

# **BORDER PLOW PIVOT/TILE PLOW**

## **OPERATOR'S MANUAL PART IDENTIFICATION**

### **BORDER PLOW**



### **PIVOT/TILE PLOW**



## **AMCO MANUFACTURING COMPANY**

800 South Industrial Parkway • P.O. Box 1107  
Yazoo City, Mississippi (MS) 39194 USA  
(662) 746-4464 • Toll Free: (800) 748-9022 • Fax: (662) 746-6825  
[www.amcomfg.com](http://www.amcomfg.com)

Revised 5/2018

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THE FOLLOWING OPERATOR INSTRUCTIONS  
ARE THE SAME FOR BOTH THE BORDER PLOW  
AND PIVOT/TILE PLOW UNLESS OTHERWISE NOTED.

# 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](http://www.amcomfg.com)

E-mail: [sales@amcomfg.com](mailto:sales@amcomfg.com)

[parts@amcomfg.com](mailto: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 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.**

## SPECIFICATIONS AND SUGGESTED HORSEPOWER REQUIREMENTS

### Border Plow

Model	Cutting Width	No. of Discs	No. of Bearings	Approx. Engine HP Required	Approx Weight lbs*
BP-624	5-1/2'	6	4	50 and up	700

### Pivot/Tile Plow

Model	Cutting Width	No. of Discs	No. of Bearings	Approx. Engine HP Required	Approx. Weight lbs*
PTP-624	5-1/2'	6	4	50 and up	700

\* To calculate weight/blade, divide the approximate weight of the model by the number of disc blades.

Specifications for all models subject to change without notice.

# BOLT TORQUE



## WARNING

Before making any adjustments, inspections, lubricating or repairing. Slowly lower the Border Plow and Pivot/Tile Plow 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	GRADE 2	OR		GRADE 8
		GRADE 5	A-325	
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 plow. It is important for you to operate the plow 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.

## STANDARD SPECIFICATIONS

 <b>AMCO's Border Plow</b> With Protect-O-Shield® Washers Featuring a 2-Year Bearing Warranty	
<b>RIGID HEAVY DUTY 1-1/2" SQUARE GANGS</b>	
STANDARD SPECIFICATIONS (Metrics in Parentheses)	
<b>AXLES:</b> 1-1/2" Square, high carbon cold rolled steel	<b>BEARINGS:</b> Protect-O-Shield®, heavy duty 1-1/2" square
<b>BLADES:</b> 26" x 5/16" Cutout blade on inside with 24" x 1/4" & 22" x 1/4" diminishing blades	<b>2 Year Warranty</b> bore regreasable triple ball type toggle
<b>SPACING:</b> 9 inches (229mm) Fabricated steel spacer spools	<b>On Bearings!</b> mounted, with zerk guards & wear guards
<b>SHANKS:</b> Heavy duty high clearance fabricated shanks (straight)	<b>HITCH:</b> A-Frame accepts Cat. II or III Three Point Hitch or Quick Coupler Mounted on a 7" x 4" x 1/4" bar
<b>GANG</b>	<b>PARKING STAND:</b> Two
<b>ANGLE:</b> Adjustable gangs - three position angle adjustment	<b>MAIN FRAME:</b> 7" x 4" x 1/4" dual bars 81" long
<b>FINISH:</b> Powder Coated	

 <b>AMCO's Pivot/Tile Plow</b> With Protect-O-Shield® Washers Featuring a 2-Year Bearing Warranty	
<b>RIGID HEAVY DUTY 1-1/2" SQUARE GANGS</b>	
STANDARD SPECIFICATIONS (Metrics in Parentheses)	
<b>AXLES:</b> 1-1/2" Square, high carbon cold rolled steel	<b>BEARINGS:</b> Protect-O-Shield®, heavy duty 1-1/2" square
<b>BLADES:</b> 24" x 1/4" (6mm) Cutout blade on inside & two 24" x 1/4" Plain blades on outside	<b>2 Year Warranty</b> bore regreasable triple ball type toggle
<b>SPACING:</b> 9 inches (229mm) Fabricated steel spacer spools	<b>On Bearings!</b> mounted, with zerk guards & wear guards
<b>SHANKS:</b> Heavy duty high clearance fabricated shanks (angled)	<b>HITCH:</b> A-Frame accepts Cat. II or III Three Point Hitch or Quick Coupler Mounted on a 7" x 4" x 1/4" bar
<b>GANG</b>	<b>PARKING STAND:</b> Two
<b>ANGLE:</b> Adjustable gangs - three position angle adjustment	<b>MAIN FRAME:</b> 7" x 4" x 1/4" dual bars 81" long
<b>FINISH:</b> Powder Coated	

# HITCHING THE PLOW TO THE TRACTOR

## WARNING



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

## WARNING



While backing the tractor to hitch to the disc do not permit anyone to stand behind the tractor or be near the plow. Before operating the hydraulic 3-point lift controls be certain no one is directly behind the tractor or near the plow.

