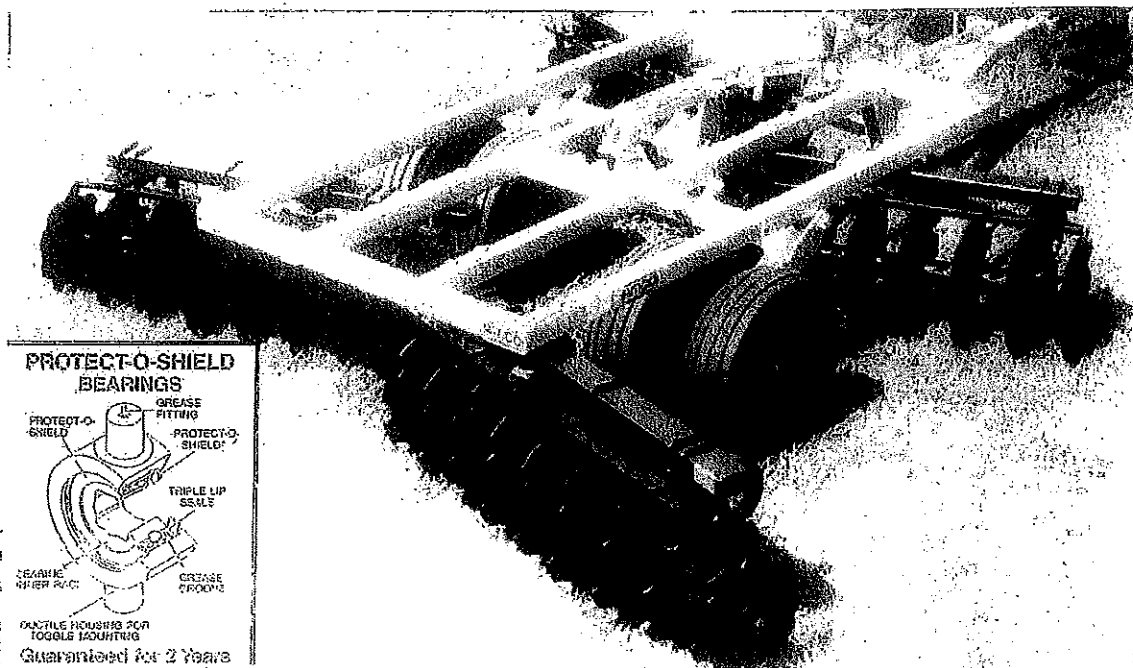


AMCO

F-17B DOUBLE OFFSET TANDEM

OPERATION**MAINTENANCE**SET-UP INSTRUCTIONS



AMCO MANUFACTURING COMPANY

800 South Industrial Parkway P.O. Box 1107
Yazoo City, Mississippi (MS) 39194 USA
(662) 746-4464 Toll free 800-748-9022 Fax (662) 746-6825
www.amcomfg.com

TO THE PURCHASER

The care you give your new AMCO F17 Double Offset Tandem Disk Harrow will greatly determine the satisfaction and service you will obtain from it. By observing the instructions and suggestions in this manual, your AMCO F17 Harrow will serve you well for many years.

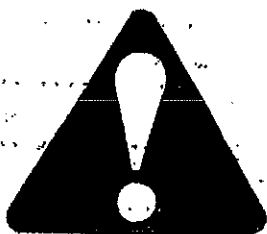
As an Authorized AMCO Dealer, we stock Genuine AMCO Parts, which are manufactured with the same precision and skill as the original equipment. For best performance and longer life use only Genuine AMCO replacement parts. Our factory trained staff is kept fully informed of the most efficient methods of servicing AMCO equipment and is ready and able to assist you.

When you sell your F17 Harrow you should pass this manual to the new owner.

If you should require additional aid or information, contact us.

YOUR AUTHORIZED AMCO DEALER

OSHA requires that as a farm employer you meet certain safety requirements. Become familiar with and comply with those requirements. Be sure anyone who operates this equipment understands all safety related items. If this harrow is repainted, be certain new decals are ordered. Decals pertaining to personal safety must be replaced.



Look for this symbol to point out important safety precautions. It means — **ATTENTION!** Become alert! Your safety is involved.

To insure efficient and prompt service, please provide the model number and serial number of your AMCO Harrow in all correspondence or contacts. Remember, the right and left hand sides of the harrow are determined by standing at the rear of the harrow and facing the direction of travel.

MODEL NUMBER

SERIAL NUMBER

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Rev. 3/13/12

SAFETY SUGGESTIONS



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY.



CAUTION Never stand between tractor and disk harrow when hitching unless all controls are in neutral and the brakes are locked.



CAUTION Park or block the disk harrow so it will not roll when disconnected from the tractor drawbar.



CAUTION When working on disk harrows, care should be exercised in handling or tightening bolts near disk blades to avoid injury.



CAUTION Always secure for transport by using the lock pin.



CAUTION Never clean, adjust or lubricate a disk harrow that is in motion.



CAUTION When transporting machinery over public roads, comply with your local and state laws regarding length, width and lighting.



CAUTION When trailing the harrow over public roads, the SMV Emblem must be used for protection of tractor and motor vehicle operators.



CAUTION When transporting farm implements on public roads after dusk, it is the responsibility of the operator to provide lighting and reflectors on the rear of the implement in accordance with your state law.



CAUTION All hydraulically or mechanically elevated components must be blocked to prevent accidental lowering or must be lowered to the ground when making adjustments or when the equipment is idle.

DOUBLE OFFSET TANDEM

MODEL "F17B"

(General Purpose)

STANDARD SPECIFICATIONS

(Metrics in Parentheses)

AXLES:	Four 1-1/2" square, high carbon cold rolled steel	BEARINGS:	Protect-O-Shield®, 1-1/2"(38mm) square bore greasable ball type, toggle mounted, with zerk guards and wear guards
BLADES:	22" x 1/4"(6mm) Plain diminishing with two feathering blades on rear gang	WHEELS:	2 - 15x8" with heavy duty 6-bolt hubs on 9'3", 10'6", 12'0"
SCRAPERS:	High carbon replaceable blades on heavy duty shanks, mounted with grade 5 bolts on high carbon angle iron bars		* 4 - 15x8" (13'6" & 15' only)
TONGUE:	70" long w/ tongue jack and reversible ductile iron clevis	WHEEL TREAD:	84 inches on center
HYDRAULIC CYLINDERS:	4"x8"x 1/2" w/stroke control (3000 PSI). Includes hose bundle to tractor	WRENCH:	One for gang bolts
		DISC SPACING:	9 inches
		GANG ANGLE:	Adjustable 18° to 22° Front, 17° to 21° Rear
		WEIGHT:	106 to 120 lbs per blade 296 to 337 lbs. per foot
		TRANSPORT WIDTH:	Width of cut plus 18"

Model No.	Cutting Width	No. of Discs	No. of Bearings	Approximate Drawbar HP Required	Approximate Weight lbs (kg)
F17B-2622	9'3" (2.82m)	26	8	50-75 (37-52)	3360 (1527)
F17B-3022	10'6" (3.20m)	30	8	60-80 (45-60)	3644 (1656)
F17B-3422	12'0" (3.66m)	34	8	70-90 (52-67)	3928 (1785)
F17B-3822*	13'6" (4.12m)	38	12	80-100 (60-75)	4708 (2140)
F17B-4222*	15'0" (4.68m)	42	12	90-115 (67-86)	5022 (2283)
F17B-4622*	16'6" (5.15m)	46	12	105-130 (79-98)	5536 (2425)

*Includes 2 outrigger bars and clamps

OPTIONAL EQUIPMENT

Shock absorber gang risers in lieu of Std. cast gang risers

Add per bearing

(Note: AMCO recommends 1/4" (6mm) blades for use with shock absorber gangs)

Add 18 (8) ea

AN-20-0001

15 x 10 wheels in lieu of standard 15 x 8

Add 6.0 (2.8)ea.

BR-14-0001

Dual wheels in lieu of single on 9'3", 10'6", and 12'0"

Add 106.0 (2.8)ea.

FA-01-0014

22" x 1/4"(6mm) Cutout blades in lieu of standard

Ded 1.9 (0.9)ea.

24" x 1/4"(6mm) Cutout blades in lieu of standard

Add 4.0 (1.8)ea.

24"x1/4"(6mm) Plain blades in lieu of standard

Add 6.0 (2.8)ea.

Safety Chain

Add 9.0 (4.1)ea.

AMCO PL Effective August 15, 2011

F.O.B. Yazoo City, Mississippi

SPECIFICATIONS AND PRICES SUBJECT TO CHANGE WITHOUT NOTICE



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P. O. Box 1107, 800 South Industrial Parkway, Yazoo City, MS 39194 USA
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www.amcomfg.com



MODEL F-17B DOUBLE OFFSET TANDEM

GENERAL SPECIFICATIONS

Model No.	Cutting Width	No. of Disks	No. of Bearings	Disk Size & Type**	Approx. DBHP Required	Approx. Shipping Wt.	Recommended Drawbar Horsepower
F17B-2622	9'3"	26	8	22" Plain	50-70	3080	55-75
F17B-3022	10'6"	30	8	22" Plain	55-75	3330	60-80
F17B-3422	12'0"	34	8	22" Plain	60-80	3580	70-90
F17B-3822*	13'6"	38	12	22" Plain	65-85	4220	75-100
F17B-4222 *	15'0"	42	12	22" Plain	75-95	4500	80-105
F17B-4622	16'6"	46	12	22" Plain	79-98	5536	105-130

*includes 2 outrigger bars and clamps.
**Optional blade sizes available.

AXLES: Four 1-1/2" square high carbon, cold rolled steel
DISC: 22" x 3/16" Plain
BLADES: Diminishing 2" with feathering blades
SPACING: 9 inches
SCRAPERS: High carbon replaceable blades on heavy duty shanks, mounted with grade 5 bolts on high carbon angle iron bars.
GANG ANGLE: Adjustable
18° — 22° Front
17° — 21° Rear
TONGUE: 70 inches long with tongue and reversible, fabricated clevis

BEARINGS: Protect-O-Shield 1-1/2" Sq. Bore regreasable ball type, toggle mounted
WRENCH: One for Gang Bolt
WHEELS: 2 — 15 x 8" with heavy duty 6 Bolt Hubs
WEIGHT: 106 — 120 lbs. per blade
296 - 337 lbs per foot
TRANSPORT WIDTH: Width of cut plus 18 inches
WHEEL TREAD: 84 inches on center

OPTIONAL EQUIPMENT

4" x 8" x 1-1/2" Hyd. cylinder with stroke control
15 x 10 wheels in lieu of Std. 15 x 8

22 x 3/16" Cutout blades
22 x 1/4" Plain blades
22 x 1/4" Cutout blades
24 x 3/16" Plain blades
24 x 3/16" Cutout blades
24 x 1/4" Plain blades
24 x 1/4" Cutout blades

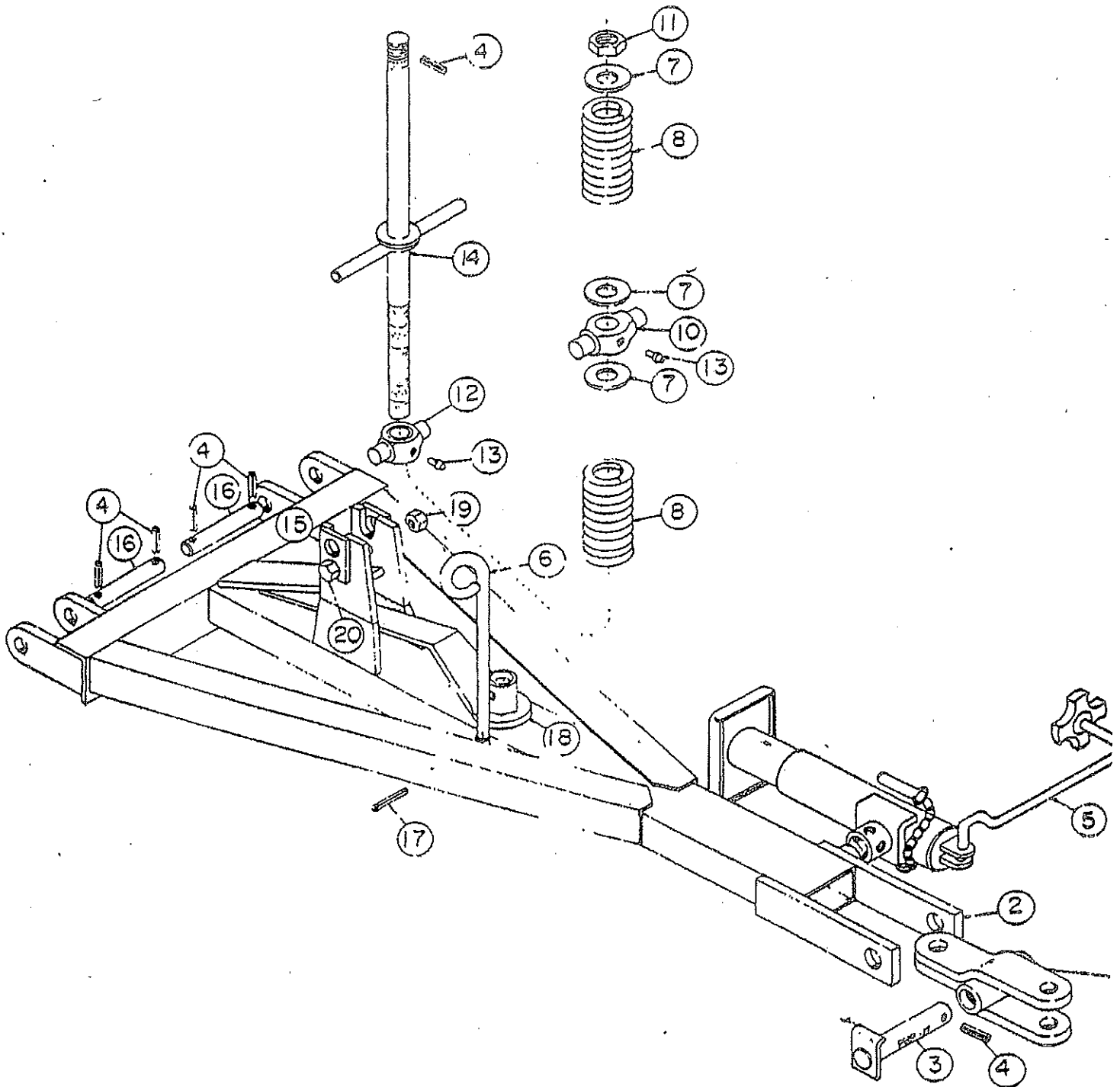
Shock Absorber Bearing Risers
Heavy Duty Scrapers & Scraper Bars
BR-14-0001 Dual 15 X 8 Wheels
W/6-Bolt Hubs

