

# ***Ashland*** **INDUSTRIES, INC.™**

*Quality  
Equipment  
Since  
1953*

## I-900 PARTS MANUAL

Version 4-03



Ashland Industries Inc.  
1115 Rail Drive  
P.O. Box 717  
Ashland, WI. 54806  
Ph: 877-634-4622 *Toll Free*  
Ph: 715-682-4622  
Fx: 715-682-9717  
[www.ashlandind.com](http://www.ashlandind.com)

MEMBER  
**CIMA**  
CONSTRUCTION INDUSTRY  
MANUFACTURERS ASSOCIATION



### HOW TO ORDER PARTS:

#### IMPORTANT

Parts must be ordered through your local authorized ASHLAND dealer.

Be sure to state MODEL and SERIAL NUMBER of your machine, PART NUMBER, DESCRIPTION and QUANTITY needed.

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



Ashland Industries weldable replacement parts are available to rebuild, modify or update your scraper to current factory specifications.


### INDEX


Page 3.	Safety Guidelines
Page 4.	Operators and Maintenance Instructions
Page 5.	Illustration - Assembly
Page 6.	Illustration and Parts List - Gooseneck Frame Assembly
Page 7.	Illustration and Parts List - Apron Assembly
Page 8.	Illustration and Parts List - Bowl and Frame Assembly
Page 9.	Illustration and Parts List - Push Off Gate Assembly
Page 10.	Illustration and Parts List - Pole and Axle Assembly
Page 11.	Illustration and Parts List - Wheel Hub and Spindle Assembly
Page 12.	Illustration and Parts List - Hydraulic Cylinder, 4" x 16"
Page 13.	Illustration and Parts List - Hydraulic Cylinder, 3-1/2" x 10", Right
Page 14.	Illustration and Parts List - Hydraulic Cylinder, 3-1/2" x 10", Left
Page 15.	Illustration and Parts List - Hydraulic Cylinder, 4" x 50"
Page 16-17.	Illustration and Parts List - Hydraulic Circuit
Page 18.	Illustration and Parts List - Counterbalance Valve
Page 19.	Instructions for Adjusting Counterbalance Valve
Page 20.	Illustration and Parts List - Sequence
Page 21.	Instructions for Adjusting Sequence Valve
Page 22.	Warranty Statement




## SAFETY SIGNAL WORDS

*Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:*

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

 **WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

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



## GENERAL SAFETY GUIDELINES

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

Replace any CAUTION, WARNING, DANGER or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.

To prevent injury or death, use a tractor equipped with a Roll Over Protective System (ROPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.

# OPERATORS AND MAINTENANCE INSTRUCTIONS

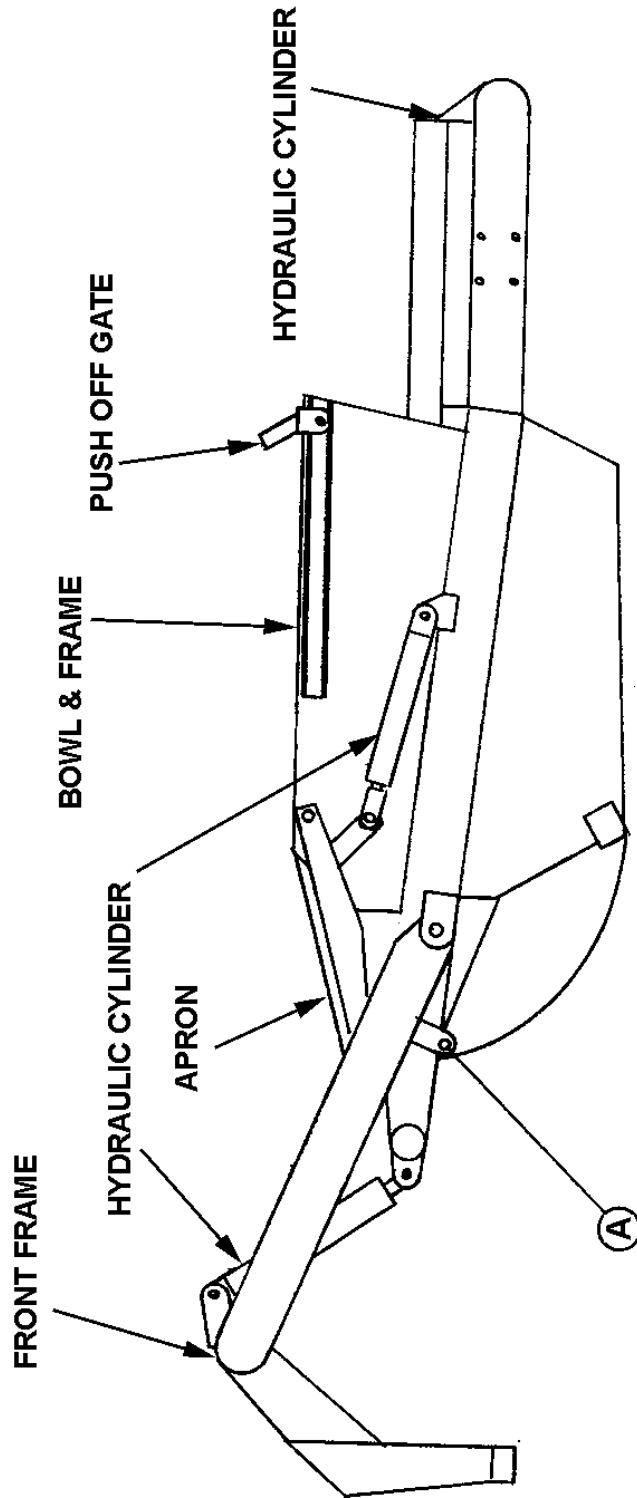
This scraper is a durable piece of equipment and with proper care will yield many years of trouble free operation. The scraper requires a power source with TWO 4 way (double acting) hydraulic control valves.

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 levels in the tractor hydraulic system and add to maintain the proper level. Care should be used 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.

