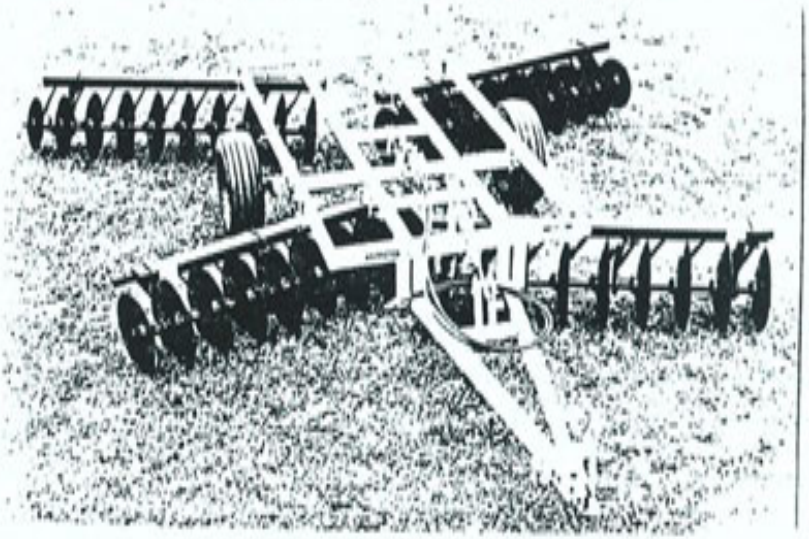
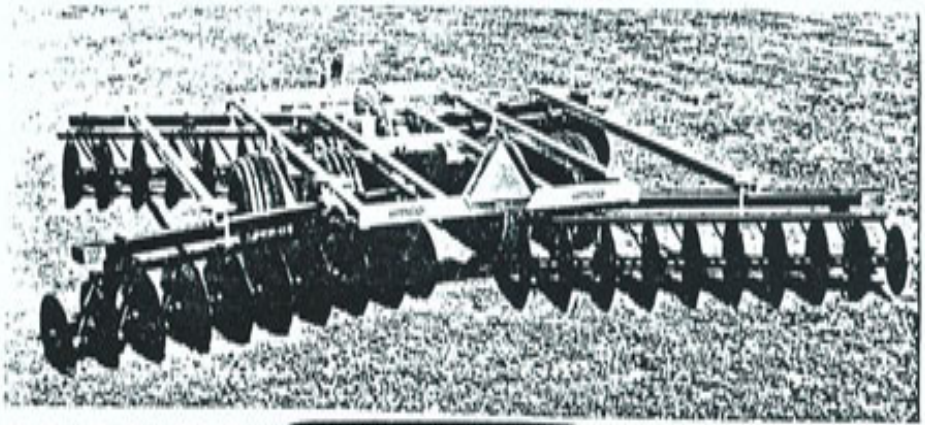
AMCO

100 Series Double Offset Tandem Disk Harrows

PARTS CATALOG
OPERATION - MAINTENANCE - SET-UP INSTRUCTIONS





AMCO

PRODUCTS

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

TO THE PURCHASER

The care you give your new AMCO 100 Series 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 100 Series 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 100 Series 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.

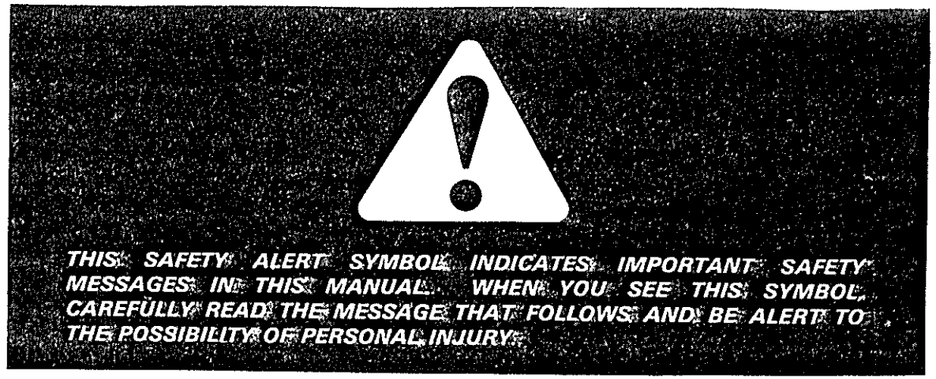
To insure efficient and prompt service, please provide the model number and serial number of your AMCO Harrow in all correspondence or contacts. Remember, the right and left hand sides of the harrow are determined by standing at the rear of the harrow and facing the direction of travel. AMCO always strives to make improvements on equipment. AMCO is not responsible for changes or additions to equipment previously sold.

MODEL NUMBER _____ SERIAL NUMBER _____

ACCIDENT PREVENTION-

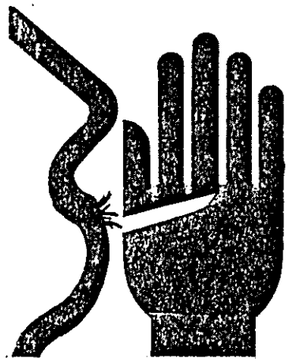
YOU CAN HELP

Accident Prevention depends on everyone, the designer, the manufacturer and the safety engineer, however, their combined efforts can be wiped out by a single careless act of the operator. Operators must accept a full measure of responsibility. Accidents can be prevented with the combined efforts of the engineers and the cooperation of the person who is directly responsible for the operation of the equipment. Machines can be hazardous in the hands of unfamiliar, untrained or unconcerned operators. We ask for your cooperation in the handling and operation of this equipment. Your safety is foremost. Make sure all operators of this equipment comply with all Dangers, Warnings, and Cautions brought to attention in this catalog. Remember "Safety First"!



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.

⚠WARNING



HYDRAULIC SYSTEMS ARE HIGHLY PRESSURIZED. ESCAPING HYDRAULIC FLUID, EVEN AN INVISIBLE PIN HOLE LEAK, CAN PENETRATE BODY TISSUES CAUSING SERIOUS INJURY. USE A PEICE 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 FLUID ESCAPING UNDER PRESSURE, SEE A DOCTOR IMMEDIATELY. SERIOUS INFECTION OR REACTION MAY OCCUR IF MEDICAL ATTENTION IS NOT GIVEN AT ONCE.

⚠WARNING

DO NOT STEP ON TOP OF IMPLEMENT TIRE WHEN SERVICING OR ADJUSTING IMPLEMENT. TIRE CAN ROTATE UNEXPECTEDLY IF NOT FIRM AGAINST GROUND AND CAUSE A SERIOUS OR FATAL INJURY DUE TO A FALL ON THE IMPLEMENT.

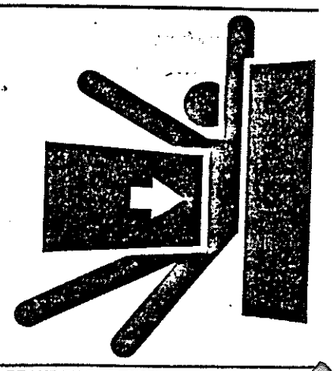
⚠WARNING

FAILURE TO FOLLOW RECOMMENDATIONS REGARDING TIRE SELECTION, INFLATION PROCEDURES, PRESSURES, AND TRANSPORT SPEEDS MAY RESULT IN SERIOUS OR FATAL INJURY DUE TO EXPLOSIVE TIRE AND WHEEL REACTION WHILE INFLATING OR BLOWOUTS IN TRANSPORT. READ AND COMPLY WITH TIRE MANUFACTURER'S SPECIFICATIONS, INSTRUCTIONS AND WARNINGS.

⚠WARNING

RIDING ON IMPLEMENT MAY CAUSE A SERIOUS OR FATAL ACCIDENT.

⚠WARNING



STANDING BETWEEN TRACTOR AND IMPLEMENT WHEN HITCHING COULD RESULT IN SERIOUS BODILY INJURY.

⚠WARNING

WHEN TRAILING THE IMPLEMENT OVER PUBLIC ROADS, THE SMV EMBLEM MUST BE USED. AFTER DUSK, PROVIDE LIGHTING AND REFLECTORS ON THE IMPLEMENT IN ACCORDANCE WITH YOUR STATE LAW TO AVOID SERIOUS INJURIES.

⚠WARNING

ALWAYS SECURE FOR TRANSPORT BY USING THE ROCKSHAFT LOCK PIN. FAILURE OF HYDRAULICS CAN CAUSE A SUDDEN OR DANGEROUS FALL.

⚠CAUTION

CARE SHOULD BE EXERCISED IF WORKING NEAR DISK BLADES TO AVOID SERIOUS CUTS FROM SHARP EDGES.

⚠WARNING

ALL HYDRAULICALLY OR MECHANICALLY ELEVATED OPERATING COMPONENTS MUST BE LOWERED OR BLOCKED TO PREVENT ACCIDENTAL FALLING WHEN MAKING ADJUSTMENTS OR WHEN THE EQUIPMENT IS IDLE.

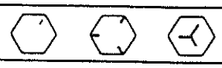
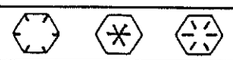
⚠CAUTION

USE PROPER IMPLEMENT SAFETY CHAIN DURING TRANSPORT TO PREVENT A SERIOUS ACCIDENT FROM LOSS OR FAILURE OF TRANSPORT PIN.

GENERAL TORQUE SPECIFICATION TABLE (TABLE 1)

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 Foot Pounds		Torque Foot Pounds		Torque Foot Pounds	
Inches	Millimeters	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"*

TABLE OF CONTENTS

C100 DOUBLE OFFSET TANDEM DISK HARROW

GENERAL SPECIFICATIONS
(metrics in parentheses)

AXLES: Four 1 1/8" sq., high strength, cold rolled steel.

DISCS: 20" x 7 Ga.(508mm x 4.5mm) Plain diminishing leveling blades

SPACING: 7" (178mm) front and rear

GANG ANGLE: Adjustable - 13° - 19° front
12° - 18° rear

TONGUE: 70" (1.78m) long with rigid yoke clevis

BEARINGS: Flangette mounted, regreasable 2" (51mm) bore ball bearings mounted on sleeve to strengthen axle

WHEELS: Two 15" x 6" heavy duty 6 bolt hubs

WEIGHT/BLADE: 59 to 78 lbs per blade (27kg to 35 kg per blade)

WEIGHT/FOOT: 197 to 262 lbs per foot (293kg to 390kg per meter)

TRANSPORT WIDTH: Width of cut plus 18" (457mm) for feathering blades.

Model No.	Cutting Width	No. Of Blades	No. Of Bearings	Approximate Weight LBS (Kg)	Recommended DBHP required HP (KW)
C100-2420	7'2"(2.18m)	24	8	1876 (851)	25-40 (19-30)
C100-2820	8'3"(2.52m)	28	8	2010 (912)	30-45 (22-34)
C100-3220	9'5"(2.87m)	32	8	2142 (972)	35-50 (26-37)
C100-3620	10'6"(3.20m)	36	8	2316 (1051)	40-55 (30-41)
C100-4020	11'8"(3.56m)	40	10	2438 (1106)	45-60 (34-45)
C100-4420	13'3"(4.04m)	44	10	2612 (1185)	55-75 (41-56)

OPTIONAL EQUIPMENT

Auxiliary Frame (For 11'8" and 13'3" Models)
Scrapers & Scraper Bar
Feathering blades for rear gangs 14"
Feathering blades for rear gangs 16"
Hose Kit with elbows
Hydraulic cylinder 3 x 8 w/stroke control
Dual 15"x6" Wheels with 6 bolt hubs
Safety Chain 5/16"
Tongue Jack

OPTIONAL DISCS

20 x 7 GA. C.O.
22 x 7 GA. Plain
22 x 7 GA. C.O.

RECOMMENDED TIRE SIZE

Two 6.70 x 15 or 9.5L x 15, 6 or 8 ply

Note: Use of disk on tractors with higher than recommended drawbar horsepower may void your warranty.

D100 DOUBLE OFFSET TANDEM DISK HARROW

GENERAL SPECIFICATIONS
(metrics in parentheses)

AXLES: Four 1 1/8" sq., high strength, cold rolled steel.

DISCS: 20" x 7 Ga.(508mm x 4.5mm) Plain diminishing leveling blades

SPACING: 9" (229mm) front and rear

GANG ANGLE: Adjustable - 13° - 19° front
12° - 18° rear

TONGUE: 70" (1.78m) long with rigid yoke clevis

BEARINGS: Flangette mounted, regreasable 2" (51mm) bore ball bearings mounted on sleeve to strengthen axle

WHEELS: Two 15" x 6" heavy duty 6 bolt hubs

WEIGHT/BLADE: 67 to 90 lbs per blade (30kg to 41 kg per blade)

WEIGHT/FOOT: 185 to 247 lbs per foot (275kg to 368kg per meter)

TRANSPORT WIDTH: Width of cut plus 18" (457mm) for feathering blades.

Model No.	Cutting Width	No. Of Blades	No. Of Bearings	Approximate Weight LBS (Kg)	Recommended DBHP required HP (KW)
D100-2020	7'3" (2.21m)	20	8	1790 (812)	30-40 (22-30)
D100-2420	8'7" (2.62m)	24	8	1930 (876)	35-50 (26-37)
D100-2820	10'2" (3.10m)	28	8	2072 (940)	40-55 (30-41)
D100-3220	11'7" (3.53m)	32	10	2266 (1028)	45-65 (34-48)
D100-3620	13'0" (3.96m)	36	10	2404 (1091)	55-80 (41-60)

OPTIONAL EQUIPMENT

Auxiliary Frame (For 11'7" and 13'0" Models)
Scrapers & Scraper Bar
Feathering blades for rear gangs 14"
Feathering blades for rear gangs 16"
Hose Kit with elbows
Hydraulic cylinder 3 x 8 w/stroke control
Dual 15"x6" Wheels with 6 bolt hubs
Safety Chain 5/16"
Tongue Jack

OPTIONAL DISCS

20 x 7 GA. C.O.
22 x 7 GA. Plain
22 x 7 GA. C.O.

RECOMMENDED TIRE SIZE

Two 6.70 x 15 or 9.5L x 15, 6 or 8 ply

Note: Use of disk on tractors with higher than recommended drawbar horsepower may void your warranty.

DC100 DOUBLE OFFSET TANDEM DISK HARROW

GENERAL SPECIFICATIONS
(metrics in parentheses)

AXLES: Four 1 1/8" sq., high strength, cold rolled steel.