RECOMMENDED TIRE SIZE

2 - 11L X 15-6 or 8 Ply Tires

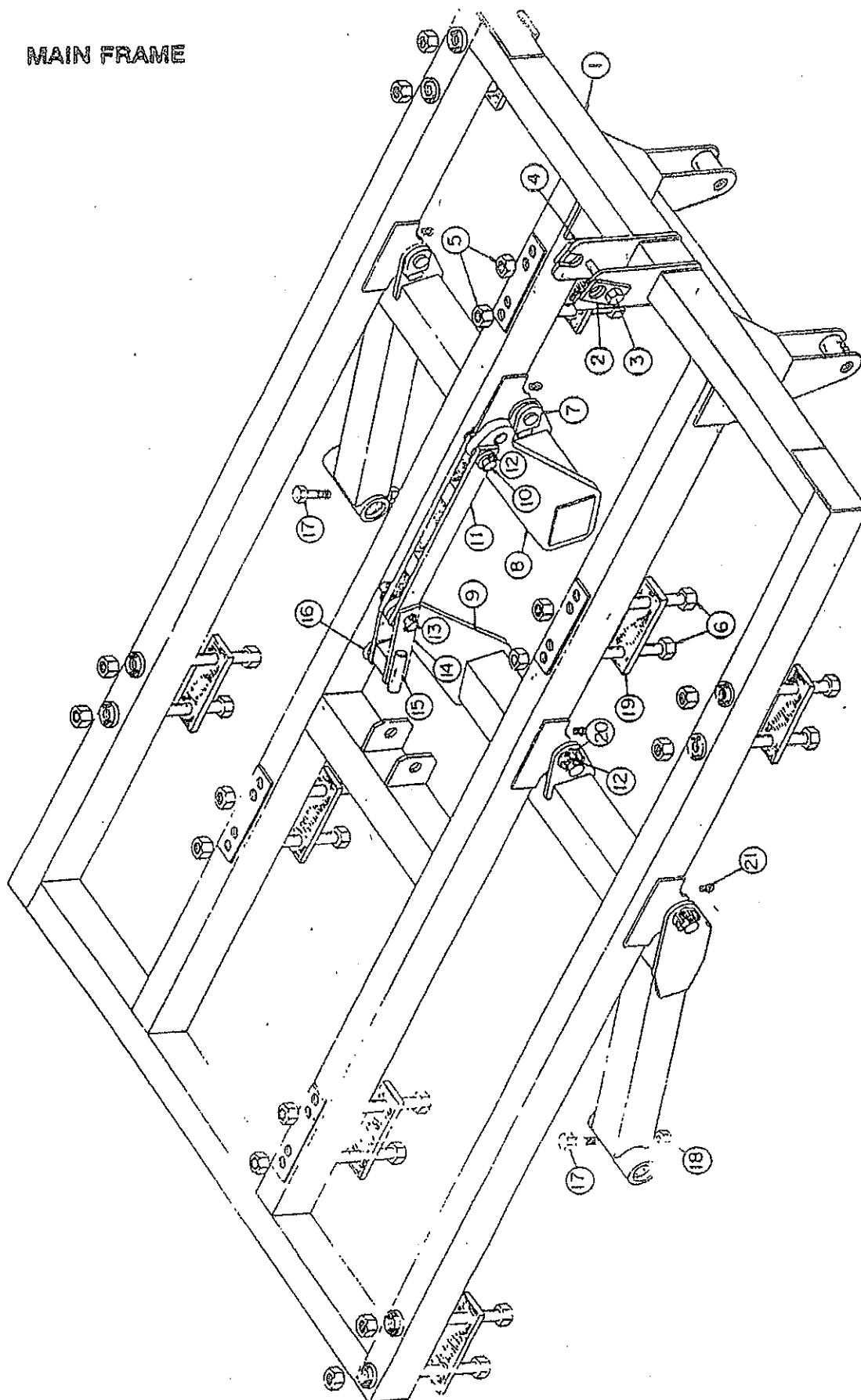
Use of Disk on tractors with higher than recommended drawbar horsepower will cause excessive maintenance cost and may void your warranty.

PULL TONGUE

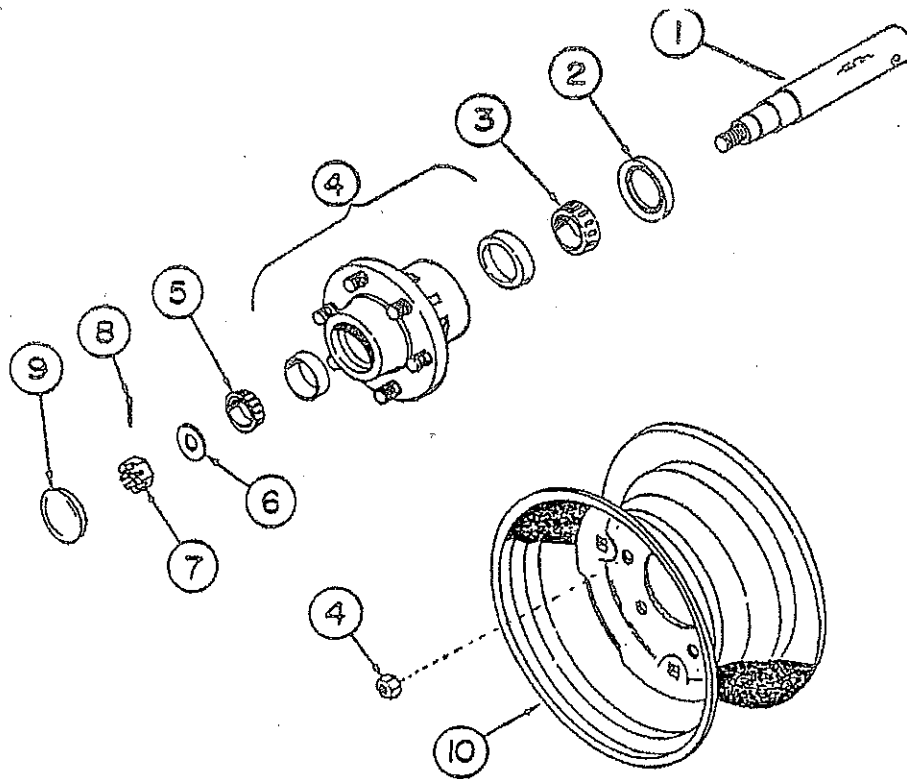


		AMCO	
		F-17B	
		PULL TONGUE	
		9'3" - 16'6"	
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	0623	Assy. Clevis	1
2	0833A	Assy. Pull Tongue	1
3	20246	Assy. Clevis Pin	1
4	10910	Roll Pin 5/16 x 2-1/4	6
5	11261	Tongue Jack	1
6	100061	Hose Holder	1
7	10872	Cut Washer 1-3/8" PL	3
8	10460A	Spring	2
9	9892	Stabilizer	1
11	11279	1-3/8 NC Slotted Nut PLT	1
12	9919A	Swivel	1
13	10606	Grease Fitting	2
14	0635A	Assy. Stabilizer Rod	1
15	9628	Clamp Trunion 3/8 x 2-1/2 x 3-3/4 Long	2
16	100574	Pin 1-1/4 Dia 6-7/8 Long	2
17	10075	Cotter Pin 1/4 x 1-1/2	1
18	100134	Nut Wrench	1
19	10299	Lock Nut 5/8 NC, PL	1
20	10067	Hex Head Machine Bolt 5/8 x 5-1/2 NC, PL	1

MAIN FRAME



		AMCO	
		F-17B	
		Main Frame & Rockshaft	
		9'3" - 16'6"	
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	20395	Assy. Main Frame	1
2	9628	Clamp Trunion 3/8 x 2-1/2 x 3-3/4 Long	2
3	10043	Hex Head Machine Bolt 5/8 x 6-1/2 NC, PL, Gr. 5	1
4	10299	Lock Nut 5/8 NC, PL	1
5	10396	Lock Nut 7/8 NC, PL	16
6	12082	Hex Head Machine Bolt 7/8 x 9 NC, PL, Gr. 5	16
7	0866	Assy. Rockshaft Pivot Pin	4
8	20393	Assy. Rockshaft LH	1
9	20392	Assy. Rockshaft RH	1
10	7397	Pin 1" Dia. 4-3/8 Long	1
11	0802	Assy. Rockshaft Tie Link	1
12	10910	Roll Pin	8
13	100578	Pin 1" Dia. 5-1/2 Long	1
14	0912	Assy. Transport Strap	1
15	0941	Assy. Transport Pin	1
16	10317	Klik Pin 1/4"	1
17	10871	Machine Bolt 3/8 x 3 NC, PL, Gr. 5	2
18	10509	Lock Nut 3/8 NC, PL	2
19	100583	Strap 3/4 x 3 x 9-1/8 Long	8
20	10232	Hex Nut 1-1/2 NC Slotted	4
21	11081	Grease Fitting	4
22	11492	Bushing (not shown)	3

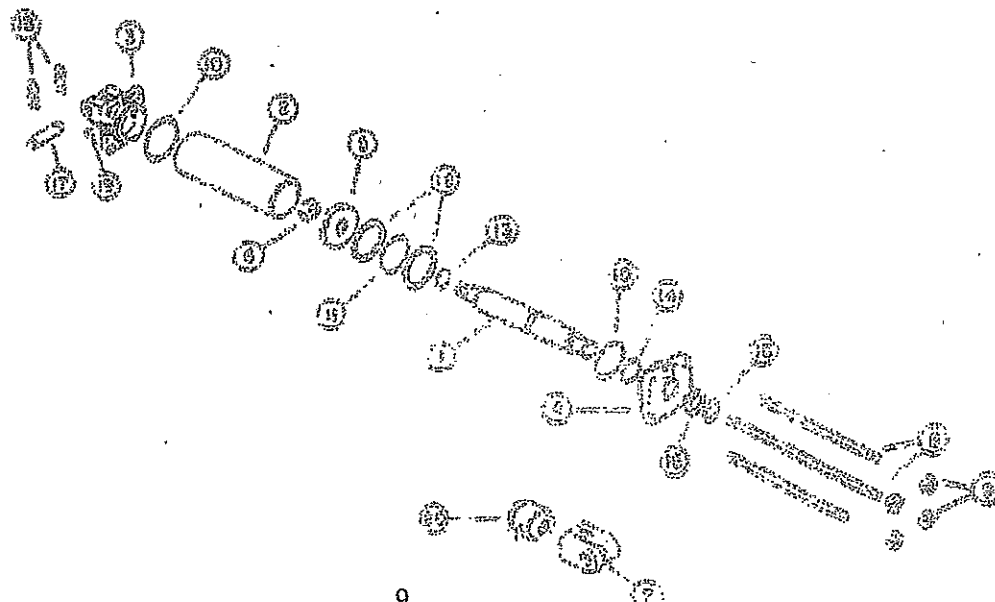


AMCO F-17B Spindle & Hub			
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	11643	Spindle	1
2	11017	Grease Seal	1
3	10353	Cone - Inner	1
4	11644	Hub with 2 cups, 6 lug bolts, 6 nuts	1
4	10352	Cup - Inner (LM48510)	1
4	10293	Cup - Outer (LM67010)	1
4	12442	Hub - Bolt 1/2x 1-3/16 NF	6
4	11046	Hub - Nut 1/2 NF	6
5	10295	Cone - Outer Timken #LM67048	1
6	10263	Spindle Washer 7/8	1
7	10264	Spindle Nut 7/8 NF	1
8	10291	Cotter Pin 5/32 x 1-1/4	1
9	10356	Hub - Cap	1
10	10936	Wheel 15 x 8 - 6 hole	1
BM-05-0082 Sub Bundle Spindle & Hub Complete Parts 1-9			

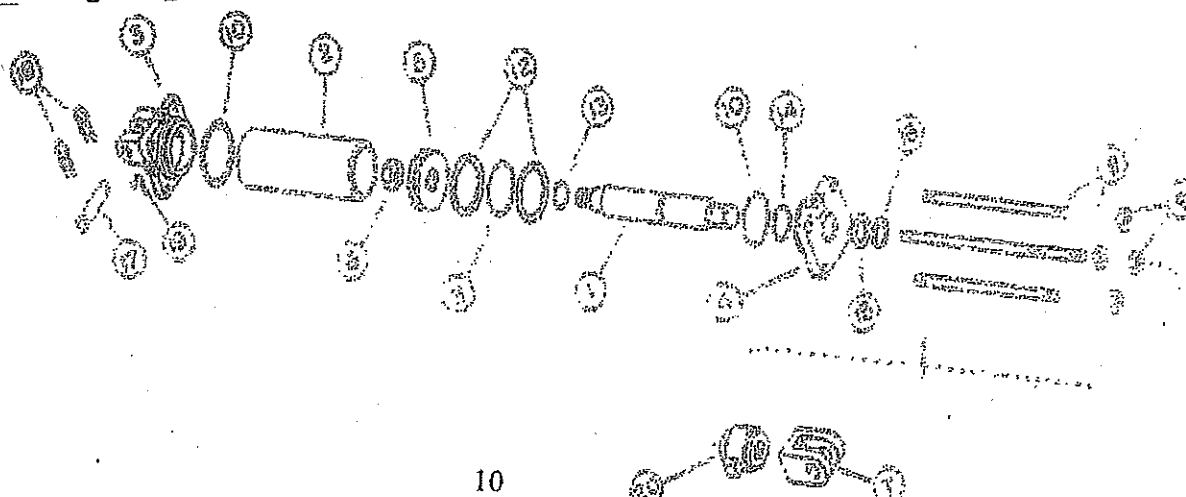
AMCO			
F-17B			
HYDRAULIC CYLINDER			
4 X 8			
Ref. No.	Part No.	Description	No. Req'd.
1	10965	Rod-Piston	1
2	10966	Tube	1
3	10952	Butt	1
4	10967	Head-Piston	1
5	10968	Piston	1
6	10980	Nut-Lock 1" 14 NF	1
7	11296	Clevis for 1-1/4 Dia. Pin	1
8	10970	Rod-Tie	1
9	10187	Nut-Hex 5/8 NC, PL	4
17	10956	Pin-Clevis 1" x 4"	1
18	10957	Clp	2
19	10978	Plug-Pipe 1/2 NPT	1
20	10937	Control-Stroke	1
21	10976	Kit-Seal Repair (Prince #8600)	1
10	10958	O-Ring	2
11	10959	O-Ring	1
12	10960	Washer	2
13	10971	O-Ring	1
14	10972	O-Ring	1
15	10973	Washer	1
16	10974	Wiper	1
23	10975	O-Ring (Used in Replacement Kit Only)	1
		(Not shown)	
	11257	4 x 8 Cylinder (With Stroke Control)	
		Replaced by 12382 Lion 4 x 8 3000 PSI	

NOTE: Use these parts before Serial # 95110416.