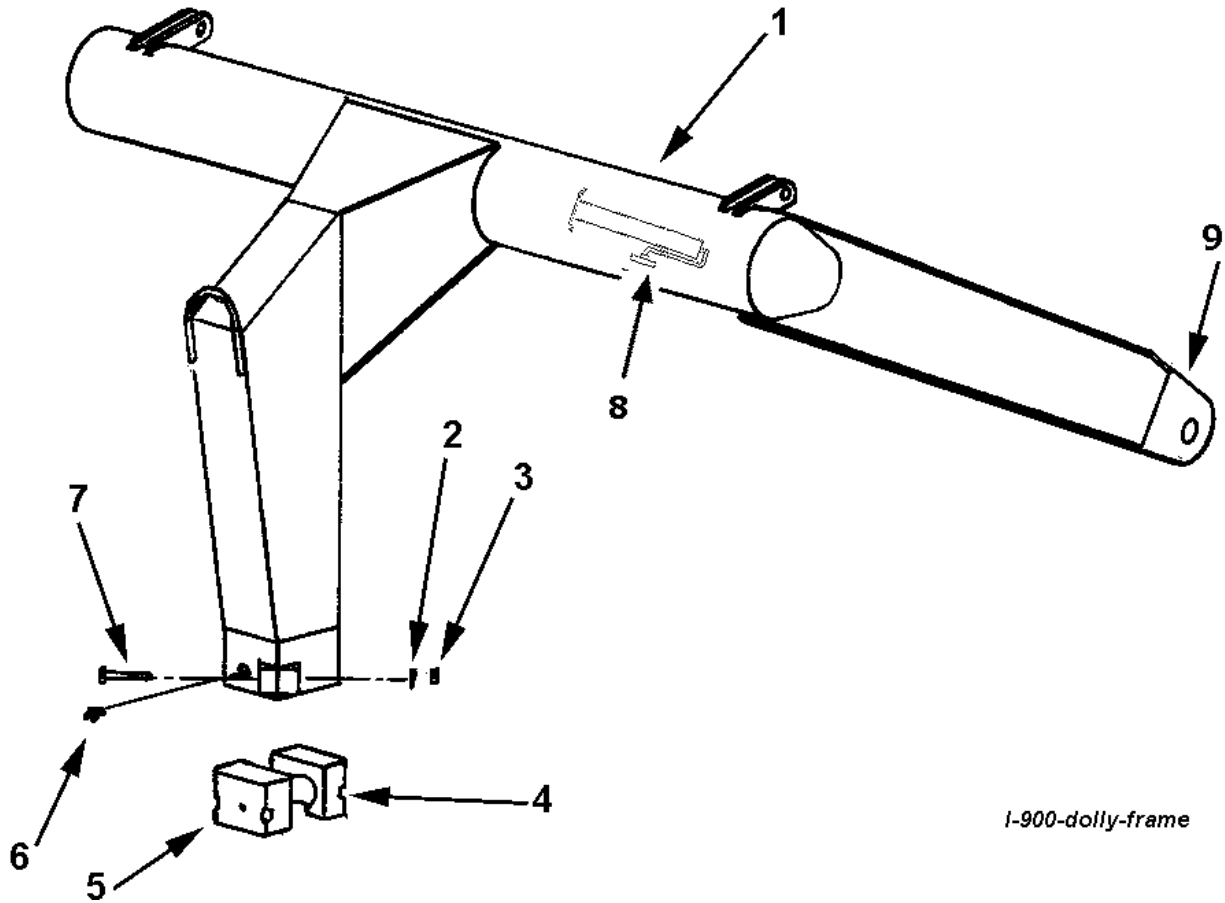
When the scraper is placed into operation, the operator will have to "feel out" the amount of depth of cut to obtain maximum loading efficiency. This is usually accomplished by taking a lesser and more uniform cut; however, some soil conditions such as loose sand may require a "pumping action" obtained 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.

ILLUSTRATION - ASSEMBLY



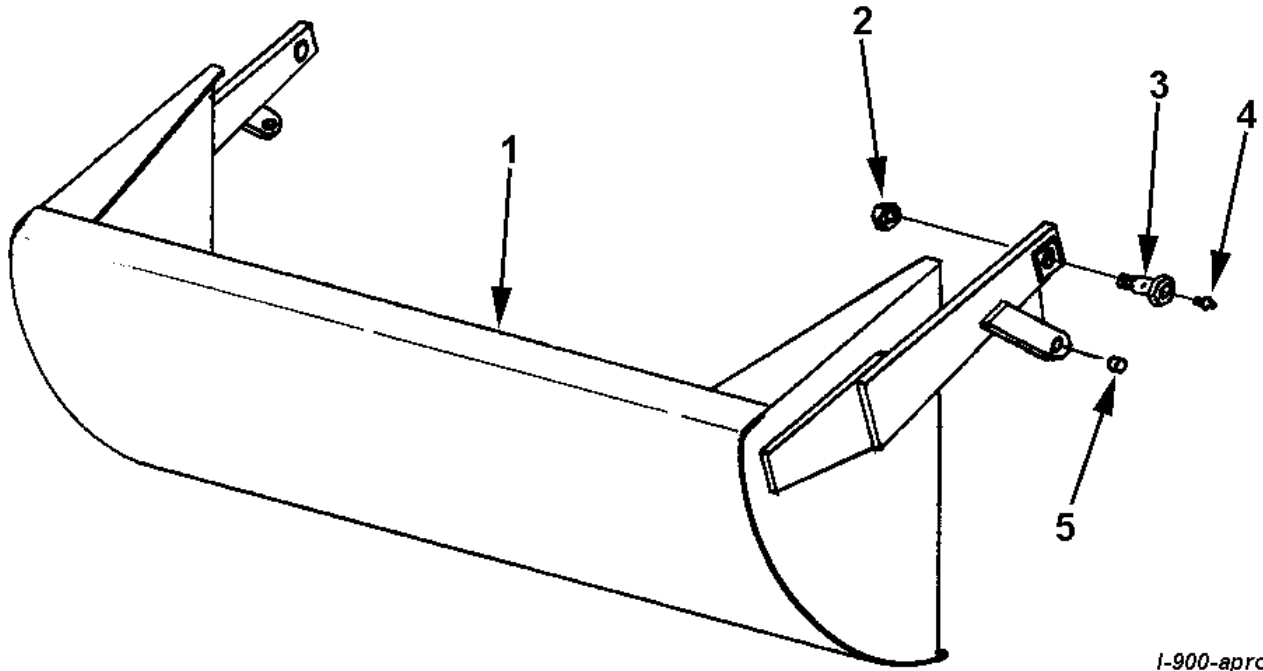
# GOOSENECK FRAME ASSEMBLY



*I-900-dolly-frame*

KEY NO.	PART NO.	DESCRIPTION
1	A9057	Gooseneck Frame
2	8110	Lock washer, 5/8"
3	7530	Nut, 5/8" NC
4	A90004	Cast socket half, rear
5	A90005	Cast socket half, front w/ zerk hole
6	A2206	Grease zerk, long shank
7	AFB-00002	Bolt, 5/8" NC x 4"
8	OPT-00001	Hitch Jack
9	14505	Grease fitting

