

# OPERATOR'S AND PARTS MANUAL

## ***BUCKET LOADER ATTACHMENTS***

| **AD11**

| **AD12**

| **AM11**

| **AR10**

| **AR12**

| **AY11**

| **AY12**

| **AV20F**



MANUAL #5MP76314

**FRONTIER**<sup>™</sup>

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# INSTALLATION

## ATTACHING

1. Attaching the equipment listed in this manual is the same as attaching a standard bucket. Follow the attaching instructions in your specific loader manual.
2. If a grapple or 4-in-1 bucket is being installed, relieve pressure from the auxiliary hydraulic lines to be used with equipment per the manufacturer's manual.
3. Make sure the hydraulic couplers are free from any foreign material or contaminants and connect the hydraulic lines of the equipment to the tractor.
4. Route the hoses in such a fashion that they will not be damaged during operation.
5. Start the tractor and put the loader and auxiliary functions through full range of motion to check proper function and hose routing.
6. Attachment installation is complete.

## DETACHING

1. Choose a level place (max 8 degree incline) to detach the equipment.
2. Close the grapple or clam (if so equipped) and lower the unit to the ground.
3. If auxiliary hydraulics are attached, relieve hydraulic pressure per the manufacturer's manual and disconnect the hydraulic couplers.
4. Follow the detaching instruction in your specific loader manual.
5. Connect hydraulic couplers (if so equipped) together or install caps to prevent contaminants from entering the hydraulic system. Drape the lines over the top of the equipment or otherwise store hoses off of the ground to help prevent damage.

# MAINTENANCE

**WARNING!** Disconnect cylinder carefully from hydraulic hoses after removal from attachment. Hydraulic oil under pressure can cause severe injury or death.



## CYLINDER SEAL REPLACEMENT

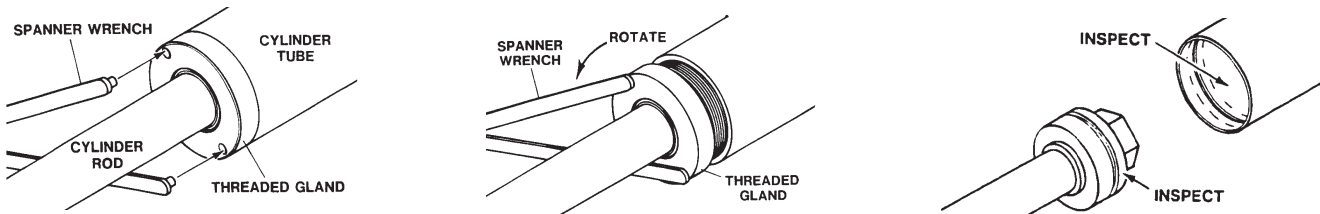
The following information is provided to assist you in the event you should need to repair or rebuild a hydraulic cylinder. When working on hydraulic cylinders, make sure that the work area and tools are clean and free of dirt to prevent contamination of the hydraulic system and damage to the hydraulic cylinders. Always protect the active part of the cylinder rod (the chrome section). Nicks or scratches on the surface of the rod could result in cylinder failure. Clean all parts thoroughly with a cleaning solvent before reassembly.

### DISASSEMBLY PROCEDURE

**IMPORTANT:** Do not contact the active surface of the cylinder rod with the vise. Damage to the rod could result.

#### THREADED TYPE GLAND

1. Rotate the gland with a spanner wrench counterclockwise until the gland is free of the cylinder tube.
2. Pull the cylinder rod from the cylinder tube and inspect the piston and the bore of the cylinder tube for deep scratches or galling. If damaged, the piston AND the cylinder tube must be replaced.



3. Remove the hex nut, piston, flat washer or spacer tube (if so equipped), and gland from the cylinder rod. If the cylinder rod is rusty, scratched, or bent, it must be replaced.
4. Remove and discard all the old seals.