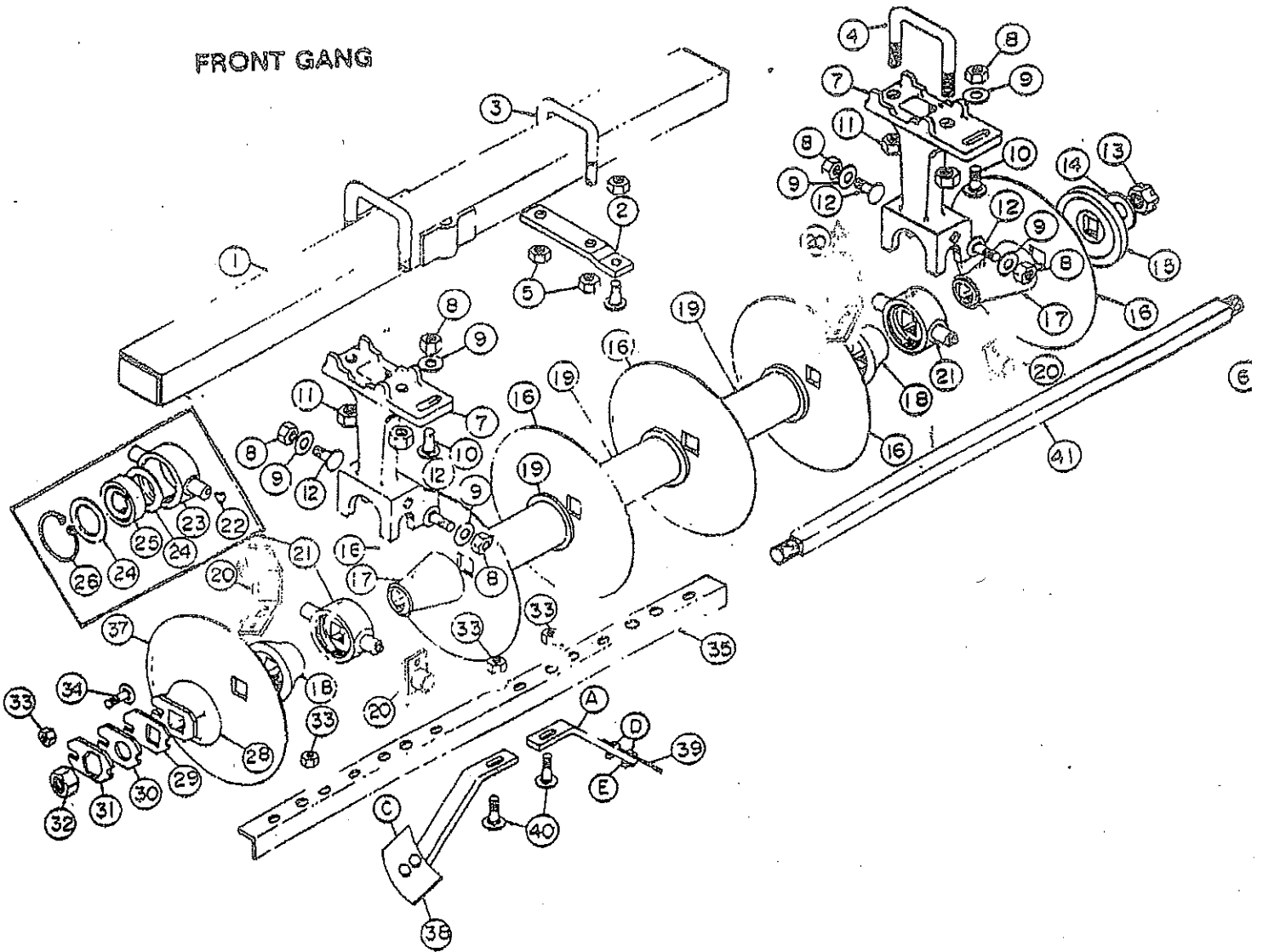
NOTE: Seal Repair Kit Parts Available in repair kits only.



		AMCO	
		F-17B	
		4 x 8 Hydraulic Cylinder	
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
	12382	4 x 8 Hyd. Cylinder (complete)	1
1	12383	Rod - Piston	1
2	12242	Tube	1
3	12243	Butt	1
4	12244	Head - Piston	1
5	12245	Piston	1
6	12246	Nut - 1-1/8 12 UNF, Gr. C	1
7	12296	Clevis for 1-1/4 Dia. Pin	1
8	12247	Rod - Tie 5/8 x 8	4
9	12248	Nut - Hex 5/8 UNF, Gr. 5	4
17	10956	Pin - Clevis 1 x 4	1
18	10957	Clip	2
19	12277	Plug - 3/4 - 16 UNF, ORB	1
20	10937	Control - Stroke	1
21	12235	Kit - Seal Repair	1
10		O-Ring	2
11		O-Ring	1
12		Washer	2
13		O-Ring	1
14		O-Ring	1
15		Washer	1
16		Wiper	1
17	12180	Adapter 1/2 to 1/2 ORB ASAE Thread	2
	100570	Pin - Rod End (not shown)	1
	10910	Roll Pin (not shown)	2
	BC-20-0004	Complete Cylinder	
NOTE: Seal Repair Kits Parts available in Repair Kits only. (Ref. No. 10-16)			
Beginning with serial # 95110416 order parts for Lion 3000 PSI.			



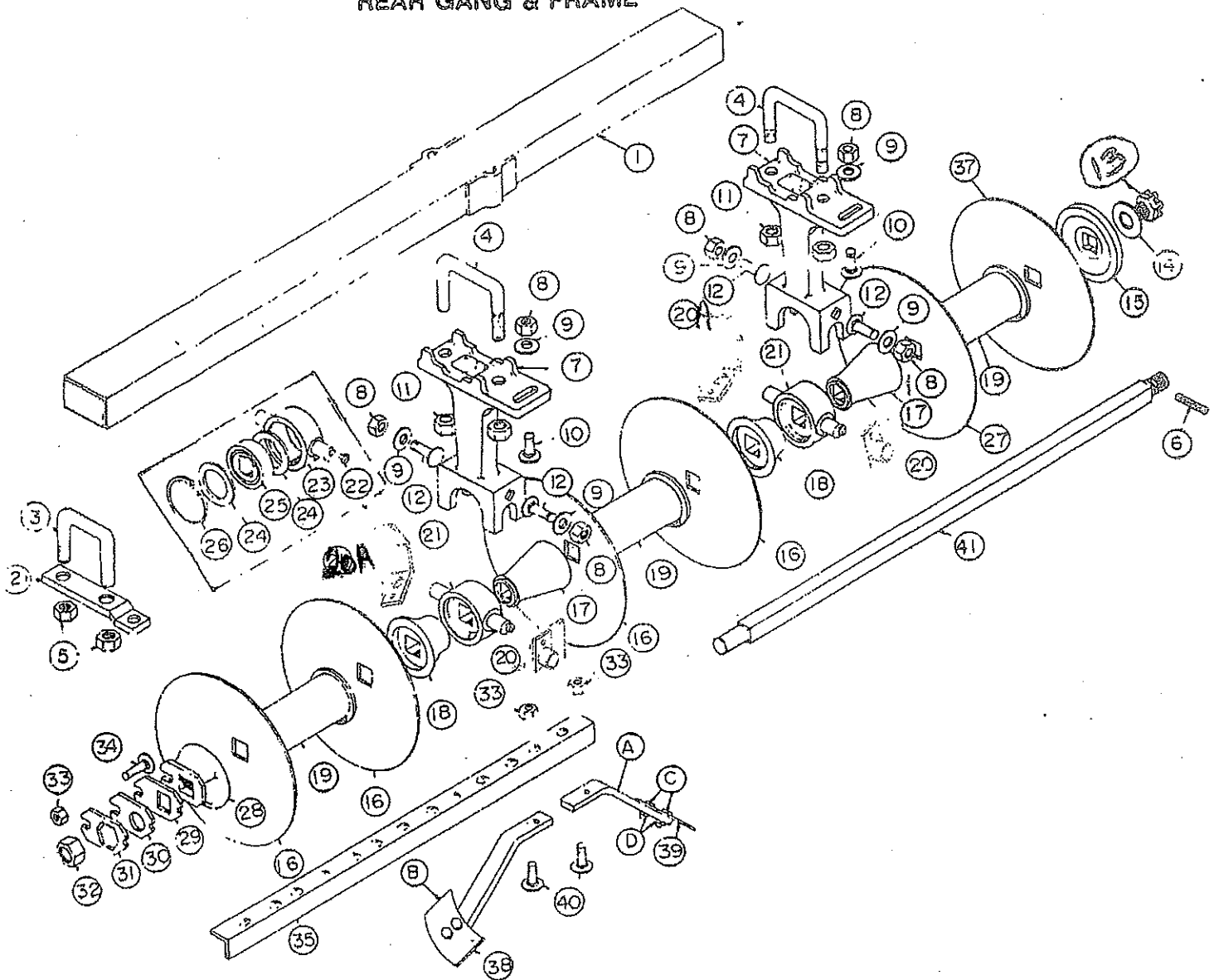
FRONT GANG



AMCO F-17B FRONT GANG & FRAMES								
Ref. No.	Part No.	Description	9'3"	10'6"	No. 12'0"	Req'd. 13'6"	15'	16'6"
1	0933	Assy. Gang Frame (shown) 3 x 5 x 44	1					
1	0921	Assy. Gang Frame 3 x 5 x 53		1				
1	0923	Assy. Gang Frame 3 x 5 x 62-1/2			1			
1	0925	Assy. Gang Frame 3 x 5 x 72				1		
1	0927	Assy. Gang Frame 3 x 5 x 81-1/2					1	
1	0929	Assy. Gang Frame 3 x 5 x 90-3/4						1
2	100365	Scraper Bar Mount 5/8 x 2 x 11-1/16	1	1	1	1	1	1
3	6513	U-Bolt 3/4 Dia.	1	1	1	1	1	1
4	11280	U-bolt 7/8 Dia.	2	2	2	3	3	3
5	10300	Lock Nut 3/4 NC, PL	2	2	2	2	2	2
6	10910	Roll Pin 5-16 x 2-1/4	1	1	1	1	1	1
7	16012	Bearing Riser	2	2	2	3	3	3
8	10299	Lock Nut 5/8 NC, PL	6	7	7	9	9	9
9	10059	Cut Washer 5/8 PL	6	7	7	9	9	9
10	10135	Carriage Bolt 5/8 x 1-3/4 NC, PL	2	3	3	3	3	3

		AMCO							
		F17B							
		FRONT GANG & FRAMES (cont.)							
						No.	Req'd.		
Ref. No.	Part No.	Description	9'3"	10'6"	12'	13'6"	15'	16'6"	
11	10396	Lock Nut 7/8 NC, PLT, Gr. B	4	4	4	6	6	6	
12	10665	Carriage Bolt 5/8 x 2 NC, PLT, Gr. 5	4	4	4	6	6	6	
13	10226	Nut Gang Bolt 1-1/2" NF, Slotted	1	1	1	1	1	1	
14	10872	Cut Washer 1-3/8 PLT	1	1	1	1	1	1	
15	2404	Bumper Washer	1	1	1	1	1	1	
16	3276	Blade 22" x 1/4 Plain	5	6	7	8	9	10	
16	3275	Blade 22" x 1/4 C. O.	5	6	7	8	9	10	
16	3250	Blade 24" x 1/4 C. O.	5	6	7	8	9	10	
16	3255	Blade 24" x 1/4 Plain	5	6	7	8	9	10	
17	17014	End Bell - Small	2	2	2	3	3	3	
18	17010	End Bell - Large	2	2	2	3	3	3	
19	0522	Spacer Spool	3	4	5	5	6	7	
20	20579	Grease Guard	4	4	4	6	6	6	
20A	102489	Wear Guard	4	4	4	6	6	6	
21	FB-09-0015	Sub Assy. Hsg & Brg	2	2	2	3	3	3	
22	12384	Grease Fitting 1/8 NPT Straight	1	1	1	1	1	1	
23	16003	Housing - Bearing	1	1	1	1	1	1	
24	100104	Washer 100mm	2	2	2	2	2	2	
25	11503	Bearing	1	1	1	1	1	1	
26	11064	Snap Ring	1	1	1	1	1	1	
28	1222A	End Gang Washer	1	1	1	1	1	1	
29	100099	Spacer Plate	1	1	1	1	1	1	
30	100098	Bearing Plate	1	1	1	1	1	1	
31	5622A	Lock Plate	1	1	1	1	1	1	
32	10489	Nut Gang Bolt 1-1/2 NF	1	1	1	1	1	1	
33	11646	1/2" Flange Lock Nut	6	7	8	9	10	10	
34	10710	Carriage Bolt 1/2 x 2 NC, PLT	1	1	1	1	1	1	
35	100677	Scraper Bar 2 x 2 x 3/8 - 44-9/16 RH	1						
35	100678	Scraper Bar 2 x 2 x 3/8 - 44-9/16 LH	1						
35	100681	Scraper Bar 2 x 2 x 3/8 - 53-3/4 RH		1					
35	100682	Scraper Bar 2 x 2 x 3/8 - 53-3/4 LH		1					
35	9921	Scraper Bar 2 x 2 x 3/8 - 62-5/16 RH			1				
35	9922	Scraper Bar 2 x 2 x 3/8 - 62-5/16 LH			1				
35	9923	Scraper Bar 2 x 2 x 3/8 - 72-1/8 RH				1			
35	9924	Scraper Bar 2 x 2 x 3/8 - 72-1/8 LH				1			
35	100679	Scraper Bar 2 x 2 x 3/8 - 81-5/16 RH					1		
35	100680	Scraper Bar 2 x 2 x 3/8 - 81-5/16 LH					1		
35	100534	Scraper Bar 2 x 2 x 3/8 LH							1
37	11588	Blade 20" x 1/4 PL	1	1	1	1	1	1	
37	11589	Blade 20" x 1/4 CO	1	1	1	1	1	1	
38	0789	Assy. Scraper LH	5	6	7	8	9	10	
A	100271	Scraper Shank	1	1	1	1	1	1	
C	100270	Scraper Blade 3/16 x 6 x 4	1	1	1	1	1	1	
D	10785	Hex Head Machine Bolt 1/2 x 1-1/2 NC, PL	2	2	2	2	2	2	
E	10395	Lock Nut 1/2 NC, PL	2	2	2	2	2	2	
39	0788	Assy. Scraper RH	5	6	7	8	9	10	
40	10870	Carriage Bolt 1/2 x 1-1/2 NC, PLT, Gr. 5	5	6	7	8	9	10	
41	9442	Gang Bolt 1-1/2" Sq. x 52-1/8	1						
41	9443	Gang Bolt 1-1/2" Sq. x 61-3/8		1					
41	9444	Gang Bolt 1-1/2" Sq. x 70-5/8			1				
41	9445	Gang Bolt 1-1/2" Sq. x 79-7/8				1			
41	9446	Gang Bolt 1-1/2" Sq. x 89-1/8					1		
41	9447	Gang Bolt 1-1/2" Sq. x 98-3/4							1