DISCS: 20" x 7 Ga.(508mm x 4.5mm) Plain diminishing leveling blades

SPACING: 9" (229mm) front and 7" (178mm) rear

GANG ANGLE: Adjustable - 13° - 19° front
12° - 18° rear

TONGUE: 70" (1.78m) long with rigid yoke clevis

BEARINGS: Flangette mounted, regreasable 2" (51mm) bore ball bearings mounted on sleeve to strengthen axle

WHEELS: Two 15" x 6" heavy duty 6 bolt hubs

WEIGHT/BLADE: 63 to 83 lbs per blade (29kg to 38kg per blade)

WEIGHT/FOOT: 191 to 256 lbs per foot (284kg to 381kg per meter)

TRANSPORT WIDTH: Width of cut plus 18" (457mm) for feathering blades.

Model No.	Cutting Width	No. Of Blades	No. Of Bearings	Approximate Weight LBS (Kg)	Recommended DBHP required HP (KW)
DC100-2220	7'2"(2.18m)	22	8	1834 (832)	30-40 (22-30)
DC100-2620	8'3"(2.52m)	26	8	1970 (894)	35-50 (26-37)
DC100-3220	10'6"(3.20m)	32	8	2168 (983)	40-55 (30-41)
DC100-3620	11'8"(3.56m)	36	10	2352 (1067)	45-65 (34-48)
DC100-4020	13'3"(4.04m)	40	10	2530 (1148)	55-80 (41-60)

OPTIONAL EQUIPMENT

Auxiliary Frame (For 11'8" and 13'3" Models)
Scrapers & Scraper Bar
Feathering blades for rear gangs 14"
Feathering blades for rear gangs 16"
Hose Kit with elbows
Hydraulic cylinder 3 x 8 w/stroke control
Dual 15"x6" Wheels with 6 bolt hubs
Safety Chain 5/16"
Tongue Jack

OPTIONAL DISCS

20 x 7 GA. C.O.
22 x 7 GA. Plain
22 x 7 GA. C.O.

RECOMMENDED TIRE SIZE

Two 6.70 x 15 or 9.5L x 15, 6 or 8 ply

Note: Use of disk on tractors with higher than recommended drawbar horsepower may void your warranty.

AMCO #11447
Issued Oct. 1984

assembly instructions

100 SERIES

The AMCO 100 Series is shipped from the factory with maximum preassembly. The following bundles are required for a complete harrow:

A. Bundle Pull Tongue & Main Frame (with rockshaft)
B. Bundle Front Right Hand Gang & Gang Frame
C. Bundle Front Left Hand Gang & Gang Frame
D. Bundle Rear Right Hand Gang & Gang Frame
E. Bundle Rear Left Hand Gang & Gang Frame
F. 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.

STEP 3

Attach the two front gangs and gang frames to the main frame. Set gang angle at one of the two center locator holes for average conditions. Clamp gang frames in place with the 7/8" hex screws and straps.
IMPORTANT - Be sure to place spacer mounts between main frame and gang frames at gang frame clamps (Fig. 1-1). The gangs should be located to throw soil away from the center of the harrow. Tighten the 7/8" hex screws to specified torque (Table 1). See Figure 1-2 for lateral gang adjustment dimensions.

STEP 4

Attach the two rear gangs to the center main frame. Set gang angle at one of the two center locator holes for average conditions. Clamp in place with the 7/8" hex screws and straps. The gangs should be located to throw soil toward the center of the harrow. Tighten the 7/8" hex screws to the specified torque. See Figure 1-2 for lateral gang adjustment dimensions.

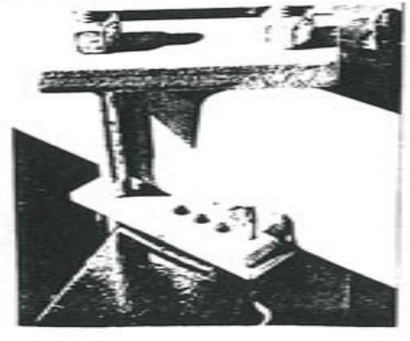


Fig. 1-1

STEP 5

Mount standard two or optional four 9.5L x 15 or 6.70 x 15 six or eight ply tires on the two or optional four wheels. Inflate to 32 PSI. Mount wheels on rockshaft. Tighten hub screws to specified torque. (Table 1).

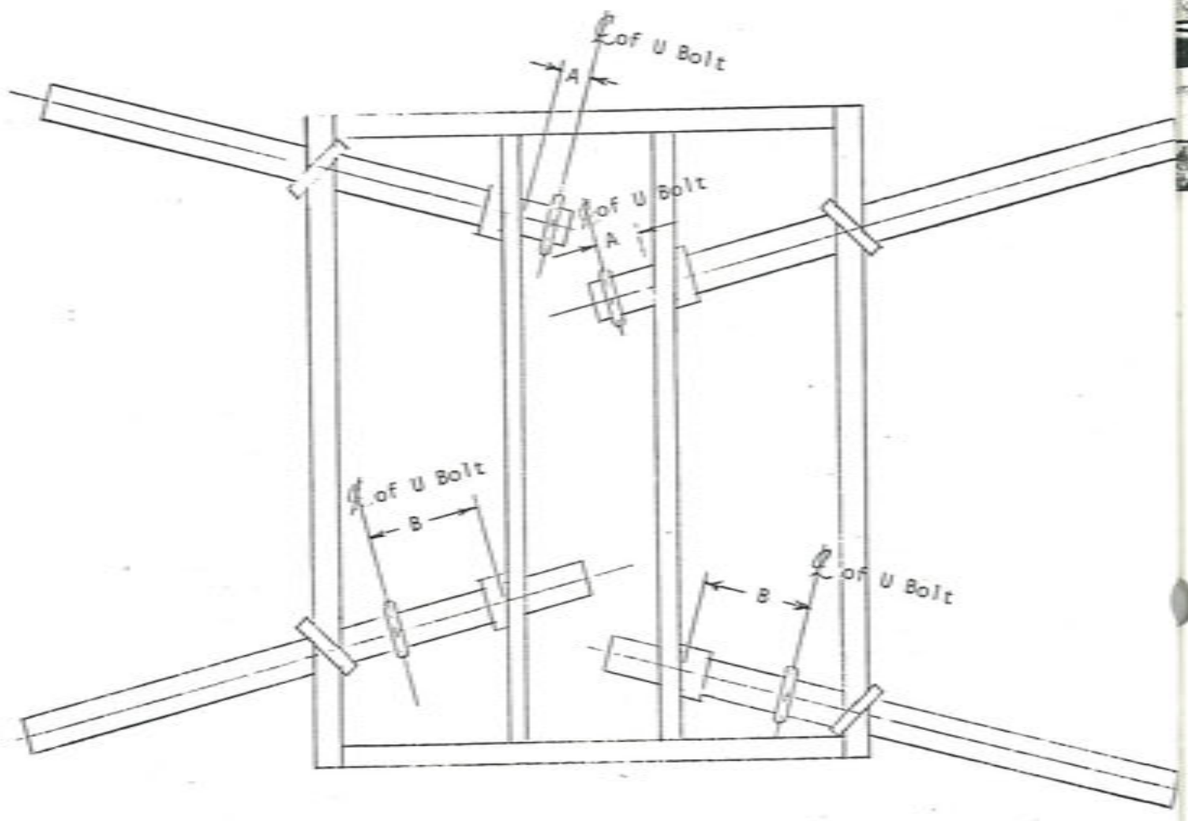
⚠CAUTION

CARE SHOULD BE EXERCISED IF WORKING NEAR DISK BLADES TO AVOID SERIOUS CUTS FROM SHARP EDGES.

⚠WARNING

FAILURE TO FOLLOW RECOMMENDATIONS REGARDING TIRE SELECTION, INFLATION PROCEDURES, PRESSURES, AND TRANSPORT SPEEDS MAY RESULT IN SERIOUS OR FATAL INJURY DUE TO EXPLOSIVE TIRE AND WHEEL REACTIONS WHILE INFLATING OR BLOWOUTS IN TRANSPORT. READ AND COMPLY WITH TIRE MANUFACTURER'S SPECIFICATIONS, INSTRUCTIONS AND WARNINGS.

FIGURE 1-2: GANG LATERAL ADJUSTMENT DIMENSIONS



	D100 9" Spacing "A"	"B"	C100 7" Spacing "A"	"B"	DC100 9"/7" Spacing "A"	"B"
For Rigid Bearing Risers	3 3/4"	10"	4 3/4"	7"	3 3/4"	7"
For Shock Absorber Risers	4 1/4"	10½"	5 1/4"	7½"	4 1/4"	7½"

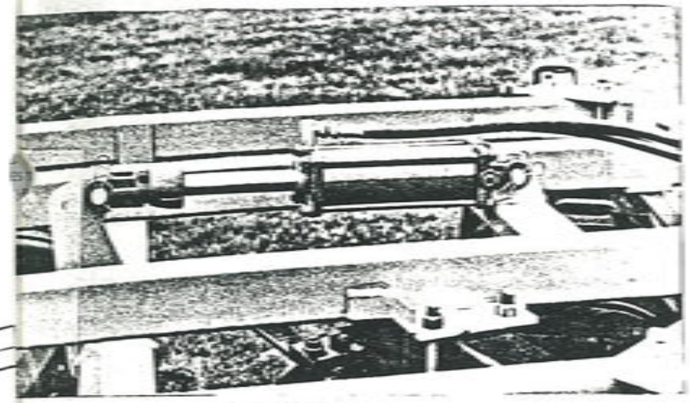


Fig. 1-3

braid hydraulic hose and two SAE 100R2 hydraulic elbows and quick couplers to connect to the hydraulic cylinder on the main frame.

STEP 9

Install optional auxiliary bars on all models over 11'. Tighten all screws to the specified torque. (Table 1)

STEP 10

Final grooming and check points.

A. Check inside front gangs. They should overlap in the center about 1 1/2" to 2 1/2". (Front tips of inside blades should be 3/4" to 1 1/4" 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 2".

B. Check the inside rear gangs. They should be 24" to 28" 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. Optional scrapers should be adjusted to run 1/8" to 1/4" from disk blades.

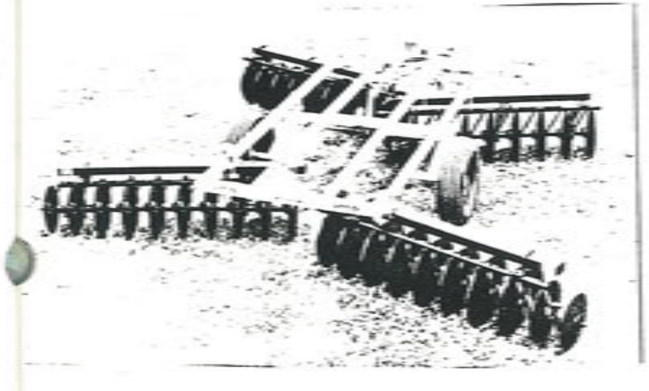


Fig. 1-5

STEP 6

Install a heavy duty 3" x 8" hydraulic cylinder with stroke control on the main frame and the rockshaft. The rod end should be attached to the rockshaft. NOTE: Remove the straps that clamp the rockshaft to the main frame.

STEP 7

Install pull tongue. Install tongue adjusting rod assembly. (Fig. 1-4)

STEP 8

Attach one 1/2" x 12' and one 1/2" x 11' SAE 100R2 or SAE 100R8 double

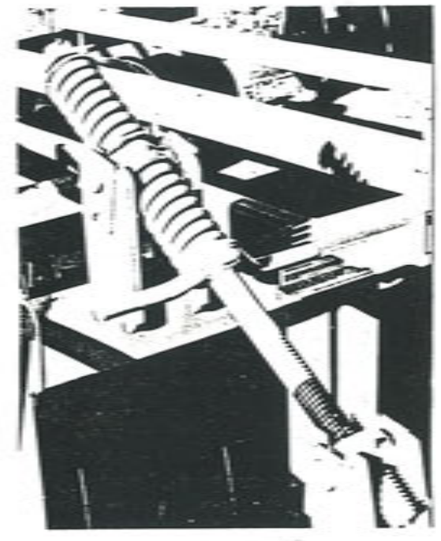


Fig. 1-4

D. Tighten all screws to proper torque. (Table 1)

E. Raise and lower harrow 4 or 5 times with 3" x 8" hydraulic cylinder. 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: (also see Lubricati Instructions)

(1) Grease the two 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 condensatio that has accumulated during shipment and storage.

G. If the harrow is in storage for more than four 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 operator's manual in the heavy plastic shipping bag. Tape bag to main frame so the operator's 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 screws 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.

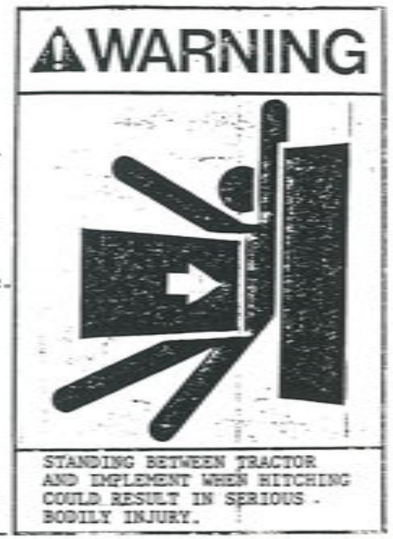
operating instructions

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. In these conditions you should use the 6.70 x 15 or 9.5L x 15 tires and the hydraulic cylinder to control cutting depth.

Never allow soil to "bulldoze" ahead of 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.



ADJUSTMENT FOR LEVEL DISKING

It is recommended 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 cause "ridging" or "furrowing".

CENTER RIDGE

If a ridge of soil is left behind the center of the harrow, shorten the stabilizer to reduce weight on rear gangs, decrease the angle of the rear gangs, increase the angle of the front gangs, or do a combination of all three.

FEATHERING BLADES

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

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 SPEED

Speeds above seven (7) MPH may result in forming ridges and furrows. Front and rear gang angle adjustment and leveling the harrow from front to rear helps overcome this problem.

HITCH ADJUSTMENT

The frame of the harrow should be level front to rear when the harrow is in operation so the front and rear disk gangs will penetrate the soil uniformly.

IMPORTANT Be sure to remove the transport pin from transport position and insert it in the transport strap before lowering gangs.

With the harrow in the ground, turn the stabilizer until the frame is positioned for the desired working depth of all gangs. Extending the stabilizer raises the front gangs thus adding weight to the rear gangs. Retracting the stabilizer lowers the front gangs thus adding weight for additional penetration. Adjust the stabilizer to keep the harrow frame level while disking.