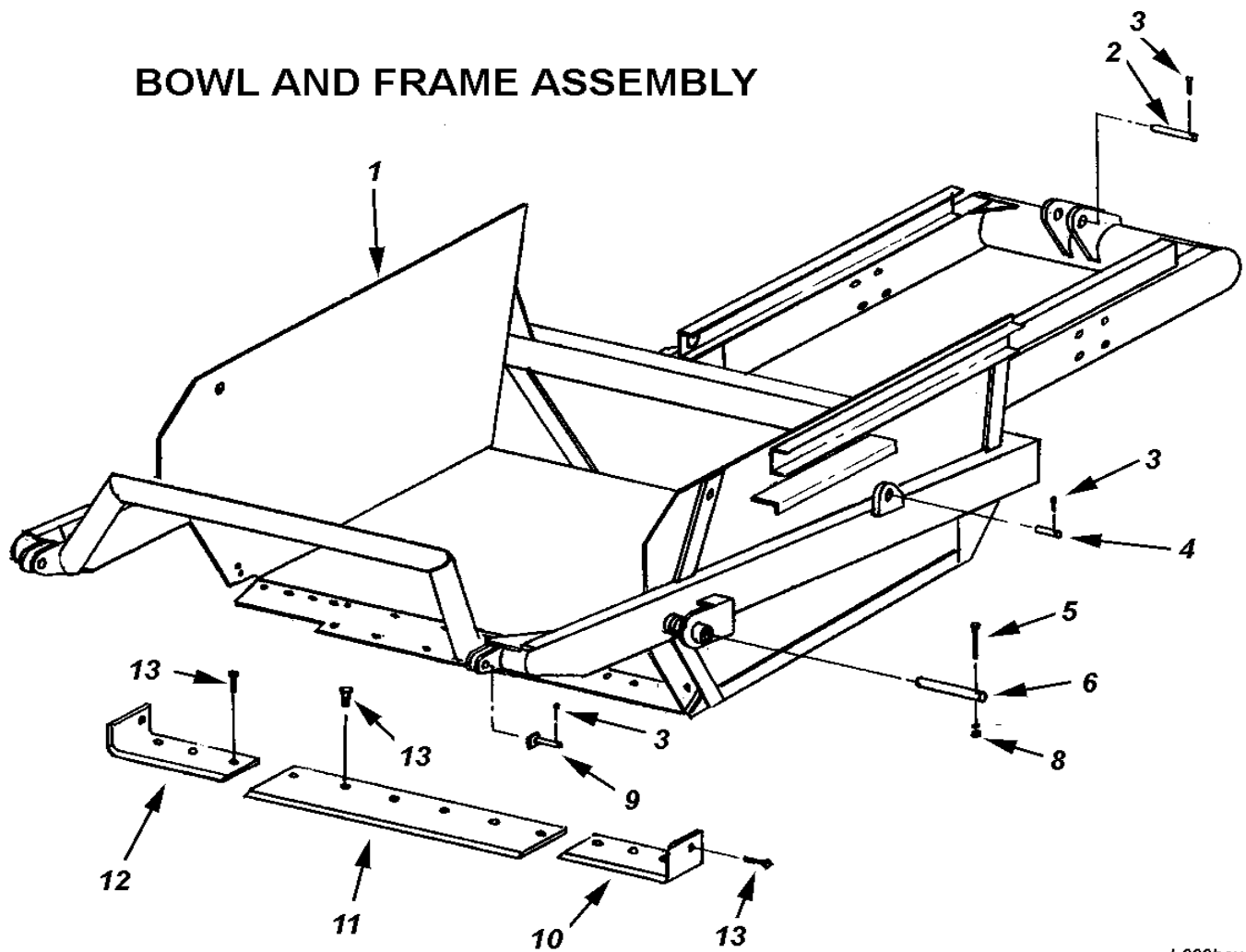
## APRON ASSEMBLY



*1-900-apron*

KEY NO.	PART NO.	DESCRIPTION
1	A8060	Apron
2	AFN-00009	Self locking nut, 1-1/4"
3	A6010	Shoulder pin, 1-5/8" to 1-1/4" with zerk in head
4	14505	Grease fitting
5	A10155	Bushing, 1" ID x 1-1/2" OD x 1-1/8" long steel

# BOWL AND FRAME ASSEMBLY

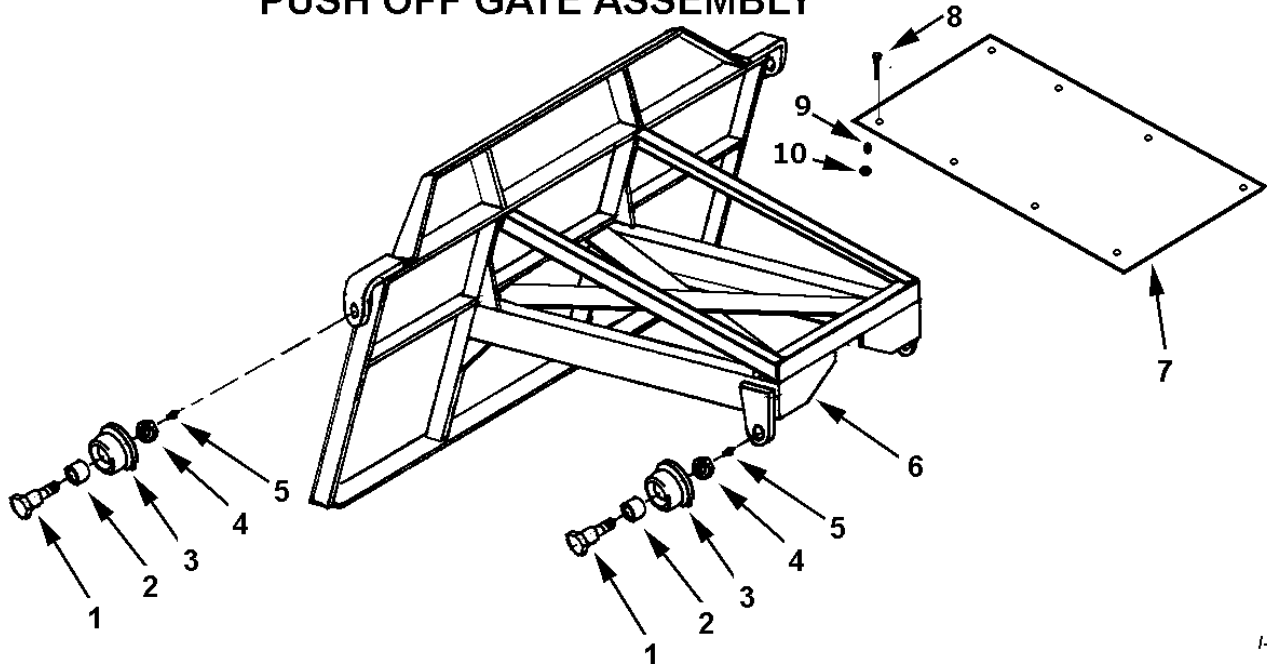


I-900bowl

KEY NO.	PART NO.	DESCRIPTION
1	A9055	Bowl and Frame
2	A8062	Pin, 1-1/4" x 7"
3	AFP-00002	Cotter pin, 3/16" x 1-3/4"
4	A1217	Pin, 1" x 3-1/2"
5	AFB-00054	Bolt, 1/2" NC x 3-1/2"
6	A8056	Pin, 1-3/4" x 7-3/4"
8	AFN-00011	Nut, 1/2" NC
9	A8064	Pin, 1-1/8" x 3-7/8"
10	A8031A	Left cutting edge, 3/4" x 6" used on s/n 17196 & up <i>Requires (4) 5/8" x 2" Plowbolts</i>
	A2225	Right cutting edge, 1/2" x 6", used through s/n 17178
11	A8030	Center cutting edge, 5/8" x 8" x 54" <i>Requires (6) 5/8" x 2" Plowbolts</i>
12	A8029A	Right cutting edge, 3/4" x 6", used on s/n 17196 & up <i>Requires (4) 5/8" x 2" Plowbolts</i>
	A2222	Left cutting edge, 1/2" x 6" used through s/n 17178
13	PB8P-NC-063-0200	Plow bolt, 5/8" x 2" (14 req'd for all blades)
	7530	Nut: 5/8" NC