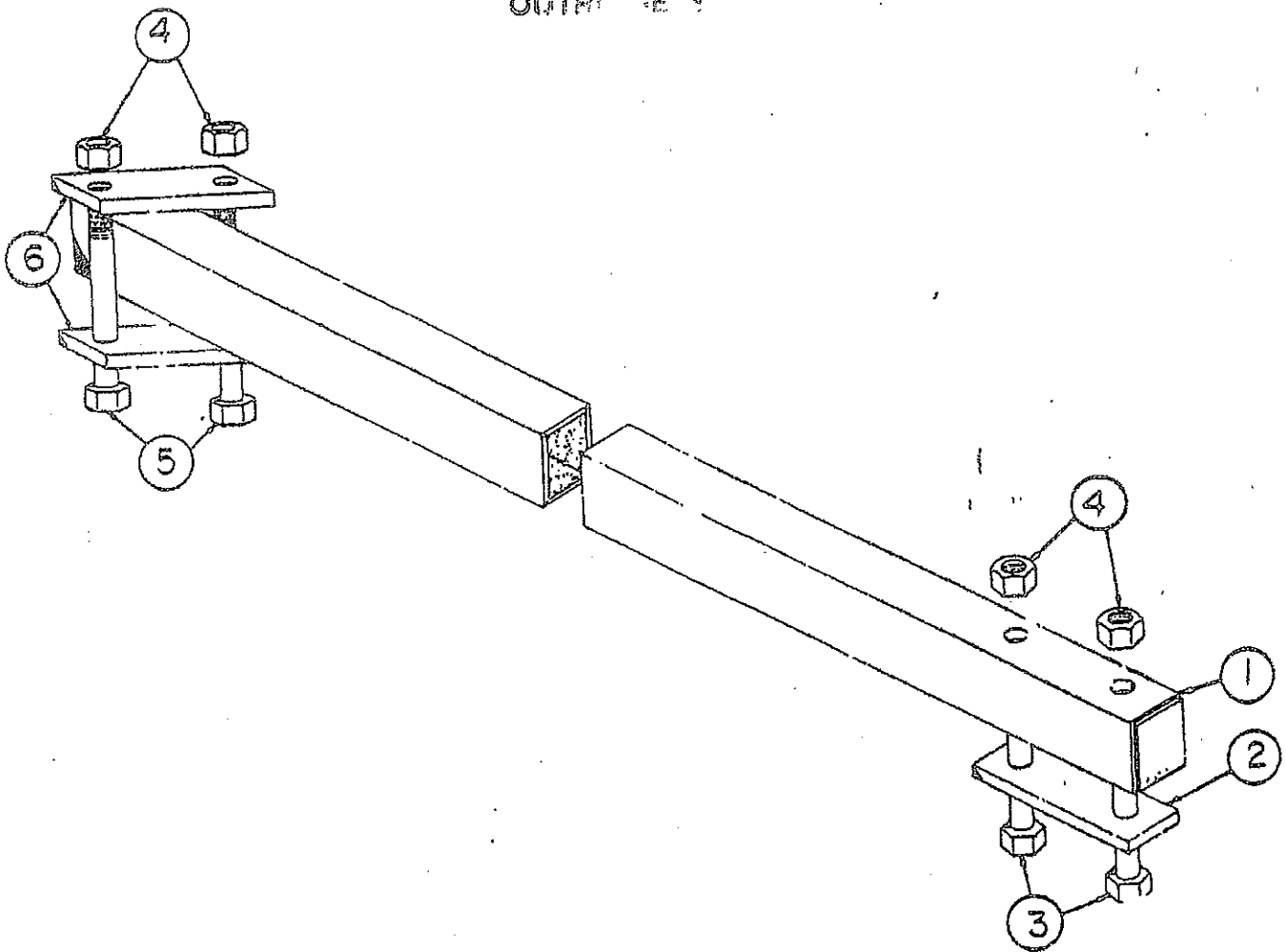
REAR GANG & FRAME



AMCO F-17B REAR GANG & FRAMES 9'3" - 16'6"								
Ref. No.	Part No.	Description	9'3"	10'6"	No. 12'	Req'd. 13'6"	15'	16'6"
1	0934	Assy. Gang Frame 3 x 5 x 53	1					
1	0922	Assy. Gang Frame 3 x 5 x 62-1/2		1				
1	0924	Assy. Gang Frame 3 x 5 x 72			1			
1	0926	Assy. Gang Frame 3 x 5 x 81-1/2				1		
1	0928	Assy. Gang Frame 3 x 5 x 91					1	
1	0930	Assy. Gang Frame 3 x 5 x 100-1/4						1
2	100365	Scraper Bar Mount 5/8 x 2 x 11-1/16	1	1	1	1	1	1
3	6513	U-Bolt 3/4" Dia.	1	1	2	1	1	3
4	11280	U-Bolt 7/8" Dia.	2	2	2	3	3	3
5	10300	Lock Nut 3/4 NC, PL	2	2	4	2	2	2
6	10910	Roll Pin 5-16 x 2-1/4	1	1	1	1	1	1
7	16012	Bearing Riser	2	2	2	3	3	3
8	10299	Lock Nut 5/8 NC, PL	7	7	8	10	10	10

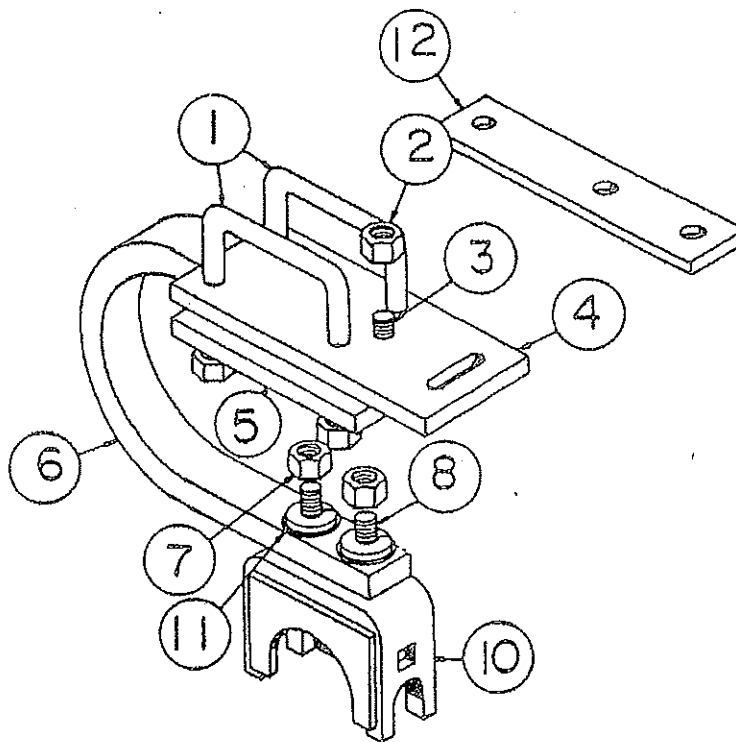
AMCO								
F-17B								
REAR GANG & FRAMES Cont.								
9'3" - 16'6"								
Ref. No.	Part No.	Description	9'3"	10'6"	No.		Req'd.	
					12'	13'6"	15'	16'6"
9	10059	Cut Washer 5/8 PL	7	7	8	10	10	10
10	10135	Carriage Bolt 5/8 x 1-3/4 NC, PL	3	3	4	4	4	4
11	10396	Lock Nut 7/8 NC, PLT, Gr. B	4	4	4	6	6	6
12	10665	Carriage Bolt 5/8 x 2 NC, PLT, Gr. 5	4	4	4	6	6	6
13	10226	Nut Gang Bolt 1-1/2' NF, Slotted	1	1	1	1	1	1
14	10872	Cut Washer 1-3/8 PLT	1	1	1	1	1	1
15	2404	Bumper Washer	1	1	1	1	1	1
16	3276	Blade 22" x 1/4 Plain	5	6	7	8	9	11
16	3275	Blade 22" x 1/4 C. O.	5	6	7	8	9	11
16	3250	Blade 24" x 1/4 C. O.	5	6	7	8	9	11
16	3255	Blade 24" x 1/4 Plain	5	6	7	8	9	11
17	17014	End Bell - Small	2	2	2	3	3	3
18	17010	End Bell - Large	2	2	2	3	3	3
19	0522	Spacer Spool	4	5	6	6	7	8
20	20579	Grease Guard	4	5	6	6	7	6
20A	102489	Wear Guard	4	4	4	6	6	6
21	FB-09-0015	Sub. Assy. Hsq. & Brg.	2	2	2	3	3	3
22	12384	Grease Fitting 1/8 NPT Straight	1	1	1	1	1	1
23	16003	Housing Bearing	1	1	1	1	1	1
24	100104	Washer 100mm	2	2	2	2	2	2
25	11503	Bearing	1	1	1	1	1	1
26	11064	Snap Ring	1	1	1	1	1	1
27	11588	Blade 20" x 1/4 Plain	1	1	1	1	1	1
27	11589	Blade 20" x 1/4 C. O.	1	1	1	1	1	1
28	1222A	End Gang Washer	1	1	1	1	1	1
29	100099	Spacer Plate	1	1	1	1	1	1
30	100098	Bearing Plate	1	1	1	1	1	1
31	5622A	Lock Plate	1	1	1	1	1	1
32	10489	Nut Gang Bolt 1-1/2 NF	1	1	1	1	1	1
33	11646	1/2" Flange Lock Nut	6	7	8	9	10	11
34	10710	Carriage Bolt 1/2 x 2 NC, PLT	1	1	1	1	1	1
35	9548	Scraper Bar 2 x 2 x 3/8 x 51-11/16 Large	2					
35	9549	Scraper Bar 2 x 2 x 3/8 x 60-7/8		2				
35	9550	Scraper Bar 2 x 2 x 3/8 x 70-1/8			2			
35	9551	Scraper Bar 2 x 2 x 3/8 x 88-7/16				2		
35	100367	Scraper Bar 2 x 2 x 3/8 x 88-7/16					2	
35	100366	Scraper Bar 2 x 2 x 3/8						1
37	3055	Blade 16" x 9 Ga.	1	1	1	1	1	1
37	9482	Blade 18" x 1/4 PL	1	1	1	1	1	1
38	0789	Assy. Scraper LH	6	7	8	9	10	11
A	100271	Scraper Shank	1	1	1	1	1	1
B	100270	Scraper Blade 3/16 x 6 x 4	1	1	1	1	1	1
C	10785	Hex Head Machine Bolt 3/16 x 6 x 4	1	1	1	1	1	1
D	10395	Lock Nut 1/2 NC, PL	2	2	2	2	2	2
39	0788	Assy. Scraper RH	6	7	8	9	10	11
40	10870	Carriage Bolt 1/2 x 1-1/2 NC, PLT, Gr. 5	6	7	8	9	10	11
41	9443	Gang Bolt 1-1/2" Sq. x 61-3/8	1					
41	9444	Gang Bolt 1-1/2" Sq. x 70-5/8		1				
41	9445	Gang Bolt 1-1/2" Sq. x 79-7/8			1			
41	9446	Gang Bolt 1-1/2" Sq. x 89-1/8				1		
41	9447	Gang Bolt 1-1/2" Sq. x 98-3/8					1	
41	9448	Gang Bolt 1-1/2" Sq. x 107-5/8						1

OUTRIGGER BAR



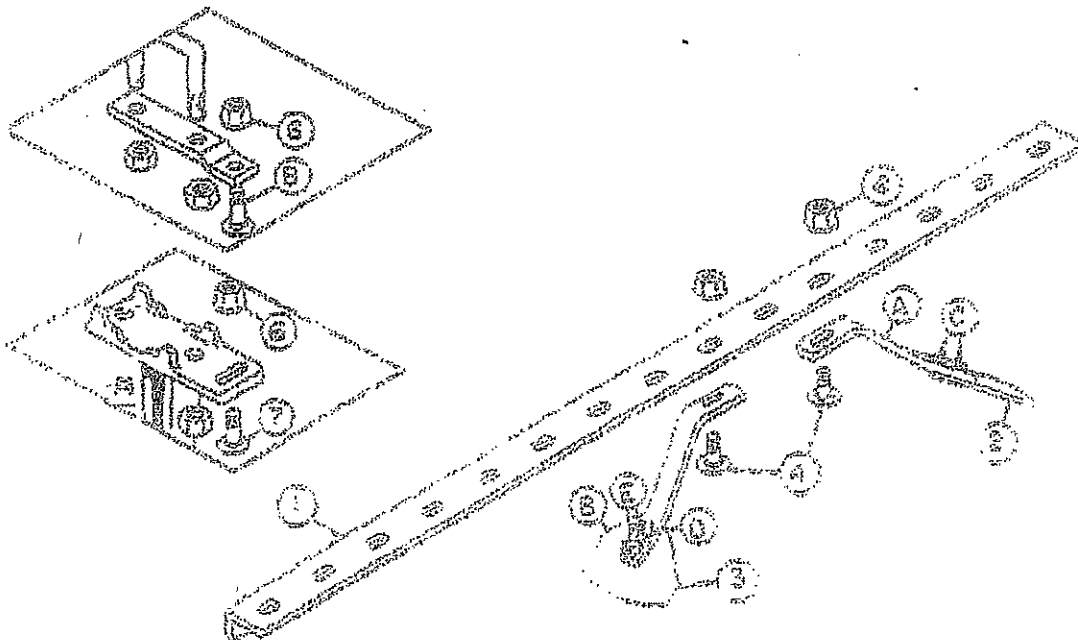
AMCO			
F-17B			
OUTRIGGER BARS			
13'6" - 16'6"			
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd</u>
1	20394	Assy. Outrigger Bar	2
2	100583	Strap - 3/4 x 3 x 9-1/8 Long	2
3	12082	Machine Bolt - 7/8 x 9 NC, PL, Gr. 5	4
4	11691	Flange Lock Nut 7/8	8
5	11102	Machine Bolt - 7/8 x 10 NC, PL	4
6	9855	Bracket - Angel Set 3/4 x 3 x 9-14/4	4