DISK ANGLE ADJUSTMENT

The front gang may be varied between 13° and 19°. The rear gang angle may be varied between 12° and 18°. The greater the angle of the gang, the deeper the blades will penetrate the soil. The draft increases as the angle increases. For maximum disk life and operating economy, the gangs should be set at the smallest angle which will do satisfactory disking.

IMPORTANT! Never operate disk with loose gang frame clamps. Angle locator pins are designed for angle location only.

All four gangs can be independently adjusted. Moving the front gangs forward and the rear gangs rearward increases the gang angle. Gang angle can be reduced by moving the front gangs toward the rear and the rear gangs toward the front. Set front and rear gangs in one of the center gang angle locat holes initially, then adjust as necessary. (Fig. 2-1) Adjust both front gangs evenly. Adjust both rear gangs evenly.

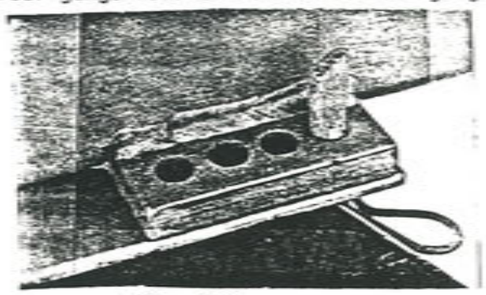
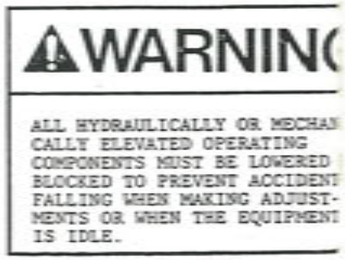


Fig. 2-1

To adjust gang angle, loosen the two bolts, plates and U bolts that secure the gang fra Slide gang frame to desired positions and replace both bolts, plates and U bolt.

GANG LATERAL ADJUSTMENT

The front and rear gang are adjustable laterally to com- pensate for soil conditions and tractor speed. As an ini- tial setting, it is recommended that the front gangs be ad- justed so that the front edges of the disk blades overlap 1 1/2" to 2 1/2", and the rear gangs are approximately 26 inches apart, measured from front edge of disk blades. Also see gang adjustment dimension Fig. 1-2. Make adjustm as needed after the harrow is placed in operation. When a ridge of soil is left behind the center of the harrow, the rear gangs should be set out. When a furrow is formed behind the center of the harrow, the rear gangs should be set in. For double offset disk harrows, moving the front gangs outward can help eliminate ridging at the rear cente Slide the gangs either toward the center or toward the outside of the harrow until the desired position has been obtained. Be sure to retighten the bolts to 150-175 FT-LB torque.



It is recommended that the rear gangs be set closer together at low tractor speeds (below 5 MPH) and set wider apart at high tractor speeds (5 to 7 MPH).

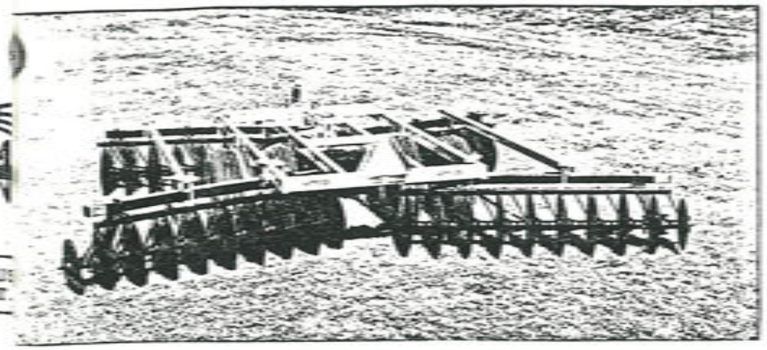


Fig. 2-2

operating tips

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, 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 replacements parts. Items such as bearings and blades look alike but are not as reliable as orginal 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.

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 throughly 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. Grease the harrow as follows:

ROCKSHAFT PIVOT PINS: A high carbon steel pin with a grease fitting joins the rockshaft to the main frame in two places. These two pins should be greased every 50 hours of operation. They should also be greased at the beginning and end of the disking season. It will take several strokes to initially fill the pivot journals. Grease the pivot pins until grease appears at the ends of the pivot journals.

TONGUE ADJUSTING ROD & TONGUE CONTROL 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.

GANG BEARINGS: The AMCO 100 Series harrow gangs are equipped with a ball bearing on each riser. The grease fitting is located on a flangette on each bearing. They should be greased every 50 hours of operation with a good grade of lithium soap base chassis grease. More frequent greasing is recommended when working at high speeds, in hot and dry weather, or in very sandy or wet conditions. All bearings should be greased at the beginning and end of each disking season.

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.

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.

Check hydraulic system for signs of oil leakage. Make repairs during the off season.

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 preventive.

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 800 foot pounds.

TRANSPORTING

Extreme caution is required when transporting any machinery on roads or highways. (See Warnings at right). Remember you are responsible for compliance with State and Local laws regarding lighting, reflectors, and SMV emblems as well as length and width. Before transporting the disk check your tires for proper inflation. Be sure that hub bolts and nuts are tight. Wheel bearings should be checked for proper adjustment and lubrication prior to roading the disk over long distances.

⚠WARNING

WHEN TRAILING THE IMPLEMENT OVER PUBLIC ROADS, THE SMV EMBLEM MUST BE USED. AFTER DUSK, PROVIDE LIGHTING AND REFLECTORS ON THE IMPLEMENT IN ACCORDANCE WITH YOUR STATE LAW TO AVOID SERIOUS INJURIES.

⚠WARNING

ALWAYS SECURE FOR TRANSPORT BY USING THE ROCKSHAFT LOCK PIN. FAILURE OF HYDRAULICS CAN CAUSE A SUDDEN OR DANGEROUS FALL.

The 100 Series is equipped with a transport pin. This pin should be inserted through the bracket on the main frame and mount on the rockshaft when in transport (Fig. 4-1).

The drawbar pin should be in good condition and strong enough to secure the disk to the tractor. Secure the drawbar pin to keep it in place. The drawbar should be secured to prevent swinging.

A transport safety chain must be attached between the disk harrow pull tongue and the tractor to prevent separation in case of accidental loss or failure of the drawbar pin. (Jig. 4-2) The chain system must be of 11,500 pounds minimum ultimate tensile strength, be attached securely at each end and pass through a shackle located within 6 inches of the drawbar pin. Mounting brackets are standard equipment on the pull tongue. An AMCO chain which meets ASAE standards for towed implements can be purchased as optional equipment from your authorized AMCO Dealer.

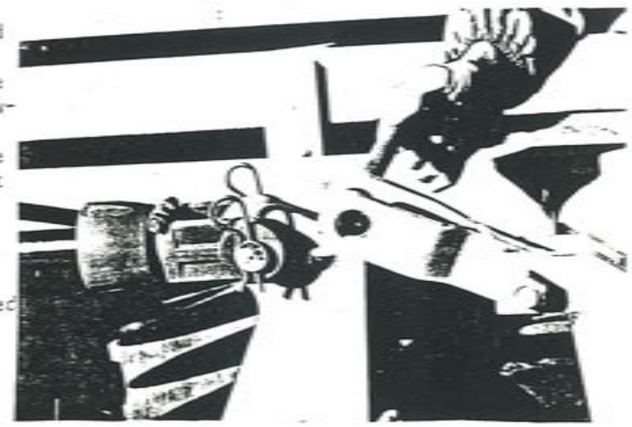


Fig. 4-1

⚠CAUTION

USE PROPER IMPLEMENT SAFETY CHAIN DURING TRANSPORT TO PREVENT A SERIOUS ACCIDENT FROM LOSS OR FAILURE OF TRANSPORT PIN.

⚠WARNING

FAILURE TO FOLLOW RECOMMENDATIONS REGARDING TIRE SELECTION, INFLATION PROCEDURES, PRESSURES, AND TRANSPORT SPEEDS MAY RESULT IN SERIOUS OR FATAL INJURY DUE TO EXPLOSIVE TIRE AND WHEEL REACTION WHILE INFLATING OR BLOWOUTS IN TRANSPORT. READ AND COMPLY WITH TIRE MANUFACTURER'S SPECIFICATIONS, INSTRUCTIONS AND MARKINGS.

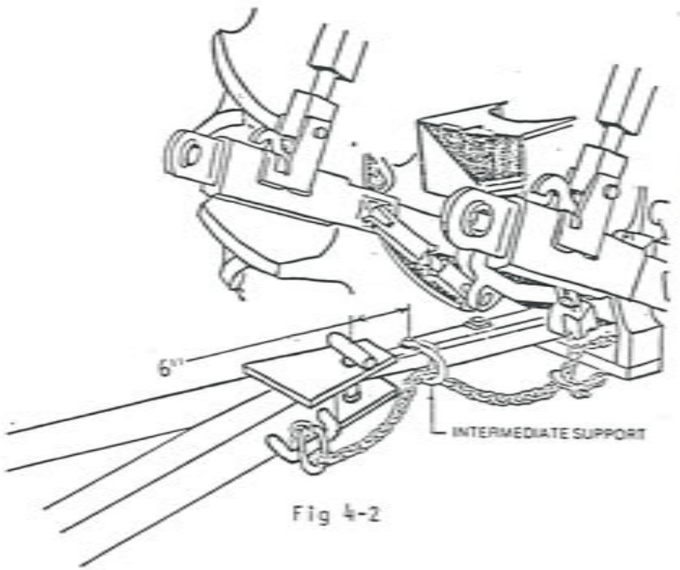
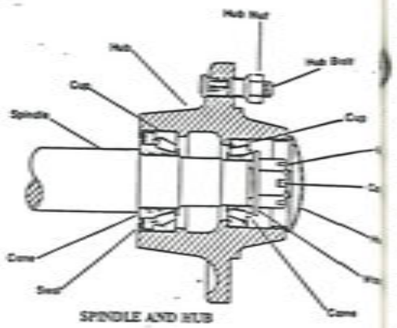


Fig 4-2

maintenance

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.



SPINDLE AND HUB

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.

To disassemble the hub, 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. 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. Check the seals and th spindle prior to reassembly. Use emory cloth to smooth t grease seal seats and provide a smooth sealing surface.

⚠WARNING

ALL HYDRAULICALLY OR MECHANICALLY ELEVATED OPERATING COMPONENTS MUST BE LOWERED OR BLOCKED TO PREVENT ACCIDENTAL FALLING WHEN MAKING ADJUSTMENTS OR WHEN THE EQUIPMENT IS IDLE.

3. Carefully inspect both sets of bearing cones. Bearin 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 replace 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.

7. 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 the hub and carefully re-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, to seat the bearings, until the hub binds when rotated. Check seal lips to be certain they are turned out to exclude contamination. 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 off to the nearest slot and secure with a cotter pin. Install dust cap and remount wheel on hub.

⚠WARNING

RIDING ON IMPLEMENT MAY CAUSE A SERIOUS OR FATAL ACCIDENT.

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 bolts that secure the flangettes to the bearing riser.

3. 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.

4. Remove the gang bolt nut and end washer.

5. Remove the blades, spacer spools and bearings being careful not to damage the threads on the gang bolt.

6. Tear the entire gang down and clean all parts. Check disk axle for straightness. Bowed, bent or worn axles must be replaced.

7. Check spacer spools for damage caused by running disk with loose gangs or hitting underground obstructions. Replace spools if they are damaged.

⚠CAUTION

CARE SHOULD BE EXERCISED IF WORKING NEAR DISK BLADES TO AVOID SERIOUS CUTS FROM SHARP EDGES.

8. 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.

9. Check all disk blades for cracks, wear and other damage. Replace worn or damaged disk blades.

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. 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. An AMCO bearing should always be used for bearing replacement. Also, a regreasable type bearing should always be used.

11. To replace bearing, remove all flangette bolts, clean flangetts, check flangettes for wear. Check flangette on new bearing. They must be tight enough to hold bearing snug. Discard flangettes if not in good condition.

12. After cleaning, checking and replacing all damaged parts, the gang should be assembled. Be sure the grease fittings in the flangette face to the rear. The 1 1/8" square gang bolt should be torqued to 800 Ft.-Lbs. The axle nut should be locked in place with the lock strap.

13. After the gang is assembled it should be attached to the harrow. The bearing risers should be carefully spaced to match the flangettes. 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.

14. 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.

⚠WARNING

DO NOT STEP ON TOP OF IMPLEMENT TIRE WHEN SERVICING OR ADJUSTING IMPLEMENT. TIRE CAN ROTATE UNEXPECTEDLY IF NOT FIRM AGAINST GROUND AND CAUSE A SERIOUS OR FATAL INJURY DUE TO A FALL ON THE IMPLEMENT.

15. 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 gang.

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 1/16" to 1/8" 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 rockshaft is 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.

HYDRAULIC SYSTEMS: Hydraulic hoses must be inspected daily to insure there are no cuts or wear points that could become hazardous if they burst or start a small, invisible leak. Particularly important inspection points are in the vicinity of hydraulic hose support members, hose end fittings, and cylinder fittings.

HYDRAULIC CYLINDER REPAIR:

A. Remove hoses and fittings from cylinder.
B. Remove cylinder from harrow and clean outside of cylinder.
C. Disassemble cylinder by removing the rods and nut from end of cylinder rod. Slip piston and gland off cylinder rod.
D. Carefully clean and inspect all parts for wear or damage. Small nicks, scratches or blemishes on rod and inside of barrel should be smoothed with fine steel wool or emory cloth. Replace parts that cannot be repaired.
E. Remove all 'O' Rings from piston and gland. Replace all seals with new parts.
F. Assemble cylinder using care to prevent damage to 'O' Rings and Seals.
G. Replace cylinder on harrow and attach hoses. Check cylinder for leaks.

⚠WARNING

HYDRAULIC SYSTEMS ARE HIGHLY PRESSURIZED. ESCAPING HYDRAULIC FLUID, EVEN AN INVISIBLE PIN HOLE LEAK, CAN PENETRATE BODY TISSUES CAUSING SERIOUS INJURY. USE A PEICE 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 FLUID ESCAPING UNDER PRESSURE, SEE A DOCTOR IMMEDIATELY. SERIOUS INFECTION OR REACTION MAY OCCUR IF MEDICAL ATTENTION IS NOT GIVEN AT ONCE.

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 800 Ft.-Lbs..

MOST OFTEN ENCOUNTERED DISK 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 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.

