

BEDDING HIPPER
Rigid and Hydraulic Toolbars
OPERATOR'S MANUAL
PARTS IDENTIFICATION



BEDDING HIPPER

Revised 11/2017

AMCO MANUFACTURING COMPANY

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FOREWORD

You've just joined an exclusive but rapidly growing club.

For our part, we want to welcome you to the group and thank you for buying an AMCO product.

We hope your new AMCO implement will help you achieve both increased productivity and increased efficiency so that you may generate more profit.

This operator's manual has been designed into five major sections: Foreword, Safety Precautions, Operation, Troubleshooting and Parts Identification.

It is important the owner/operator knows the implement model number and serial number. Write the serial and model number in the space provided and use it in all correspondence when referring to the implement.

Throughout the manual, references may be made to left side and right side. These terms are used as viewed from the operator's seat facing the front of the tractor.



This **SAFETY ALERT SYMBOL** indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of **PERSONAL**

INJURY and carefully read the message that follows.

The word **NOTE** is used to convey information that is out of context with the manual text. It contains special information such as specifications,

techniques, reference information and other information of a supplementary nature.

The word **IMPORTANT** is used in the text when immediate damage will occur to the machine due to improper technique or operation. Important will apply to the same information as specified by **NOTE** only of an immediate and urgent nature.

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure and to lubricate and maintain the product according to the maintenance schedule in the operator's manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

It is the user's responsibility to deliver his machine to the AMCO dealer who sold him the product for service or replacement of defective parts that are covered by the warranty policy.

If you are unable to understand or follow the instructions provided in the publication, consult your local AMCO dealer or contact:

AMCO MANUFACTURING, INC.

662-746-4464

800-748-9022

662-746-6825 (FAX)

Website: www.amcomfg.com

E-mail: sales@amcomfg.com

parts@amcomfg.com

AMCO Manufacturing warrants all products manufactured and sold by it against defects in material. This warranty being expressly limited to replacement at the factory of such parts or products as will appear to be defective after inspection. This warranty does not obligate the Company to bear cost of labor in replacement of parts. It is the policy of the company to make improvements without incurring obligations to add them to any unit already sold. No warranty is made or authorized to be made, other than herein set forth. This warranty is in effect for one year after purchase.

Model Number: _____
Serial Number: _____
Dealer: _____

AMCO Manufacturing warrants its own products only and cannot be responsible for damage to equipment on which mounted.

SAFETY

A brief description of signal words that may be used in this manual:

CAUTION: Used as a general reminder of good safety practices or to direct attention to unsafe practices.

WARNING: Denotes a specific potential hazard.

DANGER: Denotes the most serious specific potential hazard.

SAFETY PRECAUTIONS

You can make your farm a safer place to live and work if you observe the safety precautions given. Study these precautions carefully and insist that they be followed by those working with you and for you.



WARNING

Never clean, lubricate or adjust a machine that is in motion. Always lower or block the implement before performing service.

If machine must be serviced in the raised position, jack or block it up to prevent it from accidentally falling and injuring someone.

Do not allow riders on the tractor or implement.

Use speeds and caution dictated by the terrain being traversed. Do not operate on any slope steep enough to cause tipping or loss of control.

Be sure all personnel are clear of the immediate area before operating.

Read and understand the operator's manual and require all other persons who will operate the equipment to do the same.

Be familiar with all the tractor and implement controls and be prepared to stop engine and implements quickly in an emergency.



CAUTION

Consult your implement and tractor operator's manual for correct and safe operating practices.

Beware of towed implement width and allow safe clearance.

FAILURE TO HEED MAY RESULT IN PERSONAL INJURY OR DEATH.

BOLT TORQUE



WARNING

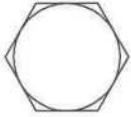
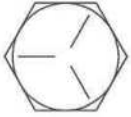

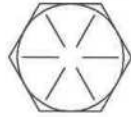
Before making any adjustments, inspections, lubricating or repairing. Slowly lower the Bedding Hipper until it is firmly in contact with the ground. Before dismounting from the tractor

shut off the engine set the parking brake and remove the key.

READ THESE INSTRUCTIONS FIRST:

1. Improperly tightened bolts will result in damage, breakage, expense, and down time.
2. Always replace bolts with the specified grade and type.
3. Torque bolts using a torque wrench properly before first use of the machine and every 2-4 hours of use until you are sure bolts are staying tight.
4. The chart below is a guide for proper torque. Use it unless a specified torque is called out elsewhere in the manual.

The following table shows torque in ft. lbs.

BOLT DIA. AND THREADS PER INCH		 OR 	
	GRADE 2	GRADE 5 A-325	GRADE 8
3/8-16	25	35	50
7/16-14	35	55	80
1/2-13	55	85	125
9/16-12	75	125	175
5/8-11	105	170	235
3/4-10	185	305	425
7/8-9	170	445	690
1-8	260	670	1030
1 1/8-7	365	900	1460
1 1/4-7	515	1275	2060
1 3/8-6	675	1675	2700
1 1/2-6	900	2150	3500
1 3/4-5	1410	3500	5600

Shear Bolt Torque Rating

Metric bolt torque for M12 Class 8.8 zinc plated is 55.1 foot-pounds.

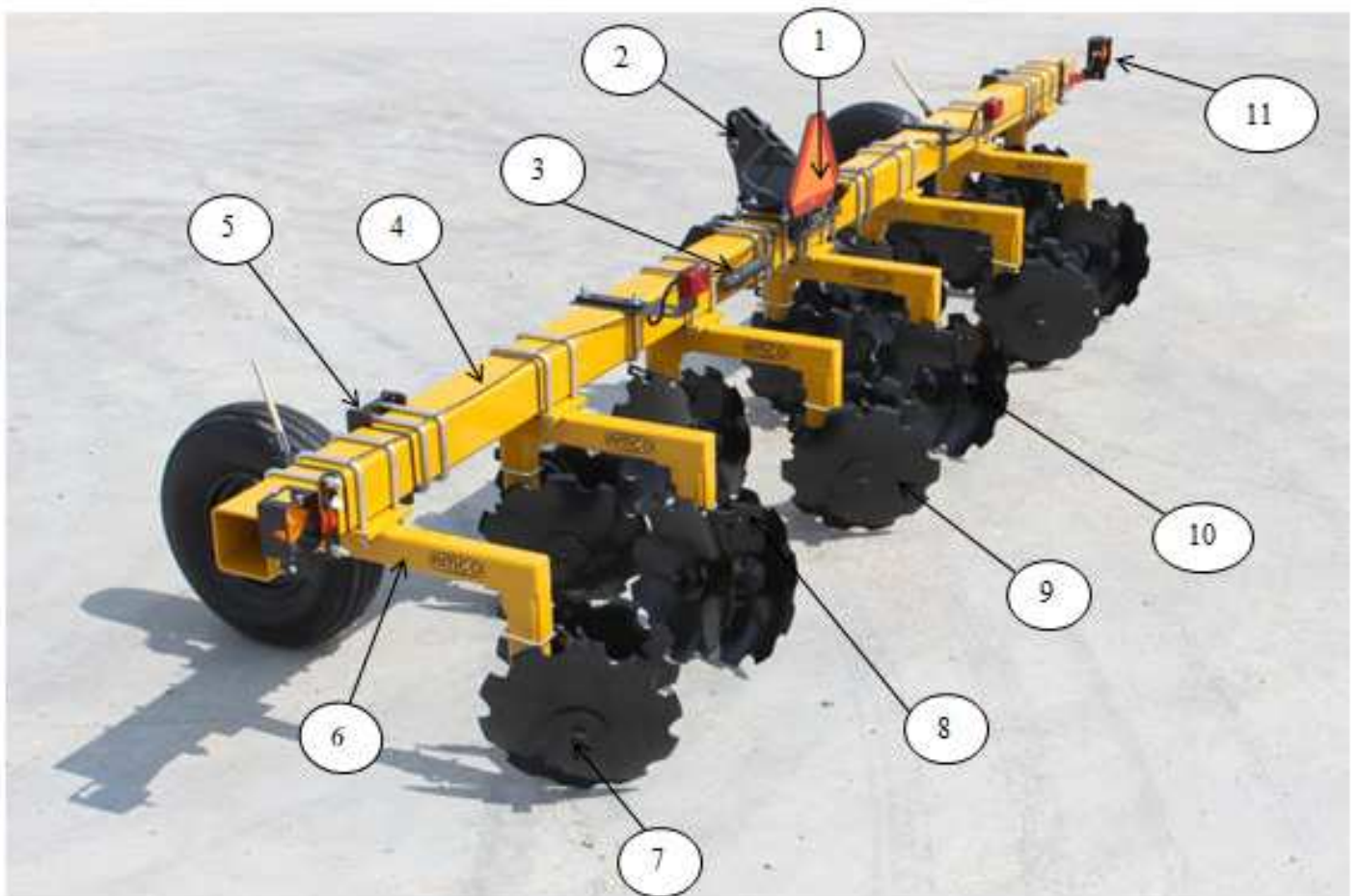
WARNING DECALS

Familiarize yourself with the warning decals affixed to the hipper. It is important for you to operate the hipper safely. Read and follow the safety directions on all warning decals.