## Tractors **without** 3-point quick hitches

1. Check and make certain the tractor drawbar will not come in contact with the plow when it is raised or lowered. If necessary reposition the drawbar or remove it. It is recommended to verify there is ample clearance the first time the plow is raised.
2. The three tractor lift links should be connected to the plow hitch.
3. After verifying the plow is securely connected to the tractor 3-point hitch slowly raise the plow.
4. Raise parking stand(s) and securely pin into position.

## Tractors **with** 3-point quick hitches

1. Check and make certain the tractor drawbar will not come in contact with the plow when it is raised or lowered.  
If necessary reposition the drawbar or remove it. It is recommended to verify there is ample clearance the first time the plow is raised.
2. The tractor 3-point hitch lift links should be connected to the plow hitch and lower hook locks latched.
4. After verifying the tractor 3-point hitch is securely connected to the plow slowly raise the plow.
5. Raise parking stand(s) and securely pin into position.

# UNHITCHING THE PLOWS FROM THE TRACTOR



## WARNING

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

### Tractors **without** 3-point quick hitches

#### NOTICE

Prior to unhitching the plow from the tractor at the end of the use season or for an extended time review the Extended Plow Storage Recommendations Section of this manual.

1. Lower parking stand(s) and securely pin into position
2. Slowly lower the plow until the blades have come in contact with a firm flat surface.
3. Remove the klik pin and pin connecting the tractor 3-point center link to the plow. Place the tractor 3-point center link into its storage position.
4. Remove lower 3-point klik pins and hitch pins from lower 3-point clevises.
5. Lower the 3-point lift arms below the clevises.
6. Use care while driving the tractor away from disc make sure the lower 3-point lift arms are free from the plow and do not pull against it.
7. Slowly pull the tractor away from the plow. Before dismounting the tractor shut off the engine set the parking brake and remove the key. Reinstall the plow 3-point hitch pins, bushing, and klik pins.

### Tractors **with** 3-point quick hitches

1. Lower parking stand(s) and securely pin into position
2. Slowly lower the plow until the blades have come in contact with a firm flat surface.
3. Prior to unhitching the plow from the tractor at the end of the use season or for an extended time review the Extended Plow Storage Recommendations Section of this manual.
4. Lower parking stand(s) and securely pin into position
5. Slowly lower the plow until the blades have come in contact with a firm flat surface.
6. Release lower hook locks
7. Lower the quick hitch until the hitch is free from the plow. Use care while driving the tractor away from the plow. Make sure the quick hitch is lowered so it will not pull against the plow.
8. Slowly pull the tractor away from the plow. Before dismounting the tractor shut off the engine set the parking brake and remove the key

# CHECKLIST BEFORE USING THE PLOW

1. Make sure the plow 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 plow.
4. Check all bolts to verify proper torque.
5. Level the plow see - LEVELING THE PLOW SECTION of this manual

Check the plow for parts that are broken or have excessive wear. If any are found replace them.

1. Check to make sure the tractor 3-point hitch is securely attached to the plow.
2. Verify the plow has been properly lubricated.

## OPERATING THE PLOW



### WARNING

Before making any adjustments, inspections, lubricating or repairing. First, find a suitable safe location to park the tractor. Then slowly lower the plow until it is touching the ground. Before dismounting from the tractor shut off the engine set the parking brake and remove the key.



### CAUTION

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



### WARNING

Never operate the plow at excessive ground speed which can cause personal injury or damage to your tractor and disc.

1. Before starting to use the plow, make sure rocks and other debris that could damage the plow have been removed from the area to be worked.