SURFACE VIEW EDGE VIEW

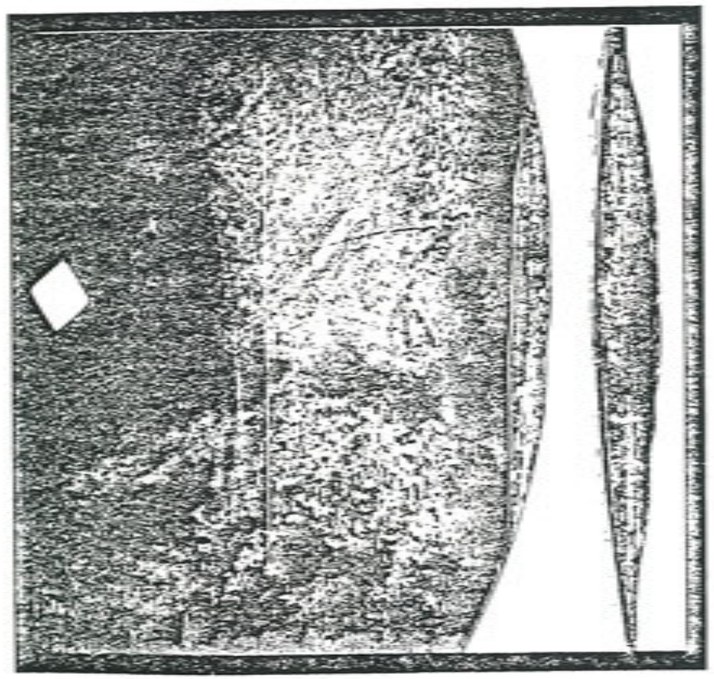
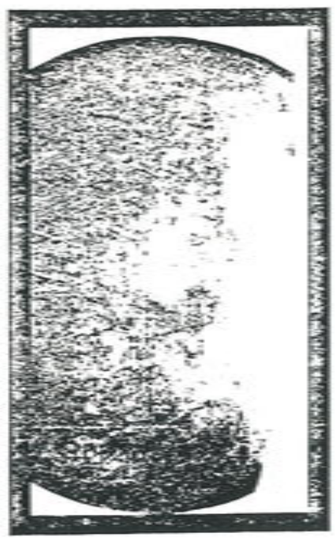


FIGURE 2 — Straight directional break caused by defective steel. Eligible for warranty consideration.



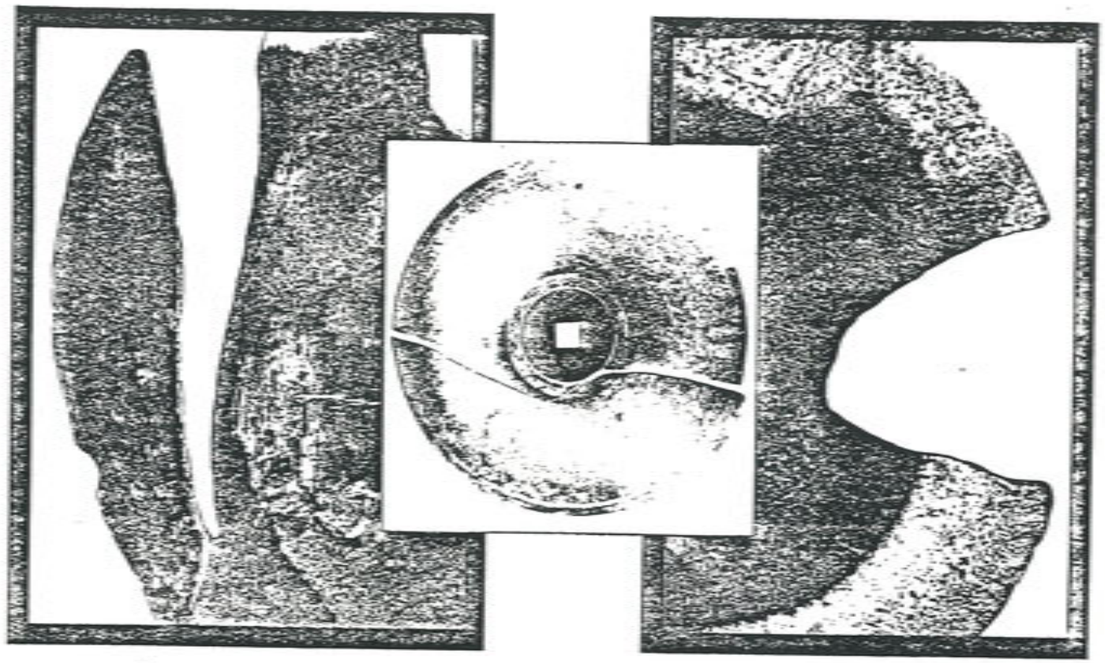


FIGURE 3, 4, 5 — Irregular breaks caused by contact against rocks or stumps. Not covered by warranty.

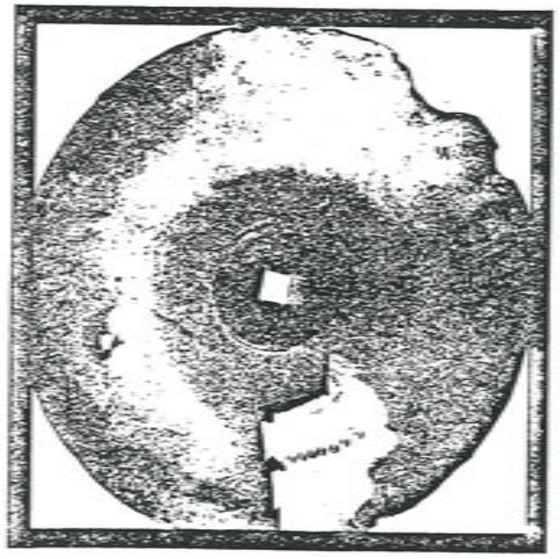


FIGURE 6 — Chipped or dented edges resulting from use in areas containing rocks or stumps. Not covered by warranty.

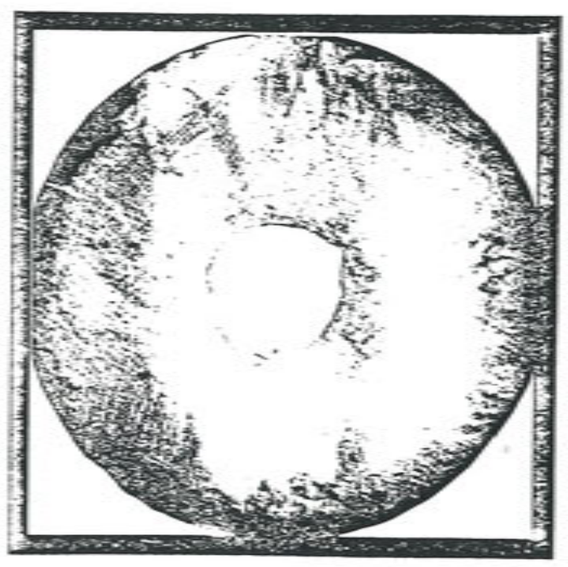
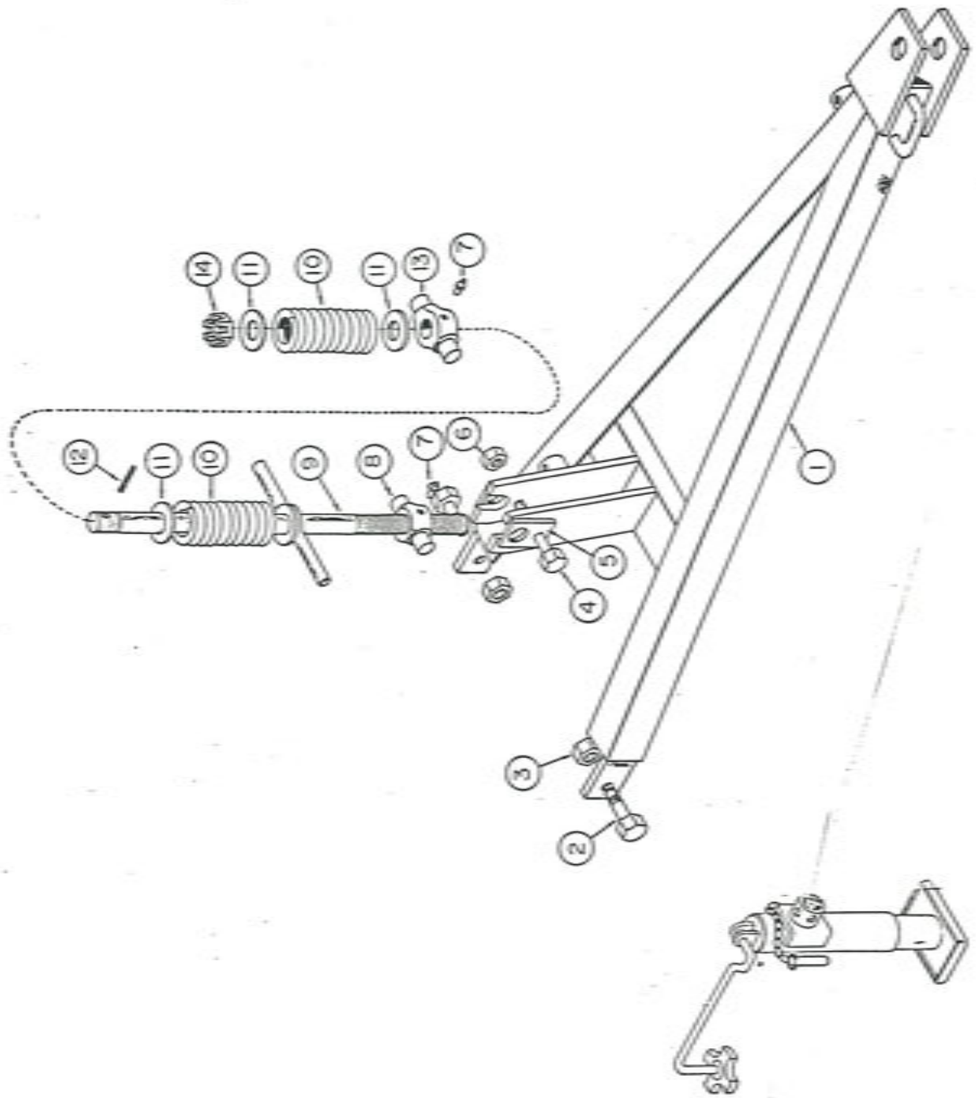


FIGURE 7 — Center broken out—Experience has shown that this is usually caused by loose bolts, excessive flexing, or by contact with rocks and stumps. Not covered by warranty.

PARTS LISTS

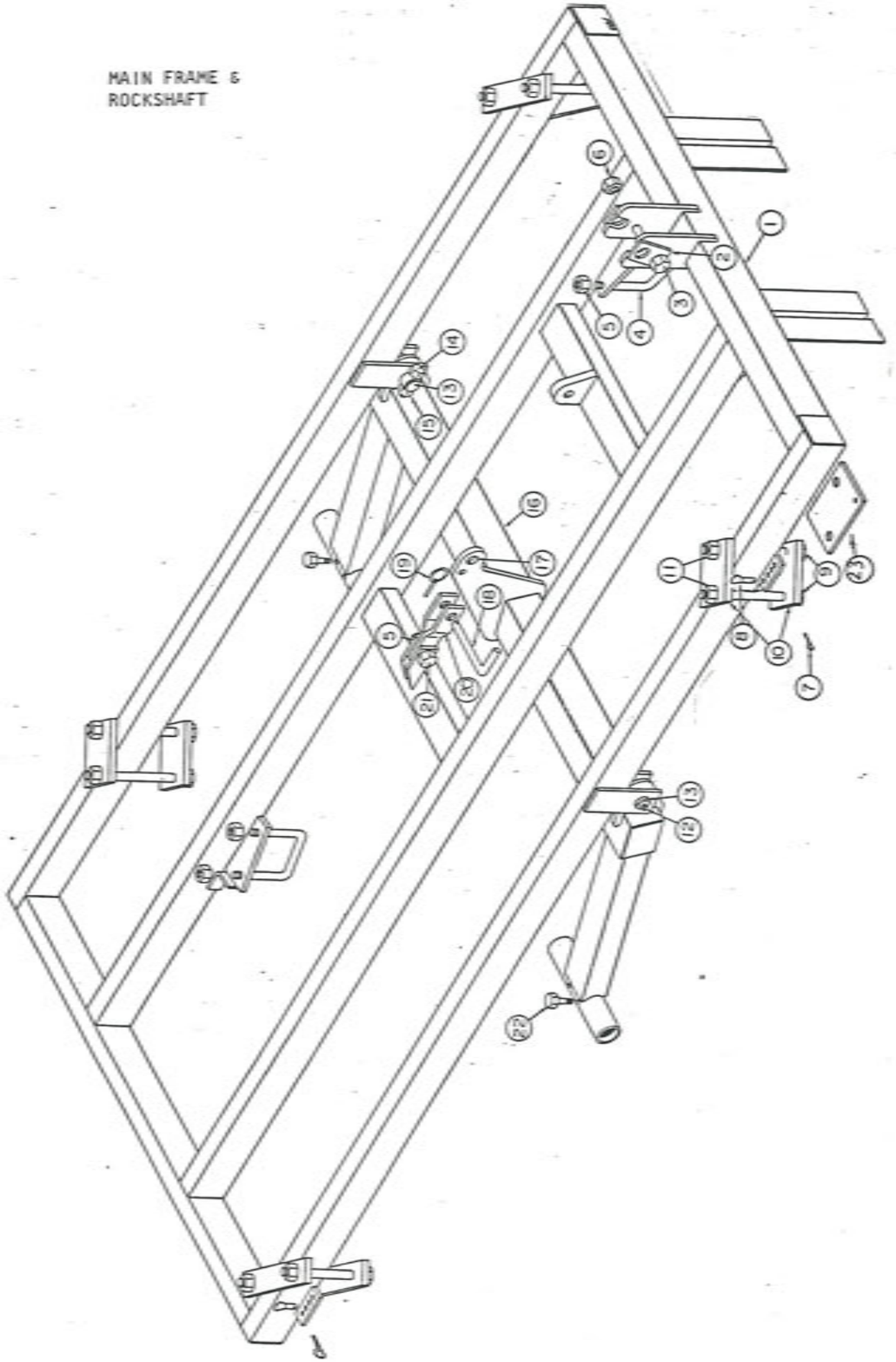
PULL TONGUE



AMCO 100 Series
Pull Tongue

Ref. No.	Part No.	Description	No. Req'd
1	20368	Assy. Pull Tongue	1
2	10189	Hex Screw 7/8 x 3 NC,PLT,GR5	2
3	10396	Lock Nut 7/8 NC,PLT,GRB	2
4	10666	Hex Screw 5/8 x 5 NC,PLT,GR5	1
5	9628	Trunion Clamp	2
6	10299	Lock Nut 5/8 NC,PLT,GRB	1
7	10606	Grease Fitting 1/8 NPT Threaded	2
8	9892	Swivel	1
9	0635A	Assy. Stabilizer Rod	1
10	10460	Spring	2
11	10872	Cut Washer 1 3/8 PL	3
12	10910	Roll Pin 5/16 x 2 1/4	1
13	9919A	Stabilizer Swivel	1
14	11279	Hex Nut 1 3/8 - NC Slotted	1
		Optional	
	11261	Parking Jack	1

