

## MODEL 50 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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## MODEL 50 SCRAPER ASSEMBLY INSTRUCTIONS

1. A suitable hoist or lift should be available for assembly.
2. Pack wheel bearing with grease and install hubs to rear spindles and front axle assembly. Be sure to follow the bearing numbers as shown in the parts listing as the front hubs require different bearings than the rear.
3. Raise the rear of the frame and install wheels to hubs. Also install wheels to front axle assembly.
4. Raise front of frame and remove the two 5/8" x 4" bolts which hold the cast socket halves inside the gooseneck. Remove the cast socket halves.
5. Roll the pole and axle assembly directly under the gooseneck, place the cast socket halves around the ball socket on the axle. Lower the frame into place so that the socket halves seat into the gooseneck. (If necessary, clamp halves together with C-clamp while inserting into gooseneck.) Replace 5/8" x 4" bolts and tighten securely. Install long shank grease fitting into the hole in the back side of gooseneck.
6. Raise actuating frame over bucket and lower into place so that the holes in the arms of the actuating frame align with the rear hole on each side of the bucket. Insert 1 1/4" x 2-9/16" pin (with tab type head) from the inside of the bucket. Secure with 5/8" x 1 1/4" NF bolt through bucket side with locking nut to the outside.
7. Connect actuating arm bars to the front holes in the bucket. In doing so, be sure that the cast roller on the opposite end of the actuating arm is in the up position and facing inward. Insert 1 1/4" x 2-9/16" pin (with tab type head) from the inside of the bucket. Secure with 5/8" x 1 1/4" NF bolt through the bucket side with locking nut to the outside.
8. Connect a short chain from the cutting edge to the cross pipe of the actuating frame, then raise this bucket and actuating assembly over the main frame and lower into place so that the front of the actuating frame can be connected to the 1 1/2" ID bearing on each side of the main frame. Secure with 1 1/2" x 5-5/8" pins on each side. Lock these pins in place by turning the pin until the hole in the head aligns with threaded hole in the actuating frame, then secure with 1/2" x 1" NC capscrew and lockwasher.
9. Lift front end of actuating arms and connect to the brackets on the front frame cross member using the 1 1/4" x 4-1/8" pins. Secure with 1/4" x 2" cotter pin.
10. Install hydraulic cylinders to main frame and actuating frame with rod end to actuating frame. Be sure the grease hole in the rod end is facing up. Use 1-1/8" x 3 1/4" pin at the base of the cylinder. Secure with 3/16" x 1 1/2" cotter pins. Use 1-1/8" x 6" pin at the rod end of the cylinder. Secure with 1" x 1/2" NC capscrew and lockwasher.
11. Install 3/8" 90° swivel adapters into front and rear port on each cylinder. Tighten so that the hose connection faces the rear.
12. Connect a 3/8" x 18" hose from the rear port of each cylinder to one of the pipe lines on the rear cross frame. Be sure both hoses from the rear ports are connected to the same pipe line.

13. Connect a 3/8" x 38" hose from the front port of each cylinder to the remaining pipe line on the rear cross frame.

14. Raise the apron assembly over the scraper and lower into position so that the holes in the arms of the apron align with the holes in the bucket sides. Insert the 1 1/4" to 1" shoulder pin through the apron arms and into the bucket. Install lock nut inside the bucket and tighten securely.

15. Install all the grease fittings and grease liberally.

16. If available, place assembled scraper on level floor or pavement and measure the distance from the cutting edge to floor, on both left and right sides, and then adjust axle spindle to obtain equal distance on both sides.

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##### Addendum:

There are mating surfaces between the offset bar of the actuating frame and the side wall of the bucket where a rubbing action occurs. Likewise, there is a spot between the offset bar of the actuating frame and the inside of the main frame on left and right sides. Apply a film of grease at these locations.

The rubbing action at these locations is intentional to support the bucket while in operation.

