



MODEL NO. 41252-90001 & UP

SET-UP AND PARTS CATALOG

**PA-17 WM FRAME KIT & SPREADER
FOR THE WORKMAN® VEHICLE**

Refer to the illustrated Parts Catalog for the details of parts used in assembling the Workman Spreader Frame Kit.

NOTE: "Right", "Left", "Front" and "Rear" are reference while seated in the operator's position.

1. Install the TORO APU Electric Clutch Kit as per the instructions provided with that kit.

2. Remove top and sides of crate. Remove the lag screw at the Frame Mounting Bracket to remove the Crate skid.

NOTE: The optional Flow Control Kit (Model No. 41403) should be installed on the PA-17 Spreader BEFORE the Spreader is attached to the mounting frame. (FIG. 1) See the Set-Up and Parts Catalog furnished with the Flow Control Kit for the installation instructions.

3. Remove the Drive Shaft Cover and position the Spreader onto the Mounting Frame.

4. Use lacquer thinner to remove the rust preventative coating from the Spreader's in-put shaft and keyway. Insert the 1/4" square key into the in-put shaft. See FIG. 1.

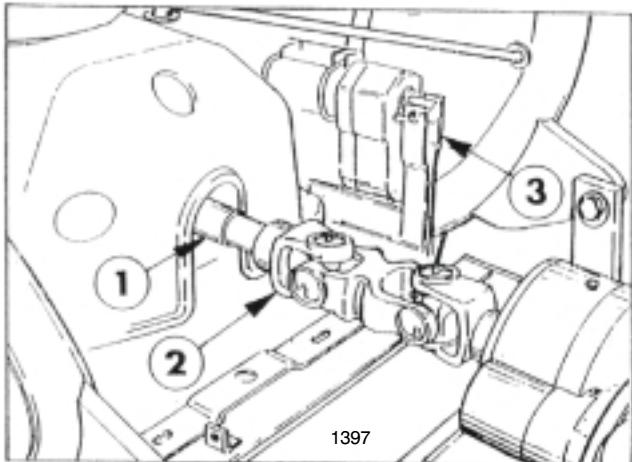


FIG. 1

1. Spreader In-put Shaft
2. End Yoke

3. Optional Flow Control

5. Align the Spreader in-put shaft with the End Yoke and slide the Spreader forward until the End Yoke is fully engaged on the in-put shaft. DO NOT TIGHTEN the set screw at this time.

6. Loosen the fasteners on the Frame's mounting straps and align the hole in the Spreader's rear mounting plate with the hole in the Mounting Frame as shown in FIG. 2. Insert a 5/8" x 2" bolt with washer through the holes to maintain the alignment of the Spreader in-put shaft and End Yoke.

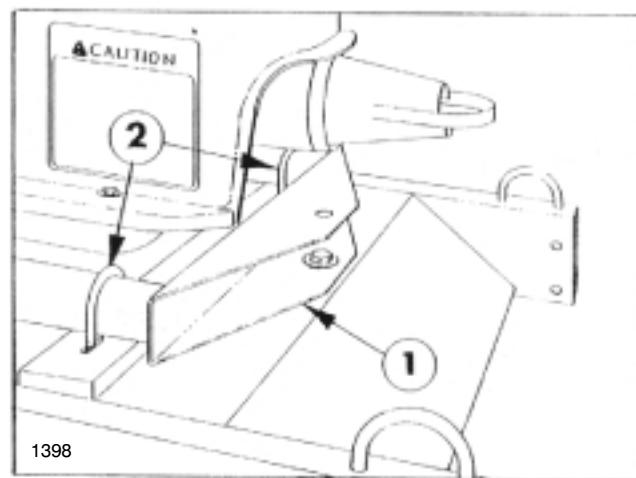


FIG. 2

1. Rear Mounting Plate

2. U-Bolts

7. Align Frames mounting mounting straps with the mounting lugs on the front of the Spreader. Secure the Spreader to the straps with two 5/8" x 2-1/2" bolts, eight washers and two hex nuts. See FIG. 3. Re-tighten mounting straps' fasteners.

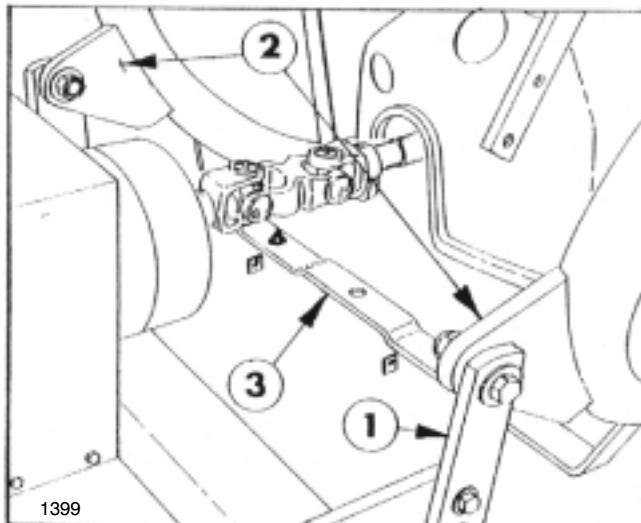


FIG. 3

1. Mounting Straps
2. Mounting Lugs

3. Cross Member

8. Lift and secure the Mounting Frame and Spreader approximately 12 inches above ground level for easier access to fasteners used in securing the Spreader to the Mounting Frame.