2. Check the soil moisture content. It is advised not to operate the plow in extremely wet soil. A rule of thumb to use is, if soil to be worked sticks to your shoes it is too wet to disc. Wait until the soil dries out. Is this applicable.
3. The maximum cutting depth is about one-third the disc blade diameter. For example, the cutting depth of an 18" blade is about 6".
4. Slowly starting moving forward while lowering the plow. Once the disc blades have engaged the soil to the proper working depth increase your ground speed until the desired soil tillage and finish has been achieved. Achieving the desired soil tillage and finish may require changing the angle of the disc gangs. To change the gang angles please see the Disc Gang Angle Adjustment section of this manual.
5. Never turn on corners without lifting the disc out of the soil. Failing to do so can result in damage to the plow. Raise the plow and back into tight spots.
6. To avoid damaging the plow, never back the plow in reverse while the disc blades are engaging the soil.
7. Always approach and cross deep ditches or steep banks on a diagonal. Crossing straight across may result in damage to the plow and/or tractor

## 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 vehicle

1. Raise the plow to highest position possible to clear the ground surface. Make sure there is adequate tractor front end ballast to keep the steering in firm contact with soil surface.
2. Be sure to reduce tractor ground speed when turning. Leave enough clearance so that the plow does not contact obstacles such as buildings, trees, or fences.
3. 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.
4. When traveling over rough or hilly terrain, shift tractor to a lower gear.

# MAINTENANCE & LUBRICATION



## WARNING

Before making any adjustments, inspections, lubricating or repairing. First, find a suitable safe location to park the tractor. Then slowly lower the plow until it is touching the ground. Before dismounting from the tractor shut off the engine set the parking brake and remove the key.



## CAUTION

Never clean, adjust or service when the plow is in motion. Block up all elevated components to prevent accidental lowering or lower to rest on the ground when adjusting or repairing.



## WARNING

Replace any missing, illegible or damaged safety decals!



## CAUTION

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

### Lubrication Schedule

#### Gang Bearings

Grease each gang bearing 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. Always clean grease zerks before pumping grease into the bearings. Replace damaged bearings.

# LEVELING THE PLOW



## WARNING

Before making any adjustments, inspections, lubricating or repairing. First, find a suitable safe location to park the tractor. Then slowly lower the disc until it is touching the ground. Before dismounting from the tractor shut off the engine set the parking brake and remove the key.



## CAUTION

Never operate the plow tilted backwards. Operating the plow tilted back will result in excessive wear on the disc blades.

1. Leveling the plow frame front to back is done by adjusting the length of the tractor 3-point center link. For most soil conditions adjust the plow as follows.
2. Level the plow frame horizontally by adjusting the tractor lift link.

# PLOW GANG ANGLE ADJUSTMENT



## WARNING

Before making any adjustments, inspections, lubricating or repairing, first, find a suitable safe location to park the tractor. Then slowly lower the plow until it is touching the ground. Before dismounting from the tractor shut off the engine, set the parking brake and remove the key.