## 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 one 4-way (double acting) hydraulic control valve.

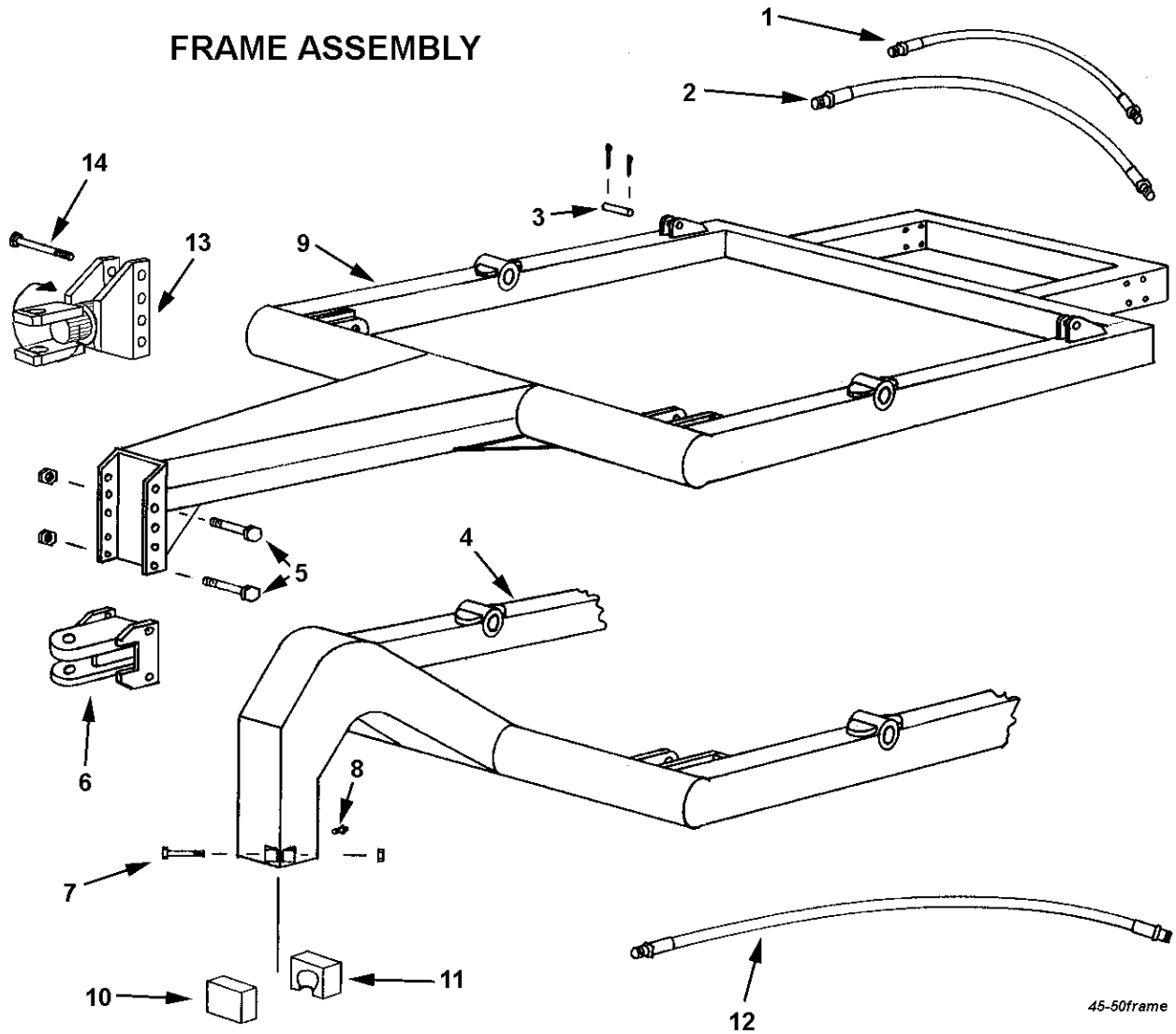
After scraper has been assembled, it should be greased at all points where grease fittings are provided. Connect hydraulic hoses to tractor and operate the scraper to maximum raise and drop several times to force any air from the hydraulic lines and cylinders. Check the oil level in the tractor hydraulic system and add to maintain the proper level.

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.