9. Install hex nut and washer to 5/8" x 2" bolt at rear mounting plate. See FIG. 2.

10. Insert two "U"-bolts over the tubular frame of the Spreader and secure with four 3/8" flat washers and lock nuts (FIG. 2).

11. Secure the cross member of the Spreader to the Mounting Frame with two 3/8" x 1" bolts, four washers, and lock nut. See FIG. 3.

12. Tighten all fasteners securely. Apply thread locking adhesive and tighten the set screw in the End Yoke. Re-install the Drive Shaft Cover.

13. Install the Edge Trim on the Radiator Cover. Mount the Radiator Cover on the Vehicle Frame and secure with four 3/8" x 1" bolts and flat washers. On some models, it may be necessary to use two nuts at rear holes.

14. Locate and remove two 1/2" bolts on each side of the Workman frame and install the Attachment Mounting Brackets, using the bolts and nuts removed earlier. See FIG 4. Tighten the nuts and bolts securely.

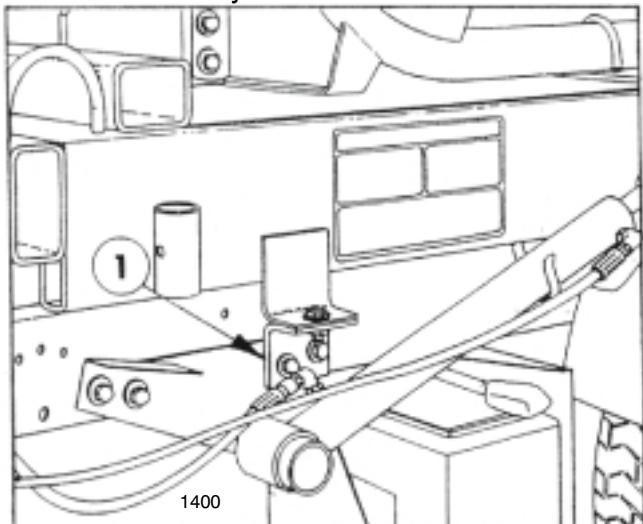


FIG. 4

1. Attachment Mounting Bracket

NOTE: If the Workman vehicle is equipped with the optional PTO Kit, remove the bottom fasteners, loosen the top fasteners and tilt the PTO Shield downward. This is necessary BEFORE the Mounting Frame can be assembled to the Workman Frame.

15. Position the assembled Spreader and Mounting Frame onto the Workman.

16. Secure the Mounting Frame to the Attachment Mounting Brackets with two 1/2" x 1-1/2" bolts four washers and lock nuts. See FIG. 4.

17. Remove the Knobs to release the hinged door on the Belt Cover and install the Spreader Spring as shown in FIG. 5. Install the Drive Belt between the Gear Reducer Pulley and the Workman's Electric Clutch Pulley. Close the cover and re-install Knobs.

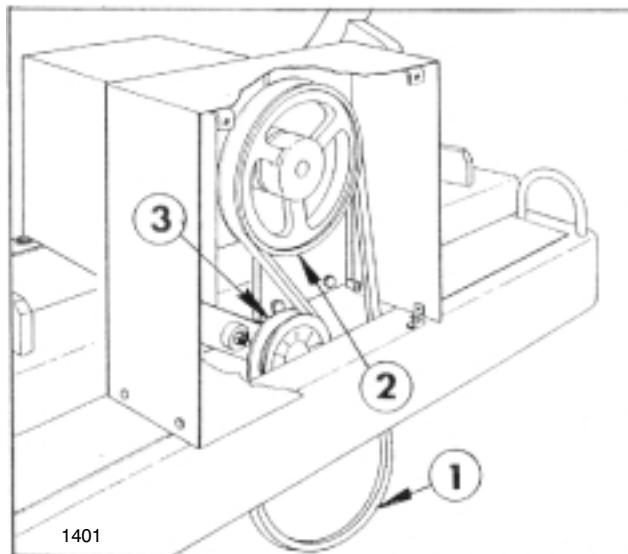


FIG. 5

1. Drive Belt	3. Idler Pulley
2. Gear Reducer Pulley	4. Idler Spring

18. Mount the Rear Support to the Mounting Frame and secure with two 1/2" x 3-1/4" bolts, four flat washers, and two lock nuts on each side of the Mounting Frame. **Do not** tighten bolts. See FIG. 6.

