



I-110

PARTS MANUAL

Updated 3/21/01



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MODEL I-100, I-110 SCRAPER

HOW TO ORDER PARTS:

Be sure to state MODEL and SERIAL NO. of machine, PARTS NO., DESCRIPTION, and QUANTITY wanted.

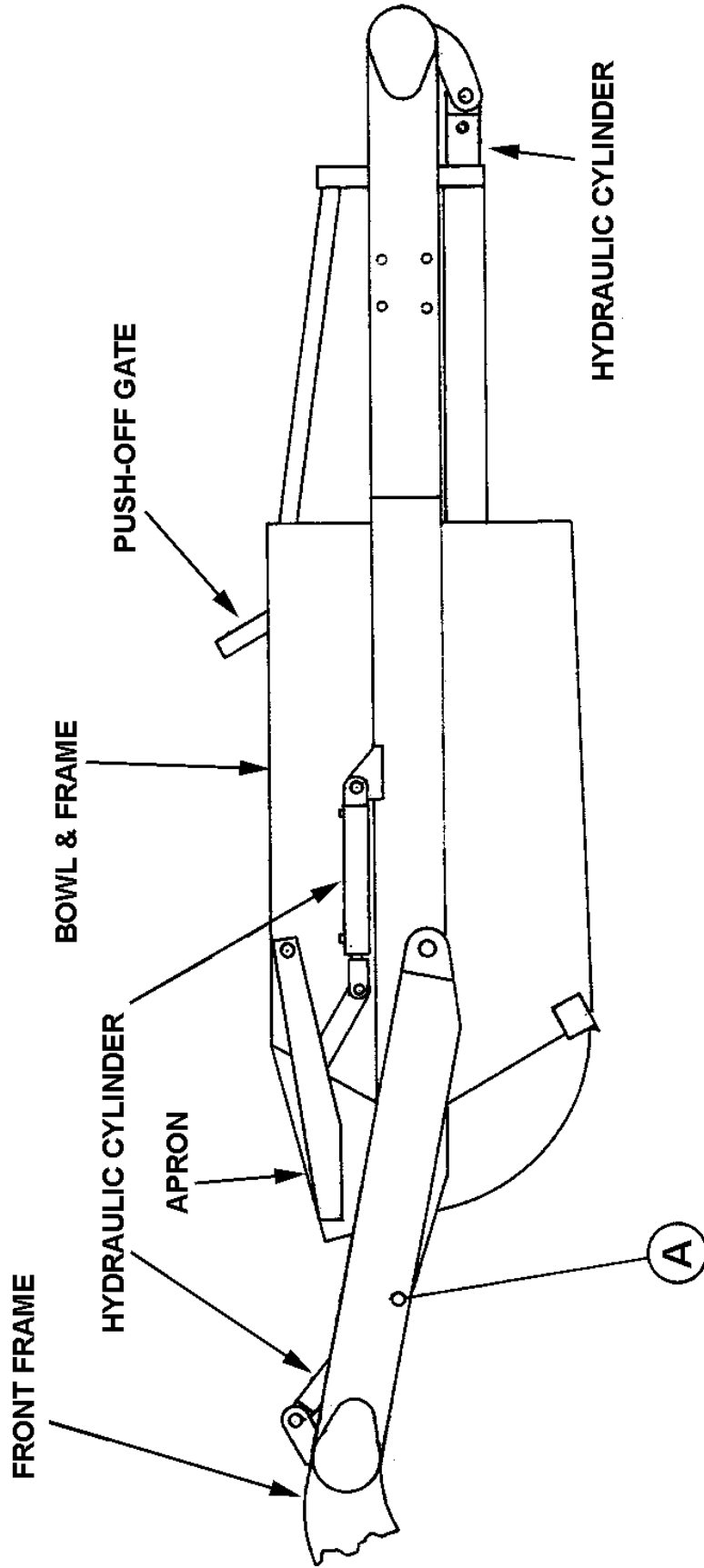
Unless this is done, we cannot provide prompt service or assure shipment of the correct parts.

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ILLUSTRATION - ASSEMBLY



OPERATOR AND MAINTENANCE INSTRUCTIONS

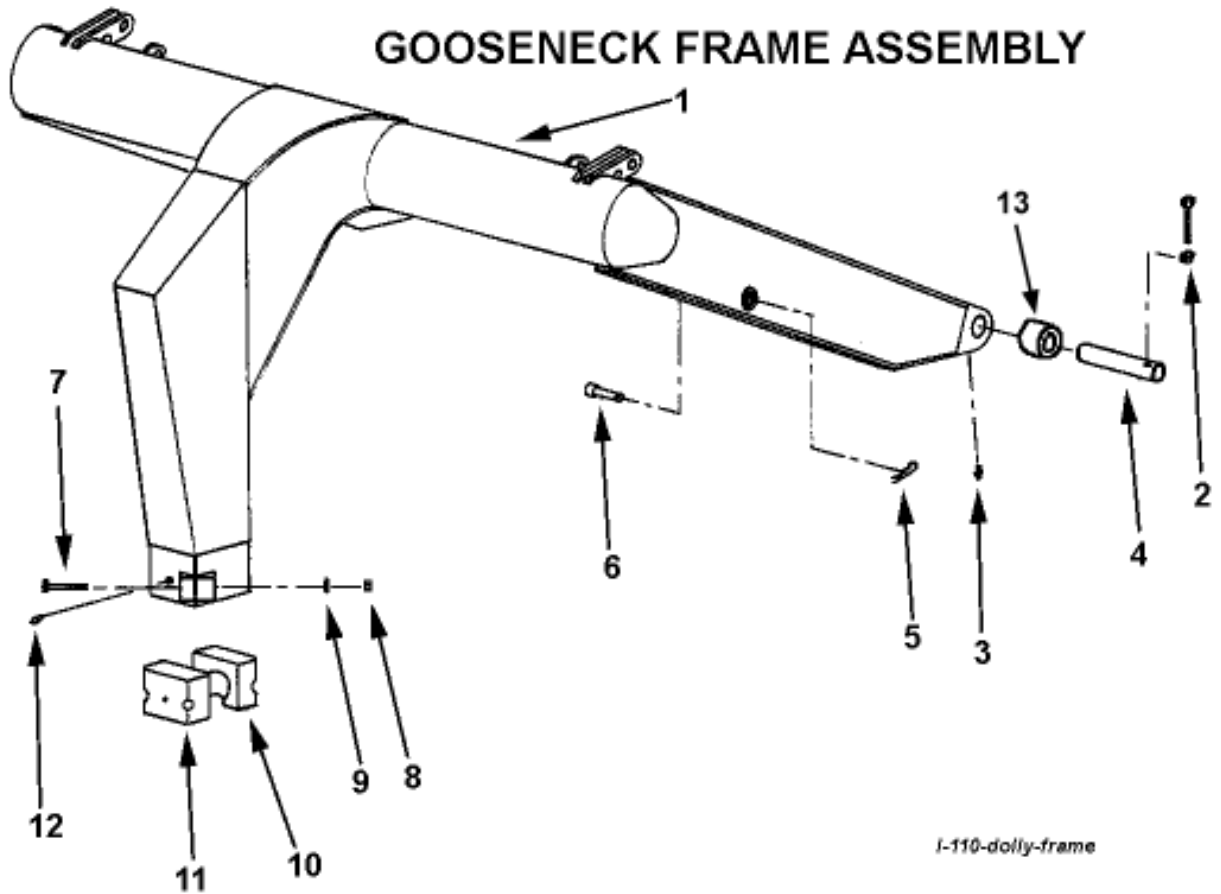
The scraper is a durable piece of equipment and with proper care will yield many years of trouble free operation. The scraper requires a power source with TWO 4-way (double acting) hydraulic control valves.

The scraper should be greased at all points where grease fittings are provided. Connect hydraulic hoses to the tractor and retract lift cylinders to remove transport lock pins (point A), then extend and retract all cylinders several times to force out any air from the hydraulic cylinders and lines. Check the oil level in the tractor hydraulic system and add to maintain the proper level. Care should be taken when adding oil or when disconnecting any oil line to keep all dirt out of the oil as dirt is a major factor in the failure of hydraulic components.

