

Farm King

OPERATOR AND PARTS MANUAL

Tandem Disc

Model 395

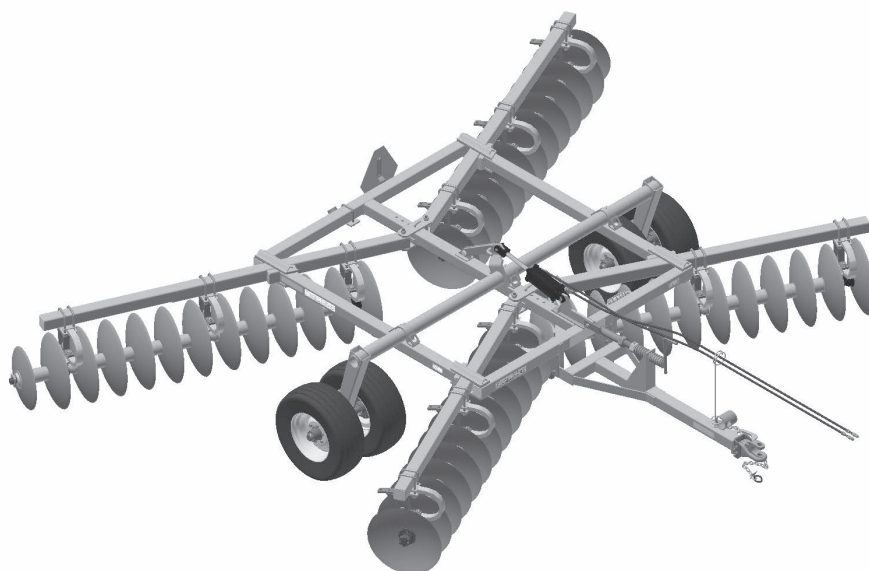


TABLE OF CONTENTS

Manufacturer’s Statement: For technical reasons, Farm King reserves the right to modify machinery design and specifications provided herein without any preliminary notice. Information provided herein is of descriptive nature. Performance quality may depend on soil fertility, applied agricultural techniques, weather conditions, and other factors.

INTRODUCTION.....5

SAFETY.....9

ASSEMBLY.....21

OPERATION.....43

MAINTENANCE.....57

PARTS IDENTIFICATION.....121

SPECIFICATIONS.....159

WARRANTY.....167

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WARRANTY REGISTRATION FORM

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

Customer Name:

Dealer Name:

Customer Address:

Dealer Address:

City:

Prov / State:

City:

Prov / State:

Postal / Zip Code:

Phone:

Postal / Zip Code:

Phone:

Equipment Model:

Serial Number:

Delivery Date:

I have thoroughly instructed the buyer on the above described equipment which review included the Operator and Parts Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Dealer Inspection Report

- ☐ Scrapers Adjusted Properly
- ☐ Lubricate Machine
- ☐ Correct # Of Depth Stops
- ☐ Wheel Bolt / Lug Nut Torque
- ☐ Fasteners Tight
- ☐ Front And Rear Gangs Set At Medium Angle
- ☐ Check Opening Measurement Between Two Inner Blades Of Rear Main Frame Gangs
- ☐ Hydraulic Cylinders / Hoses
- ☐ Electrical Harness
- ☐ Tire Pressure

Safety

- ☐ All Lights And Reflectors Installed
- ☐ All Lights And Reflectors Cleaned And Working
- ☐ Safety Chain On Hitch
- ☐ All Decals Installed
- ☐ Guards And Shields Installed And Secure
- ☐ Review Operating And Safety Instructions
- ☐ General Adjustment And Set-up Procedures
- ☐ Transportation Requirements And Regulations
- ☐ SMV sign is installed

Date:

Dealer Rep. Signature:

The above equipment and Operator And Parts Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date:

Customer / Owner Signature:

Remove this Warranty Registration Form from the Operator And Parts Manual. Make two copies of the form. Send original Warranty Registration Form to Farm King. Give one copy to the customer and the dealer will keep one copy.

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INTRODUCTION

This Operator And Parts Manual was written to give the owner / operator instructions on the safe operation, maintenance and part identification of the Farm King equipment. READ AND UNDERSTAND THIS OPERATOR AND PARTS MANUAL BEFORE OPERATING YOUR FARM KING EQUIPMENT. If you have any questions, see your Farm King dealer. This manual may illustrate options and accessories not installed on your Farm King equipment.

OWNER’S INFORMATION.....	7
Serial Number Location.....	7
EQUIPMENT IDENTIFICATION.....	8

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OWNER'S INFORMATION

Thank you for your decision to purchase a Farm King 395 Tandem Disc. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator And Parts Manual and follow all recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations **and** / or laws. Follow all on-product labeling and instructions.

All personnel shall read this manual and understand the proper operation, installation and maintenance procedures before being allowed to work with it.

Farm King is continually working to improve its products. Farm King reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

This publication has been professionally created ensuring its accuracy, Farm King makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Farm King assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Farm King Dealer if you need assistance, information, or additional copies of the manual.

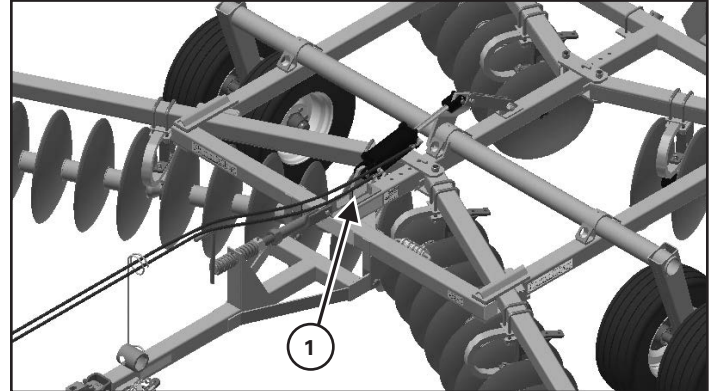
Visit our website at **www.farm-king.com** for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

Serial Number Location

Please enter the model and serial number in the space provided for easy reference.