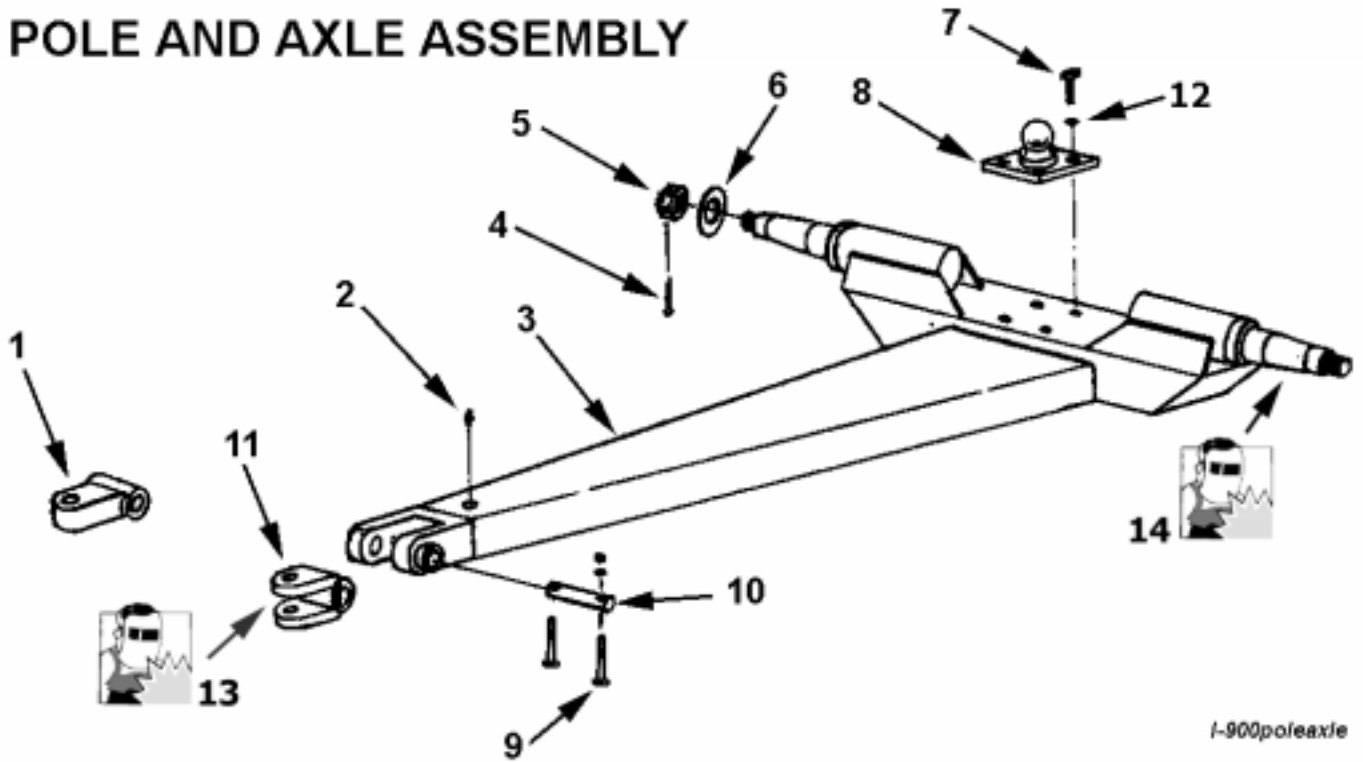
## PUSH OFF GATE ASSEMBLY



I-900gate

KEY NO.	PART NO.	DESCRIPTION
1	A10008	Shoulder pin, 1-5/8" to 1-1/4" with zerk in threaded end
2	A10162	Bushing, 2" OD x 1-5/8" ID x 1-1/2"
3	A10161	Gate roller, with bushing (for models made before Jan 1, 2000; up to sn 20218)
	A123306	Roller, gate rear with flange type (for models made after Jan 1, 2000; sn 20219 and above)
4	AFN-00024	Jam nut, 1-1/4" NF
5	14505	Grease fitting, 1/8" NPT straight
6	A9056	Push off gate
7	A9058	Dirt shield
8	AFB-00015	Bolt, 1/2" NC x 1-1/2"
9	8100	Lockwasher, 1-2"
10	AFN-00011	Nut, 1-2" NC

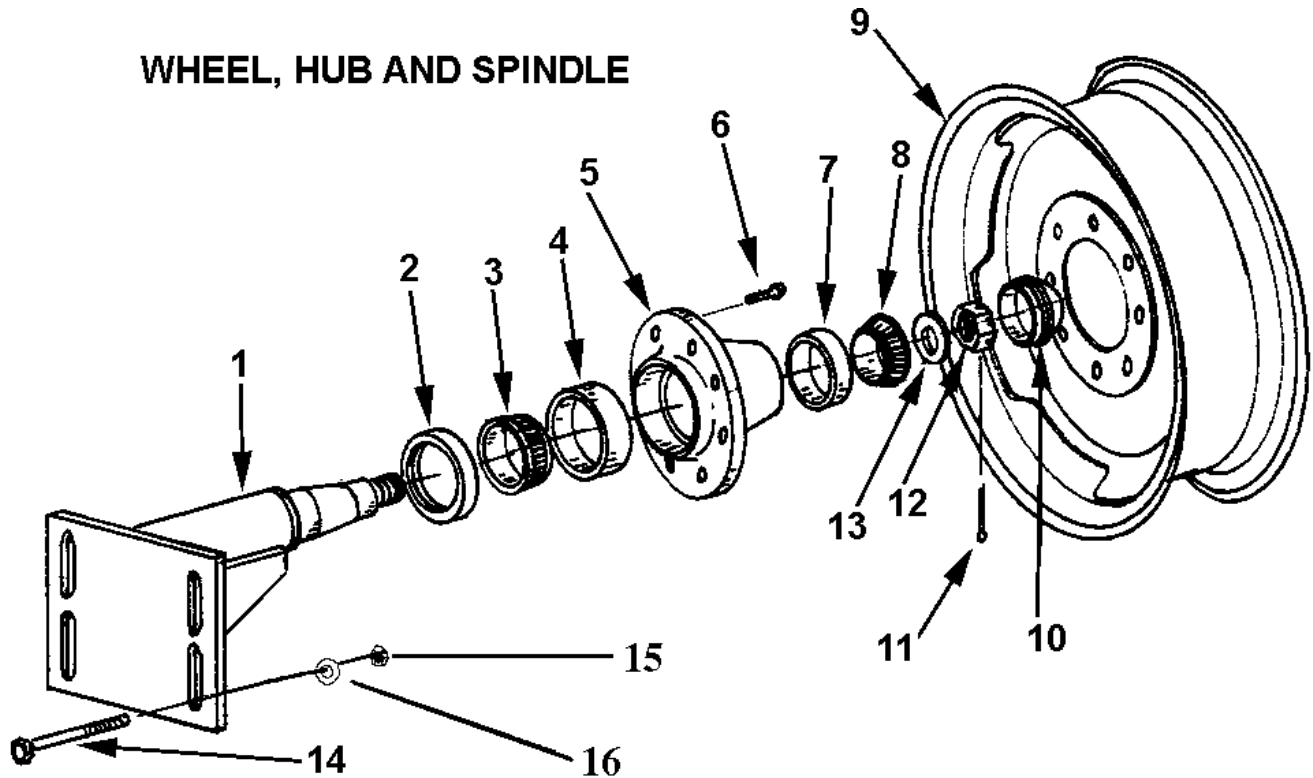
# POLE AND AXLE ASSEMBLY




t-900poleaxle

KEY NO.	PART NO.	DESCRIPTION
1	A10033A	Single lip hitch
2	14505	Grease fitting, 1/8" NPT
3	A9059	Pole
4	AFP-00002	Cotter Pin, 3/16" x 1-3/4"
5	AFN-00010	Nut, castellated, 1-1/4" NF
6	A8027	Washer, special, 1-1/4" flat
7	AFB-00005	Bolt, 3/4" NC x 2-1/2" long
8	A40006	Ball swivel
9	AFB-00068	Bolt, 5/16" x 2-1/2"
	7430	Nut: 5/16"
	8070	Lockwasher: 5/16"
10	A10034	Pin, 1-1/2" x 6-1/4"
11	A10033	Clevis hitch, optional
12	AFW-00002	Lockwasher, 3/4"
***	A9008A	Spindle, Blank weldable upto S.N. 20197
***	A9062	Spindle, Blank weldable S.N. 20198 above
13	A4553W	Weld Kit, Yoke hitch rebuild kit
14	A9062	Weld, Spindle blank

