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J-16
2-Memphis-Stat

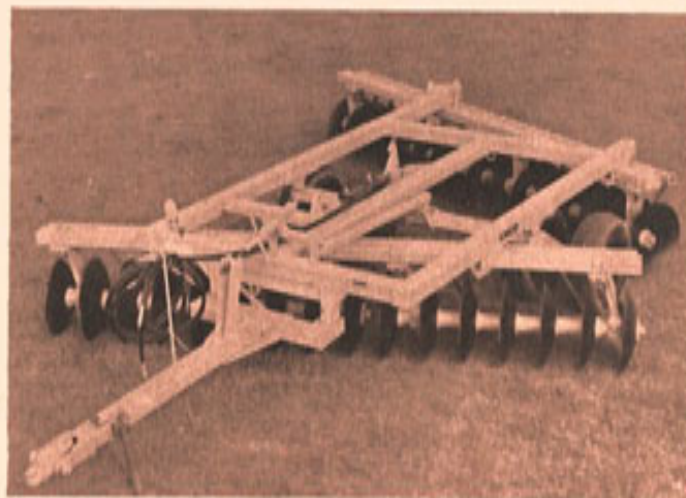
PARTS CATALOG

FOR

9 spacing 10 1/2 spacing

MODELS WOF16 AND WOJ16

WHEEL TYPE OFFSET DISK HARROWS



PRODUCTS

Portable Elevator Division, Dynamics Corporation of America
No. 1 AMCO Drive, Yazoo City, Mississippi 39194 / 601/746-4464



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.

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GENERAL TORQUE SPECIFICATION TABLE

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

GENERAL TORQUE SPECIFICATION TABLE (Revised 2-74)						
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 UNF and UNC threads.						
SAE Grade No.	2		5		8 *	
Bolt head identification marks as per grade NOTE: Manufacturing Marks Will Vary			  		  	
Bolt Size	Torque Foot Pounds		Torque Foot Pounds		Torque Foot Pounds	
Inches	Min	Max	Min	Max	Min	Max
1/4	5	6	9	11	12	15
5/16	10	12	17	20.5	24	29
3/8	20	23	35	42	45	54
7/16	30	35	54	64	70	84
1/2	45	52	80	96	110	132
9/16	65	75	110	132	160	192
5/8	95	105	150	180	220	264
3/4	150	185	270	324	400	486
7/8	160	200	400	480	600	720
1	250	300	580	696	900	1080
1 1/8			800	880	1280	1440
1 1/4			1120	1240	1820	2000
1 3/8			1460	1680	2380	2720
1 1/2			1940	2200	3160	3560

* Thick nuts must be used with Grade 8 bolts.

To the Purchaser:

The care you give your new Amco Offset Disk Harrow will greatly determine the satisfaction and service life you will obtain from it. By observing the instructions and suggestions in this manual, your harrow will serve you for many years. Please furnish this manual to new owners when the harrow is sold.

As an Authorized AMCO Dealer, we stock Genuine AMCO parts, which are manufactured with the same precision and skill as the original equipment. Use only approved 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.

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.

GENERAL SPECIFICATIONS

Model	Cutting Width	No. of Discs	No. of Bearings	Approximate D.B.H.P. Required	Approximate Weight
48" MAIN FRAME					
WOF16-2024-PBG	7'10"	20	6	70-80	3950
WOF16-2224-PBG	8'7"	22	6	70-85	4140
WOF16-2424-PBG	9'4"	24	8	75-90	4470
WOF16-2624-PBG	10'0"	26	8	80-95	4670
WOF16-2824-PBG	10'9"	28	8	90-105	5010
85" MAIN FRAME					
WOF16-3224-PBG	12'2"	32	10	100-120	6170
WOF16-3624-PBG	13'7"	36	10	110-130	6600
WOF16-4024-PBG**	15'0"	40	12	125-150	7570
WOF16-4424-PBG**	16'5"	44	12	140-180	7970
48" MAIN FRAME					
WOJ16-1824-PBG	7'10"	18	6	70-80	3860
WOJ16-2024-PBG	8'8"	20	6	70-85	4060
WOJ16-2224-PBG	9'6"	22	7	75-90	4380
WOJ16-2424-PBG	10'4"	24	8	80-95	4810
WOJ16-2624-PBG	11'2"	26	8	90-105	5100
85" MAIN FRAME					
WOJ16-2824-PBG	12'0"	28	8	100-120	5820
WOJ16-3224-PBG	13'8"	32	10	110-130	6420
WOJ16-3624-PBG**	15'4"	36	12	125-150	7420
WOJ16-4024-PBG**	17'0"	40	12	140-180	7880

**Equipped with auxiliary frame

EXTRA HEAVY DUTY WOF16 and WOJ16 WHEEL OFFSET HARROWS GENERAL SPECIFICATIONS

WOF16: 9" Spacing, 24" or 26" Blades

WOJ16: 10 1/2" Spacing, 24" or 26" Blades

MAIN FRAME: All welded 5" x 5" x 5/16" tubing. Main Frame is 48" wide on Harrows 11' 2" and smaller. Frame is 85" wide on 12' 0" and larger harrows.

AUXILIARY MAIN FRAME: 5" x 3" x 1/4" welded tubing, standard on harrows 15' 0" and up.

GANG FRAMES: Gangs and frame are factory assembled. Gang frames are 6" x 4" x 1/4" welded tubing on 10' 4" and smaller harrows and 6" x 4" x 3/8" welded tubing on 10' 9" and larger harrows.

TONGUE: Adjustable 6" x 4" x 1/4" welded tubing.

STABILIZER: Spring loaded, adjustable with 1 3/8 dia. Acme Threaded Rod.

CLEVIS: Heavy duty reversible ductile cast iron. Block and Yoke Type. Clevis pivots on 1 3/4 Dia. Pin.

GANG BOLT: 1 1/2" square, cold rolled, high carbon steel.

GANG ADJUSTMENT: Individually adjustable cutting angles of 15°-23° front and rear. Gangs also adjust laterally.

GANGS: Gangs and scrapers are factory assembled with option of either tapered or non-tapered blades. An exclusive AMCO feature is a backup blade behind every blade. A 14" x 11 gauge blade is installed behind every blade.

BEARINGS: Triple sealed Ball Bearings with 2 3/4" round bore (7,440 pound load rating at 100 RPM) ea. extra heavy ductile iron housing. Bearing installs over sleeve that strengthens the 1 1/2" sq. axle.

SCRAPERS and SCRAPER BARS: Bars are 2 1/2" square solid with extra heavy duty adjustable scrapers with 1/2 x 2 1/2 shanks securely clamped in place by 5/8" diameter "U" bolts and lock nuts. Scraper blade is replaceable and made of C1080 steel.

WHEELS: Dual 6 bolt 15 x 8" - 4,000 pound capacity each at 20 MPH.

HUBS: 6 bolt, 5,000 pound capacity each at 20 MPH with special dirt exclusion seals. Hubs mounted on replaceable, high-carbon, 1 15/16" diameter steel spindles. Hubs are equipped with automotive type, adjustable, tapered roller bearings.

ROCKSHAFT: Square 5" x 5" x 3/8" Welded tubing. Rockshaft pivots on 1 1/2" Diameter regreasable, high-carbon steel pivot pins. Pivot bearings are regreasable sintered bronze bushings. Hydraulic cylinder mounts are flame cut from 1" thick high-carbon steel plates.

WORKING WEIGHT PER BLADE: WOF16 175 to 202 pounds; WOJ16 204 to 219 pounds

WORKING WEIGHT PER FOOT: WOF16 469 to 517 pounds; WOJ16 469 to 502 pounds

TRANSPORT WIDTH: Cutting width plus 12"

Cutting width plus 24" w/feathering blades

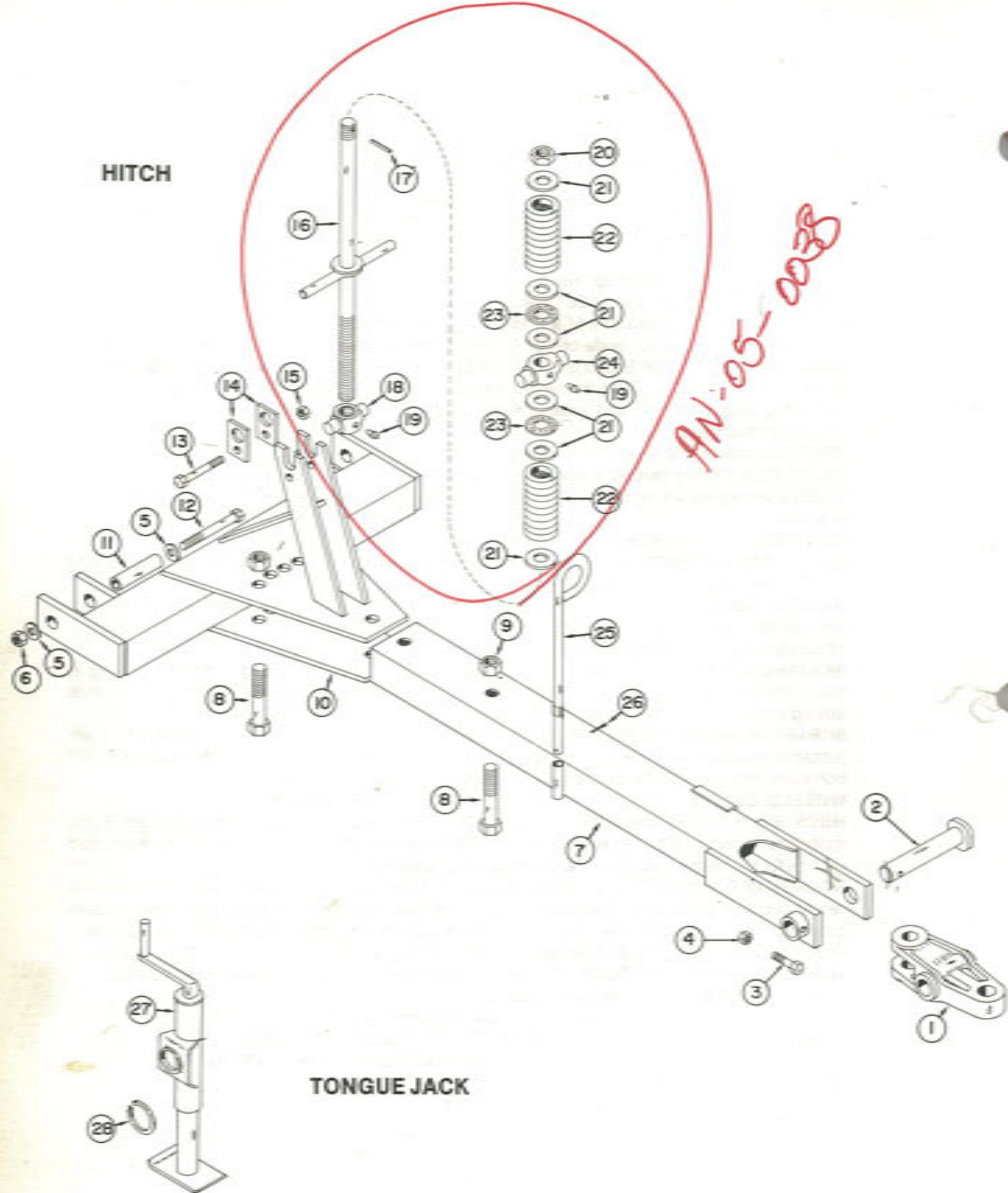
TREAD WIDTH: 48" Frame; Inside wheels 23" O.C.; Outside wheels 63" O.C.

85" Frame; Inside wheels 60" O.C.; Outside wheels 100" O.C.

DISK BLADE OPTIONS: 24 x 1/4 Plain or Cut-out

26 x 1/4 Plain or Cut-out

HITCH



TONGUE JACK

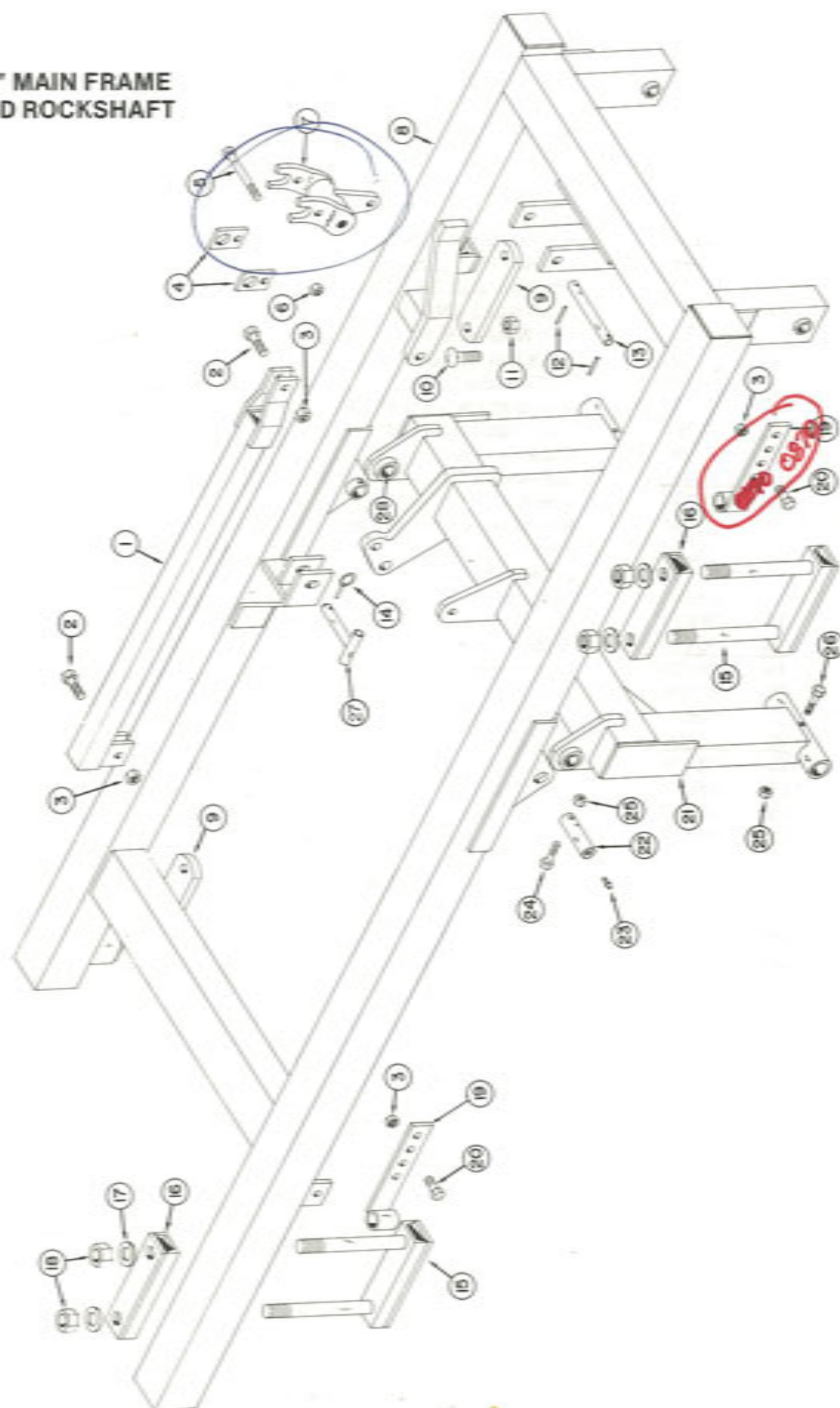
AMCO WOF16 & WOJ16 HITCH

Ref. No.	Part No.	Description	No. Req'd
1	16001	Clevis - Ductile Iron	1
2	0789	Clevis Pin	1
3	10871	Machine Bolt 3/8 x 3 NC, PLT, GR5	1
4	10509	Lock Nut 3/8 NC, PLT	1
5	10866	Cut Washer 3/4 PLT	4
6	10300	Lock Nut 3/4 NC, PLT	3
7	0435-A	Pull Tongue	1
8	10867	Hex Bolt 1 1/4 x 6 1/2 NC, PLT	2
9	10397	Lock Nut 1 1/4 NC, PLT	2
10	0723	Cross Tongue	1
11	9206	Bushing 1 5/16 O.D. x 1/4 WT. 5 3/4 Long	2
12	10696	Hex Bolt 3/4 x 7 NC, PLT	2
13	10067	Hex Bolt 5/8 x 5 1/2 NC, PLT	1
14	9628	Trunion Clamp	2
15	10299	Lock Nut 5/8 NC, PLT	1
16	0635	Stabilizer Rod	1
17	10910	Roll Pin 5/16 x 2 1/4	1
18	9919-A	Stabilizer Swivel	1
19	11081	Grease Fitting 5/16 Drive-in	2
20	11279	Hex Nut 1 3/8 NC, PL, Slotted	1
21	10872	Cut Washer 1 3/8 PLT	6
22	10460	Spring	2
23	11114	Thrust Washer 3 O.D. x 1 1/2 I.D. 1/8" Teflon	2
24	9892	Swivel	1
25	100061	Hose Holder	1
26	10075	Cotter Pin 1/4 x 1 1/2	1