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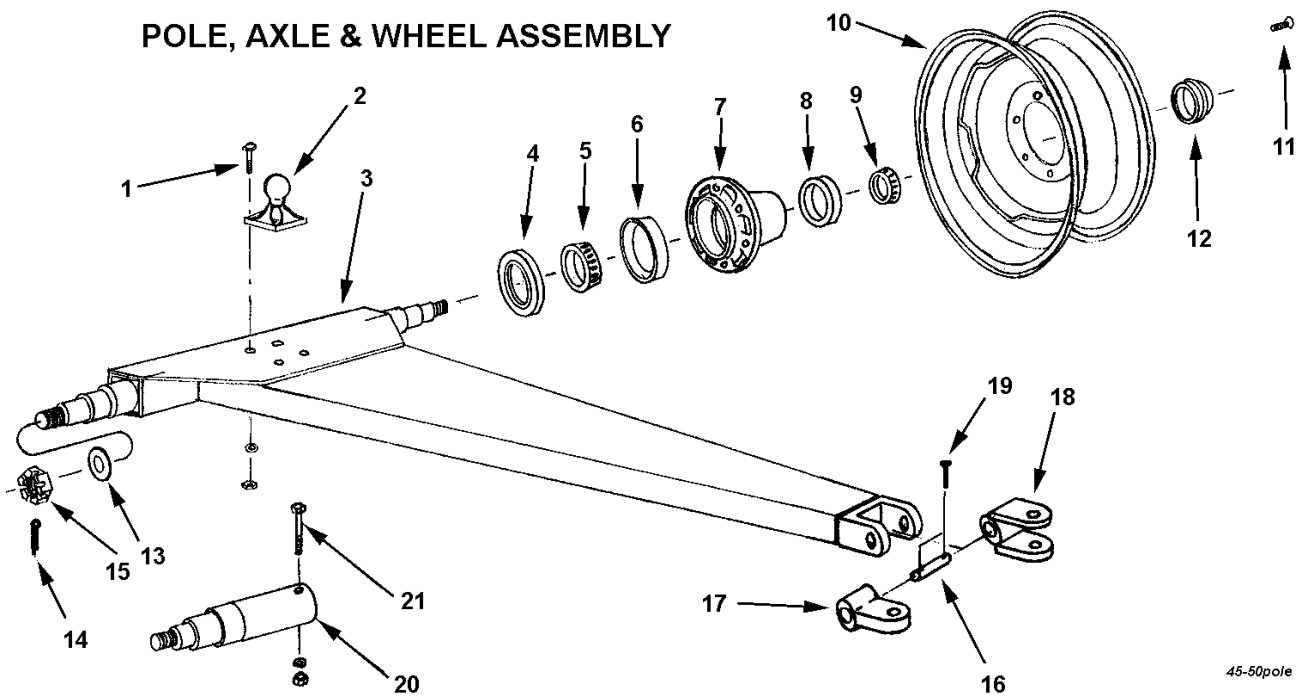
# FRAME ASSEMBLY



45-50frame

KEY NO.	PART NO.	DESCRIPTION
1	A450H01	Hydraulic hose, 3/8" x 18" single braid
2	A450H02	Hydraulic hose, 3/8" x 38" single braid
	A22H03	Swivel adapter, 90°
3	A45003	Pin, 1-1/8" x 3-1/4", cotter both ends
		Cotter pin, 3/16" x 1-1/2"
4	A4551	Frame, four wheel, Model D
5		Bolt, 3/4 x 6" NC w/ nut & LW
6	A4523	Hitch
7		Bolt, 5/8" x 4" NC w/ nut & LW
8	A2206	Grease fitting, 1-1/8" NPT strt. long
9	A4552	Frame, two wheel, Model S
10	A40004	Cast socket half, front
11	A40005	Cast socket half, rear w/ grease hole
12		Connecting hydraulic hose, 1/2" x 84" or 1/2" x 60"
13	A5004	Swivel hitch
14		Bolt, 1" x 6-1/2" NC w/ nut & LW
***	A022977-2	Hitch, Tractor 3 point, Category 2
***	A022977-3	Hitch, Tractor 3 point, Category 3