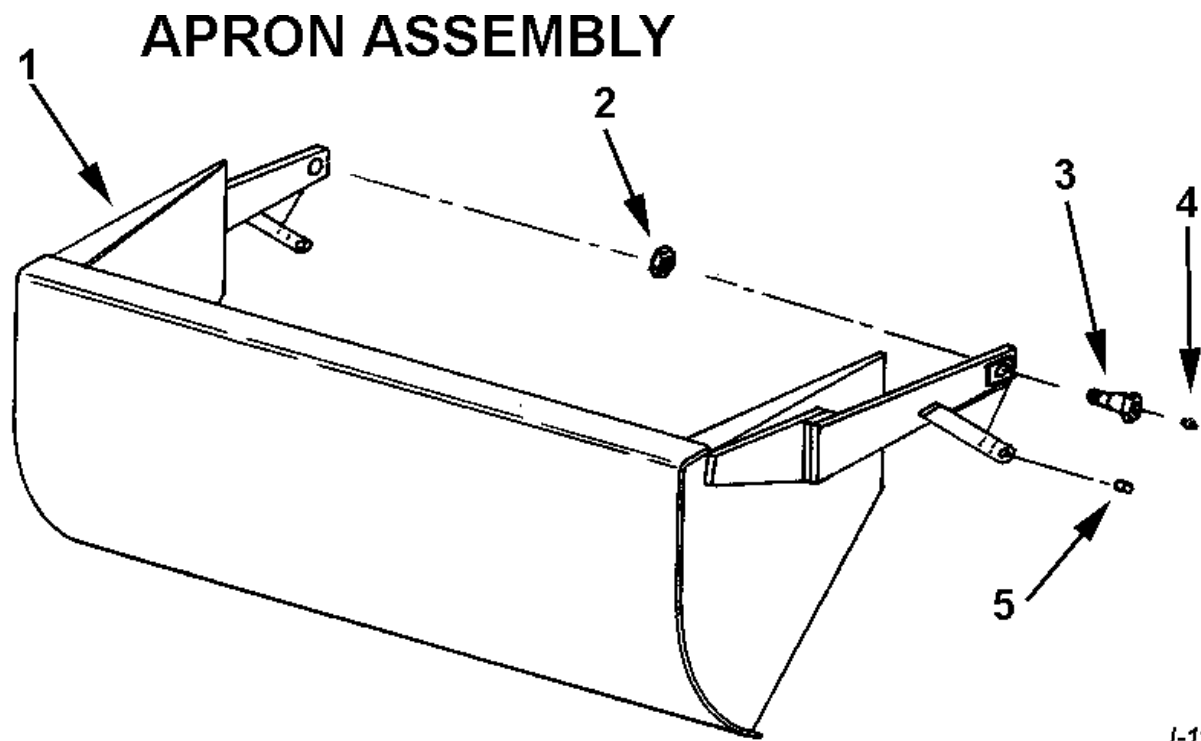
When the scraper is placed into operation, the operator will have to "feel out" the amount of depth of cut to obtain maximum loading efficiency. This is usually accomplished by taking a lesser and more uniform cut. However, some soil conditions such as loose sand may require a "pumping action" obtained by taking successive deep cuts and lifting out of cut as the tractor begins to lose power or traction.

1. After 10 hours work, all bolts should be checked and tightened if necessary.
2. Every 10 hours all grease fittings should be lubricated.
3. After 50 hours work, all bolts should be rechecked and tightened if necessary. Check wheel bearings and adjust if necessary.
4. After 300 hours work, clean and repack wheel bearings and replace, if necessary, cutting edges, worn pins, etc.

ASHLAND INDUSTRIES, INC.



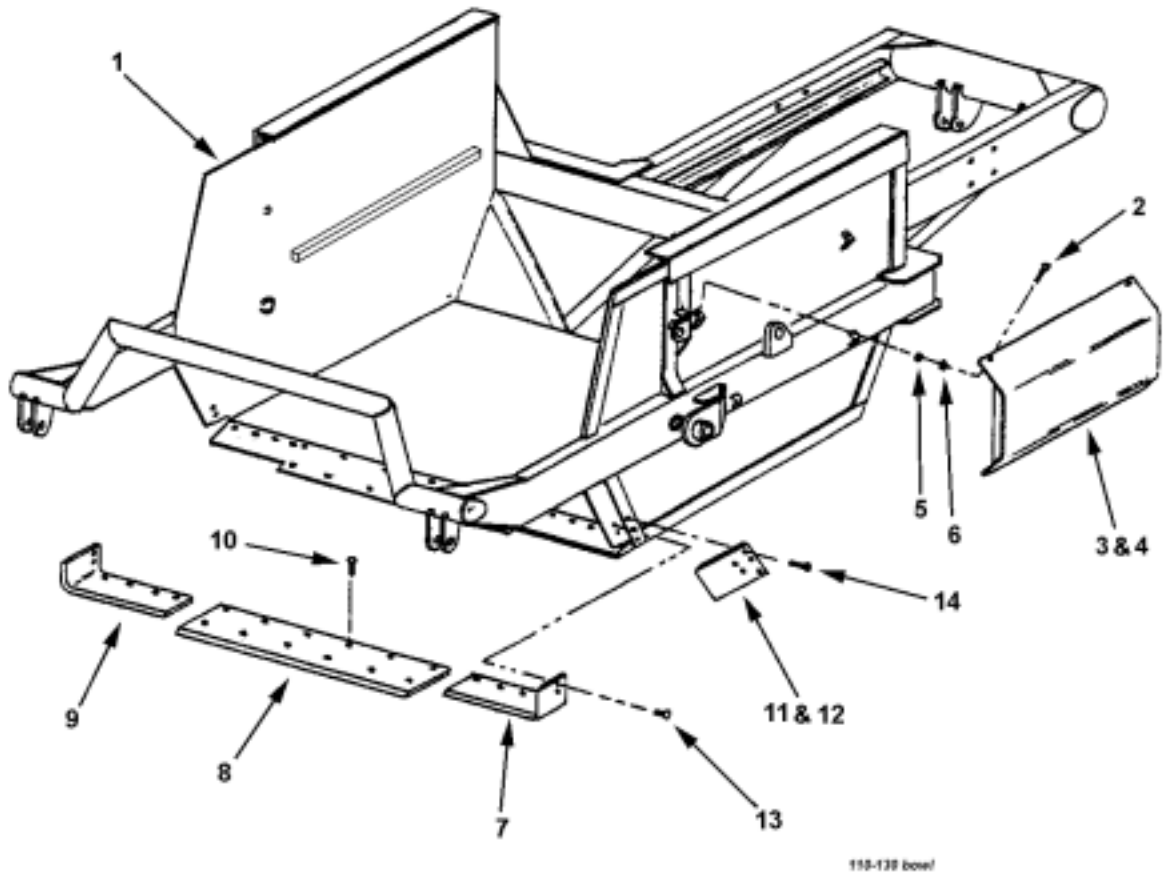
KEY NO.	PART NO.	DESCRIPTION
1	A10151A	Gooseneck frame, s/n 17816 & up
2		Bolt, 1/2" NC x 3-1/2" w/ nut
3		Grease zerker, straight
4	A10152A	Pin, Frame attachment, 2" OD x 8-1/16" Long
5		Hair pin
6	A10153	Pin, Transport lock
7		Bolt, 3/4" x 4-1/2" gr. 8
8		Nut, 5/8" NC
9		Lockwasher, 5/8"
10	A10004A	Cast socket half, rear
11	A10005A	Cast socket half, front w/ zerker hole
12	A2206	Grease zerker, long shank
13 **	A14039	Bushing, 2.375 OD x 2.00 ID x 2" Long, Grease Passage For Serial Number 20319 and above. (9/22/00)