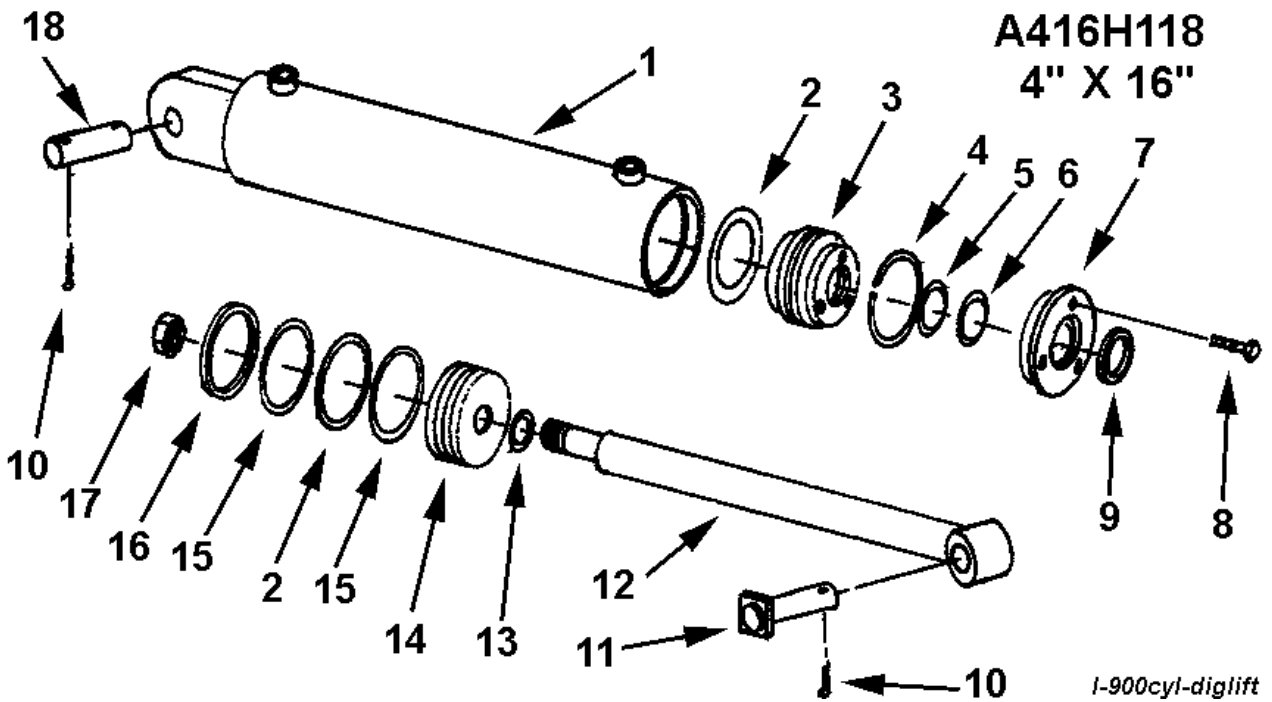
## WHEEL, HUB AND SPINDLE



I-900wheel

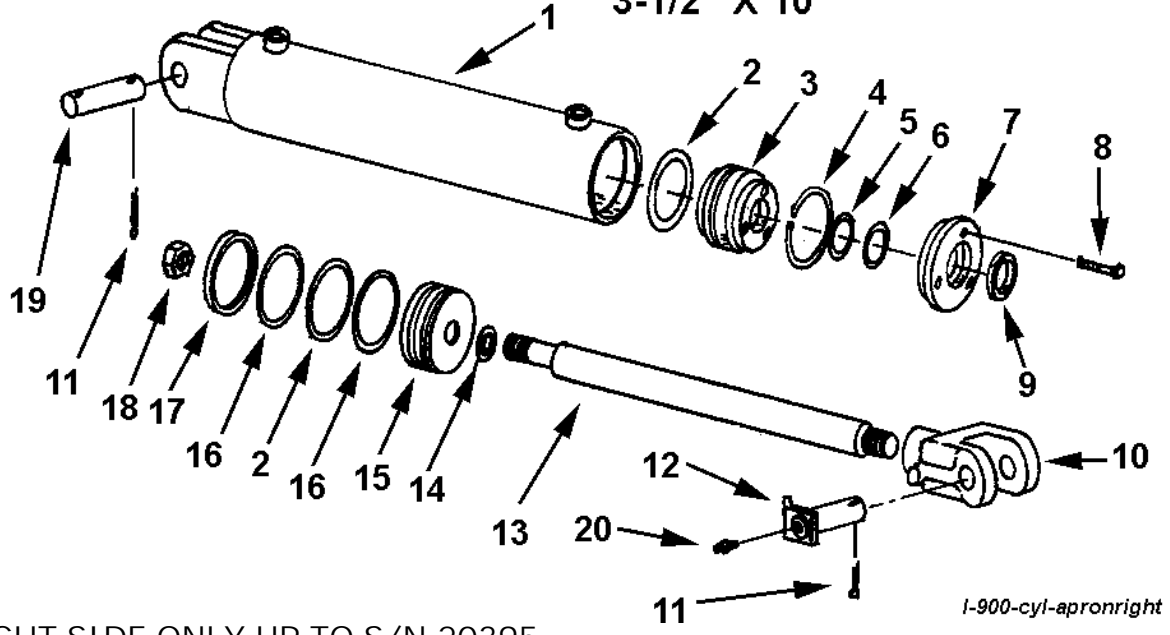
KEY NO.	PART NO.	DESCRIPTION
1	A9060	Spindle, Rear with flange base plate, s.n. 17908 above
	A9008	Spindle, Rear with flange base upto s.n. 17907
2	A8020	Grease seal ( CR 35062 )
3	A9061	Bearing cone, inner s.n. 17908 above (Timken 39585)
	A8021	Bearing cone, inner upto s.n. 17907 ( Timken 39581 )
4	A8022	Bearing cup, inner ( Timken 39520 )
5	<del>A8023</del> 	Hub
6	A4519	Wheel bolt, 9/16" NF
7	A8024	Bearing cup, outer ( Timken 3525 )
8	A8025	Bearing cone, outer ( Timken 3585 )
9	A6022A	Wheel, 16.1 x 11" DC, front
	A6023	Large wheel 24" x 15", rear
10	A8026	Hub cap
11	AFP-00002	Cotter pin, 3/16" x 1-3/4"
12	AFN-00005	Spindle nut
13	A8027	Spindle washer, special
14	AFB-00001	Bolt, 1" NC x 6-1/2" long
15	AFN-00012	Nut, 1" NC
16	AFW-00001	Flat washer, 1"

# 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	AFP-00003	Cotter pin, 3/16" x 1-1/2"
11	A10168	Pin, 1-1/8" x 3-3/4"
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    1 - A22H15    2 - A300H05
		1 - A22H15A    2 - A300H06    1 - A22H17
		1 - A45H05