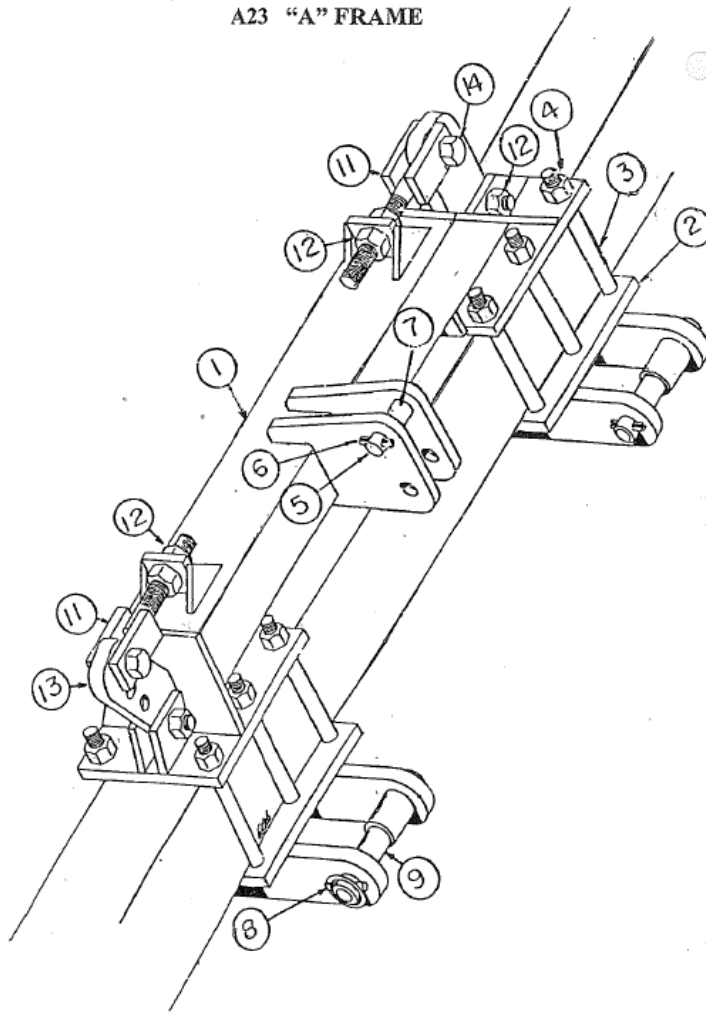
1. For operator safety make sure all warning decals are clean and legible.
2. Immediately replace any damaged or missing warning decals.
3. Never cover or obscure a warning decal.
4. Refer to the Parts Identification Section of this manual for correct warning decal locations.
5. Replacement warning decals can be obtained from your AMCO Dealer or by contacting AMCO at amcomfg.com.

BEDDING HIPPER COMPONENTS

1. SMV sign
2. 3 pt. hitch
3. Operator manual tube
4. Heavy-duty toolbar
5. Ratchet jack adjusting gauge wheel
6. Gang frame
7. Greasable heavy-duty hub with Protect-O-Shield bearings
8. Heavy-duty scraper
9. Disc blades available – smooth or cutout
10. Wear guard
11. Safety lighting

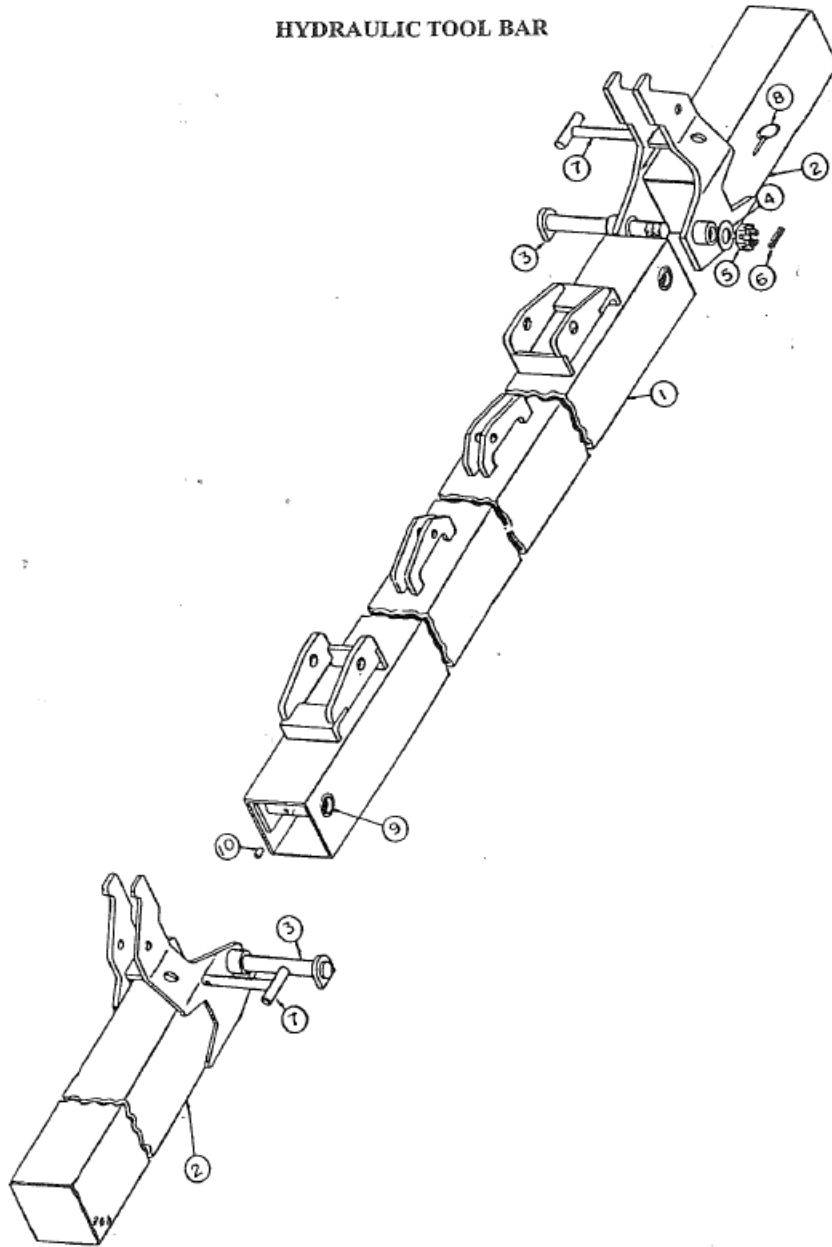


A23 "A" FRAME



AMCO			
A23 "A" FRAME			
Standard equipment for 7 x 7 Hydraulic Fold Tool Bar. Fits ASAE Cat. II and Cat. III quick coupler and Cat. III standard 3-point hitch.			
Ref. No	Part No.	Description	No. Req'd.
1	0959	A-Frame	1
2	20353	Lower Pull Point - LH	1
2	20354	Lower Pull Point - RH	1
3	11102	Hex Screw 7/8" x 10" NC, PL	12
4	10396	Lock Nut 7/8" NC, PL	12
5	6554	Hitch Pin 1" Dia. 5" Long	1
6	10910	Roll Pin	1
7	6570	Bushing 1-1/4" O.D. 2" Long	1
8	10317	Klik Pin	1
9	101739	Lower Hitch Pin 1-7/16" Dia. 9" Long	2
11	20005	Assembly - Adjusting Rod 9-38"	2
11	20006	Assembly - Adjusting Rod 20-3/8"	2
11	20007	Assembly - Adjusting Rod 33-3/8"	2
12	10868	Lock Nut 1" NC, PL	8
13	102496	Cylinder Mount	2
14	10373	Hex Screw 1" x 3-12" NC, PL	4
15	11697	Klik Pin 7/16" Dia. (Not Shown)	2
NOTE: DA-01-0096 - Complete "A" Frame Bundle			

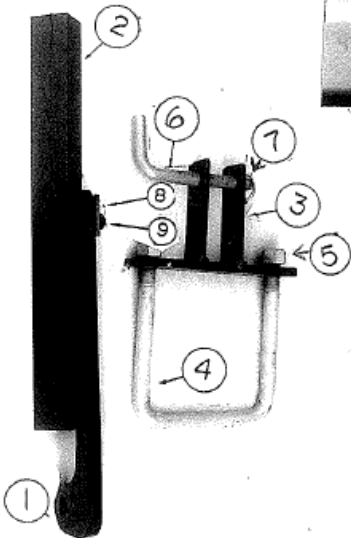
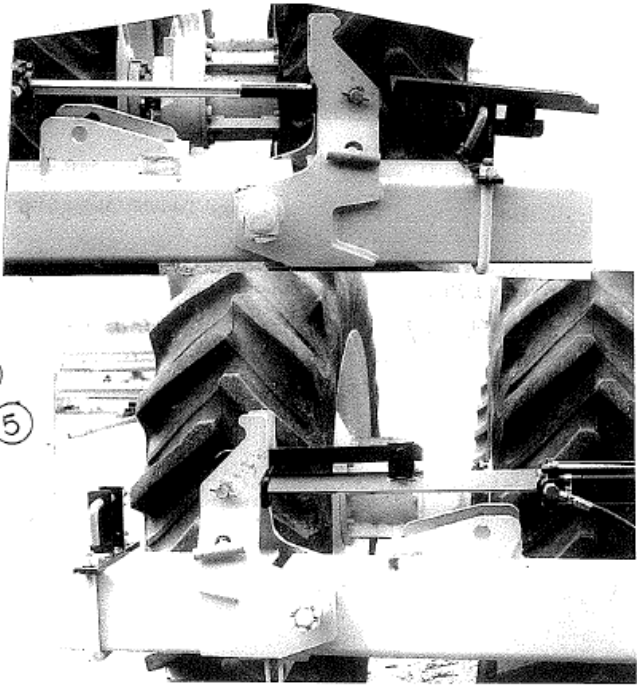
HYDRAULIC TOOL BAR