Figure 1



Model Number: _____

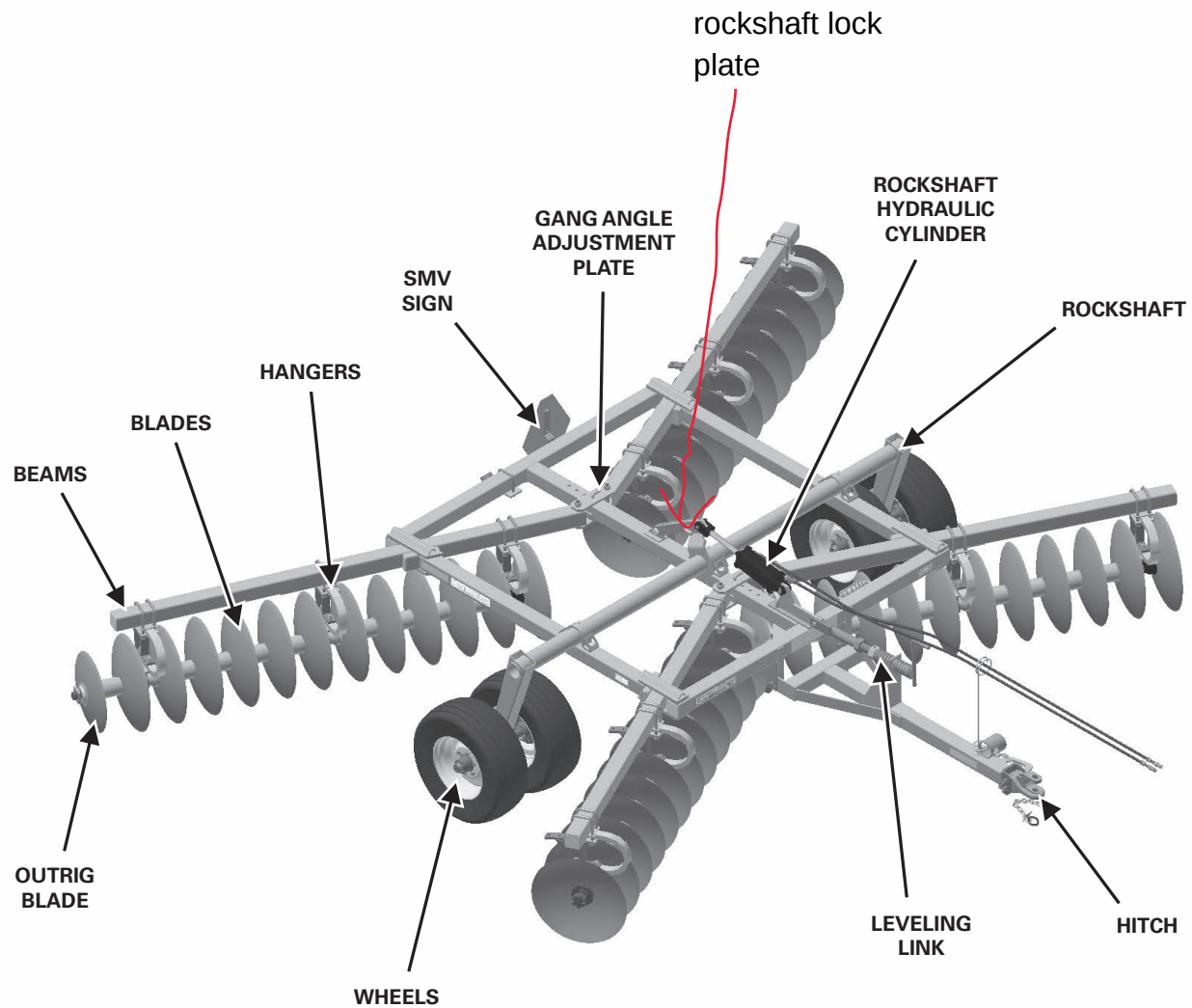
Serial Number: _____

The serial number plate (Item 1) is located at the front of main frame [Figure 1].

Always use your serial number when requesting information or when ordering parts.

EQUIPMENT IDENTIFICATION

Figure 2



SAFETY

SAFETY INSTRUCTIONS.....	11
Safety Symbols.....	11
Operator Safety.....	11
Safety Rules.....	12
Assembly Safety.....	12
Maintenance Safety.....	13
Transport Safety.....	14
Operation Safety.....	14
FIRE PREVENTION.....	15
Maintenance.....	15
Operation.....	15
Starting.....	15
Electrical.....	15
Hydraulic System.....	15
Fueling.....	15
Welding And Grinding.....	16
Fire Extinguishers.....	16
SAFETY AND EQUIPMENT SIGNS (DECALS).....	18
SAFETY SIGN-OFF FORM.....	20

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SAFETY INSTRUCTIONS

Safety Symbols

	Safety Alert Symbol
This symbol with a warning statement means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.	

**CAUTION**

The signal word **CAUTION** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**DANGER**

The signal word **DANGER** on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING**

The signal word **WARNING** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**IMPORTANT**

This notice identifies procedures which must be followed to avoid damage to the machine.

Operator Safety

**WARNING**

Operators must have instructions before operating the machine. Untrained operators can cause injury or death.

For an operator to be qualified, he or she must not use drugs or alcohol which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine and the equipment.

A Qualified Operator Must Do The Following:

Understand the written instructions, rules and regulations:

- The written instructions from Farm King include the Warranty Registration, Dealer Inspection Report, Operator And Parts Manual and decals.
- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. Regulations may identify a hazard such as a utility line.

Have training with actual operation:

- Operator training must consist of a demonstration and verbal instruction. This training is given by the machine owner prior to operation.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine safely under all conditions of the work area. Always fasten seat belt before operating.

Know the work conditions:

- Clear working area of all bystanders, especially small children and all obstacles that might be hooked or snagged, causing injury or damage.
- Know the location of any overhead or underground power lines. Call local utilities and have all underground power lines marked prior to operation.
- Wear tight fitting clothing. Always wear safety glasses when doing maintenance or service.

Safety Rules

- Read and follow instructions in this manual and the tractor's Operators Manual before operating.
- Under no circumstances should young children be allowed to work with this equipment.
- This equipment is dangerous to children and persons unfamiliar with its operation.
- If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
- Check for overhead and / or underground lines before operating equipment (if applicable).
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.
- Check that the equipment is securely fastened to the tractor.
- Make sure all the machine controls are in the NEUTRAL position before starting the machine.
- Operate the equipment only from the operator's position.
- Operate the equipment according to the Operator's Manual.
- When learning to operate the equipment, start at a slow rate in an area clear of bystanders, especially small children.
- DO NOT permit personnel to be in the work area when operating the equipment.
- The equipment must be used ONLY on approved tractors.
- DO NOT modify the equipment in any way. Unauthorized modification may impair the function and / or safety and could affect the life of the equipment.
- DO NOT make any adjustments or repairs on the equipment while the machine is running.
- Keep shields and guards in place. Replace if damaged.
- Always relieve the pressure in hydraulic system and close hydraulic lockup valves when not in operation.
- When operating on hillsides, use extreme care. The tractor may tip over if it strikes a hole, ditch or other irregularity.

Assembly Safety

- When assembling disc, use aligning punch to line up holes. Keep fingers out of holes. Any sudden movement of heavy components will severely injure or sever your fingers.
- Use adequate manpower or hoist to lift the heavy components into place. Attempting to lift heavy components by yourself could cause serious injury.
- Be sure all bolts and hydraulic fittings are tight, and all cotter pins are installed in the slotted nuts and pins.
- Support the main and wing frames securely before assembling the components. Inadequate support may result in the heavy components falling and causing serious injury to you or person(s) nearby.
- Be sure all wheel bolts are checked for tightness during initial transport or when first discing. Loose wheel bolts may result in the wheel falling off, causing serious damage to the disc and may cause serious injury to the operator or person(s) nearby.
- ~~To fill the wing lift cylinders with hydraulic fluid, remove the pin from the shaft end of each wing lift cylinder and pump fluid into the cylinders. Extend and contract the cylinders until they are completely filled with hydraulic fluid. The wings will free fall if the cylinders are not completely filled with fluid, resulting in serious damage to machine or serious injury or death to person(s) nearby.~~
- ~~Do not raise or lower the main or wing frames until all components are securely tightened. Loose components will cause serious damage to the disc and serious injury or death to you and person(s) nearby if the main or wing frames fell.~~
- Hydraulic oil escaping under pressure has sufficient force to cause serious injury. Relieve pressure in all hydraulic components before disconnecting any hydraulic components. Before applying pressure to hydraulic system, be sure all connections are tight and components are not damaged. If injured by escaping hydraulic fluid, see a medical doctor immediately.
- When attaching gang assemblies, wear protective gloves to prevent injury from cutting edges of blades.
- Before applying pressure to the hydraulic system, be sure all connections are tight and the components are not damaged.
- ~~Wings will free fall if wing cylinders is not full of oil causing serious damage to machine or serious injury or death to person(s) nearby.~~

- If hydraulic cylinder shafts are unpinned and cycled to fill them with oil, they can be seriously damaged if clevis of shaft strikes rockshaft arm or wing cylinder lug.
- ~~Do not stand under folded wings when working on disc. If hydraulic system failed or if hydraulic lever was accidentally operated, wings may fall resulting in serious injury or death to person(s) near disc.~~
- When assembling gangs ensure adequate support is placed under main frame and wing frame. Do not use lock out valves as safety device to prevent frame from falling. If any hydraulic component failed, disc could drop causing serious injury or death to person(s) nearby.

Maintenance Safety

- Do not loosen or disassemble hydraulic components when there is pressure within those components. Hydraulic components under pressure may cause parts and hydraulic fluid to fly out at a high velocity, which could cause serious injury. Always relieve the pressure in the hydraulic system before making adjustments to the hydraulic system. If injured by escaping hydraulic fluid, see a medical doctor immediately.
- Check all hydraulic hoses periodically for signs of ruptures and leaks. Always use wood or cardboard as a backstop, and wear gloves and eye protection when searching the hydraulic system for leaks. Spurting hydraulic fluid can cause injury if it penetrates the skin or the eyes. If injured by escaping hydraulic fluid, see a medical doctor immediately.
- Always relieve the pressure in the hydraulic system when the disc is not being operated. Always permit parts which contain hot fluid to cool to a safe temperature before handling or disconnecting these parts. Always wear safety glasses or goggles and gloves when working on the hydraulic system.
- ~~To fill wing lift cylinders with hydraulic oil, extend and contract cylinder within slot on wing until cylinders are completely filled with oil. Do not fold wing until cylinder is completely filled, wing will free fall if cylinders are not filled with oil, causing serious damage to machine or serious injury or death to person(s) nearby.~~
- Lower the disc to the ground when servicing or making adjustments. If the disc must be serviced in the raised position, place blocks under frame. Do not rely on hydraulics lock up valves as a safety device. If the hydraulic system failed, or if the hydraulic lever was accidentally operated, the disc could drop.
- Do not lubricate disc while it is in motion. You may fall in front of disc and be seriously or fatally injured.
- Always place all tractor controls in neutral and lock brakes when hitching disc to tractor. Tractor could roll backwards when hitching disc.
- ~~If a wing lift cylinders or wing lift hydraulic hoses are removed when wings are folded into transport position, always install a safety chain between wing frame and main frame to prevent wings from falling. If wings fell serious injury or death could occur to person(s) nearby and machine would be damaged severely.~~
- When inflating tires use a clip-on chuck and air hose extension which will allow operator to stand clear of tire and wheel assembly. Do not stand in front of or over tire when inflating. Exploding tire and wheel parts can cause serious injury or death.