AMCO			
F-17B			
FLEX GANG BEARING RISER			
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	11467	U-Bolt 3/4" Dia.	2
2	10300	Lock Nut 3/4 NC, PL	5
3	10320	Machine Bolt 3/4 x 3 NC, PL, Gr. 5	1
4	100801	Top Plate 1/2 x 5 - 12" Long	1
5	100802	Bottom Plate 1/2 x 5 - 8-3/4" Long	1
6	11521A	Shock Absorber Shank 1-1/4 x 2	1
7	12069	Flange Lock Nut 3/4 NC	2
8	10579	Carriage Bolt 3/4 x 3 NC, Gr. 5	2
10	0944	Assy. Trunnion Mount	1
11	10866	Cut Washer 3/4 PL	2
	FA-01-0006	Bundle Shock Absorber Bearing Riser (Complete) Includes 1-11	
12	100846	Scraper Bar Support 1/2 x 1-1/2 - 12 Long	1
Note: Parts 1-11 are required to replace Bearing Riser 16012A on a Shock Absorber Harrow.			
Part 12 is used to replace 100365 on a Shock Absorber Harrow.			



OPTIONAL SHOCK ABSORBER BEARING RISER

AMCO F-17B HEAVY DUTY SCRAPERS (OPTIONAL)								
Ref. No.	Part No.	Description	9'3"	10'6"	No. 12'	Req'd. 13'6"	15'	16'6"
1	101073	Scraper Bar 3 x 2 x 3/8 - 45-7/8"	2					
1	101074	Scraper Bar 3 x 2 x 3/8 - 50-1/2"	2					
1	101075	Scraper Bar 3 x 2 x 3/8 - 55-1/8"		2				
1	101076	Scraper Bar 3 x 2 x 3/8 - 59-3/4"		2				
1	101077	Scraper Bar 3 x 2 x 3/8 - 64-3/8"			2			
1	101078	Scraper Bar 3 x 2 x 3/8 - 69"			2			
1	101079	Scraper Bar 3 x 2 x 3/8 - 73-5/8"				2		
1	101080	Scraper Bar 3 x 2 x 3/8 - 78-1/4"				2		
1	101081	Scraper Bar 3 x 2 x 3/8 - 82-7/8"					2	
1	101082	Scraper Bar 3 x 2 x 3/8 - 89"					2	
1	101083	Scraper Bar 3 x 2 x 3/8 - 92-1/8"						2
1	101084	Scraper Bar 3 x 2 x 3/8 - 96-3/4"						2
2	20068	Scraper RH	11	13	15	17	19	21
A	101049	Scraper Shank .360 x 2	1	1	1	1	1	1
B	101019	Scraper Blade 3/16 x 6-1/2	1	1	1	1	1	1
C	11652	Machine Bolt 1/2 x 1-1/4 NC	2	2	2	2	2	2
D	10832	Cut Washer	2	2	2	2	2	2
E	10395	Lock Nut 1/2 NC, PL	2	2	2	2	2	2
3	20069	Scraper LH	11	13	15	17	19	21
4	10135	Carriage Bolt 5/8 x 1-3/4 NC, PL, Gr. 5 (Mounts Scraper to Scraper Bar)	22	26	30	34	38	42
6	11647	Flange Lock Nut 5/8 NC, PL, Gr. G	32	38	44	48	52	56
7	10665	Carriage Bolt 5/8 x 2 NC, PL, Gr. 5 (Mounts Scraper Bar to Bearing Riser and Supports)	10	12	14	14	14	14



GENERAL TORQUE SPECIFICATION TABLE						
USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN						
Note: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly-disulphide greases or other extreme pressure lubricants are used. This applies to both NF and NC threads.						
SAE Grade No	2		5		8 *	
Bolt head identification marks as per grade NOTE: Manufacturing Marks Will Vary			  		  	
Bolt Size	Torque		Torque		Torque	
Inches Millimeters	Foot Pounds		Foot Pounds		Foot Pounds	
	Min	Max	Min	Max	Min	Max
1/4 6.35	5	6	9	11	12	15
5/16 7.94	10	12	17	20.5	24	29
3/8 9.53	20	23	35	42	45	54
7/16 11.11	30	35	54	64	70	84
1/2 12.70	45	52	80	96	110	132
9/16 14.29	65	75	110	132	160	192
5/8 15.88	95	105	150	180	220	264
3/4 19.05	150	185	270	324	380	456
7/8 22.23	160	200	400	480	600	720
1 25.40	250	300	580	696	900	1080
1-1/8 25.58			800	880	1280	1440
1-1/4 31.75			1120	1240	1820	2000
1-3/8 34.93			1460	1680	2380	2720
1-1/2 38.10			1940	2200	3160	3560

* Thick nuts must be used with Grade 8 bolts

ALL BOLTS SHOULD BE TIGHTENED TO THE
RECOMMENDED TORQUES SHOWN IN THE
"GENERAL TORQUE SPECIFICATION TABLE"

ASSEMBLY INSTRUCTIONS - AMCO F17BHARROW

The AMCO F17BHarrow is shipped from the factory with maximum preassembly. The following bundles are required for a complete harrow.

- A. Bundle Pull Tongue (with tongue jack)
- B. Bundle Main Frame (with rockshafts)
- C. Bundle Front Right Hand Gang and Gang Frame
- D. Bundle Front Left Hand Gang and Gang Frame
- E. Bundle Rear Right Hand Gang and Gang Frame
- F. Bundle Rear Left Hand Gang and Gang Frame
- G. Two 15" Six Bolt Wheels

STEP 1. Select a clear level area to assemble the harrow. Place all parts and bundles where they will be readily accessible during assembly.

STEP 2. Place the center main frame, "right side up" on *sturdy stands* at least 33" high.



CAUTION *Use sturdy stands to prevent frame from falling.*

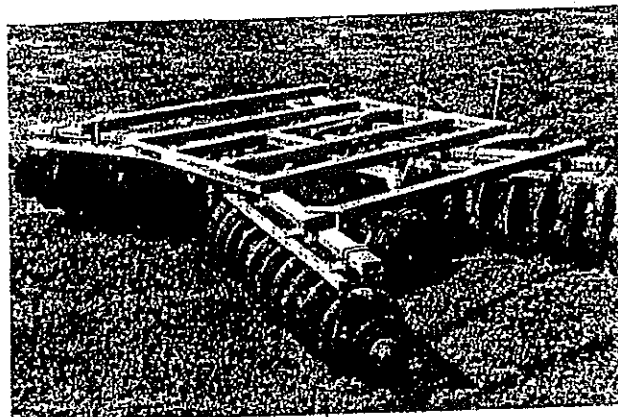
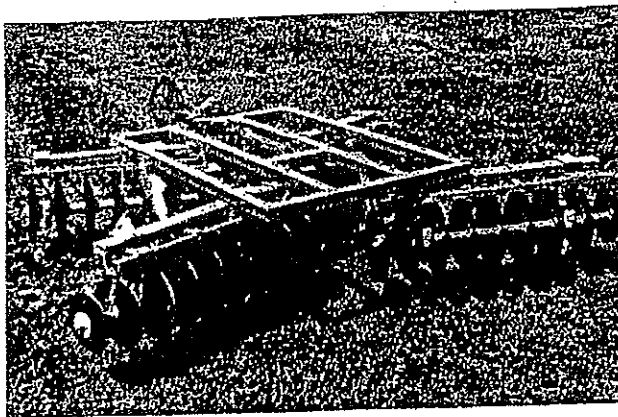
STEP 3. Attach the two front gangs and gang frames to the main frame. Clamp in place with the 7/8" bolts and straps. The gangs should be located to throw soil away from the center of the harrow. Tighten the 7/8" bolts to specified torque.

STEP 4. Attach the two rear gangs to the center main frame. Clamp in place with the 7/8" bolts and straps. The gangs should be located to throw soil toward the center of the harrow. Tighten the 7/8" bolts to the specified torque.

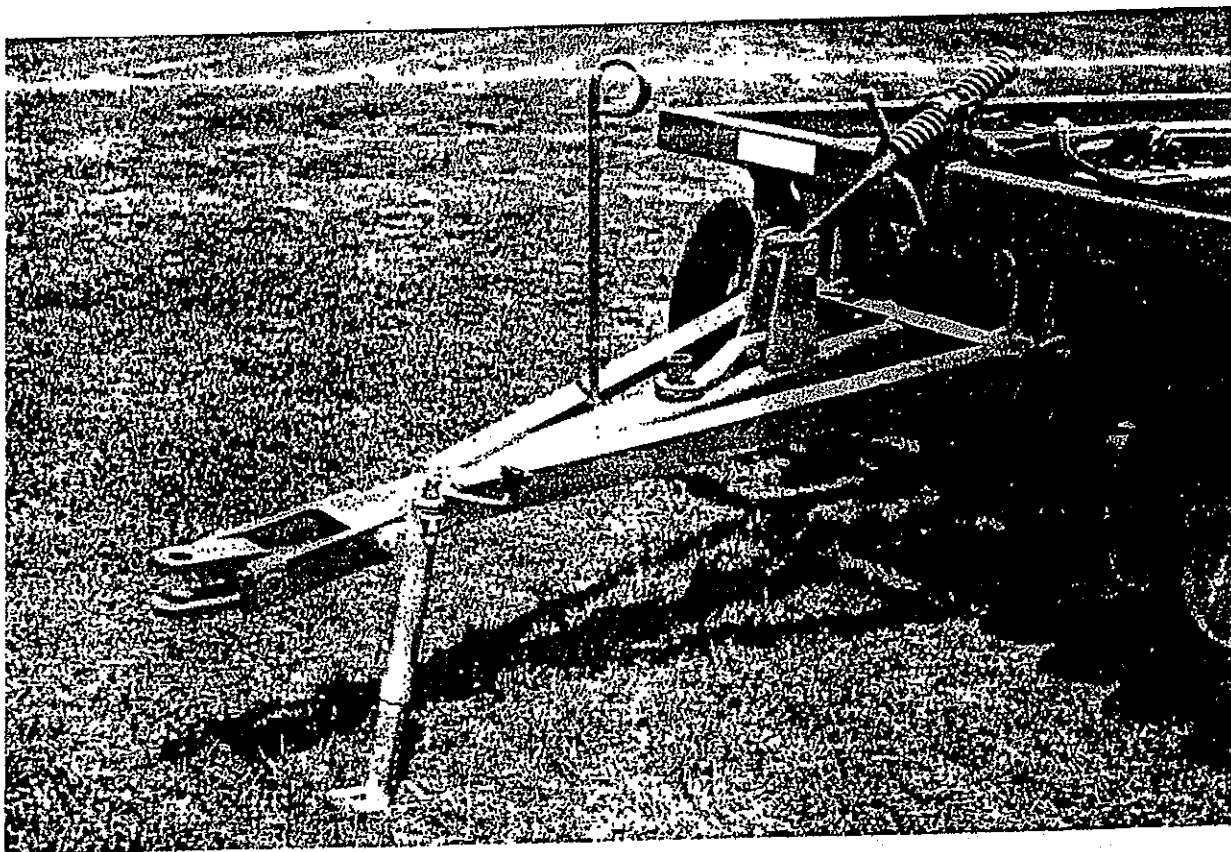
STEP 5. Mount two 9.5LX15 or 11Lx15 six or eight ply tires on the two wheels. Inflate to 40-50 PSI. Mount wheels on rockshafts. Tighten hub bolts tight.



CAUTION *When working on disk harrows, care should be exercised in handling or tightening bolts near disk blades to avoid injury.*



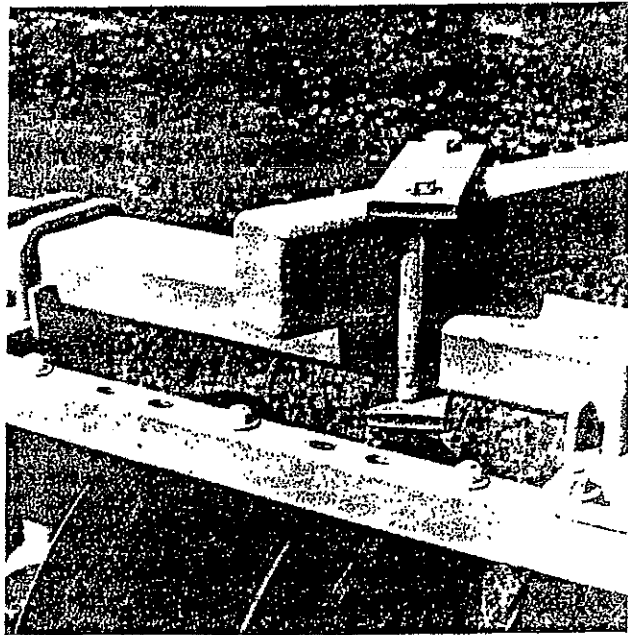
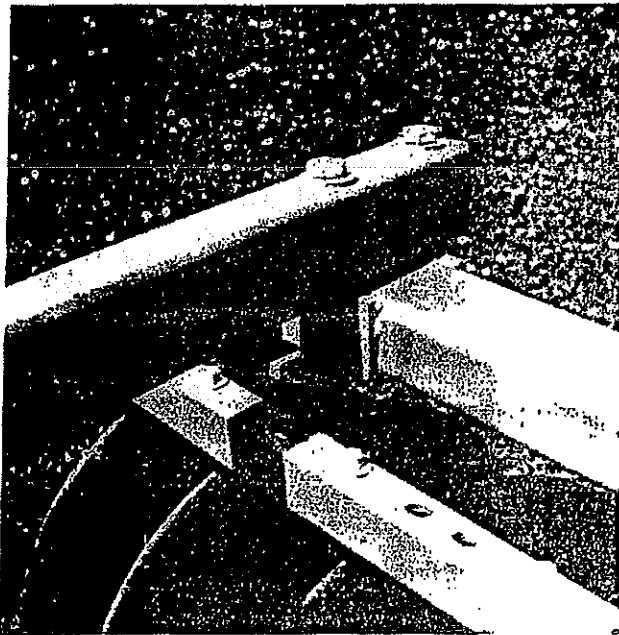
STEP 6. Install a heavy duty 3" x 8" or a 4" x 8" hydraulic cylinder on the main frame and the front rockshaft. The rod end should be attached to the rockshaft. NOTE: Remove the straps that clamp the rockshafts to the main frame.



