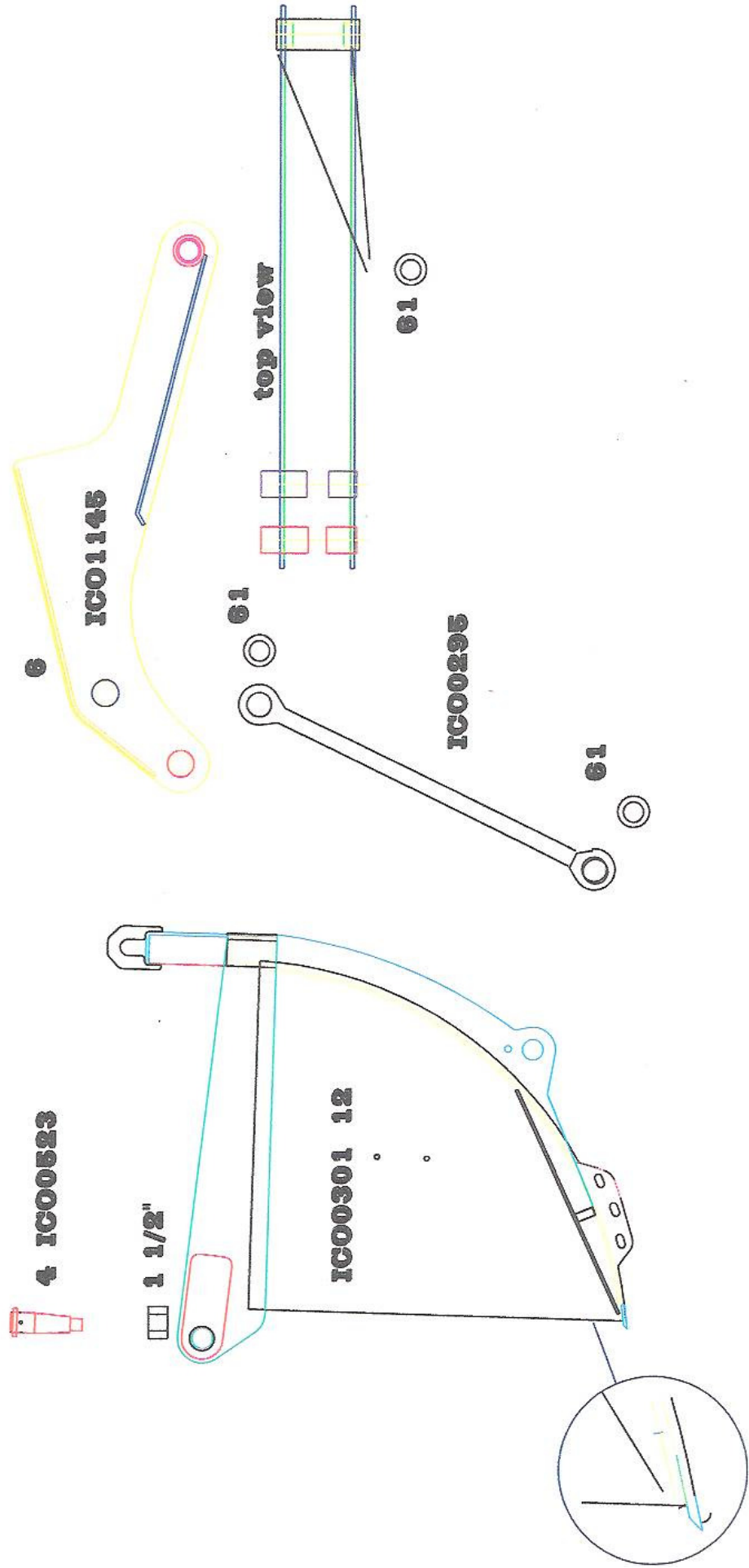
This hook up is only recommended, the operator should adjust for his/her own convenience.

Shown below is the current hydraulic configuration of the 800 Series Challenger. The covers are marked with a + or -, and the ICON hoses are marked accordingly. Also the optional brake hook up is shown.

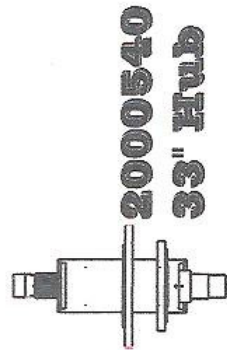
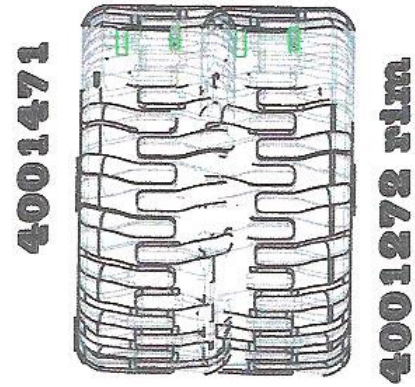
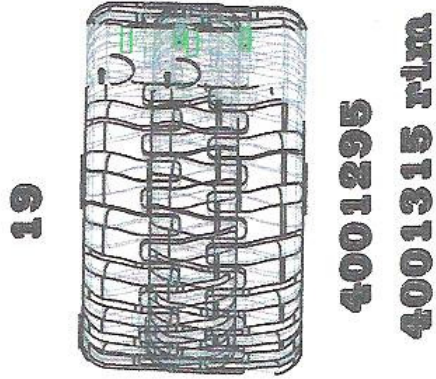
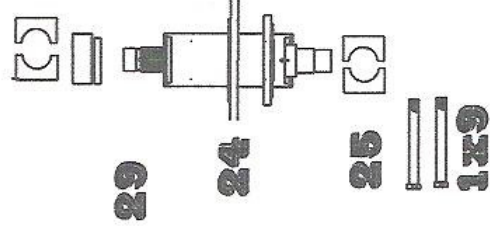
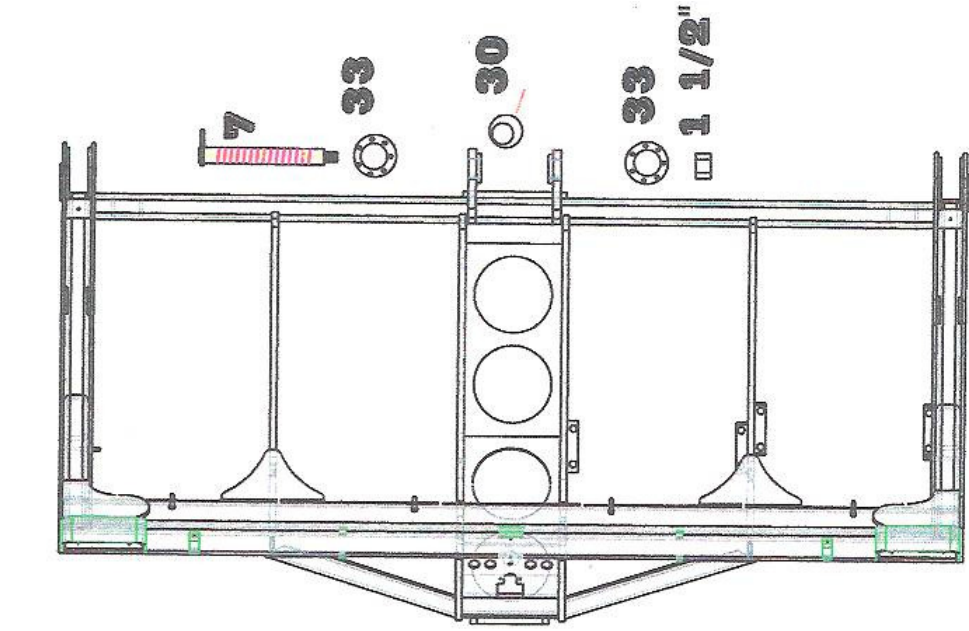
NOTE: High Pressure fluid can cause serious damage to eyes and hands. See Safety Section for safe hookup procedures.



Clam and Gate Arm



Rear Frame



IG01138

400 Series

Main Frame

6

61

1 1/2" nut

1000523

1/2" x 6

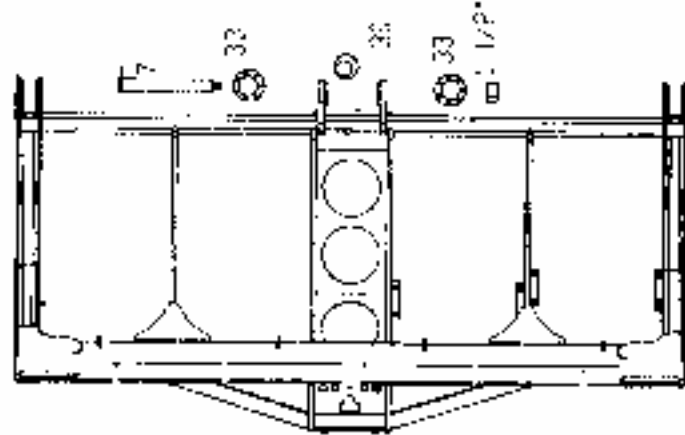
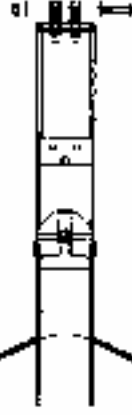
1 1/2" Hex nut

1 1/2" Hard washers

Note Every other bolt

should alternate direction

to aid in shear strength



100138

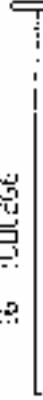
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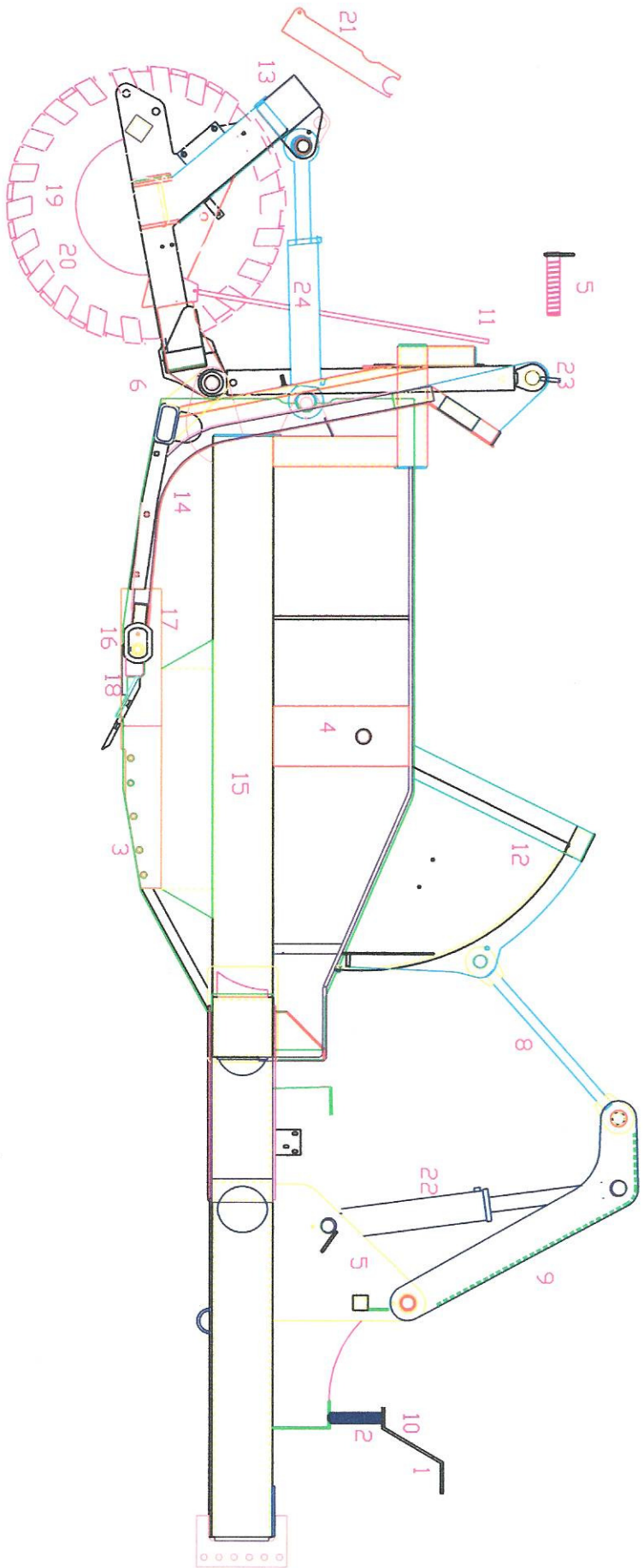
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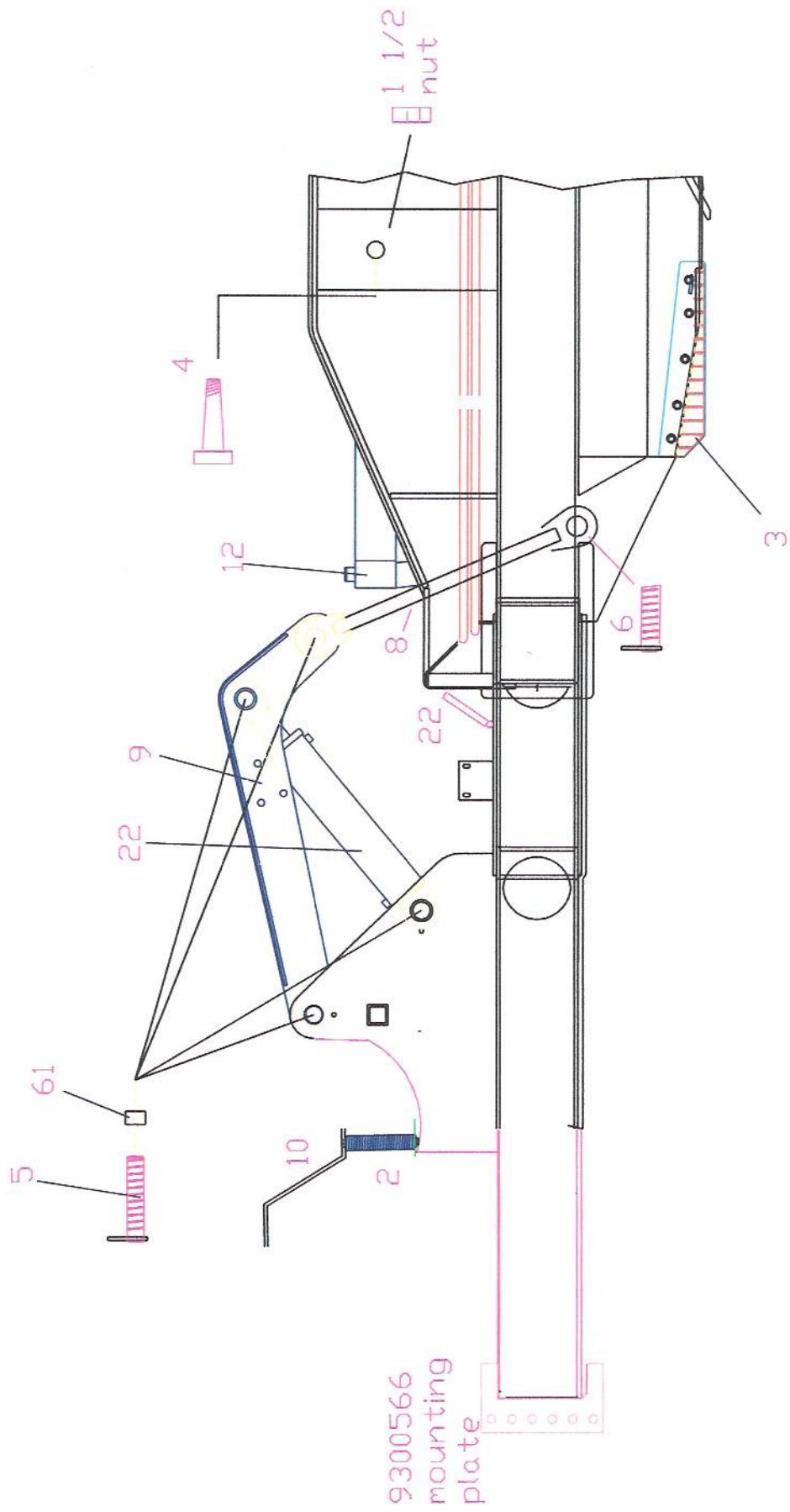
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16 1000266

Floor Fin







Bolt Listing For 400 Series Earthmovers

Component	Qty	Description
BH	4	Bolt, Hex 3/8x5" gr5
NW	4	Nut, Whiz 3/8"
Hose Support		
BP	20	Bolt, Plow 1x2 1/2" gr8
WFH	20	Washer, Flat, Hard
NJ	20	Nut, Jam 1" gr8
Cutting Edges & Frost Bit		
BP	10	Bolt, Plow 3/4x2 1/2" gr8
WFH	10	Washer, Flat, Hard 3/4"
NJ	10	Nut, Jam 3/4" gr8
Side Cutting Edges		
NJL	2	Nut, Jam Nyloc 1 1/2" gr5
WFH	2	Washer, Flat, Hard 1 1/2"
4001440	2	Key, Woodruf 1 1/8x1/4"
Clam Pins		
BH	8	Bolt, Hex 1 1/2x3" gr5
WFH	12	Washer, Flat, Hard 1/2"
NL	12	Nut, Nyloc 1/2" gr2
Rear Frame Hyd. Clamps		
BH	6	Bolt, Hex 1 1/2"x6 gr8 SP
WFH	6	Washer, flat, Hard 1 1/2"
NH	6	Nut, Hex 1 1/2" gr8
Swivel Hitch To Bracket		
BP	6	Bolt, Plow 3/4x3" gr8
WFH	6	Washer, Flat, Hard 3/4"
NJ	6	Nut, Jam 3/4" gr8
Rear Side Cutting Edges		
BH	4	Bolt, Hex 1/2x2 gr5
BH	8	Bolt, Hex 1x9" gr8
Axle Clamp Bolts		
BH	6	Bolt, Hex 1/2x1" gr5
WF	6	Washer, Flat 1/2"
WFH	6	Washer, Flat, Hard 1/2"
Front Hose Holder Springs		
BH	20	Bolt, Hex 7/8x3" Fine gr8
WFH	20	Washer, Flat, Hard 7/8"
Wheel Bolts		

Bolt Listing Cont.