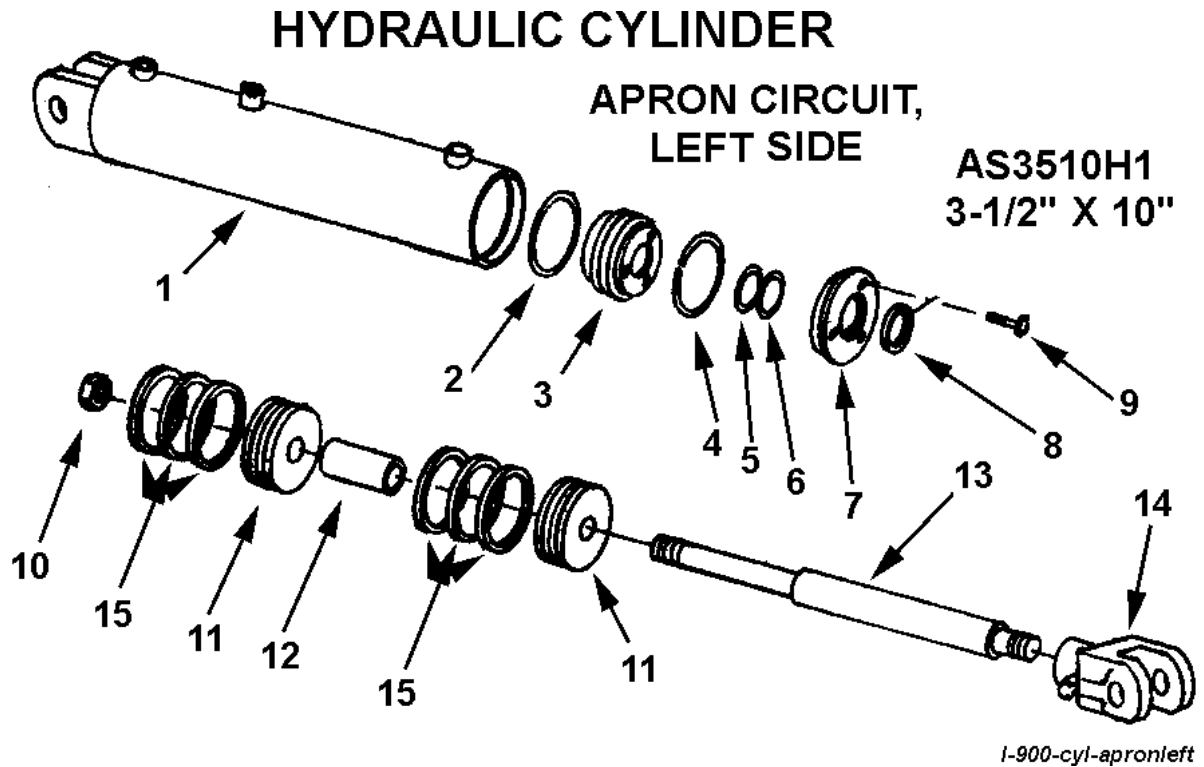
# HYDRAULIC CYLINDER A3510H1 3-1/2" X 10" APRON CIRCUIT,



*1-900-cyl-apronright*

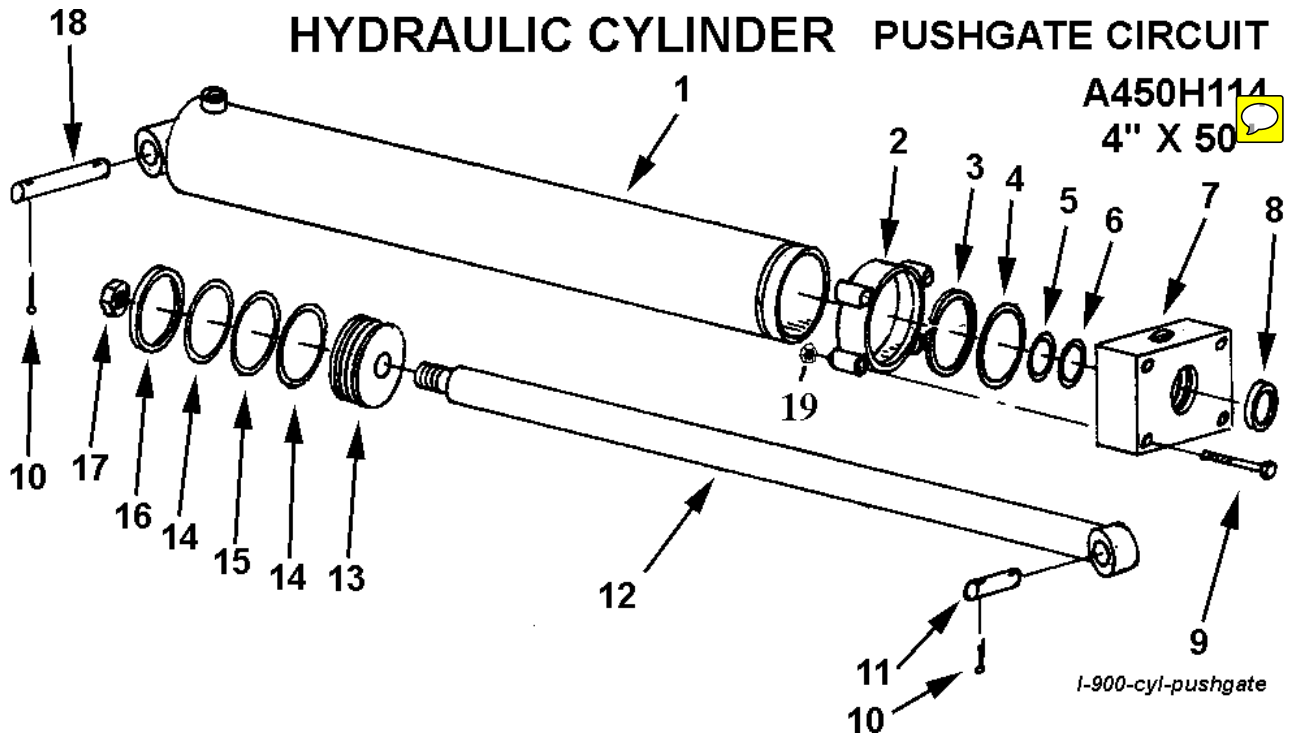
RIGHT SIDE ONLY UP TO S/N 20395  
 LEFT & RIGHT SIDE FROM S/N 20396 UP

KEY NO.	PART NO.	DESCRIPTION
1	A12H04	Barrel
2	A22H08	O-ring, 3-1/2" OD
3	A22H13	Head gland
4	A22H14	Retainer ring
5	A22H15	O-ring, 1-1/2" ID x 1/8" thickness
6	A22H15A	Backup washer
7	A22H16	Head cap
8	A22H18	Socket head capscrew, 1/4 x 1"
9	A22H17	Wiper seal, 1-1/2" ID
10	A12H03	Clevis end
11	AFP-00003	Cotter pin, 3/16" x 1-1/2"
12	A10167	Pin, 1" x 3-1/16"
13	A12H02	Shaft, 1-1/2" diameter
14	A22H10	Piston gasket, 3/4" ID
15	A22H09	Piston
16	A22H07	Back up washer, 3-1/2" OD
17	A22H06	Piston ring, 3-1/2" x 3/16"
18	A22H05	Piston nut, 3/4" NF
19	A1217	Pin, 1" x 3-1/2"
20	14505	Grease fitting
	A22H19B	Packing kit containing:
		1 - A22H06    2 - A22H07    2 - A22H08
		1 - A22H10    1 - A22H14    1 - A22H15
		1 - A22H15A    1 - A22H17