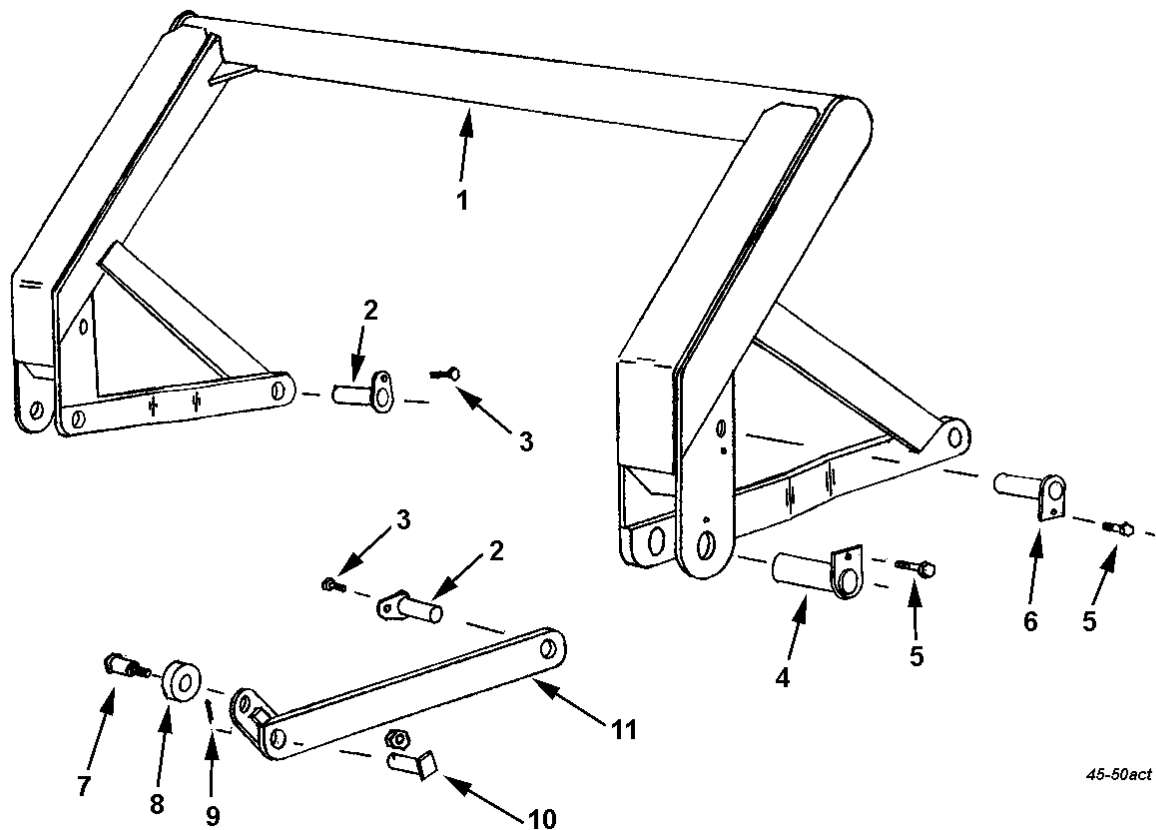
## POLE, AXLE & WHEEL ASSEMBLY



45-50pole

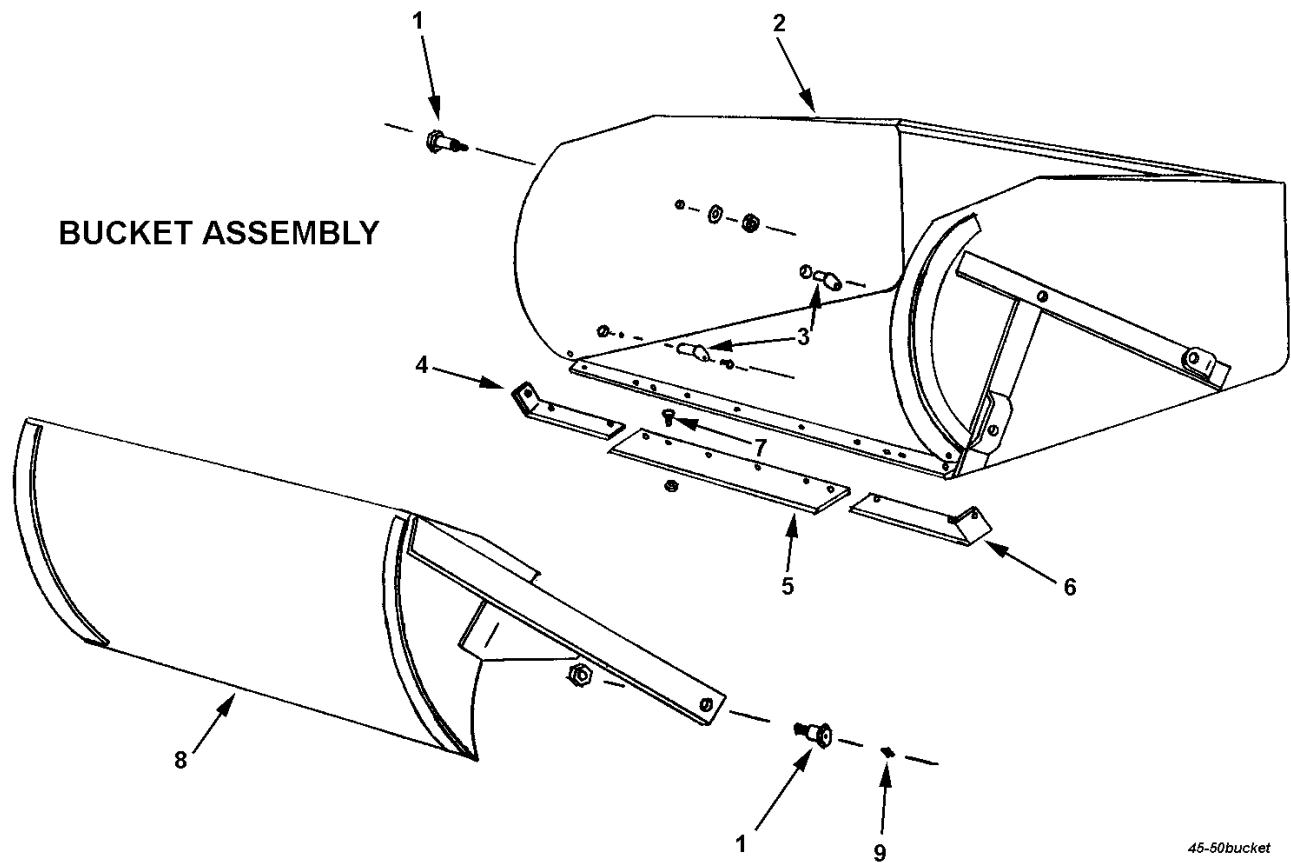
<u>KEY NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1		Bolt, 3/4" x 2-1/2" NC w/ nut & LW
2	A40006	Ball swivel
3	A5002	Pole & axle assembly, thru s/n 15279
3A	A5005	Pole assembly s/n 15280 & up
4	A2229A	Grease seal
5	A2230A	Bearing cone, inner
6	A2231	Bearing cup, inner
7	A2232	Hub, less bearing cups
8	A2233	Bearing cup, outer
9	A2234	Bearing cone, outer
10	A3319A	Wheel, 15" x 8"
11	A2236	Wheel bolt
12	A2235	Hub cap
13	A2239	Washer, special 7/8" flat
14		Cotter pin, 5/32 x 1-1/4"
15		Nut, 7/8" NF castellated
16	A6014	Pin, 1-1/4" x 6-3/4" w/ bolt holes
17	A4553A	Single lip hitch
18	A4553	Clevis hitch
19		Bolt, 5/16" x 2-1/2"
20	A5006	Spindle bolt on, s/n 15280 & up
21		Bolt, 1/2" NC x 5" lg., gr. 5 w/ nut & LW

## ACTUATING FRAME ASSEMBLY



45-50act

<u>KEY NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	A45005	Actuating frame
2	A45006	Pin, 1-1/4" x 2-9/16" w/ locking head
3		Bolt, 5/8" x 1-1/4" NC w/ lock nut
4	A2502	Pin, 1-1/2" x 5-3/4"
5		Capscrew, 1/2" x 1" NC w/ LW
6	A4524	Pin, 1-1/8" x 6"
7	A30003	Shoulder pin, 2-1/2" shoulder, 1-1/4" to 1"
		Nut, 1" NF lock nut
8	A30002	Roller
9		Cotter pin, 1/4" x 2"
10	A6007A	Pin, 1-1/4" x 4-1/8" w/ sq. head & hole for gr. zerk
11	A45007	Actuating arm, left
	A45008	Actuating arm, right