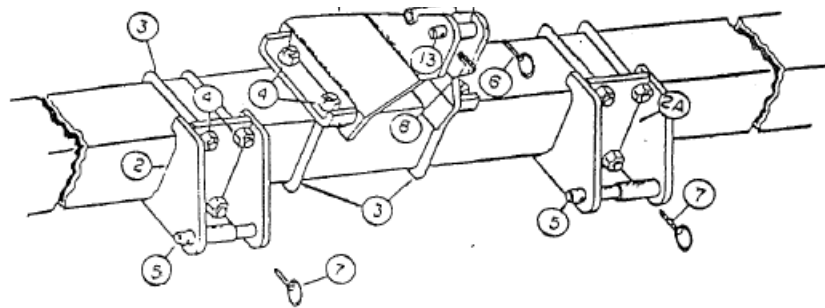
AMCO HYDRAULIC TOOL BAR				
Ref. No	Part No.	Description	No.	
			FHB6-5	FHB8-6A
1	0996	Tool Bar - Center Section 126"	1	0
1	20615	Tool Bar - Center Section 186 1/2"	0	1
2	20008	Wing Tool Bar 69"	2	0
2	20616	Wing Tool Bar 89-1/4"	0	2
3	0593	Wing Pivot Pin 1-1/2" x 12-11/16"	2	2
4	10872	Cut Washer 1-3/8" PL	2	2
5	10232	Hex Nut 1-1/2" NC, Slotted	2	2
6	10910	Roll Pin 5/16" x 2-1/4"	2	2
7	0618	Pivot Pin 1" x 8-1/4"	2	2
8	10317	Klik Pin 1/4"	2	2
9	11500	Bushing 1-3/4" O.D. x 1-1/2" I.D. x 2"	4	4
10	12384	Grease Fitting 1/8" NPT Straight	2	2
11	100578	Pin (Not Shown)	2	2
12	10910	Roll Pin (Not Shown)	4	4

LOCK DOWN KIT

<u>Ref. #</u> <u>Required</u>	<u>Part #</u>	<u>Description</u>	<u>No.</u>
1	102506	Hold Down Bar	2
2	20575	Bracket	2
3	20576	Bracket	2
4	11399	U-Bolt	2
5	10396	Lock Nut	4
6	100683	Lock Pin	2
7	10317	Klik Pin	2
8	10587	1/2" x 2" NC, PLT. Hex Bolt	2
9	10395	1/2" NC, PLT. Lock Nut	2
	DA-01-0110	Complete Bundle	

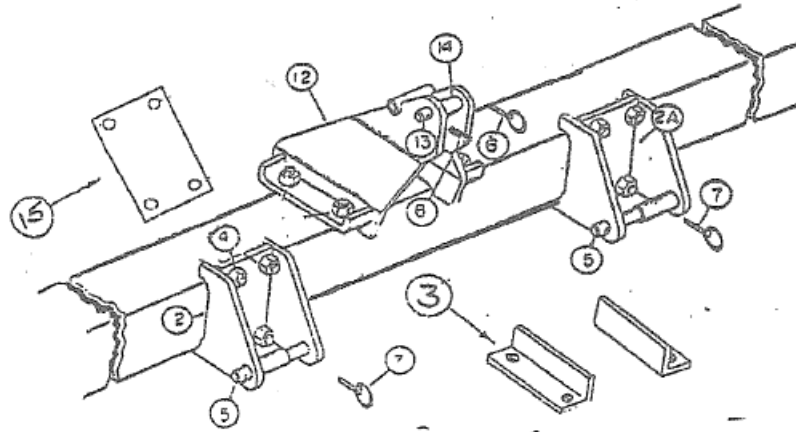
AMCO BEDDING HIPPER			
A21M "A" FRAME			
7 x 7			
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
2	20376	Bottom Hitch - RH	1
2A	20375	Bottom Hitch - LH	1
3	11399	U-Bolt 7/8" Dia.	6
4	10396	Lock Nut 7/8" NC, PLT, Gr. B	12
5	101739	Lower Hitch Pin	2
6	10317	Klik Pin - 1/4"	1
7	11697	Klik Pin - 7/16"	2
8	10910	Roll Pin - 5/16" x 2-1/4"	1
12	20320	Top Hitch	1
13	101333	Hitch Pin - 1" Dia.	1
14	6570	Buxhing - 1-1/4" Dia. - 2" Long	1



AMCO BEDDING HIPPER			
A24M "A" FRAME			
7 x 7			
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
2	20376	Bottom Hitch - RH	1
2A	20375	Bottom Hitch - LH	1
3	101984	3" x 3" 1/2" Angle	2
4	10396	Lock Nut 7/8" NC, PLT, Gr. B	12
5	101739	Lower Hitch Pin	2
6	10317	Klik Pin - 1/4"	1
7	11697	Klik Pin - 7/16"	2
8	10910	Roll Pin - 5/16" x 2-1/4"	1
12	20320	Top Hitch	1
13	101333	Hitch Pin - 1" Dia.	1
14	6570	Buxhing - 1-1/4" Dia. - 2" Long	1
15	101886	Top Plate - 5/8" x 6" x 10-1/8" Long	2
16	12160	Hex Bolt 7/8" x 9-1/2" NC, PLT, Gr. 8 (Not Shown)	12

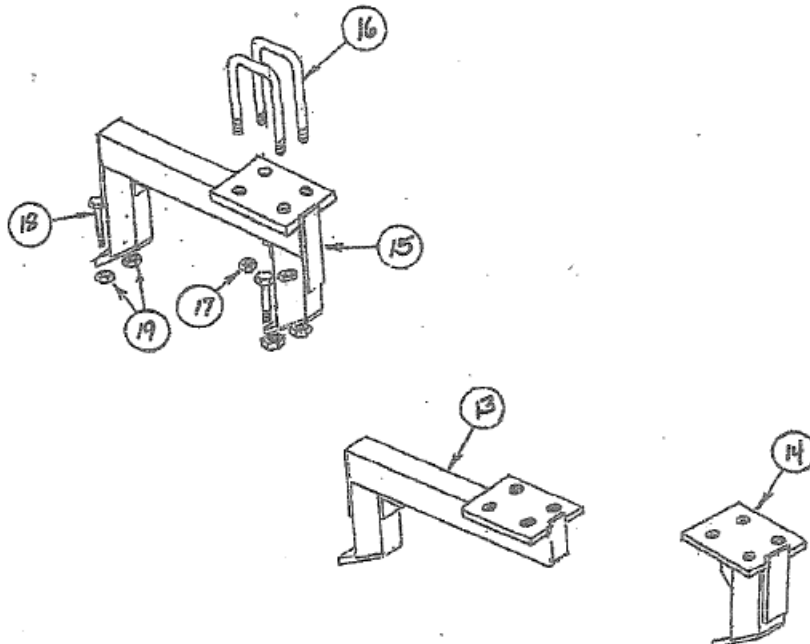
NOTE: Beginning with Serial # 94120512 - order above Parts.

NOTE: DE-01-0020 - Complete A Frame Bundle.



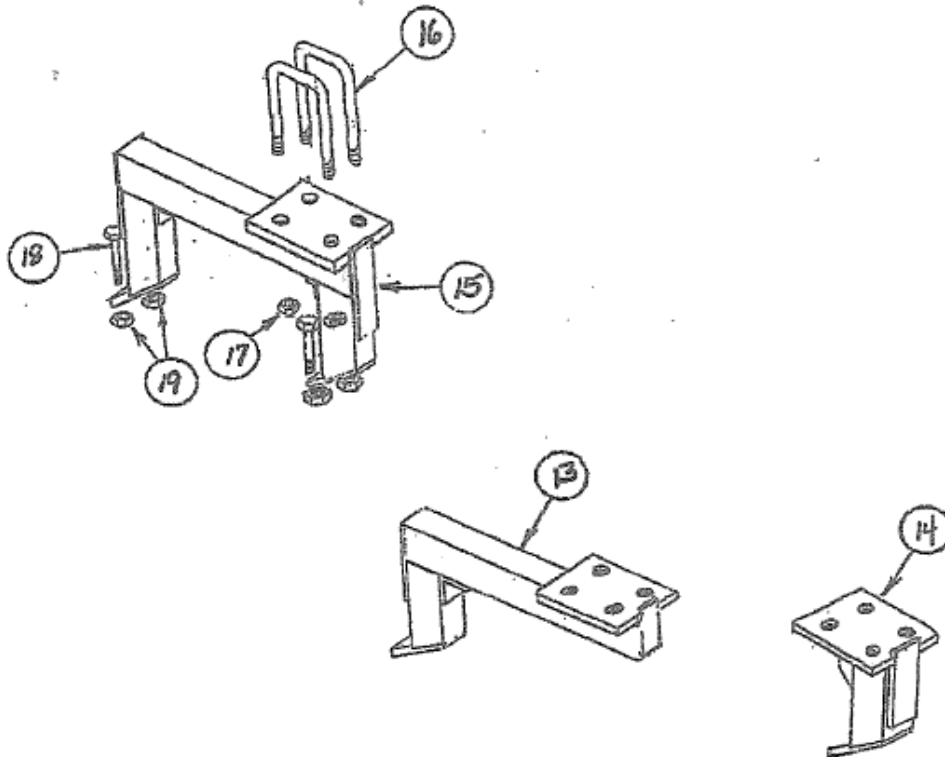
AMCO BEDDING HIPPER GANGS & HIPPER SHANKS			
Ref. No.	Part No.	Description	No. Req'd.
13	DA-01-0053	Gang Frame -Long w/ 5/8" Holes	1
14	DA-01-0052	Gang Frame - Short w/ 5/8" Holes	1
15	DA-01-0051	Gang Frame - Dual w/ 5/8" Holes	1
16	9560	U-bolt 7/8" Dia. - 7 x 4 Bar	2
16	11399	U-Bolt 7/8" Dia. - 7 x 7 Bar (Not Shown)	2
17	11691	Flange Lock Nut 7/8" NC, PL	4
18	12076	Hex Bolt 5/8" x 2-3/4" Gr. 8	2
19	10299	Lock Nut 5/8" NC, PL	2

NOTE: Use these parts before Serial No. 08080436.