Component	Qty	Description
BH	4	Bolt, Hex 3/4x1 3/4" gr8
BH	10	Bolt, Hex 3/4x1 1/2" gr8
WF	14	Washer, Flat 3/4"
WFH	14	Washer, Flat, Hard 3/4"

Hold Downs For All 2 1/2" Pins Except ICO0222

BH	1	Bolt, Hex 3/4x2 1/2" gr8
WF	1	Washer, Flat 3/4"
WFH	1	Washer, Flat, Hard 3/4"
NH	1	Nut, Hex 1 1/2" gr8
WF	1	Washer, Flat 1 1/2"
WFH	1	Washer, Flat, Hard 1 1/2"

Center Rear Frame Pin ICO0222 Hold Down

4000067	8	Zerk Straight 1/8"
4000591	8	Zerk 1/8" 90 Degree
4000720	3	Adaptor 1/8-27-1/8NPT 90 ST Elb

Zerks

4000923	2	Pin, Clevis 1/2x4 1/2"
BP	2	Bridge Pin 1/8"

Rear Cyl. Stops

BH	1	Bolt, Hex 3/4x3" gr8
WFH	1	Washer, Flat, Hard 3/4"
NH	1	Nut, Hex 3/4" gr8

Depth Gauge Assembly

WF	6	Washer, Flat 1/2"
BH	2	Bolt, Hex 1/2x1" gr5
NW	4	Nut, Whiz 1/2"
BH	1	Bolt, Hex 1/2x10" gr5
BH	1	Bolt, Hex 1/2x6" gr5

Front Hose Cover @ Hyd. Block

BC	14	Bolt, Carriage 3/4x1 1/4"
WFH	14	Washer, Flat, Hard 3/8"
NW	14	Nut, Whiz 3/8"

Wear Strips To Swing Floor

NL	1	Nut, Nyloc 5/8" gr5
----	---	---------------------

Axle Wrench Hold Down

BH	8	Bolt, Hex 1/2x1 1/2" gr5
WFH	8	Washer, Flat, Hard 1/2"

Front Hose Cover

Bolt Listing cont.

Component	Qty	Description
BH	8	Bolt, Hex 1x3 1/2" gr8
NH	8	Nut, Hex 1" gr8
WFH	8	Washer, Flat, Hard 1"

Axle Extender On Optional 26.5 Tires (Not Used On 418)

BH	8	Bolt, Hex 5/8x2" gr5
WFH	8	Washer, Flat, Hard 5/8"
NH	8	Nut, Hex 5/8" gr8

Rear Mud Scrapers

BH	1	Bolt, Hex 1x6" gr8
WFH	1	Washer, Flat, Hard 1"
NL	1	Nut, Nyloc 1" gr5
4000923	1	Pin, Clevis 1/2x4 1/2"
BP	1	Bridge Pin 1/8"

Gate Safety Stop

BH	2	Bolt, Hex 1/2x4" gr5
NH	2	Nut, Hex 1/2" gr5
WFH	2	Washer, Flat, Hard 1/2"

Side Hose Clamps

Parts Listing
414 S

Ref#	Part #	Description	Qty.
1.	ICO0432	Front Hose Bracket	1
2.	ICO0358	Hose, Spring	3
3.	ICO2172	Cutting Edge, (left side)	1
	ICO2173	Cutting Edge, (right side)	1
4.	ICO0523	Pin, Gate Tapered	2
5.	ICO0219	Pin, 2 1/2" x 11 7/8"	5
6.	ICO1133	Pin, 2 1/2" x 5 3/8"	7
7.	ICO0222	Pin, 2 1/2" x 18 5/8"	1
8.	ICO0295	Gate Link	1
9.	ICO1145	Gate Arm	1
10.	ICO0235	Hose Support	1
11.	ICO1146	Depth Gauge	1
12.	ICO0301	Gate (400 Series)	1
13.	ICO1138	Rear Frame (400 Series)	1
14.	ICO1142	Swing Floor (400 Series, 10/01/06)	1
15.	ICO1141	Main Frame (400 Series)	1
16.	ICO0266	Pin, 1 1/2" x 60 3/4" Floor Pin	2
17.	ICO0340	Swing Floor Wear Strip	2
18.	ICO0267	Floor Hinge Spacer	2
19.	4001295	Tire, 23.5x25 16 ply Titan	2
20.	4001315	Rim, 19.25 (5 pc. for 23.5)	2
21.	ICO0239	Rear Cyl. Stop	2
22.	ICO1147	Gate Safety Stop	1
23.	ICO1144	Front Hyd. Shield	1
24.	2000513	Hub Assy. (29" wide)	2
25.	ICO0488	Axle Clamp w/groove	2
26.	ICO0335	Axle Nut Wrench	1
27.	ICO2112	Tandem Coupler Plate	1
28.	ICO1070	Tandem Drawbar	1
29.	ICO1143	Axle Extension (400 Series) NA w/26.5 tires	2
30.	ICO0254	Rear Pin Spacer	1
31.	ICO0255	Floor Hinge Spacer	1
32.	ICO0244	Lift Cyl. Spacer (rear frame)	2
33.	4000914	Bushing QD 2.5ID SF STL 2.5 (used w/ICO0222)	2
34.	2000460	HD 360 Cast Swivel Hitch	1
35.	4000851	Cutting Edge (7/8x13x35 3/4")	2
36.	4000958	Cutting Edge (7/8x16x48)	1
37.	4000922	Cutting Edge (Rear)	2
38.	4001034	Hyd. Cyl. (6 1/2x22 37 1/4")	1
39.	4001036	Hyd. Cyl. (4x50 63 3/4")	1
40.	4001037	Hyd. Cyl. (5x22 37 1/4")	2
41.	4000419	Manual Holder	1
42.	4000911	Hyd. O-Ring (4 3/8OD-4ID)	2
43.	4000921	Hyd. Valve Block Sequence	1
44.	4000623	Hyd. Pilot Chk Valve CKEB-XCN	1
45.	4000924	Hyd. Counter Valve CBEA-LHN	1

400 Series Parts Listing Cont.

Ref#	Part #	Description	Qty.
46.	4000925	Hyd. Sequence Valve SCEA-LAN	1
47.	9900007	Tandem Rear Hose Supports	2
48.	2000546	Bolt Kit (414S)	1
49.	2000548	Bolt Kit (414T)	1
50.	5001066	Hydraulic Fitting Kit (S)	1
51.	5001067	Hydraulic fitting Kit (T)	1
52.	5001075	Hydraulic Hose Kit (S—2 v)	1
53.	5001076	Hydraulic Hose Kit (T—2v)	1
54.	2000547	Decal Kit 414	1
55.	ICO2113	Front Hydraulic Covers	2
56.	ICO2111	Mud Scrapers	2
57.	ICO0249	Depth Gauge Retainer	1
58.	ICO0257	Clamp, Hyd. Line 2x3 1/2"	4
59.	5000617	Hose Clamp—Plastic	8
60.	5000618	Hose Clamp—Cover Plate	4
61.	4000902	Bushing 300251200	15
62.	4000954	Bushing 300259200	1

Optional

2000541	23.5 to 26.5 Tire Upgrade
2000542	Aux. Push Block
2000543	Brake Package
2000544	Safety Light Package

Components Included In Tandem Package

ICO1070	U Assy Tandem Drawbar	
ICO2112	Tandem Coupler Plate	
5000617	Hose, Clamp Plastic	(16)
5000618	Hose, Clamp Covers	(8)
2000545	Tandem Hydraulics	
2000540	Hub Assy 33"	
4001471	Tire, 26.5x25 16ply Titan	
4001272	Rim, 22x25 (5 pc. for 26.5)	



IC00346

IC00301

IC01142

IC01138

1
2

4

3

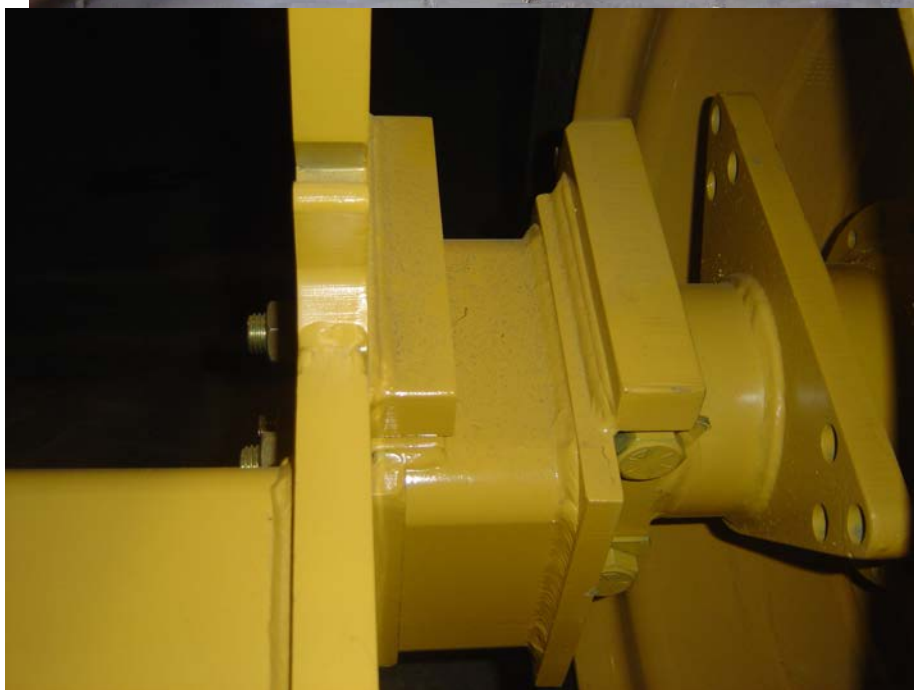
IC00295
Gate Link

IC01141

414S

IC003

Rear view of the 414S, 2v single, with 23.5 tires



Shown are the spacer blocks used with the 23.5 tires. If the optional 26.5 tires are used, these blocks are not needed, due to longer length of the axles.

Clam Pivot Pin (ICO0523)



Shown is the ICO0523 Clam Pivot Pin. The tapered pin is threaded for an 1 1/2" nut.
NOTE: The nut should be torqued to 600 ft. lbs.

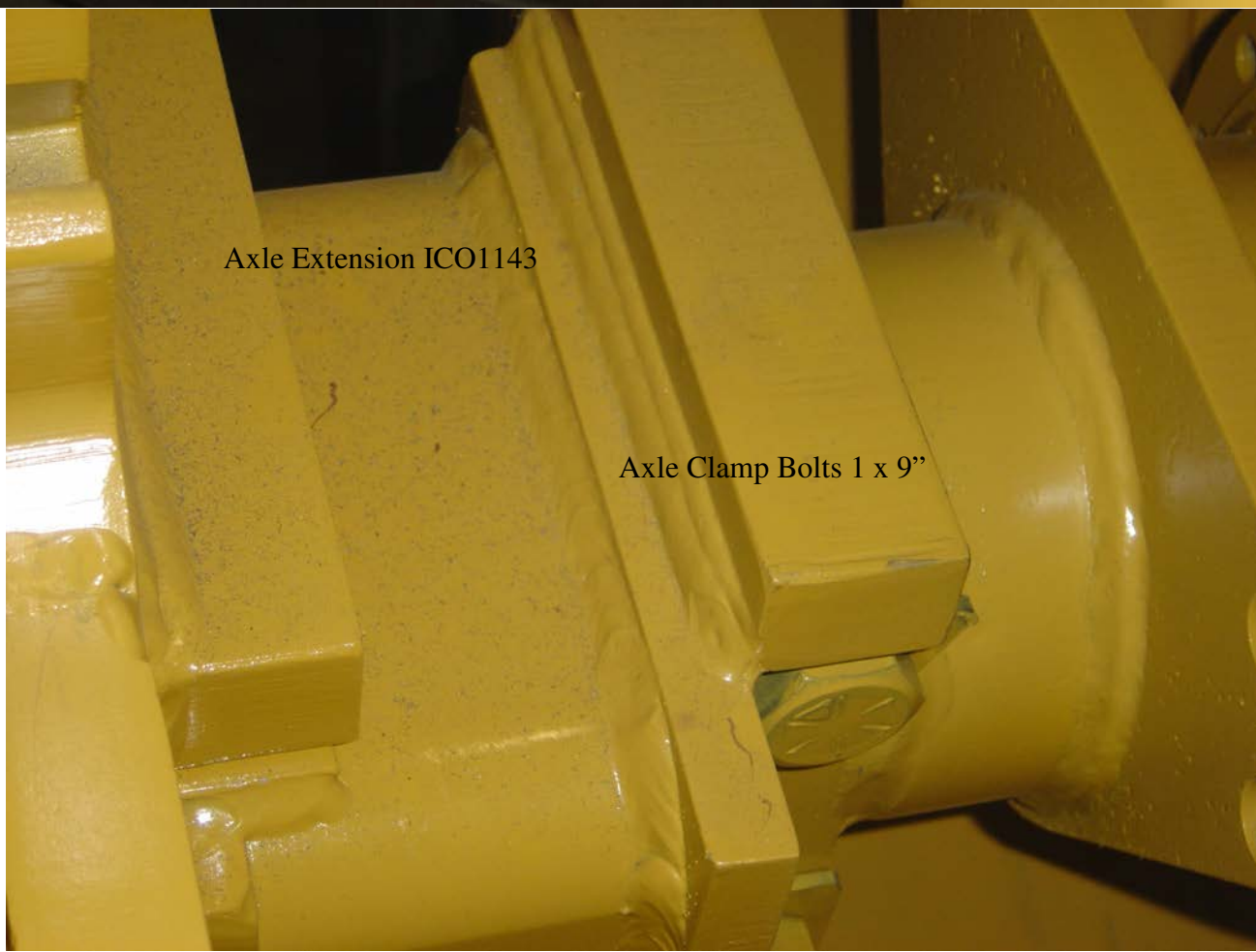


The axle spacer is held in place by (4) 1 x 3 1/2" bolts



Axle Extension ICO1143

Axle Clamp Bolts 1 x 9"



Components of the 414 Earthmover



Components (cont.) Center Rear Frame Pin



Same center pin configuration
in tandem operation.



Front End Components Of 400 Series



418 Rear Frame, shown as single unit. The pin is used for cable attachment, should the machine require being pulled from a stuck situation.

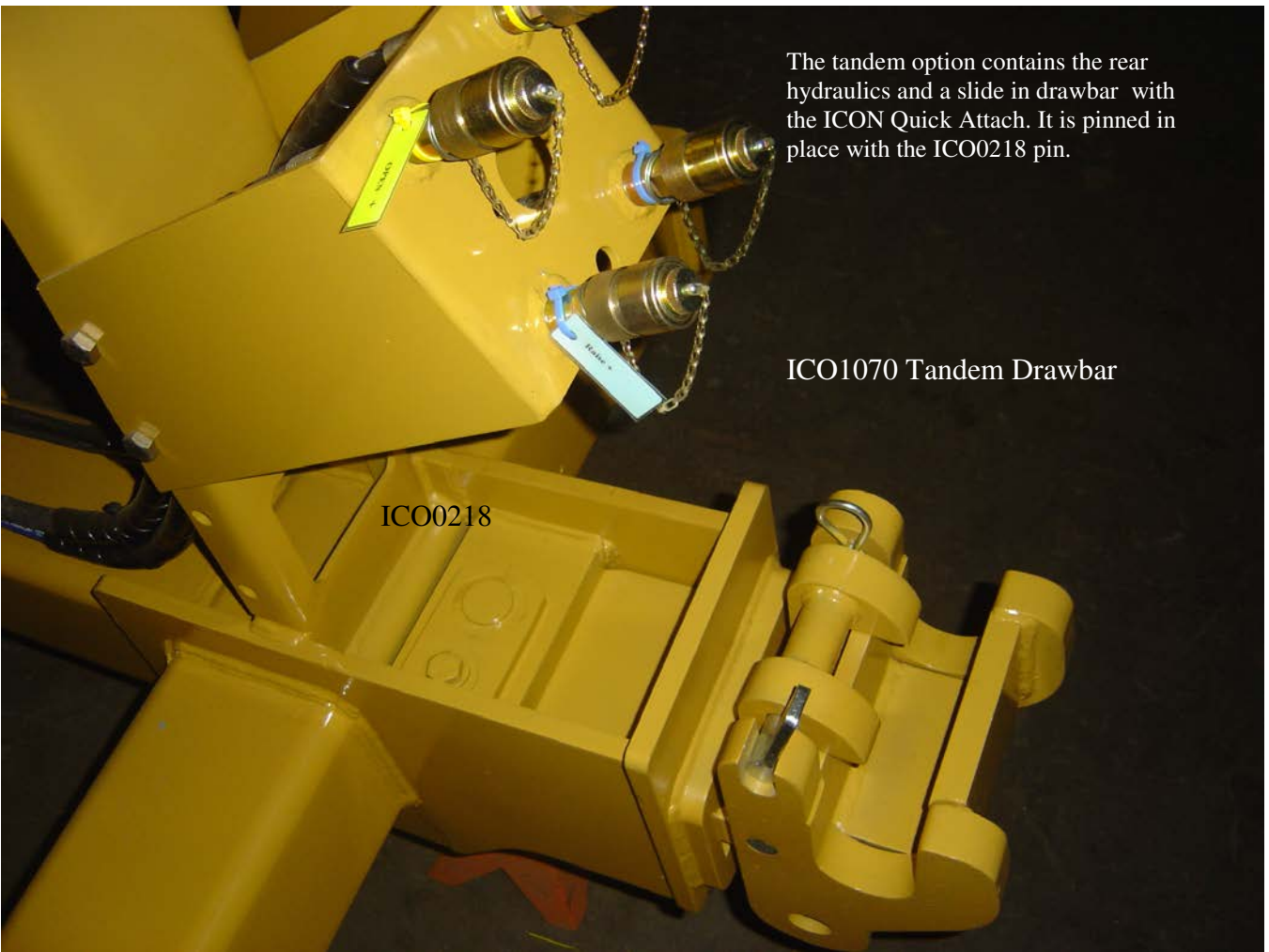
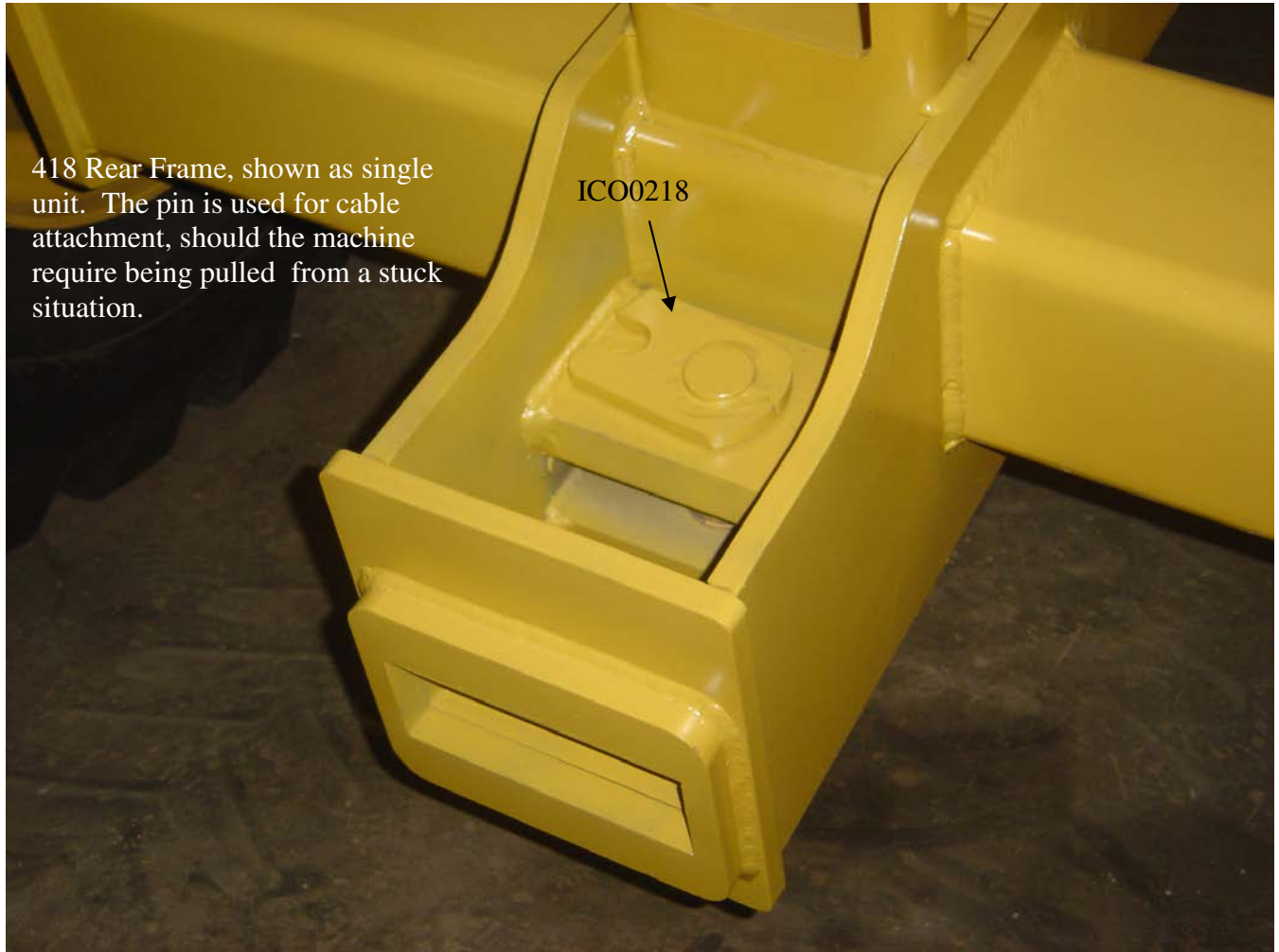
ICO0218