Transport Safety

- When trailing the disc over public roads, use the SMV emblem and warning light for protection of tractor and other motor vehicle operators. Check local laws for width and height maximums.
- When transporting disc always place ~~both hydraulic lock up valves in "closed" position.~~ If hydraulic lever was accidentally operated the disc could drop or wings could fall causing serious injury or death to operator or person(s) nearby.
- **Do not exceed 10 mph (16 km/h) when transporting the disc on smooth surfaces.**
- Reduce speed when transporting on rough surfaces. Excessive speed could cause loss of tractor control and damage to disc and tractor. Do not transport the disc with any other vehicle except a tractor.
- ~~When transporting disc always install the complete package of depth control stops (17" long) on shaft of main frame cylinder. If any component of hydraulic system failed disc could drop causing serious injury or death to operator or person(s) nearby.~~
- Disc may fall rearward suddenly and hitch may rise abruptly if disc is unpinned from tractor when disc is fully raised and wings unfolded. Always use caution and be sure other person(s) are not standing near disc when unhitching from tractor.
- ~~When transporting the disc with the wings folded (UP), be sure there is sufficient clearance under all power lines and other overhead obstructions. Serious injury or death can result from contact with electrical lines. Use care to avoid contact with electrical lines when moving or operating the disc.~~
- Always attach a safety chain to the tractor drawbar and the disc hitch before transporting the disc. The safety chain will help control disc should it accidentally separate from the drawbar. Use a chain with a strength rating greater than the gross weight of the towed machine. Serious damage, injury or death could result from the disc separating from the tractor drawbar.
- Check all reflectors and visibility and cleanliness before transporting the disc. It is important that the reflectors are clean and visible, especially during the evening hours.
- Regulate your speed on hillsides and curves when transporting the disc. Loss of tractor control could result in serious damage to the disc and possible serious injury or death to you or person(s) nearby.
- Never allow anyone to ride on drawbar of the tractor or on the disc. The person riding may fall and be seriously injured.

Operation Safety

- Be sure person(s) are standing clear before starting or moving the tractor and disc.
- Only one person (the operator) should be permitted on the tractor when the disc is in operation, and be familiar with repair procedures and temporary first aid treatment.
- Never stand between the tractor and disc when hitching disc to the tractor UNLESS all tractor controls are in neutral and the park brake is set. The tractor could roll backwards, which could result in serious injury or death to you or person(s) nearby.
- When operating on hillsides, use extreme care. The tractor may tip over if it strikes a hole, ditch or other irregularity.
- ~~To avoid personal injury or death, always stay clear of the folding wing when it is being raised, lowered or in the folded position. If the hydraulic system failed, or if the hydraulic lever was accidentally operated, the wing could drop, resulting in serious injury or death to you or those nearby.~~
- Always relieve the pressure in the hydraulic system and close both hydraulic lockup valves when the disc is not being operated.

FIRE PREVENTION



Maintenance

- The machine and some equipment have components that are at high temperatures under normal operating conditions. The primary source of high temperatures is the engine and exhaust system. The electrical system, if damaged or incorrectly maintained, can be a source of arcs or sparks.
- Flammable debris (leaves, straw, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.
- The operator's area, engine compartment and engine cooling system must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.
- All fuels, most lubricants and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Operation

- The Farm King machine must be in good operating condition before use.
- Check all of the items listed on the service schedule in the Maintenance section.
- Do not use the machine where exhaust, arcs, sparks or hot components can contact flammable material, explosive dust or gases.

Starting

- Do not use ether or starting fluids on any engine that has glow plugs. These starting aids can cause explosion and injure you or bystanders.
- Use the procedure in the tractor's operator's manual for connecting the battery and for jump starting.

Electrical



- Check all electrical wiring and connections for damage. Keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.
- Battery gas can explode and cause serious injury. Do not jump start or charge a frozen or damaged battery. Keep any open flames or sparks away from batteries. Do not smoke in battery charging area.

Hydraulic System

- Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.
- Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

Fueling



- Stop the engine and let it cool before adding fuel. No smoking! Do not refuel a machine near open flames or sparks. Fill the fuel tank outdoors.

Welding And Grinding

- Always clean the machine and equipment, disconnect the battery, and disconnect the wiring from the machine controls before welding. Cover rubber hoses, battery and all other flammable parts. Keep a fire extinguisher near the machine when welding.
- Have good ventilation when grinding or welding painted parts. Wear dust mask when grinding painted parts. Toxic dust or gas can be produced.
- Dust generated from repairing nonmetallic parts such as hoods, fenders or covers can be flammable or explosive. Repair such components in a well ventilated area away from open flames or sparks.

Fire Extinguishers



- Know where fire extinguishers and first aid kits are located and how to use them. Inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

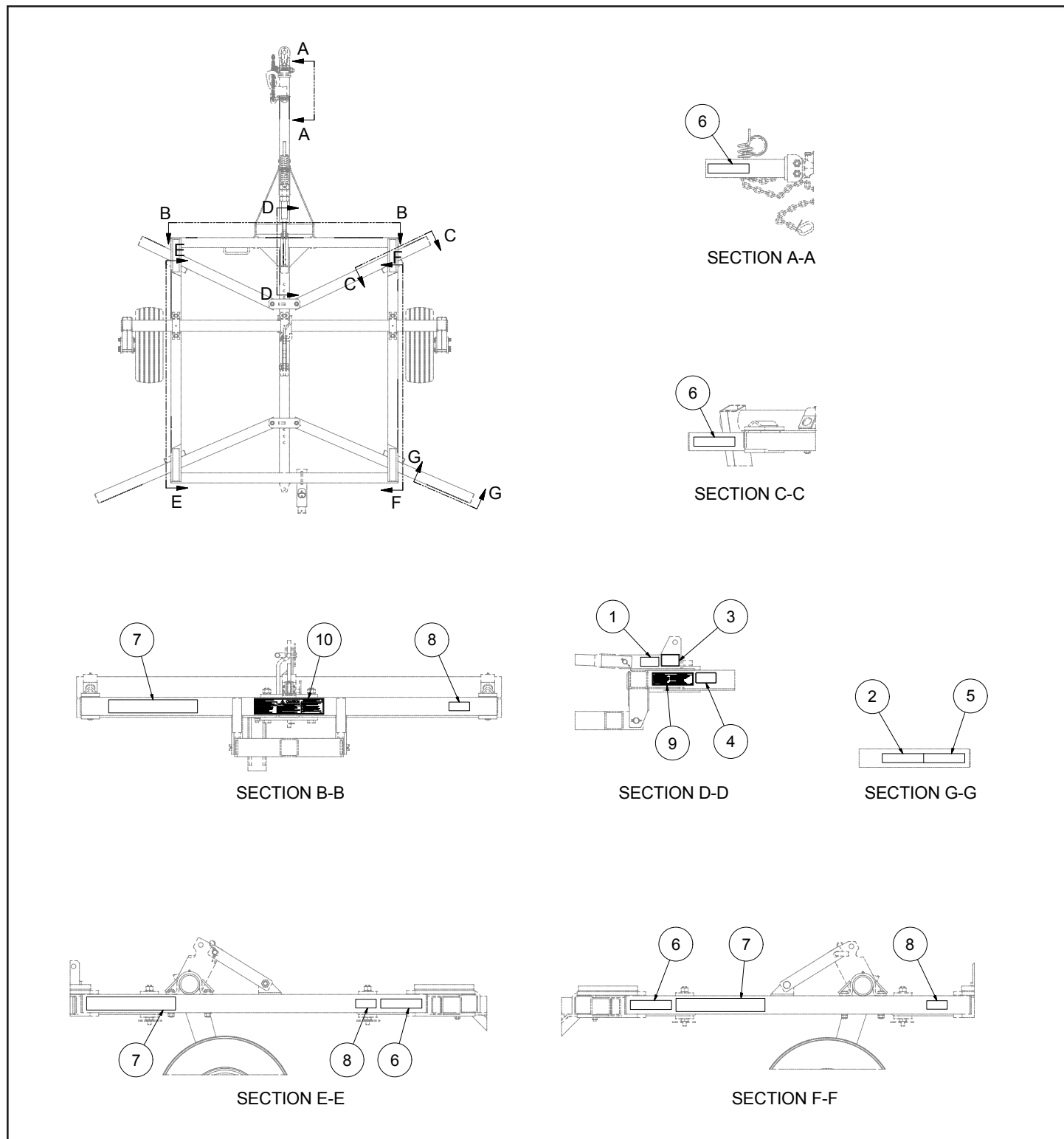
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SAFETY AND EQUIPMENT SIGNS (DECALS)