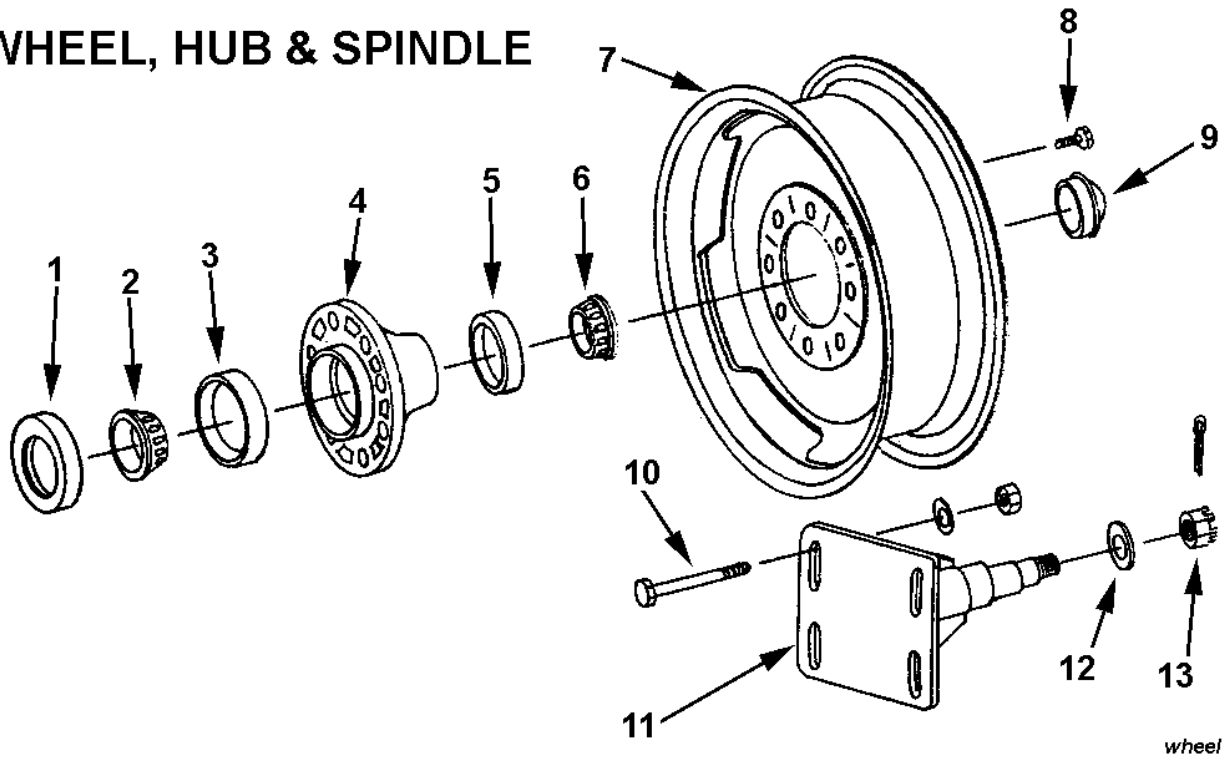


45-50bucket

<u>KEY NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	A30020	Shoulder pin, 1-1/4" to 1" NF w/ ctsk hole Nut, 1" lock type
2	A5003	Bucket
3	A45006	Pin, 1-1/4" x 2-9/16" w/ locking head
4	A2225	Right cutting edge, 6"
5	A45010	Center, cutting edge, 8" x 50"
6	A2222	Left cutting edge, 6"
7		Plow bolt, 1/2" x 1-3/4" w/ nut (6 req'd) Plow bolt, 5/8" x 2" w/ nut (6 req'd)
8	A45011	Apron
9		Grease fitting, 1/8" NPT regular