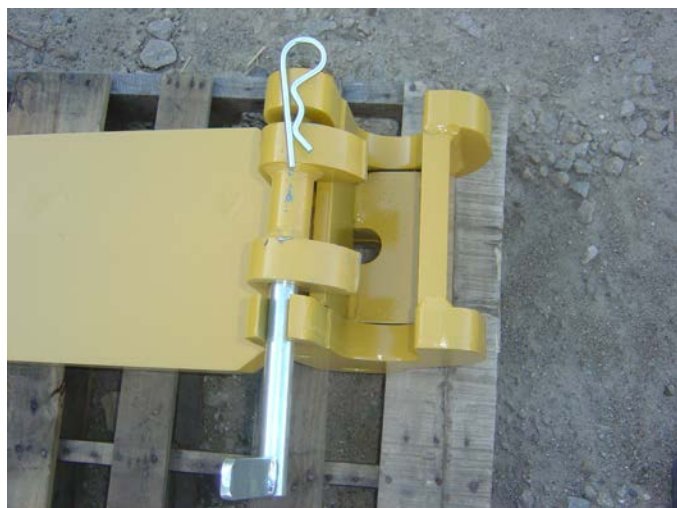
The tandem option contains the rear hydraulics and a slide in drawbar with the ICON Quick Attach. It is pinned in place with the ICO0218 pin.

ICO1070 Tandem Drawbar

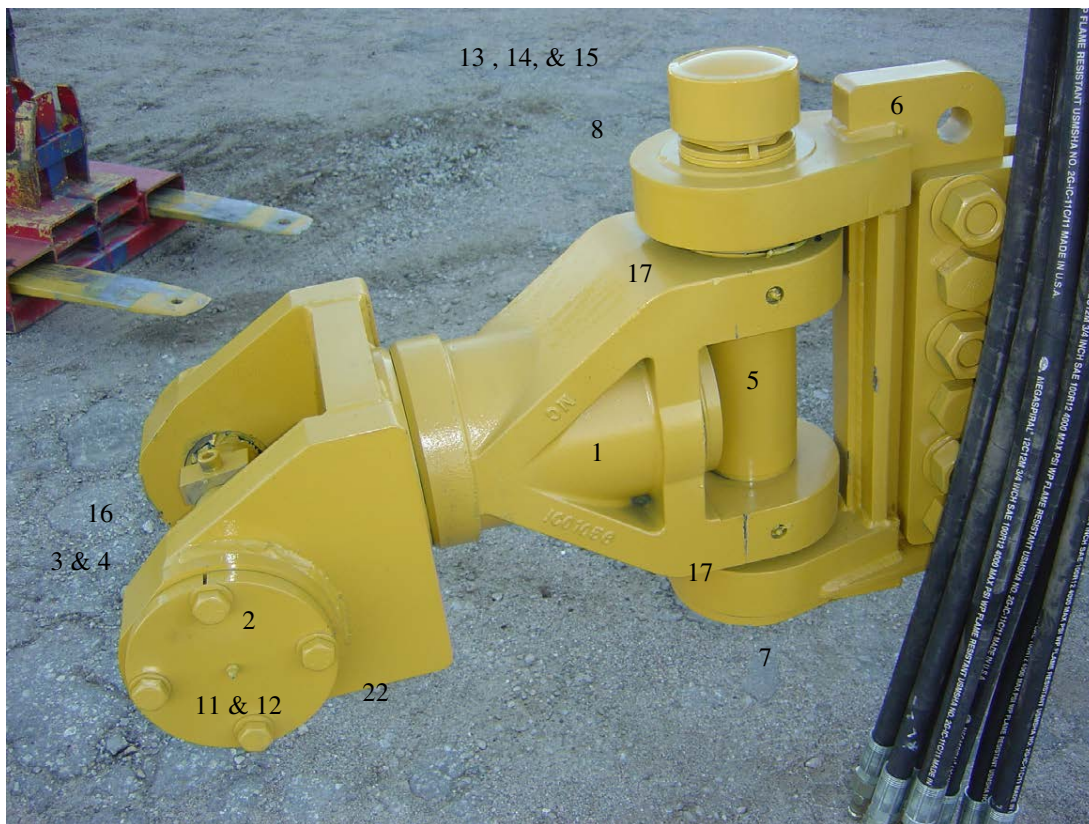
ICO0218



Shown is the Heavy Duty Swivel Hitch. It is standard on the 400 series. It features a full 360 degree rotation, cast yoke style, that attaches to the ICON Quick Attach drawbar. It is rated for 600 hp.

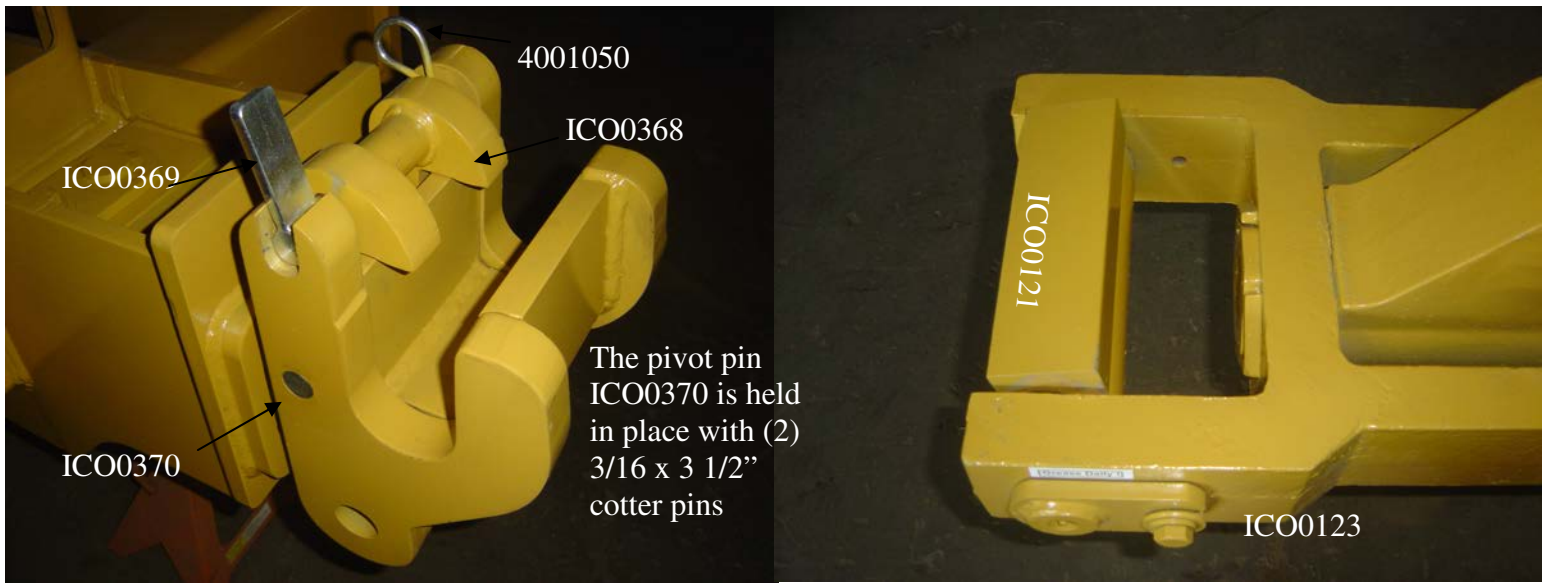


The Quick Attach Drawbar and U assembly



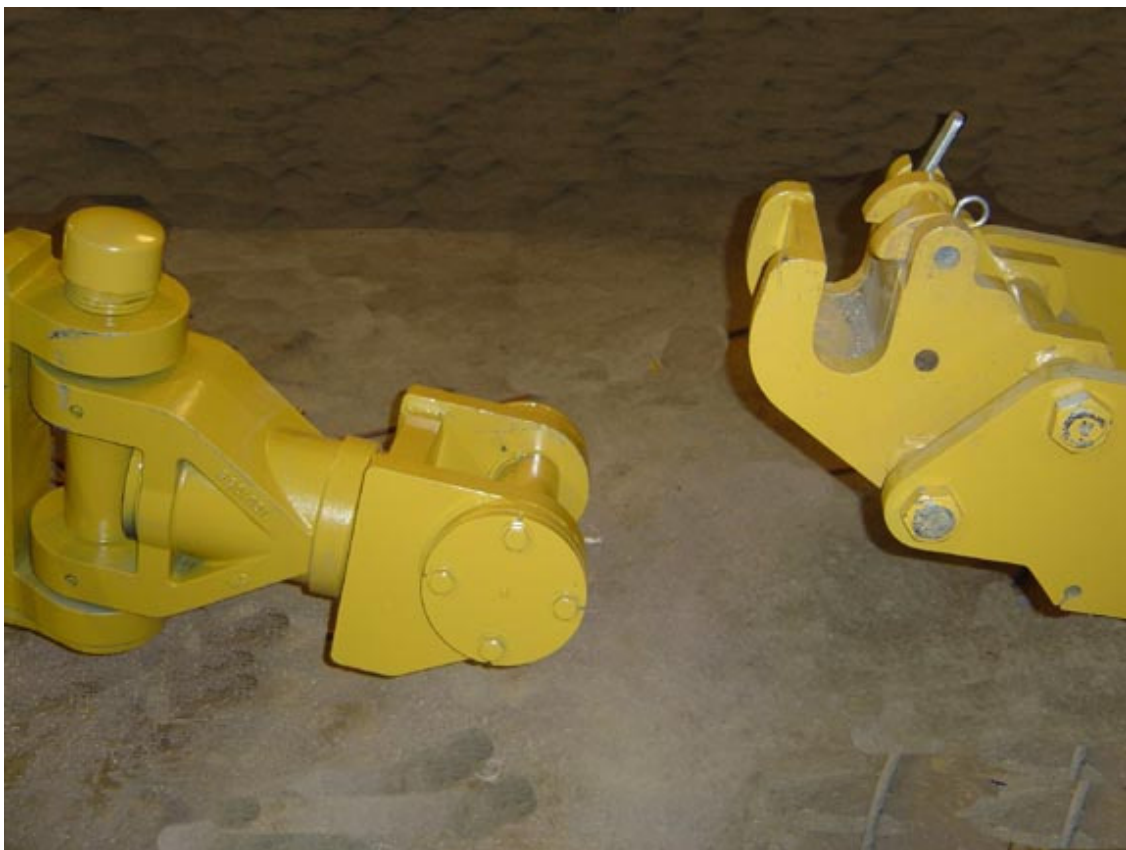
Ref #	Description	Qty	Part #
1	Cast Swivel	1	ICO1092
2	Quick Attach 3" Pin Cap	2	ICO1093
3	Quick Attach 3" Pin	1	ICO2052
4	Quick Attach Pin Keeper	1	ICO2051
5	Hitch Spacer Tube	1	ICO1061
6	Cast Hitch Bracket	1	ICO1055
7	Main Vertical Pin	1	ICO1062
8	6" Swivel Hitch Spacer	1	ICO1086
9	2" Rubber Hose	1	ICO1087
10	4" PVC Cap	1	4001292
11	Bolt, Hex 3/4 x 2" gr. 8	8	BH 3/4
12	Washer, Flat Hard 3/4"	8	WFH 3/4
13	Nut, Slotted 2 1/2" Course	1	NS 2 1/2
14	Pin, Cotter 3/8 x 5"	1	PC 3/8
15	Washer, Flat 2 1/2" Hard	1	WFH 2 1/2
16	Bolt, 5/8 x 3"	3	BH 5/8
17	Bushing	4	4001271
18	O-Ring 8 7/8x8 1/2" ID	1	4001272
19	O-Ring 7 3/8x7" ID	1	4001286
20	O-Ring 5 7/8x 5" ID	2	4001275
21	O-Ring 4 x 3 5/8" ID	2	4001274
22	Wiper Seal 3 1/2 x 3 1/4"	2	4001298

U Assembly Drawbar and Swivel Hitch



Above are the components of the ICON Quick Attach System. Back the power unit close enough to hook the hydraulic lines. Pull the snap pin, remove the lock down pin and pivot the ears back, out of the way. Hydraulically raise the tongue of the machine, until it clears the u assembly then back the assembly under the hitch, into position. Lower the hitch into the u assembly cradle and pivot the lock down ears over the adapter, replace the lock down pin and snap pin. Hook up is complete.

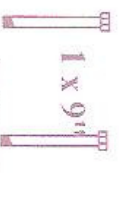
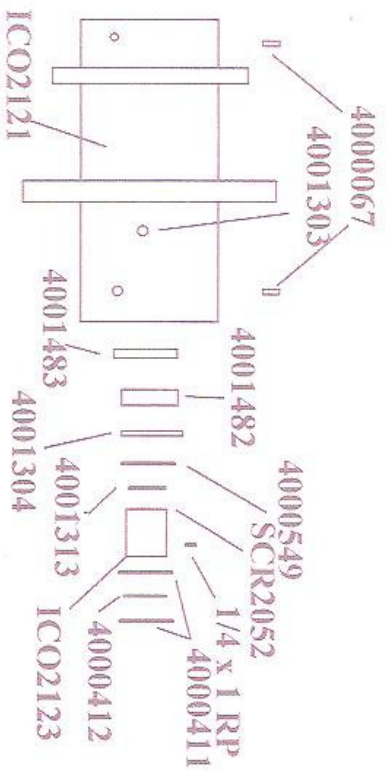
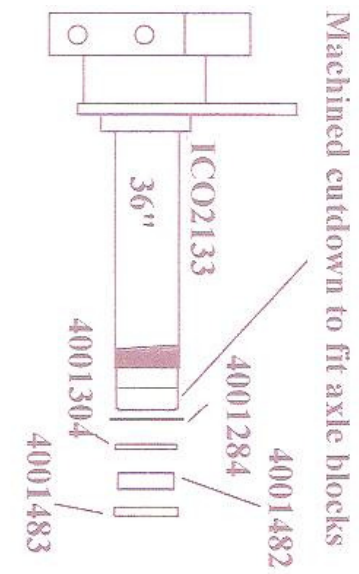
To dismount the unit, reverse procedure.



Parts List For ICON Earthmovers With Individual Axles W/O Brakes

Assembled - 2000580

Used with 26.5 Tires



Machined step to prevent axle side movement

ICO2133	Axle Assembly	34"
4001313	Snap Ring	
4001304	Bearing Seal CR42627	
4001482	Bearing, Tapered	
4001483	Bearing (Race) TaperedCup	
ICO2121	Hub 34"	
4000549	Hyd. O-Ring	
SCR2052	Axle Spacer	
4000412	Bearing, Lock Washer	
4000411	Bearing Nut	
4001303	Zerk - Spsi relief	
4000720	Adaptor 1/8-27-1/8mpt 90 el	
5001064	Hyf - coupling 1/8" pipe	
5001091	Hyf - nipple 1/8" x 11"	
5001065	Hyf - nipple 1/8" x 9"	

Cutting Edges & Components



Wear Strip—ICO0340
 1/2 x 1 1/2" Carriage Bolts (12)

Cutting Edges

Location	Dimensions	#	CAT #
Side (2)	7/8 x 13 x 35.75	4000851	178-4080
Center	7/8 x 16 x 48	4000958	174-8002

Bolts Per Blade

40008516
 4000958.....8

Cutting Edges
 1 x 2 1/2" gr. 8 Plow Bolt
 1" gr. 8 Jam Nuts
 1" Hardened Flat Washers

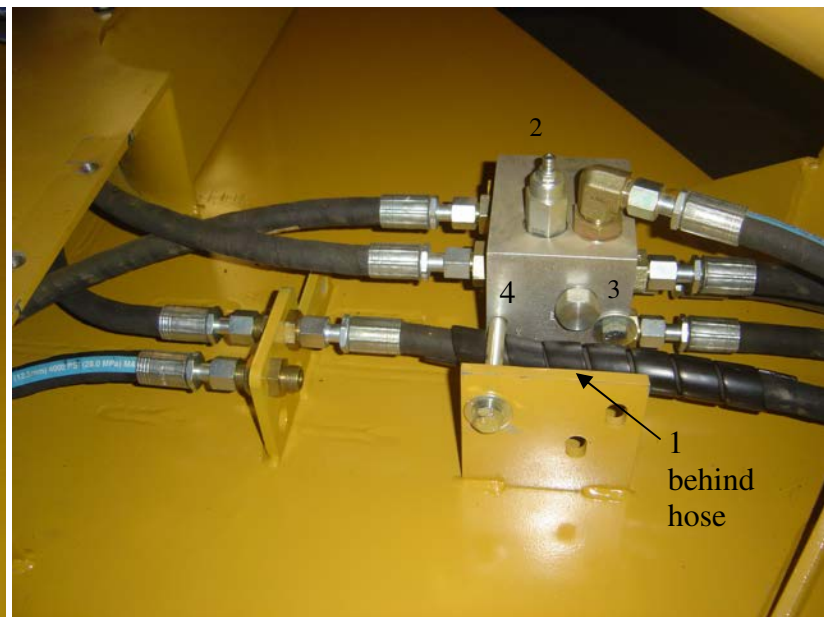
Side Cutting Edges

ICO0206L & R Each side requires (5) 3/4 x 2 1/2" Plow Bolts, Hard Washers and Hex Nuts.