STEP 7. Install pull tongue. Install tongue adjusting rod sub assembly.

STEP 8. Attach two 1/2" x 12' or 3/8" x 12' SAE 100 R2 or SAE 100 R8 Double Braid Hydraulic hoses to the hydraulic cylinder on the main frame. Attach quick couplers. (Hoses and Couplers are available as optional equipment.)

STEP 9. Install outriggers on 13' 6" and 15' 0" Models. Tighten all bolts to the specified torque.



STEP 10. Final Grooming and check points.

- A. Check inside front gangs. They should overlap in the center about 2-1/2" to 3-1/2". (Front tips of inside blades should be 1-1/2" to 2" over center line of harrow.) This can be adjusted by shifting the gangs on the gang frames. It is important that center blades clear by at least 3/4".
- B. Check the inside rear gangs. They should be 26" to 30" apart. (The front tip of the inside blades should be 13" to 15" from the harrow centerline.) Shift gangs as required to obtain this spacing.
- C. Check scraper adjustment. Scrapers should be adjusted to run 1/8" to 1/4" from disk blades.
- D. Tighten all bolts to proper torque.
- E. Raise and lower harrow 4 or 5 times with heavy duty 3" x 8" or 4" x 8" hydraulic cylinders. Check transport lock to be sure it functions properly.
- F. Raise harrow for transport as described above. Use a good grade of clean Lithium soap base chassis grease to lubricate the entire harrow. This is very important if the harrow will be kept in inventory for several weeks before being placed in service. Grease the harrow as follows:
 - (1) Grease the four rockshaft pivot pins until grease appears at the ends of the pivot journals.
 - (2) Grease the two fittings on the tongue adjusting rod. Remove tape from tongue adjusting rod.
 - (3) Grease the gang bearings with 4 or 5 shots of grease to purge any condensation that has accumulated during shipment and storage.
- G. If the harrow is in storage for four to six months, the entire harrow should again be lubricated before placing in service. It should also be greased every 50 hours while in use, at the end of each season and at the start of each season.
- H. Check decals to be certain they are in place and in good condition. Touch up paint as required before delivery. Place Operators Manual in the heavy plastic shipping bag. Tape bag to main frame so the Operators Manual will be delivered to your customer along with the harrow.

STEP 11. Review all steps of the assembly process to be certain the harrow is properly assembled. Check all bolts to be sure they are properly torqued. Visually inspect the harrow for any missing, damaged, or defective parts. Repaint any areas that need improvement.

Remember, a little extra attention to details at this time can prevent problems after the harrow is placed in service.

LUBRICATION

Careful and regular attention to lubrication will greatly increase the life of the harrow. For economical and efficient operation, the proper lubrication of frame fittings, gang bearings, and wheel bearings is essential.

Be sure fittings are free of dirt before greasing. If a fitting is lost or damaged, replace it immediately. Lubricate all parts thoroughly with a good grade No. 2 gun grease (Lithium Base).

Miscellaneous working parts not provided with lubrication fittings should be oiled occasionally with a good grade of lubrication oil.

ROCKSHAFT PIVOT PINS

A high carbon steel pin with a grease fitting joins each rockshaft to the main frame in two places. These 4 pins should be greased every 50 hours of operation. They should also be greased at the beginning and end of the disking season. A good grade of Lithium soap base grease is recommended.



WARNING *Lower or block elevated components before servicing or when leaving the machine. Elevated components can fall and cause serious injury.*

GANG BEARINGS

The AMCOF17BHarrow Gangs are equipped with regreasable Protect-O-Shield ball bearings. The grease fitting is located on the rear of each bearing housing. They should be greased every 50 hours of operation with a good grade of lithium soap base chassis grease, preferably with a low volume-low pressure hand operated grease gun. All bearings should be greased at the beginning and end of each disking season. To protect the seals from the elements, raise the harrow on its wheels and slowly spin the gangs so the grease wraps around the seals.

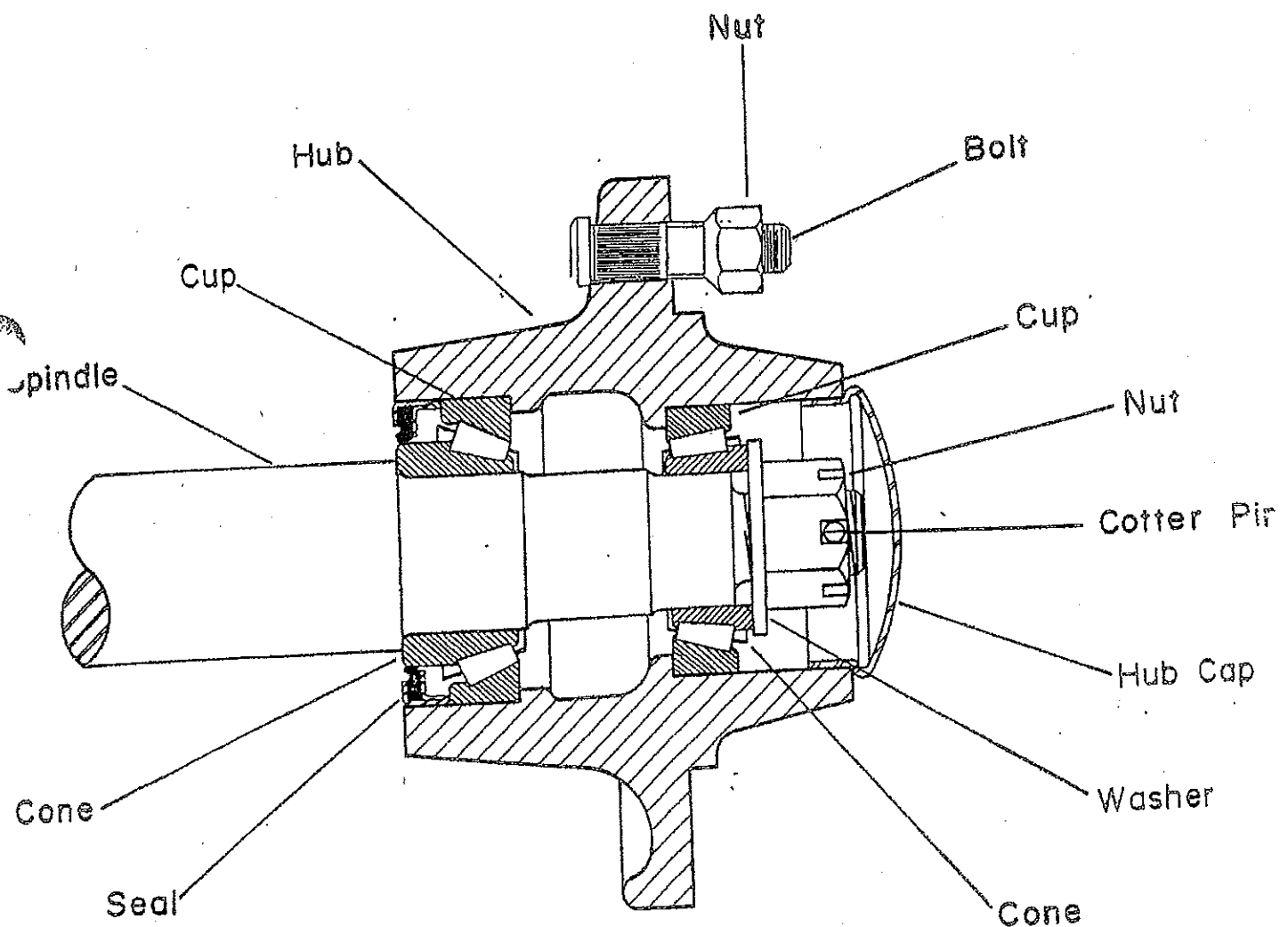
More frequent greasing is recommended when working in very sandy or wet conditions.

TONGUE ADJUSTING ROD:

The two swivels on the tongue adjusting rod should be greased every 50 hours of operation, also, at the beginning and end of each disking season. The threads on the rod should be cleaned and oiled occasionally for smooth operation.

WHEEL HUB BEARINGS

The wheel hubs are equipped with tapered roller bearings. These hubs are packed with grease and adjusted at the factory. They should be repacked and the spindle nut properly adjusted each disking season or every 300 hours of operation. Use a good grade of clean lithium soap base grease.

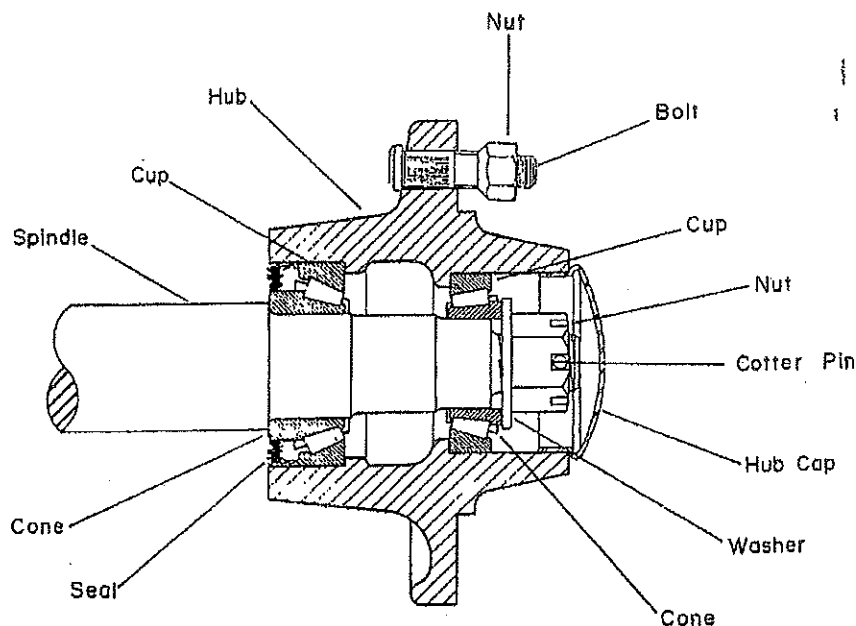


MAINTENANCE

WHEEL BEARING REPAIR

Wheel bearings should be repacked with grease and adjusted annually. Under extreme conditions, they should be serviced more frequently. Check occasionally for excessive end play. Adjust as required to eliminate excessive end play.

To disassemble the hub, remove the dust cap by prying around it. Remove the cotter pin, slotted nut and spindle washer. Carefully remove the hub and bearings from the spindle. Inspect all parts for wear and replace if necessary.



Use the following procedure when repairing or servicing wheel hubs:

1. Clean all parts that are to be re-used.
2. Carefully inspect the metal case on the grease seal. Discard seal if case is bent or damaged. Check seal lips for cuts, tears or excessive wear. Seal must fit snugly on extended inner race of bearing.
3. Carefully inspect both sets of bearing cones. Bearing bore and rollers must be smooth and free of nicks and scratches. Replace cones if damaged.
4. Inspect hub to make sure that hub bolts have a good thread. Bearing cups must be smooth and free of surface blemishes. Cups must be removed from the hub and replaced if damaged. Cups should be fully pressed into the hub and rest squarely against the shoulder inside the hub. Hub cap and grease seal should fit snugly inside the hub. Severely damaged hubs should be replaced.
5. Threads on spindle must be in good condition. Bearing cone seats must be smooth and free of blemishes. Bearing cones must fit squarely on spindle.
6. Spindle washer, slotted nut, cotter pin and hub cap must be in good condition. Replace if worn or damaged.

To reassemble the hub, repack each bearing cone with grease and fill the hub cavity 1/3 full of grease. Place inner bearing in hub, press grease seal into hub and carefully install the hub on the spindle. Install the outer bearing assembly into the hub, and replace the spindle washer and slotted nut. Tighten the slotted nut until the hub binds when rotated.

Back the slotted nut off to the nearest slot. Rotate the hub five or six revolutions in each direction to seat all parts. Re-tighten the slotted nut while rotating the hub. When the hub binds, back the slotted nut off to the nearest slot and secure with a cotter pin. Install dust cap and mount wheel on hub.

GANG REPAIR

1. With the harrow in its "down" or working position, loosen the gang bolt nut. It is helpful to clean the threads of all bolts with a wire brush and apply penetrating oil before removing the nuts.
2. Remove the nuts that secure the gang to the bearing riser.
3. Remove the trunion clamps.
4. Raise the harrow on its wheels. The entire gang can then be rolled away from the harrow. In most cases time can be saved by removing the scraper bars and scrapers.
5. Remove the gang bolt nut and end washer.
6. Remove the blades, spacer spools and bearings being careful not to damage the threads on the gang bolt.
7. Tear the entire gang down and clean all parts. Check disk axle for straightness. Bowed, bent or worn axles must be replaced.
8. Check spacer spools for damage caused by running disk with loose gangs or hitting underground obstructions. Replace spools if they are damaged.
9. Carefully check all end bells. The large end must contact the disk blade around the entire circumference of the end bell. The small end must be smooth and perpendicular to the axle. The end bells *must be replaced* if they are cracked or worn on the surface adjacent to the bearing.
10. Check all the bearings on the gang. Running a harrow for one hour or more after a bearing failure will seriously damage other bearings on the gang. These damaged bearings will then fail within a few hours after the failed bearing has been replaced. Continued operation with this failed bearing will damage the new bearing thus it will fail after a few hours use. In most cases it will be best to replace all bearings on a gang when it is torn down for repairs. A triple lip sealed regreasable bearing should always be used for bearing replacement.
11. To replace a bearing, the snap ring must be removed. The old bearing and "Protect-O-Shield Washers" should then be pressed out of the housing. Clean and wash out old grease and carefully check the housing. Replace the housing if it is damaged. Check the Protect-O-Shield washers. They should fit snug in the bearing housing requiring a few light taps with a hammer to remove or install them. If they are loose, bent, or show signs wear near the inner race of the bearing, they should be replaced. Do not use the harrow without the washers being installed. Press the new bearing straight into the housing. Always press against the outer race of the bearing. Check the location of the grease holes in the bearing. These holes must align with the grease groove in the bearing housing. Rotate the bearing in the housing after it is pressed in to be sure it turns freely. Install the snap ring in the housing.