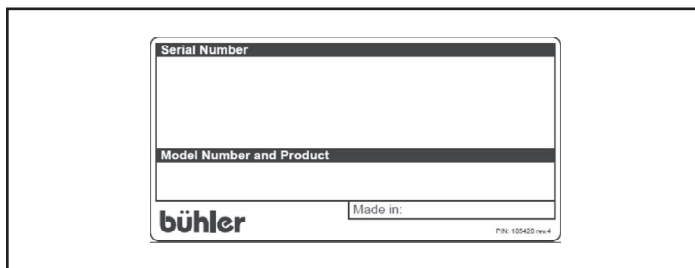
Follow the instructions on all the signs (decals) that are on the equipment. Replace any damaged signs (decals) and be sure they are in the correct locations. Equipment signs are available from your Farm King equipment dealer.

Figure 3



Decal Identification [Figure 3]

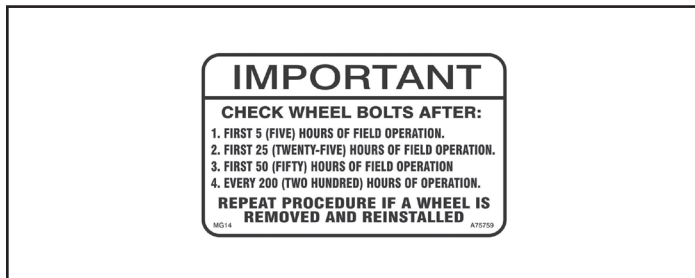
105420 - SERIAL# PLATE (ITEM 1)



86026768 - FLUORESCENT TAPE (ITEM 2)



EZA75759 - IMPORTANT DECAL (ITEM 3)



EZA75764 - WARNING OPERATION (Item 4)



EZDF10060 - RED REFLECTOR 2 X 9 (ITEM 5)



EZDF10061 - YELLOW REFLECTOR 2 X 9 (ITEM 6)



EZDF13703 - FARM KING 1.85 X 12.5 (ITEM 7)



EZDF6190 - MODEL 395 (ITEM 8)



EZDF7152 - MAINTENANCE (ITEM 9)

LUBRICATION	MAINTENANCE
- GANG BEARINGS - EVERY 20 HOURS OF OPERATION. - WHEEL HUBS - EVERY 50 HOURS OF OPERATION. - ROCKSHAFT BEARINGS (IF APPLICABLE) - EVERY 20 HOURS OF OPERATION. - WING HINGE POINTS (IF APPLICABLE) - EVERY 100 HOURS OF OPERATION. - WALKING BEAMS (IF APPLICABLE) - EVERY 8 HOURS OF OPERATION. - LEVELLING CRANK (BALL JOINT) - AT THE END AND BEGINNING OF EACH SEASON (WITH OIL).	- GANG BOLTS - 3200 ft/lbs. TORQUE. (Except models 1375/8530/80750/801080) (1-1/2" DIA.) - 3800 ft/lbs TORQUE. (Models 1375/8530/80750/801080 ONLY) - LEVELLING CRANK BOLTS (1-1/4" DIA.) - 840 ft/lbs TORQUE (MINIMUM). - GANG BEAM BOLTS (1-1/4" DIA.) - 840 ft/lbs TORQUE (MINIMUM). - WHEEL NUTS AND BOLTS - 130 LBS TORQUE (3/8" DIA) - 180 LBS TORQUE (3/4" DIA) - 285 LBS TORQUE (1" DIA) - TIRE PRESSURE AT RECOMMENDED P.S.I. ON TIRE SIDEWALL. NOTE: Loose ball hardware may cause severe damage to machine.
REFER TO OPERATOR'S MANUAL FOR OTHER LUBRICATIONS/MAINTENANCE INSTRUCTIONS.	

EZDF9510 - CAUTION (ITEM 10)

OBSERVE SAFETY RECOMMENDATIONS IN OPERATOR'S MANUAL.	CAUTION	READ AND UNDERSTAND OPERATOR'S MANUAL BEFORE OPERATING.
WHEN TRANSPORTING THIS MACHINE, LOCK ROCKSHAFT BY ENGAGING LOCK-UP DEVICES. WHEN TRANSPORTING THIS MACHINE OVER PUBLIC ROADS, USE THE SAME SIGNALS AND WARNING LIGHTS FOR PROTECTION OF TRACTOR AND OTHER MOTOR VEHICLE OPERATORS. CHECK LOCAL LAWS FOR HIGH VISIBILITY REQUIREMENTS. TRANSPORT THIS MACHINE WITH A TRACTOR ONLY. NEVER ALLOW ANYONE TO RIDE ON OR IN THIS MACHINE. DO NOT SERVICE OR ADJUST THIS MACHINE WHILE IT IS IN MOTION.	FAILING TO OBSERVE SAFETY RECOMMENDATIONS MAY RESULT IN SERIOUS INJURY OR DEATH. NEVER STAND BETWEEN TRACTOR AND THIS MACHINE WHEN HITCHING UNLESS ALL CONTROLS ARE IN NEUTRAL AND BRAKES LOCKED. PARK OR BLOCK THIS MACHINE SO IT WILL NOT ROLL WHEN DISCONNECTED FROM TRACTOR. DO NOT EXCEED 15 MPH (24 KM/H) WHEN TRANSPORTING THIS MACHINE ON SMOOTH SURFACES. REDUCE SPEED ON ROUGH SURFACES.	WHEN WORKING ON, UNDER OR AROUND THIS MACHINE, ALWAYS PLACE SAFETY SUPPORTS UNDER FRAME. IF SUPPORTS ARE NOT AVAILABLE, UNFOLD WINGS AND LOWER MACHINE TO GROUND. DO NOT DISASSEMBLE OR LOOSEN HYDRAULIC COMPONENTS WHEN THERE IS PRESSURE WITHIN THOSE COMPONENTS. CHECK HYDRAULIC HOSES PERIODICALLY FOR SIGNS OF RUPTURE AND LEAKS. USE A CARDSHARD AS BACKSTOP TO CHECK FOR ESCAPING HIGH PRESSURE OR HOT FLUID. WHEN TRANSPORTING THIS MACHINE, USE A HITCH SAFETY CHAIN.

SAFETY SIGN-OFF FORM**WARNING**

Instructions are necessary before operating or servicing equipment. Read and understand the Operator And Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

Farm King follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and / or maintaining the equipment must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Annually review this information before the season start-up and make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. An untrained operator is unqualified to operate this machine.

The following sign-off sheet is provided for your record and to show that all personnel who will be working with the equipment have read and understand the information in this Operator And Parts Manual and have been instructed in the operation of the equipment.