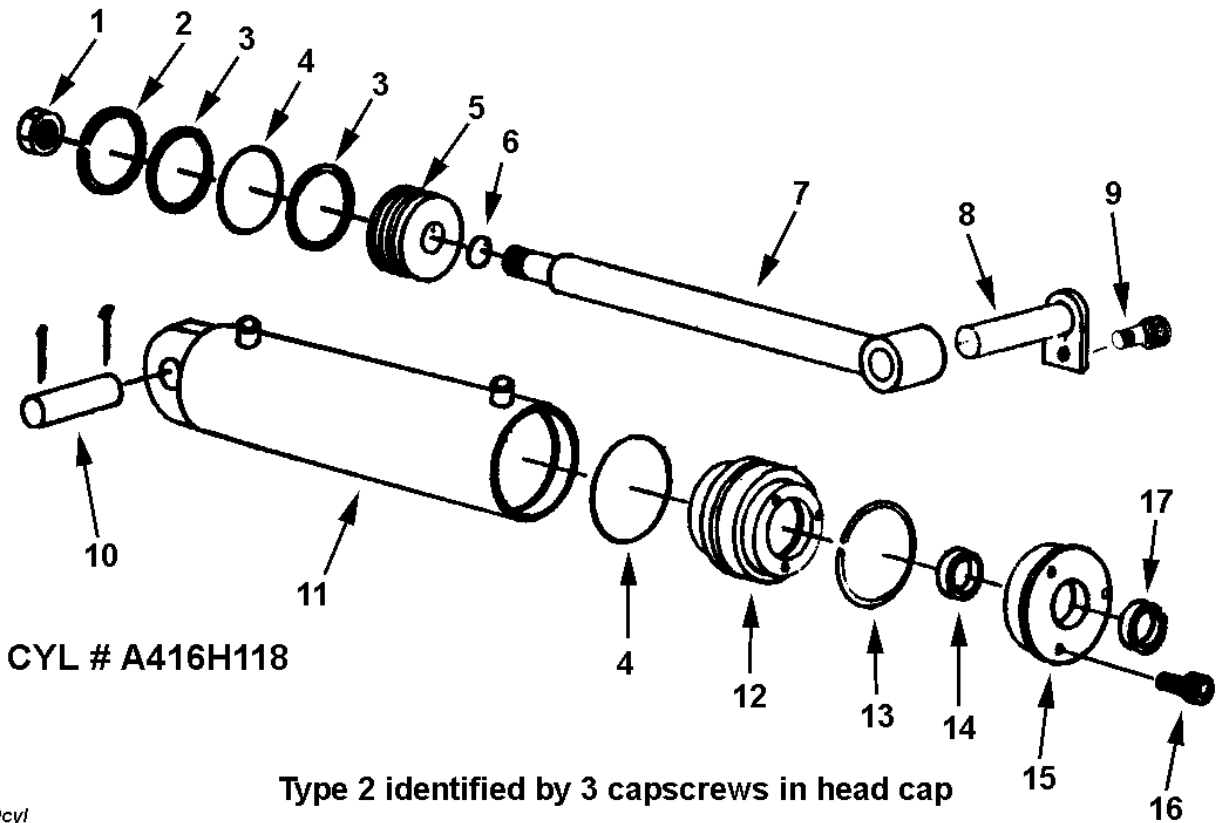
# WHEEL, HUB & SPINDLE



<u>KEY NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	A4512	Grease seal
2	A4513	Bearing cone, inner
3	A4514	Bearing cup, inner
4	A4515	Hub, less bearing cups
5	A2233	Bearing cup, outer
6	A4516	Bearing cone, outer
7	A4521A	Wheel, 20" D.C.
8	A4519	Wheel bolt
9	A2235	Hub cap
10		Bolt, 3/4" x 6" NC w/ nut & FW
11	A4520	Spindle
12	A2239	Washer, special 7/8" flat
13		Nut, 7/8" NF castellated Cotter pin