Hydraulics for 2 valve 400 series



The 2 valve sequence block components.
Valve Seq. Block 4001452 (4)
Pilot Check Valve CKGB-XCN 4001451 (3)
Counter Valve CBGB-LHN 4001449 (1)
Sequence Valve SCGA-LAN 4001450 (2)



Hydraulic Fitting listing For Single & Tandem 418's
Single 5001066

Part #	Description	Qty
5000835	Pioneer Male Ends 8010-16P 10FB	4
5001068	Hyf—Adap 8MFFORx90	2
5001071	Hyf—Adap 12MB-8MFFOR	5
5001070	Hyf—Adap 8MFFOR-12MB90	9
5001072	Hyf—Adap 8MFFORTEE	2
5001073	Hyf—Adap 8MFFORBH-LN	

Tandem 5001067

5000835	Hyf-Pioneer Male 8010-16P 10FB	8
5001068	Hyf—Adap 8MFFOR-8FFORx90	2
5001071	Hyf—Adap 12MB-8MFFOR	5
5001072	Hyf-Adap 8MFFORTEE	2
5001070	Hyf—Adap 8MFFOR-12MB90	9
5001073	Hyf—Adap 8MFFORBH-LN	6
5001014	Hyf—Pioneer FEM END 8250-16	4

**Hydraulic Hose List for Single and Tandem 414 Series
Single 2V**

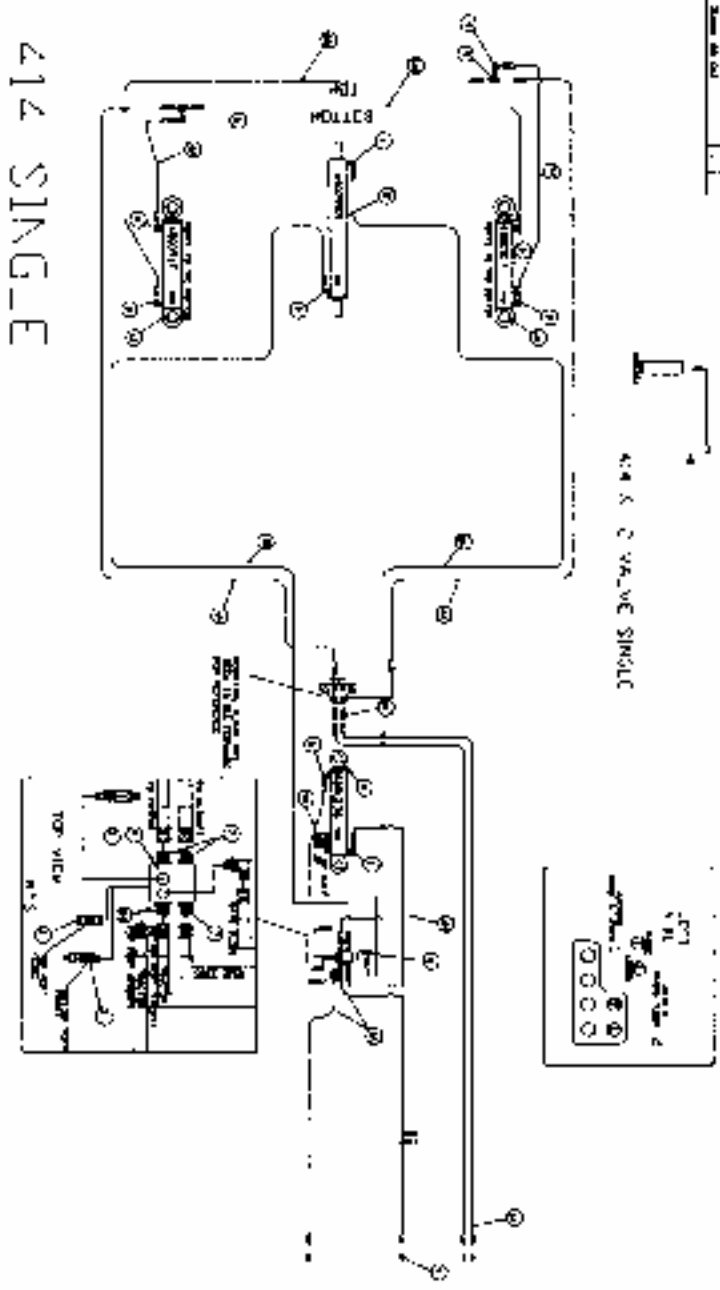
Part #	Description	Qty
5001077	Hose, 8FFORX-8C12x177"-10MB	2
5001078	Hose, 8FFORX-8C12x168"-10MB	2
5001079	Hose, 8FFORX-8C12x287"-8FFOR	1
5001080	Hose, 8FFORX-8C12x212"-8FFOR	2
5001081	Hose, 8FFORX-8C12x311"-8FFOR	1
5001082	Hose, 8FFORX-8C12x45"- 8FFORX	1
5001083	Hose, 8FFORX-8C12x37"-8FFORX	1
5001084	Hose, 8FFORX-8C12x124"-8FFOR	1
5001085	Hose, 8FFORX-8C12x70"-8FFORX	1
5001086	Hose, 8FFORX-8C12x30"-8FFORX	1
5001087	Hose, 8FFORX-8C12x130"-8FFOR	1
5001089	Hose, 4FJX-3CITx49"-2MP	2
5001090	Hose, 4FJX-3CITx53"-2MP	1

Tandem (In addition to above)

5001088	Hose, 8FFORX-8C12x353"-8FFOR	4
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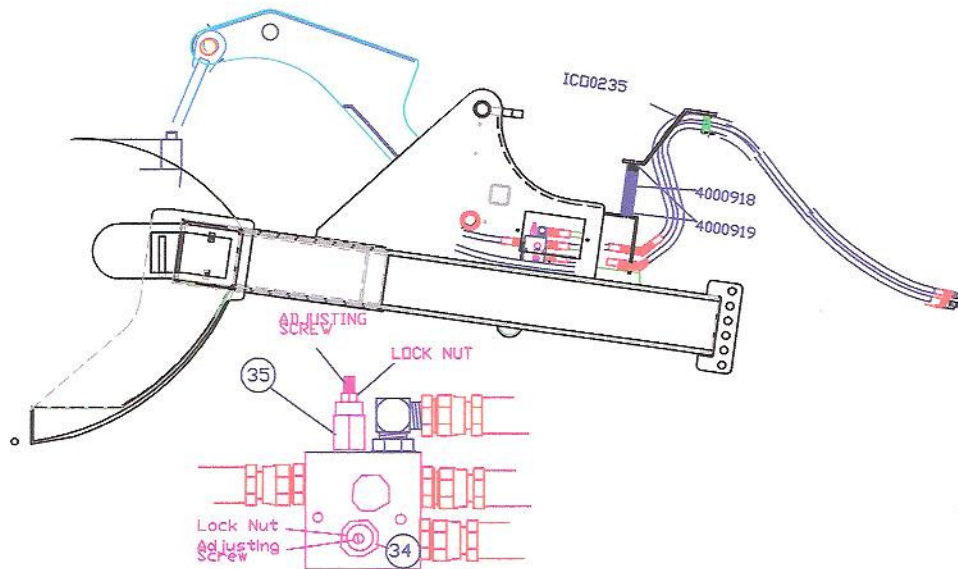
Component	Description	QTY	NO
4400924	COUNTER VALVE COCA LHM	1	1
4000925	SEQUENCE VALVE SECA-LHM	1	2
4000923	FILTR CHK VALVE SECA-CON	1	3
4000921	VALVE BLOCK	1	4
5000835	PISTON PND 8000-15P	4	5
5000068	SHFTDR-SFTDRX9	2	6
5000037	IPMB-SHFTDR	2	7
5000040	SHFTDR 12V895	9	8
5000073	SHFTDRTEE	2	9
5000075	SHFTDRBH-LV	2	10
4000336	6 X 22 CYLINDER	1	11
4000030	4 X 50 CYLINDER	1	12
4000037	3 X 22 CYLINDER	2	13
			14
			15
DESCRIPTION	DESCRIPTION	QTY	NO
5000077	SFTDRX-BC12 X 137"-1048	2	1
5000016	SFTDRX-BC12 X 137"-1048	2	2
5000076	SFTDRX-BC12 X 287"-9708X	1	1
5000075	SFTDRX-BC12 X 212"-8708X	2	4
5000089	SFTDRX-BC12 X 212"-8708X	1	5
5000082	SFTDRX-BC12 X 45"-87118X	1	6
5000083	SFTDRX-BC12 X 212"-8708X	1	7
5000084	SFTDRX-BC12 X 134"-87118X	1	11
5000075	SFTDRX-BC12 X 207"-8708X	1	9
5000086	SFTDRX-BC12 X 207"-87118X	1	10
5000087	SFTDRX-BC12 X 130"-8708X	1	11

Part No	Description	QTY
4400924	COUNTER VALVE COCA LHM	1
4000925	SEQUENCE VALVE SECA-LHM	1
4000923	FILTR CHK VALVE SECA-CON	1
4000921	VALVE BLOCK	1



414 SINGLE

Valve Adjustment 2 - valve hydraulics



Valve Adjustment

Problem:

Push wall comes forward before gate is fully up.

Answer:

- *Loosen locknut on top of valve
- *Adjust sequence valve 1/4 turn clockwise and check performance.
- *Repeat until remedied
- *Retighten locknut

Problem:

Gate comes down before push wall is fully back.

Answer:

- *Adjust counterbalance valve (located on side of valve block in tongue)
- *Loosen locknut on top of valve
- *Adjust counterbalance valve 1/4 turn counterclockwise and check performance.
- *Repeat until remedied
- *Retighten locknut.

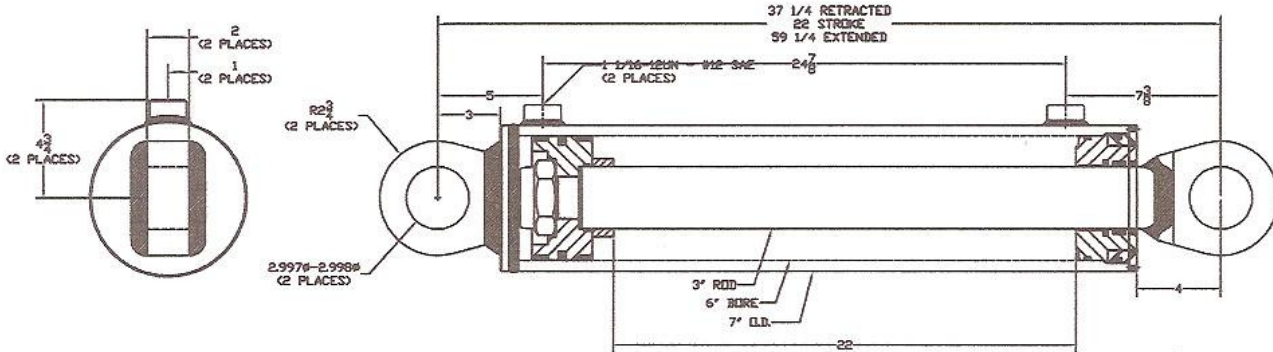
6 x 22

#4001236

Seal Kit #4001434

Seal Kit and Component List

4001236
 6" x 22" cylinder
 ICON Seal Kit #4001434



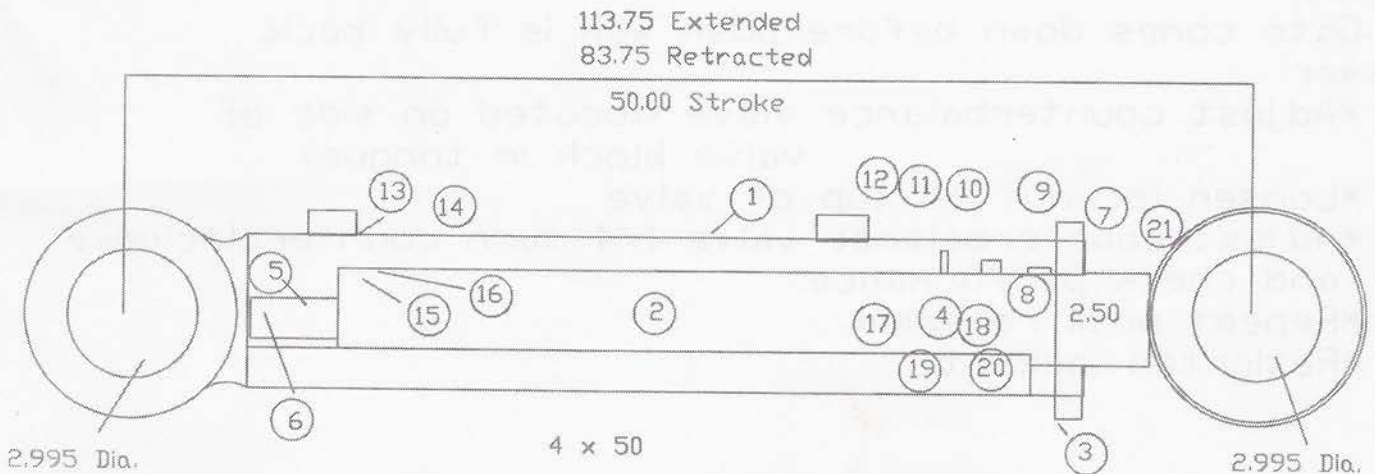
Ref#	Qty	Part#	Description
1	1	1040819	Case Weldment 6.00 32.750L
2	1	1046821	Rod Weldment 3.00 33.250L
3	1	1040822	Threaded Ring 6.250 12B 5.063
4	1	1040823	Head Gland 6.00 3.00 2.875L Duct
5	1	1040824	Piston 6.00 2.031 2.875L
6	1	27731	Spacer 3.010 4.00 .750L
7	1	77051	Locknut 2.00-12 NTU NYL insert
8	2	80243	SHSS #10-32 .375L Cup
9	1	76981	□-Ring 250 5.250D 70N .125CS
10	1	77627	□-Ring 163 6.1880D 70N .094CS
11	1	30010	Plug, Nylon .313D .250L
12	1	126699	Backup 358 6.000D 90N .188CS
13	1	126698	□-Ring 358 6.000D 70N .188CS
14	1	156540	Seal, Teflon 6.000 5.095 .379
15	2	156541	W ring 6.00 5.50 .625L SK BRZ
16	2	76989	Backup 234 3.250D 9BN .125CS
17	1	76976	□-Ring 234 3.250D 70N .125CS
18	1	156188	W Ring 3.120 3.00 .980L BC
19	1	81489	Buffer Seal 3.00 .22W SQ
20	1	77450	U Cup 3.00 .250 .375 PDSA 9250
21	1	32644	UCB G 3.020 3.495 .125 NYT
22	1	79035	Wiper 3.00R .250CS .313L CAN

Seal Kit and Component List

#4000953 4.00" Bore/2.50" Rod 4001036 w/bushings
 4 x 50" Cylinder (Used on D Models)

ICDN Seal Kit #4000964 Will Contain #'s (8 thru 21)
 All Other Parts Special Order

Ref#	Qty	Part#	Description	Size
1.	1	4001012	Case Weldment	4"
2.	1	4001011	Rod Weldment	2.50"
3.	1	4001010	Thread Ring	4"
4.	1	4001009	Head Gland	4"
5.	1	4001008	Piston	4"
6.	1	4001007	Nut	4"
7.	2	4000998	Set Screw	#10-32UNF
8.	1	4000997	□-Ring	3.50ID
9.	1	4000996	□-Ring	4.00ID x 3/32CS
10.	1	4000976	Nylon Plug	.31 Dia. x .25LG
11.	1	4000995	Back Up	4.00ID
12.	1	4000994	□-Ring	4.00ID
13.	1	4000993	Teflon Seal	4.00ID
14.	2	4000992	Wear Ring	4.00ID x .63LG
15.	2	4000991	□-Ring	2.50ID
16.	1	4000990	Back Up	2.50ID
17.	1	4000989	Wear Ring	2.50ID x .98LG
18.	1	4000988	Buffer Seal	2.50ID
19.	1	4000987	U - Cap	2.50ID
20.	1	4000986	Back Up	2.50 x .13LG
21.	1	4000985	Wiper, Lip Type	2.50ID



ICON and CAT Crossover Part #'s For 5x22/5x40 KAYDON Cyl's

Ref #	Description	Size	ICON #	CAT #
11.	Back Up	5.00ODx3/16 CS	4000975	9X7279
12.	O-Ring	5.00ODx3/16 CS	4000974	5P4326
13.	Teflon Seal	5.00OD	4000973	5J5020
14.	Wear Ring	5.00ODx.63 LG	4000972	660 BRZ
15.	Back Up	3.00IDx1/8 CS	4000971	8J2574
16.	O-Ring	3.00IDx1/8 CS	4000970	IH7339
17.	Wear Ring	3.00IDx.98 LG	4000969	8C9161
18.	Buffer Seal	3.00ID	4000968	8C9126
19.	U-Cup	3.00ID	4000967	5J8300
21.	Wiper, Lip Type	3.00ID	4000965	3E4170