SIGN-OFF SHEET		
Date	Employee's Signature	Employer's Signature

ASSEMBLY

GENERAL ASSEMBLY INFORMATION.....	23
MAIN FRAME AND ROCKSHAFT.....	24
HITCH.....	26
GANG BEAMS.....	27
GANG SECTIONS.....	29
CENTER TOOTH.....	32
HYDRAULIC CYLINDER.....	33
GANG BEAM IDENTIFICATION.....	34
SCRAPER IDENTIFICATION.....	35
GANG SECTION IDENTIFICATION.....	36
8" Spacing, 34 Blades, 8 Bearings, 11.5 Ft. Width.....	36
8" Spacing, 42 Blades, 12 Bearings, 14.5 Ft. Width.....	36
8" Spacing, 46 Blades, 12 Bearings, 16 Ft. Width.....	37
8" Spacing, 54 Blades, 12 Bearings, 18.5 Ft. Width.....	37
8" Spacing, 58 Blades, 12 Bearings, 20 Ft. Width.....	38
9" Spacing, 30 Blades, 12 Bearings, 11.5 Ft. Width.....	39
9" Spacing, 38 Blades, 12 Bearings, 14.5 Ft. Width.....	39
9" Spacing, 42 Blades, 12 Bearings, 16.5 Ft. Width.....	40
9" Spacing, 46 Blades, 12 Bearings, 18 Ft. Width.....	40
9" Spacing, 50 Blades, 12 Bearings, 19.5 Ft. Width.....	41

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GENERAL ASSEMBLY INFORMATION



DANGER

ELECTROCUTION HAZARD

To prevent serious injury or death from electrocution:

- Be aware of overhead power lines.
- Keep away from power lines when unloading and assembling.
- Electrocution can occur without direct contact.



WARNING



AVOID INJURY OR DEATH

DO NOT permit bystanders to be in the work area when unloading and assembling components.

DO NOT work under suspended parts.

Keep away from moving parts.

Always use lifting devices / vehicles, chains or straps of adequate size and strength when unloading and assembling components.



WARNING



Keep fingers and hands out of pinch points when assembling the equipment.

Unload the crate(s) and components on a flat level area of adequate size to assemble the equipment.



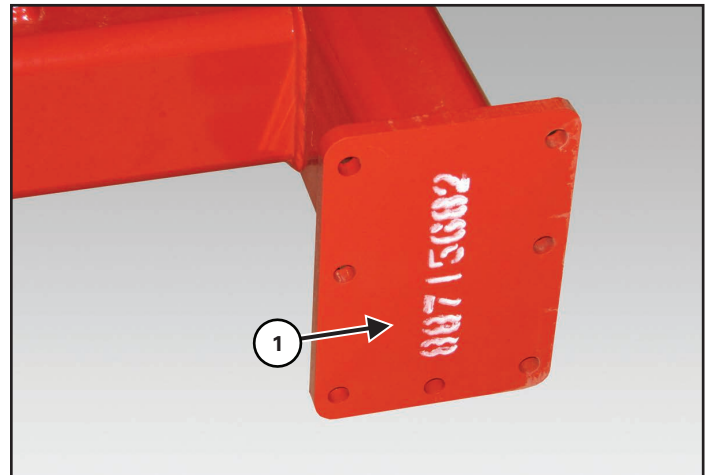
IMPORTANT

Unload crate(s) and other components carefully to prevent damage to any of the components.

NOTE: If any components are damaged, missing or replacement parts are required, contact your Farm King Dealer.

Using the packing list, locate and place all components and hardware in one area. Count the individual components and verify that you have received the correct number of components.

Figure 4



Larger components (Item 1) are marked for identification [Figure 4].

NOTE: The following images throughout the assembly section of this manual may not show the exact components as they appear but the procedure is correct for all 395 Tandem Disc series units.

MAIN FRAME AND ROCKSHAFT

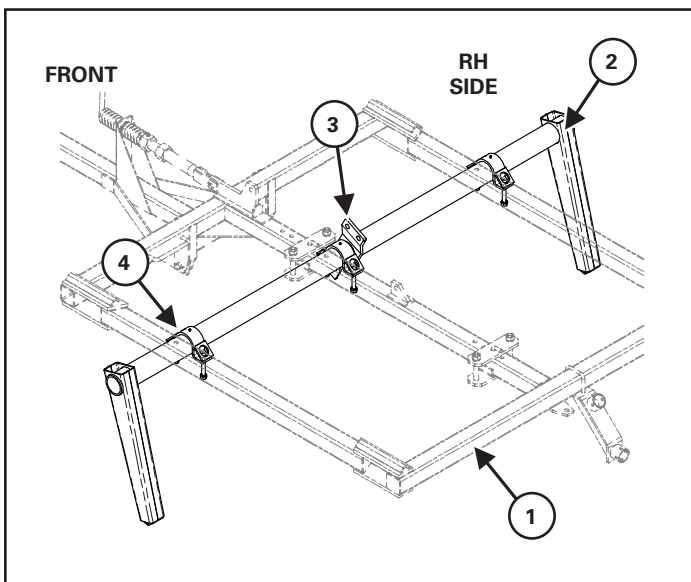
Assemble the main frame on a flat level surface.



IMPORTANT

Always use chains, straps and lifting devices that are in good condition and of adequate size to lift the equipment components.

Figure 5



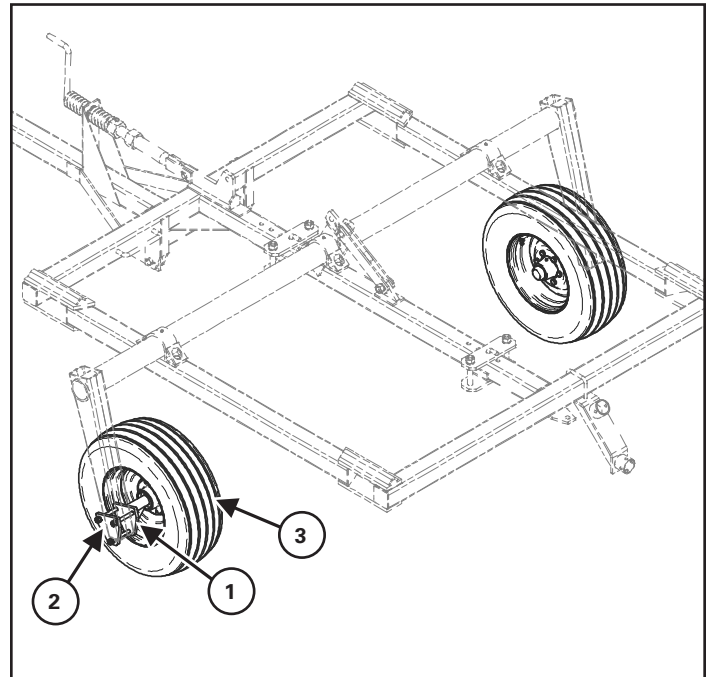
Raise frame (Item 1) approximately 30" (732mm) off the ground and block securely [Figure 5].

Lay the rockshaft (Item 2) over the frame. Position the rockshaft so that the bracket (Item 3) is on the RH side of the center frame [Figure 5].

Fasten rockshaft to frame with three bearings (Item 4). Attach each bearing using two 1" x 7" hex bolts, 1" lock washers, and 1" hex nuts [Figure 5].

Install one grease zerk to the top of each bearing.

Figure 6



Single Wheel

Attach the single wheel hub (Item 1) and backing plate (Item 2) to the rockshaft leg using three 5/8" x 6" hex bolts, 5/8" lock washers, and 5/8" hex nuts [Figure 6].

Attach the wheel (Item 3) to the hub using six 9/16" x 1-1/8" wheel bolts [Figure 6].

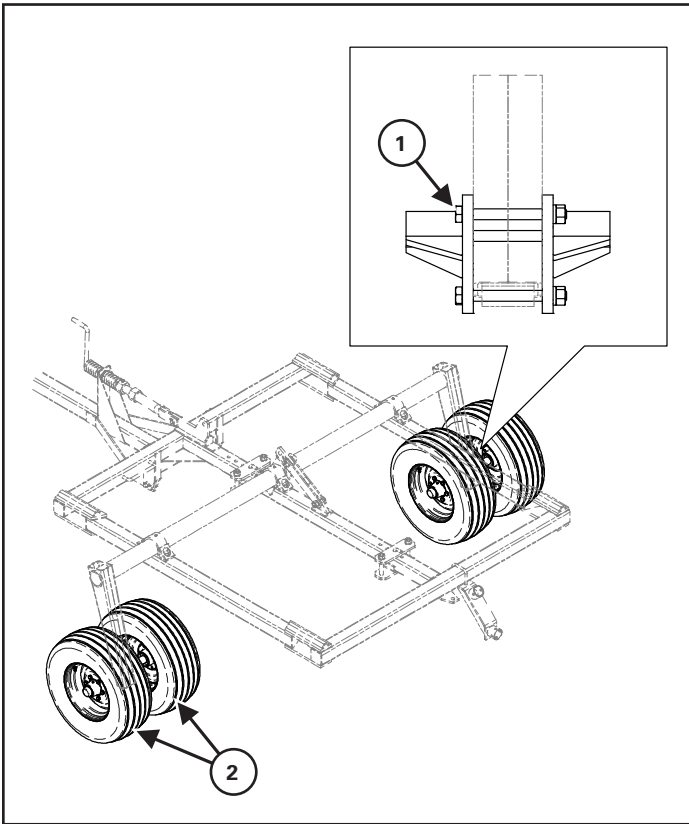
Install one grease zerk to the wheel hub.

