



# **WICKED WARRIOR TANDEM DISC**

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



**AMCO MANUFACTURING COMPANY** Revised 8-1-17

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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](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

Model No.	Cutting Width	No. of Discs	No. of Bearings	Approximate Engine HP Required (kW)
WW-1218	4'	12	8	28 (21)
WW-1618	5'	16	8	35 (26)
WW-2018	6'	20	8	45 (33)
WW-2418	8'	24	8	55 (40)

## BOLT TORQUE

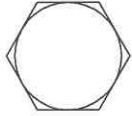
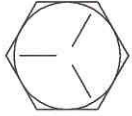

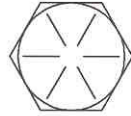
## WARNING

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.

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 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.
5. Torque is the force you apply to the wrench handle or the cheater bar, times the length of the handle or bar.
6. Use a torque wrench whenever possible.

The following table shows torque in ft. lbs.

BOLT DIA. AND THREADS PER INCH	 GRADE 2	 OR  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

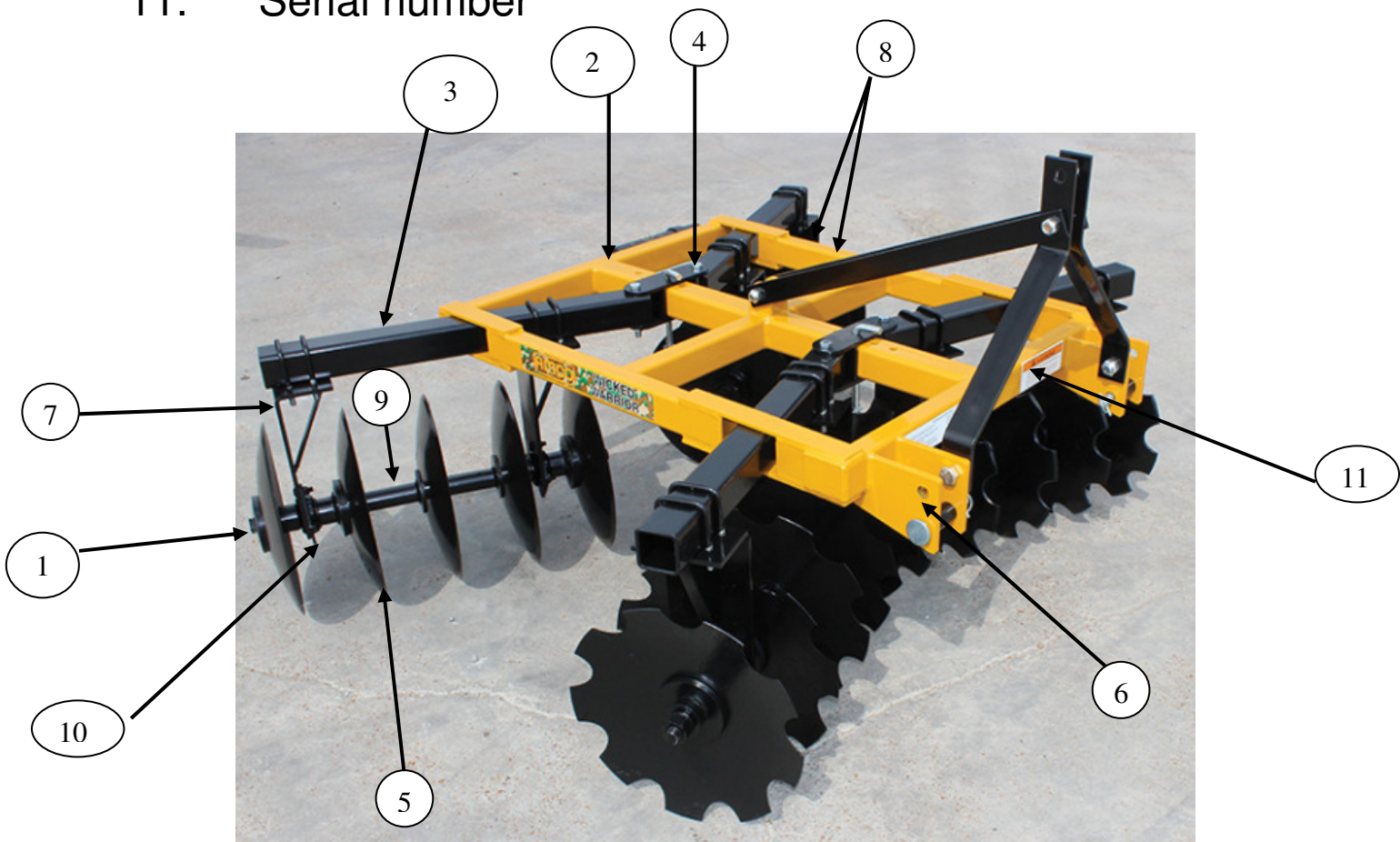
Familiarize yourself with the warning decals affixed to the disc. It is important for you to operate the disc safely. Read and follow the safety directions on all warning decals.