ICON and CAT Crossover Part #'s For 4 x 50 KAYDON Cyl's

Ref#	Description	Size	ICON #	CAT #
11.	Back Up	4.00OD	4000995	2K6830
12.	O-Ring	4.00OD	4000994	1H8128
13.	Teflon Ring	4.00OD	4000993	5J5402
14.	Wear Ring	4.00 x .63LG	4000992	660 BRZ
15.	O-Ring	2.50ID	4000991	1H5728
16.	Back Up	2.50ID	4000990	4J9225
17.	Wear Ring	2.50ID x .98LG	4000989	8T0785
18.	Buffer Seal	2.50ID	4000988	8C3839
19.	U-Cup	2.50ID	4000987	5J0964
21.	Wiper, Lip Type	2.50ID	4000985	3E4166

ICON and CAT Crossover Part #'s For 6.5 x 22 KAYDON Cyl's

Ref#	Description	Size	ICON #	CAT #
11.	Back Up	6.38OD x 3/16CS	4000982	7J8956
12.	O-Ring	6.38OD x 3/16CS	4000981	7J8955
13.	Teflon Seal	6.50OD	4000980	5J4991
14.	Wear Ring	6.50OD x .63LG	4000979	660BRZ
15.	Back Up	3.00ID x 1/8CS	4000971	8J2574
16.	O-Ring	3.00ID x 1/8CS	4000970	1H7339
17.	Wear Ring	3.00ID x .98LG	4000969	8C9161
18.	Buffer Seal	3.00ID	4000968	8C9126
19.	U-Cup	3.00ID	4000967	5J8300
21.	Wiper, Lip Type	3.00ID	4000965	3E4170

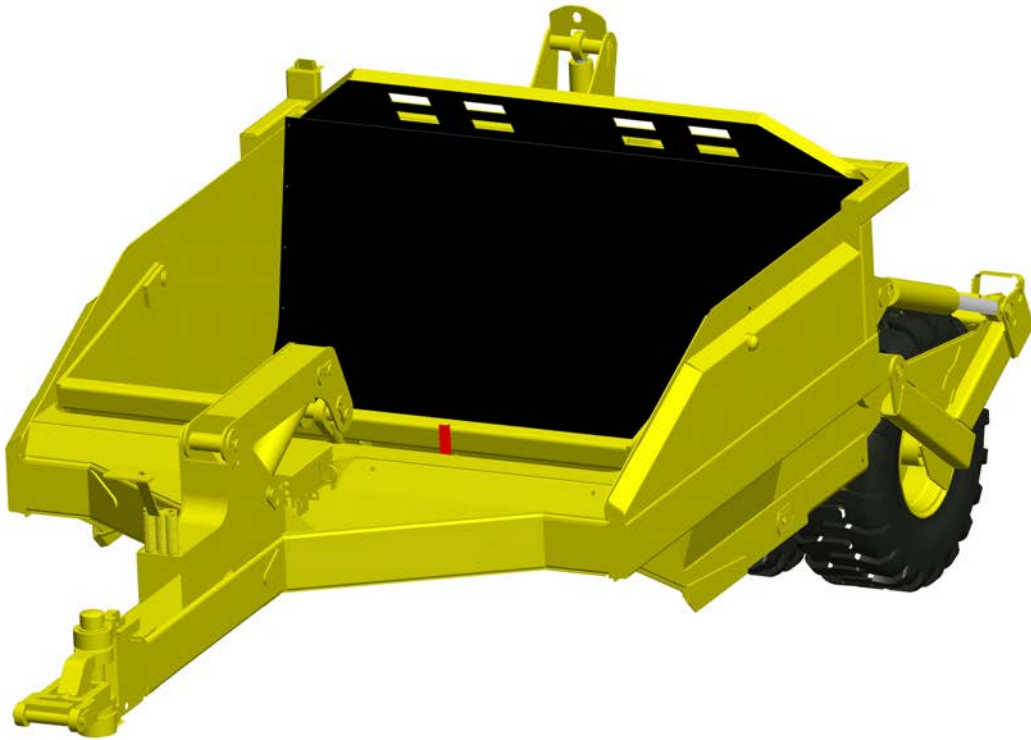
Decal Set For 400 Series

Part #	Description	Qty
1	4000931 Decal, "Warning" High Pressure	2
2	4000935 Decal, "Safety/Operation/Parts"	1
3	4000937 Decal, "3 Pumps Of Grease Weekly"	2
4	4000938 Decal, "Grease Daily"	26
5	4000940 Decal, "Danger" Pinch	4
6	4000941 Decal, " Danger" To Prevent A Hazard	1
7	4000960 Decal, "ICON" 4" (Both sides)	4
8	4001473 Decal, Depth Gauge	1
9	4000396 Decal, Gate Gauge A-B-C-D-E	1
10	4000702 Decal, Reflective Tape	4pc. 18"
11	4000949 Decal, Hyd. Hose Color Code	1
12	4001435 Decal, Tire Pressure/Torque (26.5 -23.5)	2
13	4001445 Decal, Safety Stops	3
14	4001446 Decal, Remove Safety Stops	3
15	4001248 Decal, Horsepower Limits (400) (500 on 418)	1
16	4000372 Decal, Caution, Moving Parts	4
17	4001432 Decal, USA Flag	2
18	4001415 Decal, Made in USA	2
19	4001495 Decal, 400 Series (414-416-418)	1 set
20	4001477 Decal, T (tandem) or S (single)	2
21	4001497 Decal, Graphic Side Stripes	1 set



ICON

418 Rear Lowering Earthmover



Parts & Service

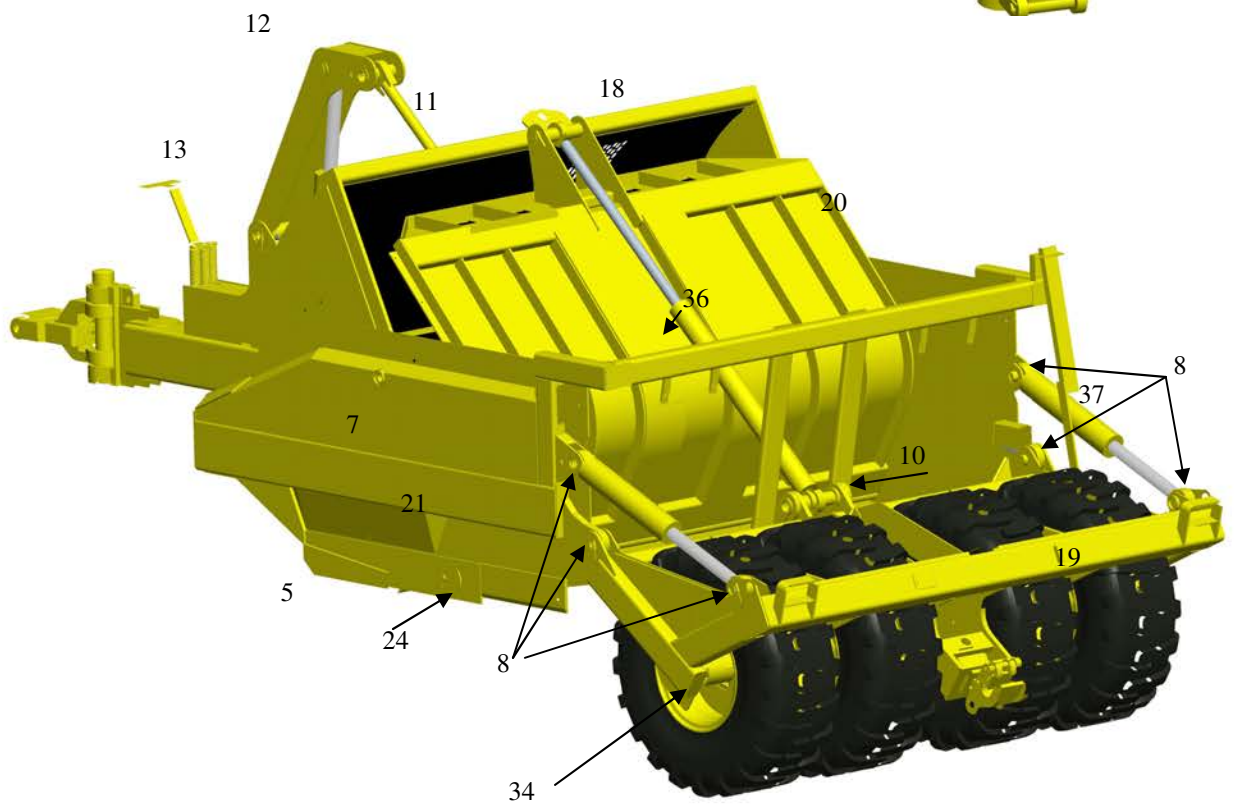
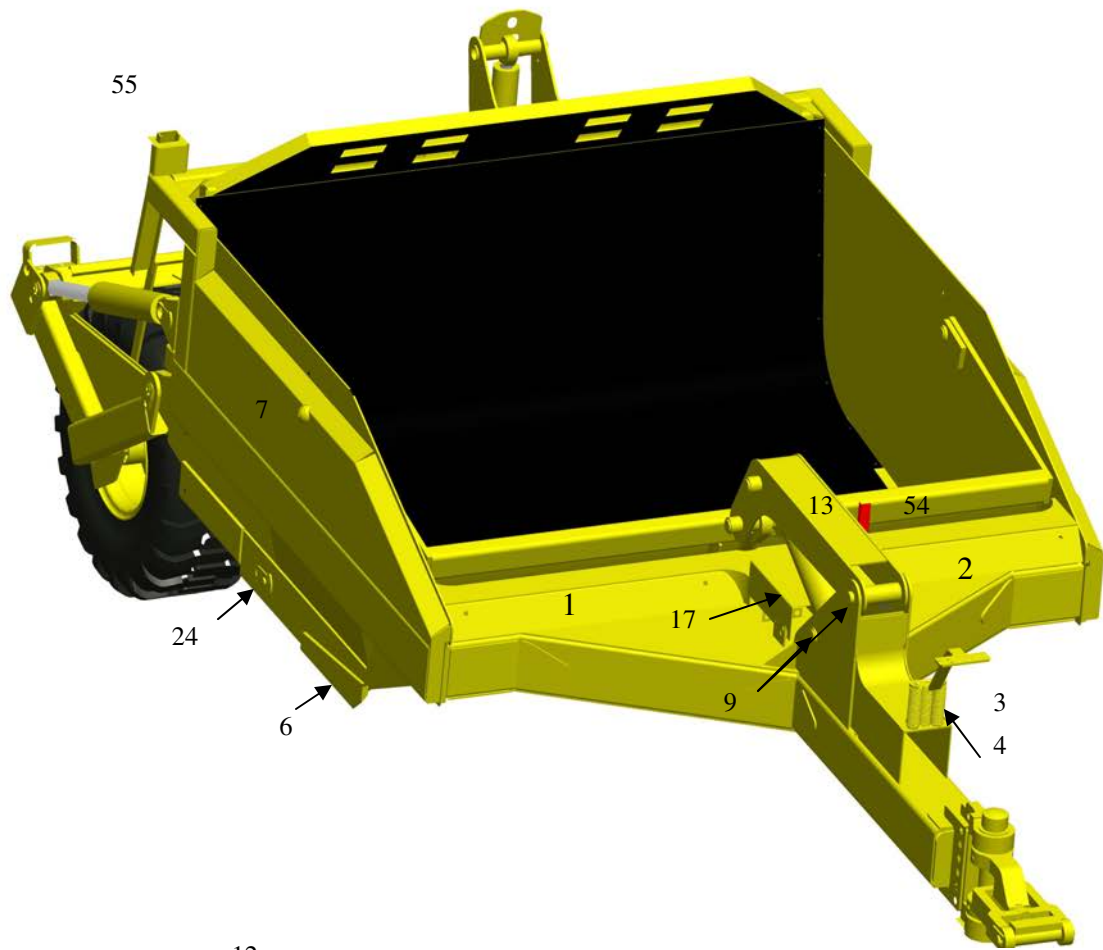
418 Parts Listing

Item #	Part #	Description	Qty
1.	ICO2151	Front Hose Cover (r side)	1
2.	ICO2152	Front Hose Cover (l side)	1
3.	ICO0432	Front Hose Bracket	1
4.	ICO0358	Hose Spring Assy.	3
5.	ICO2172	Cutting Edge (left side)	1
6.	ICO2173	Cutting Edge (right side)	1
7.	ICO0523	Tapered Gate Pin	2
8.	ICO1133	Pin, 2 1/2"x5 3/4" Ball Joint	7
9.	ICO0219	Pin, 2 1/2"x11 7/8"	5
10.	ICO0222	Pin, 2 1/2"x18 5/8"	1
11.	ICO0295	Gate Link	1
12.	ICO0346	Gate Arm	1
13.	ICO0235	Hose Support	1
14.	ICO0239	Rear Cyl. Stop	2
15.	ICO0244	Lift Cyl. Spacer	4
16.	ICO1144	Hyd. Shield	1
17.	2000461	MD Cast Swivel Hitch (optional)	1
18.	ICO0250	Gate	1
19.	ICO2118	Rear Frame	1
20.	ICO2119	Swing Floor	1
21.	ICO2117	Main Frame	1
22.	ICO0254	Rear Pin Spacer	1
23.	ICO0255	Floor Hinge Spacer	1
24.	ICO0256	Floor Pin, 1 1/2" x 66 3/4"	2
25.	ICO0257	Hyd. Line Clamp	4
26.	ICO0340	Swing Floor Wear Strip	2
27.	ICO0267	Floor Hinge Spacer	2
28.	ICO0335	Axle Nut Wrench	1
29.	ICO2113	Axle Bolt Spacer	4
30.	4000914	Bushing QD 2.5ID SF STL 2.5	2
31.	ICO0488	Axle Clamp w/groove	4
32.	4000636	Tire, 20.5x25-16 ply	4
33.	4000657	Rim, 17x25 3 pc assy.	4
34.	2000512	Hub Assy. 28" wide	4
35.	4001034	Hyd Cylinder 6 1/2x22- 36 1/4"	1
36.	4001036	Hyd. Cylinder 4x50 - 63 3/4"	1
37.	4001037	Hyd. Cylinder 5x22 - 37 1/4"	2
38.	4000851	Cutting Edge, 7/8x13x35.75"	2
39.	4000951	Cutting Edge 7/8x16x60"	1
40.	4000922	Rear Cutting Edge	2
41.	4000419	Manual Holder	1
42.	4001449	Hyd. Counter Valve CBGB-LHN	1
43.	4001450	Hyd. Sequence Valve SCGA-LAN	1
44.	4001451	Hyd. Pilot CHK Valve CKGB-XCN	1
45.	4001452	Hyd. Valve Block Seq. #3	1
46.	4001267	2 Gallon Accumulator	1
47.	9300901	Accumulator Mount	2
48.	ICO0464	Accumulator Mount	1
49.	ICO0205	Gate Spacer	4
50.	ICO0350	Gate Link Spacer	2
51.	ICO1118	Pin Spacer 9/16"	8
52.	ICO1117	Pin Spacer 7/8"	5
53.	SCR2078	Wheel Bolt Spacer	40

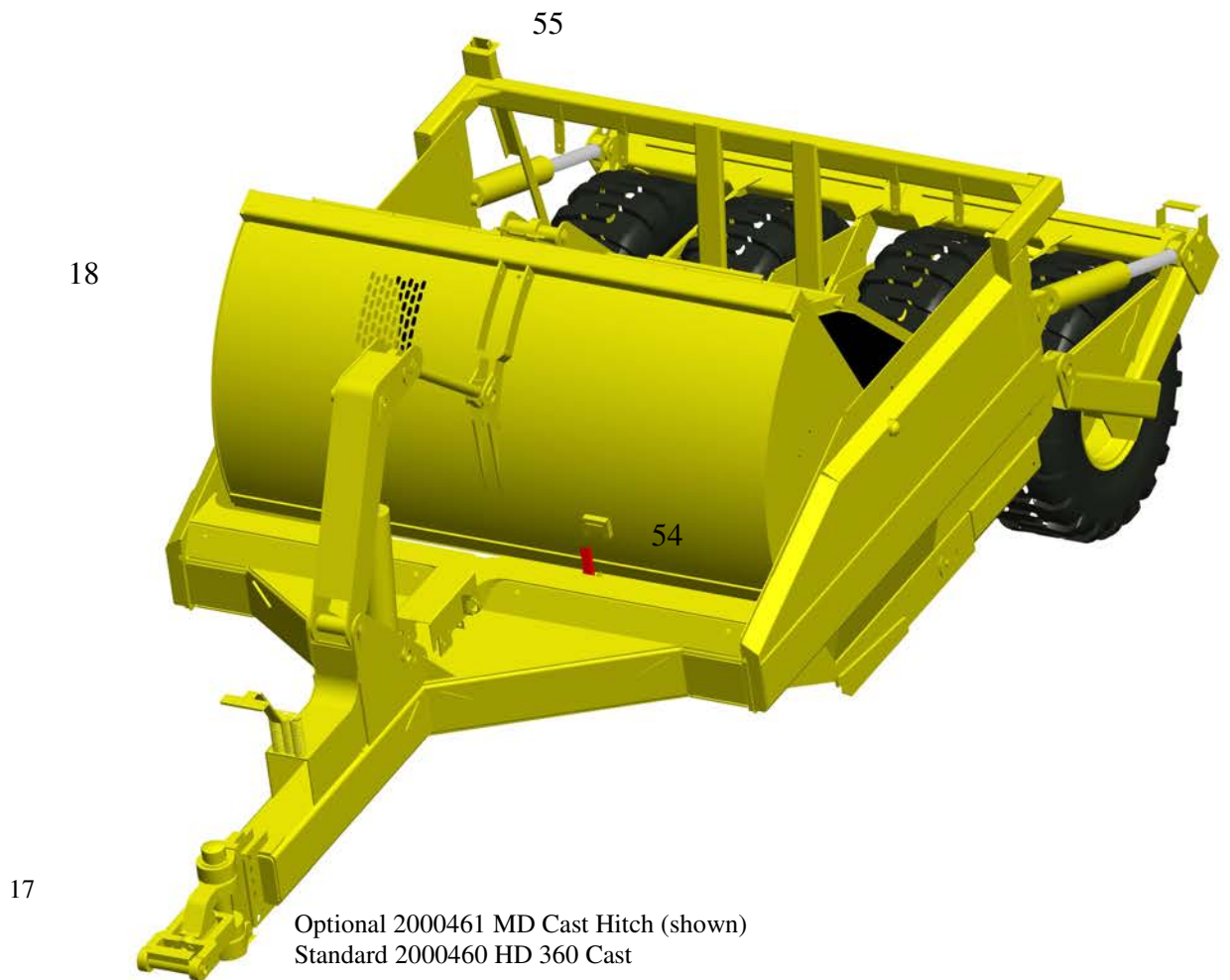
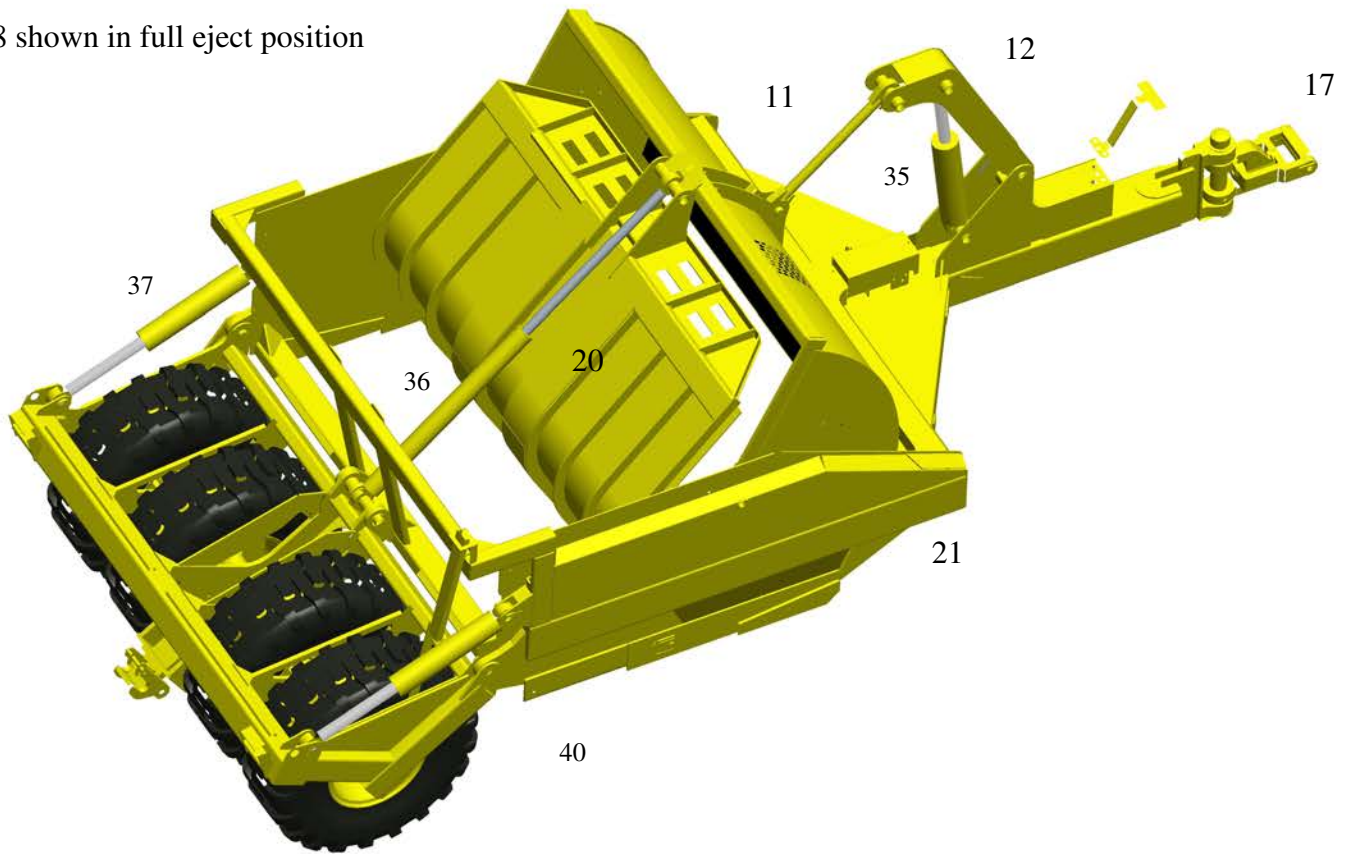
418 Parts Listing - Cont.

