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INTRODUCTION

Your Brillion Subsoil Chisel Plow has been designed to give years of trouble-free operation. Proper care and operation will insure the service and long life built into it.

Study this manual carefully before attempting to assemble or operate the machine. When ordering parts, refer to the model number and serial number located on the name plate on the mast at the front of the machine. (See page 4). Please read and record these numbers upon receipt of the machine.

LOCATION REFERENCE

"Right" and "Left", "Front" and "Rear" refer to operator's "Right and Left", "Front" and "Rear" when he faces in the same direction as the machine will travel.

SAFETY



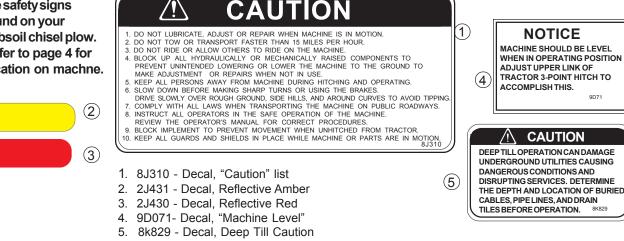
This safety alert symbol is used to call your attention to instructions concerning your personal safety. It is found on your machine and in this manual. It is important to pay attention the the precautions indicated and to be alert to the possiblility of personal injury or death.

Federal law requires you to explain the safety and operating instructions furnished with this machine to all employees before they are allowed to operate the machine. These instructions must be repeated to the employees at the beginning of each season. Be sure to observe and follow these instructions for your own and your employee's safety.

A subsoil chisel plow is a fairly simple machine, but it must be operated in a prudent manner.

- 1. Never turn corners at a high rate of speed.
- 2. Never work under the chisel plow unless it is securely blocked up and cannot be knocked off the blocks,
- 3. Always take care in raising and lowering the chisel plow, and be certain that no one is in the way.
- Never allow passengers to ride on the chisel plow. 4.
- 5. Display the Slow Moving Vehicle emblem when traveling on roads.
- 6. When traveling on the road at night, make sure that reflective decals and accessory warning lights are mounted and visible on the machine. Local regulations should be checked first, and if there are none, the chisel plow owner should take the initiative to make his machine noticeable at night.

Pictured here are the safety signs found on your subsoil chisel plow. Refer to page 4 for location on machne.

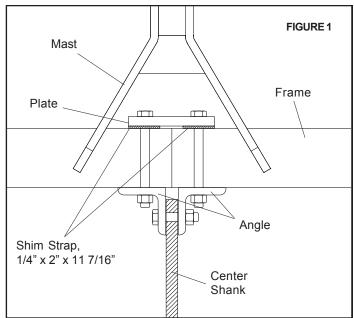


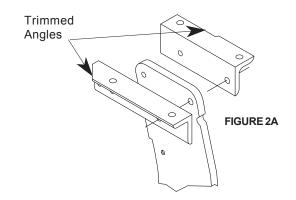
SET-UP INSTRUCTIONS

Your Brillion Subsoil Chisel Plow is shipped to you in separate assemblies. Before assembling the unit, separate the various bundles and open the box assembly, taking care not to lose any of the parts or hardware. (Refer to repair parts section for relative location of parts.)

- Block up the frame or mount it to the three point hitch on the tractor for the assembly of shanks and gage wheels, if your machine is so equipped. See repair parts section on gage wheels which shows how they are assembled to the frame.
- Assemble the center shank, as shown in Figure 1, with the angles, plate and hardware provided. Be sure to use the 1/4 x 2 x 11 7/16" long shim straps under the 1J497 plate as illustrated.

Refer to page 7, repair parts section, for proper hardware usage.

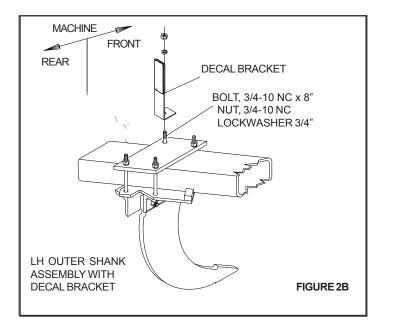




- 3. Next, assemble the outer shanks. For each shank, mount to the frame tube:
 - 1. plate weldment
 - 2. 1J495 plate
 - 3. shank mounting angles
 - *Note: Make certain that you use the* **1J700, 1J701, 1J702, and 1J703** *mounting angles at the positions nearest the lower 3-point hitch lugs on the frame.* These angles are trimmed to provide clearance at the hitch lugs when using a 19" or 20" shank spacing. Figure 2A.