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](http://amcomfg.com).



## WICKED WARRIOR TANDEM DISC COMPONENTS

1. 1-1/8" square, high-carbon steel axles
2. Main frame:
3. Gang Frame
4. Pin-adjustable gang angle
5. 18" standard disc blades
6. Category I quick-hitch compatible
7. Heavy-duty reinforced bearing risers
8. Power-coated finish
9. Welded 7-1/2" blade spacer spools
10. Eight heavy-duty bearings with two-year warranty:  
1-3/4" round bore, greaseable, triple – ball type with  
zerk guards
11. Serial number



# TRACTOR HORSEPOWER GUIDELINES



## WARNING

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

Model	Cutting Width	No. of Disc Blades	Approx. Engine HP Required	Approx. Weight lbs
WW-1218	4'	12	28	420
WW-1618	5'	16	35	742
WW-2018	6'	20	45	825
WW-2418	8'	24	55	1,290

## HITCHING THE DISC 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 disc. Before operating the hydraulic 3-point lift controls be certain no one is directly behind the tractor or near the disc.



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

1. Check and make certain the tractor drawbar will not come in contact with the disc 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 disc is raised.
2. The three tractor lift links should be connected to the disc hitch.
3. After verifying the disc is securely connected to the tractor 3-point hitch slowly raise the disc.

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

1. Check and make certain the tractor drawbar will not come in contact with the disc 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 disc is raised.
2. The tractor 3-point hitch lift links should be connected to the disc hitch and lower hook. Locks latched.
4. After verifying the tractor 3-point hitch is securely connected to the disc slowly raise the disc.

## UNHITCHING THE DISC 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

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

Slowly lower the disc until the blades have come in contact with a firm flat surface.

1. Remove the klik pin and pin connecting the tractor 3-point center link to the disc. Place the tractor 3-point center link into its storage position.
2. Remove lower 3-point klik pins and hitch pins from lower 3-point clevises.
3. Lower the 3-point lift arms below the clevises.

4. Use care while driving the tractor away from disc make sure the lower 3-point lift arms are free from the disc and do not pull against it.
5. Slowly pull the tractor away from the disc. Before dismounting the tractor shut off the engine set the parking brake and remove the key. Reinstall the disc 3-point hitch pins, bushing, and klik pins.

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

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

## CHECKLIST BEFORE USING THE DISC

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

Check the disc 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 disc.
2. Verify the disc has been properly lubricated.

## OPERATING THE DISC



### 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

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 disc at excessive ground speed which can cause personal injury or damage to your tractor and disc.

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

Check the soil moisture content. It is advised not to disc 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.

2. The maximum cutting depth of a disc is about one-third the disc blade diameter. For example, the cutting depth of an 18" blade is about 6".
3. Slowly starting moving forward while lowering the disc.  
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.
4. Never turn on corners without lifting the disc out of the soil. Failing to do so can result in damage to the disc. It best to raise the disc and back into tight spots.
5. To avoid damaging the disc, never back the disc in reverse while the disc blades are engaging the soil.
6. Always approach and cross deep ditches or steep banks on a diagonal. Crossing straight across may result in damage to the disc 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 disc 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 disc 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 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 clean, adjust or service when the disc 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 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. Always clean grease zerks before pumping grease into the bearings. Replace damaged bearings.

## LEVELING THE DISC



## 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 disc tilted backwards. Operating the disc tilted back will result in excessive wear on the disc blades on the rear gang.

1. Leveling the disc front to back is done by adjusting the length of the tractor 3-point center link. For most soil conditions adjust the disc as follows.
2. The disc is level if a slight ridge is left in the center behind the rear gangs. A soaking rain will help level it.
3. If the disc leaves a substantial ridge in the center behind the rear gangs shorten the tractor 3-point center link until a slight ridge is formed.
4. If the disc leaves a furrow in the center behind the rear gangs lengthen the tractor 3-point center link until the furrow is removed and a slight ridge is left.