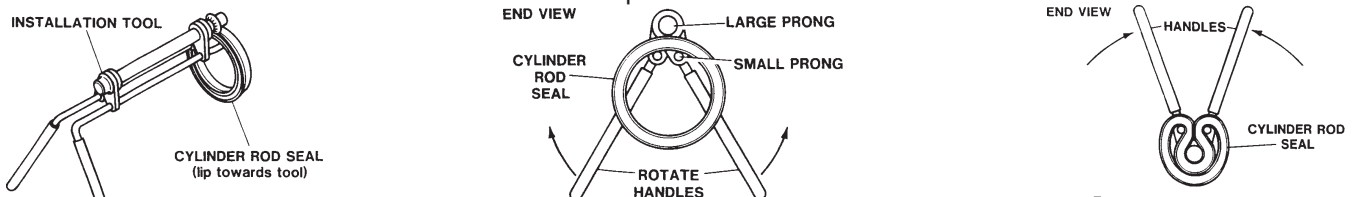
### ASSEMBLY PROCEDURE

**IMPORTANT:** Replace all seals even if they do not appear to be damaged. Failure to replace all seals may result in premature cylinder failure. **NOTE:** Seal kits will service most cylinders of similar bore size and rod diameter.

1. Install the cylinder rod seal in the gland first. Be careful not to damage the seal in the process, as it is somewhat difficult to install.

**NOTE:** A special installation tool (Part #5MP65349) is available to help with installing the seal. Simply fit the end of the tool over the seal so that the large prong of the tool is on the outside of the seal, and the two smaller prongs on the inside. The lip of the seal should be facing towards the tool. Rotate the handles on the tool around to wrap the seal around the end of the tool.

Rotate the handles on the tool around to wrap the seal around the end of the tool.



## AY11F 53" 4-IN-1 BUCKET 100, 200 & 300 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP106515	Male Coupler 6FBo 1/4" Body
2	1	5MP106516	Female Coupler 6FBo 1/4" Body
3	2	5MP3457	Straight Connector 6MBo-6MJ
4	2	5MP37520	1/4" Hose X 42" 6FJX-6FJX
5	4	5MP3434	6MBo-6MJ 90° Elbow
6	4	5MP37421	1/4" Hose X 25" 6FJX-6FJX
7	4	5MP1024	5/16" UNC X 1-1/2" Hex Bolt
8	4	5MP1502	5/16" Lock Washer
9	4	5MP103183	Hose Clamp Plate
10	4	5MP103180	Hose Clamp
11	2	5MP124202	Cylinder Assembly
12	2	5MP10122	3/4" UNC X 5" Hex Bolt - GR8
13	2	5MP124201	Bushing
14	4	5MP1649	3/4" Hard Flat Washer
15	4	5MP1936	3/4" UNC Deformed Lock Nut
16	2	5MP3314	Tee 6MJ-6MJ-6MJ
17	2	5MP10122	3/4" UNC X 5" Hex Bolt - GR8
18	1	5MP124181	Back Blade
19	2	5MP124201	Bushing
20	2	5MP6616	Grease Fitting
21	2	5MP5097	Pivot Pin 1" X 2-7/16"
22	2	5MP1793	Cotter Pin
23	1	5MP124190	Clam
24	1	---	Serial Number Identification Tag Location
25	1	5MP40151	Warning Decal, High Pressure Fluid
26	1	5MP41347	Caution Decal, Read Manual
27	1	5FPW50426	Warning Decal, Lock Pins
28	2	5FP500737	Warning Decal, Pinch Points
29	2	5FPRDL3125	Warning Decal, Crushing Hazard