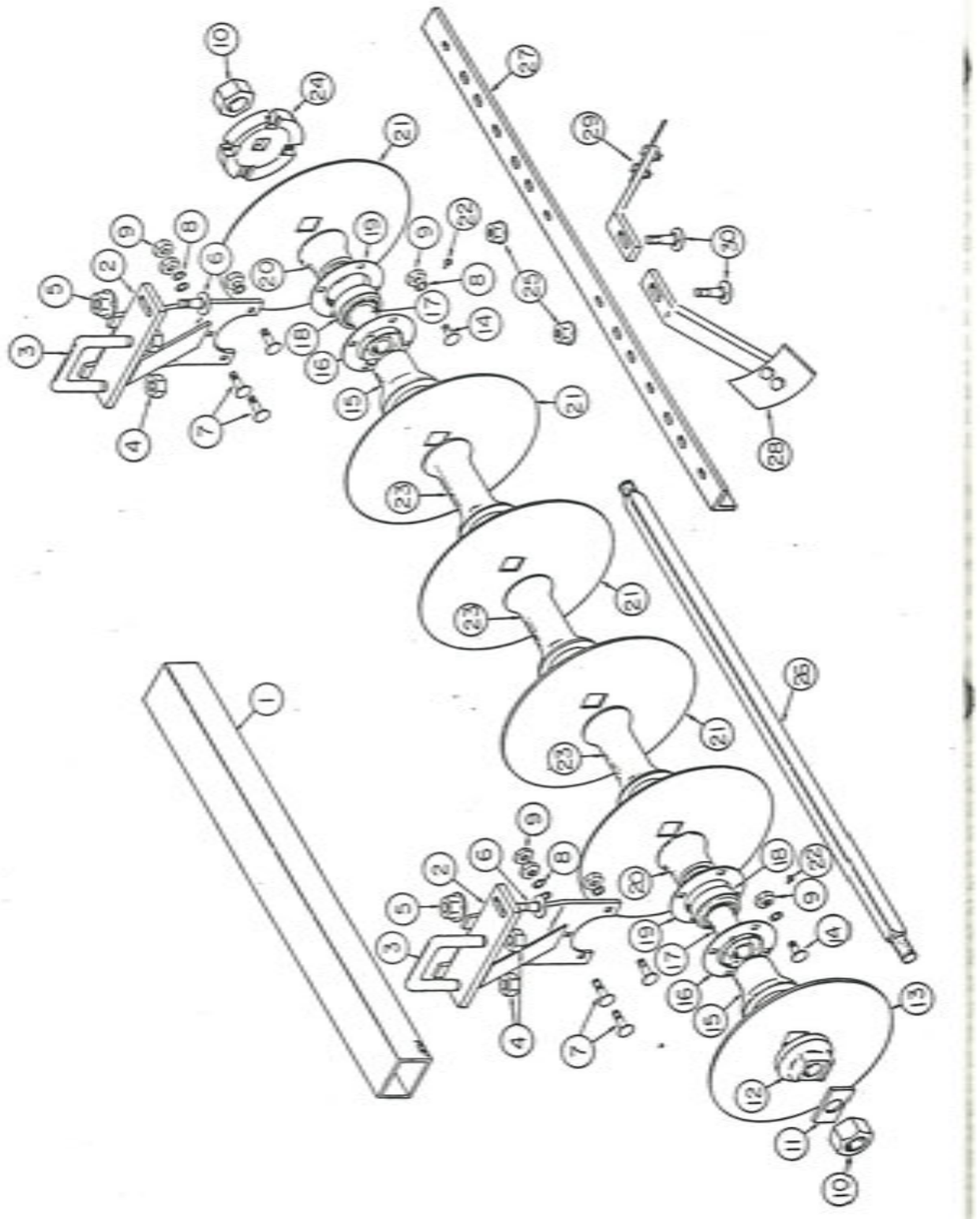
MAIN FRAME &
ROCKSHAFT



AMCO 100 Series
Main Frame & Rockshaft

Ref. No.	Part No.	Description	No. Req'd
1	20365	Assy. Main Frame	1
2	9628	Trunion Clamp	2
3	10042	Hex Screw 5/8 x 6 NC,PLT,GR2	1
4	7205	U Bolt 3/4 Dia.	4
5	10300	Lock Nut 3/4 NC,PLT,GR8	9
6	10299	Lock Nut 5/8 NC,PLT,GR8	1
7	11967	Hair Pin Clip	4
8	101967	Set Pin 1/2 Dia.	4
9	11102	Hex Screw 7/8 x 10 NC,PLT,GR2	8
10	101936	Set Bracket	8
11	10396	Lock Nut 7/8 NC,PLT,GR8	8
12	11081	Grease Fitting	2
13	9209	Retainer Pin 1 1/2 Dia. - 5 1/4" Long	2
14	10765	Hex Screw 3/8 x 2 1/2 NC,PLT,GR5	2
15	10509	Lock Nut 3/8 NC,PLT,GR8	4
16	20369	Assy. Rockshaft	1
17	11492	Bushing 1 1/4 OD x 1" ID - 1" Long	1
18	100683	Lock Pin	1
19	10317	Pin - Klik	1
20	20367	Transport - Strap	1
21	10727	Hex Screw 3/4 x 3 NC,PLT,GR5	1
22	10871	Hex Screw 3/8 x 3 NC,PLT GR5	2
23	102000	Spacer Mount	4

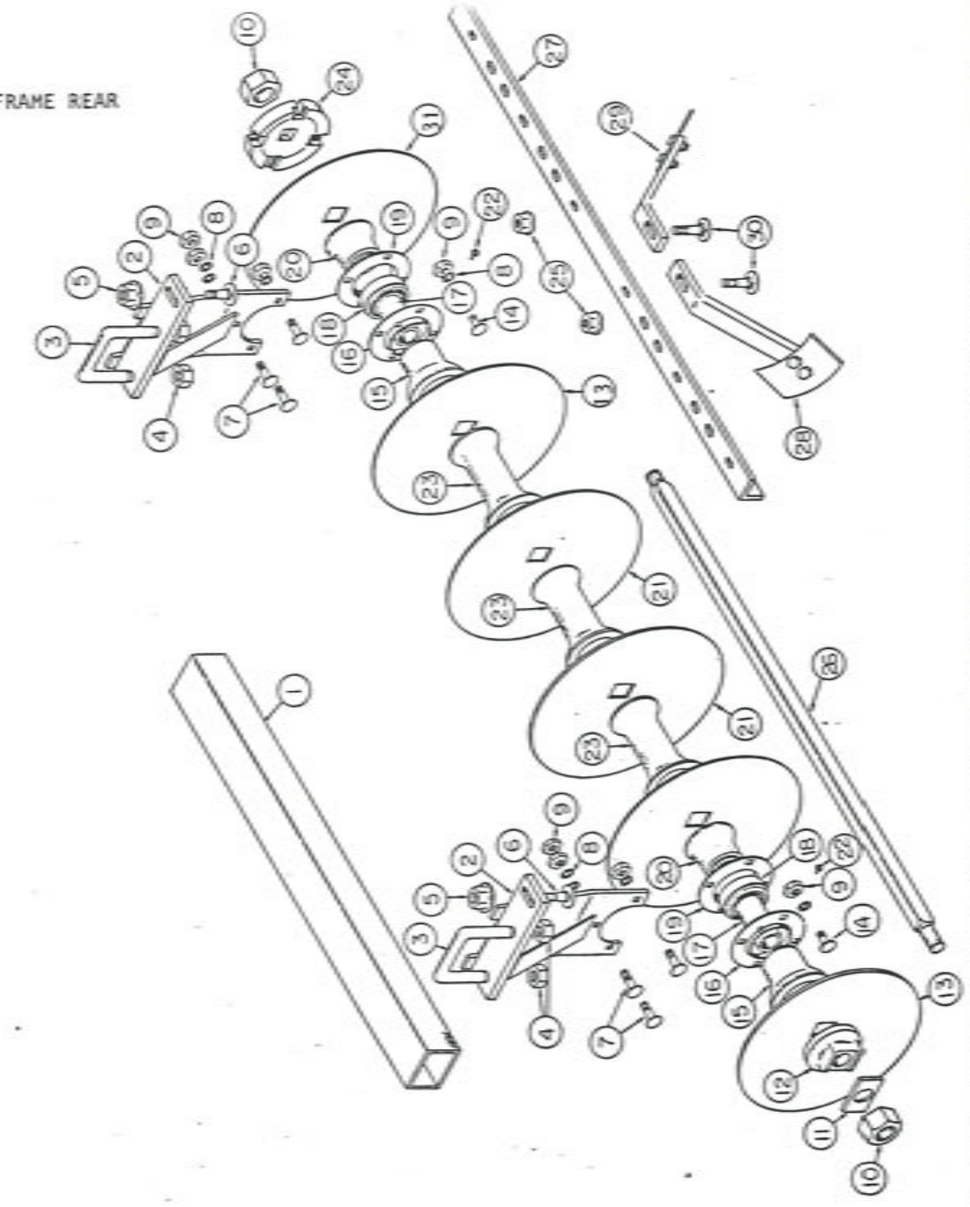
GANG & FRAME FRONT



HMCO C100 Series
Gang Frame and Gangs - Front

Ref.No	Part No.	Description	No. Req'd 24	28	32	36	40
1	101968	Gang Frame 4 x 3 x 3/16 wt - 35 1/4 Long	1	-	-	-	-
1	101969	Gang Frame 4 x 3 x 3/16 wt - 42 9/16 Long	-	1	-	-	-
1	101970	Gang Frame 4 x 3 x 3/16 wt - 51 15/16 Long	-	-	1	-	-
1	101971	Gang Frame 4 x 3 x 3/16 wt - 61 1/4 Long	-	-	-	1	-
1	101972	Gang Frame 4 x 3 x 3/16 wt - 64 1/2 Long	-	-	-	-	1
1	101973	Gang Frame 4 x 3 x 3/16 wt - 71 13/16 Long	-	-	-	-	-
2	28371	Assy Bearing Riser LF or RR Shown	2	2	2	2	3
2A	28370	Assy Bearing Riser RF or LR not shown	2	2	2	2	3
3	7285	U Bolt 3/4 Dia.	2	2	2	2	3
4	10308	Lock Nut 3/4 NC, PLT	4	4	4	4	6
5	11647	Flange Lock Nut 5/8 NC, PLT, GrG	2	2	2	2	3
6	10135	Carriage Screw 5/8 x 1 3/4 NC, PLT, Gr5	2	2	2	2	3
7	10868	Carriage Screw 7/16 x 1 1/2 NC, PLT, Gr2	6	6	6	6	9
8	10619	Lock Washer 7/16 PLT	6	6	6	6	9
9	10618	Hex Nut 7/16 NC,PLT	6	6	6	6	9
10	11835	Nut - Gang Bolt 1 1/8 NC, Heavy	2	2	2	2	2
11	2116	Lock Plate	1	1	1	1	1
12	2030	End Gang Washer	1	1	1	1	1
13	11590	Blade 18 x 8 Ga. C.O.	1	1	1	1	1
13	11591	Blade 18 x 8 Ga. Plain	1	1	1	1	1
13	3262	Blade 20 x 7 Ga. Plain	1	1	1	1	1
13	3254	Blade 20 x 7 Ga. C.O.	1	1	1	1	1
	FB-09-0009	Sub. Assy. Bearing & Flangette	2	2	2	2	3
*14	10599	Carriage Bolt 7/16 x 1 NC, PLT	1	1	1	1	1
*15	9798	End Bell - Large	1	1	1	1	1
*16	10837	Flangette 90 MSA	1	1	1	1	1
*17	8824	Insert Sleeve	1	1	1	1	1
*18	G10771	Bearing GW210PPB2	1	1	1	1	1
*19	10838	Flangette 90 MSB	1	1	1	1	1
*20	9797	End Bell - Small	1	1	1	1	1
*8	10619	Lock Washer 7/16 PLT	1	1	1	1	1
*9	10618	Hex Nut 7/16 NC, PLT	1	1	1	1	1
21	3254	Blade 20 x 7 Ga. C.O.	5	6	7	8	9
21	3262	Blade 20 x 7 Ga. Plain	5	6	7	8	9
21	3269	Blade 22 x 7 Ga. Plain	5	6	7	8	9
21	3271	Blade 22 x 7 GA. C.O.	5	6	7	8	9
22		Grease Fitting included in #10837 Flangette	1	1	1	1	1
23	9830	Spacer Spool	3	4	5	6	6
24	3412A	Bumper Washer	1	1	1	1	1
25	11646	Flange Lock Nut 1/2 NC, PLT, GrG	5	6	7	8	9
26	101406	Gang Bolt 1 1/8 Sq. 6 Blade	1	-	-	-	-
26	100248	Gang Bolt 1 1/8 Sq. 7 Blade	-	1	-	-	-
26	100249	Gang Bolt 1 1/8 Sq. 8 Blade	-	-	1	-	-
26	100250	Gang Bolt 1 1/8 Sq. 9 Blade	-	-	-	1	-
26	100251	Gang Bolt 1 1/8 Sq. 10 Blade	-	-	-	-	1
26	100252	Gang Bolt 1 1/8 Sq. 11 Blade	-	-	-	-	-
27	9929	Scraper Bar 39 3/4 Long	1	-	-	-	-
27	9930	Scraper Bar 47 Long	-	1	-	-	-
27	9931	Scraper Bar 54 1/4 Long	-	-	1	-	-
27	9960	Scraper Bar 61 1/2 Long	-	-	-	1	-
27	9961	Scraper Bar 68 3/4 Long	-	-	-	-	1
27	9962	Scraper Bar 76 Long	-	-	-	-	-
28	8788	Assy. Scraper R.H.	5	6	7	8	9
	100270	Scraper Blade	1	1	1	1	1
	100271	Scraper Leg	1	1	1	1	1
	10395	Lock Nut 1/2 NC,PLT	2	2	2	2	2
	11652	Machine Bolt (black) 1/2 x 1 1/4 NC	2	2	2	2	2
29	8789	Assy. Scraper L.H.	5	6	7	8	9
30	10870	Carriage Screw 1/2 x 1 1/2 NC, PLT, Gr5	5	6	7	8	9