TONGUE JACK

27	10883	Jack	1
28	10912	Snap Ring	1

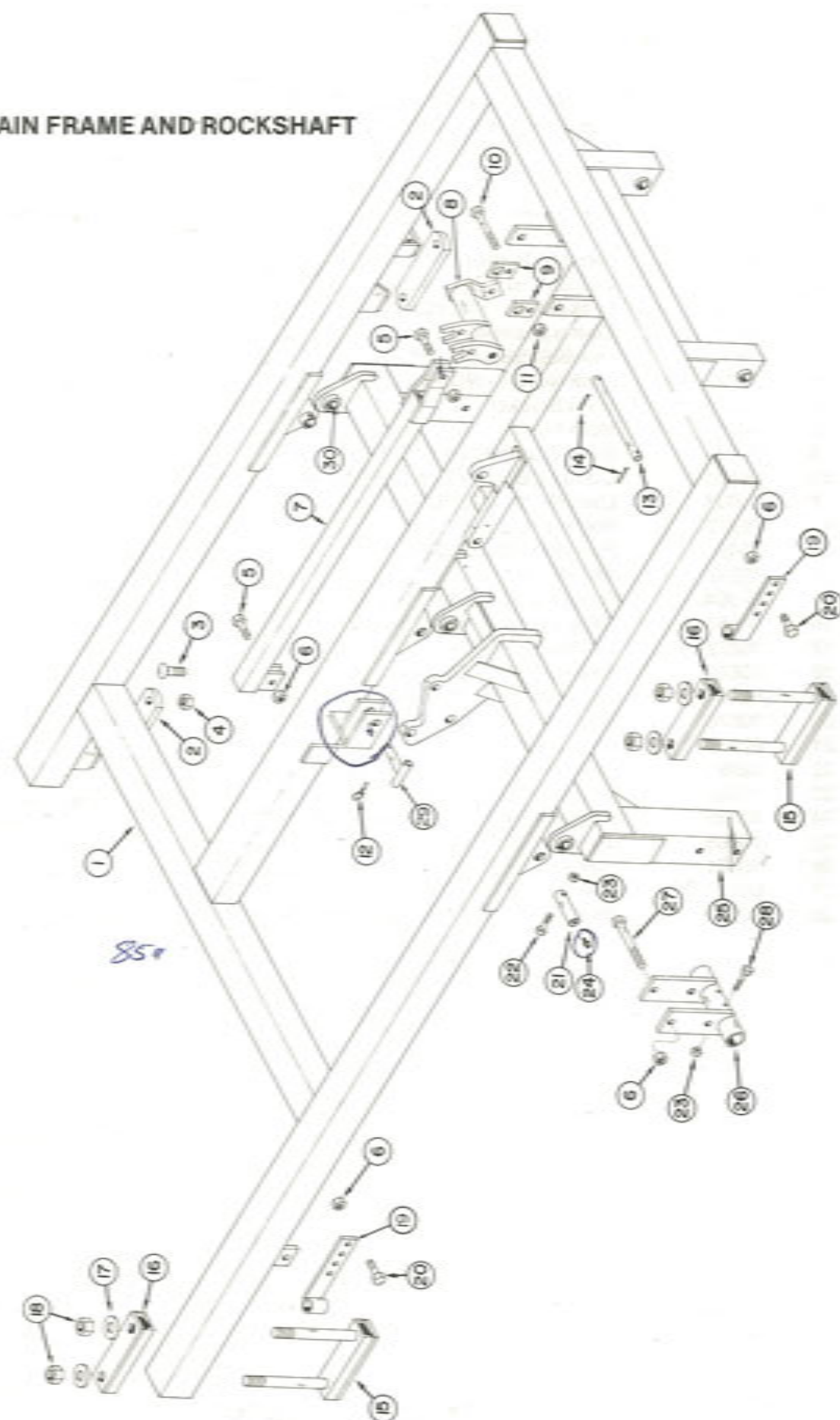
48" MAIN FRAME AND ROCKSHAFT



AMCO WOF16 & WOJ16 48" FRAME AND ROCKSHAFT

Ref. No.	Part No.	Description	No. Req'd
1	0474A	Tongue Control Rod	1
2	10678	Hex Bolt 3/4 x 2 1/2 - NC, PL, GR5	2
3	10300	Lock Nut 3/4 - NC, PLT	4
4	9628	Clamp Trunion	2
5	10043	Hex Bolt 5/8 x 6 1/2 - NC, PLT, GR5	1
6	10299	Lock Nut 5/8 - NC, PL	1
7	0721	Pivot Bracket	1
8	0475	Main Frame	1
9	9208	Gang Clamp Plate 1" C1045 3 1/2 x 12 1/2	2
10	11130	Carriage Bolt 1 x 3 - NC, PL, GR5	4
11	10868	Lock Nut 1 - NC, PL	4
12	10910	Roll Pin 5/16 x 2 1/4	2
13	9349	Pivot Pin 1 Dia. 8 3/8 Long	1
14	10317	Klik Pin 1/4"	1
15	0456A	Gang Frame Clamp-Male	2
16	0455A	Gang Frame Clamp-Female	2
17	10872	Cut Washer 1 3/8 PLT	4
18	10873	Hex Nut 1 3/8 - NC, PLT	4
19	0870	Gang Angle Set Bracket	2
20	10670	Hex Bolt 3/4 x 2 - NC, PL, GR5	2
21	0703	Rockshaft	1
22	9209	Retainer Pin 1 1/2 Dia. 5 Long	2
23	11081	Grease Fitting - 5/16 Straight - Drive-In	2
24	10765	Hex Bolt 3/8 x 2 1/2 - NC, PL, GR5	2
25	10509	Lock Nut 3/8 - NC, PL	4
26	10871	Hex Bolt 3/8 x 3 NC, PLT, GR5	2
27	0871	Transport Pin	1
28	9270	Bushing-Bronze 1 1/4 O.D. x 1 1/2 I.D. x 2 Long	2

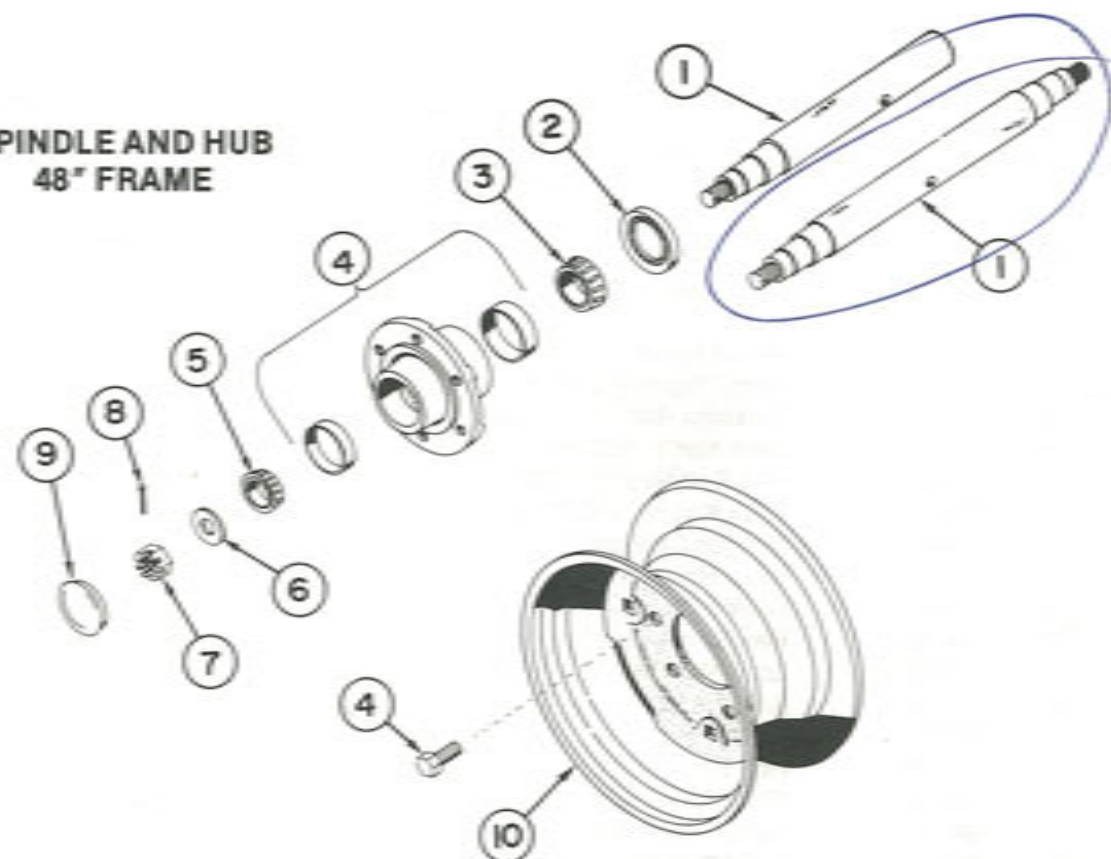
85" MAIN FRAME AND ROCKSHAFT



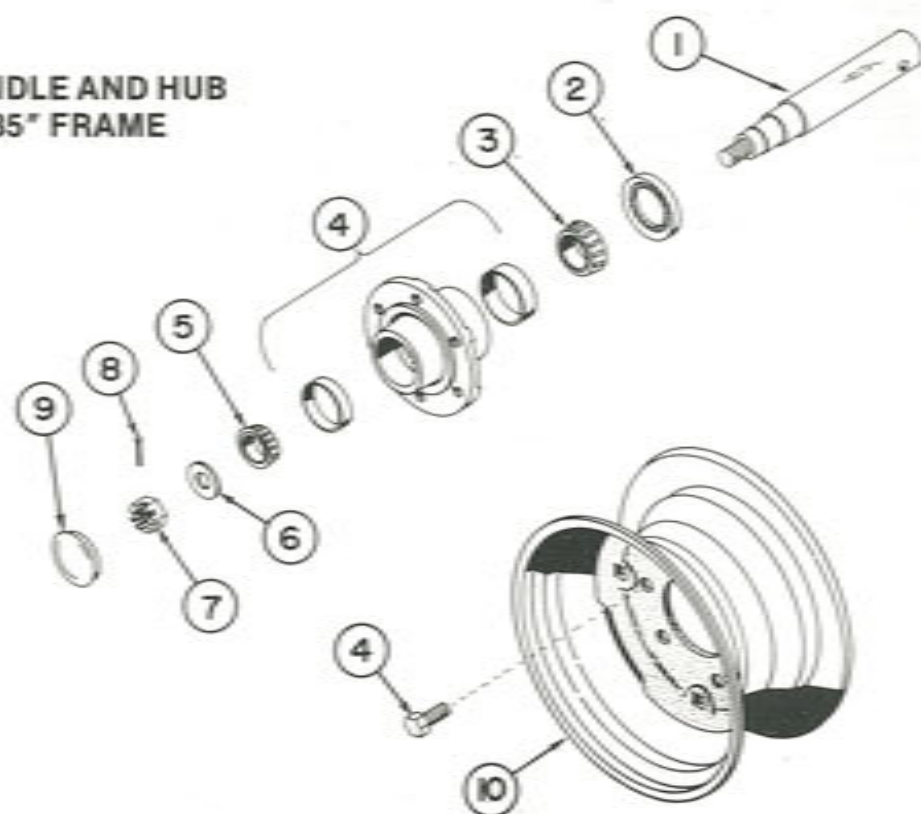
AMCO WOF16 & WOJ16 85" FRAME AND ROCKSHAFT

Ref. No.	Part No.	Description	No. Req'd
1	0439	Main Frame	1
2	9208	Gang Clamp Plate 1" C-1045 3½ x 12½	2
3	11130	Carriage Bolt 1 x 3 - NC, PL, GR5	4
4	10868	Lock Nut 1 - NC, PL	4
5	10678	Hex Bolt ¾ x 2½ - NC, PL, GR5	2
6	10300	Lock Nut ¾ - NC, PLT	8
7	0438-A	Tongue Control Rod	1
8	0722	Pivot Bracket	1
9	9628	Clamp Trunion	2
10	10043	Hex Bolt 5/8 x 6½ - NC, PL, GR5	1
11	10299	Lock Nut 5/8 - NC, PL	1
12	10317	Klik Pin ¼"	1
13	9207	Pivot Pin 1" Dia. 14 3/8 Long	1
14	10910	Roll Pin 5/16 x 2¼	2
15	0456-A	Gang Frame Clamp - Male	2
16	0455-A	Gang Frame Clamp - Female	2
17	10872	Cut Washer 1 3/8 PLT	4
18	10873	Hex Nut 1 3/8 - NC, PLT	4
19	0870	Gang Angle Set Bracket	2
20	10670	Hex Bolt ¾ x 2 - NC, PL, GR5	2
21	9209	Retainer Pin 1½ Dia. 5 Long	3
22	10765	Hex Bolt 3/8 x 2½ - NC, PL, GR5	3
23	10509	Lock Nut 3/8 - NC, PL	7
24	11081	Grease Fitting - 5/16 Straight-Drive In	3
25	0704	Rockshaft	1
26	0720	Wheel Support	2
27	10697	Hex Head Machine Bolt ¾ x 7½ - NC, PL	4
28	10773	Machine Bolt 3/8 x 3½ - NC, PL, GR5	4
29	0871	Transport Pin	1
30	9270	Bushing - Bronze 1¼ O.D. x 1½ I.D. x 2 Long	3

SPINDLE AND HUB 48" FRAME



SPINDLE AND HUB 85" FRAME



AMCO WOF16 & WOJ16 SPINDLE & HUB 48" FRAME

18-26 B

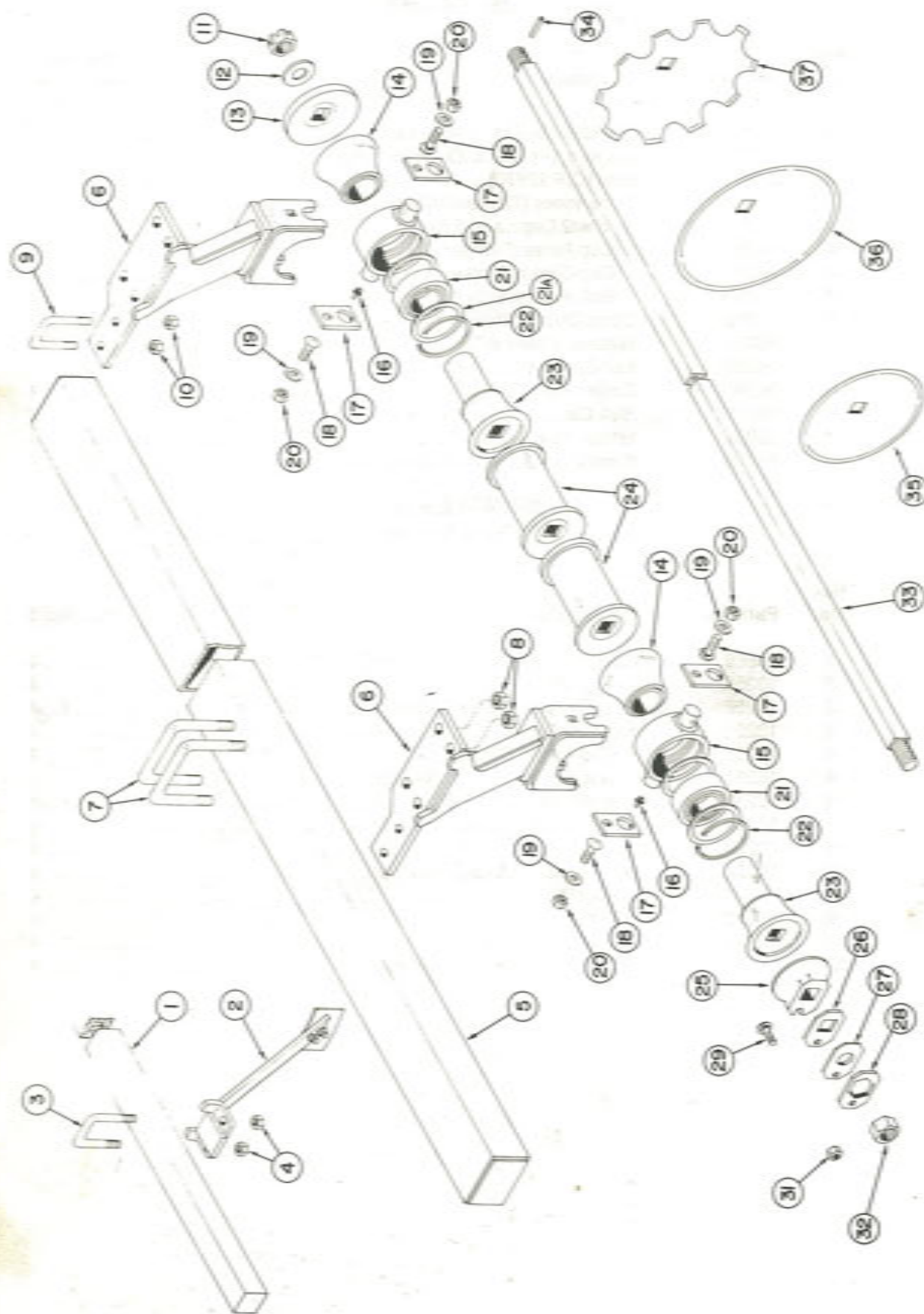
Ref. No.	Part No.	Description	No. Req'd	
			Single Wheel	Dual Wheel
1	10911	Spindle 1 3/4 Dia. x 16 3/4 Long	2	-
1	10869	Spindle 1 3/4 Dia. x 23 15/16 Long	-	2
2	10256	Seal (C/R 22870)	2	4
3	10258	Cone-Inner (Timken 342A)	2	4
4	10254	Hub w/2 Cups and 6 Bolts	2	4
4	10257	Cup-Inner (Timken 332)	2	4
4	10261	Cup-Outer (Timken 14276)	2	4
4	10259	Bolt-Hub 1/2 x 1 - NF	12	24
5	10262	Cone-Outer (Timken 14137A)	2	4
6	10263	Washer-Spindle 7/8	2	4
7	10264	Nut-Spindle 7/8 - NF Slotted	2	4
8	10291	Cotter Pin 5/32 x 1 1/4	2	4
9	10242	Hub Cap	2	4
10	10936	Wheel 15 x 8 - 6 Bolt	2	4
10	11236	Wheel 15 x 10 - 6 Bolt (Optional)	2	4