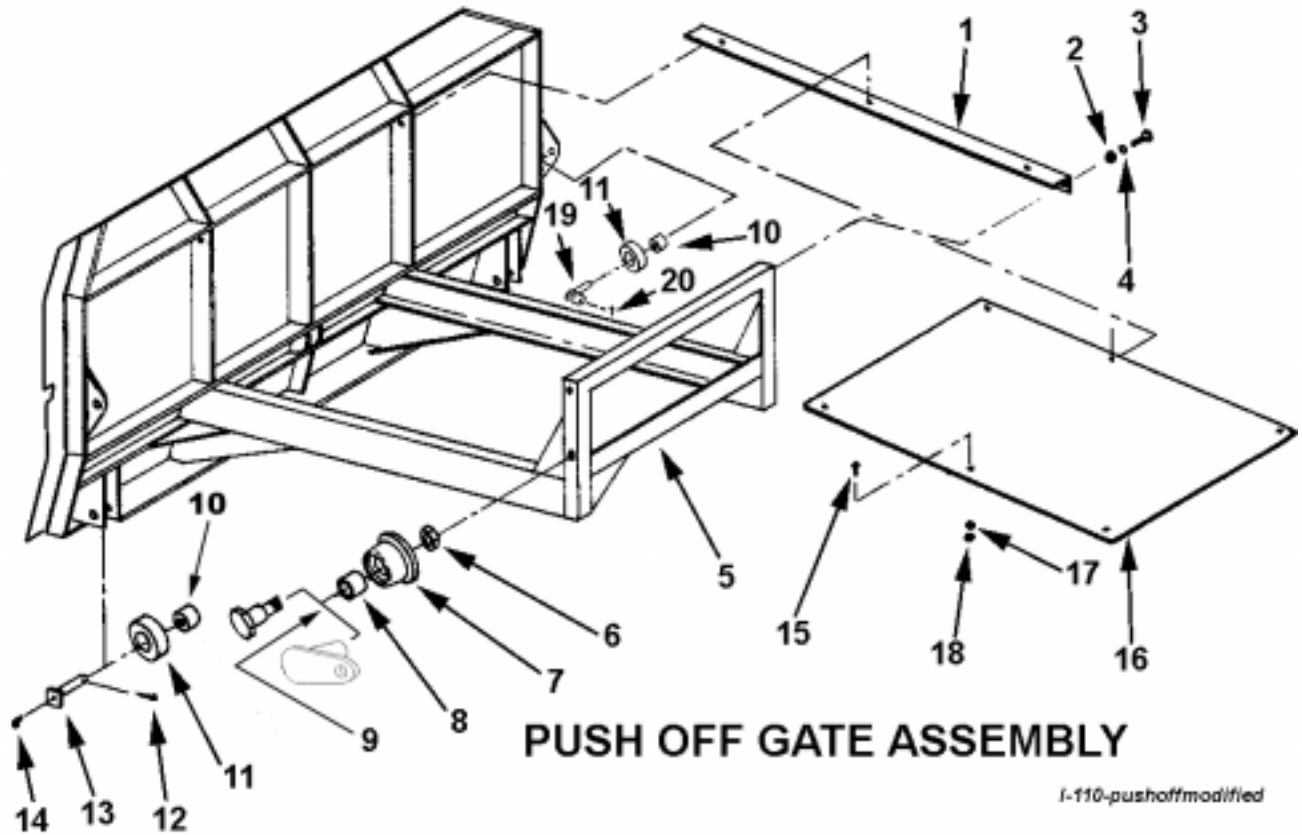
i-110-apron

KEY NO.	PART NO.	DESCRIPTION
1	A10154	Apron
2		Self lock nut, 1-1/4" NF
3	A6010	Shoulder pin, 1-5/8" to 1-1/4" w/ zerk s/n up 20119 Pin, 1-1/2" x 5-1/2" s/n 20120 & up
4		Grease fitting
5	A10155	Bushing, 1-1/2" OD x 1" ID x 1-1/8"

BOWL AND FRAME ASSEMBLY



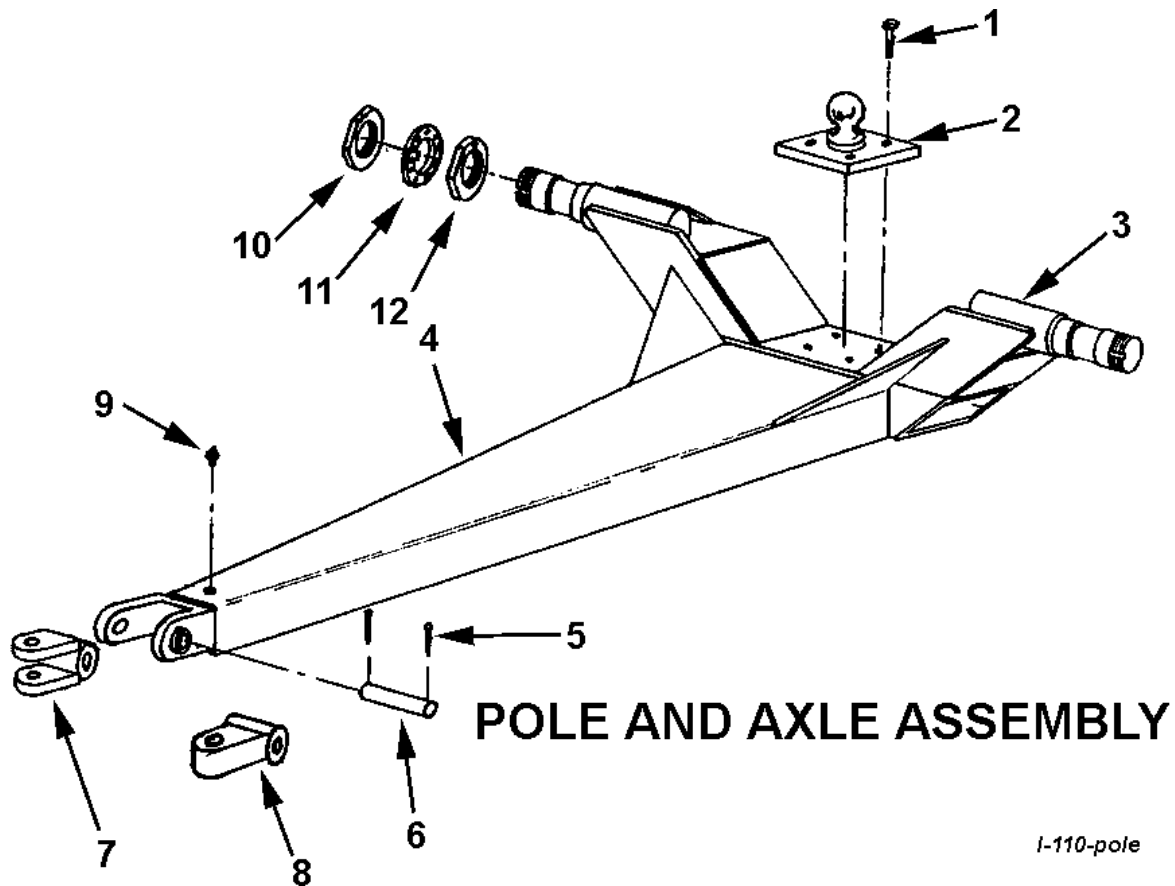
KEY NO.	PART NO.	DESCRIPTION
1	A10156A	Bowl and Frame I-110, s/n 17816 & up
2	6835	Bolt, 3/8" NC x 1"
3	A10157	Left hand cylinder guard
4	A10158	Right hand cylinder guard
5	8078	3/8" Lockwasher
6	7450	Nut, 3/8" NC
7	A10011A	Left cutting edge, 8"
8	A10012A	Center cutting edge, 12" x 54"
9	A10010A	Right cutting edge, 8"
10	PB8P-NC-063-0250	Plow bolt, 5/8" NC x 2-1/2" (12 req'd)
11	A14031A	(Optional) Left Bank Shaver Side Blade (s/n 17582 +)
12	A14032A	(Optional) Right Bank Shaver Side Blade (s/n 17582 +)
13	PB8P-NC-063-0200	Plow bolt, 5/8" NC x 2" (6 req'd / blade)
14	PB8P-NC-063-0250	Plow Bolt, 5/8" NC x 2-1/2" (7 req'd / blade)
10, 13, 14	7530	Nuts for Plow Bolts: 5/8" NC (25 req'd total)