## CAUTION

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



## CAUTION

Always adjust the gang assemblies to the same angle

### 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.

### EXTENDED STORAGE

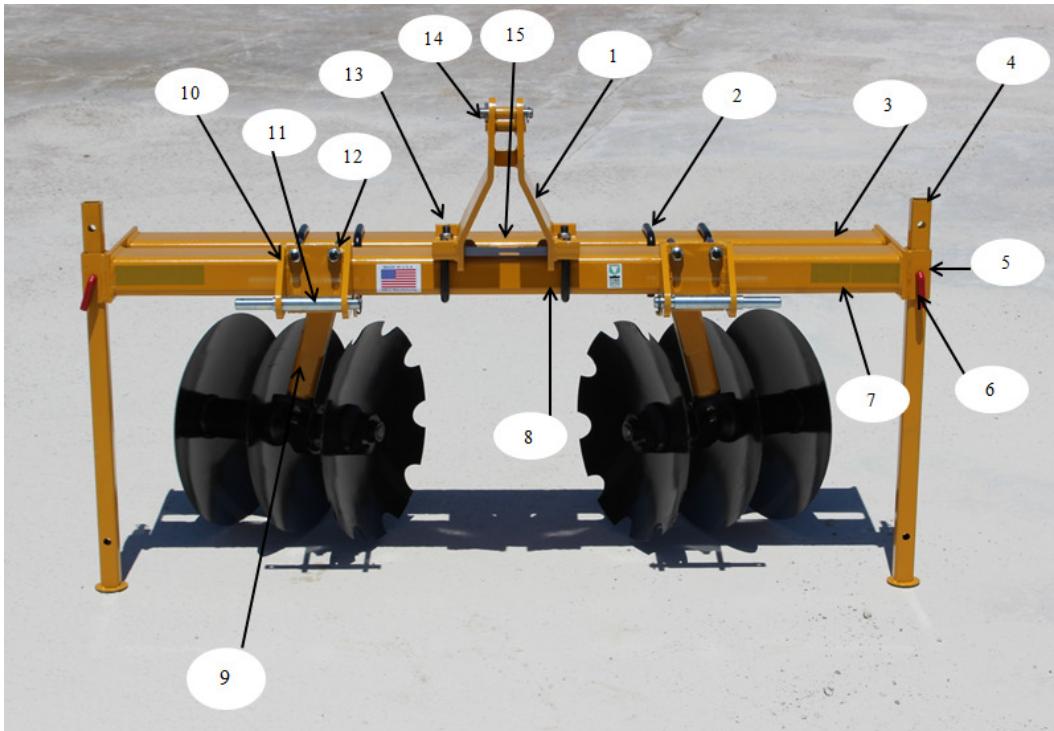


## CAUTION

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

1. Before unhitching the plow from the tractor clean off any dirt or debris that may have accumulated on the plow and moving parts. Scrape off any compacted dirt from the disc blades. Then use a power washer to clean the plow.
2. Thoroughly inspect the entire plow 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 plow as detailed in the Maintenance & Lubrication section of this manual.
4. Apply a protective coating to the disc blades.
5. The plow should be stored on a solid flat surface in a dry location. It is best to store the plow inside a storage building. Doing so will reduce future maintenance requirements and prolong the life of the plow.
6. To complete unhitching from the tractor follow the instructions in the Unhitching From The Tractor section in this manual.