AMCO BEDDING HIPPER GANGS & HIPPER SHANKS			
Ref. No.	Part No.	Description	No. Req'd.
13	DA-01-0057	Gang Frame -Long w/ 3/4" Holes	1
14	DA-01-0056	Gang Frame - Short w/ 3/4" Holes	1
15	DA-01-0055	Gang Frame - Dual w/ 3/4" Holes	1
16	9560	U-bolt 7/8" Dia. - 7 x 4 Bar	2
16	11399	U-Bolt 7/8" Dia. - 7 x 7 Bar (Not Shown)	2
17	11691	Flange Lock Nut 7/8" NC, PL	4
18	12460	Hex Bolt 3/4" x 2-3/4" Gr. 8 (Replaces #12076)	2
19	10300	Lock Nut 3/4" NC, PL (Replaces # 10299)	2

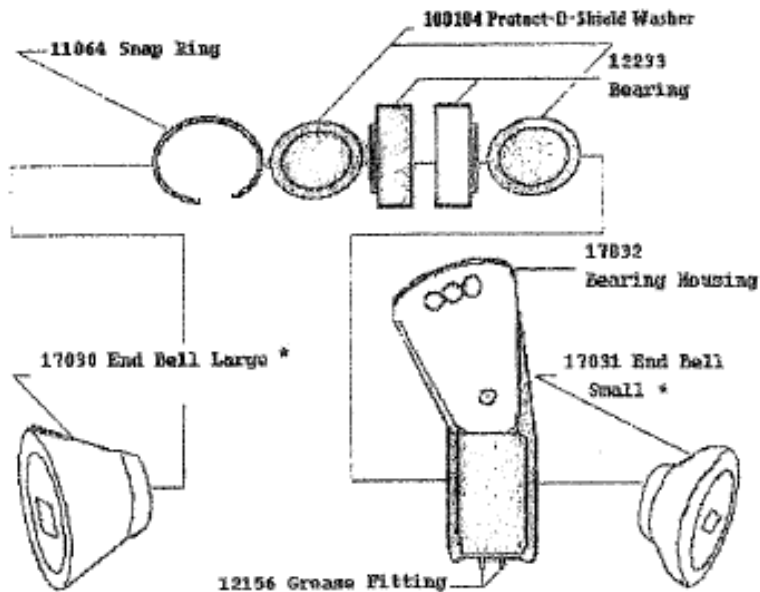
NOTE: Use these parts before Serial No. 08080436.



**AMCO BEDDING HIPPER
GANGS -- 1-1/2" SQUARE
HEAVY DUTY -- WITH PROTECTO SHEILD WASHERS**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	20561	Axle	1
2	17031	End Bell - Small	1
3	17030	End Bell - Large	1
4	FB-09-0025	Bearing and Housing Assembly	1
5	17032A	Bearing Housing with 3/4" Holes	1
6	12233	Bearing	2
7	11064	Snap Ring	1
8	1222A	End Gang Washer	1
9	5622A	Lock Plate	1
	100098	Bearing Plate (Not Shown)	1
	100099	Spacer Plate (Not Shown)	1
	10710	Carriage Bolt 1/2" x 2" Gr. 5 (Not Shown)	1
	10395	Lock Nut 1/2" NC (Not Shown)	1
10	10489	Hex Nut 1-1/2" NF	1
11	9482	18" x 1/4" Plain Blade (Standard)	1
12	11588	20" x 1/4" Plain Blade (Standard)	1
	11589	20" x 1/4" Cut Out Blade (Optional)	1
	3275	22" x 1/4" Cut Out Blade (Optional)	1
	3276	22" x 1/4" Plain Blade (Optional)	1
	3255	24" x 1/4" Plain Blade (Optional)	1
	3250	24" x 1/4" Cut Out Blade (Optional)	1
18	12076	Hex Bolt 5/8" x 2-3/4" Gr. 8	2
19	10299	Lock Nut 5/8" NC, PL	2
20	12156	1/4" (28 Threads) Self-Tapping Grease Fitting (Not Shown)	2
21	100104	Protect-O-Shield Washers	2

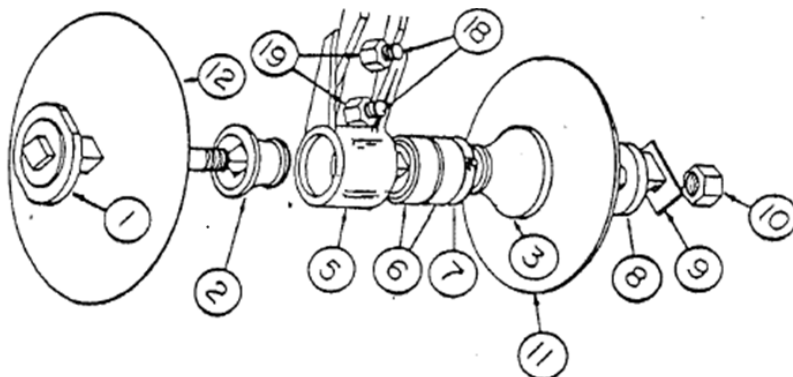
NOTE: Use these parts beginning Serial No. 08080436.



BEDDING HIPPER GANG

1-1/2" Square Heavy Duty

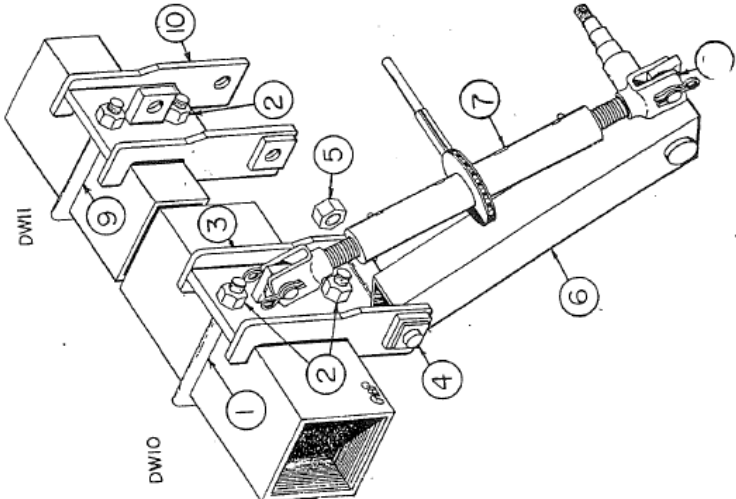
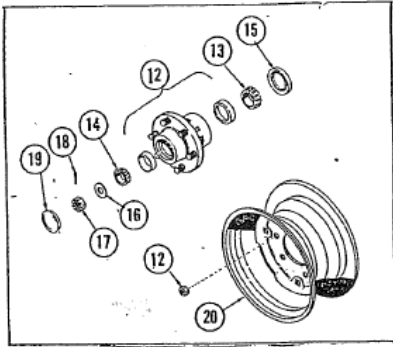
Ref. No.	Part No.	Description	No. Req'd
1	20561	Assy. Axle	1
2	17031	End Bell - Small	1
3	17030	End Bell - Large (Replaces 9902)	1
4	FB-09-0025A	Sub. Assy. Bearing	1
5	17032A	Brg. Hsg	1
6	12233	Bearing	2
7	11064	Snap Ring	1
8	1222A	End Gang Washer	1
9	5622A	Lock Plate	1
	100098	Bearing Plate (Not Shown)	1
	100099	Spacer Plate (Not Shown)	1
	10710	Carr. Bolt 1/2 x 2 Gr. 5 (Not Shown)	1
	10395	1/2" NC Lock Nut (Not Shown)	1
10	10489	1-1/2 NF Hex Nut	1
11	9482	18" x 3/16 Plain (Std.)	1
12	11588	20" x 1/4 Plain (Std.)	1
	11589	20" x 1/4 C.O. (Optional)	1
	3275	22" x 1/4 C.O. (Optional)	1
	3276	22" x 1/4 Plain (Optional)	1
	3255	24" x 1/4 Plain (Optional)	1
	3250	24" x 1/4 C.O. (Optional)	1
18A	12460	3/4" X 2-3/4" NC Hex Cap Gr. 8	2
18B	12461	3/4" x 3-1/4" NC Hex Cap Gr. 8	
19	10300	Lock Nut 3/4" NC	2
	102786	Wear Guard LH (Not Shown)	1
	102787	Wear Guard RH (Not Shown)	1
20	12156	1/4"-28 Threads Self Tapping Grease Fitting (Not Shown)	2