12. Check all disk blades for cracks, breaks, wear and other damage. Replace worn or damaged disk blades.
13. After *cleaning*, checking and replacing all damaged parts, the gang should be assembled. Be sure the grease fittings in the bearing housings face to the rear. Be sure the snap ring in the bearing housing is turned toward the convex (back) side of the disk blades. The 1-1/2" square gang bolt nut should be torqued to 1200 FT/LBS. The axle nut should be locked in place with the lock strap.
14. After the gang is assembled it should be attached to the harrow. The bearing risers should be *carefully* spaced to match the bearing housing. Poorly spaced bearing risers will overload the bearings and cause premature failure. The gang should be rotated 4 or 5 complete revolutions to be sure that all parts are aligned and the gang turns freely. Replace the scraper bar and scrapers.
15. The bearings should be greased each week or every 50 hours of use with a good grade of clean, lithium soap base grease. Use of dirty grease or a grease with metallic additives will reduce bearing life.
16. It is essential that gang bolts be kept tight to prevent axle bending, blade breakage, spacer spool breakage and damage to other gang parts. Gang parts tend to wear on a bevel when the harrow is operated with a loose gang bolt. This reduces the area of contact between mating gang parts. Therefore it is often difficult to keep a gang bolt tight if it has been operated in a loose condition. After such a gang bolt has been properly torqued it should be retorqued after about 30 minutes of operation, again after 4 or 5 hours of operation and again after 8 to 10 hours of use. This will assure that proper gang bolt tension is maintained while the mating components are reseating. If the gang bolt will not stay tight, the gang should be completely disassembled and all parts carefully inspected. All damaged parts should be replaced before reassembling the gangs.



CAUTION: When working on disk harrows care should be exercised in handling or tightening bolts near disk blades to avoid injury. All hydraulically or mechanically elevated components must be blocked or lowered to prevent accidents when servicing the harrow.

SCRAPER REPAIR

Bent scraper bars or shanks should be replaced or straightened if possible. The blades can be replaced when they wear to the extent they are not performing properly. Keep the blades adjusted from 1/8" to 1/4" from the disk blades. The scrapers can be adjusted by loosening the mount bolt and sliding the scraper to the proper position then tightening the mount bolt. Additional adjustment can be obtained by loosening the scraper bar mount bolts and shifting the entire scraper bar. Do not allow the scraper blades to run on the spacer spools as immediate damage to the spool will occur.

ROCKSHAFT PIVOT PIN REPAIR

The rockshafts are equipped with replaceable, regreasable bronze bushings. If properly lubricated they should last for several seasons. The bushings should be checked each disking season for excessive pivot pin or bushing wear. Worn bushings and pivot pins should be replaced. Failure to replace worn or damaged parts will damage other parts.

GENERAL

Keep all bolts tight. Check all bolts after 50 hours operation and each season thereafter. Visually inspect all bolts daily. Do not run with loose gang bolts. Keep the gang bolts torqued to 1200 ft. lbs.

STORAGE

Proper storage will add to the life of your disk harrow, and assure its being in good condition for the next season. The following procedure is recommended.

Clean off all foreign matter, and *thoroughly lubricate* the harrow. (See lubrication instructions)

Tighten loose bolts and replace any damaged or missing parts.

Repaint the harrow where the original paint has worn off.

Coat the disk blades and hydraulic cylinder rod with a good rust preventative.

Store in a dry place, with the gangs resting on boards to remove weight from the tires.

Carefully rotate each gang and check for worn or damaged blades, bent gang shafts, worn scrapers, damaged bearings and other parts which may need replacing.

Whenever disk blades or bearings are replaced, the gang shaft nuts must be torqued to 1200 foot pounds.



CAUTION *All hydraulically or mechanically elevated operating components must be blocked to prevent accidental lowering or must be lowered to the ground when making adjustments or when the equipment is idle.*



CAUTION *Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pinhole leak, can penetrate body tissues causing serious injury. Use a piece of wood or cardboard when looking for leaks - never use the hands or other parts of the body.*

Relieve hydraulic pressure before disconnecting circuits. When reassembling, make absolutely certain that all connections are tight.

If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious infection or reaction may occur if medical attention is not given at once.

OPERATING INSTRUCTIONS AND PROCEDURES

Disk as deep as necessary to do a thorough job, but do not try to disk to an excessive depth. In most conditions the AMCO harrow has sufficient weight for good penetration. In other conditions you have a little more weight than you really need. For these conditions, your harrow should be equipped with flotation tires. 11L x 15 tires will be adequate for most conditions. You also need a good heavy duty 3 x 8 or 4 x 8 hydraulic cylinder with depth control. This will allow you to control cutting depth.

Never allow soil to "bulldoze" ahead or flow over the spacer spools. Cutting depth should be controlled to avoid this situation. Maintaining proper cutting depth will have the following advantages.

1. Increased gang bearing life.
2. Reduced strain on harrow frame and related parts.
3. Reduced load on tractor engine and drive train.
4. Lower fuel consumption due to less load on tractor engine.
5. Reduced wheel slippage and rear tractor tire wear due to lower load.
6. Increased travel speeds due to less wheel slippage.

By properly controlling cutting depth, gang bearing life will be increased with more acres covered per day at a lower cost.



CAUTION *Never clean, adjust or lubricate a disk that is in motion. Disk blades could cause severe injury.*

ADJUSTMENTS FOR LEVEL DISKING

Six factors must be considered when level disking is required. They are (1) depth of cut, (2) tractor speed, (3) tongue adjusting rod length, (4) gang angle adjustments, (5) lateral gang adjustments, and (6) soil conditions.

CENTER RIDGE

If a ridge of soil is left behind the center of the harrow, decrease the weight on the rear gangs by shortening the tongue adjusting rod, decrease the angle of the rear gangs, increase the angle of the front gangs, or move the rear gangs farther apart, or do a combination of all four.

CENTER FURROW

If a furrow is left behind the center of the harrow, increase the weight on the rear gangs by lengthening the tongue adjusting rod, increase the angle of the rear gangs, decrease the angle of the front gangs, or move the rear gangs closer together, or do a combination of all four.

OUTER RIDGES OR FURROWS

If ridges or furrows are left behind the outer ends of the harrow, change the weight on the rear gangs by adjusting the length of the tongue adjusting rod, or change the front or rear gang cutting angle. You may have to change tractor speeds.

TRACTOR SPEED

Speeds above 6 MPH may result in forming ridges and furrows. Lateral adjustment of the rear gangs and reducing gang angle helps overcome this problem.

CAUTION: When adjusting gang angle make sure the 7/8" gang frame mount bolts are torqued properly before use. Refer to the torque chart on page 17. After operating the disk harrow for a few hours the bolts should be rechecked for proper torque.

ROAD TRANSPORT

Extreme caution must be exercised when the disk is transported on roads or highways. Remember you are responsible for compliance with state and local laws regarding lighting, reflectors, and SMV emblems, as well as length and width.



CAUTION When transporting machinery over public roads, comply with your local and state laws regarding length, width and lighting.



CAUTION When trailing the disk over public roads, the SMV Emblem must be used, for protection of tractor and motor vehicle operators.



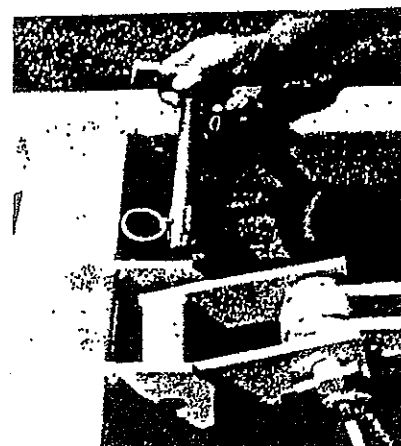
CAUTION When transporting farm implements on public roads after dusk, it is the responsibility of the operator to provide lighting and reflectors on the rear of the implement in accordance with your state law.

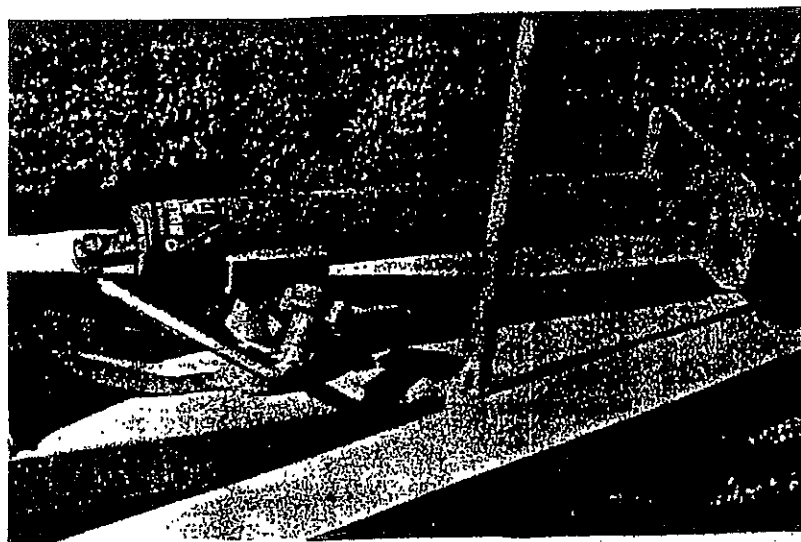
Prior to road transport, it is wise to check tire pressure making sure they are properly inflated. Also, be sure all hub bolts and nuts are tight. Hub bearings should be properly adjusted. The drawbar pin must be in good condition and secured in place to withstand shock loads. The drawbar must also be secured to prevent swinging from side to side.



CAUTION Always secure for transport by using the transport lock pin

The transport pin should be used to secure the disk in the raised position. The transport pin must be secured in place.





When the disk is in use or being transported. The tongue jack should be stored on the tongue. This will prevent loss of the gang bolt wrench and damage to the tongue jack.

OPERATING TIPS FOR LONG LIFE AND SATISFACTORY PERFORMANCE

1. Match the harrow with the proper size tractor. Too much horsepower and speed will result in excessive maintenance cost.
2. Lubricate with *clean* grease at the recommended intervals.
3. Use good quality tires, hoses, and hydraulic cylinders.
4. Use the tongue adjusting rod, gang angle adjustment, proper cutting depth, and travel speed to get level disking and smooth fields.
5. Wash corrosive materials such as fertilizer and herbicides from the disk when it is not in use.
6. Insist on genuine AMCO replacement parts. Items such as bearings and blades look alike but are not as reliable as original equipment.
7. *Never* allow unsafe conditions or operating practices. Your safety is of prime importance.
8. Raise the disk harrow on its transport wheels when turning. Failure to do so will result in broken blades, bent axles, and excessive strain on the tongue and main frame.
9. Reduce operating speed in areas containing stumps or rocks to reduce blade breakage.

MOST OFTEN ENCOUNTERED DISC BLADE FAILURES

Most disk blade failures can be prevented by selecting the correct blade size and thickness for individual conditions when buying a disk. Reduction of gang cutting angle and speed in areas containing rocks and stumps will greatly lengthen the blade life. Keeping gang bolts properly torqued and raising the harrow while turning will also reduce disk blade breakage.

FIGURE 1 - Laminated Disc-defective steel.
Eligible for warranty consideration

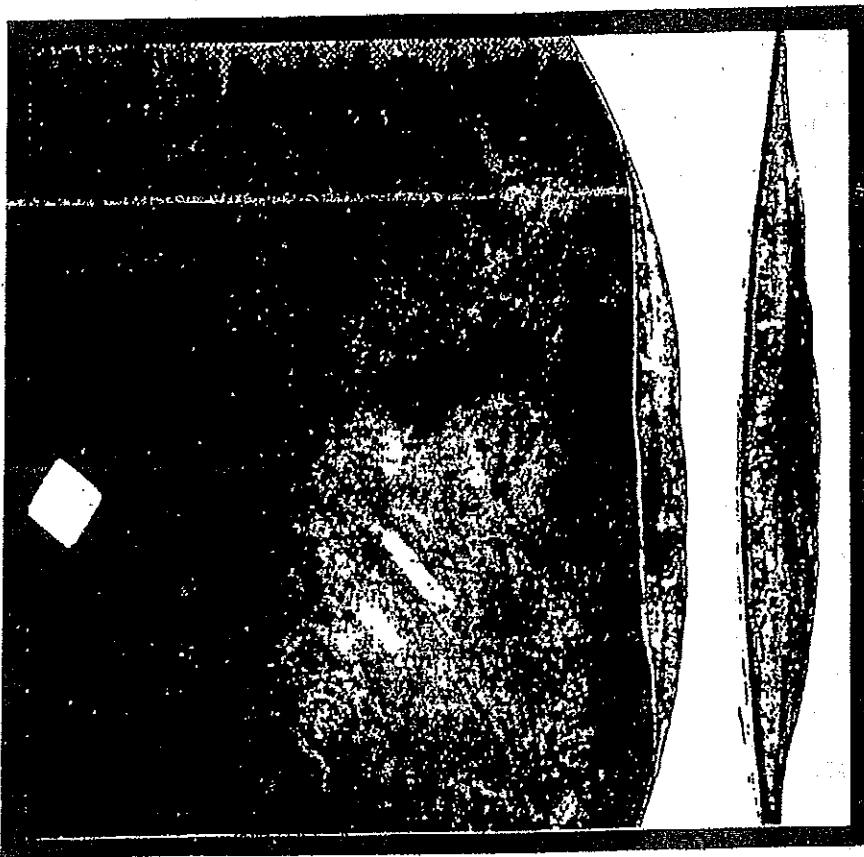
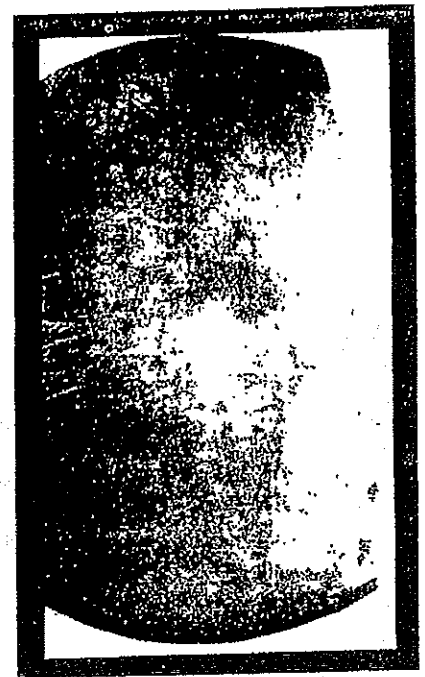