LEFT SIDE ONLY UP TO S/N 20395

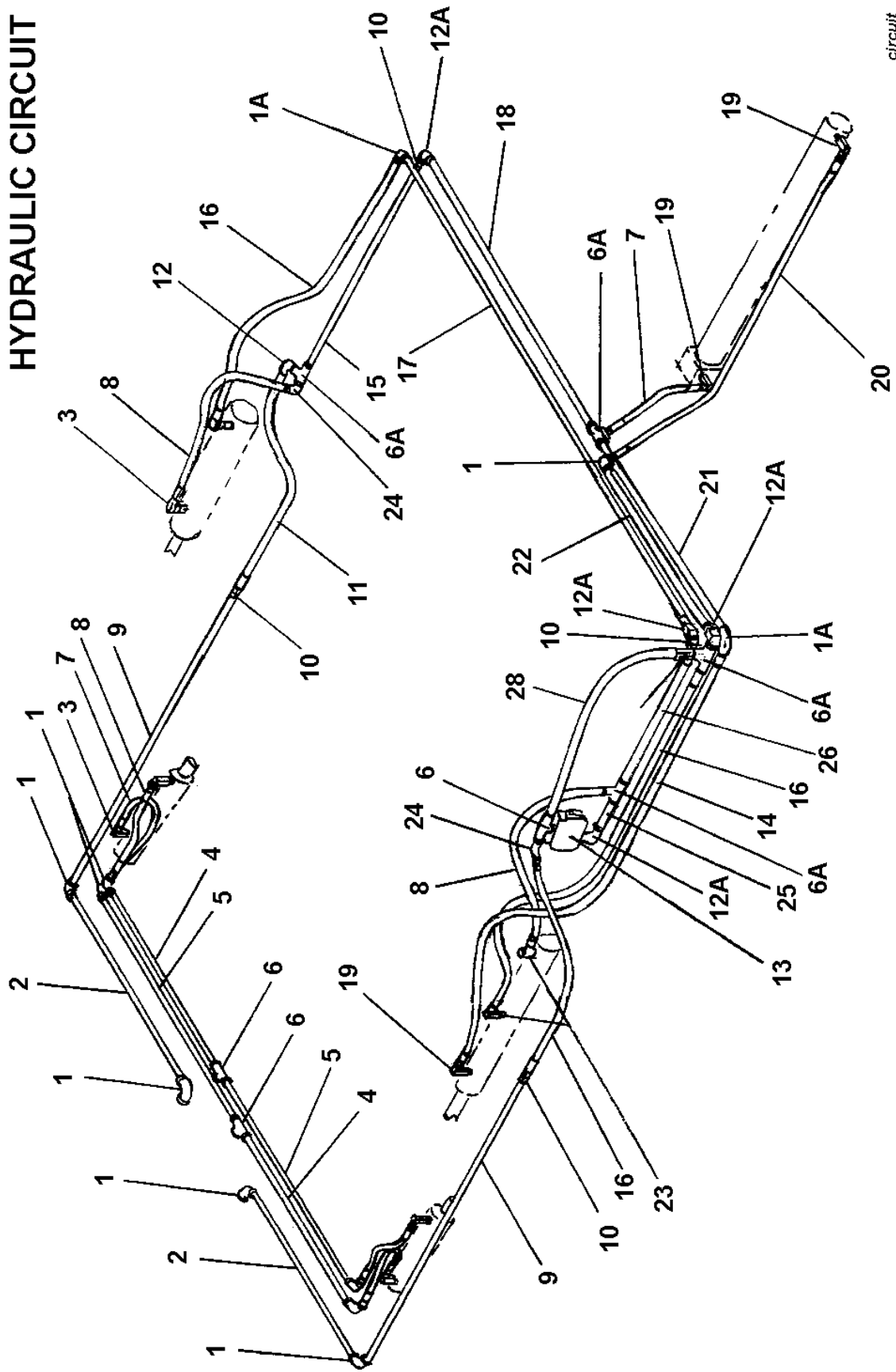
KEY NO.	PART NO.	DESCRIPTION
1	A101H78A	Barrel
2	A22H08	O-ring, 3-1/2" OD x 3/16"
3	A22H13	Head gland
4	A22H14	Retainer ring
5	A22H15	O-ring, 1-1/2" ID
6	A22H15A	Backup washer, 1-1/2" ID
7	A22H16A	Gland cap
8	A22H17	Wiper seal, 1-1/2" ID
9	A22H18A	Capscrew, 1/4" NC x 1"
10	A300H03	Piston nut
11	A101H79A	Piston, 3-1/2"
12	A130H12A	Piston spacer
13	A101H80A	Shaft, 1-1/2" diameter
14	A12H03	Clevis end
15	A22H06A	Cast iron rings, 3-1/2" x 1/4"
	A101H81A	Packing kit containing:
		6 - A22H06A    1 - A22H08    1 - A22H15
		1 - A22H15A    1 - A22H17



KEY NO.	PART NO.	DESCRIPTION
1	A90H25	Barrel Assembly
2	A80H22	Clamp ring
3	A80H23	Retainer ring
4	A80H24	O-ring, 4" OD x 1/8"
5	A400H12	O-ring, 2" ID
6	A400H12A	Backup washer
7	A80H25	Head gland
8	A80H06	Wiper seal, 2" ID
9	AFB-00009	Bolt, 1/2" NF x 4-1/2", Gd. 5, w/ nut
10	8602	Cotter pin, 1/4" x 2"
11	A8061	Pin, 1-1/4" x 4"
12	A90H26	Rod assembly
13	A80H27	Piston
14	A300H05	Backup washer, 4" OD
15	A300H06	O-ring, 4" OD x 3/16"
16	A300H04	Cast iron ring, 4" OD
17	A400H17	Piston nut, 1-1/4" NF
18	A8062	Pin, 1-1/4" x 7"
19	AFN-00011	Nut, 1-2" NC
	A80H30	Packing kit containing:
		1 - A80H24    2 - A300H05    1 - A400H12
		1 - A300H06    1 - A400H12A    1 - A300H04
		1 - A80H06