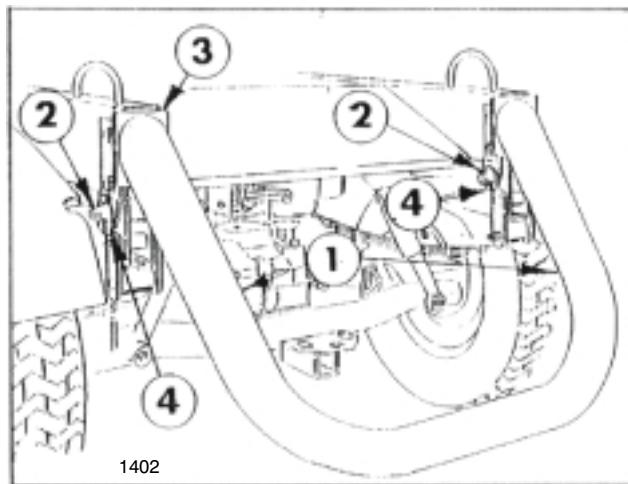


FIG. 6

1. Rear Support	3. Support Tube Plates
2. Mounting Pin	4. Lynch Pin

19. Slide the two 3/4" x 4-3/8" Mounting Pins through the Support Tube Plates and the Workman's frame. Secure with two Lynch Pins on each Mounting Pin. Torque fasteners for Rear Support to 75 ft. lbs.

NOTE: If the Spreader IS EQUIPPED with the optional Flow Control Kit, skip Steps 1 thru 6 and proceed to Step 7.

If the Spreader is NOT EQUIPPED with the optional Flow Control Kit, proceed as follows:

1. Install the Lever Bracket Assembly on the Workman's Seat Frame as shown in FIG. 7. Secure with four 5/16" x 3/4" carriage bolts and nuts.

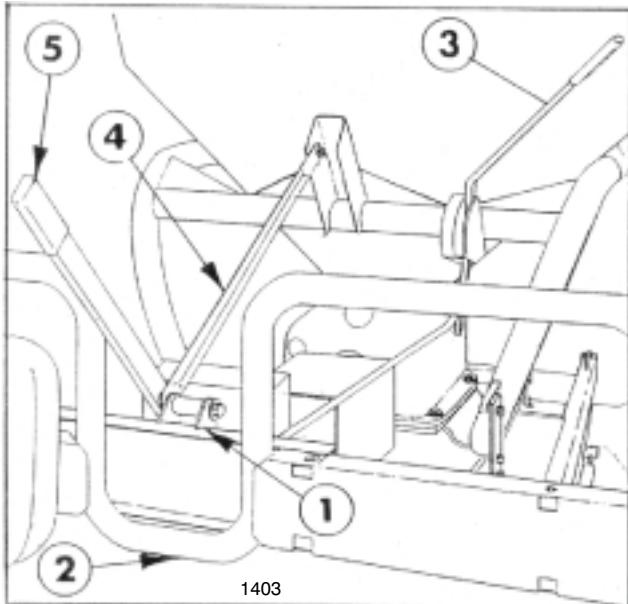


FIG. 7

1. Lever Bracket Assy	4. Lever Bracket Brace
2. Seat Frame	5. Flow Control Handle (in Close position)
3. Flow Regulator Handle (in Close Position)	

2. Apply rust preventive oil to the Pivot Sleeve and slide it inside the pivot tube on the Lever Bracket Assembly, position a 1/2" flat washer and insert the 1/2" x 4" bolt through the washer, the pivot tube, the Lever Bracket Brace and the Control Lever. Secure with a lock nut.

3. Install the Lever Bracket Brace to the hole in the Spreader's frame, using a 5/8" x 1-1/2" screw, two washers and a lock nut.

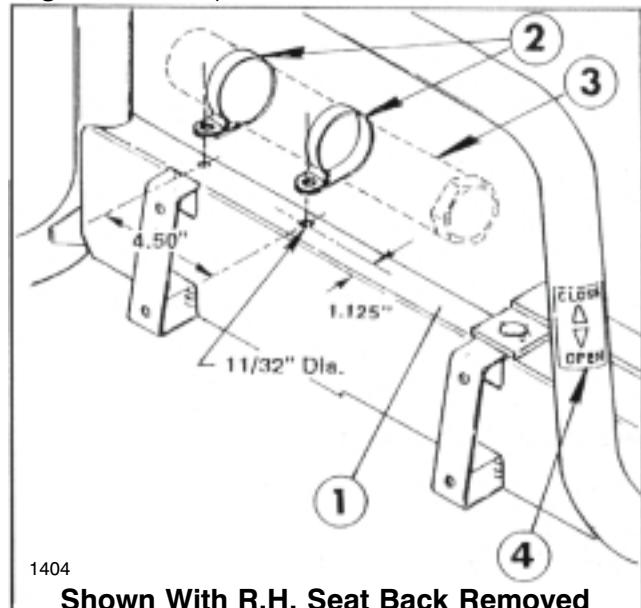
4. Position the Flow Regulator and Flow Control Handles in their **CLOSE** position as shown in FIG. 7.

5. Insert the Linkage Rod into the lower hole of the Control Lever and secure with two 1/2" flat washers and cotter pin.

6. Attach the adjustable clevis on the other end of the Linkage Rod to the Spreader's Flow Regulator Handle with a 1/2" x 1-1/2" clevis pin, two washers and hairpin cotter. **NOTE: The effective length of the Linkage can be shortened or lengthened by loosening the jam nut and turning the Adjustable Clevis. When length is correct, re-tighten the jam nut.**

7. Position the Muual Tube the passenger hand side of the Seat Back Rest Channel, it will have to be moved to the **right** hand side, with R-Clamps positioned as shown in FIG. 8. If the existing hole in that locatoin proceed as follows:

8. Using dimensions shown, locate, mark and drill an 11/32" dia. hole in top of the **right** hand Seat Back Rest Channel. Use a file to make a square hole of the 11/32" dia. hole (for the carriage bolt head.)