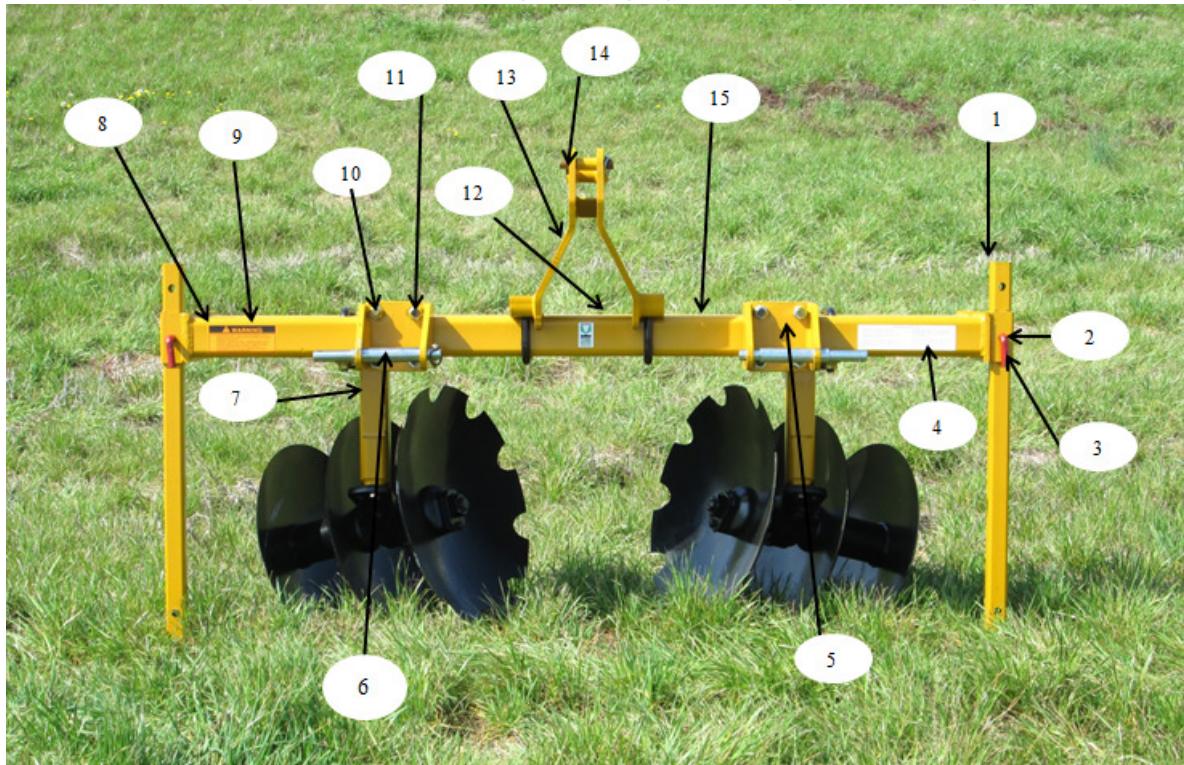
# PIVOT/TILE PLOW COMPONENTS



Pivot/Tile Plow

No.	Part Number	Description	Quantity
1	11465	"AMCO" LOGO LARGE (Hitch)	1
1	10465	"AMCO" LOGO SMALL (Toolbar)	1
2	9560	U-Bolt (7/8" x 7-1/16" x 5-3/4")	6
3	12541	2 X 9 REFLECTOR - RED	2
4	20166A	PARKING STAND W.A.	2
5	10317	KLIK PIN 1/4"	3
6	100683	LOCK PIN	2
7	2565-808	AMBER REFLECTOR, 1.97 X 6.3"	2
8	20541	TOP HITCH W.A.	1
9	21030	BEARING RISER W.A., RH (PTP)	1
9	21031	BEARING RISER W.A., LH (PTP)	1
10	20540	BOTTOM HITCH W.A., RH	1
10	20539	BOTTOM HITCH W.A., LH	1
11	101739	LOWER HITCH PIN	2
12	11495	U-Bolt(7/8" X 4-1/16" X 8-3/4")	4
13	10396	7/8 NC ALL METAL TOP L/N GR C Z	12
14	101333	PIN, UPPER HITCH	1
15	20664	MAIN FRAME W.A.	1
<b>Not Shown</b>			
	10910	5/16" x 2-1/4" Roll Pin	1
	11697	KLIK PIN 7/16"	2
	11691	7/8 NC GRADE "G" FLANGE LOCKNUT ZINC & YELLOW	15
	6570	BUSHING	8
			1

# BORDER PLOW COMPONENTS



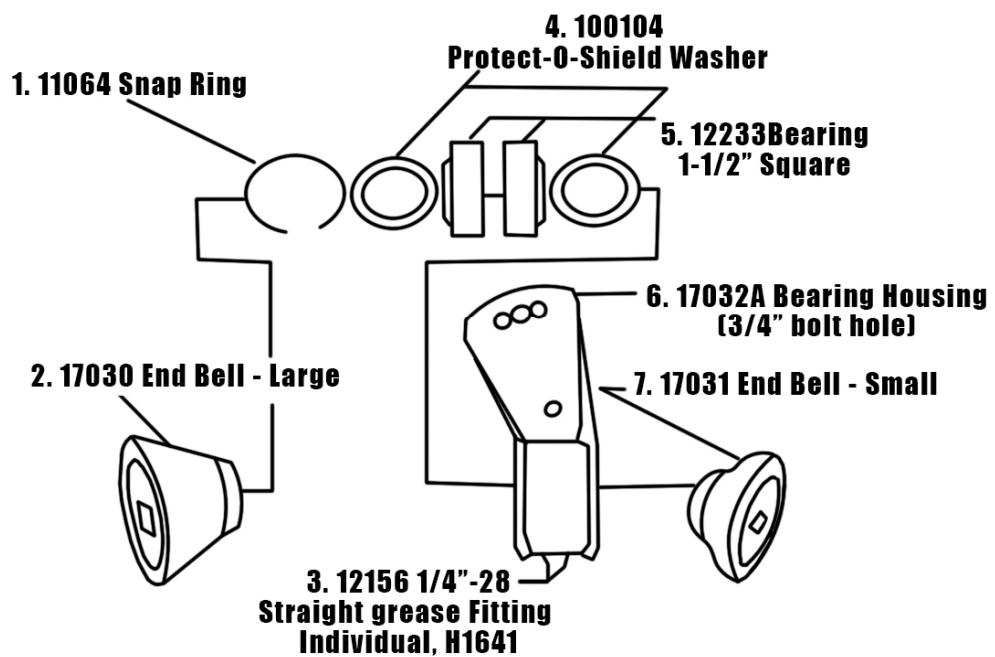
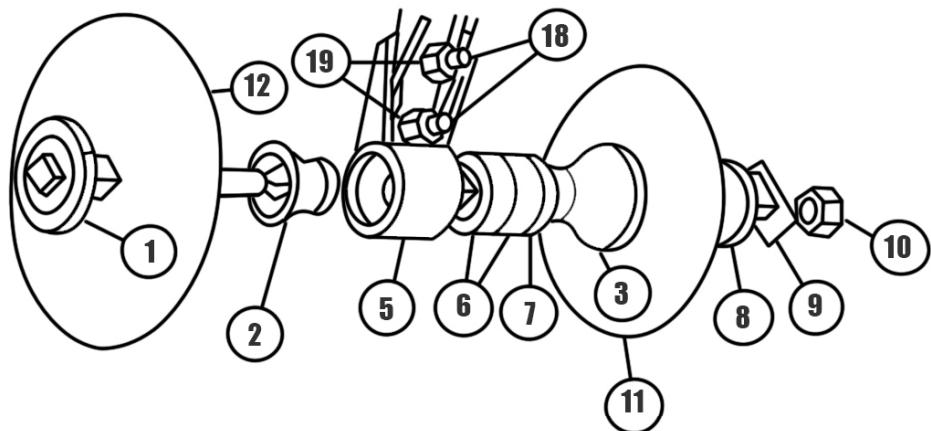
## Border Plow