NOTE: Install the single wheels on the inside of the rockshaft legs.

Repeat to install both wheel assemblies.

Tighten wheel bolts to 130 Ft.-Lbs. (176.3 N.-m.).

Figure 7



Dual Wheel

Attach the dual wheel hubs to the rockshaft leg using three 5/8" x 6" hex bolts (Item 1), 5/8" lock washers, and 5/8" hex nuts [Figure 7].

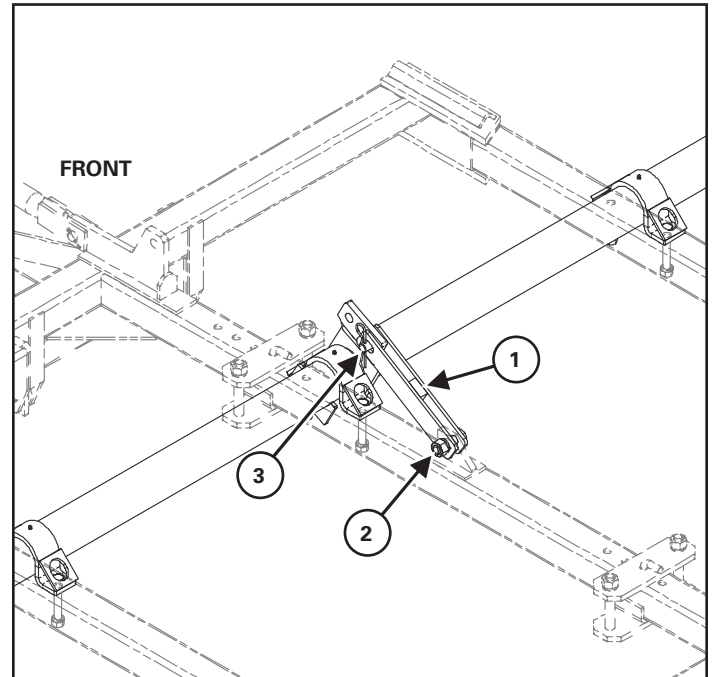
Attach the wheels (Item 2) to the hubs using six 9/16" x 1-1/8" wheel bolts [Figure 7].

Install one grease zerk to the wheel hubs.

Repeat to install both wheel assemblies.

Tighten wheel bolts to 130 Ft.-Lbs. (176.3 N.-m.).

Figure 8



Position the rockshaft lock plate (Item 1) on the frame [Figure 8].

Install the lock plate to the mount on the main frame using one 1" x 3" hex bolt (Item 2), 1" lock washer, and 1" hex nut [Figure 8].

NOTE: Use the round hole of the lock plate to attach to the main frame bracket.

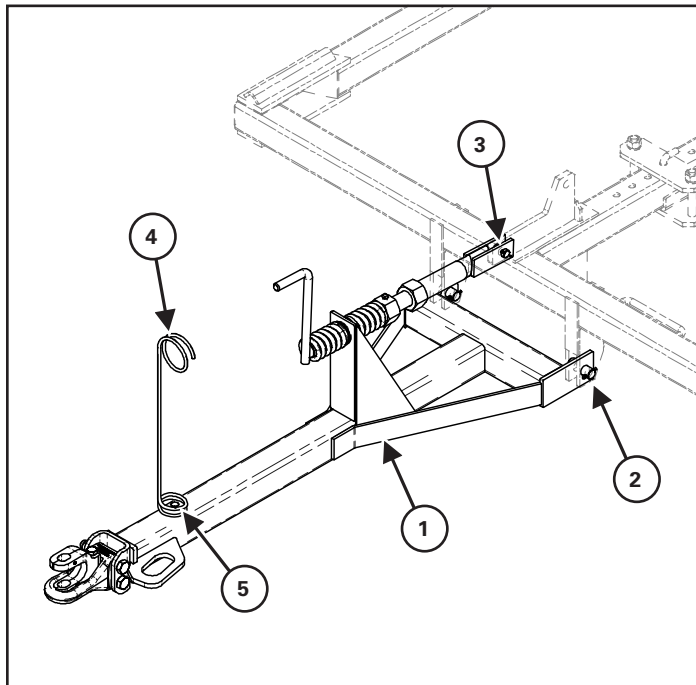
Raise the frame on the wheels and fasten the lock plate (Item 1) to the rear hole on the rockshaft bracket using one clevis pin (Item 3) and cotter pin [Figure 8].

NOTE: Use the slotted hole of the lock plate to attach to the rockshaft.

The rockshaft is now in the lock-up position.

HITCH

Figure 9



Position the hitch assembly (Item 1) at the front of the frame **[Figure 9]**.

Attach the lower hitch mounts to the frame using two 1-1/4" x 3-1/2" pins (Item 2) and cotter pins **[Figure 9]**.

Attach the leveling link mount to the frame using one 1-1/4" x 3-1/2" pin (Item 3) and cotter pins **[Figure 9]**.

Attach the hose support (Item 4) to the 5/8" bolt (Item 5) (welded to the hitch) using one 11/16" ID flat washer and 5/8" nut **[Figure 9]**.

GANG BEAMS

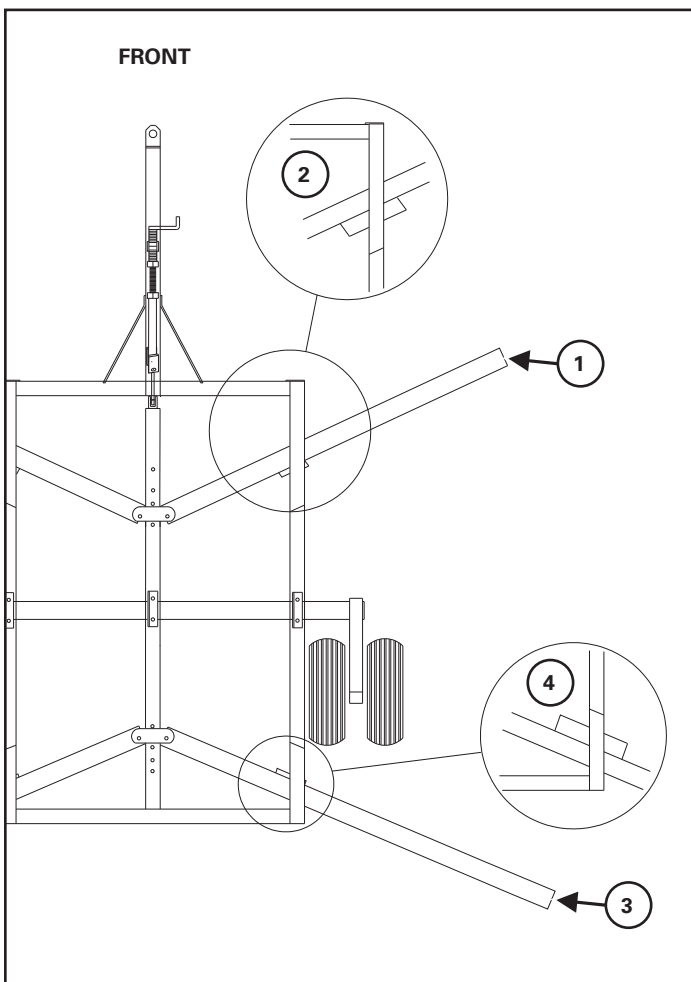


IMPORTANT

Always use chains, straps and lifting devices that are in good condition and of adequate size to lift the equipment components.

Always block the main frame when assembling gang components.