Shown With R.H. Seat Back Removed

FIG. 8

1. Back Rest Channel	3. Manual Tube
2. R-Clamps	4. Open/Close Decal

9. Re-install the R-Clamps and Manual Tube on the **right** hand side of the channel, using the fasteners previously removed and hex nut provided. See FIG. 8.

10. Remove backing and affix "Open/Close" Decal on Seat Frame. See FIG. 8.

DANGER

AN OVERLOADED SPREADER HOPPER CAN CAUSE A TIP OVER RESULTING IN SERIOUS INJURY OR DEATH.

- **Install the Level Limit and Capacity 700 LBS. Decals as instructed.**

11. Remove the backing and affix the "Maximum Sand Level" Decal directly below the existing "Capacity 1000 LBS." Decal, on the back of the Spreader Hopper. See FIG. 9.

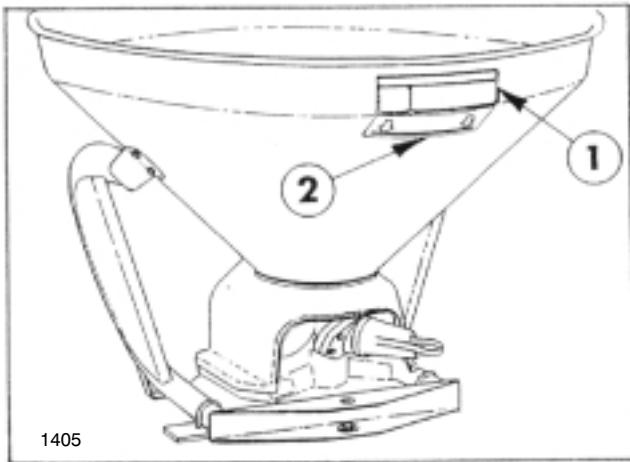


FIG. 9

1. Capacity 700 LBS.
Decal
2. Maximum Sand Level
Decal

12. Remove the backing and affix the "Capacity 700 LBS." Decal over the "Capacity 1000 LBS." Decal, so it is completely covered.

INSTRUCTIONS FOR SPREADER EQUIPPED WITH THE OPTIONAL FLOW CONTROL KIT:

1. Remove two screws on the Workman dash panel and use them to attach the Control Console Bracket to dash as shown in FIG. 10.

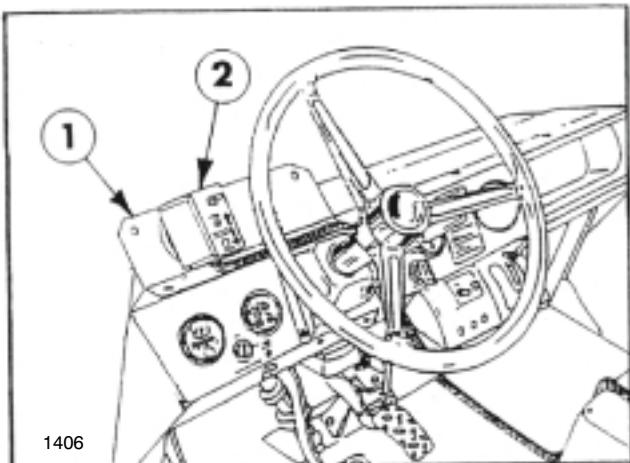


FIG. 10

1. Console Mounting Brkt 2. Control Box

2. Route the Wiring Harness and Control Box forward along the left side of the Workman frame and connect the two battery wires to the Battery, as described in the Flow Control Instructions.

3. Attach the Magnet and Control Box to the Bracket attached to the Workman dash panel in Step 22.

INSTRUCTIONS FOR SPREADER EQUIPPED WITH THE OPTIONAL FLOW CONTROL, TO BE USED ON WORKMAN EQUIPPED WITH OPTIONAL ENCLOSURE.

4. Disconnect the Wiring Harness at the Actuator and the two Limit Switches.

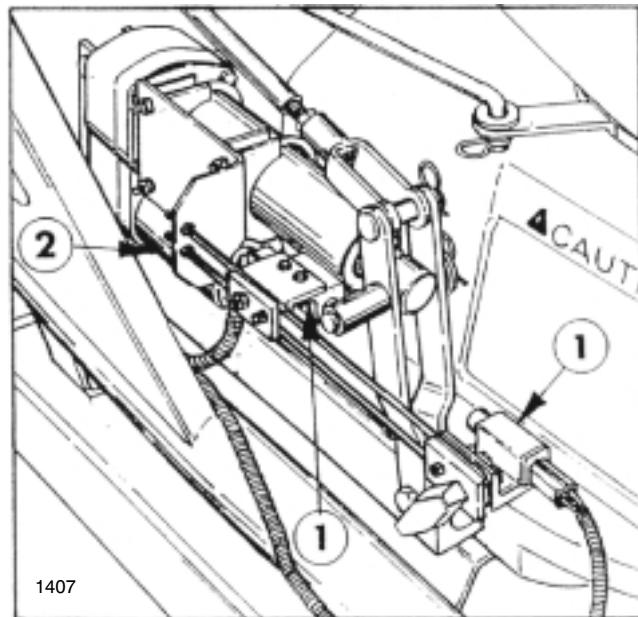


FIG. 11

1. Limit Switch 2. Actuator

5. Slide the Grommet over the connectors.

6. Measure and mark the location, to drill a 2" dia. hole in the rear of the Enclosure. Locate the hole in a convenient location near the center of the Enclosure, approximately 24 inches from the top of the Workman frame. Install Grommet in hole.