## AY12D & AY12G 84" 4-IN-1 BUCKET 600, 700, GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP15512	Male Coupler 10FBo 1/2" Body
	2	5MP51753	Male Coupler Cover
2	2	5MP3362	10MBo-6MJ Straight Connector
3	2	5MP37886	3/8" Hose X 60" 6FJX-6FJX
4	1	5MP107758	Valve Cover
5	3	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
6	3	5MP1502	5/16" Lock Washer
7	3	5MP1513	5/16" Flat Washer
8	1	5MP35806	1/4" Hose X 45" 6FJX-6FJX
9	1	5MP37264	1/4" Hose X 43" 6FJX-6FJX
10	3	5MP3434	6MBo-6MJ 90° Elbow
11	1	5MP88536	Valve - Gresen
12	1	5MP30169	6MBo-6MJ 90° Long Elbow
13	2	5MP30031	6MJ-6FJX-6MJ Tee
14	1	5MP37579	1/4" Hose X 51" 6FJX-6FJX
15	1	5MP35807	1/4" Hose X 50" 6FJX-6FJX
16	4	5MP1030	5/16" UNC X 3" Hex Bolt
17	2	5MP107553	Cylinder Pin
18	6	5MP1753	5/16" UNC Nylock Nut
19	6	5MP6616	Grease Fitting
20	2	5MP111736	Cylinder Assembly
21	2	5MP1029	5/16" UNC X 2-3/4" Hex Bolt
22	2	5MP107552	Cylinder Pin
23	1	5MP111344	84" Back Blade (600 & 700 Series Loader)
		5MP111748	84" Back Blade (Global Carrier Series Loader)
24	1	5MP111806	84" Clam
25	2	5MP112057	Bushing
26	2	5MP107551	Pivot Pin
27	2	5FP500737	Warning Decal, Pinch Points
28	2	5FPRDL3125	Warning Decal, Crushing Hazard
29	1	---	Serial Number Identification Tag Location
30	1	5MP41347	Caution Decal, Read Manual
31	1	5MP40151	Warning Decal, High Pressure Fluid

### ITEMS #32 THROUGH #37 ARE USED ON 600 & 700 SERIES LOADERS ONLY

32	4	5MP2560	M12 Hex Nut
33	1	5FP1352136	Right Latch Pin
34	2	5FP0710145	Trip Pin
35	1	5FP1352135	Left Latch Pin
36	2	5MP10195	Roll Pin
37	2	5FP0710144	Compression Spring

## AD12D & AD12G 82" DEBRIS BUCKET 600, 700 & GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	2	5FP0310115	1/2" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	12	5MP1525	3/8" SAE Flat Washer
	6	5FP81595	Spacer Tube
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352369	Cylinder Pin 3-15/32" Long
12	2	5FP1352370	Cylinder Pin 4-15/32" Long
13	2	5MP30381	6MFS-6MBo Long 90° Elbow
14	1	5MP88536	Check Valve
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
	4	5MP1513	5/16" Flat Washer
	2	5MP1934	5/16" UNC Center Dented Lock Nut
16	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
17	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
18	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
19	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
20	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
21	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
22	2	5MP34114	Rubber Edge
23	2	5FP1352371	Grapple Pivot Pin
24	4	5MP6616	Grease Fitting
25	4	5FPLAF9544	Replacement Bushing
26	1	5FP1352377	Right Grapple
27	1	5FP1352376	Left Grapple
28	1	5FP135245309	82" Bucket (Global Carrier Series Loader)
	1	5FP135245307	82" Bucket (600 & 700 Series Loader)
29	2	5FP500737	Warning Decal, Pinch Points
30	2	5FPRDL3125	Warning Decal, Crushing Hazard
31	1	----	Serial Number Identification Tag Location
32	1	5MP41347	Caution Decal, Read Manual
33	1	5MP40151	Warning Decal, High Pressure Fluid