PUSH OFF GATE ASSEMBLY

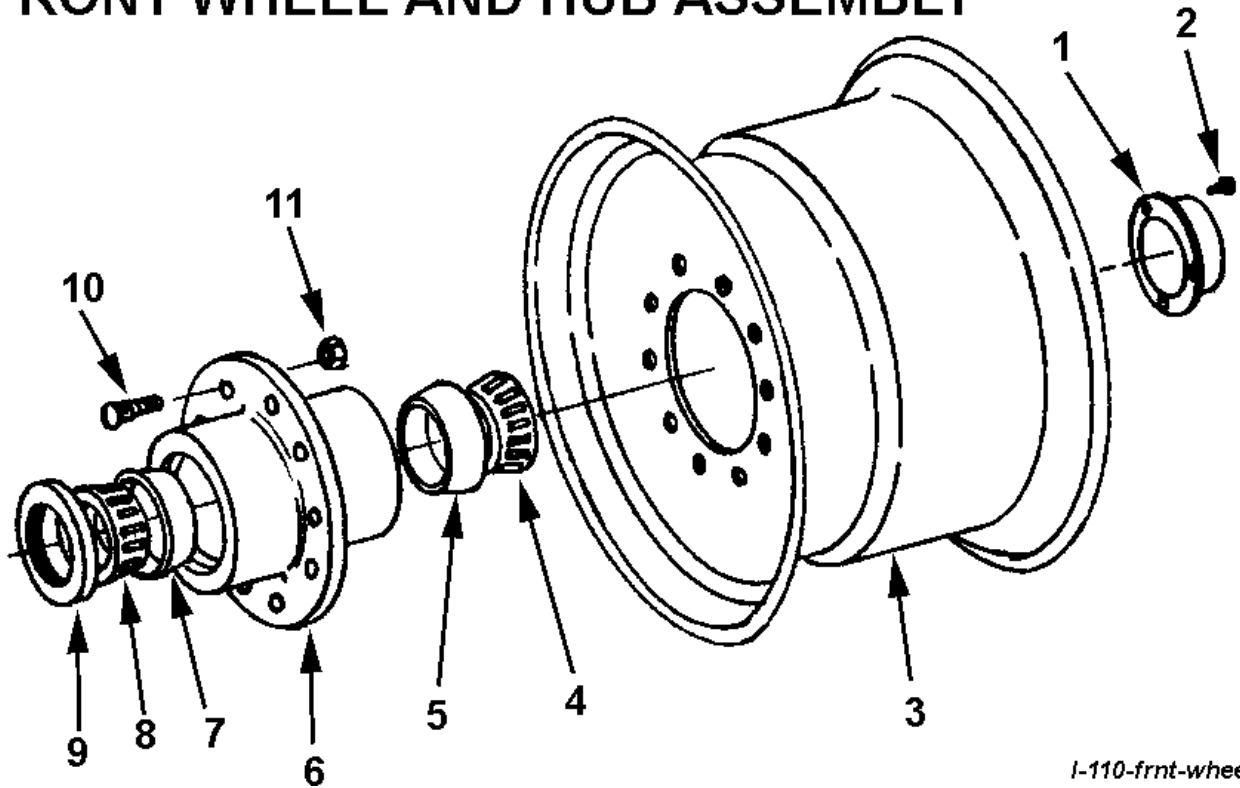
I-110-pushoffmodified

KEY NO.	PART NO.	DESCRIPTION
1	A10159	Brace, R. H. & L. H. same
2		Nut, 3/4" NC
3		Bolt, 3/4" NC x 1-1/2" lg.
4		Lockwasher, 3/4"
5	A10160	Push off gate
6		Jam nut, 1-1/4" NF
7	A123306 <i>sn 20210 +</i> A10161 <i>upto sn 20209</i>	Gate roller, rear, with A123307 bushing Gate roller, rear, with A10162 bushing
8	A123307 <i>sn 20210 +</i> A10162 <i>upto sn 20209</i>	Bushing, 1-5/8" OD x 1-1/4" ID x 1-1/2" lg Bushing, 2" OD x 1-5/8" ID x 1-7/16"
9	A123305 <i>sn 20210 +</i> A10008 <i>upto sn 20209</i>	Pin, 1-1/4" dia. x 2-3/4" lg. tab head w/zerk Shoulder pin, 1-5/8" to 1-1/4" w/ zerk in thd. end
10	A10163	Bushing, 1-3/4" OD x 1-1/4" ID x 2-3/8"
11	A10164	Gate roller, front, 4-1/4" OD
12		Cotter pin, 1/4" x 2" lg.
13	A6007A	Pin, 1-1/4" x 4-1/8" lg.
14		Grease zerk, 90° x 1/8" NPT
15		Bolt, 1/4" x 1" NC
16	A10171	Dirt shield
17		Nut, 1/4" NC
18		Lockwasher, 1/4"
19	A123288	Pin, 1-1/4" dia. x 3-1/4" lg. tab head w/ zerk
20		Bolt, 5/8" x 1-1/4" NC



KEY NO.	PART NO.	DESCRIPTION
1		Bolt, 3/4" NC x 2-1/2" lg., Gd. 5
2	A10035	Ball swivel
3	A14021	Spindle Only Weldable, s/n 17844 & up
4	A10181	Pole, s/n 17844 & up
5		Cotter pin, 1/4" x 2-1/2" lg.
6	A10034	Pin, 1-1/2" x 6-1/4" lg.
7	A10033	Double lip clevis
8	A10033A	Single lip hitch
9		Grease fitting
10	A10048	Spindle nut
11	A10049A	Lock collar
12	A10172	Nut w/ Lock pin

FRONT WHEEL AND HUB ASSEMBLY

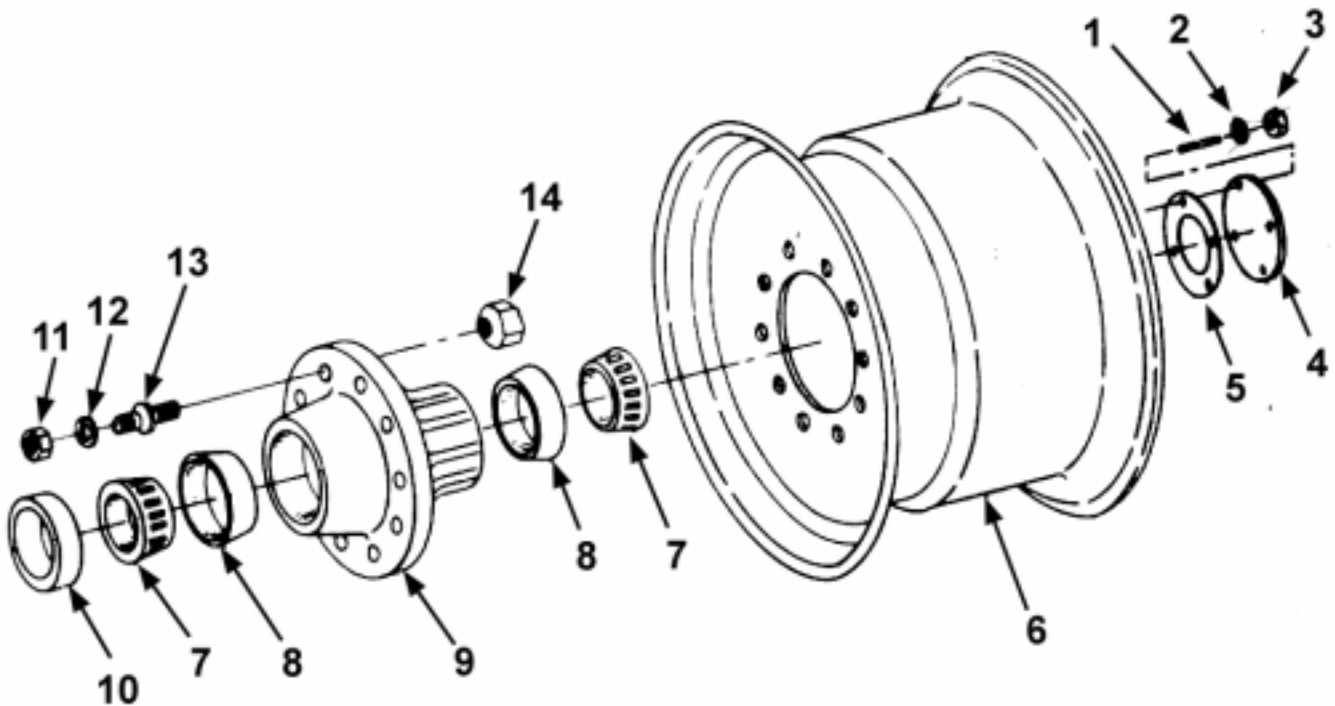


I-110-frnt-wheel

KEY NO.	PART NO.	DESCRIPTION
1	A14004	Hub cap
2		Bolt, 5/16 NC x 5/8 lg.
3	A10170	Wheel, 14 x 16.1
4	A14015	Bearing cone (Timken 644)
5	A14014	Bearing cup (Timken 632)
6	A14010	Hub
7	A14013	Bearing cup (Timken 742)
8	A14012	Bearing cone (Timken 749)
9	A14011	Grease seal (CR 42624)
10	A10176	Stud
11	A10046	Lug nut

I-100 & I-110 Front Wheel & Hub Assembly Used on Serial Number up to 15845 (7/13/80)