FOR MODELS UP TO S/N 20395

# HYDRAULIC CIRCUIT



circuit

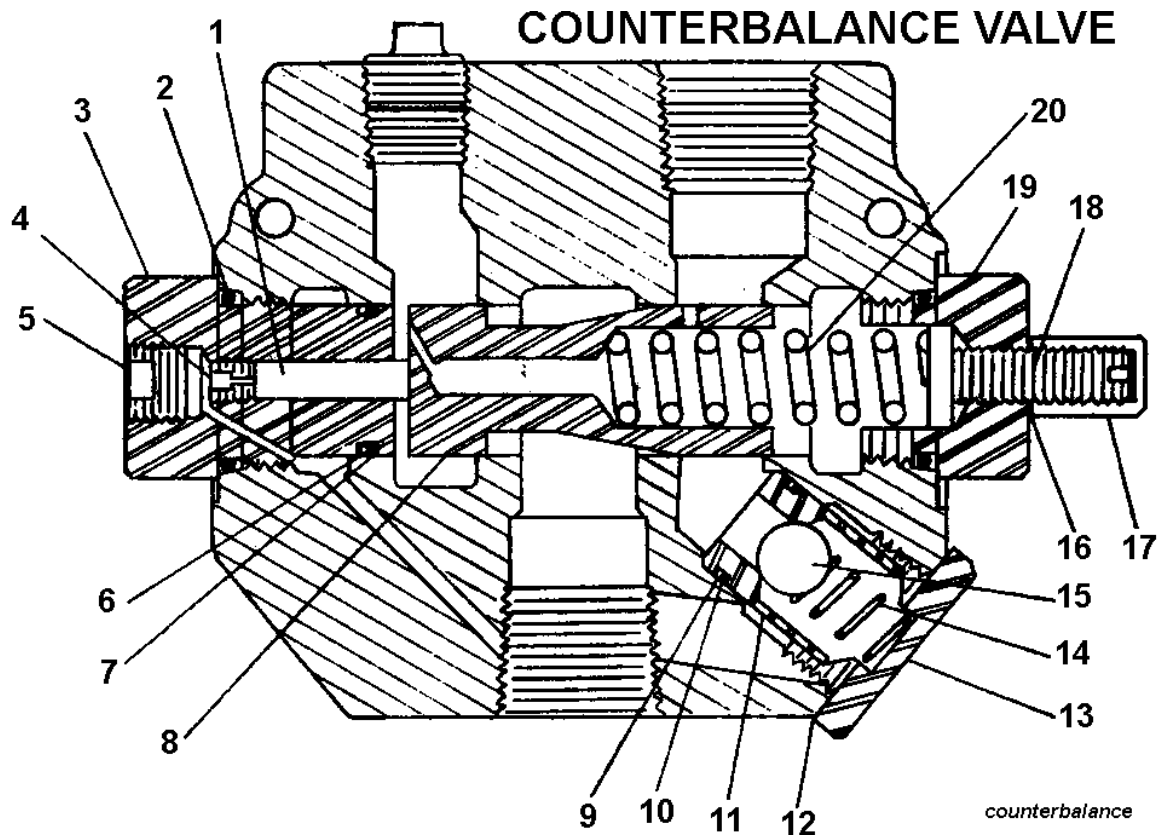


# FOR MODELS UP TO S/N 20395

## PARTS LIST

### HYDRAULIC CIRCUIT

KEY NO.	NO. REQ'D	PART NO.	DESCRIPTION
1	9		Elbow, 90°, 1/2" NPT, Cast
1A	2		Elbow, 90°, 1/2" NPT, Steel
2	2		Pipe, 1/2" x 41" long
3	6	A45H07	Swivel adapter, 90°, 3/8" male x 1/2" female
4	2		Pipe, 1/2" x 32-3/4" long
5	2		Pipe, 1/2" x 34-3/4" long
6	3		Pipe tee, 1/2" NPT, Cast
6A	4		Pipe tee, 1/2" NPT, Steel
7	3	A60H01A	Hose, 1/2" x 18" long
8	4	A45H06	Hose, 1/2" x 24" long
9	2		Hose, 1/2" x 64" long
10	4	A101H74	Swivel adapter, straight, 1/2" female x female
11	1	A80H11	Hose, 1/2" x 40" long
12	1		Street elbow, 90°, 1/2" NPT, Cast
12A	4	A101H73	Street elbow, 90°, 1/2" NPT, Steel
13	1	A101H48	Counterbalance valve
14	1	A130H24	Hose, 1/2" x 58" long
15	1		Pipe, 1/2" x 32-1/4" long
16	3	A80H29	Hose, 1/2" x 46" long
17	1		Pipe, 1/2" x 85-3/4" long
18	1		Pipe, 1/2" x 47-1/4" long
19	5	A400H02	Swivel adapter, 90°, 1/2" male x female
20	1	A101H82	Hose, 1/2" x 55" long
21	1		Pipe, 1/2" x 39-3/4" long
22	1		Pipe, 1/2" x 37-1/4" long
23	2		Pipe bushing, 3/4" NPT x 1/2" NPT
24	2		Street elbow, 45°, 1/2" NPT, Cast
25	1		Pipe, 1/2" x 3" long
26	1		Pipe, 1/2" x 21" long
27	1	A600H28	Check valve
28	1	A101H76	Hose, 1/2" x 33" long



Part #A101H48  
 USED ON MODELS UP TO S/N 20395

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

## FOR MODELS UP TO S/N 20395

### COUNTERBALANCE VALVE

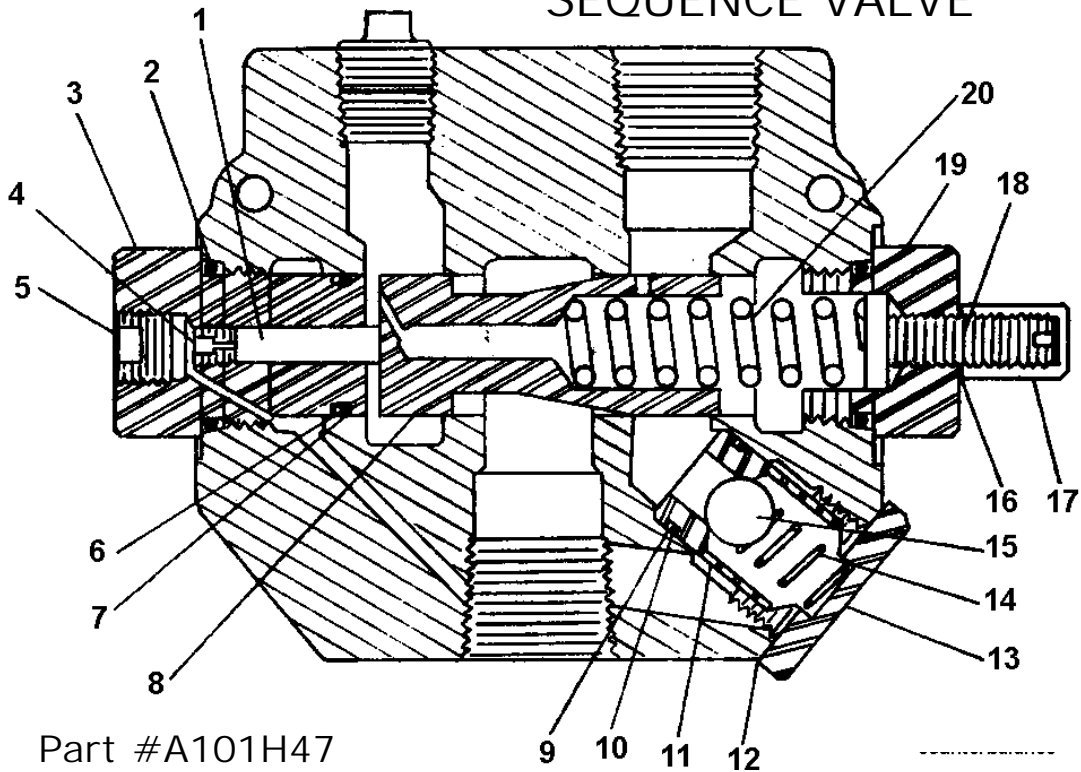
PURPOSE of the counterbalance valve is to prevent the front gate from closing before the rear pushgate is fully retracted when the scraper is empty. This enables the operator to start the next cut without having to reopen the gate from the closed position.

INSTRUCTIONS for establishing counterbalance valve setting:

When properly adjusted, the front gate will close 40% from full open position and hold at that position until the rear pushgate is fully retracted. If the front gate is closing more than 40%, remove the acorn cap nut and turn the adjusting screw clockwise until the front gate holds at that position. Turn an additional  $\frac{1}{4}$  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.

FOR MODELS AFTER S/N 20396

## SEQUENCE VALVE



Part #A101H47

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	A101H70	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	A101H69	Adjusting plug - RD1075 SM
20	A101H68	Metering spring
*	A101H71	Valve body

\* NOT SOLD SEPARATELY

## FOR MODELS AFTER S/N 20396

### SEQUENCE VALVE

The sequence valve controls two hydraulic circuits with one hydraulic remote. Ashland Industries incorporates a sequence valve to control the Apron and Pushoff cylinder systems. When the tractors hydraulic remote is activated, oil flows first to the apron cylinders until they are fully extended. Once the cylinders are fully extended, the apron circuits' hydraulic pressure begins to increase. Once the pressure threshold is surpassed (which is adjustable. See adjustment section), the sequence valve diverts the oil flow to the pushoff's hydraulic circuit. Once the pushoff is completely extended the operator then reverses the tractors hydraulic remote. This will direct oil first to the Apron circuit. Once the aprons cylinders are fully retracted, again the hydraulic pressure begin to increase allowing the pushoff to retract fully once the oil has been diverted from the sequence valve.

#### INSTRUCTIONS for establishing sequence valve setting:

Remove acorn nut from end of sequence valve with a 1/2" wrench. Turn adjustment screw, using a 4mm hex wrench, clockwise until front apron rises before the push-off advances while the earthmover is empty. Turn the adjustment screw an additional 1/4 turn clockwise, then replace the acorn nut and tighten. Torque check valve assembly and internal pilot plug to 25 ft.-lbs. maximum.

# 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, or the date the product is first put into service via a rental agreement or other means, whichever occurs first.

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