DEPTH GAUGE WHEELS

AMCO BEDDING HIPPER DEPTH GAUGE WHEELS (OPTIONAL)			
Ref. No.	Part No.	Description	No. Req'd.
1	11399	U-Bolt 7/8" Dia. - 7" x 7" Bar	2
2	10396	Lock Nut 7/8" NC, PL	4
3	0973	Bottom Bracket - 7" x 7" Bar	1
4	20123	Pivot Pin	1
5	10868	Lock Nut 1" NC, PL	1
6	20124	Depth Gauge Leg- RH or LH	1
7	11494	Ratcheting Jack	1
8	10879	Flat Washer 1" USS, PL	4
9	11495	U-Bolt 7/8" Dia. 4" x 7" Bar	1
10	0993	Bottom Bracket - 4" x 7" Bar	1
11	11396	Pin 1" Dia. X 2-7/8" (with 2 Hair Pin Clips)	2
12	11644	Hub - (F & H # 108675) with Cups, Lug Bolts and Nuts	1
13	10353	Cone - Inner (Timken # LM48548)	1
14	10295	Cone - Outer (Timken # LM67048)	1
15	11017	Grease Seal (C/R # 17618)	1
16	10263	Spindle Washer 7/8"	1
17	10264	Spindle Nut 7/8" NF	1
18	10291	Cotter Pin 5/32" x 1-1/4"	1
19	10356	Hub Cap	1
20	10265	Wheel 15" x 6" - 6 Hole Wheel	1

NOTE: Parts list above compose one (1) Depth Gauge.

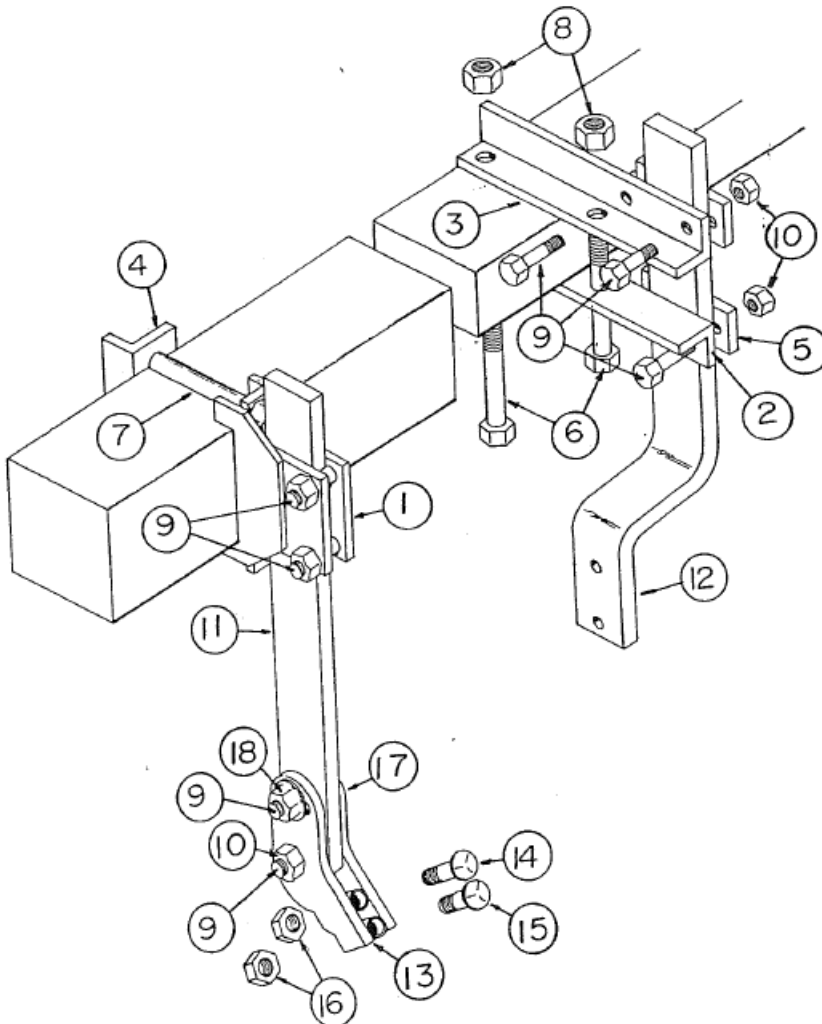


**AMCO Bedding Hippers
SWEEP ATTACHEMNTS
(OPTIONAL)**

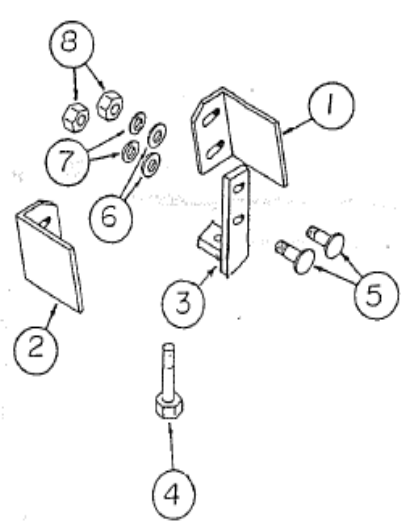
Ref. No.	Part No.	Description	Req'd.	
			4 X 7 BAR	7 X 7 BAR
1	20071	Anchor Bar	0	1
2	101068	Clamp Bar - RH	1	0
3	101069	Clamp Bar - LH	1	0
4	9007	Clamp Strap	0	1
5	101067	Clamp Strap	2	0
6	10591	Hex Screw 7/8" x 6" NC, PL, Gr. 5	2	0
7	11102	Hex Screw 7/8" x 10" NC, PL	0	2
8	10396	Lock Nut 7/8" NC, PL	2	2
9	10201	Hex Screw 5/8" x 3" NC, PL, Gr. 5	6	4
10	10299	Lock Nut 5/8" NC, PL	5	3
11	100912	Shank - Straight	1	1
12	100913	Shank - Offset	1	1
13	20022	Sweep Mount	1	1
14	11653	Plow Bolt 1/2" x 3" NC, PL, Gr. 5	1	1
15	10420	Plow Bolt 1/2" x 2-1/4" NC, PL, Gr. 5	1	1
16	10395	Lock Nut 1/2" NC, PL	1	1
17	10059	Flat Washer 5/8" PL (Not Shown)	1	1
18	11647	Flange Lock Nut 5/8" NC, PL	1	1

NOTE: Sweep attachments do not include sweeps.

SWEEP ATTACHEMNTS



AMCO Bedding Hippers SCRAPERS			
(before serial # 97010031 order the following parts)			
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	7025	Scraper Blade - RH	1
2	7026	Scraper Blade - LH	1
3	20528	Scraper Leg	2
4	12178	Hex Screw - 5/8" x 3-1/4" NC, PLT, Gr. 5	2
5	10068	Carriage Screw - 7/16" x 1-1/2" NC, PL	4
6	10013	Flat Washer - 7/16" PL	4
7	10619	Lock Washer - 7/16" PL	4
8	10618	Hex Nut - 7/16" NC, PL	4



AMCO BEDDING HIPPER SCRAPERS		
<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
20585	Scraper - RH	2
20586	Scraper - LH	2
12213	U-Bolt - 1/2" x 6" x 4-1/8"	4
10395	Lock Nut - 1-2" NC, PLT, Gr. B	8
10832	Cut Washer - 1/2" PLT	8
Replacement Parts also available:		
102532	Scraper Leg (for 20585 & 20586)	1
102533	Scraper Blade (for 20585 & 2086)	1



**AMCO BEDDING HIPPER
WEAR GUARD FOR HIPPER HOUSING (2-ROWS)**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	102526	Wear Guard - LH (Fits Assy. With 5/8" Holes)	2
2	102527	Wear Guard - LH (Fits Assy. With 5/8" Holes)	2
3	12178	Hex Bolt 5/8" x 3-1/4" NC, PL, Gr. 8	4
4	12076	Hex Bolt 5/8" x 2-3/4" NC, PL, Gr. 8	4
5	10299	Lock Nut 5/8" NC, PL, Gr. 8	8

NOTE: Use these parts before Serial # 08080436

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No. Req'd.</u>
1	102786	Wear Guard - LH (Fits Assy. With 3/4" Holes)	2
2	102787	Wear Guard - LH (Fits Assy. With 3/4" Holes)	2
3	12461	Hex Bolt 3/4" x 3-1/4" NC, PL, Gr. 8	4
4	12460	Hex Bolt 3/4" x 2-3/4" NC, PL, Gr. 8	4
5	10300	Lock Nut 3/4" NC, PL, Gr. 8	8

NOTE: Use these parts beginning with Serial # 08080436

HITCHING THE BEDDING HIPPER TO THE TRACTOR



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.



IMPORTANT

Using a 3-point quick hitch will make hitching and unhitching a one person operation plus add a measure of safety.



CAUTION

Do not stand or let anyone else stand between the tractor and Bedding Hipper when hitching to it.



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.