Use the $3/4" \times 8"$ long bolts in front and the $5/8" \times 8"$ long bolts in the rear, but do not tighten at this time. (Refer to pages 6 and 7 of the repair part section for position of parts.)

- 4. Assemble the shank between the mounting angles and install the bolts through the angles, shanks and locknuts as shown, with two 5/8" x 3 3/4" long bolts at the front and a 3/4" x 3 1/2" bolt at the rear. TIGHTEN THESE BOLTS UNTILTHE ANGLES ARE JUST SNUG AGAINST THE SHANK. DO NOT OVERTIGHTEN. THE BOLTS SHOULD BE EASILY TURNED WITH A WRENCH ON THE BOLT HEAD WHEN CORRECTLY TIGHTENED. OVER TIGHTENING THESE BOLTS WILL NOT ALLOW THE SHANK TO PIVOT AND SHEAR THE FRONT BOLT IF AN OBSTRUCTION IS HIT. The front bolt that is installed through the angles is designed only to keep the angles from spreading if the front shank bolt shears.
- 5. Now, adjust your shanks to the center distance desired and tighten the vertical clamping bolts.



- 6. When assembling the outermost shank assembly on each side of the machine, include the decal bracket containing the red and amber reflective decals. These reflective decals must be visible on any machine 8 feet wide or more. The left hand assembly is shown in Figure 2B at left. Fasten the bracket to the top of the plate making sure it is rotated so that the decals are not angled with the frame tube but so that amber is aimed directly forward and red directly back. Assemble the right hand outer shank assembly in the same way.
- 7. See Page 4 for placement of the BRILLION name decal.
- 8. Finally, assemble the SUPPORT STANDS through the square tubes on the ends of the frame. Insert the 1/4 x 2 1/4" long cotter pins in the top holes of the support stands to prevent them from falling out when the machine is raised. When the machine is idle and not mounted to the tractor, the 1/2 x 3" long clevis pins, inserted in the middle holes, will prevent the unit from tipping. Then when you raise the machine for working or for transport, remove the clevis pins, raise the support stands all the way up and insert pins in the lowest hole. this will keep the support stand up and out of the way while the machine in use.

GENERAL INFORMATION

Shanks: 1" thick, high strength material

Shank Spacing: Designed or 19" or 20" shank spacing

Working Depth: 0 to 16"

Hitch: Pins provided with the 5 shank and 7 shank models are designed to work with Category II three-point hitch and Category II quick-attaching coupler. Provided with the 9 shank and 11 shank models are pins designed to work with category II and Category III quick-attaching coupler and Category III three point hitch.

Gage Wheels (Optional): 15" - 5 bolt, for 6.70-15 tire	kit# 8D626
15" - 6 bolt, for floatation tire	kit # 1J661

MAINTENANCE

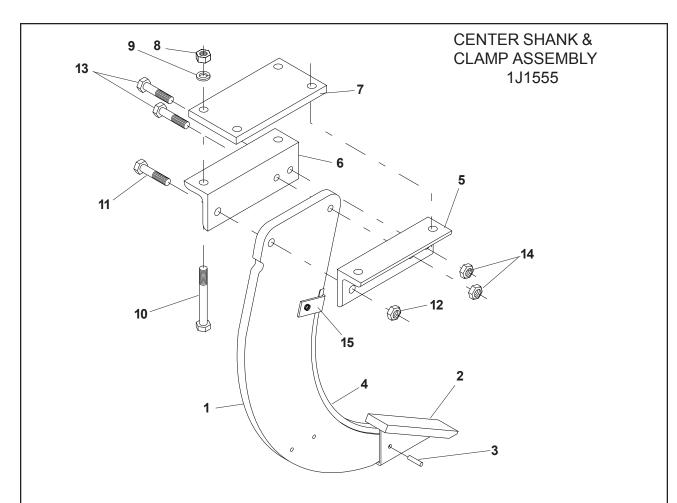
After the first 5 or 6 hours of operation, go over the machine and tighten all nuts with lockwashers which might be loose and retighten the vertical clamping bolts.