I-100 & I-110-Frt Hub-1980.tif

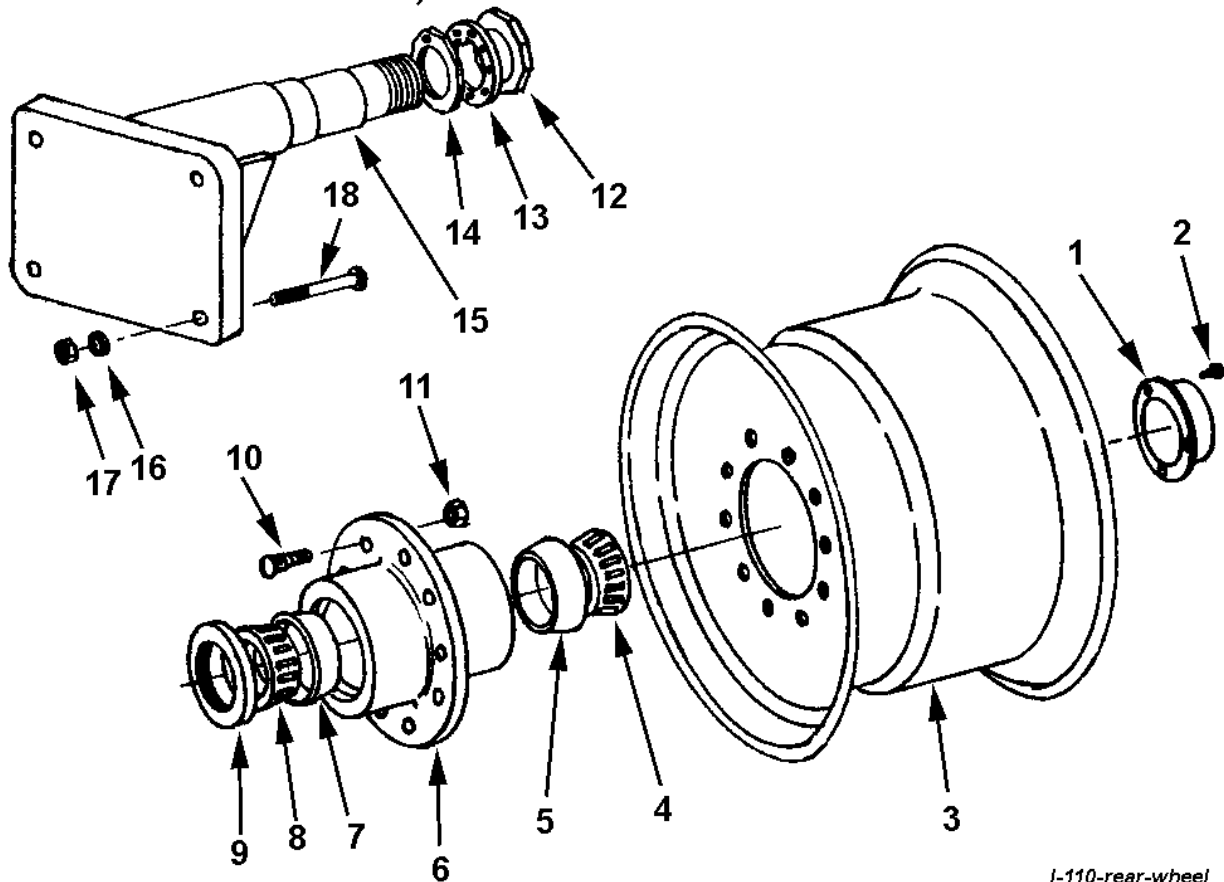


Model I-100 & early I-110

Recognized by Casted Hub & Dual Threaded Studs

Key No.	Part No.	Description
1	---	Stud Bolt, 5/16 x 5/8 NC
2	---	Lock Washer
3	---	Nut
4	A10041	Hub Cap
5	A10040	Gasket (Silicone Gel can be substituted)
6	A10170	Wheel, 11" x 16" Drop Center
7	A10014	Bear Cone (Timken 5557)
8	A10015	Bear Cup (Timken 5520)
9	A10016	Hub Less Bearings & Race
10	A10013	Grease Seal, (CR 35062)
11	---	Nut, 3/4" NF
12	A10042	Bushing
13	A10043	Lug, Left Hand Threads
	A10044	Lug, Right Hand Threads
14	A10045	Lug Nut, Left Hand Threads
	A10046	Lug Nut, Right Hand Threads

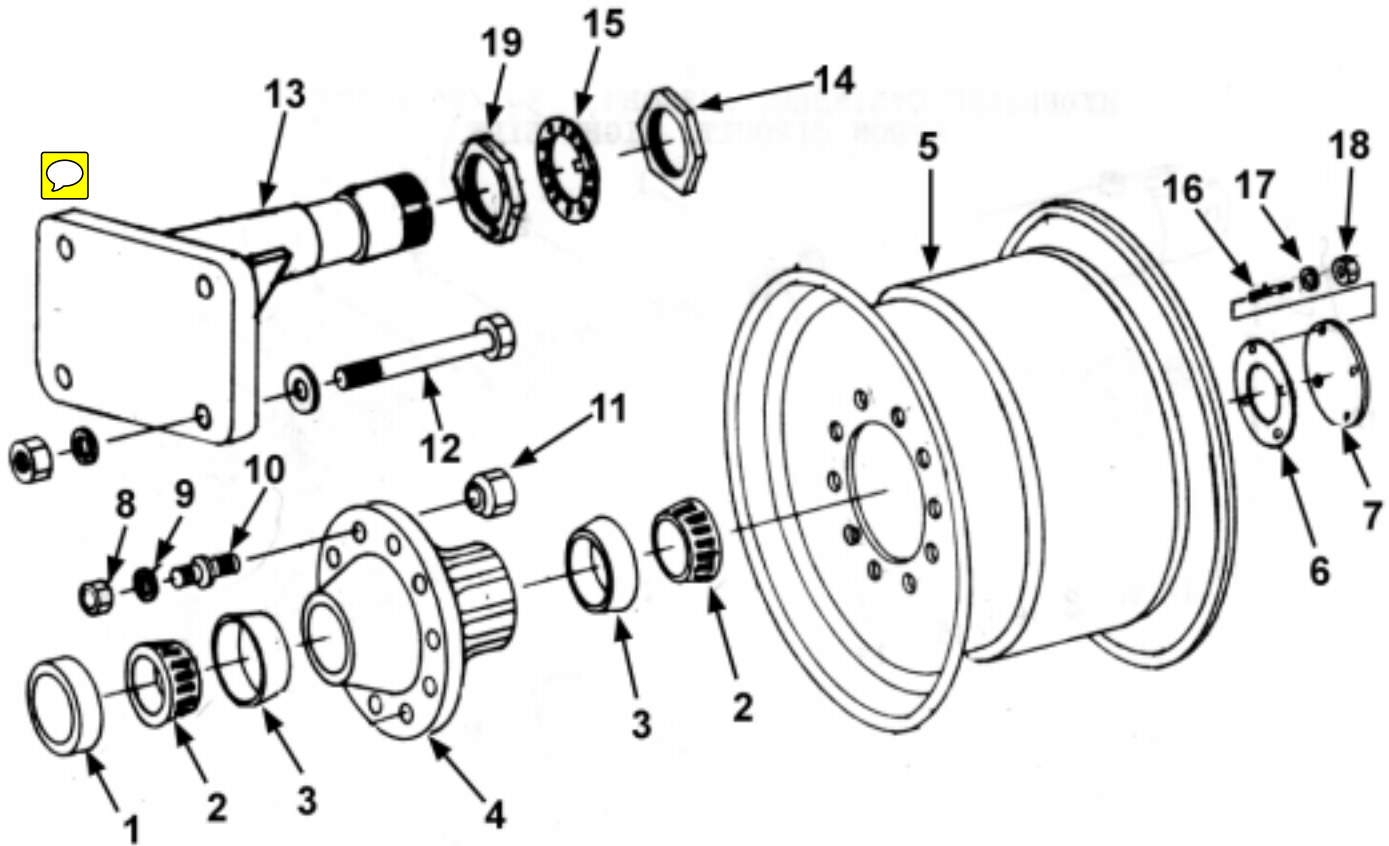
REAR WHEEL, SPINDLE & HUB ASSEMBLY



I-110-rear-wheel

KEY NO.	PART NO.	DESCRIPTION
1	A14004	Hub cap
2		Bolt, 5/16 NC x 5/8 lg.
3	A10039	Wheel, 16 x 26 Drop Center
4	A14015	Bearing cone (Timken 644)
5	A14014	Bearing cup (Timken 632)
6	A14010	Hub
7	A14013	Bearing cup (Timken 742)
8	A14012	Bearing cone (Timken 749)
9	A14011	Grease seal (CR 42624)
10	A10176	Stud
11	A10046	Lug nut
12	A10048	Spindle nut
13	A10172	Lock collar
14	A14037	Nut w/ lock pin
15		Spindle
16		Lockwasher, 1"
17		Nut, 1" NC
18		Bolt, 1" NC x 6-1/2" lg.

I-100 & I-110-Rear Hub & spindle-1980.tif



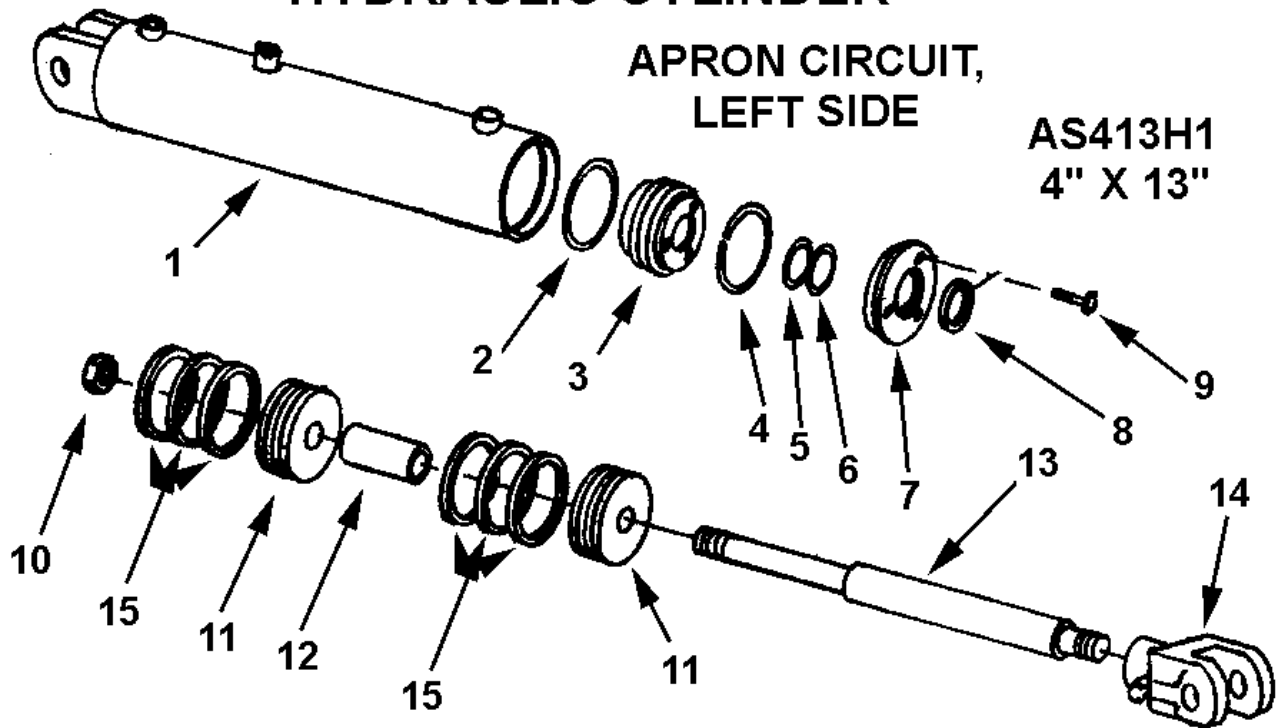
I-100 & I-110 Scraper for Serial Number 15845 and Below 7/13/80