FOR TRACTORS WITHOUT 3-POINT QUICK HITCHES

1. Raise or lower tractor 3-point lift links as needed to match the lower Bedding Hipper hitch pin holes. Install hitch pins.
2. Attach the upper 3-point hitch adjusting link to the Bedding Hipper.
3. Plug in hazard lighting
4. On folding models connect the hydraulic hoses
5. Slowly raise the Bedding Hipper. Watch for tractor and tractor tire interference.
6. Pin up the parking stands.
7. Adjust the upper 3-point hitch adjusting link so that top of the Bedding Hipper is level fore and aft.

FOR TRACTORS WITH 3-POINT QUICK HITCHES

HITCH: The AMCO Bedding Hipper is designed to hitch to ASAE Standard Category III three-point hitches and to ASAE Standard Category III quick couplers.

1. Release locks on the lower lift hooks.
2. Position the lower lift hooks under the Bedding Hipper lower hitch pins.
3. Raise the tractor 3-point quick hitch to engage the lower Bedding Hipper hitch pins. The upper center link hook should be fully engaged with the Bedding Hipper center link pin.



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.

4. Latch the lower lift hooks locks
5. Plug in hazard lighting
6. On folding models connect the hydraulic hoses
7. Slowly raise the Bedding Hipper. Watch for tractor and tractor tire interference.



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.

7. Pin up the parking stands.
8. Adjust the upper 3-point hitch adjusting link so that top of the Bedding Hipper is level fore and aft.

UNHITCHING THE BEDDING HIPPER FROM THE TRACTOR



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.



CAUTION

After parking the Bedding Hipper, always check to make sure that it cannot be overturned either forward or backward accidentally.

FOR TRACTORS WITHOUT 3-POINT QUICK HITCHES

1. Lower parking stands and securely pin into position.
2. Slowly lower the Bedding Hipper until the parking stands and Bedding Hipper are on a firm level surface.
3. Unplug hazard lighting
4. On folding models connect the hydraulic hoses



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.

5. Unpin the tractor lift arms from the Bedding Hipper
6. Disconnect the upper 3-point hitch adjusting link from the Bedding Hipper
7. Carefully pull the tractor forward away from the Bedding Hipper

FOR TRACTORS WITH 3-POINT QUICK HITCHES

1. Lower parking stands and securely pin into position.
2. Slowly lower the Bedding Hipper until the parking stands and Bedding

- Hipper are on a firm level surface
3. Unplug hazard lighting
 4. Disconnect the hydraulic hoses on folding models
 5. Release locks on the lower lift hooks
 6. Lower the 3-point quick hitch until all of the lift hooks are disconnected from the Bedding Hipper. Then slowly pull away

CHECKLIST BEFORE USING THE BEDDING HIPPER

CAUTION

To insure safe steering at all times install proper ballast on the front of the tractor

1. Make sure the Bedding Hipper is properly attached to the tractor
2. Read and understand the operator's manual.
3. Read and familiarize yourself with the safety and warning decals on the Bedding Hipper.
4. Check all bolts to verify proper torque.
5. Level the Bedding Hipper toolbar fore-and-aft so that all of the beds have the same height.

WARNING

Never operate the Bedding Hipper at excessive ground speed. Excessive ground speed can cause personal injury or damage to your tractor and Bedding Hipper!

6. Check the Bedding Hipper for parts that are broken or have excessive wear. If any are found replace them.
7. Check to make sure the tractor 3-point hitch is securely attached to the Bedding Hipper.
8. Verify the Bedding Hipper has been properly lubricated.

TRANSPORTATION

CAUTION

Always comply with all federal, state and local laws when traveling on public roads whether at night or during the day. Use accessory lights and devices for adequate warning to operators of other vehicles.



WARNING

Before transporting over public roads, always lock folding wings in the raised position. Failure to do so could result in serious accidental injury.



WARNING

Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.

1. When raising the Bedding Hipper to transport, be sure the parking stands are pinned in the full up position.
2. Raise the gangs for maximum ground clearance
3. Fold toolbar wings on hydraulic folding models. Install transport wing locks.
4. Be sure to reduce tractor ground speed when turning. Leave enough clearance so that the Bedding Hipper does not contact obstacles such as buildings, trees, or fences.
5. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely. When traveling over rough or hilly terrain, shift tractor to a lower gear.

LUBRICATION SCHEDULE

Grease weekly or after (25) hours of operation under normal conditions. It is recommended to grease at the beginning and end of each use season as well.

1. Gang Bearings.

Protect-O-Shield bearings should be greased until grease “pops” out around the bearings. The bearing will thus be purged of any dirt or foreign matter. The Protect-O-

Shield prevents any possibility of blown seals. The bearing will be purged of any dirt or foreign matter. The Protect-O-Shield prevents any possibility of blown seals.

Grease weekly or after (50) hours of operation under normal conditions. It is recommended to grease at the beginning and end of each use season as well.

1. Wing pivot pins
2. Ratchet Jack

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. Do not run with loose disc blades. Keep gang bolts tight! Tighten gang bolts to 800 ft. lbs. of torque.
3. Grease pivot pins and ratchet jack every week or 50 hours, at the start of each season and at the end of each season. Grease gangs every 25 hours of operation, at the start of each season, and at the end of each season.
4. **Disc Blade, Bearing and End Bell Replacement**
 - A. Remove the bearing housing from the gang frame.
 - B. Remove the gang nut lock plate.
 - C. Remove the gang hex nut from the end of the shaft. NOTE: Clean visible threads and apply penetrating fluid to aid in removal of nut without damaging axle threads.
 - D. Slide off the bearing, end bells, and blades.
 - E. Avoid thread damage.
 - F. Tear the entire gang down and clean off all parts. Check disc axle for straightness. Bowed, bent or worn axles must be replaced.
 - G. Carefully check all end bells. The large end must contact the disc 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.
 - H. Check all the bearings. Running a Hipper for one hour or more after bearing failure will seriously damage other parts on the gang.
 - I. To replace the bearing, the snap ring must be covered. The old bearing should 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 bearings straight into the housing. Always press against the outer race of the

- bearing. **NEVER** press against the seal or inner race of the bearing. Press the outer edges of the Protect-O-Shield washer to remove and replace bearings from the 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.
- J. After cleaning, checking and replacing all damaged parts, the gang should be assembled. Be sure the snap ring in the bearing housing is turned toward the convex (back) side of the disc blade. The gang bolt nut should be torqued to 800 ft./lbs. The axle nut should be locked in place with the locking plate parts (9).
 - K. After the gang is assembled, it should be attached to the Hipper. The gang should be rotated 4 or 5 complete revolutions to be sure that all parts are aligned and the gang turns freely.
 - L. Grease both fittings until grease is visible at the Protect-O-Shield Washer. It is essential that gang bolts be kept tight to prevent axle bending, blade breakage, end bell breakage and damage to other gang parts. Gang parts tend to wear on a bevel when the hipper 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 re-torqued 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.
5. **Disc Blade Scraper Repair:** Bent scraper blades or legs 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 1/4" from the disc blades. The scrapers can be adjusted by loosening the mount bolt and sliding the scraper to the proper position, then tightening the mount bolt. Do not allow the scraper blades to run on the end bells as immediate damage to end bell will occur.

BEDDING HIPPER EXTENDED STORAGE



CAUTION

Raise the Bedding Hipper high enough so both parking stands can be securely pinned to prevent the Bedding Hipper from falling forward while unhitching or in storage. Before dismounting from the tractor shut off the engine set the parking brake and remove the key.



CAUTION

After parking the Bedding Hipper, always check to make sure that it cannot be overturned either forward or backward accidentally.

1. Before unhitching the Bedding Hipper from the tractor clean off any dirt or debris that may have accumulated on any of the moving parts. Scrape off any compacted dirt from the disc blades. Then use a power washer to clean the Bedding Hipper.
2. Thoroughly inspect the entire Bedding Hipper for missing, worn or damaged parts including decals. Repair or replace parts during the “off season” to assure dependable, trouble-free performance during the use season.
3. Lubricate the Bedding Hipper as detailed in the Maintenance & Lubrication section of this manual.
4. Apply a rust preventative protective coating to the disc blades. Do the same for any exposed hydraulic cylinder rods or completely retract the cylinder rods.
5. The Bedding Hipper should be stored on a solid flat surface in a dry location. It is best to store the Bedding Hipper inside a storage building. Doing so will reduce future maintenance requirements and prolong the life of the Bedding Hipper.
6. To complete unhitching from the tractor follow the instructions in the Unhitching From The Tractor section in this manual.

ASSEMBLY INSTRUCTIONS



CAUTION

Use sturdy assembly stands with the correct weight load bearing capability. Secure the main frame to the assembly stands at least 32” high.