## DISC GANG ANGLE ADJUSTMENT



### CAUTION

Always adjust the both front and rear gang assemblies to the same angle

Adjustments can be made to the disc gang angles by following these instructions

1. Activate the 3-point hitch to raise the disc off the ground.
2. Remove the gang angle adjusting L pin and klick pin.
3. Position the gang assembly to desired position.
4. Reinsert gang angle adjusting L pin and klick pin.





## DISC EXTENDED STORAGE

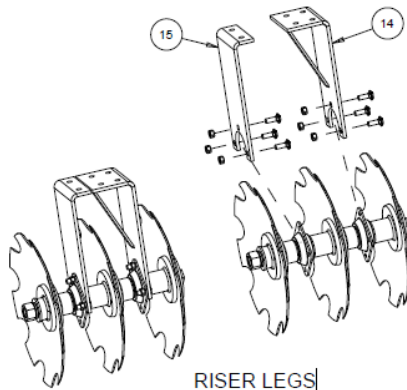


### CAUTION

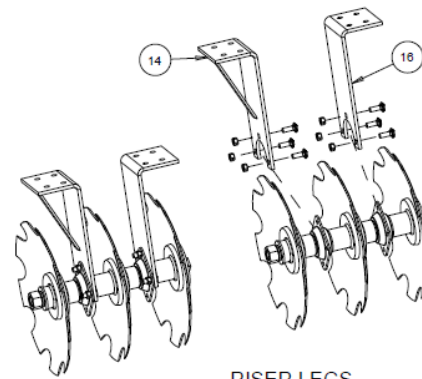
Before dismounting from the tractor shut off the engine set the parking brake and remove the key.