SPINDLE & HUB 85" FRAME

28 B - 40 B

Ref. No.	Part No.	Description	No. Req'd	
			Single Wheel	Dual Wheel
1	10880	Spindle 1 15/16 Dia. x 13 Long	4	-
2	10256	Seal (C/R 22870)	4	4
3	10258	Cone-Inner (Timken 342A)	4	4
4	10254	Hub w/2 Cups and 6 Bolts	4	4
4	10257	Cup-Inner (Timken 332)	4	4
4	10261	Cup-Outer (Timken 14276)	4	4
4	10259	Bolt-Hub 1/2 x 1 - NF	24	48
5	10262	Cone-Outer (Timken 14137A)	4	4
6	10263	Washer-Spindle 7/8	4	4
7	10264	Nut-Spindle 7/8 - NF Slotted	4	4
8	10291	Cotter Pin 5/32 x 1 1/4	4	4
9	10242	Hub Cap	4	4
10	10936	Wheel 15 x 8 - 6 Bolt	4	4
10	11236	Wheel 15 x 10 - 6 Bolt (Optional)	4	4

WOF16 FRONT GANG



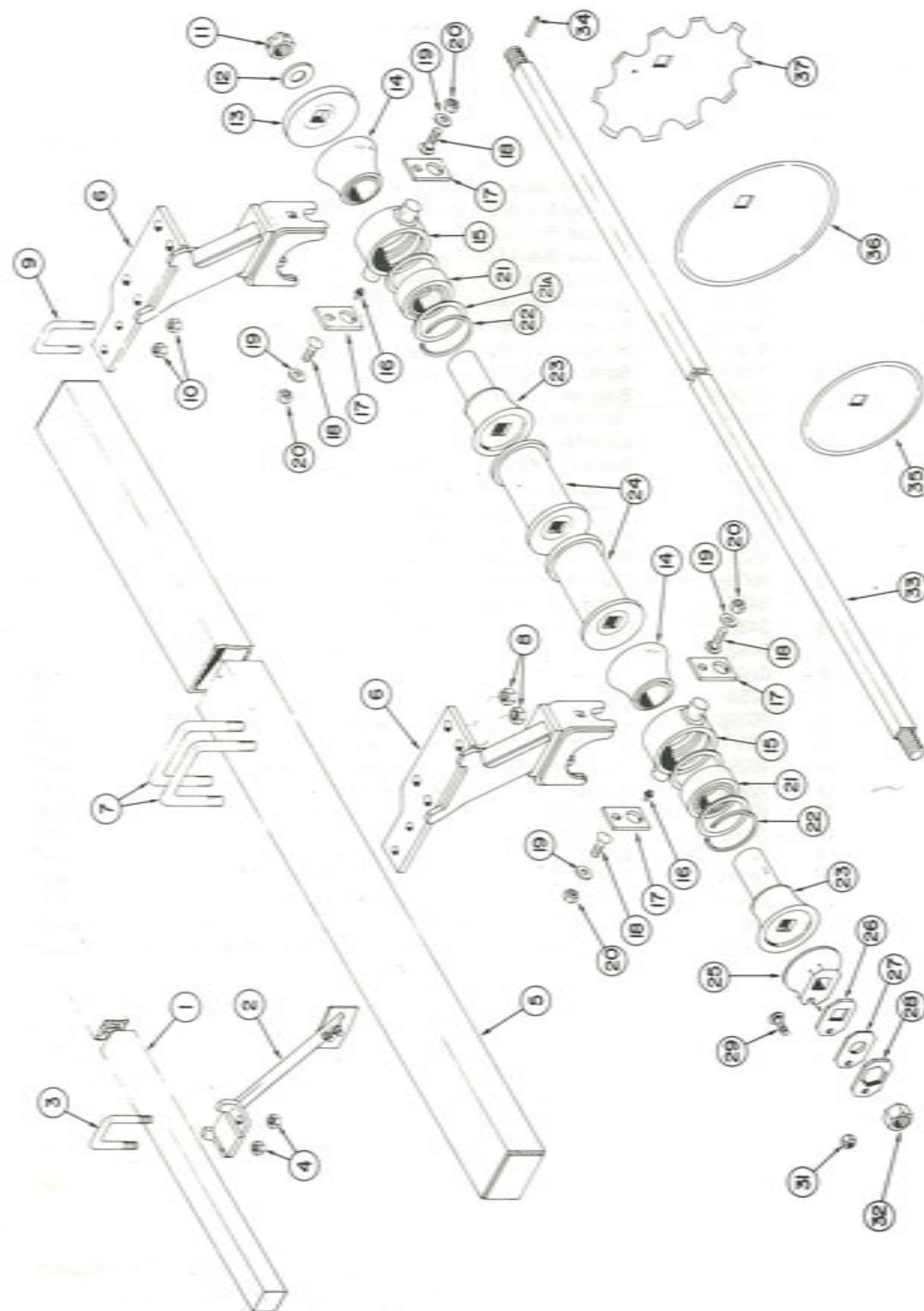
AMCO WOF16 FRONT GANG

Ref. No.	Part No.	Description	No. Req'd
1	100336	Scraper Bar 94" - 20 Blade.	1
1	100337	Scraper Bar 102" - 22 Blade.	1
1	100338	Scraper Bar 108" - 24 Blade.	1
1	100339	Scraper Bar 117" - 26 Blade.	1
1	100340	Scraper Bar 126" - 28 Blade.	1
1	100342	Scraper Bar 144" - 32 Blade.	1
1	100343	Scraper Bar 165" - 36 Blade.	1
1	100344	Scraper Bar 183" - 40 Blade.	1
1	100346	Scraper Bar 200" - 44 Blade.	1
2	0708-A	Scraper (1 per Blade)	A.R.
3	100002	"U" Bolt 5/8-Dia. (1 per Scraper)	A.R.
4	10299	Lock Nut 5/8-NC, PLT (2 per Scraper)	A.R.
5	0700	Gang Frame 94" - 20 Blade	1
5	0503	Gang Frame 102" - 22 Blade	1
5	0504	Gang Frame 108" - 24 Blade	1
5	0505	Gang Frame 117" - 26 Blade	1
5	0506	Gang Frame 126" - 28 Blade	1
5	0508	Gang Frame 144" - 32 Blade	1
5	0487	Gang Frame 165" - 36 Blade	1
5	0488	Gang Frame 183" - 40 Blade	1
5	0492	Gang Frame 200" - 44 Blade	1
6	0701	Bearing Riser - RH	A.R.
7	9752	"U" Bolt 7/8 Dia. (2 per Bearing Riser)	A.R.
8	10396	Lock Nut 7/8-NC, PL (4 per Bearing Riser)	A.R.
9	100002	"U" Bolt 5/8 Dia. (1 per Bearing Riser)	A.R.
10	10299	Lock Nut 5/8-NC, PLT, (2 per Bearing Riser)	A.R.
11	10226	Nut-Gang Bolt 1 1/2-NF, Slotted (1 per Gang Bolt)	A.R.
12	10872	Cut Washer 1 3/8-PLT (1 per Gang Bolt)	A.R.
13	2404	Bumper Washer (1 per Gang)	A.R.
14	6400	End Bell-Small (1 per Bearing Riser)	A.R.
15	16014	Bearing Housing (1 per Bearing Riser)	A.R.
16	10606	Grease Fitting (1 per Bearing Housing)	A.R.
17	9981	Clamp-Trunion (3/8 x 2 1/2 x 4) (2 per Bearing Riser)	A.R.
18	10665	Carriage Bolt 5/8 x 2-NC, PLT, GR5 (2 per Bearing Riser)	A.R.

FRONT
36-BL 8BL+10BL

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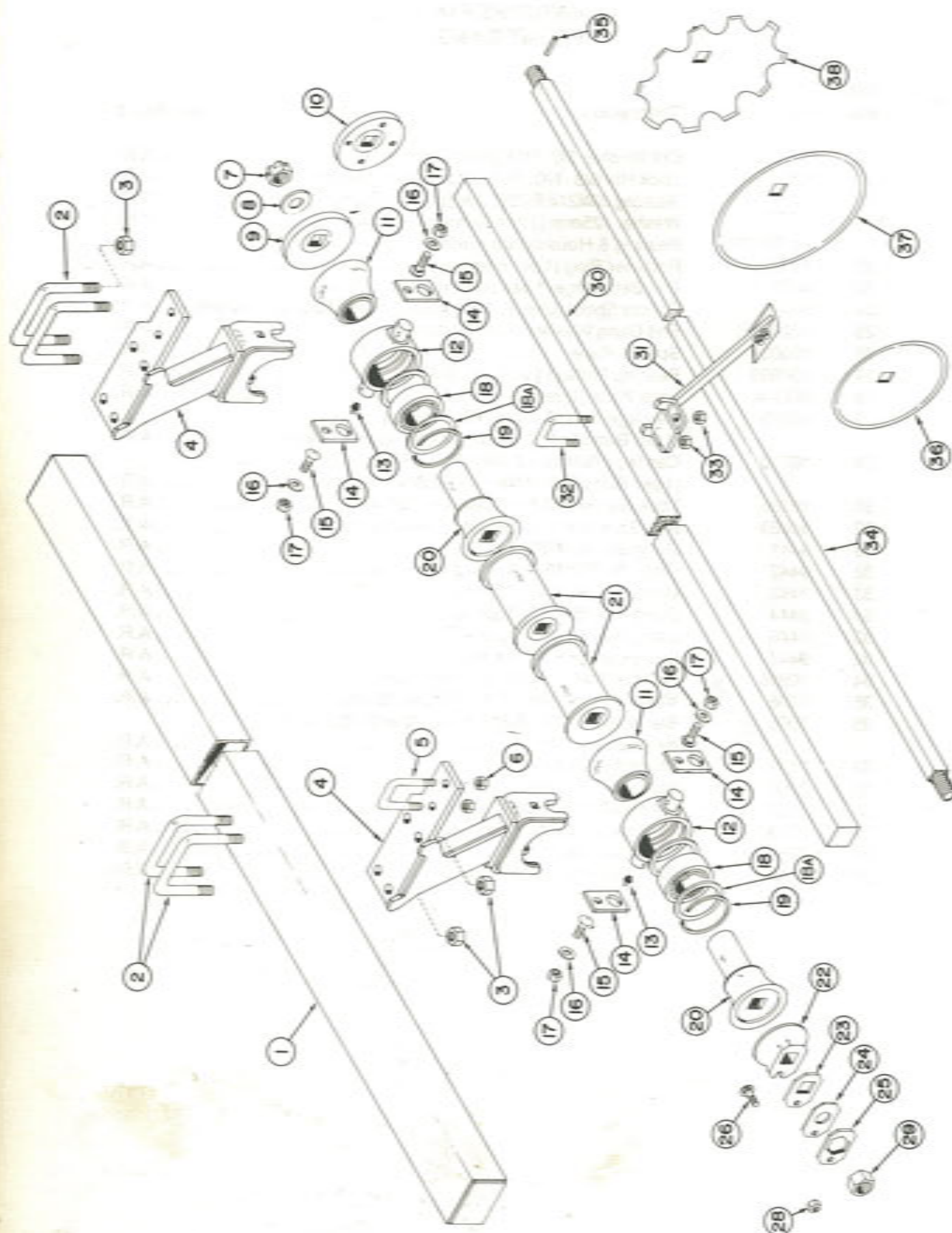
WOF16 FRONT GANG



AMCO WOF16 FRONT GANG

Ref. No.	Part No.	Description	No. Req'd
19	10059	Cut Washer 5/8 - PLT (2 per Bearing Riser).....	A.R.
20	10299	Lock Nut 5/8 - NC, PLT (2 per Bearing Riser).....	A.R.
21	G10218	Bearing GW214-PP2 (1 per Bearing Riser).....	A.R.
21A	100105	Washer 125mm (2 per Bearing Housing).....	A.R.
	FB-09-0014	Bearing & Housing Complete.....	A.R.
22	11072	Retainer Ring (1 per Bearing).....	A.R.
23	6401	End Bell-Large (1 per Bearing Riser).....	A.R.
24	545	Spacer Spool (Use 0522 for harrows less back-up blades).....	A.R.
25	1222-A	End Gang Washer (1 per Gang Bolt).....	A.R.
26	100099	Spacer Plate.....	A.R.
27	100098	Bearing Plate (1 per Gang Bolt).....	A.R.
28	5622-A	Lock Plate (1 per Gang Bolt).....	A.R.
29	10870	Carriage Bolt 1/2 x 1 1/2 NC, PL, GR5 (1 per Gang Bolt Without 100099 Spacer Plate).....	A.R.
29	10710	Carriage Bolt 1/2 x 2 - NC, PL, GR5 (1 per Gang Bolt With 100099 Spacer Plate).....	A.R.
31	10395	Lock Nut 1/2 NC, PL (1 per Gang Bolt).....	A.R.
32	10489	Nut-Gang Bolt 1 1/2 NF, CH (1 per Gang Bolt).....	A.R.
33	9441	Gang Bolt 42 7/8" - 5 Blade.....	A.R.
33	9442	Gang Bolt 52 1/8" - 6 Blade.....	A.R.
33	9443	Gang Bolt 61 3/8" - 7 Blade.....	A.R.
33	9444	Gang Bolt 70 5/8" - 8 Blade.....	A.R.
33	9446	Gang Bolt 89 1/8" - 10 Blade.....	A.R.
33	9447	Gang Bolt 98 3/8" - 11 Blade.....	A.R.
34	10910	Roll Pin 5/16 x 2 1/4 (1 per Gang Bolt).....	A.R.
35	3266	Blade - 14 x 11 Ga. Plain (Back-Up Blade).....	A.R.
35	3055	Blade 16 x 11 Ga. Plain (Back-Up with 26" Blades before 1 Jan 77).....	A.R.
36	3276	Blade-22 x 1/4 Plain.....	A.R.
36	3255	Blade-24 x 1/4 Plain.....	A.R.
36	3263	Blade-26 x 1/4 Plain.....	A.R.
37	3275	Blade-22 x 1/4 C.O.....	A.R.
37	3250	Blade 24 x 1/4 C.O.....	A.R.
37	2456	Blade 26 x 1/4 C.O.....	A.R.