Figure 10



Install the two shorter front gang beams (Item 1) through the front side openings of frame [Figure 10].

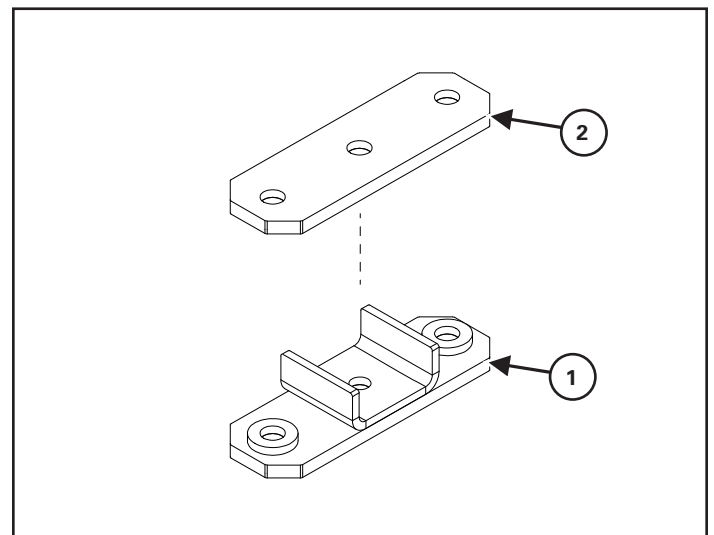
The front gang beams must be positioned so that the stabilizing bracket (Item 2) (welded to each gang beam) is facing the rear [Figure 10].

Install the two longer rear gang beams (Item 3) through the rear side openings of frame [Figure 10].

The rear gang beams must be positioned so that the stabilizing bracket (Item 4) (welded to each gang beam) is facing front [Figure 10].

NOTE: See "Gang Beam Identification" on page 34 for proper lengths depending on model.

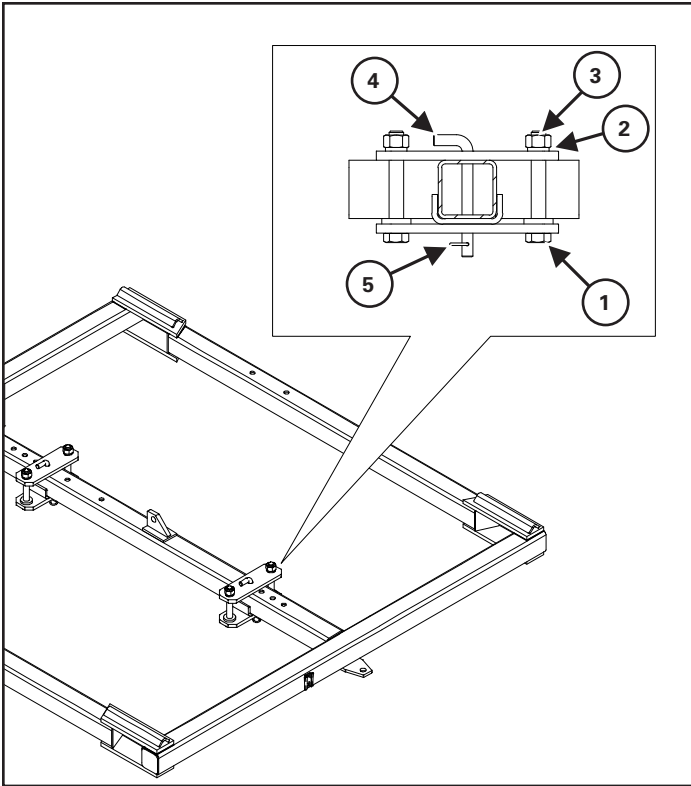
Figure 11



Place one lower mount plate (Item 1) beneath the center frame weldment. Align the saddle of the plate with the frame weldment [Figure 11].

Place one upper mount plate (Item 2) over top the center frame weldment. Align with the bottom plate [Figure 11].

Align the two LH and RH gang beams with the holes of the lower and upper mount plates [Figure 11].

Figure 12

Attach the plates through the gang beams using one 1" x 7" hex bolt (Item 1), 1" lock washer (Item 2), and 1" hex nut (Item 3) **[Figure 12]**.

Install one locking pin (Item 4) and cotter pin (Item 5) through the center of the plates **[Figure 12]**.

Repeat to install all gang beams.

GANG SECTIONS

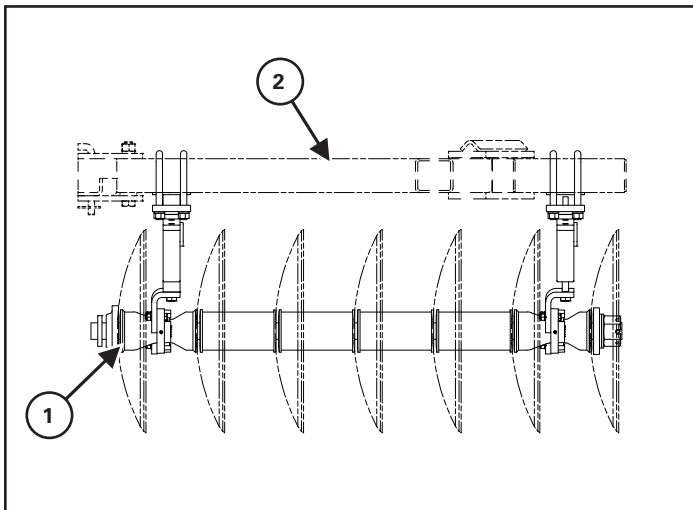


IMPORTANT

Always use chains, straps and lifting devices that are in good condition and of adequate size to lift the equipment components.

Always secure the main frame with blocks when assembling gang components.

Figure 13



Place the correct gang section (Item 1) underneath the corresponding gang beam (Item 2) [Figure 13].

See "Gang Beam Identification" on page 34 and "Gang Section Identification" on page 36.

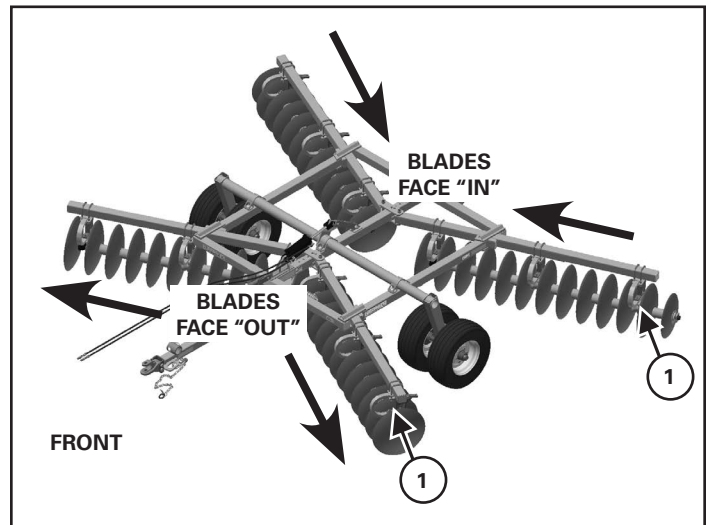


IMPORTANT

When installing gang sections be sure of the following:

- Gang sections are installed to the correct gang beam.
- Blades of each gang section face the proper direction based on position (front, back, left, right).
- Gang sections are spaced the correct distance from the center frame.
- Hangers are square with the gang beam.

Figure 14

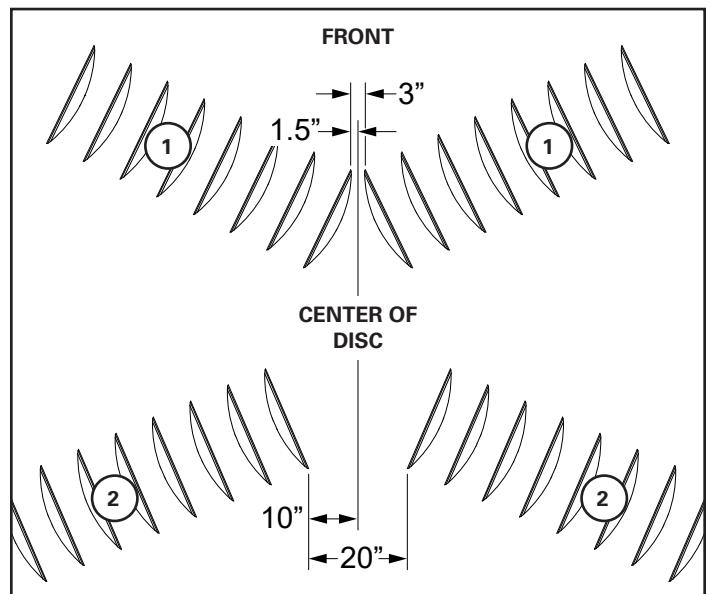


The curved portion of the hangers (Item 1) on both the front and rear gangs must face the front of the disc [Figure 14].