Check shank bolts daily. -Refer to set up instructions for correct tightness.

Normal periodic checks should be made thereafter.

Gage wheel bearings should be packed once each season, if your machine is so equipped.

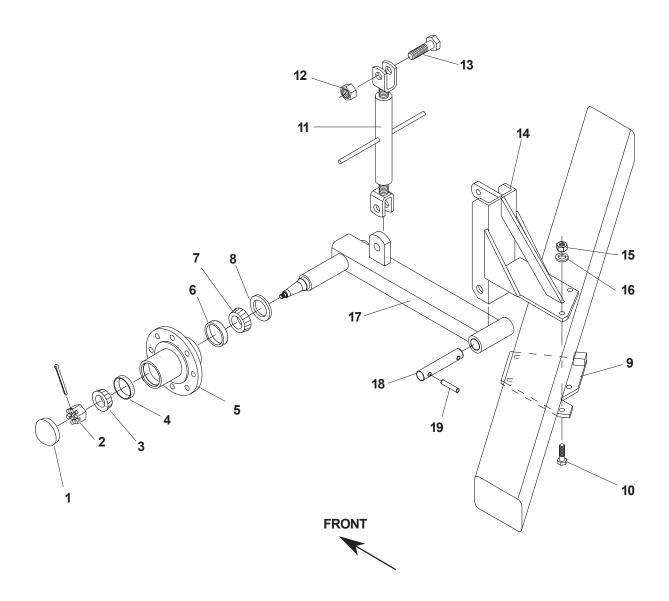
NOT MACHINE SHOL WHEN IN OPER TRACTOR 3-POL ACCOMPLISH T	ULD BE LEVEL ATING POSITION LUNK OF INT HITCH TO HIS. 9071	CONTRACTOR OF TRANSPORTER C	ITER THAN 15 MILES PER HOU TO RIDE ON THE MACHINE. R MECHANICALLY RANSED CC IR THE MACHINE TO THE GRC MACHINE DURING HITCHING / ARP TURNS OR USING THE BI UND, SIDE HILLS, AND AROU TANSPORTING THE MACHINE E SAFE OPERATION OF THE M	MOTION. JR. MIPONENTS TO PREVENT JUIND TO MAKE ADJUSTMENT NUD OPERATING. TAKES. TO CURVES TO AVOID TIPPING. ON PUBLIC ROADWAYS. JACHINE. S.
		REPAIR PARTS LISTING		
Index	Part		No.	
<u>No.</u>	No. 2J608	Description "7" Shank Frame	Req'd	Weight 724.0
I	2J620	"11" Shank Frame		965.0
2	6D529	Clevis Pin, 1" x 4 1/2" Long		1.1
2	5D110	Klik Pin, 1/4"	1	1
4	5D157	Sleeve, 1 1/4" O.D. x 1 15/16" Long		.1
*	50157	(Used with Category III, Category II	'	.2
		quick-attaching coupler, & Category III		
		quick-attaching coupler, a Category m		
5	1J545	Pin Assembly (5 & 7 shank models)	2	3.2
	1J545 1J536	Hitch Pin (9 & 11 shank models)	2	3.6
6	1J716	Sleeve (5 & 7 shank models)	2	.4
	1J535	Spacer (9 & 11 shank models)	2	1.5
7	6D049	Cotter Pin, 1/4" dia. x 2 1/2" Long	2	.1
8	9D047	Support Stand	2	9.4
9	3C335	Clevis Pin, 1/2" dia. x 3" Long	2	.1
10	1J722	Klik Pin, 7/16"	2	.1
10	4K103	Decal, "Brillion"	2	.2
12	8J310	Decal, CAUTION		-
12	9D071	Decal, Level Machine	1	-
13	90071	Name Plate	1	-
14	1K089	Decal Bracket (Outermost Shanks only)	2	1.6
15	2J431	Decal, Amber Reflective	2	1.0
10	2J431 2J430	Decal, Red Reflective	2	-
18	8K829	Decal, Deep Till Caution		
973rev2_1(Page 4		