WOF16 REAR GANG

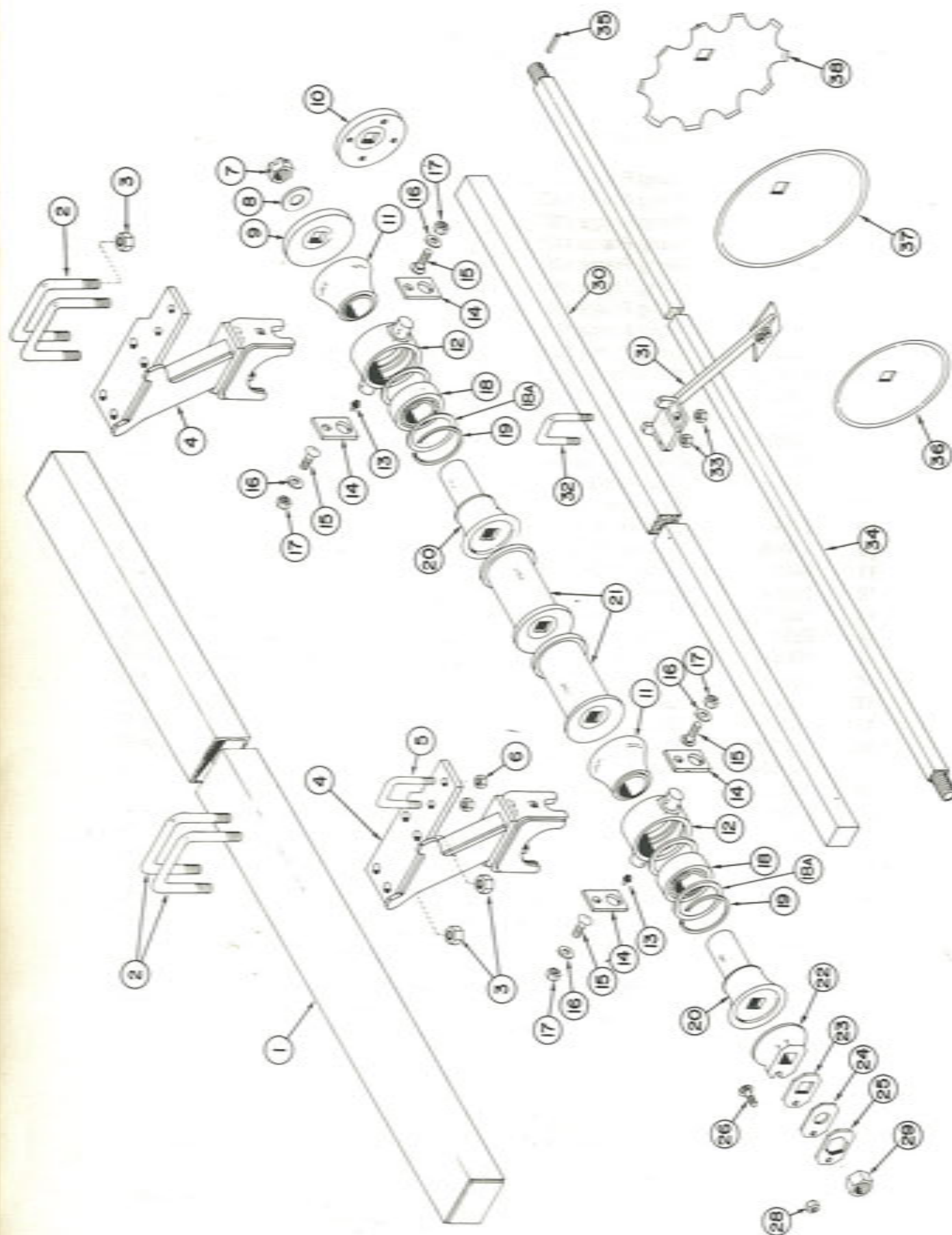


AMCO WOF16 REAR GANG

Ref. No.	Part No.	Description	No. Req'd
1	0700	Gang Frame 94" - 20 Blade	1
1	0503	Gang Frame 102" - 22 Blade	1
1	0504	Gang Frame 108" - 24 Blade	1
1	0505	Gang Frame 117" - 26 Blade	1
1	0506	Gang Frame 126" - 28 Blade	1
1	0508	Gang Frame 144" - 32 Blade	1
1	0487	Gang Frame 165" - 36 Blade	1
1	0488	Gang Frame 183" - 40 Blade	1
1	0492	Gang Frame 200" - 44 Blade	1
2	9752	"U" Bolt 7/8 Dia. (2 per Bearing Riser)	A.R.
3	10396	Lock Nut 7/8 - NC, PL (4 per Bearing Riser)	A.R.
4	0702	Bearing Riser - LH.	A.R.
5	100002	"U" Bolt 5/8 Dia. (1 per Bearing Riser)	A.R.
6	10299	Lock Nut 5/8 - NC, PLT (2 per Bearing Riser)	A.R.
7	10226	Nut Gang Bolt 1 1/2 - NF, Slotted (1 per Gang Bolt)	A.R.
8	10872	Cut Washer 1 3/8 PLT (1 per Gang Bolt)	A.R.
9	2404	Bumper Washer (1 per Gang)	A.R.
10	2404A	Bumper Washer (Use On R.H. Gang Only)	1
11	6400	End Bell-Small (1 per Bearing Riser)	A.R.
12	16014	Bearing Housing (1 per Bearing Riser)	A.R.
13	10606	Grease Fitting (1 per Bearing Housing)	A.R.
14	9981	Clamp-Trunion (3/8 x 2 1/2 x 4) (2 per Bearing Riser)	A.R.
15	10665	Carriage Bolt 5/8 x 2 - NC, PLT, GR5 (2 per Bearing Riser)	A.R.
16	10059	Cut Washer 5/8 - PLT (2 per Bearing Riser)	A.R.
17	10299	Lock Nut 5/8 - NC, PLT (2 per Bearing Riser)	A.R.
18	G10218	Bearing GW214-PP2 (1 per Bearing Riser)	A.R.
18A	100105	Washer 125mm (2 per Bearing Housing)	A.R.
	FB-09-0014	Bearing & Housing - Complete	
19	11072	Retainer Ring (1 per Bearing)	A.R.
20	6401	End Bell-large (1 per Bearing Riser)	A.R.
21	545	Spacer Spool (Use 0522 for harrows less back-up blades)	A.R.
22	1222-A	End Gang Washer (1 per Gang Bolt)	A.R.
23	100099	Spacer Plate	A.R.
24	100098	Bearing Plate (1 per Gang Bolt)	A.R.
25	5622-A	Lock Plate (1 per Gang Bolt)	A.R.
26	10870	Carriage Bolt 1/2 x 1 1/2 NC, PL, GR5 (1 per Gang Bolt Without 100099 Spacer Plate)	A.R.
26	10710	Carriage Bolt 1/2 x 2 - NC, PL, GR5 (1 per Gang Bolt Used With 100099 Spacer Plate)	A.R.

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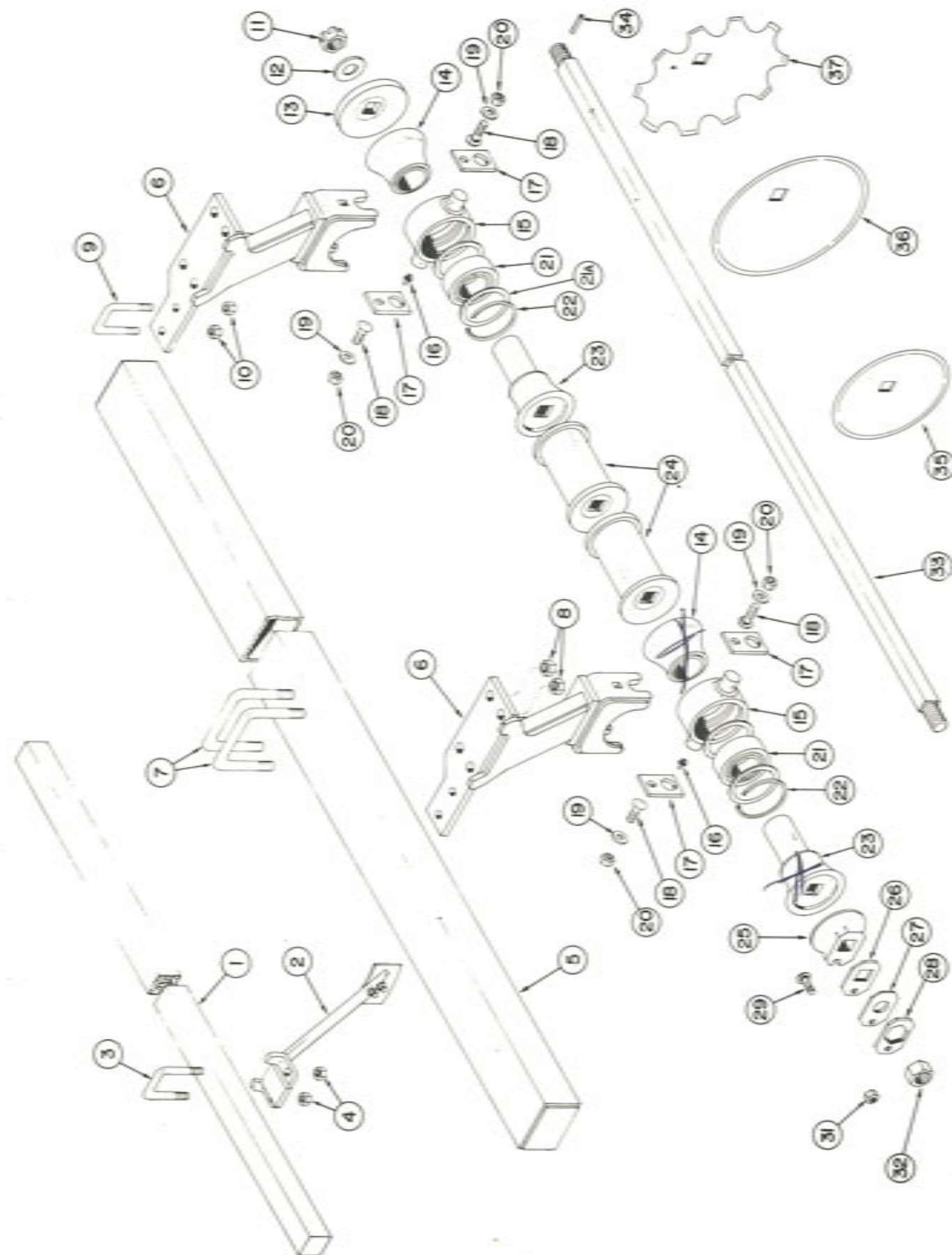
WOF16 REAR GANG



AMCO WOF16 REAR GANG

Ref. No.	Part No.	Description	No. Req'd
28	10395	Lock Nut 1/2-NC, PL, (1 per Gang Bolt)	A.R.
29	10489	Nut-Gang Bolt 1 1/2 - NF, CH (1 per Gang Bolt)	A.R.
30	100336	Scraper Bar 94" - 20 Blade	1
30	100337	Scraper Bar 102" - 22 Blade	1
30	100338	Scraper Bar 108" - 24 Blade	1
30	100339	Scraper Bar 117" - 26 Blade	1
30	100340	Scraper Bar 126" - 28 Blade	1
30	100342	Scraper Bar 144" - 32 Blade	1
30	100343	Scraper Bar 165" - 36 Blade	1
30	100344	Scraper Bar 183" - 40 Blade	1
30	100346	Scraper Bar 200" - 44 Blade	1
31	0709A	Scraper (1 per Blade)	A.R.
32	100Q02	"U" Bolt 5/8 Dia. (1 per Scraper)	A.R.
33	10299	Lock Nut 5/8 - NC, PLT, (2 per Scraper)	A.R.
34	9441	Gang Bolt 42 7/8" - 5 Blade	A.R.
34	9442	Gang Bolt 52 1/8" - 6 Blade	A.R.
34	9443	Gang Bolt 61 3/8" - 7 Blade	A.R.
34	9444	Gang Bolt 70 5/8" - 8 Blade	A.R.
34	9446	Gang Bolt 89 1/8" - 10 Blade	A.R.
34	9447	Gang Bolt 98 3/8" - 11 Blade	A.R.
35	10910	Roll Pin 5/16 x 2 1/4 (1 per Gang Bolt)	A.R.
36	3266	Blade - 14 x 11 Ga. Plain (Back-Up Blade)	A.R.
36	3055	Blade 16 x 11 Ga. Plain (Back-Up With 26" Blades Before 1 Jan. 77)	A.R.
37	3276	Blade 22 x 1/4 Plain	A.R.
37	3255	Blade 24 x 1/4 Plain	A.R.
37	3263	Blade-26 x 1/4 Plain	A.R.
38	3275	Blade 22 x 1/4 C.O.	A.R.
38	3250	Blade-24 x 1/4 C.O.	A.R.
38	2456	Blade 26 x 1/4 C.O.	A.R.

WOJ 16 FRONT GANG



0946- 10-1/4 w/ Back U Blades
0947- 10-1/2 Less Back UP Blades

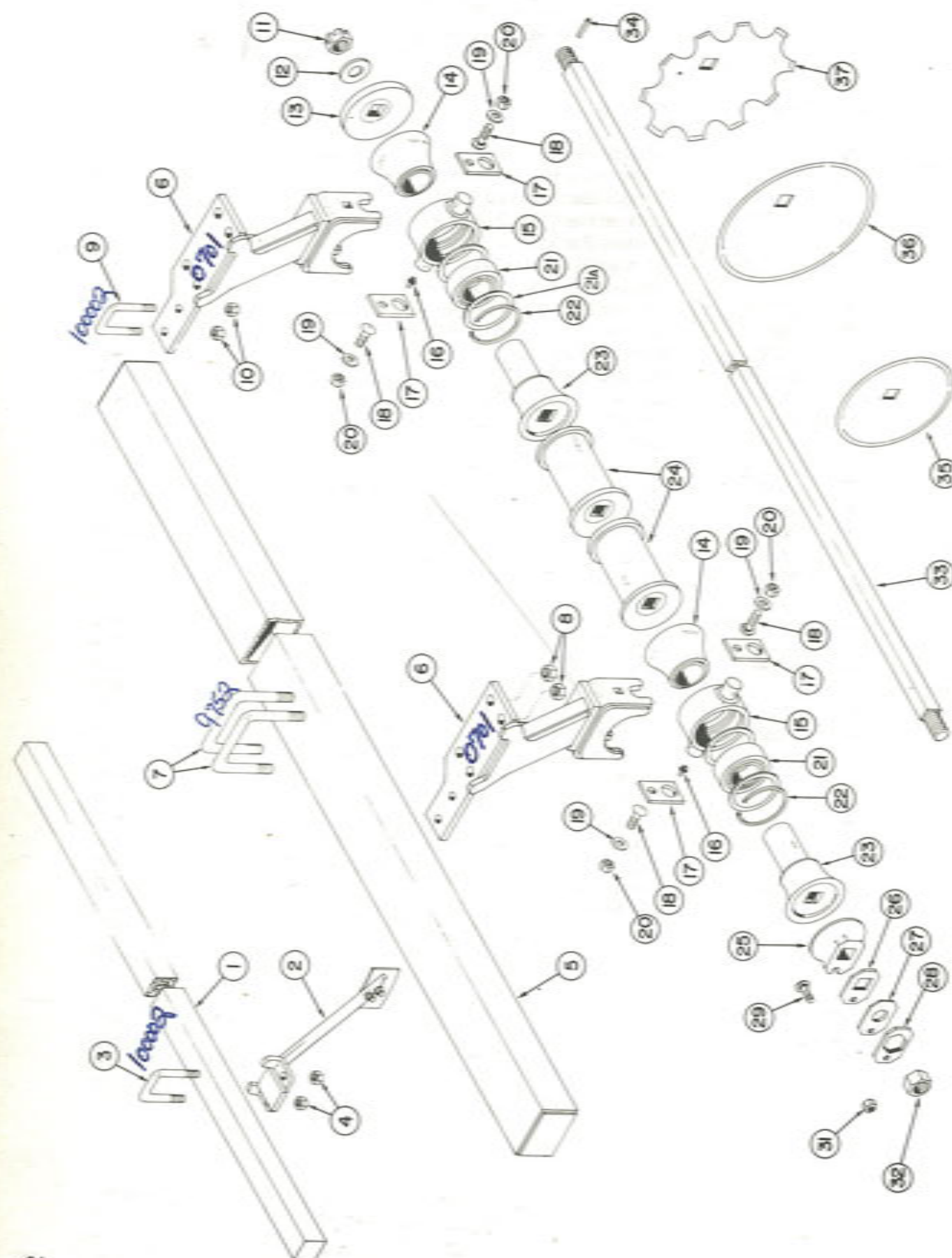
AMCO W0J16
FRONT GANG

AN-01-0008- EXTRA BAG. FRONT GANGS 2024

Ref. No.	Part No.	Description	No. Req'd
1	100336	Scraper Bar 94" - 18 Blade.	1
1	100337	Scraper Bar 102" - 20 Blade.	1
1	100339	Scraper Bar 117" - 22 Blade.	1
1	100340	Scraper Bar 126" - 24 Blade.	1
1	100341	Scraper Bar 135" - 26 Blade.	1
1	100342	Scraper Bar 144" - 28 Blade.	1
1	100343	Scraper Bar 165" - 32 Blade.	1
1	100345	Scraper Bar 187" - 36 Blade.	1
1	100347	Scraper Bar 209" - 40 Blade.	1
2	0708A	Scraper (1 per Blade)	A.R.
3	100002	"U" Bolt 5/8 - Dia. (1 per Scraper)	A.R.
4	10299	Lock Nut 5/8 - NC, PLT (2 per Scraper)	A.R.
5	0700	Gang Frame 94" - 18 Blade	1
5	0503	Gang Frame 102" - 20 Blade	1
5	0505	Gang Frame 117" - 22 Blade	1
5	0506	Gang Frame 126" - 24 Blade	1
5	0507	Gang Frame 135" - 26 Blade	1
5	0508	Gang Frame 144" - 28 Blade	1
5	0487	Gang Frame 165" - 32 Blade	1
5	0519	Gang Frame 187" - 36 Blade	1
5	0493	Gang Frame 209" - 40 Blade	1
6	0701	Bearing Riser - RH	A.R.
7	9752	"U" Bolt 7/8 Dia. (2 per Bearing Riser)	A.R.
8	10396	Lock Nut 7/8 - NC, PL (4 per Bearing Riser)	A.R.
9	100002	"U" Bolt 5/8 Dia. (1 per Bearing Riser)	A.R.
10	10299	Lock Nut 5/8 - NC, PLT (2 per Bearing Riser)	A.R.
11	10226	Nut Gang Bolt 1 1/2 - NF, Slotted (1 per Gang Bolt)	A.R.
12	10872	Cut Washer 1 3/8 - PLT (1 per Gang Bolt)	A.R.
13	2404	Bumper Washer (1 per Gang)	A.R.
14	6402	End Bell - Small (1 per Bearing Riser)	A.R.
15	16014	Bearing Housing (1 per Bearing Riser)	A.R.
16	10606	Grease Fitting (1 per Bearing Housing)	A.R.
17	9981	Clamp-Trunion 3/8 x 2 1/2 x 4 (2 per Bearing Riser)	A.R.
18	10665	Carriage Bolt 5/8 x 2 - NC, PLT, GR5 (2 per Bearing)	A.R.
19	10069	Cut Washer 5/8 - PLT (2 per Bearing Riser)	A.R.
20	10299	Lock Nut 5/8 - NC, PLT (2 per Bearing Riser)	A.R.
21	G10218	Bearing GW214-PP2 (1 per Bearing Riser)	A.R.
21A	100105	Washer 125mm (2 per Bearing Housing)	A.R.
	FB-09-0014	Bearing & Housing - Complete	
22	11072	Retainer Ring (1 per Bearing)	A.R.
23	6403	End Bell-Large (1 per Bearing Riser)	A.R.
24	1296	Spacer Spool (Use 0523 for harrows less back-up blades)	A.R.
25	1222-A	End Gang Washer (1 per Gang)	A.R.