GANG & FRAME REAR

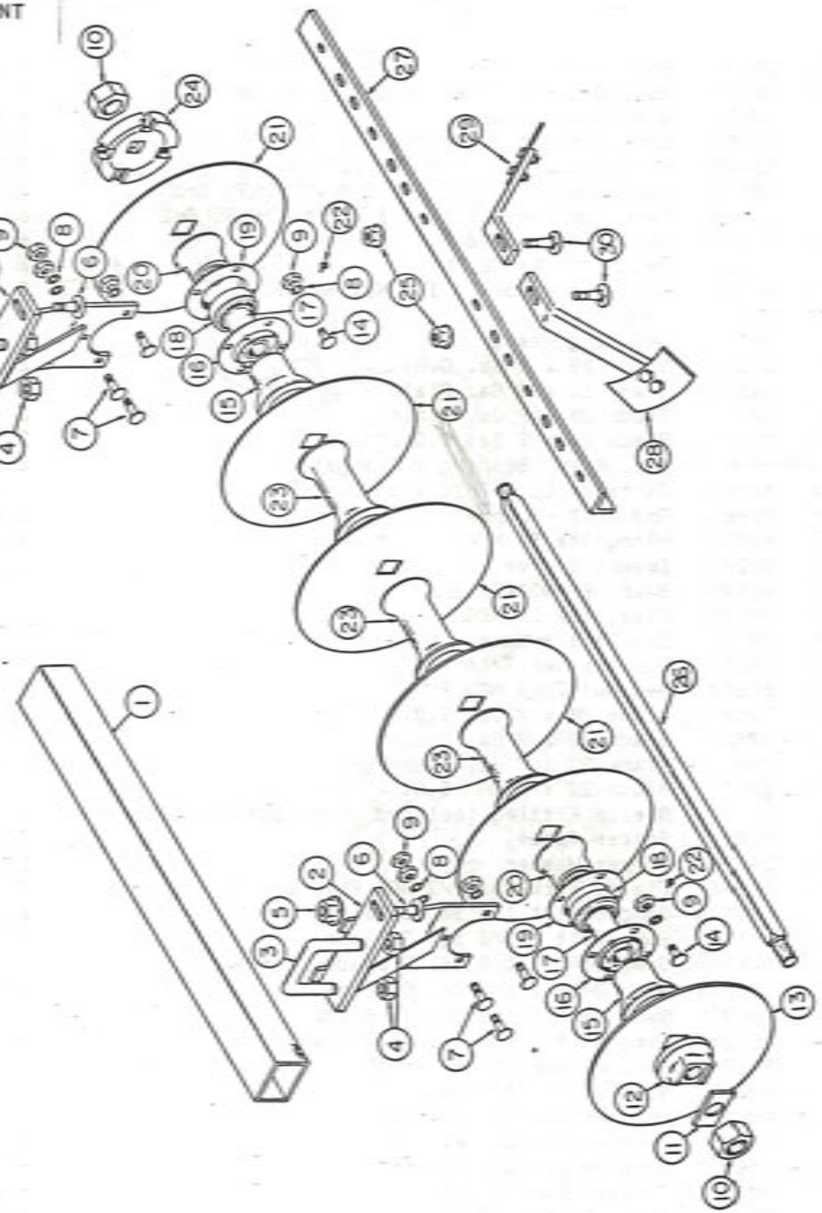


AMCO C100 Series
Gang Frame and Gangs - Rear

Ref.No	Part No.	Description	No. Req'd Blades					
		DC100	22	26		32	36	40
		C100	24	28	32	36	40	44
1	101969	Gang Frame 4 x 3 x 3/16 wt - ~~35 1/4~~ Long 42 9/16	1	-	-	-	-	-
1	101970	Gang Frame 4 x 3 x 3/16 wt - ~~42 9/16~~ Long 51 15/16	-	1	-	-	-	-
1	101971	Gang Frame 4 x 3 x 3/16 wt - ~~51 15/16~~ Long 61 1/4	-	-	1	-	-	-
1	101972	Gang Frame 4 x 3 x 3/16 wt - ~~61 1/4~~ Long 64 1/2	-	-	-	1	-	-
1	101973	Gang Frame 4 x 3 x 3/16 wt - ~~64 1/2~~ Long 71 13/16	-	-	-	-	1	-
1	101974	Gang Frame 4 x 3 x 3/16 wt - ~~71 13/16~~ Long 79	-	-	-	-	-	1

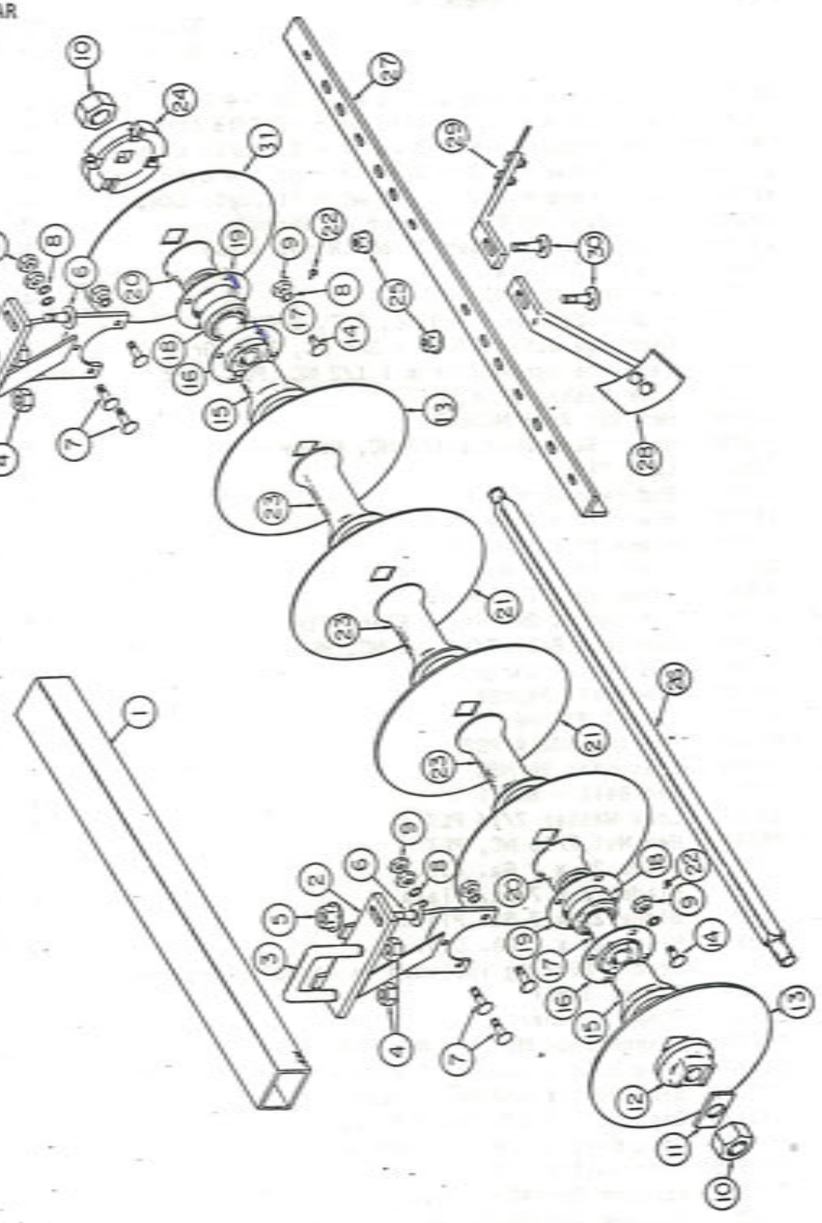
#.No	Part No.	Description	No. Req'd Blades					
		DC100	22	26		32	36	40
		C100	24	28	32	36	40	44
	20371	Assy Bearing Riser LF or RR Shown	2	2	2	2	2	2
2A	20370	Assy Bearing Riser RF or LR not shown	2	2	2	2	2	2
3	7205	U Bolt 3/4 Dia.	2	2	2	2	2	2
4	10308	Lock Nut 3/4 NC, PLT	4	4	4	4	4	4
5	11647	Flange Lock Nut 5/8 NC, PLT, Gr8	2	2	2	2	2	2
5	10135	Carriage Screw 5/8 x 1 3/4 NC, PLT, Gr5	2	2	2	2	2	2
7	10868	Carriage Screw 7/16 x 1 1/2 NC, PLT, Gr2	6	6	6	6	6	6
8	10619	Lock Washer 7/16 PLT	6	6	6	6	6	6
9	10618	Hex Nut 7/16 NC,PLT	6	6	6	6	6	6
10	11035	Nut - Gang Bolt 1 1/8 NC, Heavy	2	2	2	2	2	2
11	2116	Lock Plate	1	1	1	1	1	1
12	2030	End Gang Washer	1	1	1	1	1	1
13	11590	Blade 18 x 8 Ga. C.O.	2	2	2	2	2	2
13	11591	Blade 18 x 8 Ga. Plain	2	2	2	2	2	2
13	3262	Blade 20 x 7 Ga. Plain	2	2	2	2	2	2
13	3254	Blade 20 x 7 Ga. C.O.	2	2	2	2	2	2
	FB-09-0009	Sub. Assy. Bearing & Flangette	2	2	2	2	2	2
#14	10599	Carriage Bolt 7/16 x 1 NC, PLT	1	1	1	1	1	1
#15	9798	End Bell - Large	1	1	1	1	1	1
#16	10837	Flangette 90 MSA	1	1	1	1	1	1
#17	8824	Insert Sleeve	1	1	1	1	1	1
#18	G10771	Bearing GW210PP82	1	1	1	1	1	1
#19	10838	Flangette 90 MSB	1	1	1	1	1	1
#20	9797	End Bell - Small	1	1	1	1	1	1
#8	10619	Lock Washer 7/16 PLT	1	1	1	1	1	1
#9	10618	Hex Nut 7/16 NC, PLT	1	1	1	1	1	1
21	3254	Blade 20 x 7 Ga. C.O.	3	4	5	6	7	8
21	3262	Blade 20 x 7 Ga. Plain	3	4	5	6	7	8
21	3269	Blade 22 x 7 Ga. Plain	3	4	5	6	7	8
21	3271	Blade 22 x 7 GA. C.O.	3	4	5	6	7	8
22		Grease Fitting included in #10837 Flangette	1	1	1	1	1	1
23	9830	Spacer Spool	3	4	5	6	7	8
24	3412A	Bumper Washer	1	1	1	1	1	1
25	11646	Flange Lock Nut 1/2 NC, PLT, Gr8	5	6	7	8	9	10
26	101406	Gang Bolt 1 1/8 Sq. 6 Blade	1	-	-	-	-	-
26	100248	Gang Bolt 1 1/8 Sq. 7 Blade	-	1	-	-	-	-
26	100249	Gang Bolt 1 1/8 Sq. 8 Blade	-	-	1	-	-	-
26	100250	Gang Bolt 1 1/8 Sq. 9 Blade	-	-	-	1	-	-
26	100251	Gang Bolt 1 1/8 Sq. 10 Blade	-	-	-	-	1	-
26	100252	Gang Bolt 1 1/8 Sq. 11 Blade	-	-	-	-	-	1
27	9929	Scraper Bar 39 3/4 Long	1	-	-	-	-	-
27	9930	Scraper Bar 47 Long	-	1	-	-	-	-
27	9931	Scraper Bar 54 1/4 Long	-	-	1	-	-	-
27	9960	Scraper Bar 61 1/2 Long	-	-	-	1	-	-
27	9961	Scraper Bar 68 3/4 Long	-	-	-	-	1	-
27	9962	Scraper Bar 76 Long	-	-	-	-	-	1
28	0788	Assy. Scraper R.H.	5	6	7	8	9	10
	100270	Scraper Blade	1	1	1	1	1	1
	100271	Scraper Leg	1	1	1	1	1	1
	10395	Lock Nut 1/2 NC,PLT	2	2	2	2	2	2
	11652	Machine Bolt (black) 1/2 x 1 1/4 NC	2	2	2	2	2	2
29	0789	Assy. Scraper L.H.	5	6	7	8	9	10
30	10870	Carriage Screw 1/2 x 1 1/2 NC, PLT, Gr5	5	6	7	8	9	10
31	3267	Blade 16 x 10 Ga. Plain	1	1	1	1	1	1
31	11591	Blade 18 x 8 Ga. Plain	1	1	1	1	1	1
31	11590	Blade 18 x 8 Ga. C.O.	1	1	1	1	1	1