7. Attach the Magnet and Control Box to the front of the Enclosure as shown in FIG. 10.

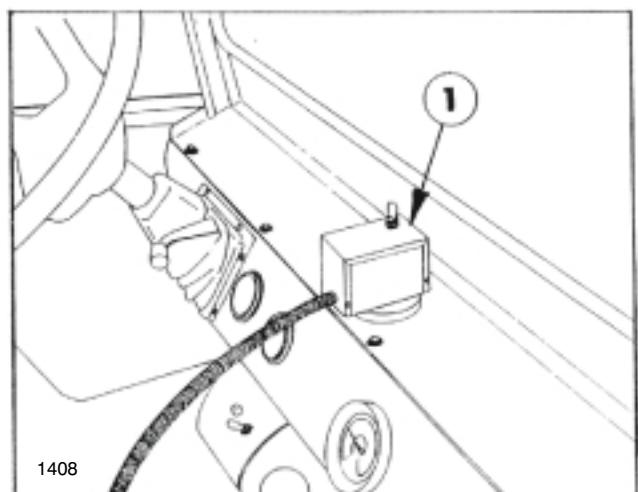
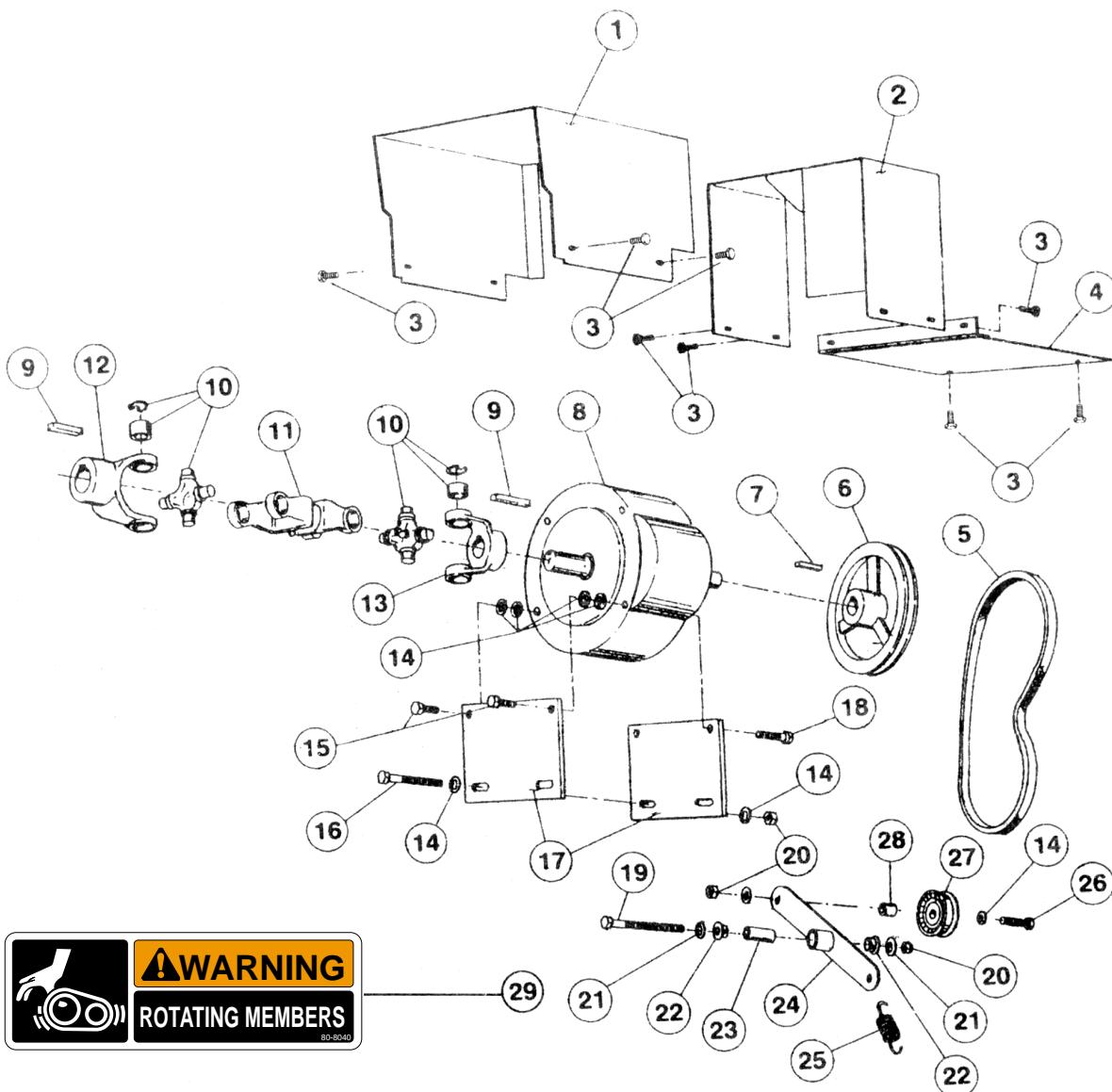