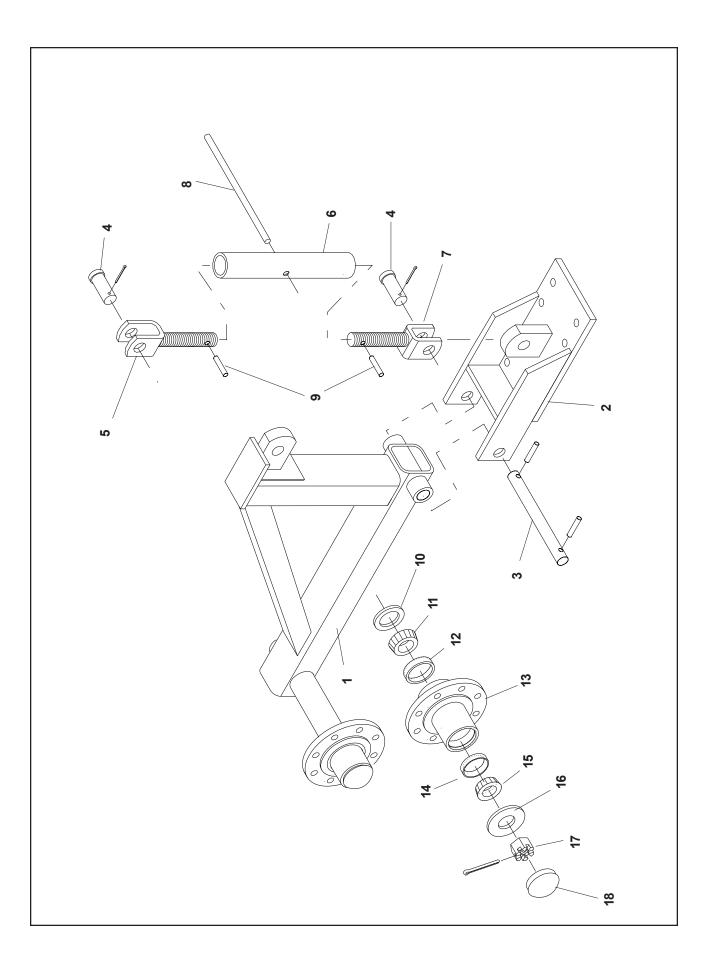
Index No.	Part No.	Description	No. / ea. Assem.	Weight
1	1J480	Shank Assembly (26 1/2") - Complete	1	68.5
	1J479	26 1/2" Shank Only	1	58.5
	4K735	Shank Assembly (32") - Complete	1	85.7
	4K656	32" Shank Only	1	75.7
2	1J481	Point	1	6.0
3	1C659	Roll Pin, 1/4 x 1 1/2" Long	1	-
4	1J485	Wear Strip	1	3.4
5	1J492	R.H. Angle	1	13.7
6	1J491	L.H. Anlge	1	13.7
7	1J497	Plate	1	13.8
	1J509	Shim, 1/4 x 2 x 11 7/16" Lg. (not shown)	2	1.5
8	1C210	Nut, 3/4-10NC Hex	4	.1
9	1C211	Lockwasher, 3/4" Medium	4	
10	1J523	Bolt, 3/4-10NC x 8" Long Grade 5	4	1.1
11	6D758	Bolt, 3/4-10NC x 3 1/2" Long Grade 5	1	.5
12	6C729	Locknut, 3/4-10NC Hex Stover	1	.1
13	8D423	Bolt, 5/8-11NC x 3 3/4" Long Grade 5	2	.3
14	5C461	Locknut, 5/8-11NC Hex Stover	2	.1
15	1J484	Clamp	1	.5
	1J486	Capscrew, 1/2-13 NC x 2 1/4" Lg, Gr. 5	1	.2
	1C120	Flat Washer, 1/2"	2	
	5C392	Locknut, 1/2-13 NC Hex Stover	1	