FIGURE 2 - Straight directional break
caused by defective steel. Eligible for
warranty consideration



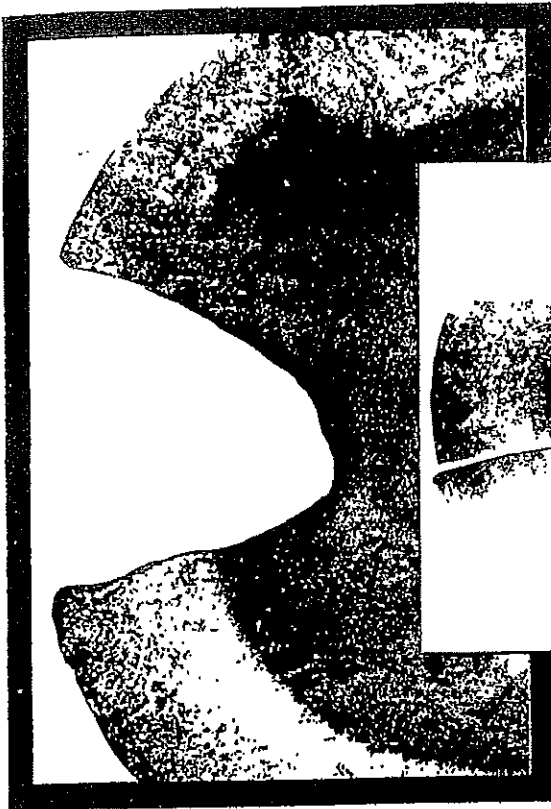


FIGURE 3,4,5 - Irregular breaks caused by contact against rocks or stumps. Not covered by warranty.



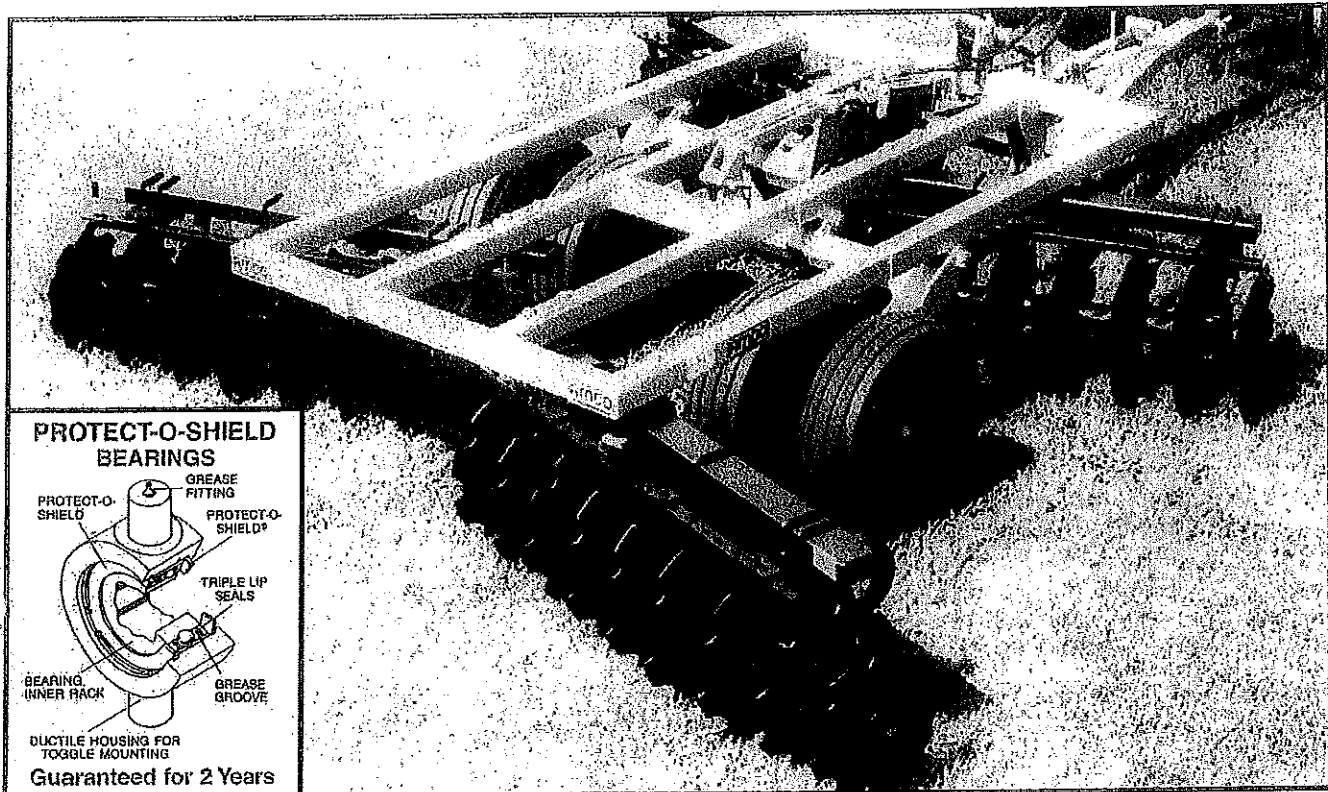
FIGURE 6 - Chipped or dented edges resulting from use in areas containing rocks or stumps. Not covered by warranty.



FIGURE 7 - Center broken out. Experience has shown that this is usually caused by loose bolts, excess flexing, or by contact with rocks and stumps. Not covered by warranty.

Amco

MODEL F-17B DOUBLE OFFSET TANDEM



MODEL F-17B DOUBLE OFFSET TANDEM

AMCO's Model F-17B double offset tandem disk harrows range in size from 9'3" to 16'6" and are ideal for use with tractors ranging from 50 to 130 horsepower.

These dependable double offset harrows weigh from 296 to 337 pounds per cutting foot and are available in 9'3", 10'6", 12'0", 13'6", 15'0", and 16'6" models.

Built AMCO tough, the Model F-17B double offsets have the same quality features you expect from AMCO implements. Depending upon size, the Model F-17B is equipped with eight or twelve regreasable ball type, toggle-mounted bearings featuring AMCO's Protect-O-Shield®; 1-1/2" square, high-carbon, cold rolled steel

axes; reversible clevis and heavy-duty scrapers with high-carbon replaceable blades. The Model F-17B has standard 22" plain blades on 9" spacing and on the rear gang features diminishing blades with 16" feathering blades. A gang bolt wrench and a 4" x 8" (3000 PSI) hydraulic cylinder with hoses to tractor are also standard equipment.

The Model F-17B has AMCO's optional Shock Absorber Gang Riser which allows the gang on the harrow to move upward and back to relieve shock when the disk blades encounter an obstacle in the ground. (See insert back page.)

Specifications subject to change without notice.

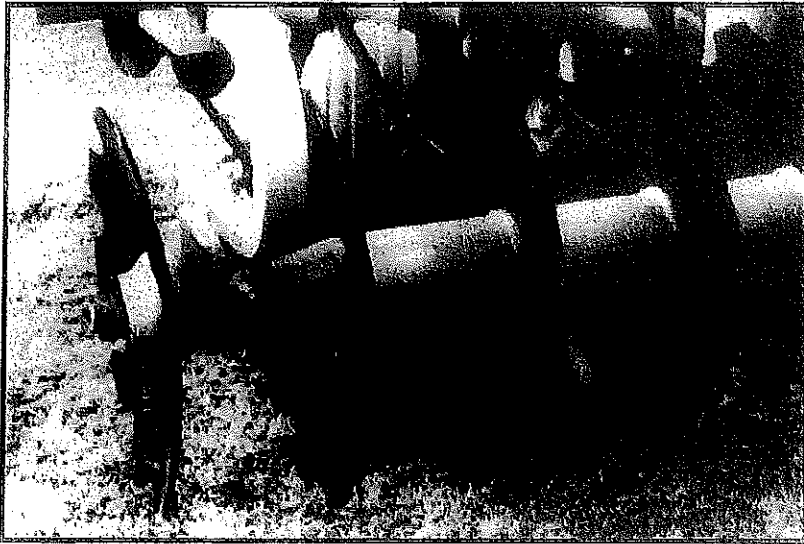
Amco

AMCO MANUFACTURING, INC.

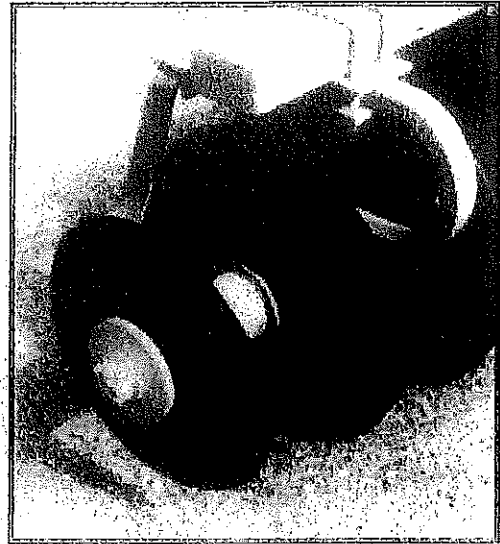
800 South Industrial Parkway • P. O. Box 1107
YAZOO CITY, MISSISSIPPI (MS) 39194 U.S.A.
662-746-4464 • Wats 800-746-9022 • Fax 662-746-6825
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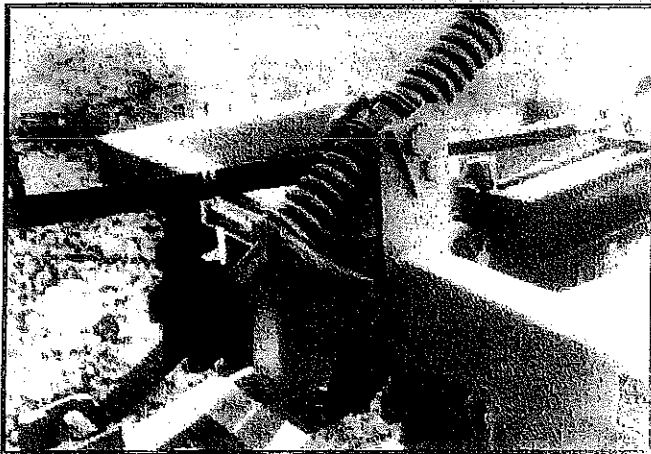
MODEL F-17B DOUBLE OFFSET TANDEM



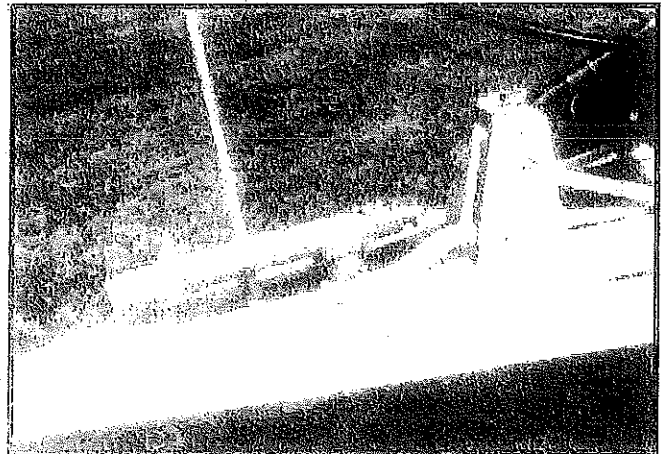
AMCO's optional Shock Absorber Gang Riser permits the gang to move upward and back to relieve shock when the blades strike an obstacle. Heavy-duty scrapers feature high-carbon, replaceable steel blades.



Diminishing blades on the rear gang and feathering blades (pictured here) aid in a smooth, even cut.



Front to rear leveling spring allows easy adjustment in the field.



The Model F-17B has a tongue jack and gang bolt wrench standard. Both fit in place on the tongue during operation.

AMCO's Protect-O-Shield® Bearing Is Guaranteed for Two Full Years.

Amco

AMCO MANUFACTURING, INC.

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www.amcomfg.com

12540 Orange Reflector
Note: Place on front gang
Frame far left

#11741
WARNING
BEFORE OPERATING

#11716
MAINTENANCE
INSTRUCTIONS

#11465
AMCO LOGO LARGE
AND
#11767
MODEL NUMBER (F17)

12540 Orange Reflector
Note: Place front gang
Frame far right

#11465 AMCO LOGO LARGE
AND #11767 MODEL NUMBER (F17)
NOTE: Mount 4 to 6 inches
rearward of axle pivot

SERIAL
NO.
PLATE

#11465 AMCO LOGO LARGE
AND #11767 MODEL NUMBER (F17)
NOTE: Mount 4 to 6 inches
rearward of axle pivot

12541 Red Reflector
Note: Place on rear gang
Frame far left

12541 Red Reflector
Note: Place on rear gang
Frame far right

Qty. Part No. Description

5	11465	AMCO Logo Large
5	11767	Model # "F-17"
1	11741	Warning Before Operating
1	11716	Maintenance Instruction
2	12540	Orange Reflector
2	12541	Red Reflector
1	11548	FEMA

REV.		DWG. NO.	11898	MATERIAL	NOTE: Right and left hand side of the narrow are determined by standing at the rear of the narrow & facing the direction of travel.	Amco PRODUCTS	Forable Elevator Division Dynamia Corp. of Amco Ypsilanti, Mich. 48198
REV.		DRAWN BY	HTH	SCALE	1/32"=1"		
REV.		DATE	6/82	APPROVED BY		CHART - DECAL PLACEMENT (717B)	