FIG. 12

1. Control Box

8. Re-connect the Wiring Harness to the Actuator and Limit Switches.

9. Connect battery wires from the Wiring Harness to the Workman Vehicle's battery as described in the Flow Control Kit instructions.

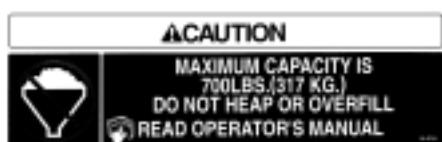
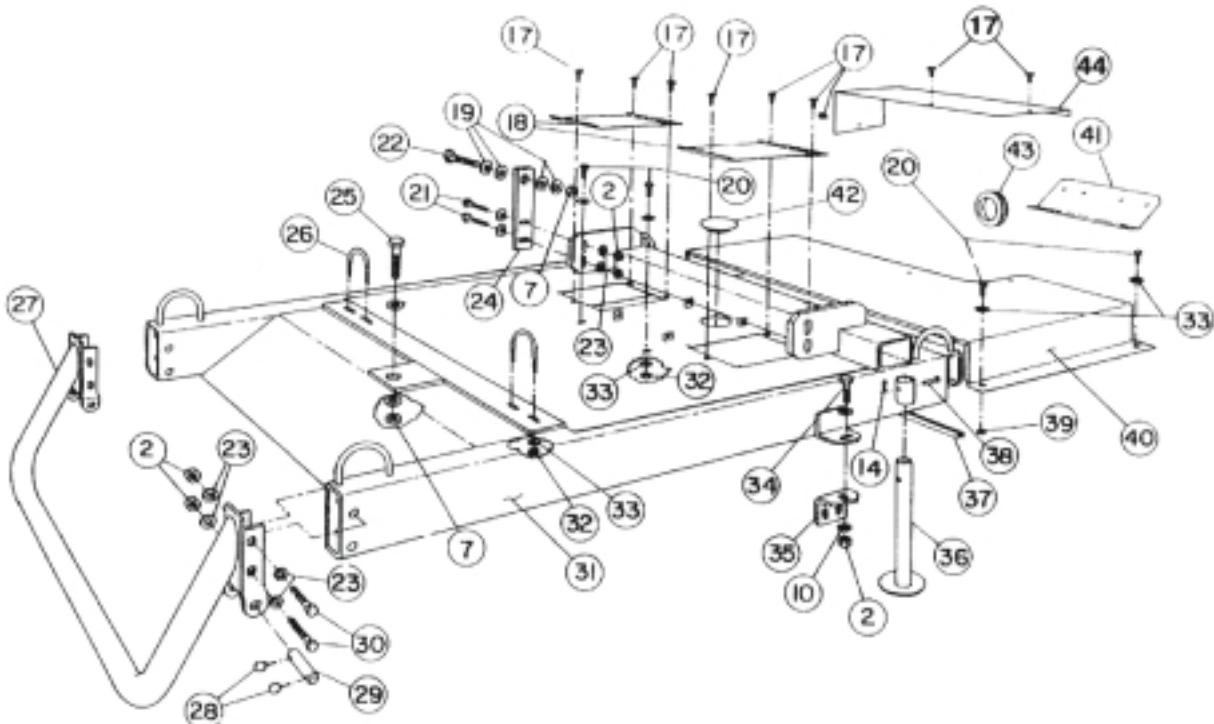
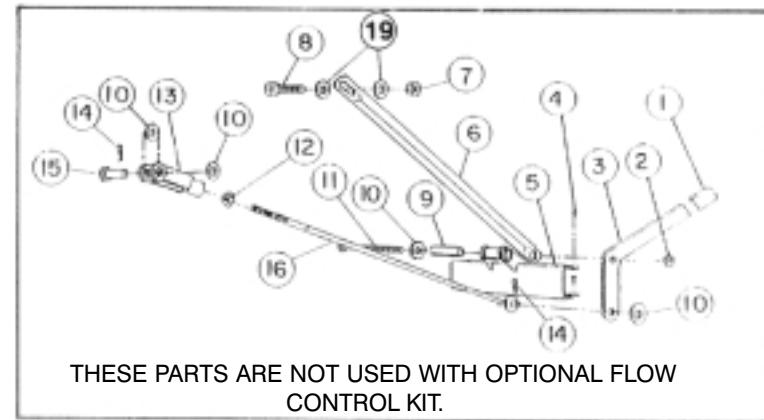