(LEF	SHANK & CLAMP ASSEMBLY (LEFT SIDE OF MACHINE) 7 44 6 4 4 7 6 7 7 7 7 7 7 7 7 7 7 7 7				
Index No.	Part No.	Description	No. / ea. Assem.	Weight	
1 2 3 4 4A 5 6 7 8 9 10 11 12 13 14 15 16 17	1 J480 1 J479 4K735 4K656 1 J485 1 J481 1 J488 1 J701 1 J490 1 J971 1 J495 1 C659 6 D758 7 D040 1 J523 6 C729 1 B166 1 C211 1 C392 1 C210 8 D423 5 C461 1 J484 1 J486 1 C120 5 C392 1 K089 2 J430 2 J431	Shank Assembly (26 1/2") - Complete 26 1/2" Shank Only Shank Assembly (32") - Complete 32" Shank Only Wear Strip Point Angle, 14 7/8" Long Angle, 14 7/8" Long w/ Corner Clipped Angle, 11 7/8" Long L.H. Plate Weldment Plate Roll Pin, 1/4 x 1 1/2" Long Bolt, 3/4-10NC x 3 1/2" Long, Gr. 5 Bolt, 3/4-10NC x 3 1/2" Long, Gr. 5 Bolt, 5/8-11NC x 8" Long, Gr. 5 (rear) Bolt, 3/4-10NC x 8" Long, Gr. 5 (front) Locknut, 3/4-10NC Hex Stover Lockwasher, 5/8" medium Lockwasher, 5/8" medium Nut, 5/8-11NC Hex (rear) Nut, 3/4-10NC Hex (front) Bolt, 5/8-11NC C x 3 3/4" Long, Gr.5 Locknut, 5/8-11NC Hex Stover Clamp Capscrew, 1/2-13NC x 2 1/4" Long, Gr. 5 Flat Washer, 1/2 " Locknut, 1/2-13NC Hex Stover Decal Bracket (w/ outermost shanks only) Decal, Red Reflective Decal, Amber Reflective	1 1 1 1 1 1 1 1 1 1 1 1 1 1	68.5 58.5 85.7 75.7 3.4 6.0 16.8 16.5 13.5 13.6 15.2 - .5 .8 1.1 .1 .1 .1 .1 .3 .1 .5 .2 - 1.6 - 1.6 -	

14 17 13 14 17 12 14 7 6 12 12 12 12 12 12 12 12 12 12				
Index No.	Part No.	Description	No. / ea. Assem.	Weight
1 2 3 4 4A 5 6 7 8 9 10 11 12 13 14 15 16 17	1J480 1J479 4K735 4K656 1J485 1J481 1J487 1J700 1J489 1J970 1J495 1C659 6D758 7D040 1J523 6C729 1B166 1C211 1C392 1C210 8D423 5C461 1J484 1J486 1C120 5C392 1K089 2J430 2J431	Shank Assembly (26 1/2") - Complete 26 1/2" Shank Only Shank Assembly (32") - Complete 32" Shank Only Wear Strip Point Angle, 14 7/8" Long Angle, 14 7/8" Long w/ Corner Clipped Angle, 11 7/8" Long R.H. Plate Weldment Plate Roll Pin, 1/4 x 1 1/2" Long Bolt, 3/4-10NC x 3 1/2" Long, Gr. 5 Bolt, 5/8-11NC x 8" Long, Gr. 5 (rear) Bolt, 3/4-10NC x 8" Long, Gr. 5 (front) Locknut, 3/4-10NC Hex Stover Lockwasher, 5/8" medium Lockwasher, 5/8" medium Lockwasher, 3/4" medium Nut, 5/8-11NC Hex (rear) Nut, 3/4-10NC Hex (front) Bolt, 5/8-11NC Hex (front) Bolt, 5/8-11NC Kay 3/4" Long, Gr. 5 Locknut, 5/8-11NC Kay 3/4" Long, Gr. 5 Flat Washer, 1/2 " Locknut, 1/2-13NC X 2 1/4" Long, Gr. 5 Flat Washer, 1/2 " Locknut, 1/2-13NC Hex Stover Decal Bracket (w/ outermost shanks only) Decal, Red Reflective Decal, Amber Reflective	1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2	68.5 58.5 85.7 75.7 3.4 6.0 16.8 16.5 13.5 13.6 15.2 - .5 .8 1.1 .1 .1 .1 .3 .1 .5 .2 - .1 .1 .5 .2 - .1 .5 .2 - .1 .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 - .5 .2 .2 - .5 .2 .2 - .5 .2 .2 - .5 .2 .2 .2 .1 .1 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5