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

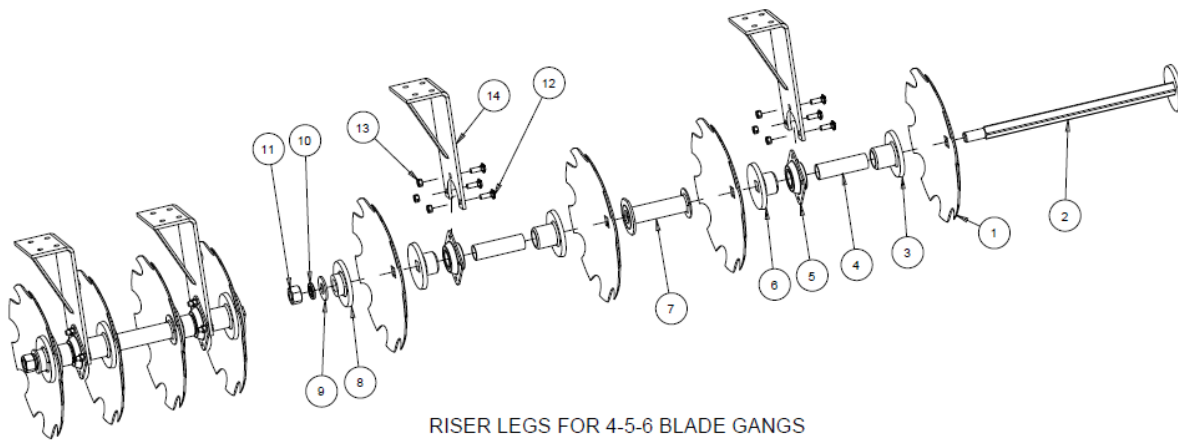
# PARTS



RISER LEGS  
FOR 3-BLADE GANGS  
FRONT



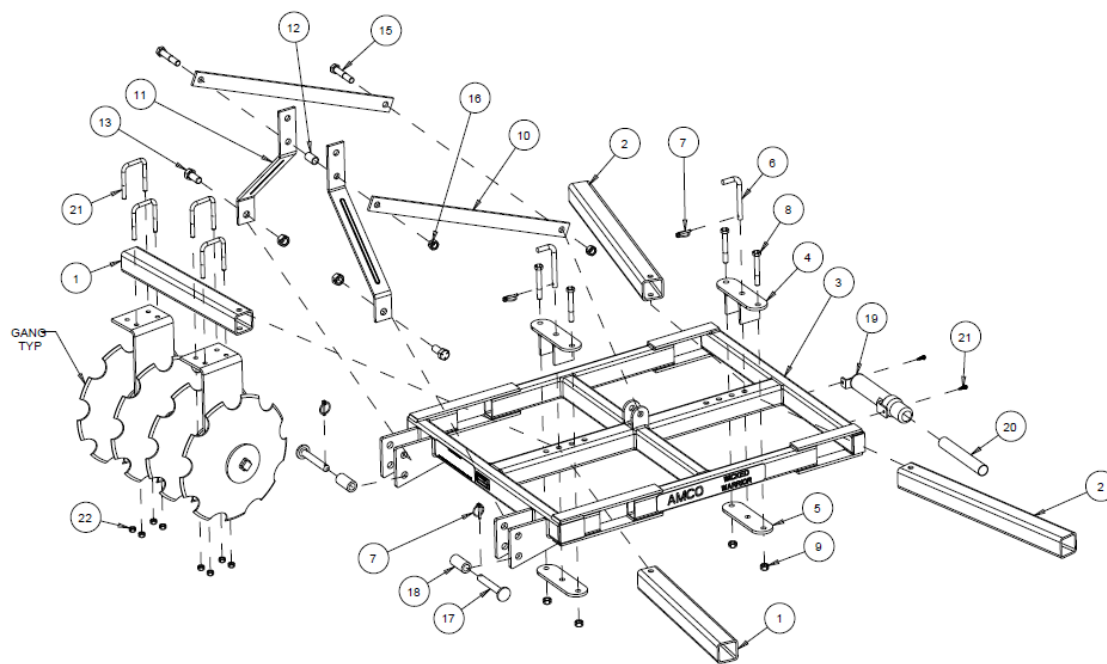
RISER LEGS  
FOR 3-BLADE GANGS  
REAR



RISER LEGS FOR 4-5-6 BLADE GANGS  
GANG COMPONENTS FOR ALL GANGS

ITEM	PART NO.	DESCRIPTION	W.W. 18" DIA BLADES 4 FOOT CUT WIDTH						W.W. 18" DIA BLADES 5 FOOT CUT WIDTH					
			SMOOTH BLADES BLADE COUNT			CUTOUT BLADES BLADE COUNT			SMOOTH BLADES BLADE COUNT			CUTOUT BLADES BLADE COUNT		
			FRONT	REAR	TOTAL	FRONT	REAR	TOTAL	FRONT	REAR	TOTAL	FRONT	REAR	TOTAL
1	3268	18 X 4.5MM PLAIN BLADE, 1-1/8 AXLE	3	3	6				4	4	8			
1	19019	18 X 4.5MM C.O. BLADE, 1-1/8 AXLE				3	3	6				4	4	8
2	20911	1.125 X 18.00 SQUARE AXLE	1	1	2	1	1	2						
2	20912	1.125 X 25.50 SQUARE AXLE							1	1	2	1	1	2
3	20805	END BELL	2	2	4	2	2	4	2	2	4	2	2	4
4	103251	SLEEVE	2	2	4	2	2	4	2	2	4	2	2	4
5	12071	BEARING	2	2	4	2	2	4	2	2	4	2	2	4
6	20801	END BELL	2	2	4	2	2	4	2	2	4	2	2	4
7	21025	SPOOL							1	1	2	1	1	2
8	21051	END WASHER	1	1	2	1	1	2	1	1	2	1	1	2
9	19046	1-1/8 FLAT WASHER	1	1	2	1	1	2	1	1	2	1	1	2
10	10336	1-1/8 LOCK WASHER	1	1	2	1	1	2	1	1	2	1	1	2
11	11035	1-1/8 HEAVY HEX NUT	1	1	2	1	1	2	1	1	2	1	1	2
12	10870	1/2-13 X 1.50 CARRIAGE BOLT	3	3	6	3	3	6	3	3	6	3	3	6
13	10395	1/2-13 LOCK NUT	3	3	6	3	3	6	3	3	6	3	3	6
14	21006	RISER LEG	1	1	2	1	1	2	1	1	2	1	1	2
15	103338	RISER LEG, LH	1	0	1	1	0	1						
16	103271	RISER LEG	0	1	1	0	1	1						