1409

SPREADER DRIVE

Ref	Part No.	Description	Qty
1	93-6431	Drive Shaft Cover	1
2	92-8270	Belt Cover	1
3	32104-95	HWH - Self Tapping Screw 1/4 x 5/8"	12
4	92-8219	Belt Cover Door	1
5	92-8249	Drive Belt	1
6	92-8204	Speaker Pulley	1
7	314110	Square Key, 3/16 x 1"	1
8	043003	Gear Multiplier 5:1	1
9	314233	Square Key, 1/4 x 1-1/2"	2
10	42554	Journal & Bearing	2
	3247-3	Set Screw, 3/8 NC x 1/2"	4
11	43004	Double Center Yoke	1
12	42552	End Yoke, 1-3/16" Dia.	1
13	42553	End Yoke, 1" Dia.	1
14	3256-24	Flat Washer, 3/8" S.A.E.	10

Ref	Part No.	Description	Qty
15	323-6	HHCS, 3/8 NC x 1"	2
16	323-38	HHCS, 3/8 NC x 4-3/4"	2
17	92-8205	Gearbox Plate	2
18	323-10	HCS, 3/8 NC x 5-1/2"	2
19	323-25	HHCS, 3/8 NC x 5-1/2"	1
20	32153-2	Lock Nut	4
21	3256-4	Flat Washer, 3/8"	2
22	256-258	Nylon Flange Bushing	2
23	92-8202	Idler Pivot Sleeve	1
24	92-8199	Idler Arm Ass'y	1
25	54-2730	Idler Spring	1
26	323-9	HHCS, 3/8 x 1-3/4"	1
27	041353	Idler Pulley	1
28	41488	Idler Spacer	1
29	80-8040	Decal - Rotating Members	1



Part No. 92-2741: Located on rear of Spreader Hopper.



Part No. 65-3090: Located on top of Front Tube Crossmember.

NO RIDERS

Part No. 75-5190: Located on rear Rear Cover
2 - Located on sides of Rear Support Tube.
2 Located on Radiator Cvr.



Part No. 80-8040: 2 - Located on Radiator Cover.
1 - Located on Belt Cover.



Part No. 88-8950: 1- Located on Frame under Belt Cover.
1 - Located under PTO.

MAXIMUM SAND LEVEL

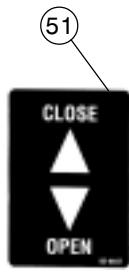
Part No. 92-2742: Located on Hopper below Decal No. 92-2741



Part No. 36-3400: Located on Radiator Cover.



Part No. 87-0450: Located on top of Front Tube Crossmember.



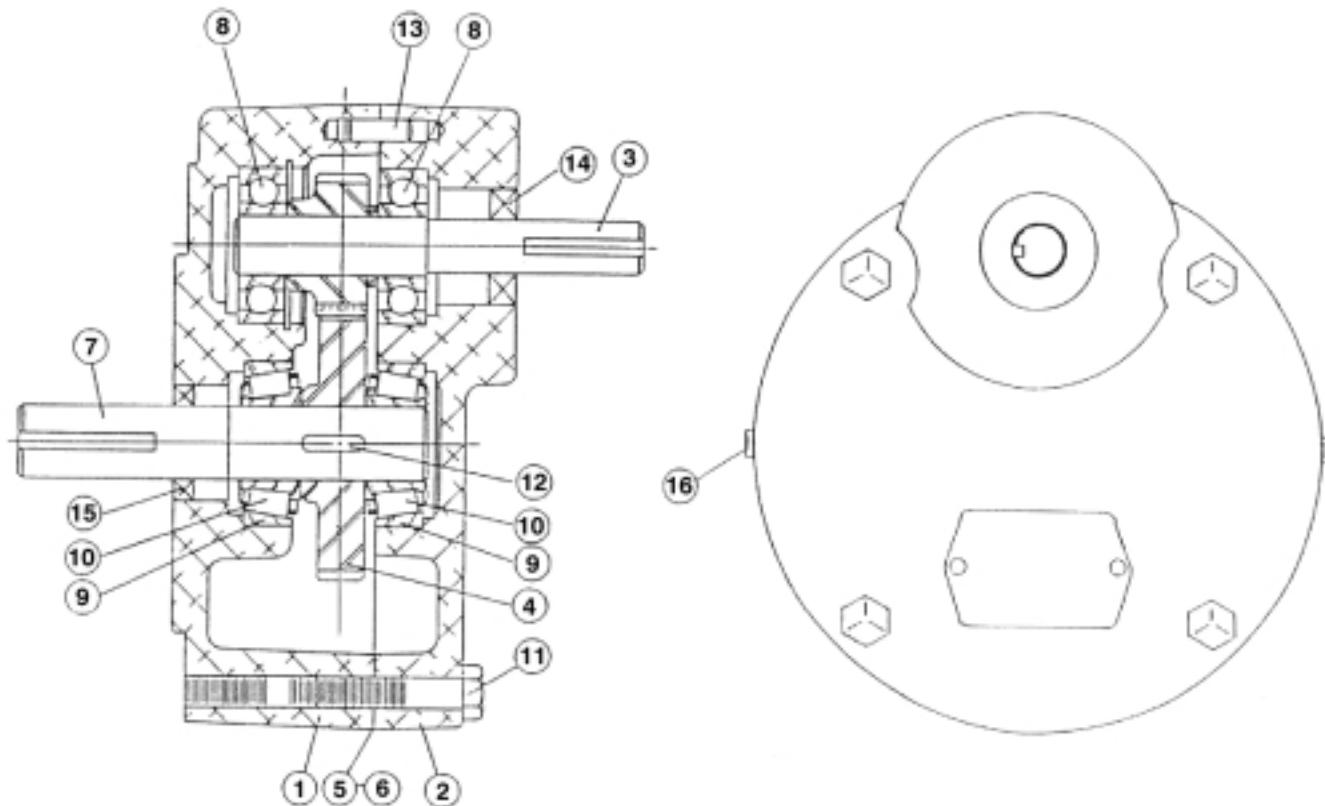
Part No. 92-4447: Located on Seat Bar next to Spreader Lever.