GAGE WHEEL ASSEMBLY (OPTIONAL)				
Index No.	Part No.	Description	No. / ea. Assem.	Weight
	8D626	Gage Wheel Kit - Complete		
1	1J463 3C173	Hub Cap Slotted nut	*2 *2	.2
3	3C350 5C911	Cotter Pin (5/32" x 1" Long)` Bearing Cone #LM11949	*2 *2	3
4 5	5C912 1J390	Bearing Cup #LM11910 Wheel Hub	*2 *2	.1 6.3
6 7	5C479 5C480	Bearing Cup #LM48510 Bearing Cone #LM48548	*2	.1 .2
8 9	1D273 8D440	Seal L.H. Plate Assembly	*2	.1 10.0
10 11	8D438 9C059 8D589	R.H. Plate Assembly Bolt, 5/8-11 NC x 7" Long gr. 5 Turnbuckle Assembly	1 8 2	10.0 .7 6.8
	8D597 8D601 8D602	Turnbuckle Body R.H. Screw Assembly L.H. Screw Assembly	8 2 2 2 2 2	3.1 2.7 2.7
	7C870 8D590 7C940	Roll Pin, 3/16" x 1 1/8" Long Rod (Handle) Roll Pin, 3/16" x 7/8" Long	4 2 4	1.1
12 13	6C729 3D510	Stover Nut, 3/4-10 NC Capscrew, 3/4-10 NC x 2 1/2" Long	2 2 1	.1 .2 31.3
14	8D630 8D629 1C392	L.H. Bracket Assembly R.H. Bracket Assembly Nut, 5/8-11NC Hex	1 8	31.3
16 17	1B166 1J414 1J415	Lockwasher, 5/8" Med. Arm & Spindle - L.H. (Complete)	8	- 17.2 17.2
18 19	8D631 2D894	Arm & Spindle - R.H. (Complete) Pin Roll Pin, 1/4" x 2" Long	1 2 4	1.8
*	4C129 5C100	Wheel - 15" Wheel Bolt	2 10	16.0
*	8J794	Tire, 7.60-15	2	27.0
		* Not Shown		