Key.	Part #	Description
1.	A10013	Grease Seal (CR 35062)
2.	A10014	Bearing Cone (Timken 5557)
3.	A10015	Bearing Cup (Timken 5520)
4.	A10016	Hub Less Bearings
5.	A10039	Wheel, 16" x 26" Drop Center
6.	A10040	Gasket (No longer Available) use liquid gasket material
7.	A10041	Hub Cap, 4 holes plate
8.*		Nut, 3/4" NF
9.*	A10042	Bushing
10.*	A10043	Lug, Left Hand Threads
10.*	A10044	Lug, Right Hand Threads
11.	A10045	Lug Nut, Left Hand Threads
11.	A10046	Lug Nut, Right Hand Threads
12.		Bolt, 1"NC x 6-1/2" Lg. w/Nut & Lockwasher
13.	A10169	Spindle
14.	A10048	Spindle Nut
15.	A10049A	Lock Collar
16.		Stud Bolt, 1/2" NF
17.		Lockwasher, 1/2"
18.		Nut, 1/2" NF
19.	A10172	Nut, with Lock Pin

HYDRAULIC CYLINDER

APRON CIRCUIT, LEFT SIDE

AS413H1
4" X 13"



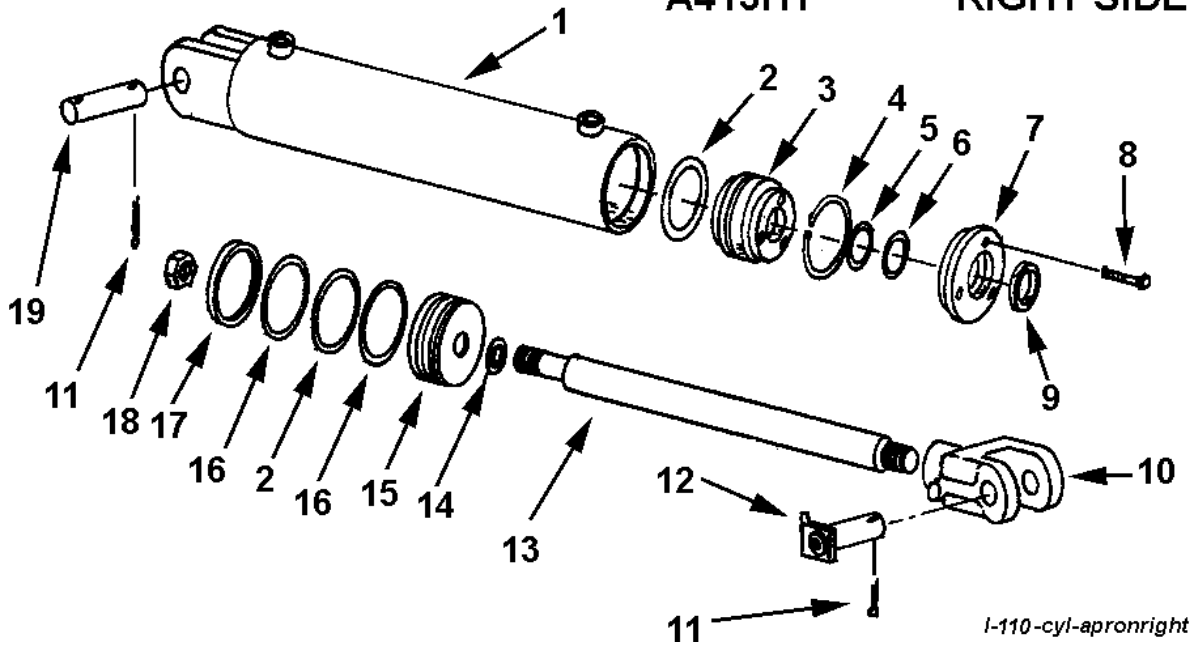
l-110-cyl-apronleft

KEY NO.	PART NO.	DESCRIPTION	
1	A175H13	Barrel	
2	A300H06	O-ring, 4" OD x 3/16"	
3	A300H11	Head gland	
4	A300H12	Retainer ring	
5	A22H15	O-ring, 1-1/2" ID	
6	A22H15A	Backup washer, 1-1/2" ID	
7	A300H13	Gland cap	
8	A22H17	Wiper seal, 1-1/2" ID	
9	A22H18	Capscrew, 1/4" NC x 1"	
10	A300H03	Piston nut	
11	A450H15	Piston, 4"	
12	A130H12	Piston spacer	
13	A175H14	Shaft, 1-1/2" diameter	
14	A12H03	Clevis end	
15	A300H04	Cast iron rings, 4" OD	
	A130H23	Packing kit containing:	
	6 - A300H04	1 - A22H17	1 - A22H15
	1 - A22H15A	1 - A300H06	

HYDRAULIC CYLINDER

4" x 13"
A413H1

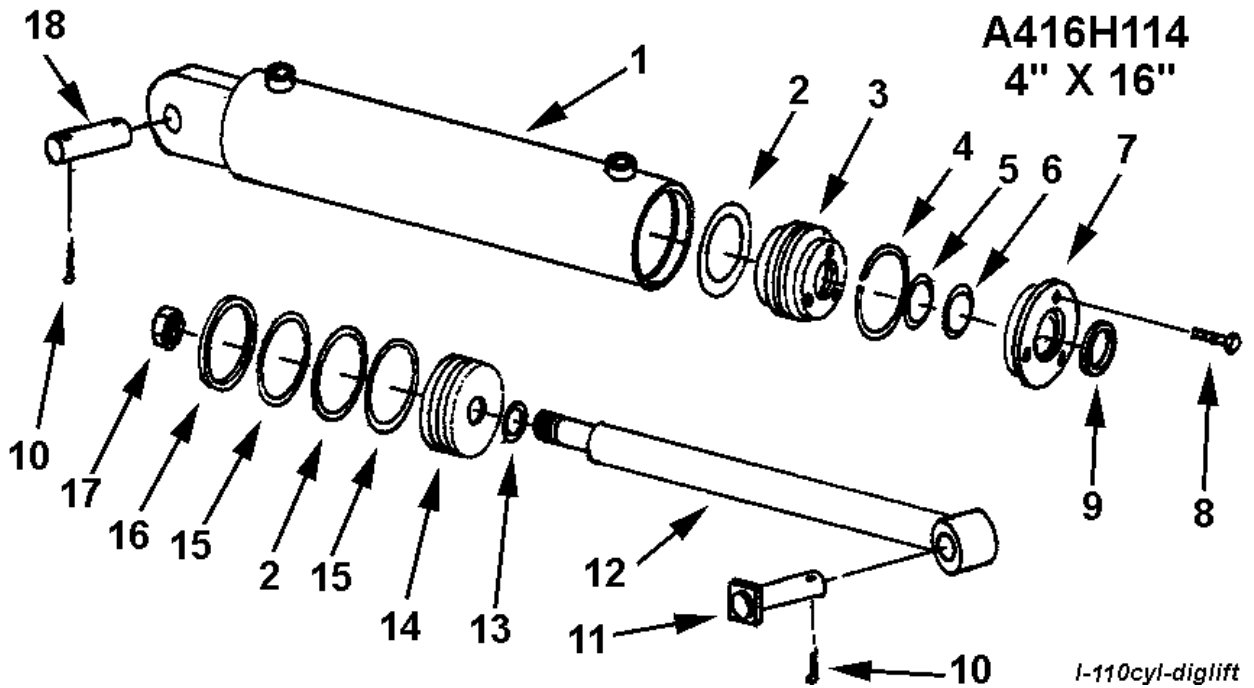
APRON CIRCUIT,
RIGHT SIDE



I-110-cyl-apronright

KEY NO.	PART NO.	DESCRIPTION
1	A175H01	Barrel Assembly
2	A300H06	O-ring seal, 4" OD x 3/16"
3	A300H11	Head gland
4	A300H12	Retainer ring
5	A22H15	O-ring, 1-1/2" x 1/8"
6	A22H15A	Backup washer
7	A300H13	Head cap
8	A22H18	Capscrew, 1/4 NC x 1"
9	A22H17	Wiper seal, 1-1/2" ID
10	A12H03	Clevis end
11		Cotter pin, 3/16" x 1-1/2"
12	A10167	Pin, 1" x 3-1/16"
13	A175H02	Shaft, 1-1/2" diameter
14	A45H05	Piston gasket, 1"
15	A300H07	Piston, 4" dia.
16	A300H05	Back up washer, 4" OD
17	A300H04	Cast iron ring, 4" OD
18	A300H03	Piston nut, 1" NF
19	A1217	Pin, 1" x 3-1/2"
	A300H14B	Packing kit containing:
		1 - A300H04 2 - A22H15 2 - A300H05
		1 - A22H15A 2 - A22H06 1 - A22H17
		1 - A45H05