# HYDRAULIC CYLINDER

## 4" BORE X 16" STROKE

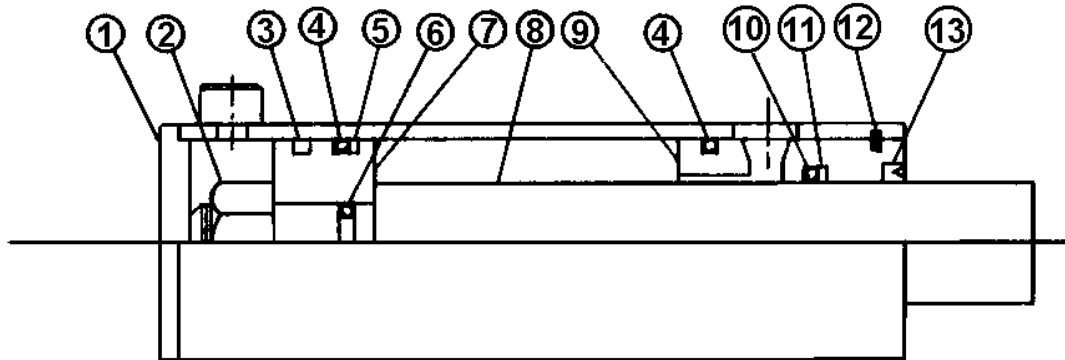


45-50cyl

KEY NO.	PART NO.	DESCRIPTION
1	A300H03	Piston nut, 1" NF
2	A300H04	Cast iron ring, 4" OD
3	A300H05	Backup washer, 4" OD
4	A300H06	O-ring seal, 4" OD x 3/16"
5	A300H07	Piston, 4"
6	A45H05	Piston gasket, 1"
7	A45H03	Shaft, 1-1/2" dia.
8	A4524	Pin, 1-1/8" x 6"
9		Capscrew, 1/2" x 1" NC w/ LW
10	A45003	Pin, 1-1/8" x 3-1/4"
		Cotter pin, 3/16" x 1-1/2"
11	A45H04	Barrel assembly
12	A300H11	Head gland
13	A300H12	Retainer ring
14	A22H15	O-ring, 1-1/2" x 1/8"
	A22H15A	Backup washer
15	A300H13	Head cap
16	A22H18	Capscrew, 1/4" x 1" NC
17	A22H17	Wiper seal, 1-1/2" ID
	A300H14B	Packing kit, containing:
		1 - A300H04    2 - A22H15    2 - A300H05
		1 - A22H15A    2 - A300H06    1 - A22H17
		1 - A45H05

4" Bore  
16" Stroke  
2 Port

## PMC-5600D Series



**Type 4 identified by Snap ring securing gland** *cyl-pmc-5600d*

<u>KEY NO.</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	A45H04-P	Butt and tube assembly
2	1	A-2043-8	Lock nut
3	1	PMAP-R-45	Piston ring
4	2	PMAP-O-45	O-ring
5	1	PMAP-W-45	Bu-washer
6	1	PMAP-O-19	O-ring
7	1	P4-1130	Piston
8	1	A45H03-P	Piston rod
9	1	GIC-3940	Gland
10	1	PMAP-O-32	O-ring
11	1	PMAP-W-32	Bu-washer
12	1	PMAP-VB-32	Wiper
13	1	TSR-400	Snap ring
	1	PMCK-5600D	Packing kit

# HOW TO OPERATE THE W7B-20DC RIM

**Note:** This rim has been developed for 20" used truck tires up to and including 9.00-20 ten ply. However, many users have found it possible to mount 10.00-20 twelve ply tires. The following procedures should be followed:

## Tools and Materials Required:

One Set Firestone Truck Tire Tools (48-A-200)  
One Pair Vise-Grip Pliers  
Lubricant (Avoid use of compound that contains water . . . or a solvent injurious to rubber — see your rim distributor)

## MOUNTING:



1. Remove flap inasmuch as it is not required on the drop center rim mounting and it prevents mounting the tire. Check to see tube is in casing and inflated sufficiently to prevent sag below tire beads.



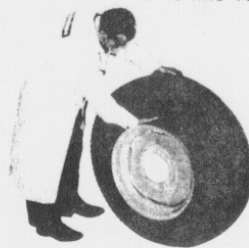
2. Place rim on floor with valve hole side up. Place tire over rim with valve stem pointing upwards. Force lower bead into well of rim as far as possible.



3. Lubricate last section of lower bead to facilitate mounting.



4. Using straight end of tool (with stop resting on rim flange) take small bites to work remaining section of lower bead onto rim.



5. Stand tire up with valve and valve hole at top of rim. Insert valve into valve hole.



6. To get top bead in place stand on tire and force bead down as far as possible and clamp vice grip pliers on the flange. (snub side toward tire). Using spoon end of tire iron with lug side towards rim, work progressively around bead using small bites until bead slips over flange onto rim base. In order to mount last 6" of bead it usually is necessary to insert second tire iron and lubricate the last bead portion.

## DEMOUNTING:



1. Remove valve core to deflate and loosen tire from bead seat of rim on both sides. Lubricate upper bead of tire thoroughly. With stops toward rim, insert spoon ends of both tools about 10 inches apart. While standing on tire to hold bead in well, pull one tool back toward center of rim.



2. Hold first tool in position with one foot and pull second tool toward center of rim. Progressively work top bead off rim, taking additional bites if necessary.



3. Stand tire and tube in vertical position with valve at top of assembly and remove valve from valve hole. Then place valve at bottom of assembly and pull out upper portion of tube so it will not interfere with demounting the second bead. Lubricate second bead. At top of assembly insert straight end of tool between bead and back flange of rim at about a 45° angle. Turn tool so it is perpendicular to rim. Pry second bead off.

**ELECTRIC WHEEL COMPANY-QUINCY, ILL.**

Division of the Firestone Tire & Rubber Company