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WOJ 16 FRONT GANG



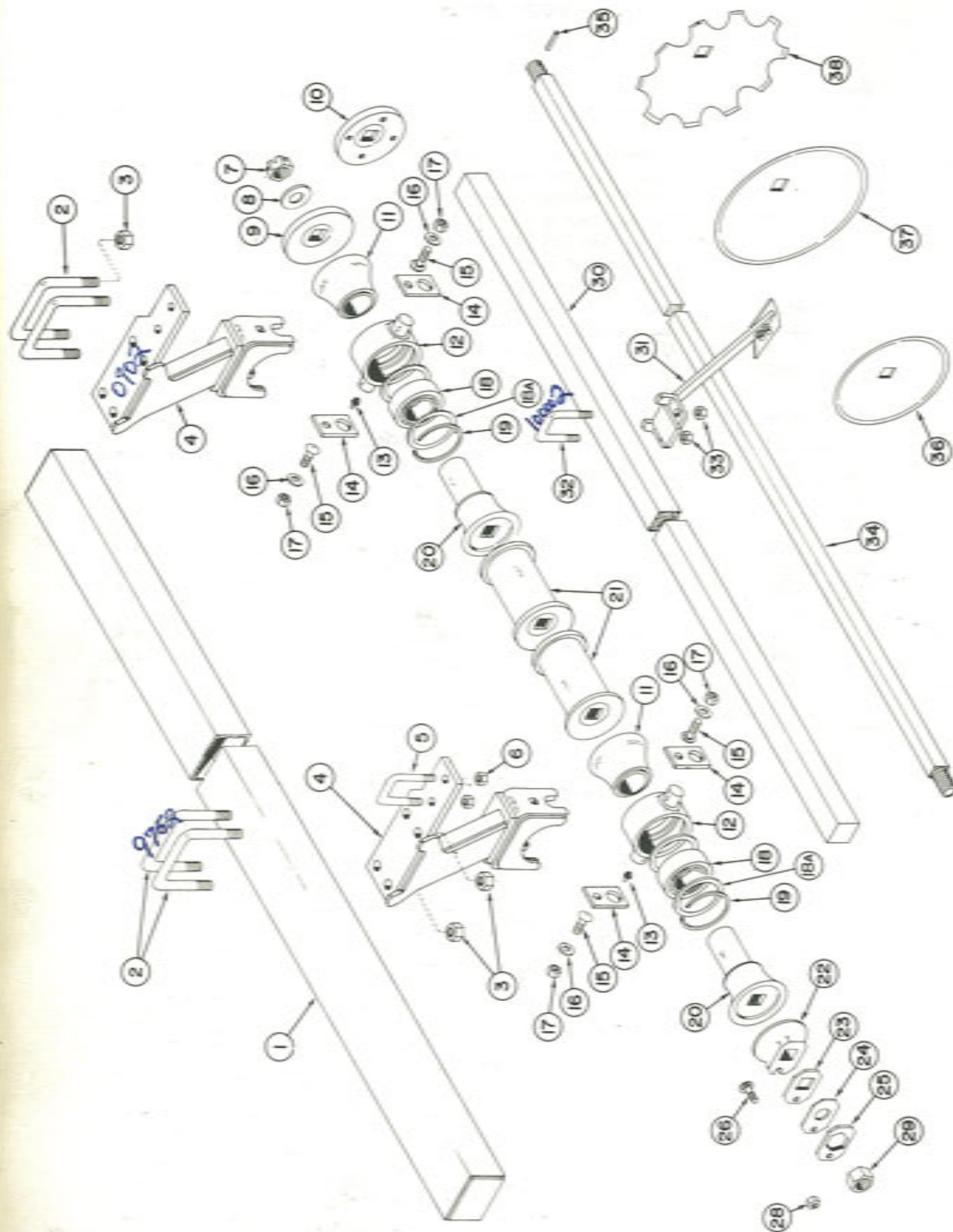
AMCO WJ16 FRONT GANG

Ref. No.	Part No.	Description	No. Req'd
26	100099	Spacer Plate	A.R.
27	100098	Bearing Plate (1 per Gang Bolt)	A.R.
28	5622-A	Lock Plate (1 per Gang Bolt)	A.R.
29	10870	Carriage Bolt 1/2 x 1 1/2-NC, PLT, GR5 (1 per Gang Bolt Without 100099 Spacer Plate)	A.R.
29	10710	Carriage Bolt 1/2 x 2-NC, PL, GR5 (1 per Gang Bolt Used With 100099 Spacer Plate)	A.R.
31	10395	Lock Nut 1/2-NC, PL (1 per Gang Bolt)	A.R.
32	10489	Nut-Gang Bolt 1 1/2-NF, CH (1 per Gang Bolt)	A.R.
33	9444	Gang Bolt 70 5/8" - 7 Blade	A.R.
33	9450	Gang Bolt 49 1/2" - 5 Blade	A.R.
33	9451	Gang Bolt 60 1/4" - 6 Blade	A.R.
33	9454	Gang Bolt 92 1/2" - 9 Blade	A.R.
33	9455	Gang Bolt 103 1/4" - 10 Blade <i>20BL</i>	A.R.
34	10910	Roll Pin 5/16 x 2 1/4 (1 per Gang Bolt)	A.R.
35	3266	Blade 14 x 11 Ga. Plain (Back-Up Blade)	A.R.
35	3055	Blade 16 x 11 Ga. Plain (Back-Up with 26" Blades Before 1 Jan 77)	A.R.
36	3276	Blade-22 x 1/4 Plain	A.R.
36	3255	Blade 24 x 1/4 Plain	A.R.
36	3263	Blade 26 x 1/4 Plain	A.R.
37	3275	Blade-22 x 1/4 C.O.	A.R.
37	3250	Blade 24 x 1/4 C.O.	A.R.
37	2456	Blade 26 x 1/4 C.O.	A.R.

WJ-16-40BL

1- 9456 - 11BL
1- 9454 - 9BL
2- 9455 - 10BL

WOJ 16 REAR GANG



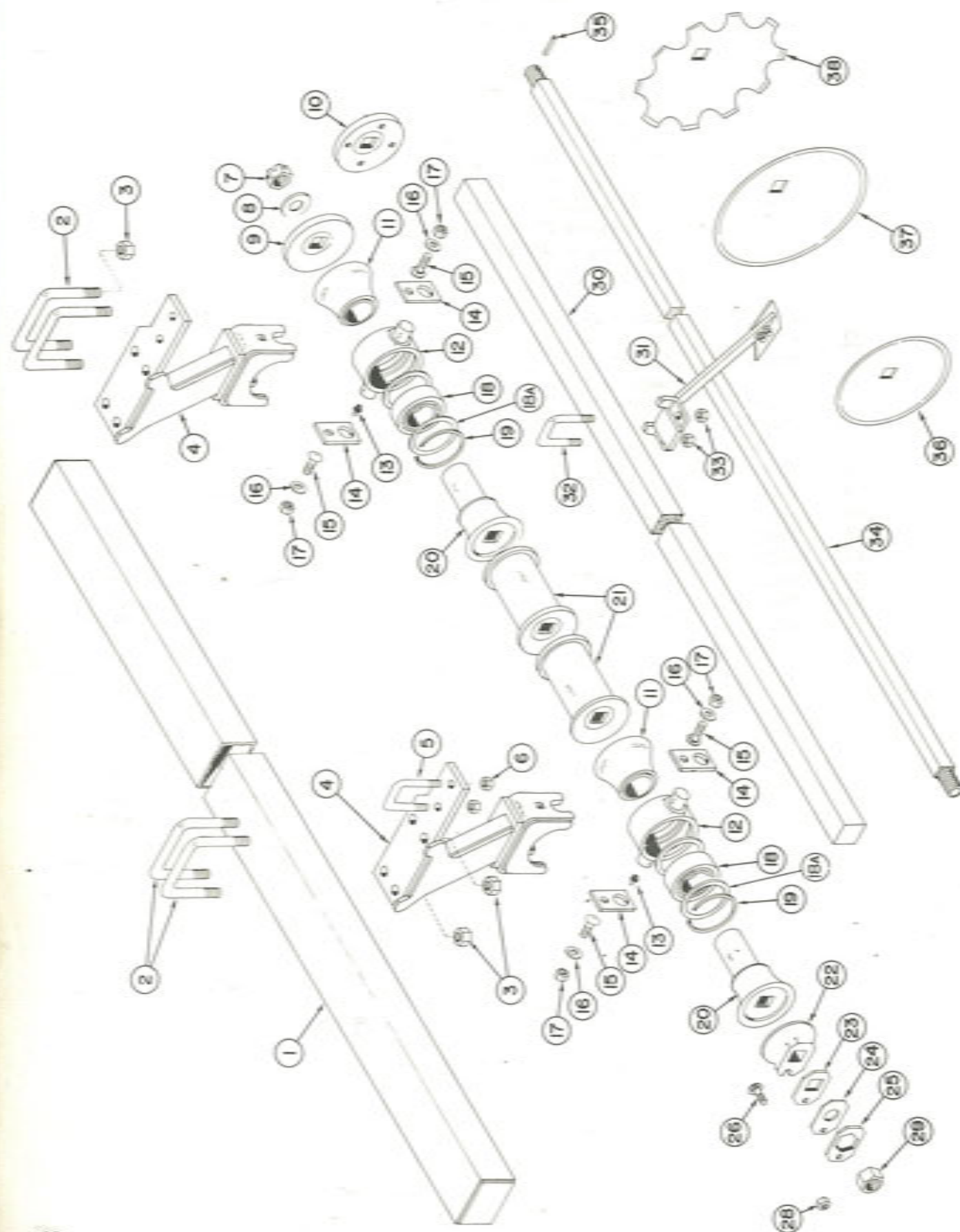
AN-01-0009 EXTRA BRG REAR GANG

AMCO WJ16 REAR GANG

Ref. No.	Part No.	Description	No. Req'd
1	0700	Gang Frame 94" - 18 Blade	1
1	0503	Gang Frame 102" - 20 Blade	1
1	0505	Gang Frame 117" - 22 Blade	1
1	0506	Gang Frame 126" - 24 Blade	1
1	0507	Gang Frame 135" - 26 Blade	1
1	0508	Gang Frame 144" - 28 Blade	1
1	0487	Gang Frame 165" - 32 Blade	1
1	0519	Gang Frame 187" - 36 Blade	1
1	0493	Gang Frame 209" - 40 Blade	1
2	9752	"U" Bolt 7/8 Dia. (2 per Bearing Riser)	A.R.
3	10396	Lock Nut 7/8 - NC, PL (4 per Bearing Riser)	A.R.
4	0702	Bearing Riser - LH.	A.R.
5	100002	"U" Bolt 5/8 Dia. (1 per Bearing Riser)	A.R.
6	10299	Lock Nut 5/8 - NC PLT (2 per Bearing Riser)	A.R.
7	10226	Nut-Gang Bolt 1 1/2 - NC, Slotted (1 per Gang Bolt)	A.R.
8	10872	Cut Washer 1 3/8 - PLT (1 per Gang Bolt)	A.R.
9	2404	Bumper Washer (1 per Gang)	A.R.
10	2404-A	Bumper Washer (Use On R.H. Gang Only)	1
11	6402	End Bell-Small (1 per Bearing Riser)	A.R.
12	16014	Bearing Housing (1 per Bearing Riser)	A.R.
13	10606	Grease Fitting (1 per Bearing Housing)	A.R.
14	9981	Clamp-Trunion, (3/8 x 2 1/2 x 4) (2 per Bearing Riser)	A.R.
15	10665	Carriage Bolt 5/8 x 2 - NC, PLT, GR5 (2 per Bearing Riser)	A.R.
16	10059	Cut Washer 5/8 - PLT (2 per Bearing Riser)	A.R.
17	10299	Lock Nut 5/8 - NC, PLT (2 per Bearing Riser)	A.R.
18	G10218	Bearing GW214-PP2 (1 per Bearing Riser)	A.R.
18A	100105	Washer 125mm (2 per Bearing Housing)	A.R.
	FB-09-0014	Bearing & Housing - Complete	
19	11072	Retainer Ring (1 per Bearing)	A.R.
20	6403	End Bell-Large (1 per Bearing Riser)	A.R.
21	1296	Spacer Spools (Use 0523 For Harrows Less Back-Up Blades)	A.R.
22	1222-A	End Gang Washer (1 per Gang Bolt)	A.R.
23	100099	Spacer Plate	A.R.
24	100098	Bearing Plate (1 per Gang Bolt)	A.R.
25	5622-A	Lock Plate (1 per Gang Bolt)	A.R.
26	10870	Carriage Bolt 1/2 x 1 1/2 - NC, PL, GR5 (1 per Gang Bolt Without 100099 Spacer Plate)	A.R.
26	10710	Carriage Bolt 1/2 x 2 - NC, PL, GR5 (1 per Gang Bolt With 100099 Spacer Plate)	A.R.
28	10395	Lock Nut 1/2 - NC, PL (1 per Gang Bolt)	A.R.
29	10489	Nut-Gang Bolt 1 1/2 - NF, CH (1 per Gang Bolt)	A.R.
30	100336	Scraper Bar 94" - 18 Blade	1
30	100337	Scraper Bar 102" - 20 Blade	1
30	100339	Scraper Bar 117" - 22 Blade	1
30	100340	Scraper Bar 126" - 24 Blade	1

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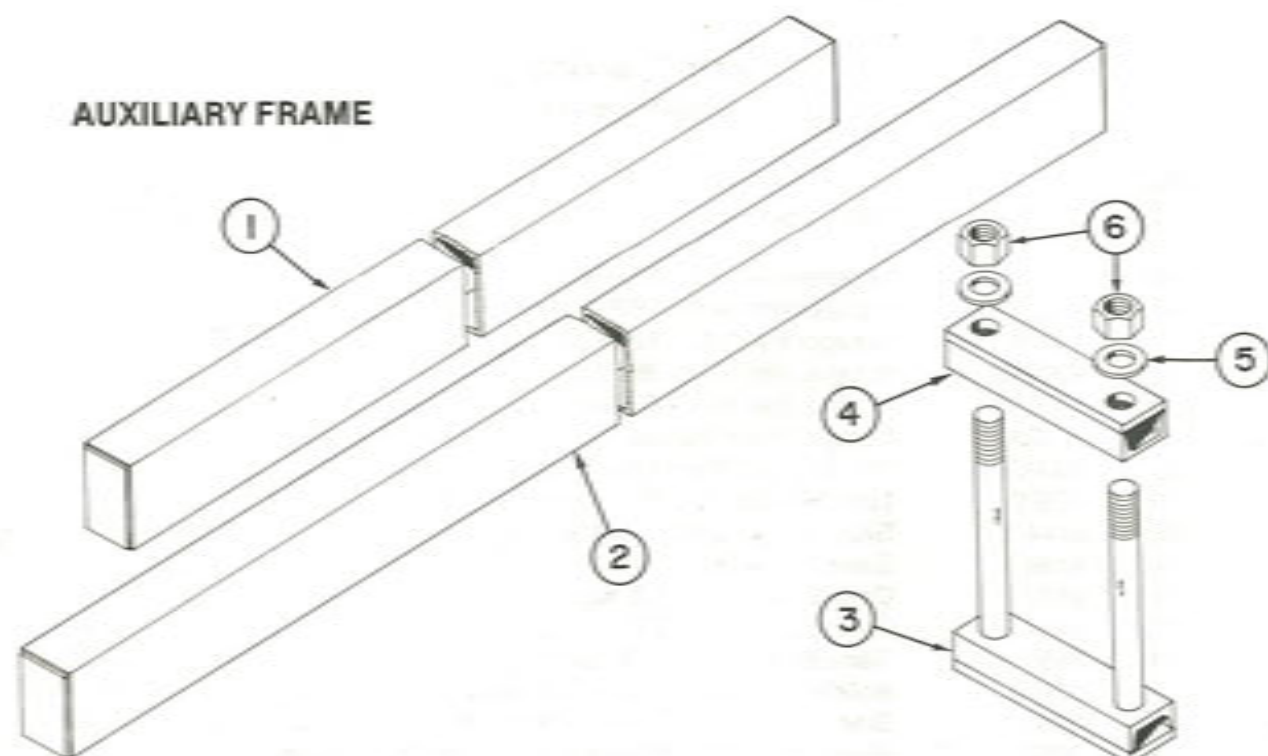
WOJ 16 REAR GANG