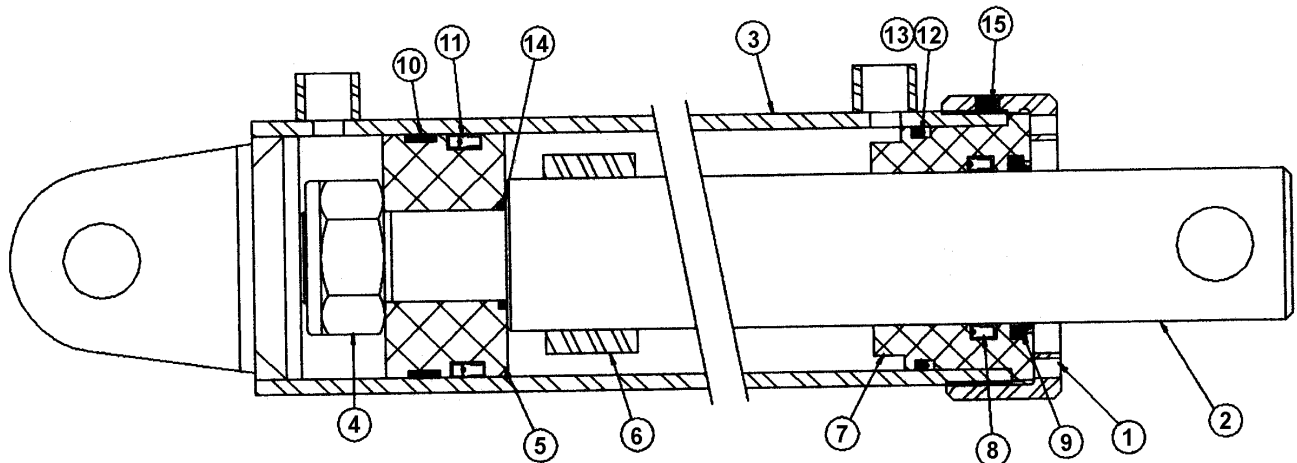
HYDRAULIC CYLINDER DIG AND LIFT CIRCUIT



KEY NO.	PART NO.	DESCRIPTION
1	A45H04	Barrel Assembly
2	A300H06	O-ring, 4" OD x 3/16"
3	A300H11	Head gland
4	A300H12	Retainer ring
5	A22H15	O-ring, 1-1/2" ID x 1/8"
6	A22H15A	Backup washer
7	A300H13	Head cap
8	A22H18	Capscrew, 1/4" x 1"
9	A22H17	Wiper seal, 1-1/2" ID
10		Cotter pin, 3/16" x 1-1/2"
11	A6007A	Pin, 1-1/4" X 4-1/8" w/ square head
12	A45H03	Shaft, 1-1/2" diameter
13	A45H05	Piston gasket, 1" ID
14	A300H07	Piston, 4"
15	A300H05	Backup washer, 4" OD
16	A300H04	Cast iron ring, 4" OD
17	A300H03	Piston nut
18	A45003	Pin, 1-1/8" x 3-1/4"
	A300H14B	Packing kit containing:
		1 - A300H04 2 - A22H15 2 - A300H05
		1 - A22H15A 2 - A300H06 1 - A22H17
		1 - A45H05

I-110 PUSH GATE CYLINDER ASSEMBLY PART NO. A454H114B

4" BORE X 54" STROKE - MODEL I-110 (SERIAL NO. 17661 & UP)

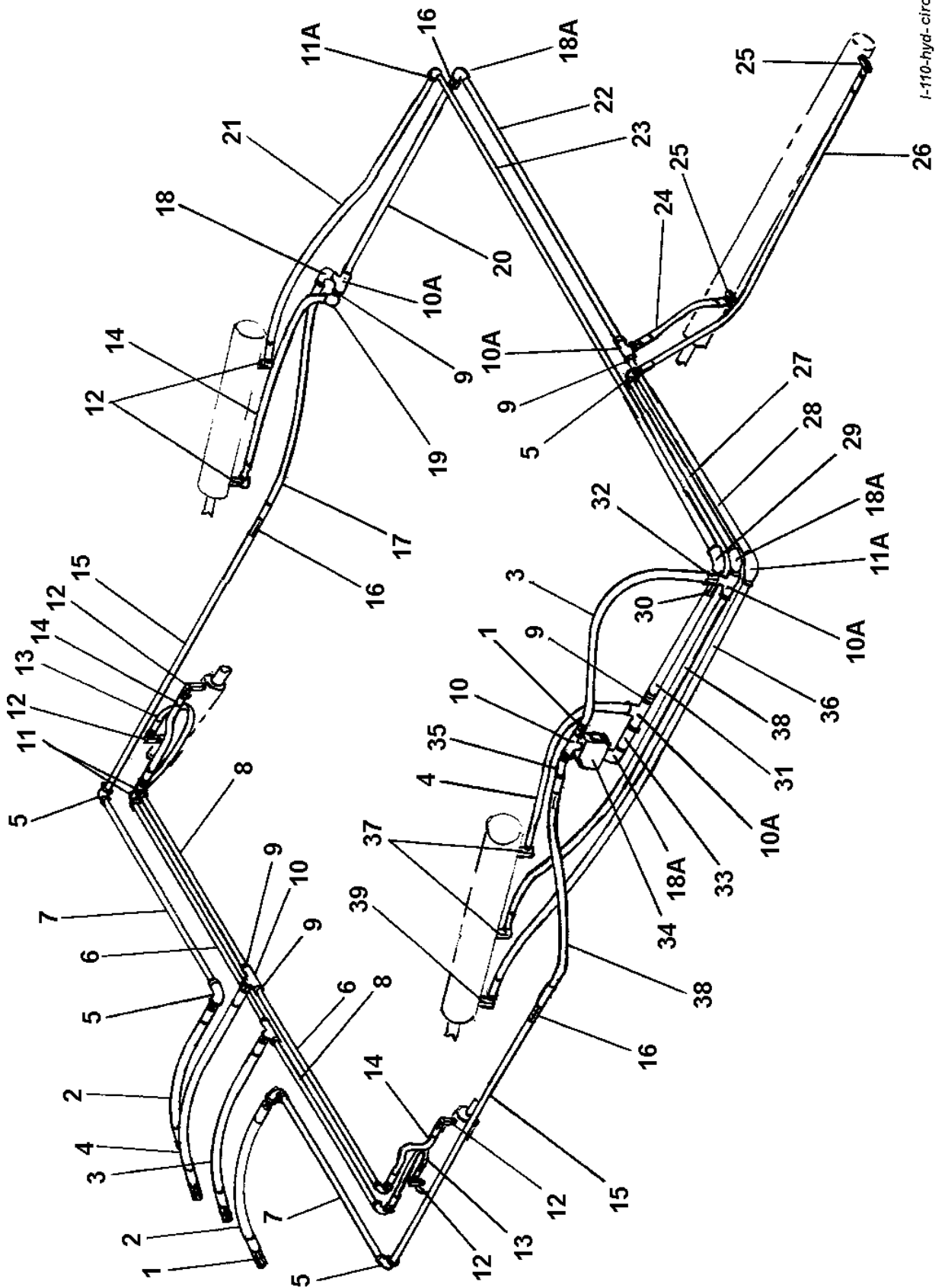


I-110-cyl-push

KEY NO.	QTY.	PART NO.	DESCRIPTION
1	1	A101H103	Collar
2	1	A101H98	2 1/2" Rod
3	1	A101H97	Barrel weldment
4	1		Lock nut (1 1/2" - 12)
5	1	A101H96	Piston
6	1	A101H99	Spacer
7	1	A101H102	Head
8	1	A140H07	Rod seal
9	1	A140H08	Rod wiper
10	1	A101H100	Wear ring
11	1	A101H101	Piston seal
12	1	A200H06	O-ring
13	1	A300H05	Backup ring
14	1	A22H15	O-ring
15	1		Nylon tip set screw (3/8" NC x 3/8)
16	1	A101H30A	Seal kit (Items 8-14)