54.	ICO1147	Gate Stop	1
55.	ICO1146	Depth Gauge	1
56.	2000470	(Option) Brake Assy	1
57.	2000587	(Option) Potentiometer	1
58.	2000585	(Option) Potentiometer Tractor	1
59.	2000460	SD Swivel Hitch	1
60.	5001092	Kit, Hyd. Fittings (single)	1
61.	5001094	Kit, Hose (single 2v)	1
62.	2000551	Kit, Bolt 418 single	1
63.	2000547	Kit, Decal 400 series	1
64.	2000203	Kit, Lights	1
65.	ICO2021	Brake Line Shield	2
66.	ICO2053	821 Axle Nut	8

Parts Listing

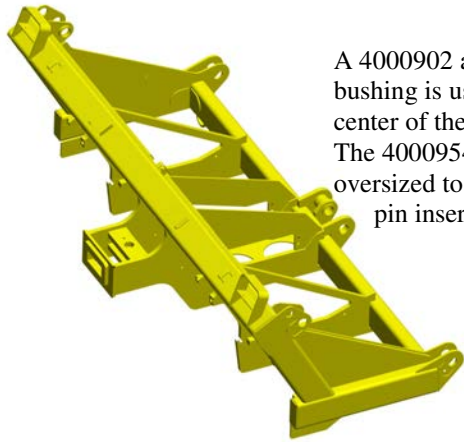


418 shown in full eject position



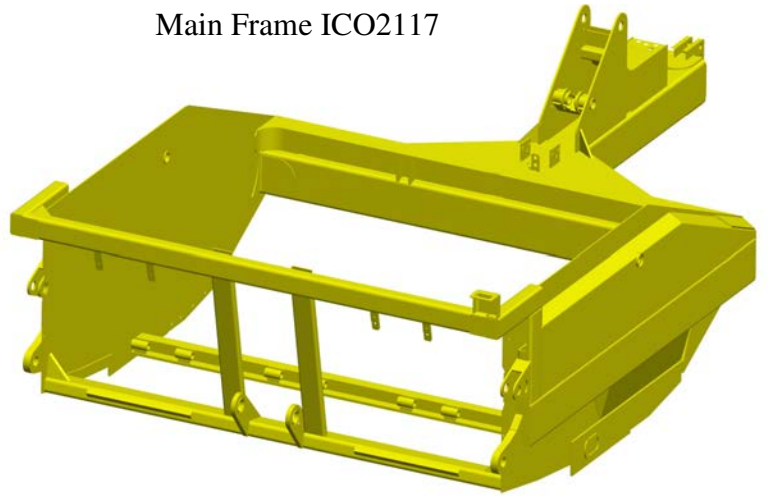
Optional 2000461 MD Cast Hitch (shown)
Standard 2000460 HD 360 Cast

Rear Frame ICO2118



A 4000902 and 4000954 bushing is used in the center of the rear frame. The 4000954 is slightly oversized to allow easier pin insertion.

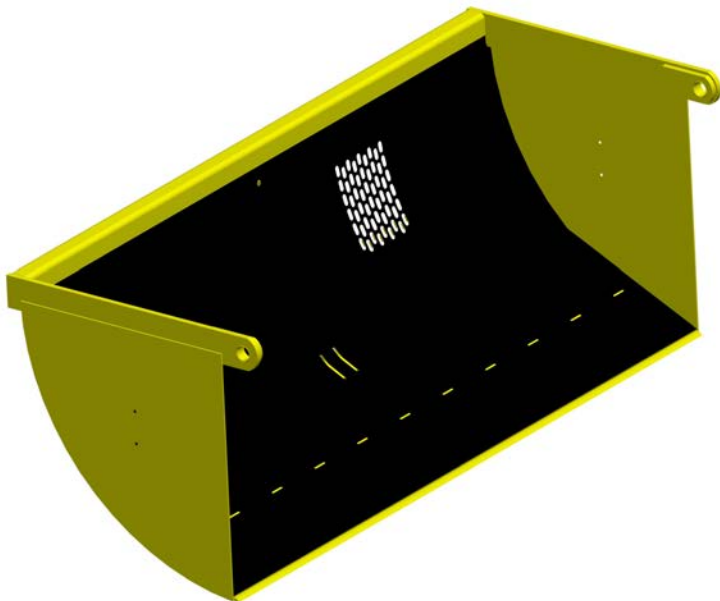
Main Frame ICO2117



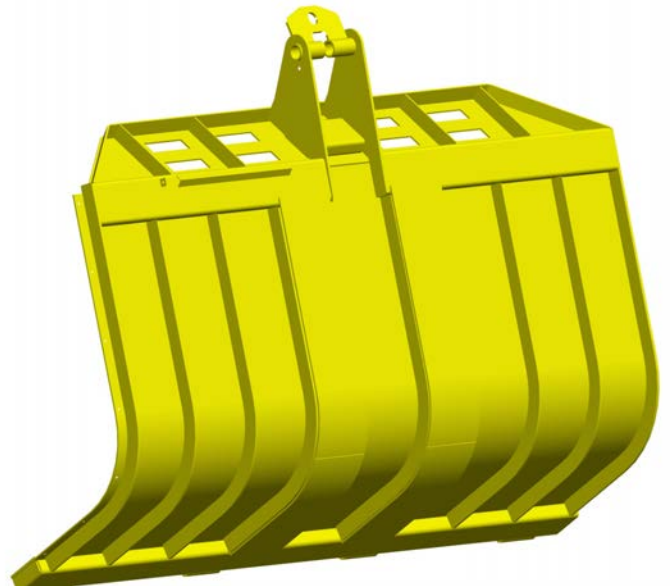
Rear frame mounts to main frame using ICO1133 pins at each side and a center frame pin ICO0222 and (2) 4000419 bushings

ICO0250 Gate.

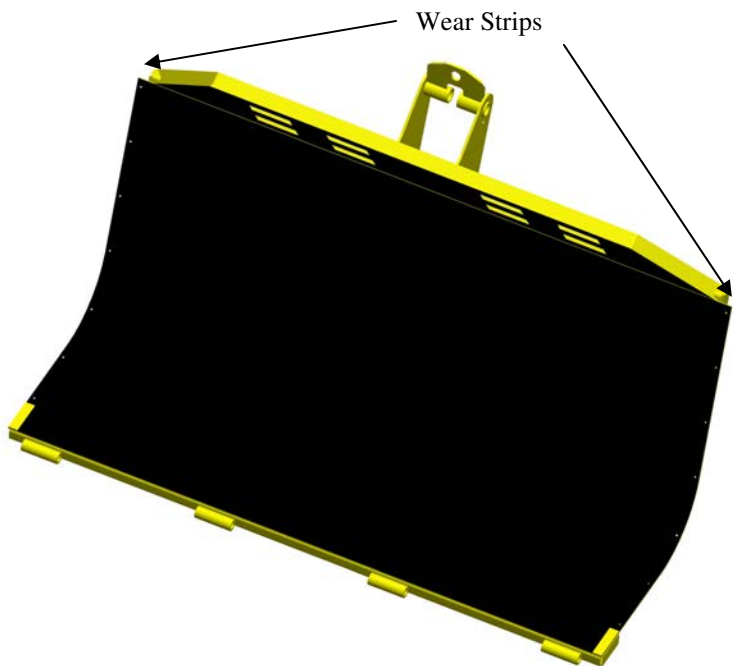
Attaches to the main frame with (2) ICO0523 tapered pins. These should be torqued to 650lbs.



The swing floor ICO2119. The cylinder attaches at the top and allows the floor to pivot on (2) ICO0256 pins, inserted at the bottom.

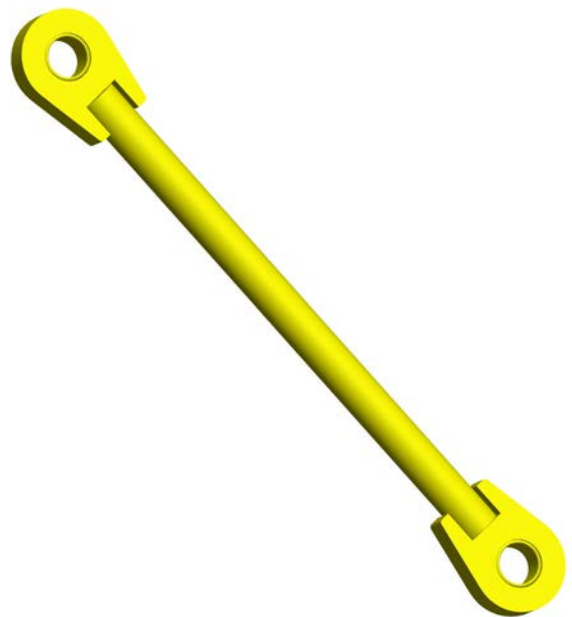
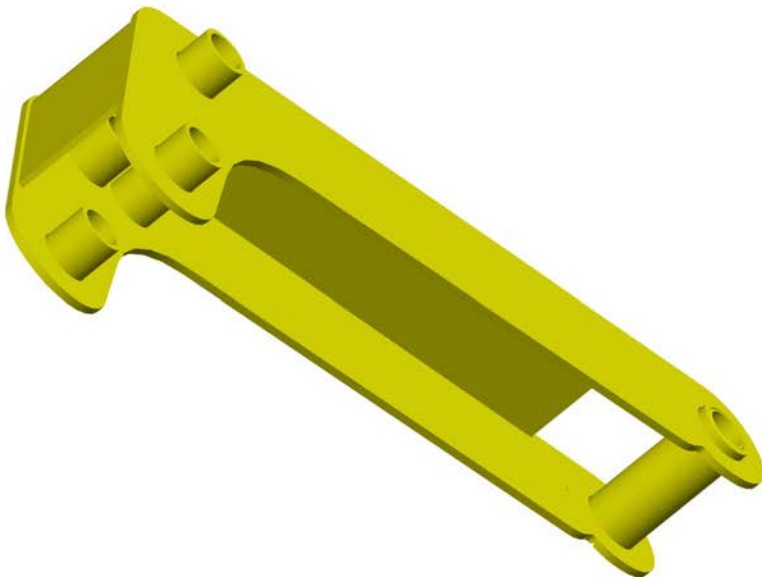


Front view of the swing floor. The mounts for the floor pins can be seen, along with the side wear strip (ICO0340) mounting holes.



Gate Arm (ICO0346)

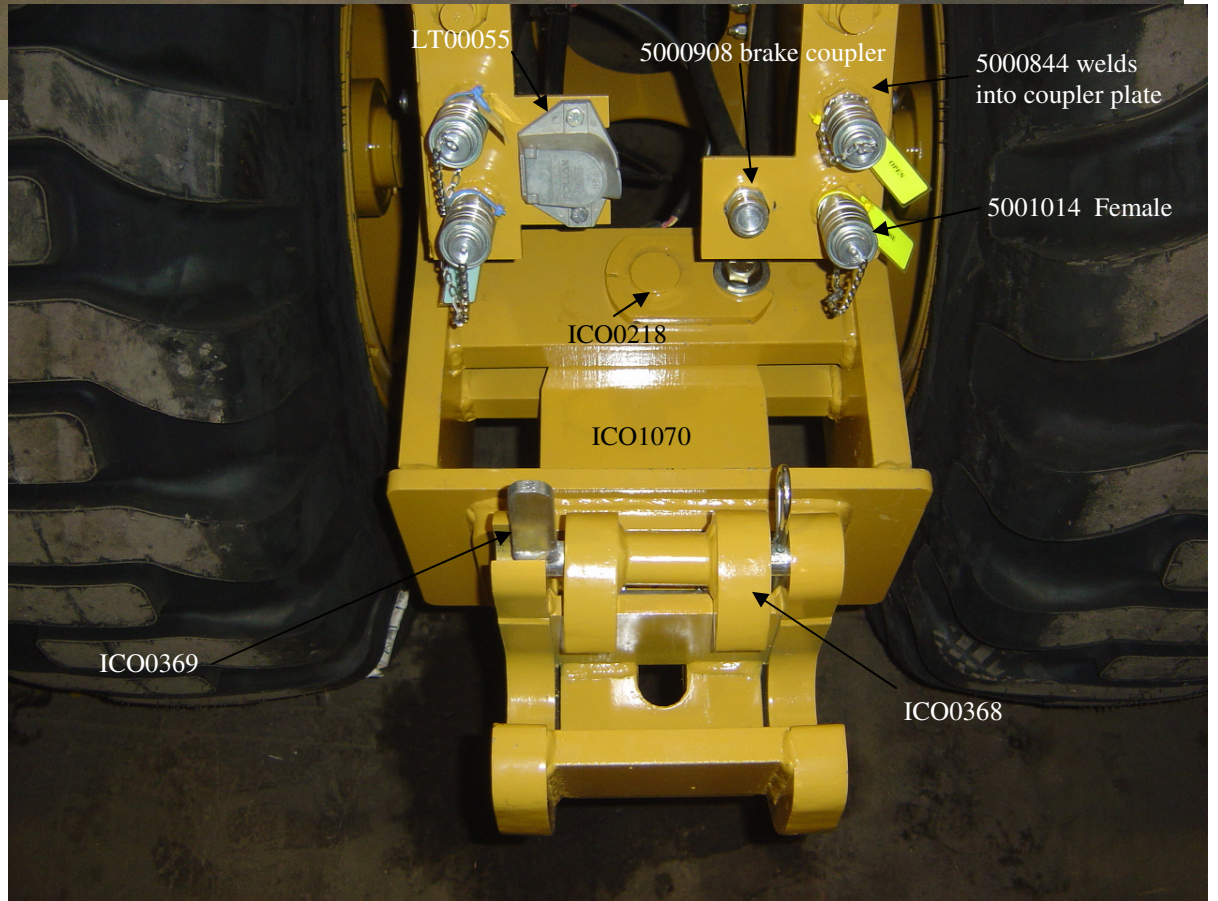
Gate Link (ICO0295)



Components of the 418







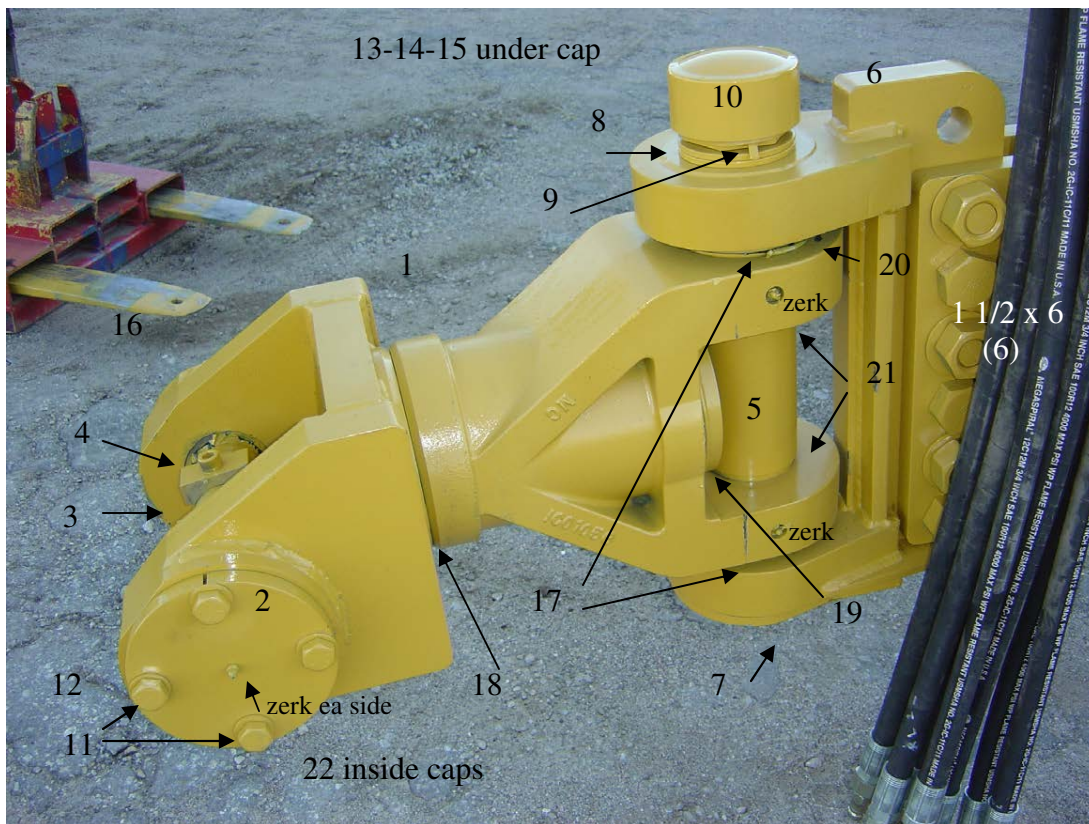
The Super Duty Cast Hitch is standard on all Models
A Medium Duty Option is available.