ITEM	PART NO.	DESCRIPTION	W.W. 18" DIA BLADES 6 FOOT CUT WIDTH						W.W. 18" DIA BLADES 8 FOOT CUT WIDTH					
			SMOOTH BLADES BLADE COUNT			CUTOUT BLADES BLADE COUNT			SMOOTH BLADES BLADE COUNT			CUTOUT BLADES BLADE COUNT		
			FRONT	REAR	TOTAL	FRONT	REAR	TOTAL	FRONT	REAR	TOTAL	FRONT	REAR	TOTAL
1	3268	18 X 4.5MM PLAIN BLADE, 1-1/8 AXLE	5	5	10				6	6	12			
1	19019	18 X 4.5MM C.O. BLADE, 1-1/8 AXLE				5	5	10				6	6	12
2	21048	1.125 x 33.00 SQUARE AXLE	1	1	2	1	1	2						
2	20914	1.125 x 40.50 SQUARE AXLE							1	1	2	1	1	2
3	20805	END BELL	2	2	4	2	2	4	2	2	4	2	2	4
4	103251	SLEEVE	2	2	4	2	2	4	2	2	4	2	2	4
5	12071	BEARING	2	2	4	2	2	4	2	2	4	2	2	4
6	20801	END BELL	2	2	4	2	2	4	2	2	4	2	2	4
7	21025	SPOOL	2	2	4	2	2	4	3	3	6	3	3	6
8	21051	END WASHER	1	1	2	1	1	2	1	1	2	1	1	2
9	19046	1-1/8 FLAT WASHER	1	1	2	1	1	2	1	1	2	1	1	2
10	10336	1-1/8 LOCK WASHER	1	1	2	1	1	2	1	1	2	1	1	2
11	11035	1-1/8 HEAVY HEX NUT	1	1	2	1	1	2	1	1	2	1	1	2
12	10870	1/2-13 X 1.50 CARRIAGE BOLT	3	3	6	3	3	6	3	3	6	3	3	6
13	10395	1/2-13 LOCK NUT	3	3	6	3	3	6	3	3	6	3	3	6
14	21006	RISER LEG	1	1	2	1	1	2	1	1	2	1	1	2



FRAME & HITCH

ITEM	PART NO.	DESCRIPTION	QTY	WICKED WARRIOR MODEL
1	103337	GANG FRAME - FRONT	2	4' CUT WIDTH, 12-BLADE UNIT
1	103331	GANG FRAME - FRONT	2	5' CUT WIDTH, 16-BLADE UNIT
1	103279	GANG FRAME - FRONT	2	6' CUT WIDTH, 20-BLADE UNIT
1	103344	GANG FRAME - FRONT	2	8' CUT WIDTH, 24-BLADE UNIT
2	103340	GANG FRAME - REAR	2	4' CUT WIDTH, 12-BLADE UNIT
2	103332	GANG FRAME - REAR	2	5' CUT WIDTH, 16-BLADE UNIT
2	103335	GANG FRAME - REAR	2	6' CUT WIDTH, 20-BLADE UNIT
2	103345	GANG FRAME - REAR	2	8' CUT WIDTH, 24-BLADE UNIT
3	A-01-0001	MAIN FRAME	1	ALL
4	21004	GANG ADJUSTING BRACKET	2	ALL
5	103270	GANG ADJUSTING BRACKET	2	ALL
6	103254	L-PIN	2	ALL
7	10317	KLIK PIN 1/4"	4	ALL
8	18023	5/8-11 X 4-1/2 HHCS GRD 5	4	ALL
9	10299	5/8-11 LOCK NUT	4	ALL
10	103248	PULL BRACE	2	ALL
11	103247	UPPER PULL POINT	2	ALL
12	103346	BUSHING	1	ALL
13	11692	7/8-9 X 2.0 HHCS GRD 5	2	ALL
14	10396	7/8-9 LOCK NUT	2	ALL
15	10113	3/4-10 X 4.0 HHCS GRD 5	2	ALL
16	10300	3/4-10 LOCK NUT	2	ALL
17	21005	HITCH PIN	2	ALL
18	103255	TUBE	2	ALL
19	MT-01-0001	SMALL MANUAL TUBE AND WARRANTY INFO	1	ALL
20	103409	OPERATOR'S MANUAL, WICKED WARRIOR	1	ALL
21	103259	U-BOLT	16	ALL
22	10395	1/2-13 LOCK NUT	32	ALL

# TROUBLESHOOTING GUIDE

Problem	Solution
Disc blades will not penetrate the soil to desired operation depth	<p>Gang angles not set properly - Reset gang angle to a lesser angle</p> <p>The soil may be too dry - Wait for adequate soil moisture</p>
Disc is leaving substantial ridge behind the rear gangs	Disc is not properly set and the disc blades are moving excess soil to the center of the disc – Shorten 3 point center link until a slight ridge is formed behind the rear gangs. Slower tractor ground speed will reduce the amount of excess soil.
The disc leaves a furrow in the center behind the rear gangs	Disc is not properly set and the disc blades are moving enough soil to the center of the disc – Lengthen the tractor 3-point center link until the furrow is removed and a slight ridge is left
Disc does not pull straight and walks side-to-side	Front gangs are running deeper than the rear gangs. Front and rear gangs are not set at the same angle or front and/or rear gangs are not centered on the disc frame – Adjust the front gangs to a shallower setting by lengthening the tractor 3-point center link. Set front and rear gangs to operate at the same angle. Center front and/or rear gangs on the disc frame.