HYDRAULIC CIRCUIT

MODEL I-110 SCRAPER, serial no. 16520 and up

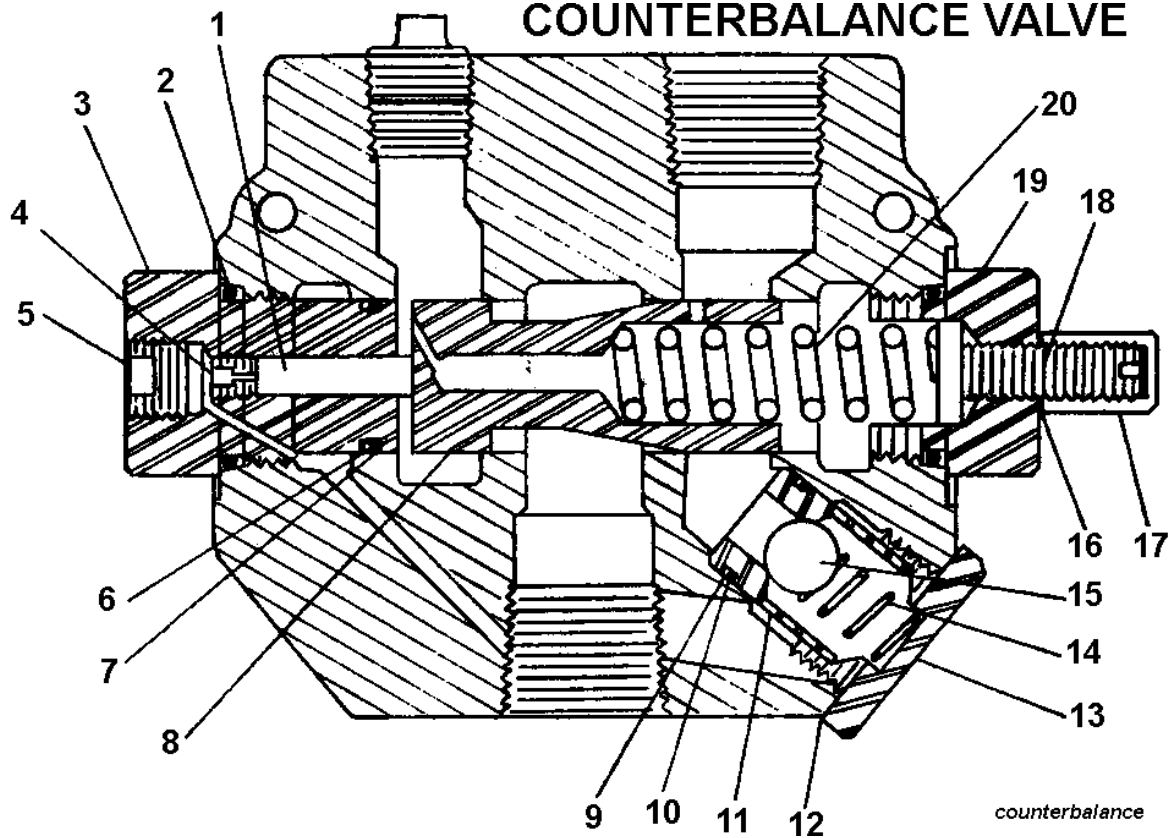


I-110-hydr-circ

PARTS LIST - HYDRAULIC CIRCUIT

KEY NO.	NO. REQ'D	PART NO.	DESCRIPTION
1	5	A101H72	Swivel adapter, str. 3/4 male x female
2	2	A101H32	Hose, 3/4 x 21 lg.
3	2	A101H46	Hose, 3/4 x 24-1/2 lg.
4	2	A101H31A	Hose, 3/4 x 27 lg.
5	5		Elbow, 90° x 3/4 NPT, Cast
6	2		Pipe, 1/2 x 38-1/4 lg.
7	2		Pipe, 3/4 x 48 lg.
8	2		Pipe, 1/2 x 35-3/4 lg.
9	7		Pipe bushing, 1/2 NPT x 3/4 NPT
10	3		Pipe tee, 3/4 NPT, Cast
10A	4		Pipe tee, 3/4 NPT, Steel
11	4		Elbow, 90°, 1/2 NPT, Cast
11A	2		Elbow, 90°, 1/2 NPT, Steel
12	6	A45H07	Swivel adapter, 90°, 3/8 male x 1/2 female
13	2	A60H01A	Hose, 1/2 x 18 lg.
14	3	A45H06	Hose, 1/2 x 24 lg.
15	2		Pipe, 3/4 x 78-1/4 lg.
16	3	A101H35	Swivel adapter, str. 3/4 female x female
17	1	A101H36	Hose, 3/4 x 33 lg.
18	1		Street elbow, 90°, 3/4 NPT, Cast
18A	3		Street elbow, 90°, 3/4 NPT, Steel
19	1		Street elbow, 45°, 1/2 NPT, Cast
20	1		Pipe, 3/4 x 28 lg.
21	1	A101H83	Hose, 1/2 x 44 lg.
22	1		Pipe, 3/4 x 53 lg.
23	1		Pipe, 1/2 x 97-7/8 lg.
24	1	A101H37	Hose, 3/4 x 18 lg.
25	2	A101H39	Swivel adapter, 90°, 1/2 male x 3/4 female
26	1	A101H38A	Hose, 3/4 x 71 lg.
27	1		Pipe, 3/4 x 48 lg.
28	1		Pipe, 1/2 x 44 lg.
29	1	A101H73	Street elbow, 90°, 1/2 NPT, Steel
30	1	A101H74	Swivel adapter, str. 1/2 female x female
31	1		Pipe, 1/2 x 11-3/4 lg.
32	1	A101H75	Check valve
33	1		Pipe, 3/4 x 5-1/2 lg.
34	1	A101H48	Counterbalance valve
35	1		Street elbow, 45°, 3/4 NPT, Cast
36	1	A101H82	Hose, 1/2 x 55 lg.
37	2	A101H77	Swivel adapter, 90°m 3/4 male x female
38	2	A101H42	Hose, 3/4 x 42 lg.
39	1	A400H02	Swivel adapter, 90°, 1/2 male x female

COUNTERBALANCE VALVE



Serial no. 14656 and up

KEY NO.	PART NO.	DESCRIPTION
1	A101H49	Piston
2	A101H50	O-ring
3	A101H51	External pilot plug
4	A101H52	Orifice
5	A101H53	Plug
6	A101H54	O-ring
7	A101H55	Backup washer
*8	A101H56	Metering spool
9	A101H57	Backup washer
10	A101H58	O-ring
11	A101H59	Check seat
12	A101H60	Aluminum washer
13	A101H61	Check plug
14	A101H62	Check spring
15	A101H63	Check ball
16	A101H64	Aluminum washer
17	A101H65	Acorn nut
18	A101H66	Adjusting screw
19	A101H67	Adjusting plug - RD1075 CB
20	A101H68	Metering spring
*	A101H71	Valve body

* NOT SOLD SEPARATELY

COUNTERBALANCE VALVE

PURPOSE of the counterbalance valve is to prevent the front gate from closing before the rear pushgate is fully retracted when the scraper is empty. This enables the operator to start the next cut without having to reopen the gate from the closed position.

INSTRUCTIONS for establishing counterbalance valve setting:

When properly adjusted, the front gate will close 40% from full open position (26 ½" from bottom of gate to cutting edge) and hold at that position until the rear pushgate is fully retracted. If the front gate is closing more than 40%, loosen the lock nut under the hex socket head screw and turn the screw clockwise until the front gate holds at that position. Turn an additional ¼ turn clockwise, then tighten the lock nut. DO NOT turn the adjusting screw more than is necessary to hold the front gate at 40% open.

Limited Warranty Statement

Ashland Industries Inc. warrants each new product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the product or components, not to exceed six consecutive months from the date of delivery of the new Ashland Industries product to the original purchaser.

Genuine Ashland Industries Inc. replacement parts and components will be warranted for 30 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

Under no circumstances will it cover any merchandise or components thereof, which in the opinion of the company, has been subjected to misuse, unauthorized modification, alterations, an accident or if repairs have been made with parts other than those obtained through Ashland Industries Inc.

Ashland Industries Inc. in no way warrants Tires since these items are warranted separately by their respective manufacturer. Please call Ashland Industries Inc. to receive phone numbers of tire suppliers.

Ashland Industries Inc. in no way warrants wearable items such as cutting edges, front dolly wheel balls, socket halves.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that, in our judgement, shall show evidence of such defect, provided further that such part shall be returned within 30 days from the date of failure to Ashland Industries Inc. routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid. Upon warranty approval proper credits will be reimbursed for transportation.

This warranty shall not be interpreted to render Ashland Industries Inc. liable for injury or damages of any kind or nature to person or property. This warranty does not extend to the loss revenue, extra labor cost associated with downtime, substitute machinery, rental or for any other reason.

Except as set forth above, Ashland Industries Inc. shall have no obligation or liability of any kind on account of any of its equipment and shall not be liable for special or consequential damages. Ashland Industries Inc. make no other warranty, expressed or implied, and, specifically, Ashland Industries Inc. disclaims any implied warrant or merchantability or fitness for a particular purpose. Some states or provinces do not permit limitations or exclusions of implied warranties or incidental or consequential damages, so the limitations or exclusion in this warranty may not apply.

This warranty is subject to any existing conditions of supply which may direct affect our ability to obtain materials or manufacture replacement parts.

Ashland Industries Inc. reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold

No one is authorized to alter, Modify or enlarge this warranty nor the exclusion, limitations and reservations.

Ashland Industries Inc.
Warranty Department