CAUTION

Always wear hand protection such as gloves when working around the disc blades to avoid coming in contact with sharp edges

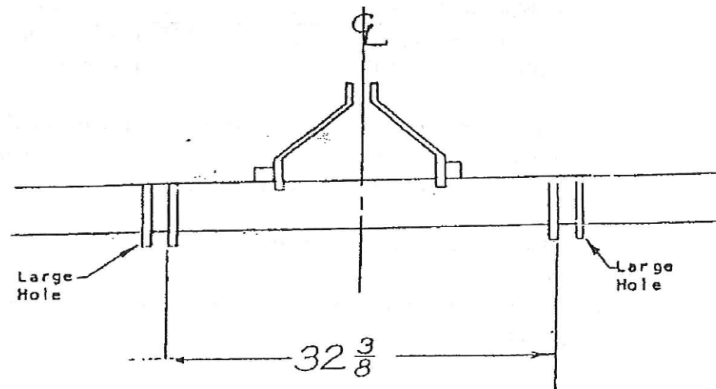
The hipper is shipped from the factory with maximum pre-assembly in the following bundles:

- A. A-Frame
- B. Tool Bar – Rigid or Hydraulic Folding
- C. Gang Frames – Short, Long and Dual
- D. Gangs
- E. Gauge Wheels

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

1. Select a clean level area for assembly. Place and secure the toolbar on sturdy stands at least 32" high.
2. Locate the center of the tool bar and mark with chalk.
3. Position A21M A-Frame exactly on center of hipper and attach with 7/8" U-Bolts. SEE DIAGRAM for locating bottom hitches.

IMPORTANT: Position right hand and left hand bottom hitches so that the large holes are to the outside.



Step 3 Diagram

4. Attach the depth gauge wheels to the toolbar with 7/8" U-Bolts to run in desired furrow. Mount 9.5L x 15 tires. Inflate to the correct PSI recommended by the tire manufacturer.

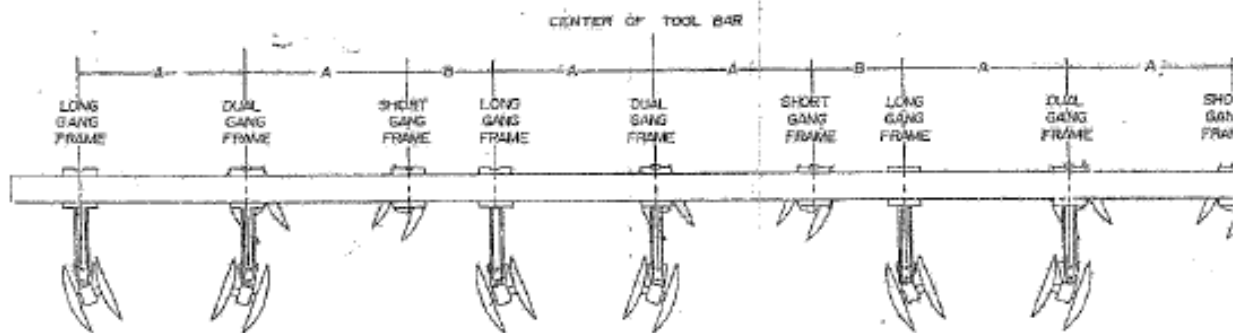
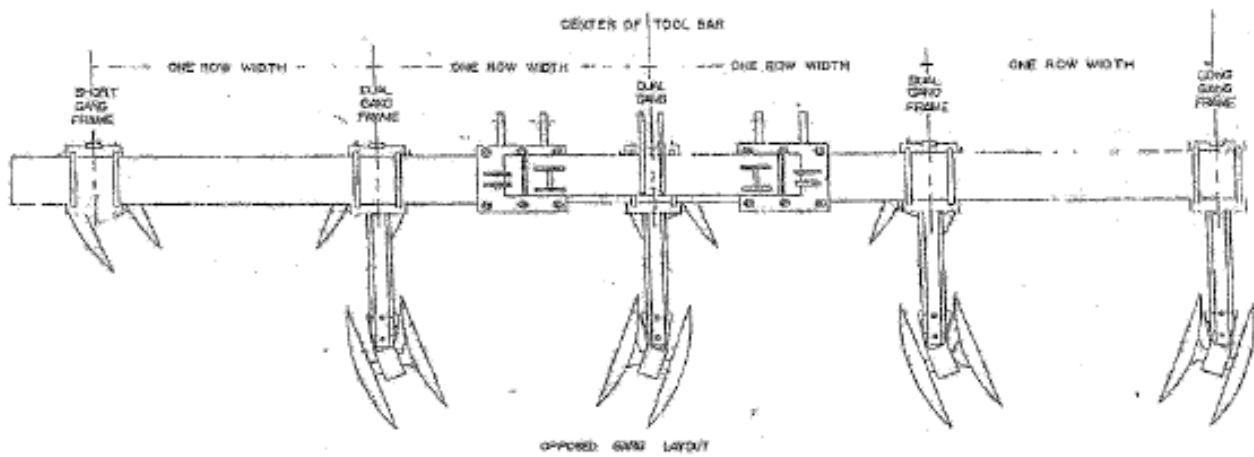
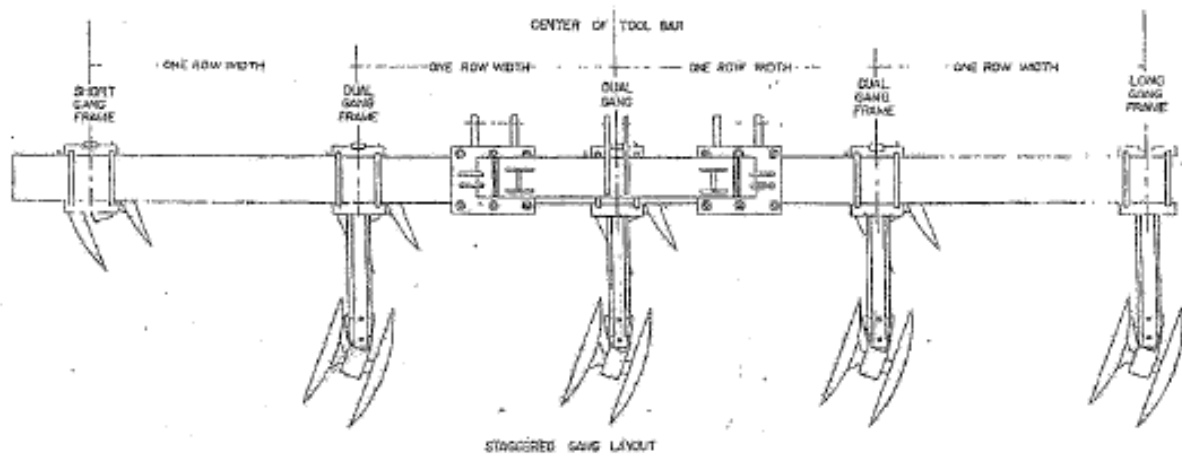


5. Measure from the center of the tool bar for row spacing desired and mark the hipper gang location for each row with chalk. Refer to diagrams on the following pages for gang layout of conventional row spacing.
6. Hipper model SB6-5A is designed to produce beds for a wide-bed cultural system consisting of two rows, 38 to 40 inches apart, alternating with a 60 to 64 inch skip. This row pattern is similar to 2 x 1 skip row, except that the skip is narrower than one row width. Hence, the system is referred to as a narrow skip-row pattern. The gang layout diagram for a narrow skip, 6-row Bedding Hipper with spacing combinations of 38/60, 38/62, 38/64, 40/60, 40/62, and 40/64 is shown on the following pages.
7. On Narrow Skip Row models, mount the gang frames to the tool bar as shown in the gang layout diagram on the following pages with 7/8" U-Bolts. Mount all gangs on the center of the row spacing mark with the legs of the gang frame pointed rearward.
8. On conventional row spacing models, mount the short gang frame with 7/8" U-Bolts in the outside row on the left hand side of the bar when facing the direction of travel. Mount all gangs on the center of the row spacing mark with the legs of the gang frame pointed rearward.
9. Mount the long gang frame with 7/8" U-Bolts on the right outside row spacing.
10. Mount the dual gang frames with 7/8" U-Bolts on the remaining row locations. Tighten all bolts.
11. The gangs may be mounted on the gang frames in an opposed or in a staggered configuration. Staggered gangs are recommended to prevent clogging in heavy, moist soils and trashy conditions. Staggered gangs layer the soil into a smooth, somewhat rounded bed. Opposed gangs are recommended in light soils and clean, dry conditions. Opposed gangs tend to make higher, pointed beds and generally operate well at high speeds. The gangs may also be mounted to the gang frame at three pitches. The variable pitch allows a wide variety of bed shapes. Generally, large pitch angles build high beds. Shallow pitch angles build shallow beds.
12. On conventional row spacing models with opposed gangs, mount the gangs to the gang frame as illustrated in the diagram on page 20 with 5/8" x 2-1/2" hex screws.
13. For staggered gangs, mount the gangs as illustrated in the diagram on the following page.
14. On narrow skip row models with opposed gangs, mount the gangs to the gang frame as illustrated on the following pages.
15. For staggered gangs on narrow skip row models, mount all gangs on the front row of gang frames facing right. Mount all gangs on the rear facing left. Refer to the conventional row spacing staggered gang layout on the following page for example.
16. Set the gang pitch in the center position for normal conditions. Tighten all bolts.
17. If optional disc blade scrapers are used, attach them as shown in the photo below.