GANG & FRAME FRONT



Ref.No	Part No.	Description	No. Req'd Blades				
		DC100	22	26	32	36	40
		D100	20	24	28	32	36
1	101968	Gang Frame 4 x 3 x 3/16 wt - 35 1/4 Long	1	-	-	-	-
1	101969	Gang Frame 4 x 3 x 3/16 wt - 42 9/16 Long	-	1	-	-	-
1	101970	Gang Frame 4 x 3 x 3/16 wt - 51 15/16 Long	-	-	1	-	-
1	101971	Gang Frame 4 x 3 x 3/16 wt - 61 1/4 Long	-	-	-	1	-
1	101973	Gang Frame 4 x 3 x 3/16 wt - 71 13/16 Long	-	-	-	-	1
2	20371	Assy Bearing Riser LF or RR Shown	2	2	2	3	3
2A	20370	Assy Bearing Riser RF or LR not shown	2	2	2	3	3
3	7285	U Bolt 3/4 Dia.	2	2	2	3	3
4	10380	Lock Nut 3/4 NC, PLT	4	4	4	6	6
5	11647	Flange Lock Nut 5/8 NC, PLT, Gr5	2	2	2	3	3
6	10135	Carriage Screw 5/8 x 1 3/4 NC, PLT, Gr5	2	2	2	3	3
7	10868	Carriage Screw 7/16 x 1 1/2 NC, PLT, Gr2	6	6	6	9	9
8	10619	Lock Washer 7/16 PLT	6	6	6	9	9
9	10618	Hex Nut 7/16 NC,PLT	6	6	6	9	9
10	11035	Nut - Gang Bolt 1 1/8 NC, Heavy	2	2	2	2	2
11	2116	Lock Plate	1	1	1	1	1
12	2030	End Gang Washer	1	1	1	1	1
13	11590	Blade 18 x 8 Ga. C.O.	1	1	1	1	1
13	11591	Blade 18 x 8 Ga. Plain	1	1	1	1	1
13	3262	Blade 20 x 7 Ga. Plain	1	1	1	1	1
13	3254	Blade 20 x 7 Ga. C.O.	1	1	1	1	1
	FB-09-0005	Sub. Assy. Bearing & Flangette	2	2	2	3	3
*14	10599	Carriage Bolt 7/16 x 1 NC, PLT	1	1	1	1	1
*15	9798	End Bell - Large	1	1	1	1	1
*16	10837	Flangette 90 MSA	1	1	1	1	1
*17	8824	Insert Sleeve	1	1	1	1	1
*18	G10771	Bearing GW210PPB2	1	1	1	1	1
*19	10838	Flangette 90 MSB	1	1	1	1	1
*20	9797	End Bell - Small	1	1	1	1	1
*8	10619	Lock Washer 7/16 PLT	1	1	1	1	1
*9	10618	Hex Nut 7/16 NC, PLT	1	1	1	1	1
21	3254	Blade 20 x 7 Ga. C.O.	4	5	6	7	8
21	3262	Blade 20 x 7 Ga. Plain	4	5	6	7	8
21	3269	Blade 22 x 7 Ga. Plain	4	5	6	7	8
21	3271	Blade 22 x 7 GA. C.O.	4	5	6	7	8
22		Grease Fitting included in #10837 Flangette	1	1	1	1	1
23	6165	Spacer Spool	2	3	4	4	4
24	3412A	Bumper Washer	1	1	1	1	1
25	11646	Flange Lock Nut 1/2 NC, PLT, Gr5	4	5	6	7	8
26	101406	Gang Bolt 1 1/8 Sq. 5 Blade	1	-	-	-	-
26	100242	Gang Bolt 1 1/8 Sq. 6 Blade	-	1	-	-	-
26	100243	Gang Bolt 1 1/8 Sq. 7 Blade	-	-	1	-	-
26	100244	Gang Bolt 1 1/8 Sq. 8 Blade	-	-	-	1	-
26	100245	Gang Bolt 1 1/8 Sq. 9 Blade	-	-	-	-	1
27	9475	Scraper Bar 42 1/2 Long	1	-	-	-	-
27	9548	Scraper Bar 51 11/16 Long	-	1	-	-	-
27	9549	Scraper Bar 60 7/8 Long	-	-	1	-	-
27	9550	Scraper Bar 70 1/16 Long	-	-	-	1	-
27	9551	Scraper Bar 79 1/4 Long	-	-	-	-	1
28	8788	Assy. Scraper R.H.	4	5	6	7	8
	100270	Scraper Blade	1	1	1	1	1
	100271	Scraper Leg	1	1	1	1	1
	10395	Lock Nut 1/2 NC,PLT	2	2	2	2	2
	11652	Machine Bolt (black) 1/2 x 1 1/4 NC	2	2	2	2	2
29	8789	Assy. Scraper L.H.	4	5	6	7	8
30	10870	Carriage Screw 1/2 x 1 1/2 NC, PLT, Gr5	4	5	6	7	8

GANG & FRAME REAR



AMCO D100 Series
Gang Frame and Gangs - Rear

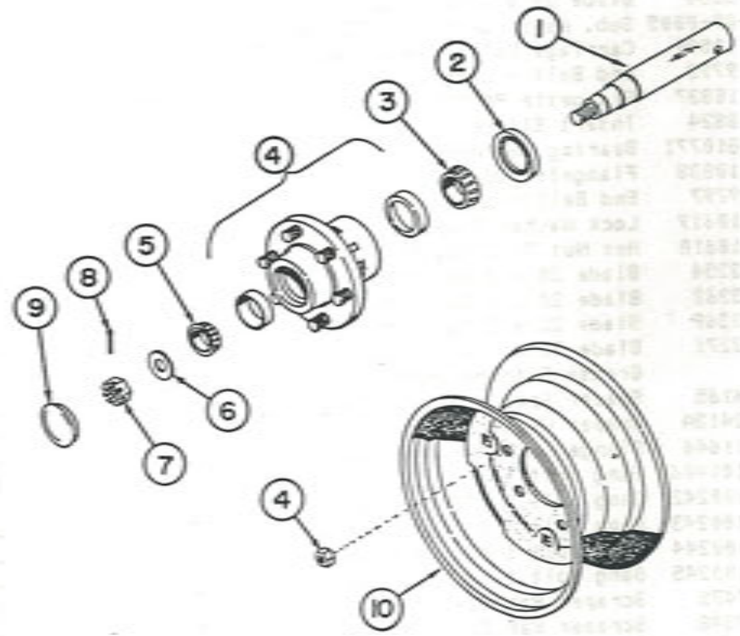
Ref.No	Part No.	Description	No. Req'd 20	24	28	32	36
1	101969	Gang Frame 4 x 3 x 3/16 wt - 42 9/16 Long	1	-	-	-	-
1	101970	Gang Frame 4 x 3 x 3/16 wt - 51 15/16 Long	-	1	-	-	-
1	101971	Gang Frame 4 x 3 x 3/16 wt - 61 1/4 Long	-	-	1	-	-
1	101973	Gang Frame 4 x 3 x 3/16 wt - 71 13/16 Long	-	-	-	1	-
1	101974	Gang Frame 4 x 3 x 3/16 wt - 79 Long	-	-	-	-	1
2	20371	Assy Bearing Riser LF or RR Shown	2	2	2	2	2
2A	20370	Assy Bearing Riser RF or LR not shown	2	2	2	2	2
3	7205	U Bolt 3/4 Dia.	2	2	2	2	2
4	10300	Lock Nut 3/4 NC, PLT	4	4	4	4	4
5	11647	Flange Lock Nut 5/8 NC, PLT, Gr5	2	2	2	2	2
6	10135	Carriage Screw 5/8 x 1 3/4 NC, PLT, Gr5	2	2	2	2	2
7	10868	Carriage Screw 7/16 x 1 1/2 NC, PLT, Gr2	6	6	6	6	6
8	10619	Lock Washer 7/16 PLT	6	6	6	6	6
9	10618	Hex Nut 7/16 NC,PLT	6	6	6	6	6
10	11035	Nut - Gang Bolt 1 1/8 NC, Heavy	2	2	2	2	2
11	2116	Lock Plate	1	1	1	1	1
12	2030	End Gang Washer	1	1	1	1	1
13	11590	Blade 18 x 8 Ga. C.O.	2	2	2	2	2
13	11591	Blade 18 x 8 Ga. Plain	2	2	2	2	2
13	3262	Blade 20 x 7 Ga. Plain	2	2	2	2	2
13	3254	Blade 20 x 7 Ga. C.O.	2	2	2	2	2
FB-09-0005		Sub. Assy. Bearing & Flangette	2	2	2	2	2
*14	10599	Carriage Bolt 7/16 x 1 NC, PLT	1	1	1	1	1
*15	9798	End Bell - Large	1	1	1	1	1
*16	10837	Flangette 90 MSA	1	1	1	1	1
*17	8824	Insert Sleeve	1	1	1	1	1
*18	610771	Bearing GW210PPB2	1	1	1	1	1
*19	10838	Flangette 90 MSB	1	1	1	1	1
*20	9797	End Bell - Small	1	1	1	1	1
*8	10619	Lock Washer 7/16 PLT	1	1	1	1	1
*9	10618	Hex Nut 7/16 NC, PLT	1	1	1	1	1
21	3254	Blade 20 x 7 Ga. C.O.	2	3	4	5	6
21	3262	Blade 20 x 7 Ga. Plain	2	3	4	5	6
21	3269	Blade 22 x 7 Ga. Plain	2	3	4	5	6
21	3271	Blade 22 x 7 GA. C.O.	2	3	4	5	6
22		Grease Fitting included in #10837 Flangette	1	1	1	1	1
23	6165	Spacer Spool	2	3	4	5	5
24	3412A	Bumper Washer	1	1	1	1	1
25	11646	Flange Lock Nut 1/2 NC, PLT, Gr5	4	5	6	7	8
26	101406	Gang Bolt 1 1/8 Sq. 5 Blade	1	-	-	-	-
26	100242	Gang Bolt 1 1/8 Sq. 6 Blade	-	1	-	-	-
26	100243	Gang Bolt 1 1/8 Sq. 7 Blade	-	-	1	-	-
26	100244	Gang Bolt 1 1/8 Sq. 8 Blade	-	-	-	1	-
26	100245	Gang Bolt 1 1/8 Sq. 9 Blade	-	-	-	-	-
27	9475	Scraper Bar 42 1/2 Long	1	-	-	-	-
27	9548	Scraper Bar 51 11/16 Long	-	1	-	-	-
27	9549	Scraper Bar 60 7/8 Long	-	-	1	-	-
27	9550	Scraper Bar 70 1/16 Long	-	-	-	1	-
27	9551	Scraper Bar 79 1/4 Long	-	-	-	-	1
28	8788	Assy. Scraper R.H.	4	5	6	7	8
	100270	Scraper Blade	1	1	1	1	1
	100271	Scraper Leg	1	1	1	1	1
	10395	Lock Nut 1/2 NC,PLT	2	2	2	2	2
	11652	Machine Bolt (black) 1/2 x 1 1/4 NC	2	2	2	2	2
29	8789	Assy. Scraper L.H.	4	5	6	7	8
30	10870	Carriage Screw 1/2 x 1 1/2 NC, PLT, Gr5	4	5	6	7	8

AMCO D100 Series
Gang Frame and Gangs - Rear

Ref.No	Part No.	Description	No. Req'd 20	24	28	32	36
1	101969	Gang Frame 4 x 3 x 3/16 wt - ~~41~~ 42 9/16 Long	1	-	-	-	-
1	101970	Gang Frame 4 x 3 x 3/16 wt - 51 15/16 Long	-	1	-	-	-
1	101971	Gang Frame 4 x 3 x 3/16 wt - 61 1/4 Long	-	-	1	-	-
1	101973	Gang Frame 4 x 3 x 3/16 wt - 71 13/16 Long	-	-	-	1	-
1	101974	Gang Frame 4 x 3 x 3/16 wt - 79 Long	-	-	-	-	1
2	20371	Assy Bearing Riser LF or RR Shown	2	2	2	2	2
2A	20370	Assy Bearing Riser RF or LR not shown	2	2	2	2	2
3	7285	U Bolt 3/4 Dia.	2	2	2	2	2
4	10380	Lock Nut 3/4 NC, PLT	4	4	4	4	4
5	11647	Flange Lock Nut 5/8 NC, PLT, GrG	2	2	2	2	2
6	10135	Carriage Screw 5/8 x 1 3/4 NC, PLT, Gr5	2	2	2	2	2
7	10068	Carriage Screw 7/16 x 1 1/2 NC, PLT, Gr2	6	6	6	6	6
8	10619	Lock Washer 7/16 PLT	6	6	6	6	6
9	10618	Hex Nut 7/16 NC,PLT	6	6	6	6	6
10	11035	Nut - Gang Bolt 1 1/8 NC, Heavy	2	2	2	2	2
11	2116	Lock Plate	1	1	1	1	1
12	2030	End Gang Washer	1	1	1	1	1
13	11590	Blade 18 x 8 Ga. C.O.	2	2	2	2	2
13	11591	Blade 18 x 8 Ga. Plain	2	2	2	2	2
13	3262	Blade 20 x 7 Ga. Plain	2	2	2	2	2
13	3254	Blade 20 x 7 Ga. C.O.	2	2	2	2	2
	FB-09-0005	Sub. Assy. Bearing & Flangette	2	2	2	2	2
*14	10599	Carriage Bolt 7/16 x 1 NC, PLT	1	1	1	1	1
*15	9798	End Bell - Large	1	1	1	1	1
*16	10837	Flangette 90 MSA	1	1	1	1	1
*17	8824	Insert Sleeve	1	1	1	1	1
*18	G10771	Bearing GW210PPB2	1	1	1	1	1
*19	10838	Flangette 90 MSB	1	1	1	1	1
*20	9797	End Bell - Small	1	1	1	1	1
*8	10619	Lock Washer 7/16 PLT	1	1	1	1	1
*9	10618	Hex Nut 7/16 NC, PLT	1	1	1	1	1
21	3254	Blade 20 x 7 Ga. C.O.	2	3	4	5	6
21	3262	Blade 20 x 7 Ga. Plain	2	3	4	5	6
21	3269	Blade 22 x 7 Ga. Plain	2	3	4	5	6
21	3271	Blade 22 x 7 GA. C.O.	2	3	4	5	6
22		Grease Fitting included in #10837 Flangette	1	1	1	1	1
23	6165	Spacer Spool	2	3	4	5	5
24	3412A	Bumper Washer	1	1	1	1	1
25	11646	Flange Lock Nut 1/2 NC, PLT, GrG	4	5	6	7	8
26	101486	Gang Bolt 1 1/8 Sq. 5 Blade	1	-	-	-	-
26	100242	Gang Bolt 1 1/8 Sq. 6 Blade	-	1	-	-	-
26	100243	Gang Bolt 1 1/8 Sq. 7 Blade	-	-	1	-	-
26	100244	Gang Bolt 1 1/8 Sq. 8 Blade	-	-	-	1	-
26	100245	Gang Bolt 1 1/8 Sq. 9 Blade	-	-	-	-	-
27	9475	Scraper Bar 42 1/2 Long	1	-	-	-	-
27	9548	Scraper Bar 51 11/16 Long	-	1	-	-	-
27	9549	Scraper Bar 60 7/8 Long	-	-	1	-	-
27	9550	Scraper Bar 70 1/16 Long	-	-	-	1	-
27	9551	Scraper Bar 79 1/4 Long	-	-	-	-	1
28	8788	Assy. Scraper R.H.	4	5	6	7	8
	100270	Scraper Blade	1	1	1	1	1
	100271	Scraper Leg	1	1	1	1	1
	10395	Lock Nut 1/2 NC,PLT	2	2	2	2	2
	11652	Machine Bolt (black) 1/2 x 1 1/4 NC	2	2	2	2	2
29	8789	Assy. Scraper L.H.	4	5	6	7	8
30	10870	Carriage Screw 1/2 x 1 1/2 NC, PLT, Gr5	4	5	6	7	8