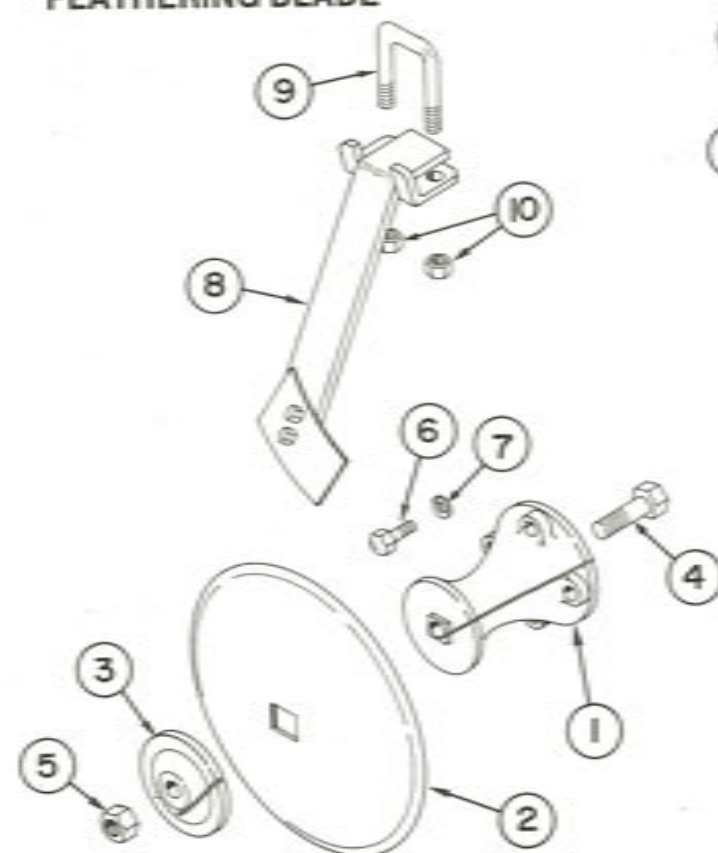
AMCO WJ16 REAR GANG

Ref. No.	Part No.	Description	No. Req'd
30	100341	Scraper Bar 135" - 26 Blade.....	1
30	100342	Scraper Bar 144" - 28 Blade.....	1
30	100343	Scraper Bar 165" - 32 Blade.....	1
30	100345	Scraper Bar 187" - 36 Blade.....	1
30	100347	Scraper Bar 209" - 40 Blade.....	1
31	0709A	Scraper (1 per Blade)	A.R.
32	100002	"U" Bolt 5/8 - Dia. (1 per Scraper)	A.R.
33	10299	Lock Nut 5/8 - NC, PLT (2 per Scraper)	A.R.
34	9444	Gang Bolt 70 5/8" - 7 Blade	A.R.
34	9450	Gang Bolt 49 1/2" - 5 Blade	A.R.
34	9451	Gang Bolt 60 1/4" - 6 Blade	A.R.
34	9454	Gang Bolt 92 1/2" - 9 Blade	A.R.
34	9455	Gang Bolt 103 1/4" - 10 Blade	A.R.
35	10910	Roll Pin 5/16 x 2 1/4 (1 per Gang Bolt)	A.R.
36	3266	Blade 14 x 11 Ga. Plain (Back-Up Blade).....	A.R.
36	3055	Blade 16 x 11 Ga. Plain (Back-Up With 26" Blades Before 1 Jan. 77)	A.R.
37	3276	Blade-22 x 1/4 Plain	A.R.
37	3255	Blade 24 x 1/4 Plain	A.R.
37	3263	Blade 26 x 1/4 Plain	A.R.
38	3275	Blade - 22 x 1/4 C.O.....	A.R.
38	3250	Blade - 24 x 1/4 C.O.....	A.R.
38	2456	Blade - 26 x 1/4 C.O.....	A.R.
39	9456	Gang Bolt.....	AR

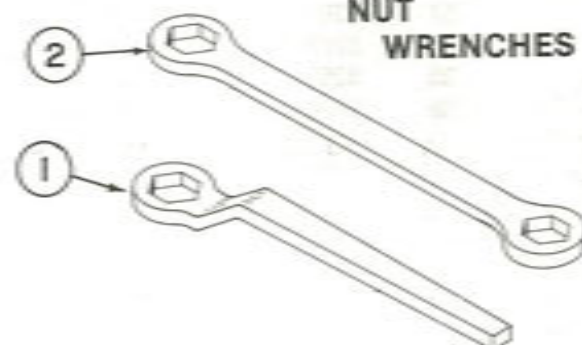
AUXILIARY FRAME



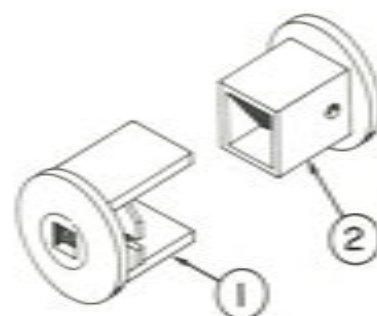
FEATHERING BLADE



NUT WRENCHES



GANG DRIVERS



AMCO WOF16 & WOJ16 AUXILIARY FRAME

Ref. No.	Part No.	Description	No. Req'd
1	0490	Auxiliary Frame - Short 84"	1
2	0491	Auxiliary Frame - Long 192"	1
3	0456-A	Gang Frame Clamp - Male	4
4	0455-A	Gang Frame Clamp - Female	4
5	10872	Cut Washer 1 3/8 - PL	8
6	10873	Hex Nut 1 3/8 - NC, PL	8
	AG-01-0005	Auxiliary Frame - Complete	

NUT WRENCHES

Ref. No.	Part No.	Description	No. Req'd
1	100134	Nut Wrench 1 1/2"	1
2	100136	Nut Wrench 1 1/2" & 1 3/8"	1
	AL-10-0017	Bundle Wrenches - Complete	

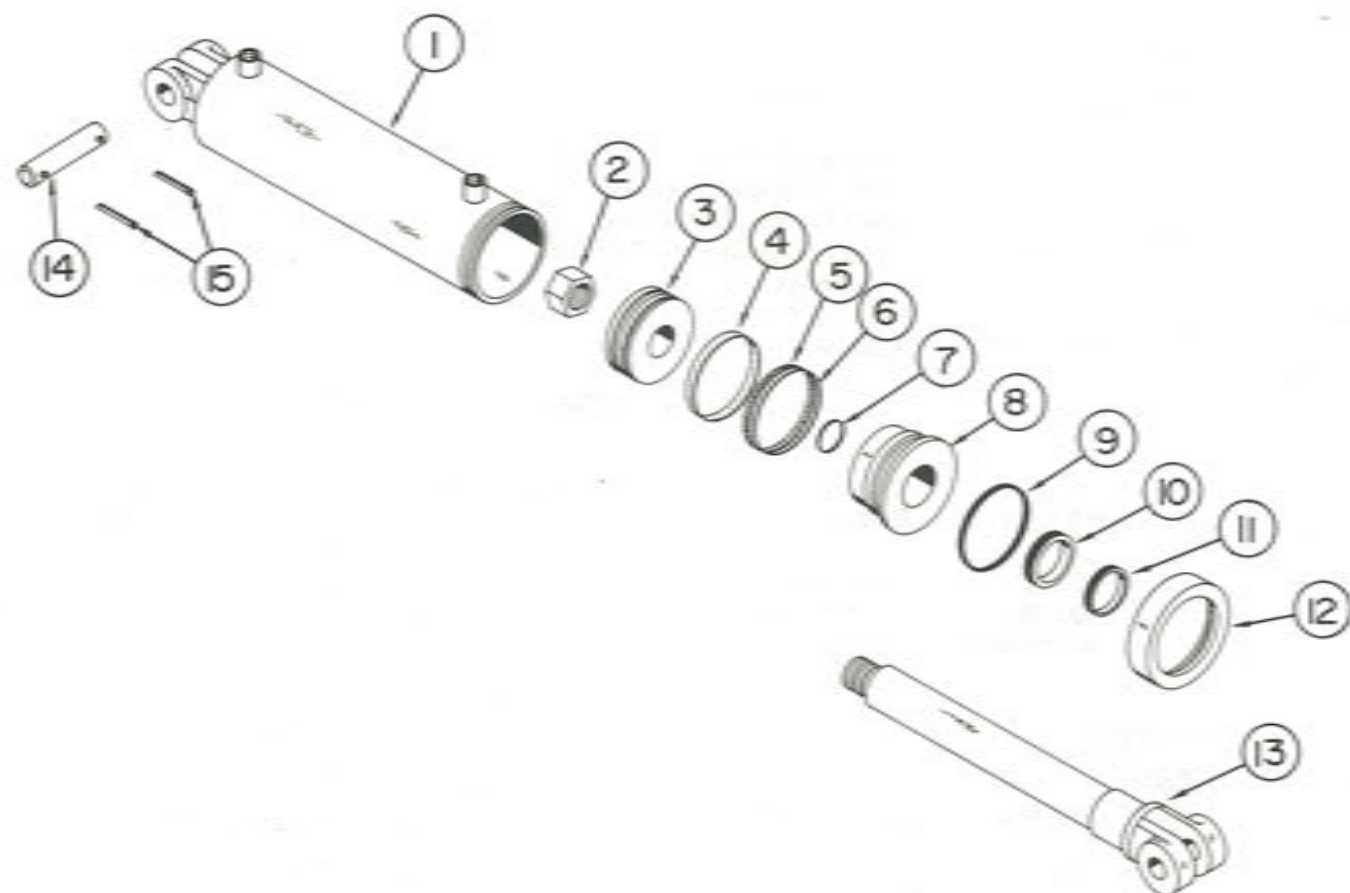
FEATHERING BLADE

Ref. No.	Part No.	Description	No. Req'd
1	7673	Blade Spacer	1
2	3268	Blade 18 x 9 Ga. Plain	1
3	7801	Blade Cup	1
4	10189	Hex Bolt 7/8 x 3 - NC	1
5	10396	Lock Nut 7/8 - NC, PL	1
6	10928	Hex Bolt 1/2 x 1 3/4 - NC, PL	4
7	10098	Lock Washer 1/2	4
8	0709-A	Scraper - LH	1
9	100002	"U" Bolt 5/8 Dia.	1
10	10299	Lock Nut 5/8 - NC, PL	2
	AN-01-0001	Feathering Blade - Complete	2

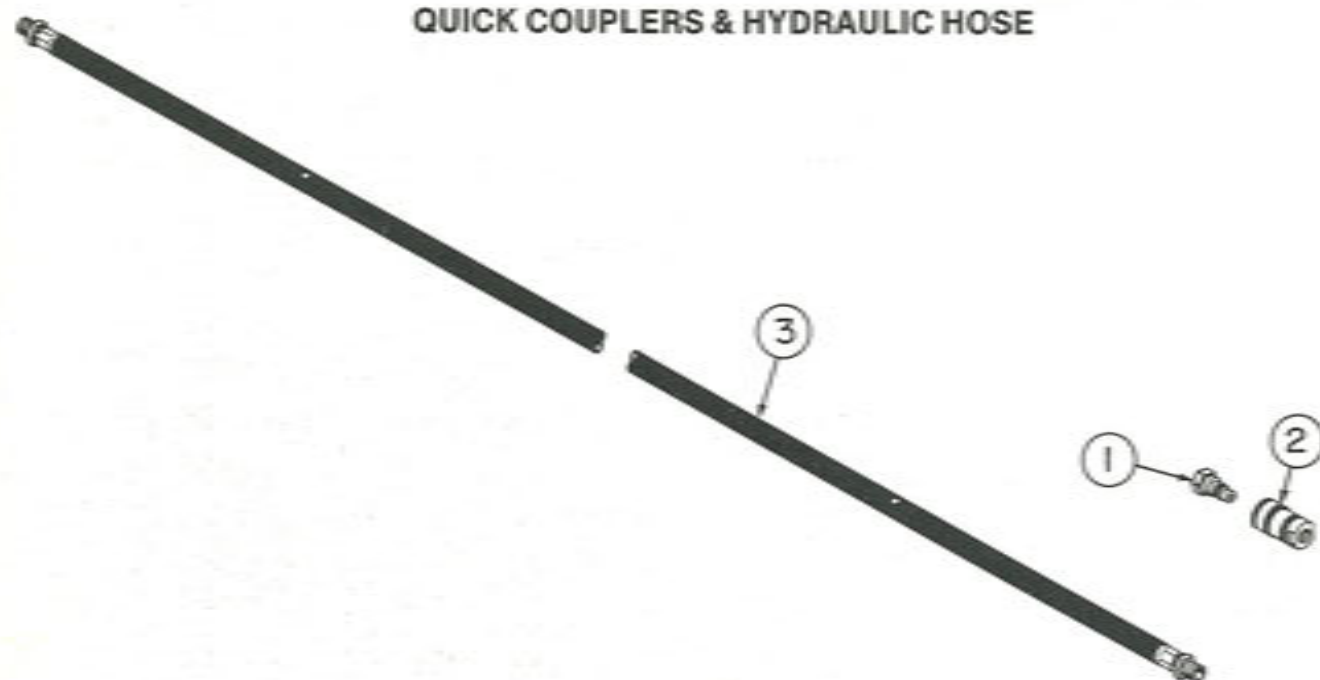
GANG DRIVERS

Ref. No.	Part No.	Description	No. Req'd
1	0542	Gang-Lock - Female	1
2	0543	Gang Lock - Male	1
	JA-01-0025	Gang Lock Set - Complete	

4 x 16 HYDRAULIC CYLINDER



QUICK COUPLERS & HYDRAULIC HOSE



AMCO WOF16 & WOJ16 4 x 16 HYDRAULIC CYLINDER (OPTIONAL)

Ref. No.	Part No.	Description	No. Req'd
	11134	Cylinder Complete (Lantex #x3050-BL) (Pins Not Included)	1
1	11136	Barrel Assy	1
2	11139	Lock Nut-Self Locking 1½-12 NF	1
3	11138	Piston	1
4	*11146	Wear Strip	1
5	*11144	Piston Seal	1
6	*11145	"O" Ring	1
7	*11143	Rod Static Seal	1
8	11137	Gland	1
9	*11140	Gland Static Seal	1
10	*11141	Rod Seal	1
11	*11142	Rod Wiper	1
12	11147	Collar	1
13	11135	Rod Assy	1
14	100171	* Pin 1¼ Dia. x 4½ Long	2
15	10910	Roll Pin 5/16 x 2¼	4
	*11148	Seal Repair Kit	
	AG-20-0004	4 x 16 Hydraulic Cylinder - Complete w/Pins	

Note: Items with (*) sold in seal repair kit only.