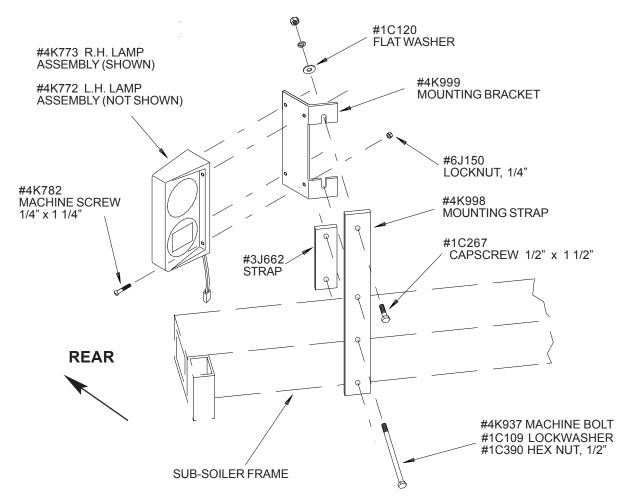


FLOTATION GAGE WHEEL

Index No.	Part No.	Description	No. / ea. Assem.	Weight
1	1J665 g 1J672	L. H. Axle Arm Assembly R.H. Axle Arm Assembly	1	61.9 61.9
2	1J662	Gauge Wheel Bracket		33.2
3	1J677	Pivot Shaft	2 2	2.6
•	6D854	Roll Pin, 1/2" x 2"	4	.06
4	7D590	Clevis Pin, 3/4" x 2 1/4"	4	.33
	3C350	Cotter Pin, 5/32" x 1"	4	
	8D591	Turnbuckle Assembly (items 5-9)	2	8.4
5	8D602	L.H. Screw Assembly		2.7
6 7	8D597	Turnbuckle Body	2 2 2	3.1
	8D601	R.H. Screw Assembly	2	2.7
8	8D590	Rod (Handle)	2	1.1
	7C940	Roll Pin, 3/16" x 7/8"	4	
9	7C870	Roll Pin, 3/16" x 1 1/8"	4	
10	6D338	Seal, National # 200335	2	.1
11	5C480	Bearing Cone #LM48548	2	.2
12	5C479	Bearing Cup #LM48510	2	.2
13	6D336	Wheel Hub	2	10.5
14	5C914	Bearing Cup #LM57010	2	.2
15	5C913	Bearing Cone #LM67048	2 2 2 2 2 2 2	.2
16 17	1C871	Flat Washer		
17	6D284 1C788	Slotted Nut, 1 1/4" Cotter Pin, 3/16" x 1 1/2"	2 2	
18	6D337	Hub Cap	2	.8
10	5C100	Wheel Bolt	2	.0
	6D312	Wheel, 8 x 15	2	24.0
	00012		2	24.0

9	2, 3	4K996 W/	ARNING LI	GHT KIT
Index No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Part No. 4K999 4K772 4K773 4K780 4K936 4K937 1C109 1C390 4K782 6J150 3J662 9D851 1C120 4K998 3J615 1C267	Description Mounting Bracket Dual Lamp, LH Dula Lamp, RH Wishbone Harness, 10' (not shown) Ag. Harness, 10' (not shown) Machine Bolt, 1/2" x 8 1/2" Lock Washer, 1/2" Hex Nut, 1/2" Machine Screw, 1/2" x 1 1/4" Flange Lock Nut, 1/4" Strap Plastic Cable Tie, 20" (not shown) Flat Washer, 1/2" Mounting Strap Plastic Cable Tie, 28" (not shown) Capscrew, 1/2" x 1 1/2"	No. / ea. Assem. 2 1 1 1 1 4 8 8 8 8 8 8 8 2 1 4 2 10 4	Weight

WARNING LAMP ASSEMBLY



Assemble a #4K998 mounting strap to the right side of the machine frame as close to the end as shanks and gage wheels permit. Use #3J662 strap and 8 1/2" long machine bolts as illustrated above. Then attach a #4K999 mounting bracket to mounting strap with 1/2" x 1 1/2" capscrews, flat washers, lockwashers, and nuts. Assemble the other brackets and straps in similar fashion on the left side of the machine.

Attach lamp assemblies with fasteners shown (amber facing forward; red and amber facing rearward with amber above red).

Connect "wishbone" wiring harness ends to connectors on lamp assemblies. (*IMPORTANT*: wires are color coded on wishbone harness. Connect end with yellow wire to left side lamp assembly. Connect end with green wire to right side lamp assembly). Run wishbone harness wires along rear frame member to center of machine.

At center of machine assemble the connector of the straight harness to the wishbone harness. The 7-pin plug on the straight harness connects to the tractor socket when in use. Allow enough harness length to reach tractor socket and roll or fold up excess. Attach permanently to implement frame. All wires must be firmly attached to machine frame members so they don't droop or become torn loose by field debris. Use plastic cable ties, provided, and electrical tape to secure all wiring.

ASSEMBLY OF FLOTATION GAUGE WHEELS

Flotation gauge wheels must be located on toolbar so that tires will run outside of tractor rear wheels. Be sure to allow a minimum of 5" clearance between the tractor tire and the gauge wheel tire.

The maximum recommended outside to outside distance across the rear tractor tires is 120".

This flotation gauge is mounted directly over a shank. Remove the clamp plate from the top of the toolbar and install the gauge wheel bracket. Install the gauge wheel arm between the ears on the gauge wheel bracket and insert pivot shaft. Secure with 1/2 x 2 roll pins. Be sure that the hub points away from the tractor. Install turnbuckle between ear on gauge wheel bracket and lug on axle arm assembly.

Mount 9.5L - 15 or 11L - 15 tires on rims, inflate to 28 psi. and mount on hubs.

On seven shank machines, the gauge wheels can be mounted only over the last shank. On nine shank machines, the gauge wheels can be mounted over either of the last two shanks. On eleven shank machines, the gauge wheels can be mounted over any of the last three shanks.



Intertek

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