2000460



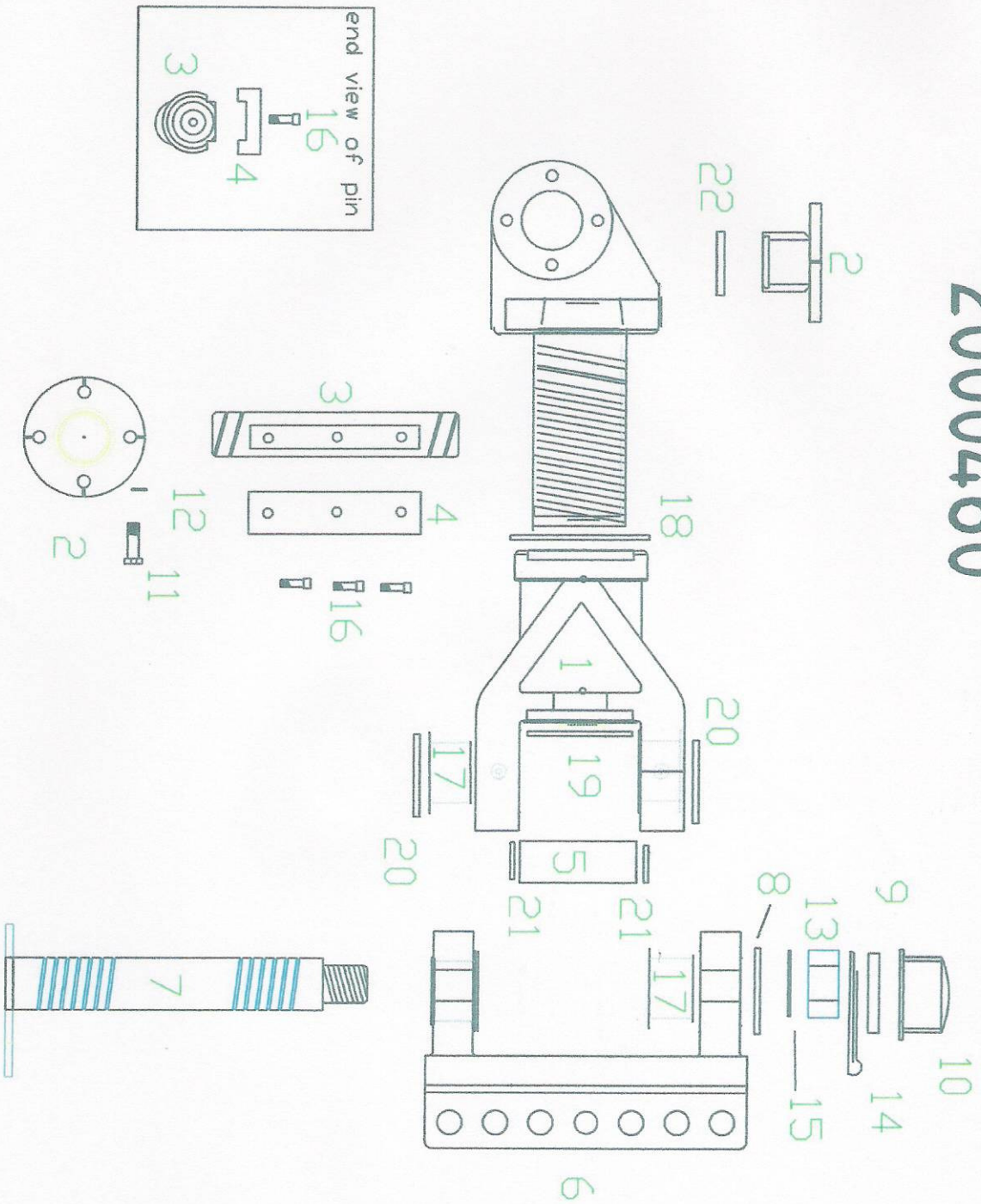
Shown is the 3" pin (ICO1094) used with the cast hitch. The top is milled to allow the retainer plate (ICO1095) to bolt on using (3) 5/8 x 3" bolts.



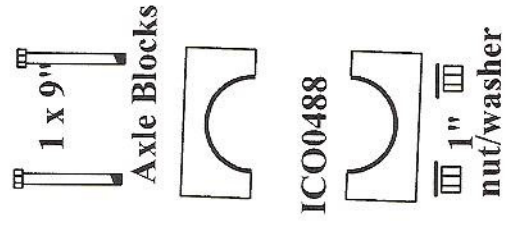
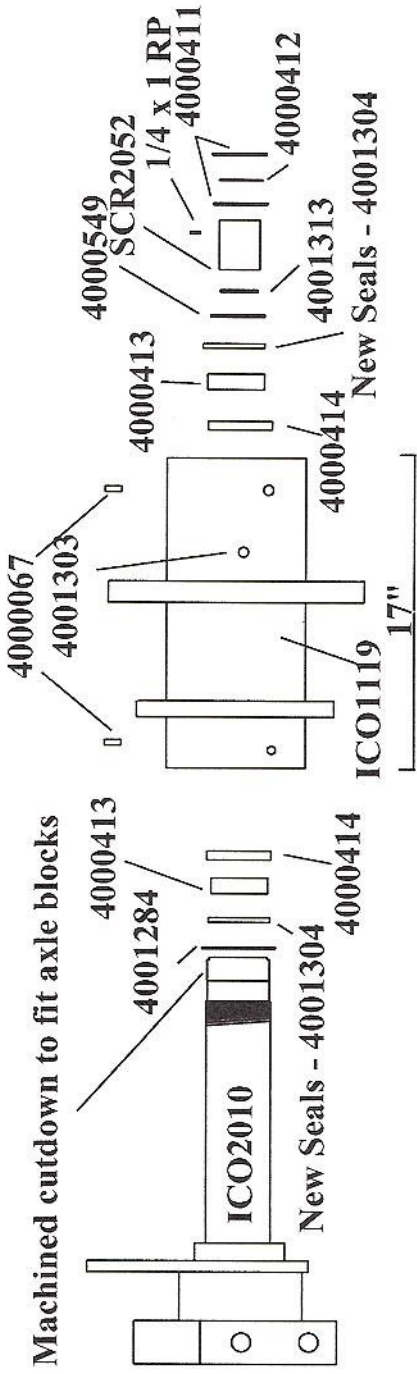


	Qty	Part #	Ref #	Description
1	1	ICO1092		Cast Swivel
2	2	ICO1093		Quick Attach 3" Pin Cap
3	1	ICO2052		Quick Attach 3" Pin
4	1	ICO2051		Quick Attach Pin Keeper
5	1	ICO1061		Hitch Spacer Tube
6	1	ICO1055		Cast Hitch Bracket
7	1	ICO1062		Main Vertical Pin
8	1	ICO1086		6" Swivel Hitch Spacer
9	1	ICO1087		2" Rubber Hose
10	1	4001292		4" PVC Cap
11	8	BH 3/4		Bolt, Hex 3/4 x 2" gr. 8
12	8	WFH 3/4		Washer, Flat Hard 3/4"
13	1	NS 2 1/2		Nut, Slotted 2 1/2" Course
14	1	PC 3/8		Pin, Cotter 3/8 x 5"
15	1	WFH 2 1/2		Washer, Flat 2 1/2" Hard
16	3	BH 5/8		Bolt, 5/8 x 3"
17	4	4001271		Bushing
18	1	4001272		O-Ring 8 7/8x8 1/2" ID
19	1	4001286		O-Ring 7 3/8x7" ID
20	2	4001275		O-Ring 5 7/8x 5" ID
21	2	4001274		O-Ring 4 x 3 5/8" ID
22	2	4001298		Wiper Seal 3 1/2 x 3 1/4"

SUPER DUTY CAST 2000460

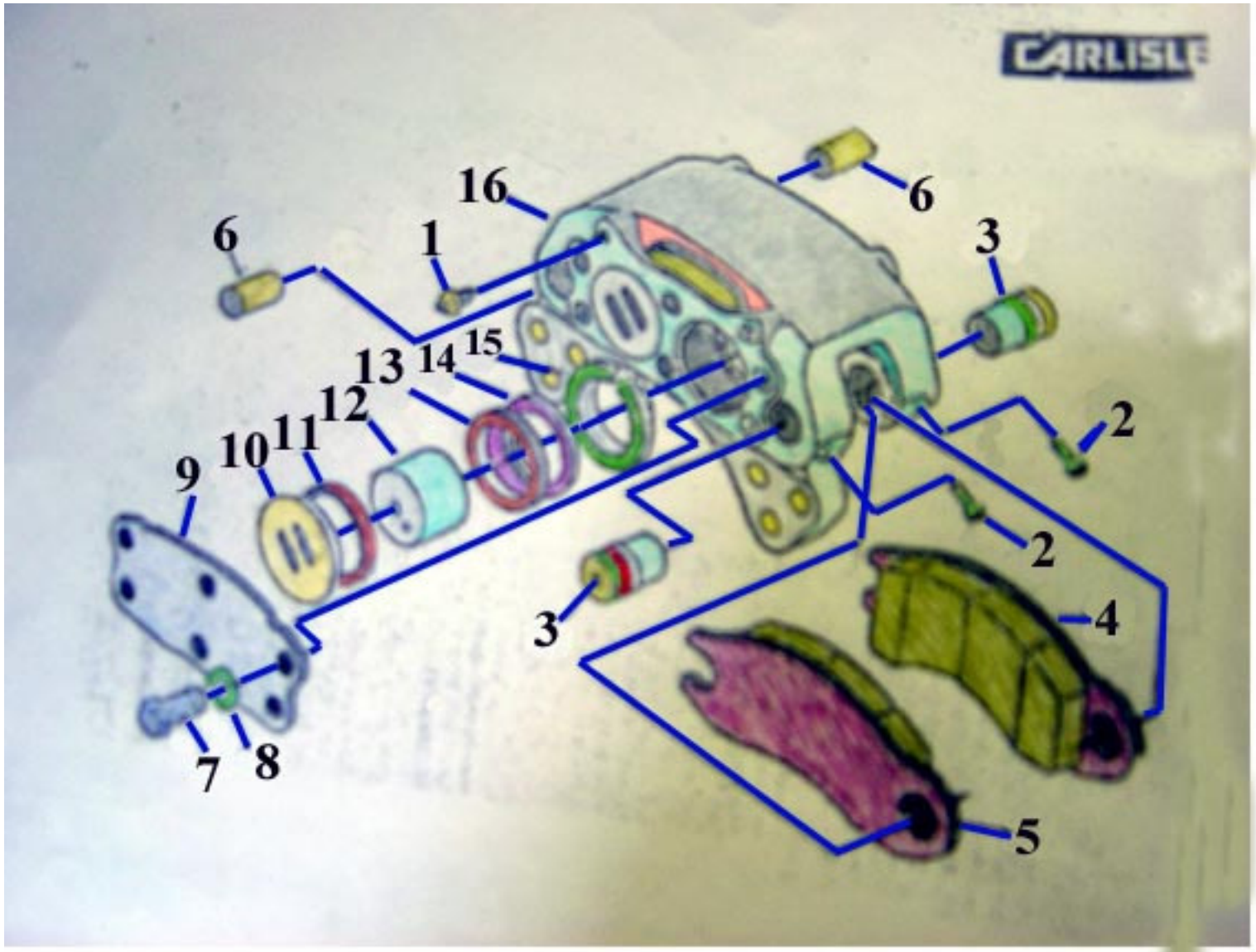


**Parts List For ICON Earthmovers With Individual Axles W/O Brakes
Assembled - 20000512 & 2000513**



Machined step to prevent axle side movement

- ICO2011 Axle Assembly 29"
- ICO2010 Axle Assembly 28"
- 4001313 Snap Ring
- 4001304 Bearing Seal CR42627
- 4000413 Bearing, Timken Cone
- 4000414 Bearing (Race) Timken Cup
- 4000552 Zerk, 45 1/8"
- ICO1119 Hub Assembly
- 4000549 Hyd. O-Ring
- SCR2052 Axle Spacer
- 4000412 Bearing, Lock Washer
- 4000411 Bearing Nut
- 4001303 Zerk - 5psi relief



Brake components used on the ICON Earthmovers are manufactured by CARLSLE Braking Systems.

Below is a list of the components currently used on the Earthmover brakes. ICON does not stock or supply these components, they must be ordered directly from the Mfr. NOTE: Use only CARLSLE Approved parts.

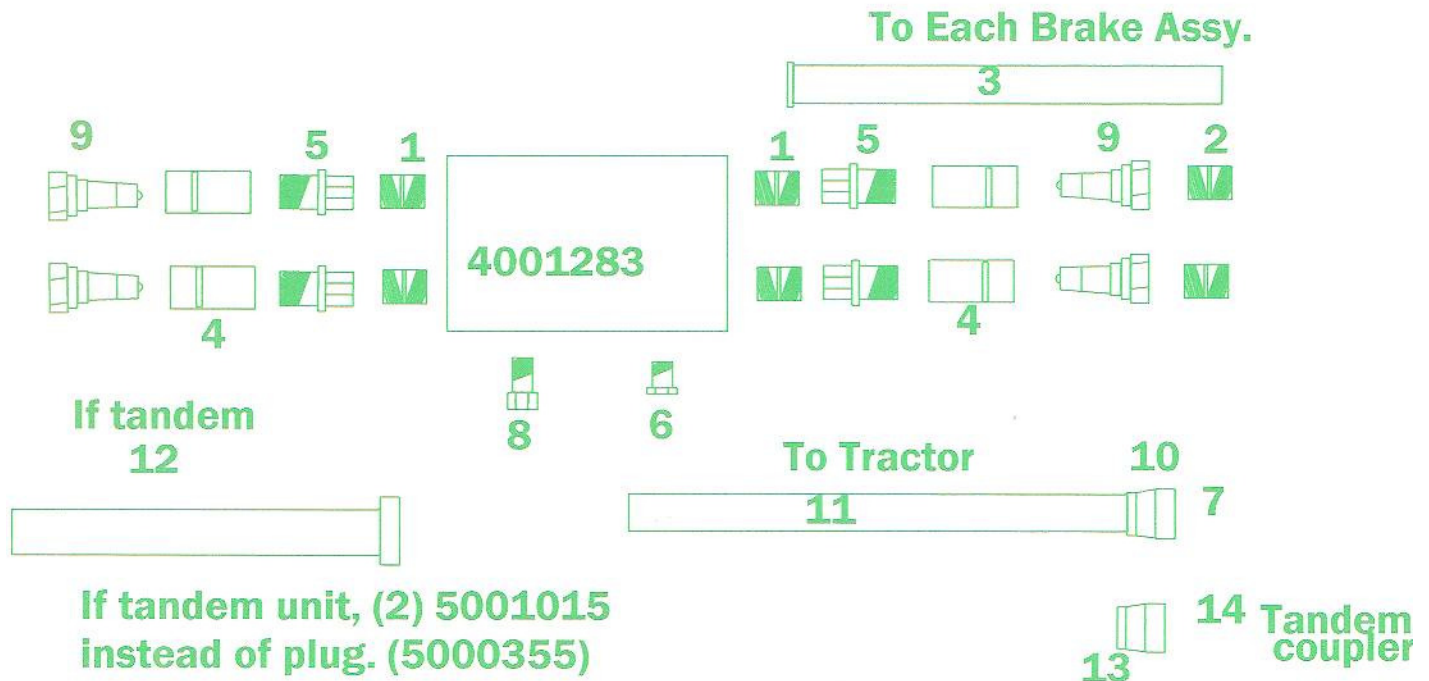
Brake Head Assembly #419-888

Index	Part	Description		Qty.
1.	84-35	Bleeder Valve	(CAT #7K-4942)	1
2.	43-1140	Bolt, Hex	(CAT #3V-0197)	4
3.	20-554	Pin		2
4.	244-741-2	Lining & Carrier Assy.		1
5.	244-741-1	Lining & Carrier Assy.		1
6.	20-490	Pin	(CAT #4V-7277)	2
7.	43-1299	Bolt, Hex		6
8.	80-717	Washer		6
9.	93-986	Plate, Cover		1
10.	49-402	Plug, Piston	(CAT #114-9304)	2
11.	*NSS	Packing Plug		2
12.	74-927	Piston	(CAT #114-9306)	4
13.	*NSS	Packing Piston		4
14.	*NSS	Retainer Ring		4
15.	*NSS	Boot		4
16.	+184-979	Torque Plate		1
	**306-7376	Parts Kit		1
	328-741	Lining Kit		1

*These items not sold separately: see parts kit

Brake Fittings/Hose Package For 400 Series

Block is located on upper rear frame.