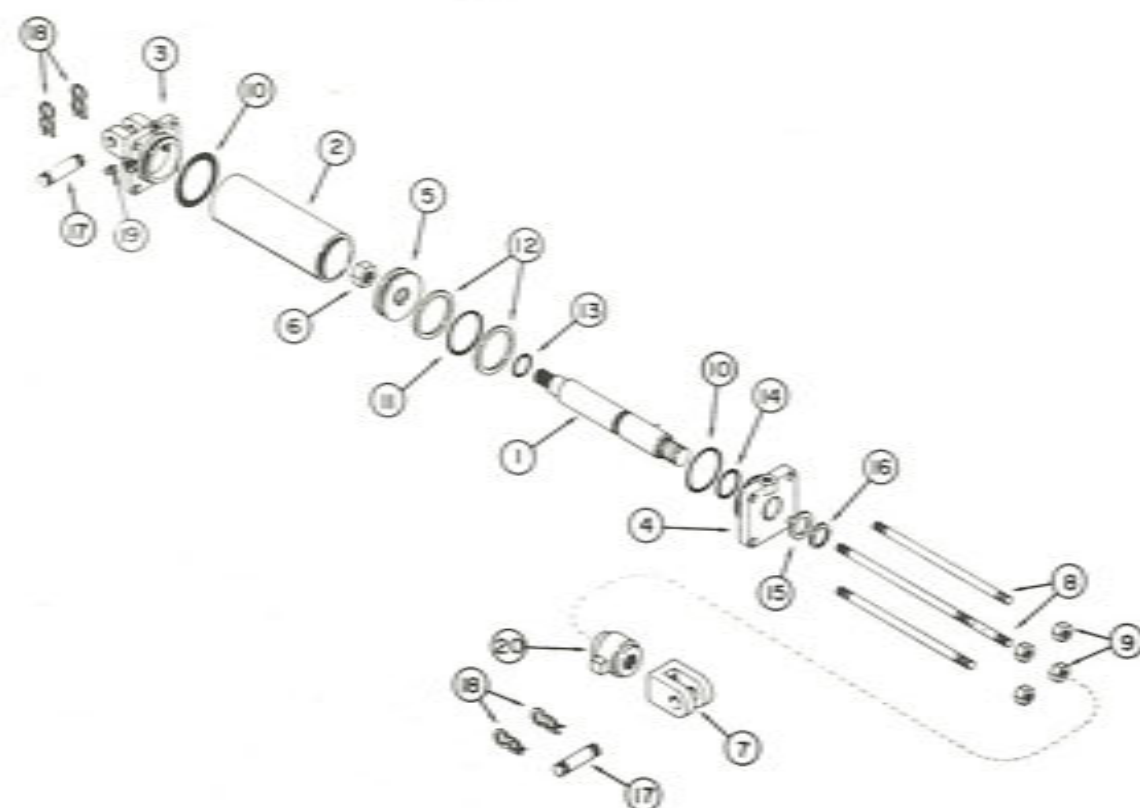
QUICK COUPLERS & HYDRAULIC HOSE (OPTIONAL)

Ref. No.	Part No.	Description	No. Req'd
1	10943M	Quick Coupler-Male (Pioneer 5010-4)	1
2	10943F	Quick Coupler-Female (Pioneer 4050-4)	1
	10943	Assy. Quick Coupler-Complete (Pioneer 4000-4)	1
	AL-10-0016	Set Quick Couplers (2)-Complete	
3	10720	Hydraulic Hose ½" x 12"	1
	AG-20-0001	Set Hydraulic Hose (2)-Complete	

4 x 8 HYDRAULIC CYLINDER (PRINCE #8608) (OPTIONAL)

Ref. No.	Part No.	Description	No. Req'd
	10934	Cylinder Complete (Prince #8608)	
1	10965	Rod-Piston Assembly	1
2	10966	Tube	1
3	10952	Butt	1
4	10967	Head Piston	1
5	10968	Piston	1
6	10980	Lock Nut 1-14 NF	1
7	10969	Clevis Assembly 1" Dia. Pin	1
8	10970	Rod Tie	4
9	10139	Nut 5/8-NC, PL	4
10	*10958	"O" Ring	2
11	*10959	"O" Ring	1
12	*10960	Washer-Back Up	2
13	*10971	"O" Ring	1
14	*10972	"O" Ring	1
15	*10973	Washer-Back up	1
16	*10974	Wiper	1
17	10956	Clevis Pin-1" Dia.	2
18	10957	Clip Hair Pin	4
19	10978	Plug-Pipe 1/2 NPT	1
20	10937	Stroke Control	1
	*10976	Seal Repair Kit (Prince #8600)	
	BD-20-0003	4 x 8 Hydraulic Cylinder w/Stroke Control (Complete)	

Note: Items with (*) sold in seal repair kit only.



DECALS

AMCO

! WARNING

LOWER OR BLOCK ELEVATED COMPONENTS BEFORE SERVICING OR WHEN LEAVING THE MACHINE.
ELEVATED COMPONENTS CAN FALL AND CAUSE SERIOUS INJURY.

11233

MAINTENANCE INSTRUCTIONS

- Keep all bolts tight.
 - Visually inspect all bolts daily.
 - Check after first 50 hours or one week's operations.
- Keep wheel bearings properly adjusted.
 - Clean and repack each season or every 300 hours.
 - Replace all worn or damaged parts when repairing.
- Do not run with loose disk blades. Keep gang bolts tight! Tighten after first day's operation.
- Keep scrapers properly adjusted 1/16" - 1/8" from blades.
- Grease gang bearings every week or 50 hours, at the start of each season, and at the end of each season. Apply with low pressure, low volume hand grease gun. Use a good, clean lithium base grease, Shell Alvania No. 3 or equal. Rotate gangs while greasing for best results.

AMCO WOF16 & WOJ16 SERIES DISK HARROW DECALS

Ref. No.	Part No.	Description	Req'd No.
1	10948	Decal-AMCO	3
2	11233	Decal-Warning	1
3	10997	Decal-Maintenance	1

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 RETAINER PINS

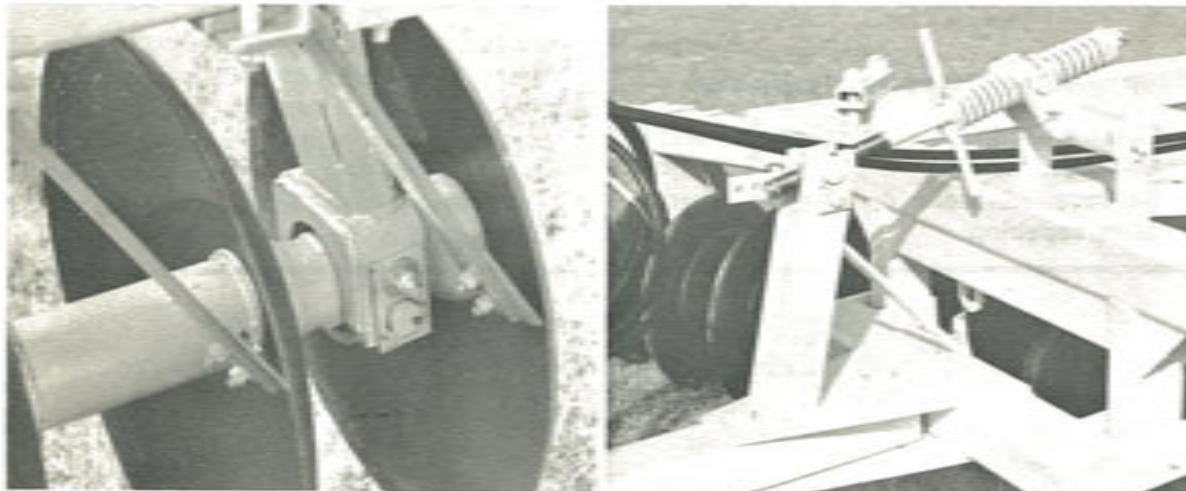
Grease every week or 50 hours of operation.

GANG BEARINGS

The AMCO wheel type offset disk harrow is equipped with triple sealed re-greasable ball bearings. The bearings are packed and greased at the factory. Grease these bearings every week or 50 hours of operation. **IMPORTANT** - apply grease with a low pressure, low volume hand grease gun. Use care to prevent damage to bearing seals. At the end of the season, all bearings should be greased, then raise the harrow on its wheels and spin the gangs slowly so that grease wraps around the bearing seals. This will help protect the seals from the elements during periods of storage.

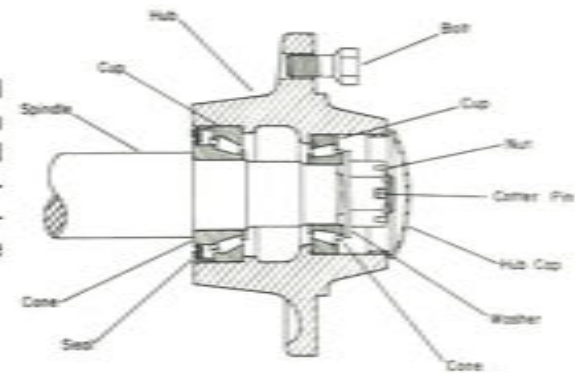
HITCH STABILIZER

The hitch stabilizer should be greased every week or 50 hours of operation. The stabilizer should also be greased at the start of each season and at the end of each season. The threads on the stabilizer rod should be cleaned out and oiled occasionally for smooth operation.



WHEEL 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 season or every 300 hours of operation. Use a good grade No. 2 gun grease (Lithium Base).



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 wheel, then remove the dust cap by prying around it. Remove the cotter pin, slotted nut and flat washer. Carefully remove the hub and bearings from the spindle. Thoroughly clean and carefully inspect all parts for wear. All parts that appear to be worn or damaged must be replaced.

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 the seal if the 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 the hub bolt holes have a full thread. Bearing cones 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 the spindle.
6. Flat 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 assembly in hub, press grease seal into hub and carefully re-install the hub on the spindle. Install the outer bearing assembly into the hub and replace the flat washer and slotted nut. Tighten the slotted nut to seat the bearings, 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 nut off to the nearest slot and install the cotter pin. Install the hub cap and re-mount the wheel on the hub.

OPERATING INSTRUCTIONS

Your new AMCO offset disk harrow has been set-up, inspected, and adjusted by your dealer before delivery. However, before using your new harrow, or one that has been stored, check to make certain that all nuts and bolts are tight, all cotter pins spread and that the harrow has been lubricated.

This instruction manual should be carefully and thoroughly read to enable the operator to care for and operate the harrow.

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.

Refer to your tractor operator's manual for complete tractor operating instructions.

ADJUSTMENT FOR LEVEL DISKING

It is recommended that the tractor be operated at a speed best suited for soil conditions. High-speed disking will sometimes result in excessive lateral movement of the soil. This may leave an uneven surface behind the disk harrow known as "Ridging" or "Furrowing".

When disking in a cover crop or where the land is to be reworked, an uneven surface is not objectionable. If the land is to be bare through the winter, furrows and ridges will reduce soil washing, and will help catch and hold moisture, resulting in more water being absorbed by the soil.

FEATHERING BLADES

The use of feathering blades with smaller disks will move the excess soil back which is thrown out by the front gangs at high speeds. By using the feathering blades, the outside furrows are partially filled, giving a more uniform job of disking.

GROUND SPEED AND ADJUSTMENTS

Where it is necessary to have a level job of disking, the following factors must be taken into consideration: (1) Tractor Speed (2) Hitch Adjustment and (3) Disk Gang Angle Adjustment.

TRACTOR DRAWBAR

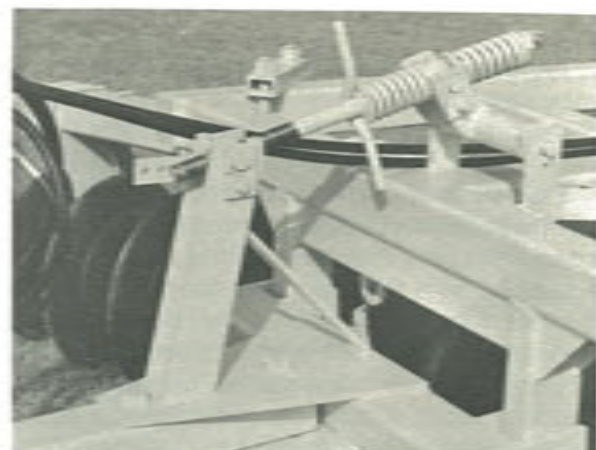
It is suggested that the tractor drawbar be set so it is free to swing when disking. This will prevent side draft, making operation of the harrow easier. The tractor drawbar will pull somewhat to the left side during operation. This is normal with an offset harrow.

HARROW HITCH

The harrow pull tongue can be offset to the right or left by using the set of holes in the cross tongue plates to obtain the desired offset.

SPRING LOADED STABILIZER

Penetration of front and rear gangs may vary. The spring loaded stabilizer may be adjusted to level the harrow front to rear. In extremely hard ground it may be necessary to shorten the stabilizer to force the front or penetrating gang into the ground. In normal conditions, the stabilizer should be adjusted so that the disk harrow is level front to rear while disking. The stabilizer may also be adjusted to level the unit for transport.



The type of work to be done by the harrow will determine the type of adjustments to be made.

Observe the harrow while it is working and check if the dead furrow is being filled and the ground left level. If not, an adjustment will have to be made.

If the left blade of the rear gang is being "starved" for soil, move the rear gang slightly to the right or increase the rear gang cutting angle.

If the left blade of the rear gang is throwing too much soil, move the gang slightly to the left or decrease the rear gang cutting angle.

Changing the angle between the gangs will affect the penetration of the harrow. The wider the angle, the deeper the harrow will cut.

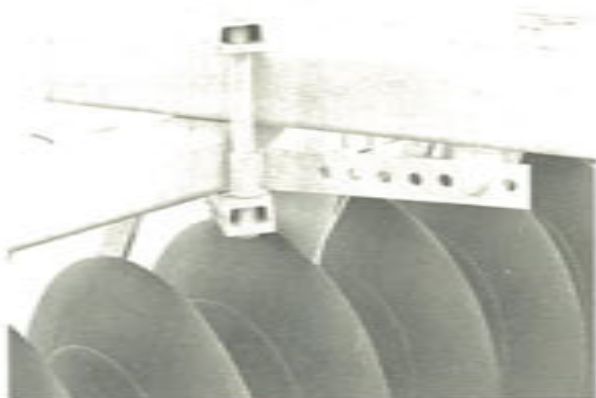
There are many factors which affect the way in which the soil will flow. Some factors are: moisture content of the soil, type of soil, speed of the tractor, depth of penetration, and working angle between the gangs. If any one of the conditions change, there will be a change in the resulting disking job.

Move the rear gang laterally one or two inches, or change the angle one hole at a time when making an adjustment.

To check the quality of disking being done, make one complete round and pass the points where the observation was made.

DISK GANG ANGLE

The gangs may be set at cutting angles from 15 degrees to 23 degrees depending on soil conditions and job to be done. When conditions are near normal, a setting somewhere between the two extremes is advisable for best operation. Use the gang angle set brackets on the right hand side of the main frame to select desired angles. The front gang angle can be increased by moving the gang forward. Moving the gang rearward will decrease the gang angle. Moving the rear gang forward will decrease the rear gang angle. Moving the rear gang to the rear will increase the rear gang cutting angle.



Increasing the cutting angle will increase penetration, soil pulverizing action and power requirements. Decreasing the cutting angle will have the opposite effect. Remember, always retorquer gang frame mount bolts after making adjustments.

Disk as deep as necessary to do a thorough job but do not try to disk to an excessive depth. In most conditions, your AMCO harrow has ample weight for penetration. In other conditions, you may have a little more weight than you really need. Your harrow should be equipped with flotation tires for these conditions. 9.5L x 15 or 11L x 15 tires will be adequate for most conditions. You also need a good heavy duty, 4 x 8 or 4 x 16 hydraulic cylinder. This will allow you to control your harrow cutting depth to meet all conditions. You should never allow soil to "bulldoze" ahead of or flow over the axle and spacer spools. Cutting depth should be controlled to avoid this situation. Maintaining proper cutting depth will have the following advantages:

1. Increased life of gang bearings.
2. Less strain on disk harrow frame. Therefore, the harrow will last longer.
3. Less load on your tractor engine and drive train.
4. Lower fuel consumption due to less load on tractor engine.
5. Less wheel slippage and less rear tractor tire wear due to lower load.
6. Higher tractor travel speeds due to less rear wheel slippage.

Therefore, by properly controlling the cutting depth, you can increase gang bearing life and cover more acres per day at a lower cost. In most cases it will not be necessary to reduce cutting depth by more than $\frac{1}{2}$ ".

GANG LATERAL ADJUSTMENT

Front and rear gangs may be moved laterally for adjustments in extreme conditions. To make lateral gang adjustments, loosen the gang clamp plates on the left hand side of the main frame and the gang frame clamps on the right hand side of the main frame. Be sure to re-tighten the clamp bolts after making the adjustments.

SCRAPER ADJUSTMENT

Scrapers should be adjusted to run approximately $\frac{1}{8}$ " from the disk blades. Rotate the gang to be sure the scrapers are not rubbing the disk blades. Each scraper may be adjusted individually by loosening the "U" bolt and sliding the scraper on the scraper bar to the desired position. Always retighten the "U" bolts.

OFFSETTING THE HARROW

The harrow drawbar may be adjusted so the left tractor wheel can be run in the furrow if that is desirable. Or the left hand tractor wheel may be operated to the right of this furrow, on uncut ground, by making a compensating adjustment on the harrow drawbar. The fields may be laid out so right turns are made by lifting the harrow out of the ground before making the turn.

When the harrow is adjusted so it disks in an extreme left offset position, the front gang will assume a much greater angle (with respect to forward travel) than the rear gang. The rear gang will have a relatively small angle with respect to forward travel.