## AM11H 60" MANURE FORK AND GRAPPLE 300 & 400 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP106516*	Female Coupler 6FBo 1/4" Body
2	1	5MP106515*	Male Coupler 6FBo 1/4" Body
3	1	5FP0310125	1/4" Hose X 81" 6FFS-6MBo
4	1	5FP0310124	1/4" Hose X 72" 6FFS-6MBo
5	2	5MP30204	6MFS-6MBo 90° Elbow
6	1	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
7	2	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	4	5MP1525	3/8" SAE Flat Washer
	2	5FP81595	Spacer Tube
	2	5MP1837	3/8" UNC Torque Lock Nut
8	2	5FP1352369	Cylinder Pin 3-15/32" Long
9	4	5MP10016	3/4" UNC X 1-3/4" Socket Head Shoulder Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1528	5/8" SAE Flat Washer
	4	5MP1839	5/8" UNC Torque Lock Nut
10	1	5FP1352577	Grapple
11	4	5MP1141	3/4" UNC X 2-1/2" Hex Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1936	3/4" UNC Torque Lock Nut
12	8	5FPLAF9481	Replacement Bushing
13	1	5FP135255004	Back Frame
14	8	5FP0710157	Fork Tine
	8	5FP0710159	Replacement Nut
15	2	5FPRDL3125	Warning Decal, Crushing Hazard
16	1	5MP41347	Caution Decal, Read Manual
17	1	5MP40151	Warning Decal, High Pressure Fluid
18	1	5FPW50426	Warning Decal, Lock Pins
19	1	----	Serial Number Identification Tag Location
20	2	5FP500737	Warning Decal, Pinch Points

\* Hydraulic Kit 5MP107610 needed to adapt manure fork and grapple to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

## OPTIONAL ROCK BUCKET GRAPPLE AR10 SERIES 66" & 75" ROCK BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	----	Serial Number Identification Tag Location
2	1	5MP40151	Warning Decal, High Pressure Fluid
3	2	5MP38359	1/4" Hose X 15" 6FJX-6FJX 90° Long
4	1	5MP30383	Straight Connector 6MJ-6FJ W/.0625 Orifice
5	2	5MP30379	Bulkhead Tee 6MJ-6MJ-6MJ (Includes Nut)
6	2	5MP38114	1/4" Hose X 50" 6FJX-6FJX
7	2	5MP3297	Straight Bulkhead Connector 6MJ-6MJ (Includes Nut)
8	2	5MP38360	1/4" Hose X 13-1/2" 6FJX-6FJX 90° Short
9	6	5MP6616	Grease Fitting
10	2	5MP107567	Cylinder Assembly
	-	5MP45822	Replacement Cylinder Seal Kit
11	4	5MP1044	3/8" UNC X 1-1/4" Hex Bolt
	8	5MP1514	3/8" Flat Washer
	4	5MP1226	3/8" UNC Hex Nut
12	4	5MP81807	Spacer
13	2	5MP104642	Cylinder Pin
14	2	5MP104650	Rear Column
15	4	5MP1044	3/8" UNC X 1-1/4" Hex Bolt
	8	5MP1514	3/8" Flat Washer
	4	5MP1503	3/8" Lock Washer
	4	5MP1226	3/8" UNC Hex Nut
16	1	5MP105590	Fitting Guard - Right
17	1	5MP105591	Fitting Guard - Left
18	2	5MP88713	U-Bolt
	4	5MP1646	1/2" Hard Flat Washer
	4	5MP1841	1/2" UNC Deformed Lock Nut
19	2	5MP104957	Grapple Pin
20	2	5MP1030	5/16" UNC X 3" Hex Bolt
	2	5MP1502	5/16" Lock Washer
	2	5MP1225	5/16" UNC Hex Nut
21	2	5MP104640	Arm
22	2	5MP104644	Cylinder Pin
23	8	5MP1090	1/2" UNC X 1-1/2" Hex Bolt
	16	5MP1646	1/2" Hard Flat Washer
	8	5MP1841	1/2" UNC Deformed Hex Nut
24	1	5MP104648	Grapple
25	2	5FPRDL3125	Warning Decal, Crush Hazard
26	2	5FP500737	Warning Decal, Pinch Points

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