Item #	Description	Qty	Ref. #
5000919	Hyf-Adap 6MB-6MB	4	1
5000903	Hyf-Adap 6FB-10MB	4	2
5000902	Hose - 4MB-4M3Kx65"-6MB	4	3
5000845	Pioneer 1/2" Female End	4	4
5000920	Hyd-Adap 8MB-6FB	4	5
5000355	Hyd-Plug 8MB	1	6
5000907	Brake Coupler VF-0/1815	1	7
5001015	Hyf-Adap 8MB-8FFORX (2 if tandem)	1	8
5000835	Pioneer Male End 8010-16P 10FB	4	9
5000906	Hyd-Adap JIC to M 7400-10-18	1	10
5000911	Hose - 8MFFOR-8M3Kx594"-10FJX	1	11
5001016	Hose-10FJX-8M3Kx65-8MFFOR (#12 used on tandem)	1	12
5000905	Hyf-Adap JIC to M 7430-10-18	1	13
5000908	Hyd Rear Brk Coupler VF-7/1815M	1	14

Brake Components

**Used on all ICON Earthmovers
Equipped with Brakes**



Front Brake Coupler
5000907
(Faster VF1815F-0.4M)



5000906
M18x1.5MWO-10MJ

The male end is mounted on the rear of the lead scraper. (If a tandem package is ordered).

It is standard on the AGCO Challenger tractors, if equipped with the brake package.



Rear Brake Coupler
5000908
(Faster, VF-7/1815-M)

Cuttings Edges & Components



Wear Strip—ICO0340 (2 pcs)
1/2 x 1 1/2" Carriage Bolts (12)

Cutting Edges

Location	Dimensions	#	CAT #
Side (2)	7/8 x 13 x 35.75	4000851	178-4080
Center	7/8 x 16 x 60	4000951	174-8001
If a straight cut for finish work is required, a 13" center blade is available from CAT			
Center SC	7/8 x 13 x 60	4000619	4T6620
Center	7/8 x 19 x 60 (More aggressive cut)	4001013	

Bolts Per Blade

40008516
4000951.....10

Cutting Edges
1 x 2 1/2" gr. 8 Plow Bolt
1" gr. 8 Jam Nuts
1" Hardened Flat Washers

Side Cutting Edges

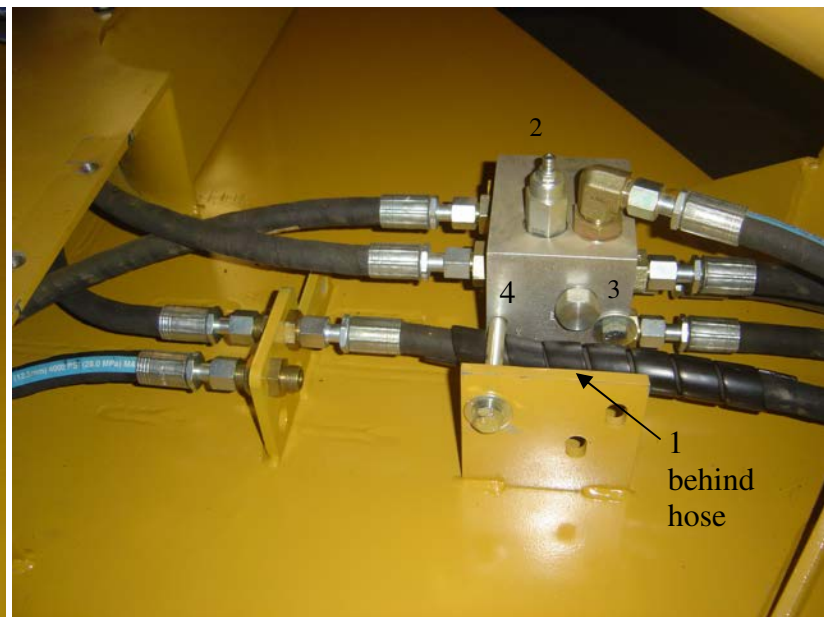
ICO0206L & R
ICO2172/2173

Each side requires (5) 3/4 x 2 1/2" Plow Bolts, Hard Washers and Hex Nuts.
4" longer for deeper cut

Hydraulics for 2 valve 400 series



The 2 valve sequence block components.
Valve Seq. Block 4001452 (4)
Pilot Check Valve CKGB-XCN 4001451 (3)
Counter Valve CBGB-LHN 4001449 (1)
Sequence Valve SCGA-LAN 4001450 (2)



Hydraulic Hose Listing For 418 Single

5001096	2	Hose, 12FFORX-12C12x177"-12MB
5001097	2	Hose, 12FFORX-12C12x168"-12MB
5001098	1	Hose, 12FFORX-12C12x299"-12FFORX
5001099	2	Hose, 12FFORX-12C12x224"-12FFORX
5001100	1	Hose, 12FFORX-12C12x323"-12FFORX
5001101	1	Hose, 12FFORX-12C12x51"-12FFORX
5001102	1	Hose, 12FFORX-12C12x43"-12FFORX
5001103	1	Hose, 12FFORX-12C12x130"-12FFORX
5001104	1	Hose, 12FFORX-12C12x70"-12FFORX
5001140	1	Hose, 12FFORX-12C12x45"-12FFORX
5001106	1	Hose, 12FFORX-12C12x136"-12FFORX
5001139	1	Hose, 16MB-12C12x31"-12FFORX

Hydraulic Fittings For 418 Single

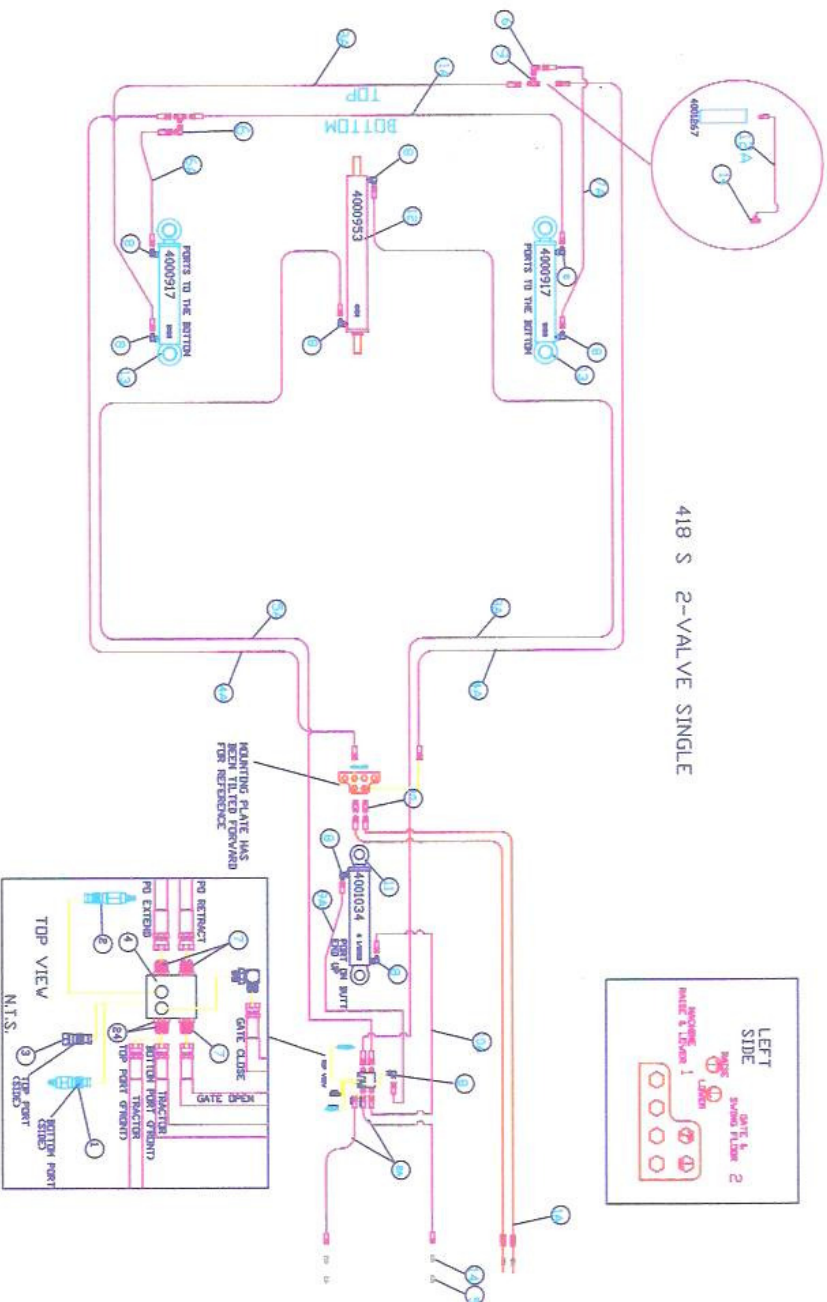
5001001	4	Hyf-Parker 3/4 Male End-12FB 1
5001047	2	Hyf-EL, 12FFORX-12MFFOR90
5000833	5	Hyf-Adpt. 12MB-12MFFOR
5000793	9	Hyf-EL, 12MFFOR-12MB90
5000983	2	Hyf-Tee, 12MFFORT
5001011	4	Hyf-12MFFORBH-LN

Components Added To Complete Tandem

5001001	4	Pioneer Male 3/4" 12MB
5001011	4	Hyf-12MFFORBH-LN
5000977	4	Pioneer Female 3/4" 12MB
5001096	4	Hose, 12FFORX-12C12x177"-12MB
5001107	4	Hose, 12FFORX-12C12x365"-12FFORX

418 SINGLE

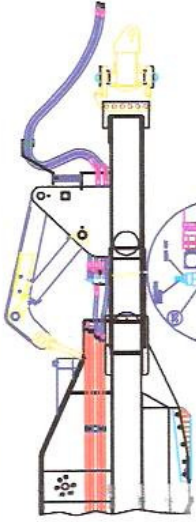
COMPONENT	DESCRIPTION	QTY.	No.	
4001449	Counter Valve CBGB-LHN	1	1	
4001450	Sequence Valve SCGA-LA	1	2	
4001451	Pilot Cmk Valve CKGB-XCN	1	3	
4001452	Valve Block 60 Gal	1	4	
5001001	PIONEER MALE 3/4 12FB	4	5	
5001047	12MFFDRX-12MFFDR90	2	6	
5000933	12MB-12MFFDR	5	7	
5000793	12MFFDR-12MB90	9	8	
5000983	TEE, 12MFFDRT	2	9	
5001011	HYF-12MFFDRBH-LN	4	10	
4001034	6 1/2 X 22 CYLINDER	1	11	
4001036	4 X 50 CYLINDER	1	12	
4001037	5 X 22 CYLINDER	2	13	
5001060	TEE, 12MFFDR-12MFFDR-12FFDRXT	1	14	
COMPONENT	DESCRIPTION	DAL	QTY.	No.
5001096	12FFDRX-12C12 x 177'-12MB		2	1
5001097	12FFDRX-12C12 x 168'-12MB		2	2
5001098	12FFDRX-12C12 x 299'-12FFDRX		1	3
5001099	12FFDRX-12C12 x 224'-12FFDRX		2	4
5001100	12FFDRX-12C12 x 323'-12FFDRX		1	5
5001101	12FFDRX-12C12 x 51'-12FFDRX		1	6
5001102	12FFDRX-12C12 x 43'-12FFDRX		1	7
5001103	12FFDRX-12C12 x 137'-12FFDRX		1	8
5001104	12FFDRX-12C12 x 70'-12FFDRX		1	9
5001140	12FFDRX-12C12 x 45'-12FFDRX		1	10
5001106	12FFDRX-12C12 x 143'-12FFDRX		1	11
5001139	16MB-12C12 x 31'-12FFDRX		1	12



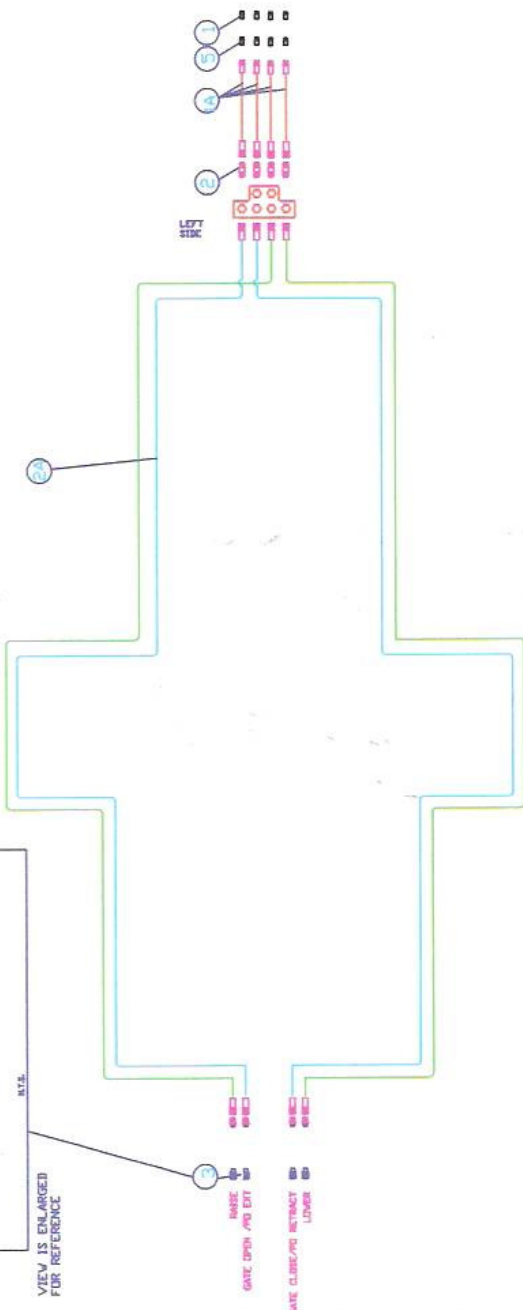
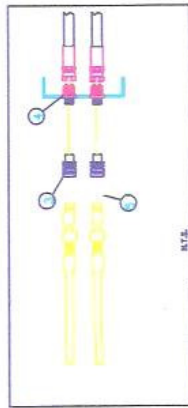
418 TANDEM

COMPONENT	DESCRIPTION	QTY.	No.
5001001	PIONEER MALE 3/4 12MB	4	1
5001011	HYF-12MFFDRBH-LN	4	2
5000977	PIONEER FEMALE 3/4-12MB	4	3
	12MB-12MFFDR	4	4
			5

WELDS ON IT IS IN



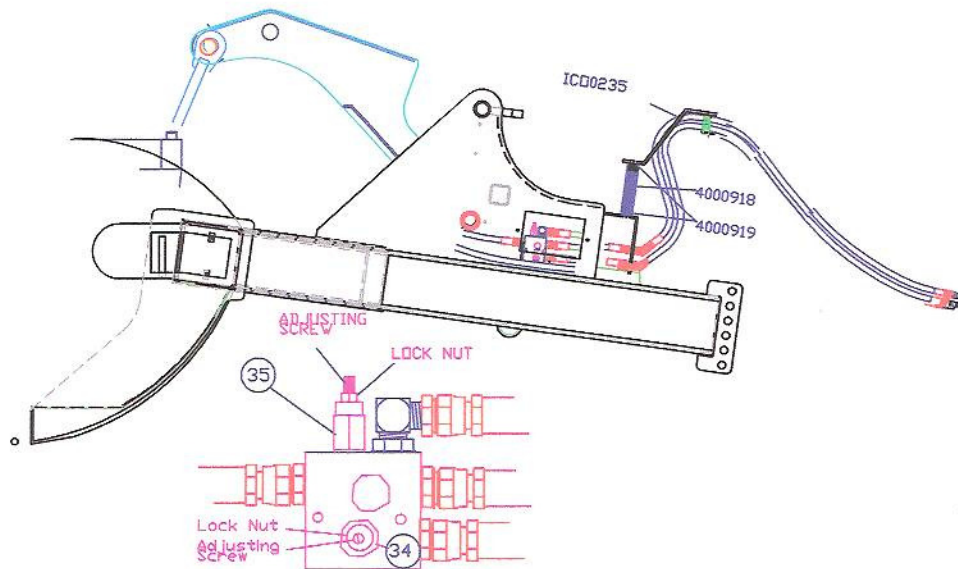
VALVE ADJUSTMENT
 1. WITH TRACER UPWARDS TURN THE ADJUSTING SCREW TO THE RIGHT UNTIL THE TRACER IS IN CONTACT WITH THE VALVE PLATE. THE TRACER SHOULD BE IN CONTACT WITH THE VALVE PLATE TO ADJUST THE VALVE TO THE CORRECT POSITION.
 2. WITH TRACER UPWARDS TURN THE ADJUSTING SCREW TO THE LEFT UNTIL THE TRACER IS IN CONTACT WITH THE VALVE PLATE. THE TRACER SHOULD BE IN CONTACT WITH THE VALVE PLATE TO ADJUST THE VALVE TO THE CORRECT POSITION.
 3. WITH TRACER UPWARDS TURN THE ADJUSTING SCREW TO THE RIGHT UNTIL THE TRACER IS IN CONTACT WITH THE VALVE PLATE. THE TRACER SHOULD BE IN CONTACT WITH THE VALVE PLATE TO ADJUST THE VALVE TO THE CORRECT POSITION.
 4. WITH TRACER UPWARDS TURN THE ADJUSTING SCREW TO THE LEFT UNTIL THE TRACER IS IN CONTACT WITH THE VALVE PLATE. THE TRACER SHOULD BE IN CONTACT WITH THE VALVE PLATE TO ADJUST THE VALVE TO THE CORRECT POSITION.
 5. WITH TRACER UPWARDS TURN THE ADJUSTING SCREW TO THE RIGHT UNTIL THE TRACER IS IN CONTACT WITH THE VALVE PLATE. THE TRACER SHOULD BE IN CONTACT WITH THE VALVE PLATE TO ADJUST THE VALVE TO THE CORRECT POSITION.



418T 2-VALVE TANDEM

DESCRIPTION	DAL	QTY.	No.
5001096	12FFDRX-12C12 x 177 *-12MB	4	1
5001107	12FFDRX-12C12 x 365*-12FFDRX	4	2
			3
			4
			5
			6
			7
			8
			9
			10
			11
			12
			13

Valve Adjustment 2 - valve hydraulics



Valve Adjustment

Problem:

Push wall comes forward before gate is fully up.

Answer:

- *Loosen locknut on top of valve
- *Adjust sequence valve 1/4 turn clockwise and check performance.
- *Repeat until remedied
- *Retighten locknut

Problem:

Gate comes down before push wall is fully back.

Answer:

- *Adjust counterbalance valve (located on side of valve block in tongue)
- *Loosen locknut on top of valve
- *Adjust counterbalance valve 1/4 turn counterclockwise and check performance.
- *Repeat until remedied
- *Retighten locknut.



Intertek

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

Model 414/418 Scraper Service and Parts Manual

Re-Order Part Number F-881-0118

LANDOLL CORPORATION

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