Part No. 92-4366: Located on R. H. and L.H. side of Frame.

SPREADER DRIVE

Ref	Part No.	Description	Qty	Ref	Part No.	Description	Qty
1	92-8229	Lever Grip	1	30	325-13	HHCS, 1/2 NC x 3-1/4	4
2	32153-5	Lock Nut, 1/2 NC	11	31	92-8291	Frame Ass'y. (With decals)	1
3	92-8228	Lever	1	32	32153-2	Lock Nut, 3/8 NC	6
4	3230-1	Carriage Bolt, 5/16 NC x 3/4"	4	33	3256-4	Flat Washer, 3/8 USS	8
5	92-8223	Lever Pivot Bracket	1	34	325-6	HHCS, 1/2 NC x 1-1/2"	2
6	92-8230	Lever Bracket Brace	1	35	92-2667	Attachment Mounting Bracket	2
7	32153-15	Lock Nut, 5/8 NC	4	36	92-8250	Jack Stand	2
8	327-4	HHCS, 5/8 NC x 1-1/2	1	37	92-8233	Cover Trim	1
9	92-8235	Pivot Sleeve	1	38	42195	Clevis Pin, 1/2 x 2"	2
10	3256-6	Flat Washer, 1/2 USS	10	39	3217-7	Hex Nut, 3/8 NC	2
11	325-17	HHCS, 1/2 NC x 4"	1	40	93-6199	Radiator Cover (With decals)	1
12	3220-5	Hex Jam Nut, 1/2" NF	1		9203627	Trim 5-5/8" Long	1
13	92-0302	Adjustable Clevis 1/2"	1		42657	Trim 26" Long	1
14	328967	Hair Pin	4	41	92-3679	Control Console Bracket	1
15	283-68	Clevis Pin, 1/2 x 1-1/2"	1			(Flow Control w/o Enclosure)	
16	92-8231	Linkage Bar	1	42	42591	Hole Plug, 3-1/2"	1
17	32104-57	HWH - Self Tapping Screw 1/4 x 5/8"	9	43	40764	Grommet	1
18	92-8211	Service Door	2	44	93-6427	(Flow Control w/ Enclosure)	
19	3256-7	Flat Washer, 5/8 USS	12			Radiator Panel	1
20	323-6	HHCS, 3/8 NC x 1"	6	45	92-2741	(Air-cooled WM only)	
21	325-8	HHCS, 1/2 NC x 2"	4	46	92-2742	Decal - Capacity 700 lbs.	1
22	327-7	HHCS, 5/8 NC x 2-1/2"	2	47	88-8950	Decal - Sand Level	1
23	3256-26	Flat Washer, 1/2 SAE	16	48	36-3400	Decal - Warning	2
24	92-8210	Spreader Mount Plate	2	49	75-5190	Decal - No Sept	2
25	327-6	HHCS, 5/8 NC x 2	1	50	80-8040	Decal - No Riders	5
26	92-2752	U-Bolt	2	51	92-4447	Decal - Rotating Members	2
27	92-8269	Rear Support Tube (With decals)	1	52	65-3090	Decal - Open/Close	1
28	92-1298	Lynch Pin	4	53	87-0450	Decal - Read Manual	1
29	92-1233	Mounting Pin	2	54	92-4366	Decal - Personal Injury	2
						Decal - Danger Tip	2



1411

GEAR MULTIPLIER, 5:1

REF	PART NO.	DESCRIPTION	QTY
1	43047	250 Housing Half	1
2	43048	250 Housing Half	1
3	43049	250 Gear, INTG HEL LH, 15T	1
4	43050	250 Gear, HEL RH , 75T	1
5	43051	250 Shim, .002 Red	2
6	43052	250 Shim, .005 Blue	2
7	43053	Spec. Shaft - Output	1
8	43054	Ball Bearing	2
9	43055	Cup Bearing	2
10	43056	Cone Bearing	2
11	323-9	HHCS 3/8 NC x 1-3/4 (Grade 5)	4
12	43057	Key, 3/16 sq x 3/4	1
13	43058	Dowell Pin, 1/4 x 3/4	2
14	43061	Seal	1
15	43060	Seal	1
16	43059	Skt. Pipe Plug, 1/4 NPT	4