AMCO 100 Series
Spindle & Hub

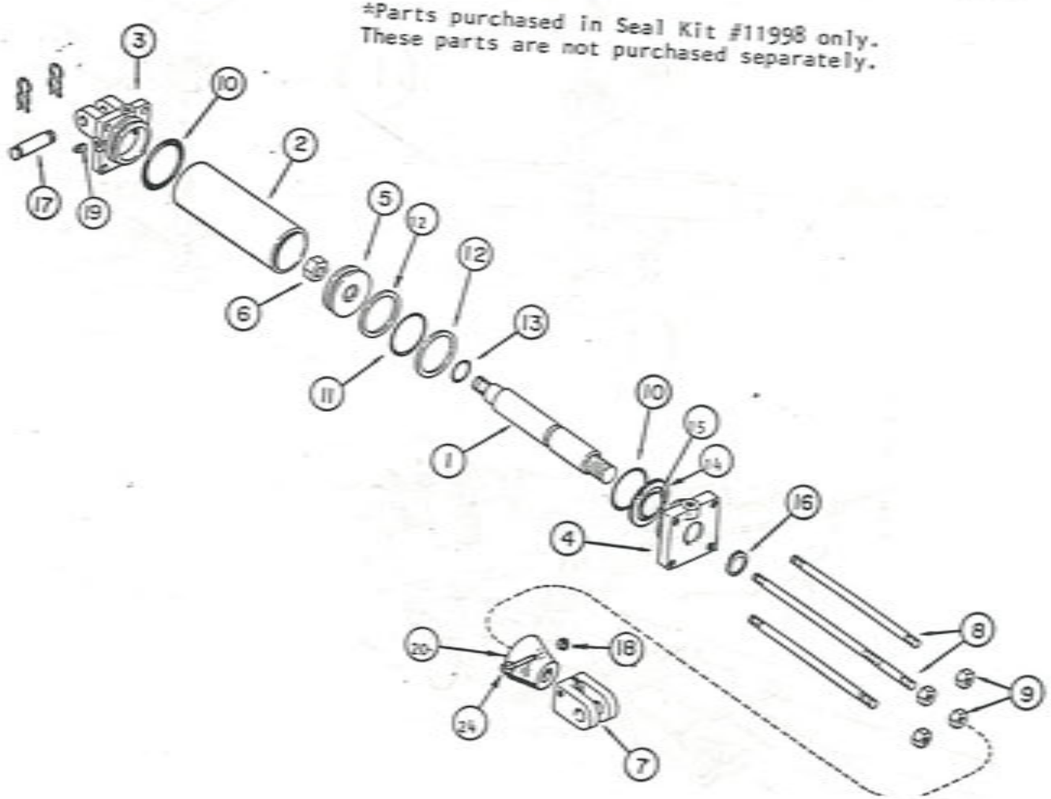
Ref. No.	Part No.	Description	No. Req'd
1	11643	Spindle 1 3/4 Dia. - 12 Long	1
2	11017	Grease Seal	1
3	10353	Cone - Inner Timken #LM48548	1
4	11644	Hub w/2 cups & 6 lug bolts, nuts	1
4	10352	Cup - Inner (LM48510)	1
4	10293	Cup - Outer (LM67010)	1
4	11657	Hub - Bolt 1/2 x 1 1/2 NF	6
4	11046	Hub - Nut 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	



Optional 3 x 8 Hydraulic Cylinder
100 Series

Ref. No.	Part No.	Description	No. Req'd
1	11994	Rod	1
2	11993	Barrel	1
3	11666	Base Clevis	1
4	11664	Gland	1
5	11992	Piston	1
6	10980	Nut - Self Locking	1
7	11663	Rod Clevis	1
8	11669	Rod - Tie	1
9	11671	Hex Nut Tie Rod	4
17	11686	Assy Pin	8
18	11670	Hex Nut - Rod Clevis	2
19	11676	Plug	3
20	11997	Control - Stroke	1
24	11672	* Bolt Allen Head	1
21	11998	Kit - Seal Repair	1
10	11249	Gland Static Seal	1
11	11995	O Ring	2
12	11996	Piston Seal	1
13	11252	* Rod Static Seal	2
14	11673	Rod Seal	1
15	11674	Back-Up Ring	1
16	11675	Rod Wiper	1
	11991	Hydraulic Cylinder 3 x 8 w/ stroke control (Lantex #AP30080)	1

*Parts purchased in Seal Kit #11998 only.
These parts are not purchased separately.



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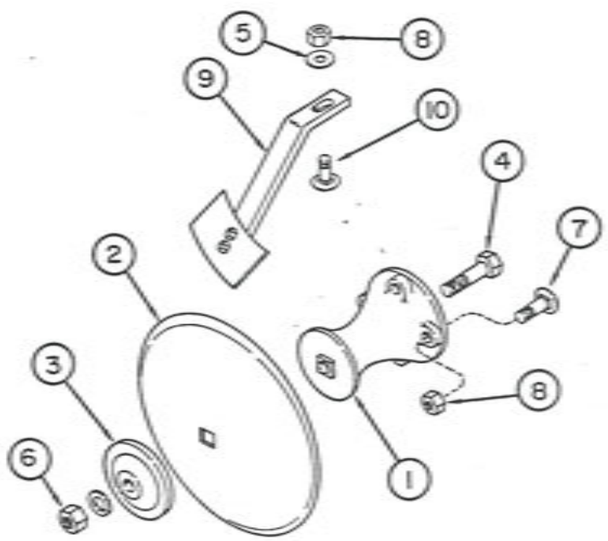
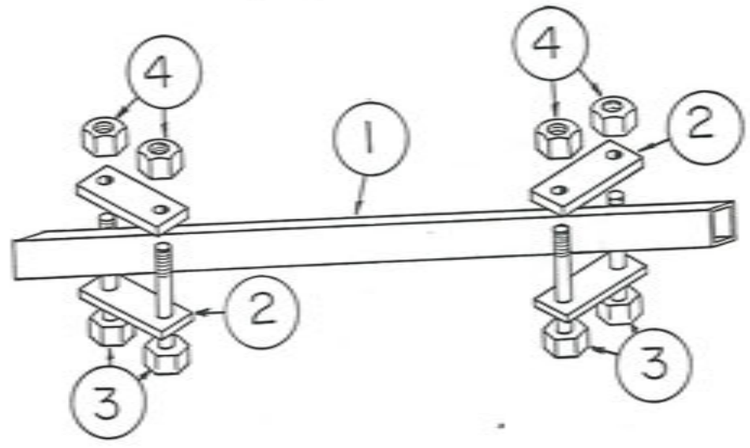
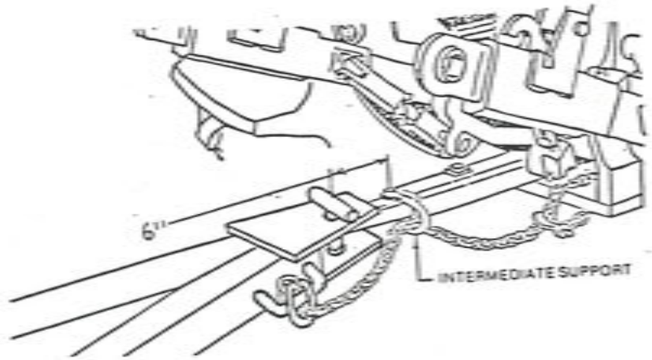


FEATHERING BLADE



AUXILIARY FRAME



SAFETY CHAIN

Optional Hose Kit for
100 Series

Part No.	Description	No. Req'd
10720	Hose 1/2 x 12' w/1/2 NPT Fittings	1
11320	Hose 1/2 x 11' w/1/2 NPT Fittings	1
10921	90° Swivel Elbow 1/2 NPT Male to 1/2 NPT Female Swivel	2

Optional Feathering Blade
100 Series

Ref. No.	Part No.	Description	No. Req'd
1	7673	Spacer - Blade	2
2	11585	Blade 14" Dia. x 10 Ga. Plain	2
2	3267	*Blade 16" Dia. x 10 Ga. Plain	1
3	7801	Cap - Blade	1
4	10189	Bolt - Hex 7/8 x 3 NC	2
5	10832	Cut Washer 1/2 Pl	2
6	10396	Lock Nut 7/8 NC,PL	2
7	10238	Bolt - Carriage 1/2 x 2 1/2 NC,PL	2
8	10395	Nut - Lock 1/2 NC,PL	8
9	0788	Scraper - RH	10
9	0789	Scraper - LH	1
10	10870	Bolt Carriage 1/2 x 1 1/2 NC,PL	1
			2

Optional Auxiliary Frame
100 Series

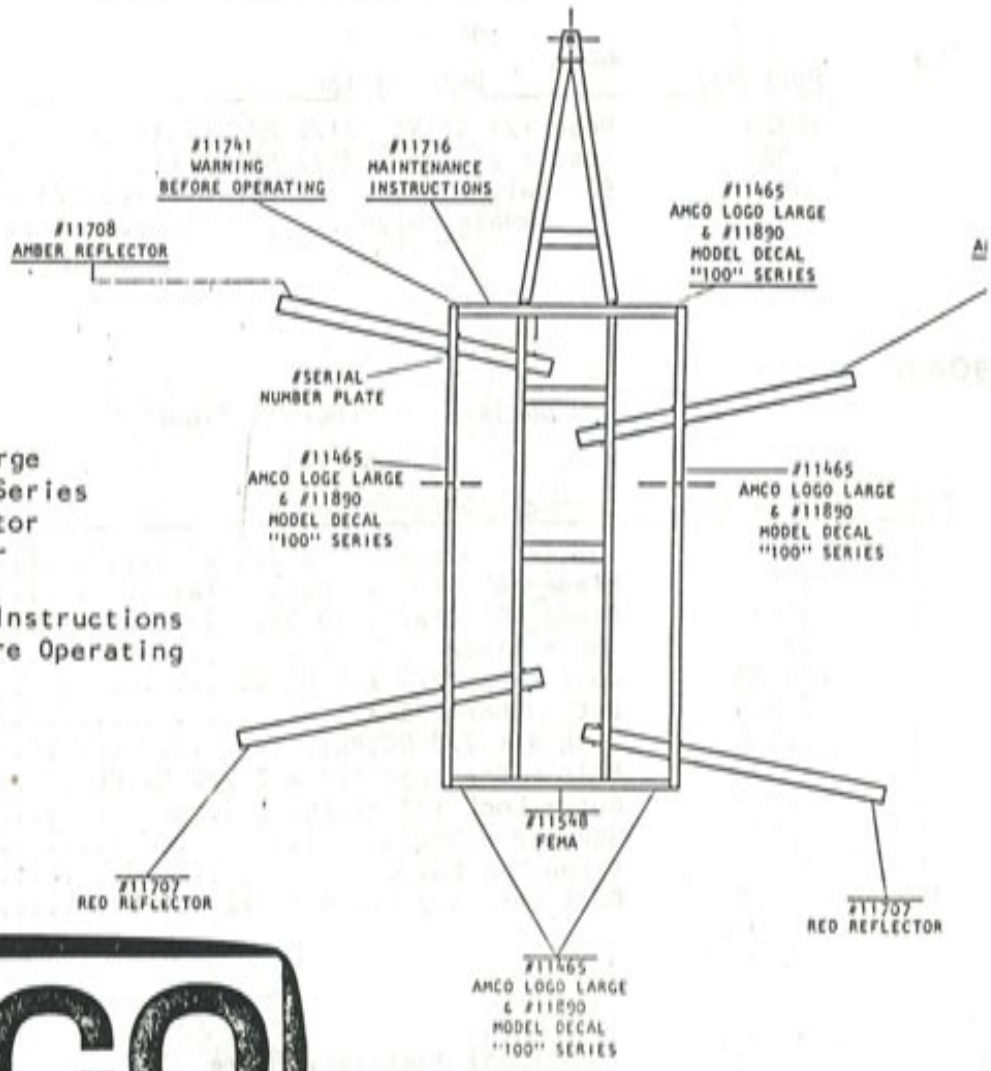
Ref. No.	Part No.	Description	No. Req'd
1	101980	Auxiliary Bar Tube 3 x 2 x 3/16wt. - 120" Lg	2
2	101936	Angle Set Bracket	8
3	10945	Hex Screw 7/8 x 9 NC,PLT,G2	8
4	10396	Lock Nut 7/8 NC,PLT GR8	8

Optional Safety Chain
100 Series

Part No.	Description	No. Req'd
11806	Safety Chain 5/16" Assy	1

DECAL PLACEMENT CHART

QTY.	PART NUMBER	DESCRIPTION
(5)	11465	AMCO Logo Large
(5)	11890	Model "100" Series
(2)	11708	Amber Reflector
(2)	11707	Red Reflector
(1)	11548	FEMA
(1)	11716	Maintenance Instructions
(1)	11741	Warning Before Operating



AMCO
YAZOO CITY, MISS.

100
SERIES

⚠ WARNING

1. **BEFORE OPERATING - STUDY OPERATOR'S MANUAL SAFETY MESSAGES AND SAFE OPERATING PROCEDURES, READ SAFETY SIGNS ON THIS MACHINE.**
2. **TRANSPORT ON PUBLIC ROADS - OBSERVE FEDERAL, STATE AND LOCAL REGULATIONS; DISPLAY SMV EMBLEM; ATTACH PROPER STRENGTH SAFETY CHAIN TO TOWED IMPLEMENT; AND LIMIT MAXIMUM SPEED TO 20mph (32 km/h).**
3. **LOWER OR BLOCK ALL ELEVATED COMPONENTS BEFORE SERVICING OR LEAVING THIS MACHINE.**

11741 321-6025

MAINTENANCE INSTRUCTIONS

1. Keep all bolts tight. Check after first 50 hours or one week's operation. Visually inspect all bolts daily.
2. Keep wheel bearings properly adjusted. Clean and repack each season or every 300 hours. Replace all worn or damaged parts when repairing.
3. Keep gang bolts tight! Tighten after first day's operation. Do not run with loose disk blades. If gang bolts have been operated in a loose condition, retighten, then tighten again after 30 minutes use, again after 4 to 5 hours, and again after 8 to 10 hours.
4. Grease gang bearings daily with a hand grease gun and a good grade of clean, number 2, lithium soap base grease. Always wipe fittings clean before greasing. Apply grease until old or dirty grease is purged from bearings. Avoid high-pressure greasing.
5. Inspect for damaged or misaligned parts if gangs do not turn smoothly by hand. Bearings will fail prematurely if operated with misaligned or damaged gang parts. If a gang is operated for one or more hours following a bearing failure replace all bearings on the gang.

Refer to the operator's manual for other important maintenance instructions.

11716