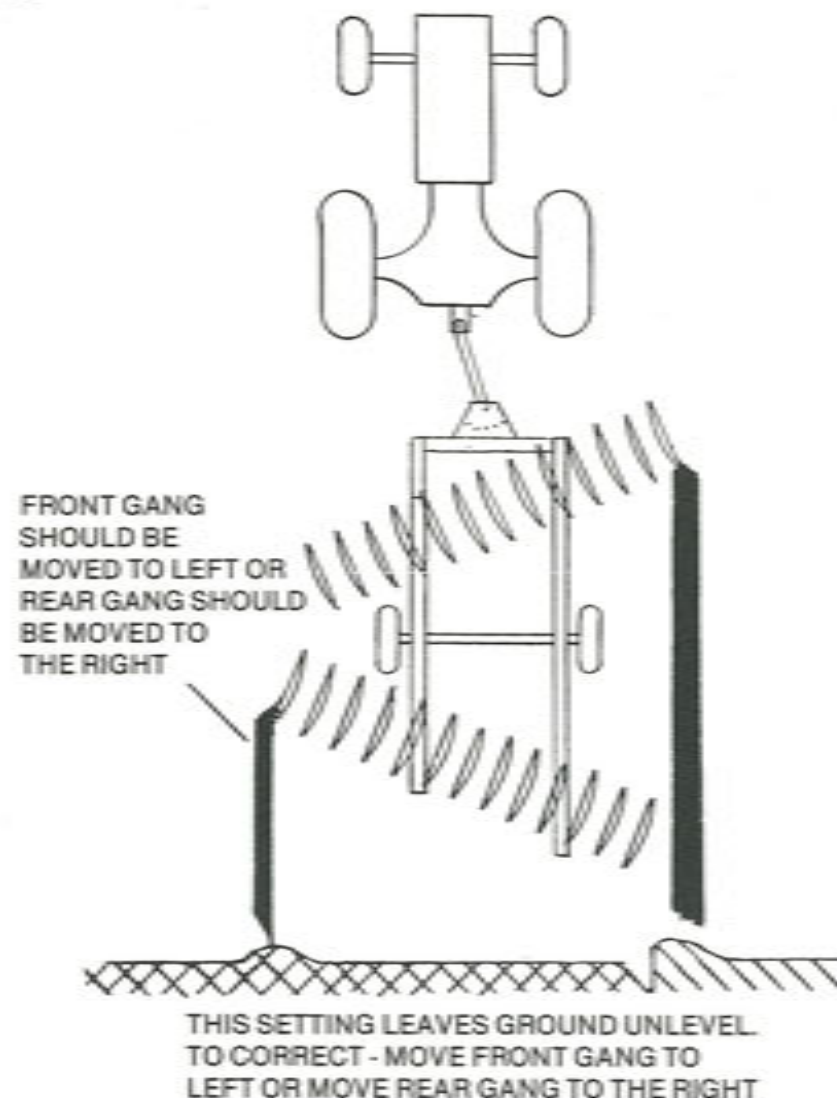
The small angle of the rear gang makes it more difficult to fill the dead furrow, but the condition can be corrected by using a rear gang adjustment. Usually, the rear gang will have to be shifted to the left.

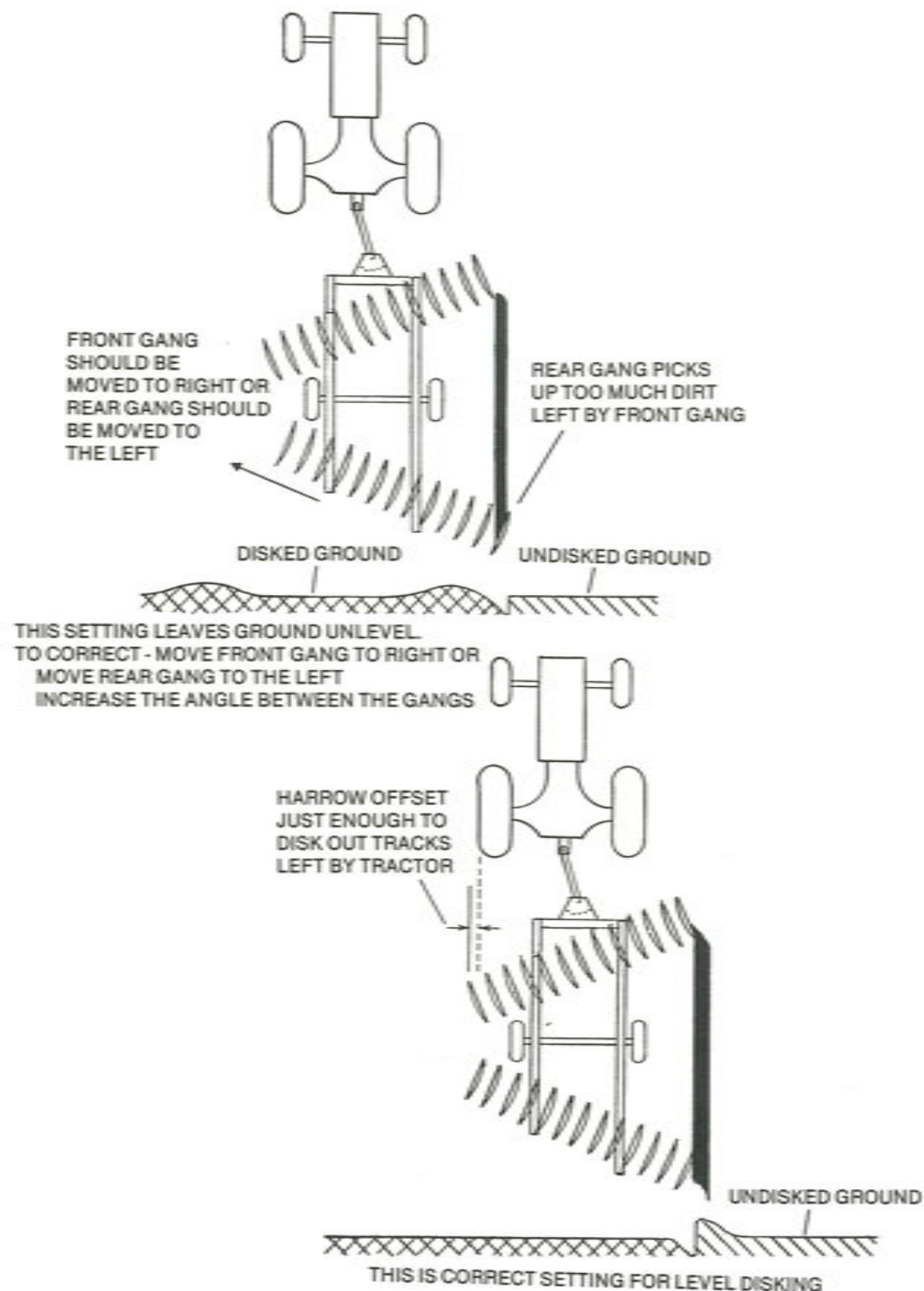
In general when making a left offset, attempt to keep the amount of offset as small as possible.

The following points are important to remember when offsetting the harrow:

Offsetting to the left increases the angle of the front gang and decreases the angle of the rear gang.

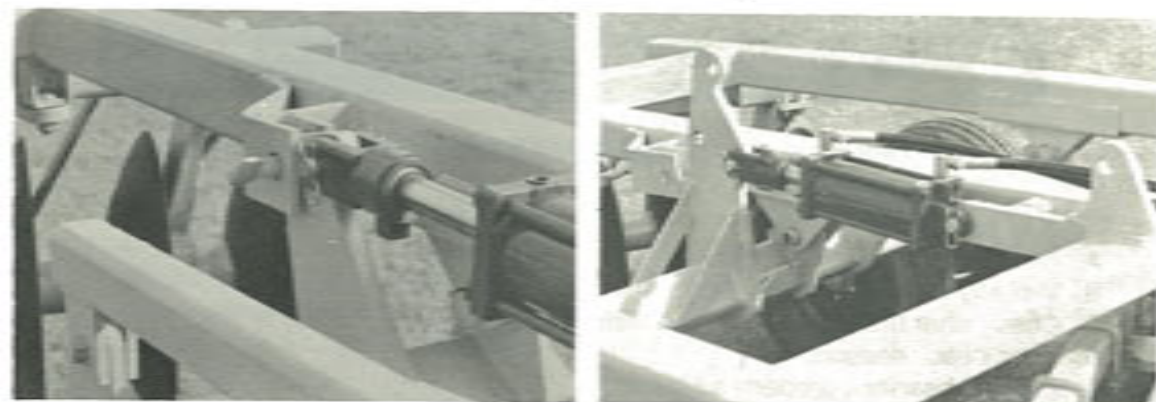
Offsetting to the right decreases the angle of the front gang and increases the angle of the rear gang.





TRANSPORT PIN

When transporting the disk harrow, always lock it in transport position with the transport pin. If the hydraulic cylinder is to be removed from the disk harrow, the transport pin should be installed before attempting to remove the cylinder.



HYDRAULIC CYLINDER

Attach the rod end of the cylinder to the rockshaft lift arm and the butt end of the cylinder to the main frame as shown above. A heavy duty ASAE 4 x 8 hydraulic cylinder is recommended for raising and lowering the disk harrow. On larger harrows weighing over 6500 pounds, a heavy duty ASAE 4 x 16 hydraulic cylinder is recommended. A separate set of holes is located on the rockshaft lift arm and the 85" main frame for installing this 4 x 16 cylinder.

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 lubricate the harrow.
- Repaint the harrow where the original paint has worn off.
- Coat the disk blades with a rust preventative.
- Tighten all loose bolts and replace any damaged or missing parts.
- All hydraulic cylinder rods should be fully retracted or coated with a rust preventative to prevent rusting in storage.

WARNING REFLECTORS

Attach a reflector with both red and amber reflective surfaces as near as possible to the extreme left rear part of the harrow. Mount the reflector so that the red surface is visible from the rear and the amber surface is visible from the front. Attach a red reflector as near as possible to the extreme right rear part of the harrow with the reflective surface visible from the rear.

SMV EMBLEM

The SMV (Slow Moving Vehicle) Emblem is a recommended attachment that should be added to your harrow. Check your state and local laws regarding placement of the SMV Emblem. The SMV Emblem and warning reflectors can be purchased from your authorized AMCO dealer.

WARNING LAMP

A warning lamp to be mounted on the extreme left hand rear of the harrow is available at your local AMCO dealer.

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

MAINTENANCE

1. Keep all bolts tight.
 - A. Check before placing in service.
 - B. Visually inspect all bolts daily.
 - C. Check after first 50 hours or one week's operation.
 - D. Check each season.
2. Keep wheel bearings properly adjusted.
 - A. Check often.
 - B. Clean and repack each season or every 300 hours.
 - C. Replace worn or damaged parts.
 - D. In dis-assembling and re-assembling the wheel hub assemblies, care must be taken to not damage the grease seal lips. In re-assembly, to seat the bearings, carefully tighten the hex nut until the hub drags. Rotate hub to help seat the bearing cups and cones. Re-tighten the hex nut until the hub drags, then back off the hex nut to the nearest slot and secure with cotter pin.
3. Do not run with loose disk blades. Keep gang bolts tight! Tighten gang bolts to 900-1000 ft-lbs of torque.
4. Keep scrapers properly adjusted 1/8" from blades.
5. Grease gang bearings and rockshaft retainer pins every week or 50 hours, at the start of each season, and at the end of each season. Apply with low pressure, low volume hand grease gun. Use a good No. 2 gun grease (Lithium Base). Rotate gangs while greasing for best results.

CAUTION! Use care to prevent damage to seals.
6. Disk Blade, Bearing, and Spool Replacement.
 - A. Remove the nuts that hold the gang bearing housing trunnion clamps.
 - B. Remove clamps.
 - C. Raise the harrow and roll the gang away from the frame.
 - D. Remove the gang nut lock plate.
 - E. Remove the gang hex nut from the end of the shaft.
 - F. Slide off the bearing spools, spacers, and blades.
 - G. Avoid thread damage.
 - H. Tear the entire gang down and clean all parts. Check disk axle for straightness. Bowed, bent or worn axles must be replaced.
 - I. Check spacer spools for damage caused by running disk with loose gangs or hitting underground obstructions. Replace spool if it is damaged.
 - J. 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.
 - K. 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. This damaged bearing 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 bearing should always be used for bearing replacement. Also, a regreasable type bearing should always be used.

- L. To replace a bearing, the snap ring must be removed. The old bearing 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. Press the new bearing straight into the housing. Always press against the outer race of the bearing. NEVER press against the seal or inner race of the bearing. Check location of the grease hole in the outer race of the bearing. This hole 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.
- M. 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 900-1000 FT/LBS. The axle nut should be locked in place with the lock strap.
- N. After the gang is assembled it should be attached to the harrow. The bearing risers should be carefully spaced to match the bearing housings. 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.
- O. The bearings should be greased each week or every 50 hours of use with a good grade of clean, number 2, lithium soap base grease. Use of dirty grease or a grease with metallic additives will reduce bearing life. A hand operated grease gun should always be used. Excessive greasing will damage bearings seals.



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.

SET-UP INSTRUCTIONS

The AMCO WOF16 and WOJ16 series disk harrow is shipped from the factory with maximum pre-assembly in the following bundles:

1. Main frame and rockshaft. 48" main frame on harrows below 10'4" in width. 85" main frame on harrows above 10'4" in width.
2. Pull tongue.
3. Two gang and frame bundles with scrapers and scraper bars attached.
4. Four 15 x 8 six bolt wheels.
5. Auxiliary frame on models 15'0" and larger.

SET-UP PROCEDURE

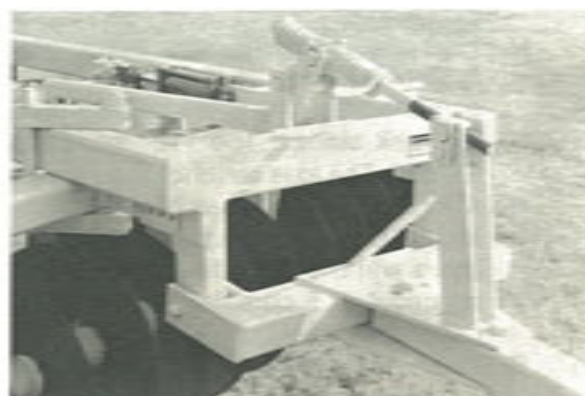
1. Place all bundles where they will be convenient. Arrange loose parts so they may be readily seen when needed. To insure good alignment of units and parts, insert all bolts leaving the nuts slightly loose. Tighten the nuts evenly to prevent misalignment, distortion or binding. Be sure all bolts are tight, all cotter pins properly spread and all pins properly inserted.

2. Select a clean level area for assembly. Place the main frame on sturdy stands.



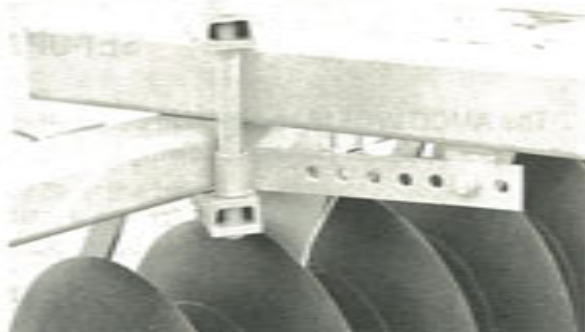
CAUTION! Use sturdy stands to prevent frame from falling!

3. Attach hitch tongue using holes in the main frame. Tighten bolts.
4. Attach stabilizer to the hitch control bracket and hitch tongue.
5. Attach hose holder to hitch tongue.
6. Attach tongue jack to hitch tongue.



7. Mount the wheel support and hubs on the rockshaft legs. This applies to the larger harrows with 85" wide main frames. The wheel supports should then be welded to the rockshaft legs. This will prevent the bolts working loose in operation.
8. Mount tires and tubes on 15 x 8 wheels. Inflate tires. 9.5L x 15 or 11L x 15 6-ply tires are recommended. Bolt the wheels to the hubs. Tighten hub bolts evenly to assure wheel alignment.
9. Install a 4 x 8 or 4 x 16 hydraulic cylinder (optional) to the harrow. Connect hydraulic hoses from the cylinder to the tractor. Attach the hitch clevis to the tractor drawbar.
10. Raise the harrow up on the wheels by activating the hydraulic cylinder.

11. Remove gang clamp plates and gang frame clamps from the main frame. Attach the gang assemblies to the main frame. Secure them with clamp plates and frame clamps. Convex end of the gang faces to the left on the front gang and to the right on the rear gang.



12. Tighten bolts snug but not tight. For proper placement of the gang frame on the main frame, refer to the chart and drawing at the end of these instructions. The dimensions shown are measured from the left side of the main frame along the center of the gang frame tubing to the inside of the inside "U" bolt.
13. On models 15' 0" and up, attach the two outrigger braces to the gang frames.
14. Check and tighten all bolts. Be sure all cotter pins are properly spread and all pins in place. Check the gangs to see that they rotate freely.
15. Be sure that the harrow is properly lubricated.
16. Adjust the harrow for front to rear leveling.

Model	Front Measurement "A"	Rear Measurement "B"
WOF16-20 Blade	17	1½
WOF16-22 Blade	17½	2
WOF16-24 Blade	22½	7
WOF16-26 Blade	27	11½
WOF16-28 Blade	31¾	16¼
WOF16-32 Blade	18	2½
WOF16-36 Blade	27¼	11¾
WOF16-40 Blade	36½	21
WOF16-44 Blade	45¾	30¼
WOJ16-18 Blade	19¾	2
WOJ16-20 Blade	19¾	2
WOJ16-22 Blade	24	6¼
WOJ16-24 Blade	29½	11¾
WOJ16-26 Blade	34¾	17
WOJ16-28 Blade	19¾	2
WOJ16-32 Blade	28	10¼
WOJ16-36 Blade	38¾	21
WOJ16-40 Blade	49½	31¾