No.	Part Number	Description	Quantity
1	20166A	PARKING STAND W.A.	2
2	10317	KLIK PIN 1/4"	3
3	100683	LOCK PIN	2
4	11716	DECAL, MAINTENANCE	1
5	20539	BOTTOM HITCH W.A., LH	1
5	20540	BOTTOM HITCH W.A., RH	1
6	101739	LOWER HITCH PIN	2
7	20671	GANG FRAME W.A., SHORT	2
8	12541	2 X 9 REFECTOR - RED	2
9	11741	DECAL -- "WARNING"	1
10	11495	U-Bolt(7/8" X 4-1/16" X 8-3/4")	4
11	10396	7/8 NC ALL METAL TOP L/N GR C Z	12
12	10465	"AMCO" LOGO SMALL (Toolbar)	1
12	11465	"AMCO" LOGO LARGE (Hitch)	1
13	20541	TOP HITCH W.A.	1
14	101333	PIN, UPPER HITCH	1
15	20664	MAIN FRAME W.A.	1

## Not Shown

	10910	5/16" x 2-1/4" Roll Pin	1
	11697	KLIK PIN 7/16"	2
16	11691	7/8 NC GRADE "G" FLANGE LOCKNUT ZINC & YELLOW	8
	6570	BUSHING	1
	9560	U-Bolt (7/8" x 7-1/16" x 5-3/4")	6

# BORDER PLOW & PIVOT/TILE PLOW GANG



### Border Plow & Pivot/Tile Gang

<b>Ref. No.</b>	<b>Part No.</b>	<b>Description</b>	<b>No. Req'd</b>
1	20663	Axle W.A.	1
2	17031	End Bell - Small	1
3	17030	End Bell - Large	1
	FB-09-0025A	Assy.Bearing and Housing	1
5	17032A	Bearing Housing (3/4" bolt hole)	1
6	12233	Bearing 1-1/2" Square	2
7	11064	Snap Ring	1
	100104	Washer	2
	12156	1/4"-28 Straight Grease Fitting Individual, H1641	2
8	1222A	End Washer	1
9	5622A	Lock Plate-Nut	1
	100098	Bearing Plate (Not Shown)	1
	100099	Spacer Plate (Not Shown)	1
	10710	1/2"-13 X 2" Carriage Bolt Grade 5 Zinc (Not Shown)	1
	10395	1/2" NC All Metal Top L/N GR C Zinc (Not Shown)	1
10	10489	1-1/2"-12 NF Grade 8 Hex Nut Plain	1
	545	Spacer Spool W.A. (Not Shown)	1
18A	12460	3/4" X 2-3/4" NC Hex Cap GR. 8	1
18B	12461	3/4" X 3-1/4" NC Hex Cap GR. 8	1
19	10300	Lock Nut 3/4" NC	2
	102786	Wear Guard LH (Not Shown)	1
	102787	Wear Guard RH (Not Shown)	1

### Border Plow Blades

	11575	26" X 5/16" C.O. BLADE, 1-1/2" AXLE (Not Shown)	1
	3255	24" X 1/4" PLAIN BLADE, 1-1/2" AXLE (Not Shown)	1
	3276	22" X 1/4" PLAIN BLADE, 1-1/2" AXLE (Not Shown)	1

### Pivot/Tile Plow Blades

	3250	24" X 1/4" C.O. BLADE, 1-1/2" AXLE (Not Shown)	1
	3255	24" X 1/4" PLAIN BLADE, 1-1/2" AXLE (Not Shown)	2