Optional Disc Blade Scraper

Keep the scraper blade adjusted 1/4" away from the disc blade





AMCO Toolbar Safety Light Kit Installation Instructions

1. Attach both Red Light Brackets (#3400-359) and Light Bracket Clamps (#3400-398) onto toolbar using one U-bolt, nut and lock washer provided in light kit (part #3400-398 sits directly on top of #3400-359). Make sure each of the Red Light Brackets are placed facing the rear of the toolbar and are located between 2' and 5' of the center hitch point.
2. Attach the Red Lamps (#1300-447) onto Red Light Brackets using M8 x 12mm screws (#2502-195).
3. Attach both the Amber Light Brackets (#21076) to the toolbar using U-bolts, nuts and lock washers provided in the light kit. The center of the U-bolt attaching the Amber Light Brackets should be placed onto the rear face of the center bar approximately 4" to 5" from the center of the Wing Pivot Pin. Make sure the horizontal part of the Amber Light Brackets is oriented toward the end of the toolbar.
4. Attach Amber Light Assemblies (#1300-137) to the Amber Light Brackets using the ½"-13 x 1 ¼" hex screw that is attached to the frame of the light assembly. The Amber Light Assembly should be oriented to the top of light bracket.
5. Attach SMV Bracket (#3500-313) using U-bolt, nuts and lock washers provided in the light kit. The SMV Bracket should be mounted as close to the center of the toolbar as possible and facing the rear of toolbar. Attach the reflective plastic SMV (#12466) and the Turn Signal Module (#RE152269) using ¼" x ½" Hex Screw (#19073) and ¼" x 2" Hex Screw (#12519). The Turn Signal Module should be mounted on the back of the SMV bracket using the bottom hole.
6. Lay Wiring Harness (#1300-446) out on floor in front of the toolbar. Plug large adapter located about center of the wiring harness into the turn signal module located on the back of the SMV bracket. Pull a long adapter wire labeled LH and a short wire adapter label LH to the Left side of the toolbar, repeat for the RH. The short wires go to each red lamp and the long wires go to each amber lamp. Roll up remaining wire going to the plug for the tractor and lay on top of toolbar behind one of the red lamps.
7. Secure loose wires with zip ties where needed.
8. Apply the Amber Reflectors (#2565-808) to the front side of the horizontal part of the amber light brackets. Apply the Red Reflectors (#12541) to the rear side of the same brackets.

HYDRAULIC ASSEMBLY



WARNING

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



CAUTION

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



CAUTION

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

FOR HYDRULIC FOLD MODELS

AMCO Folding Toolbar Hydraulic Hose Installation Instructions

1. Attach the Cylinder Mount (#102496) to the anchor lugs on the main bar using 1" x 3 1/2" hex screw (#10373) and lock nut (#10868). With the Cylinder Mount oriented vertically make sure the 2 holes that are closest together on the Cylinder Mount are pointed down with the radius between the holes facing toward the end of the toolbar. The bottom hole will mount to the main bar.
2. Attach a 1" lock nut (#10868) onto threaded end of the Adjusting Rod (see chart for part #) about 1" away from where the rod stops and the threads start. Guide the threaded end of the Adjusting Rod into the holes in the brackets located on top of the A-frame Hitch and attach another 1" lock nut. Both nuts on the Adjusting Rod can be adjusted later to level wings with the center section. Align holes in the ears of the Adjusting Rod with the top hole in the Cylinder Mount using 1" x 3 1/2" hex screw (#10373) and 1" lock nut (#10868).

3. Press four bushings (#11492) into the pivot holes on both ends of the 3½" x 16" Cylinder (#12179). Install two 90 degree elbows (#12165) into the ports on the cylinder. Both 90 degree elbows should be centered with the cylinder and turned toward the butt end of the cylinder. Coat fittings with pipe sealant before installation. Attach the butt end of the cylinder to the center hole in the cylinder mount that was attached earlier using one Clevis Pin (#10956) and two Hair Clips (#10957).
4. Repeat steps 1- 3 for the other side of the tool bar.
5. Lay out all six hoses. Set the two ½" x 120" (#10929) to the side as they will be used last (these should be the largest of the hoses). With four remaining hoses, locate the two longest (see chart for part #). Attach one end of each hose to the most distant elbow from the center of the toolbar on each cylinder. Take the last two hoses (these should be the shortest) (see chart for part #) and attach one of each to the elbow nearest to the center of the toolbar. Attach the two long hoses to the same tee joint (#2515-326) with the center fitting on the tee joint facing the front of the toolbar. Repeat for the short hoses. At this point take the two ½" x 120" hoses that were set aside earlier and attach one of each to each of the tees using a swivel union (#11157). Attach a ½" male quick disconnect (#19010) to other end on each of the hoses coming from the center of toolbar. Use pipe sealant for the connections on both ends of the ½" x 120" hoses (#10929).
6. Hook hoses to tractor. **IMPORTANT: fully extend each cylinder rod two or three times to fill cylinders with hydraulic oil and to bleed air out of the system before attaching cylinders to the wings. Serious injury to personnel or damage to equipment could occur if wings are folded without cylinders being properly filled and bleed.** Check for any leaks.
7. Extend the rod out until the hole in the clevis of the cylinder is lined up with top hole in the hinge bracket of the wing. Slide the Latch Bar (#102506) between the clevis of the cylinder and attach with Pin (#100578). Secure pin with two 5/16" Roll Pins (#10910).
8. Use zip ties to secure hoses to the toolbar as needed.

HYDRAULIC SYSTEM TROUBLE SHOOTING



WARNING

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



CAUTION

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



CAUTION

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

When first hooking up the hydraulic hoses to the tractor, the hydraulic cylinder rods should be fully extended, and the hydraulic valve on the tractor should be held open for at least one minute. This operation will fill the hydraulic cylinders and hoses with hydraulic fluid. Check the tractor hydraulic fluid level afterward, since the hipper cylinders and hoses hold three quarts of fluid. Retract and extend the cylinders several times to purge the system of air.

Should the cylinders fail to operate together, check the hose installation to verify they are correctly installed per the assembly instructions.

It may be necessary to rephrase the hydraulic cylinders during field use. The two cylinders can get out of phase if fluid leaks out of the system, and the gangs will not work together. Should this occur, fully extend or fully retract the cylinders holding the tractor hydraulic valve open for a few seconds. This will allow additional fluid to pass through the system replacing any fluid that may have leaked out. By occasionally, either fully retracting or fully extending the cylinders during field use, the system will be rephrased continually thereby assuring that the gangs work together.

FINAL ASSEMBLY AND CHECK POINTS

- (A) Check all bolts for proper torque.
- (B) Check scraper adjustment. Scrapers should be adjusted to run 1/16" to 1/8" from disc blades.
- (C) Check all hydraulic hoses and fittings for leaks. Repair as required. Replace fittings that continue to leak after tightening.
- (D) Lubrication for hipper:
Raise hipper to transport position. Use a good grade of clean lithium soap base chassis grease to grease the entire hipper. Grease the hipper as follows:
 - (1) Grease all pivot pins until grease appears.

- (2) Grease the gang bearings with 4 or 5 shots of grease to purge any condensations that has accumulated during shipment and storage. If the harrow is in storage for four to six months, the entire hipper should again be lubricated before placing in service. It should also be greased every 50 hours while in use, at the end of each session and at the start of each season.
- (E) Check decals to be certain they are in place and in good condition. Place operator's manual back into the manual tube attached to the frame
- (F) Review all steps of the assembly process to be certain the hipper is properly assembled. Check all bolts to be sure they are properly torqued. Visually inspect the hipper for any missing, damaged, or defective parts. Repaint any areas that need improvements.

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

OPERATING INSTRUCTIONS



CAUTION

This operator's manual should be carefully and thoroughly read to enable the operator to care for and operate the hipper properly. The right and left hand sides of the Bedding Hipper as used in these instructions are determined by standing at the rear of the hipper and facing the direction of travel. Refer to your tractor operator's manual for complete tractor operating instructions.



WARNING

Never operate the Bedding Hipper at excessive ground speed. Excessive ground speed can cause personal injury or damage to your tractor of Bedding Hipper!

1. Never allow unsafe conditions or operating practices. Your safety is of prime importance.
2. Raise the Bedding Hipper by the 3 point hitch when turning around. Failure to do so will result in broken blades, bent axles, and excessive strain on the hitch and main frame.
3. Reduce operating speed in any areas containing stumps, rocks or other obstacles.

4. Never back up without raising the Bedding Hipper out the soil.
5. Operate the Bedding Hipper at a groundspeed in the range of 5 to 8 m.p.h.
6. It is best not to operate Bedding Hipper gangs any deeper than necessary to build the desired bed.
7. High groundspeeds and shallow gang depth throw up uniform.
8. Low groundspeeds and deep gang depths push the soil and may cause bulldozing in front of the gangs.
9. Vary the gang angle to suit your ground conditions.
10. Staggered gangs work well in most soil conditions and layer soil into smooth, Somewhat rounded beds.
11. Opposed gangs make higher, pointed beds and generally operate well at high speeds, but clog more easily in heavy, moist soil or high crop residue conditions.



CAUTION

Always wear hand protection such as gloves when working around the disc blades to avoid coming in contact with sharp edges

GANG ANGLE ADJUSTMENTS

The gangs may be set at cutting angles of 10, 20, 30 degrees. Larger gang angles will throw more dirt. To change the gang angle, loosen the bolts holding each gang to the gang frame, and replace the bolt in the hole corresponding to the desired gang angle.

TROUBLE SHOOTING GUIDE

Problem	Cause	Solution
Hipper gangs running too shallow	Incorrect Hipper Gang angle pitch	Adjust Hipper Gang to a larger pitch
Soil build-up on the disc blade	Missing, damaged or improperly adjusted scrapers	Adjust or replace scrapers as needed
Hipper Gangs running too deep	Disc blades set to run too deep	Raise toolbar and adjust depth gauge wheels to run shallower
	Slow ground speed to slow	Increase ground speed