Blades on the front gangs must face "out" away from the center of the disc [Figure 14].

Blades on the rear gangs must face "in" towards the center of the disc [Figure 14].

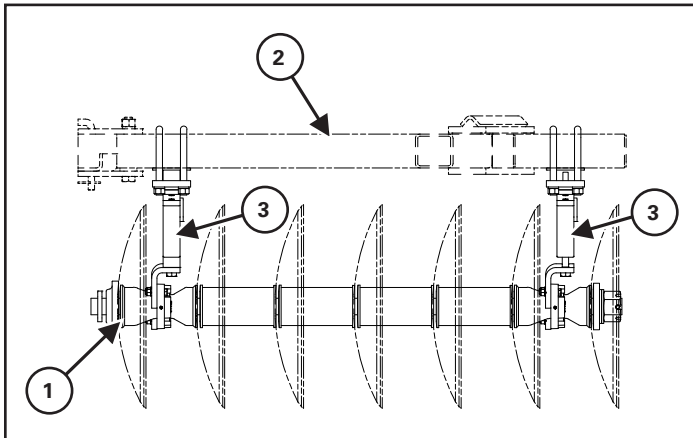
Figure 15



Position the front gangs (Item 1) so the innermost blades are 3" apart [Figure 15].

Position the rear gangs (Item 2) so the innermost blades are 20" apart [Figure 15].

Figure 16



Attach the gang sections (Item 1) to the beams (Item 2) by raising or lowering the front or rear frame to align the beam with the hangers (Item 3) [Figure 16].

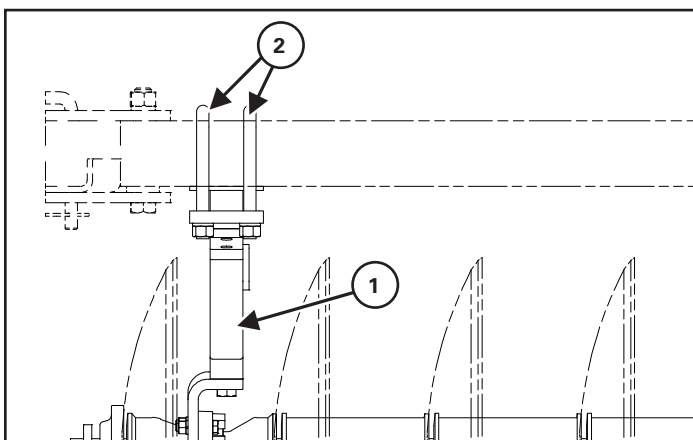


IMPORTANT

Always use chains, straps and lifting devices that are in good condition and of adequate size to lift the equipment components.

Always secure the main frame with blocks when assembling gang components.

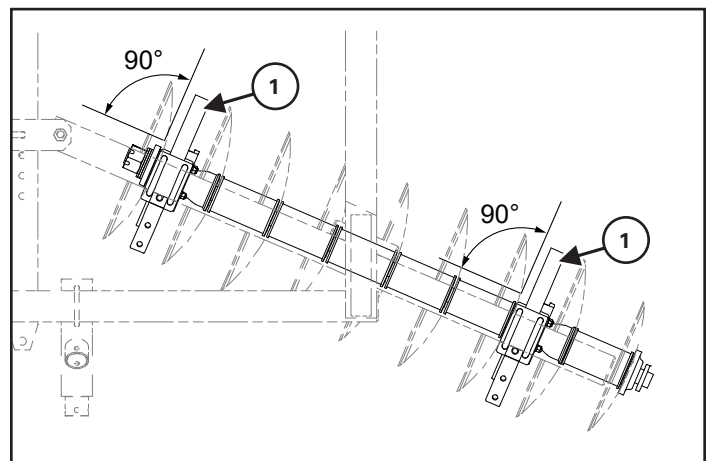
Figure 17



Attach each hanger (Item 1) to the gang beam with two 3/4" x 4" u-bolts (Item 2), four 3/4" lock washers, and four 3/4" hex nuts [Figure 17].

Do not tighten u-bolts at this time.

Figure 18



Make sure that each hanger (Item 1) is square with the gang beam [Figure 18].

Tighten the u-bolts of the outside hanger of each gang section first. Make sure the outside hanger is square with the gang beam before tightening.

Tighten the remaining hanger u-bolts of the gang section. Make sure the hangers are square with the gang beam before tightening.

NOTE: The mounting fasteners of the scraper bar may have to be loosened to square the hangers (if applicable).



IMPORTANT

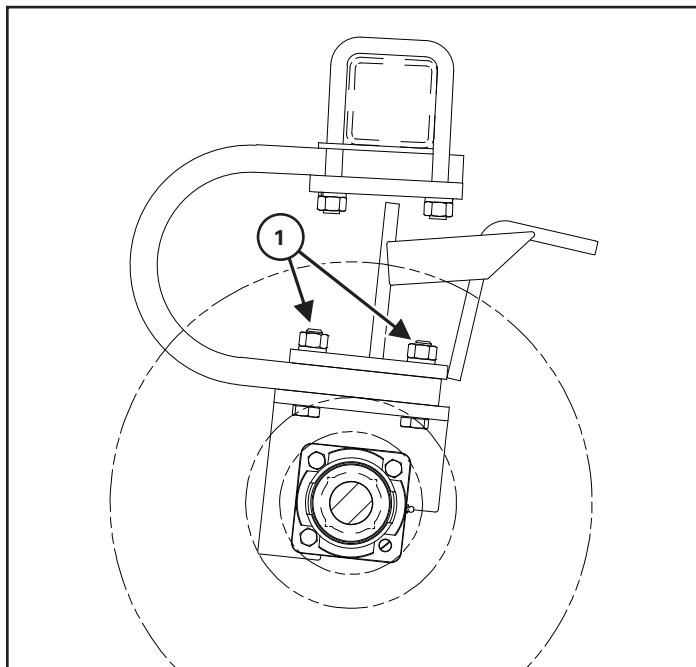
If bearing hangers are not sitting square before tightening u-bolts, thrust will be built into the bearings and the life of the bearing will be shortened.

Tighten bearing hanger u-bolts to 430 Ft.-Lbs.

Make sure gang assemblies are installed with the grease zerks facing the rear of the unit.

Lubricate bearings every 20 hours of use.

Figure 19



Once hangers are square, loosen the fasteners (Item 1) of the angle bracket attached to the hanger. Repeat to loosen the fasteners (Item 1) on each bearing assembly of the gang section [Figure 19].

Turn the blades of the gang section to align the bearings. Once bearings are aligned, re-tighten the fasteners (Item 1) [Figure 19].

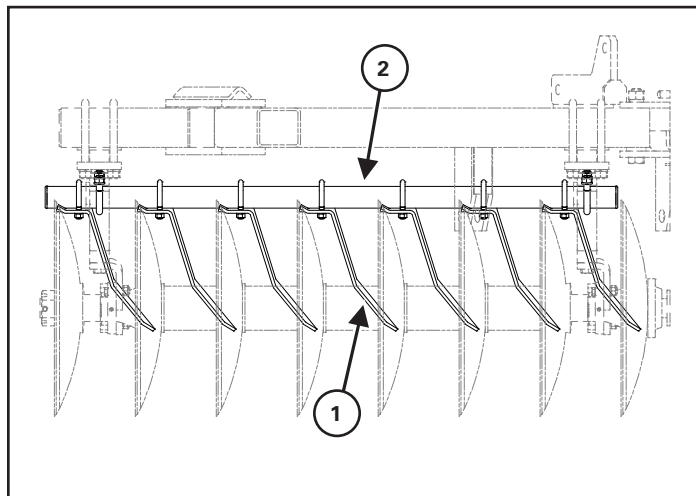
Repeat for each gang section.



IMPORTANT

Proper bearing alignment will increase bearing life.

Figure 20

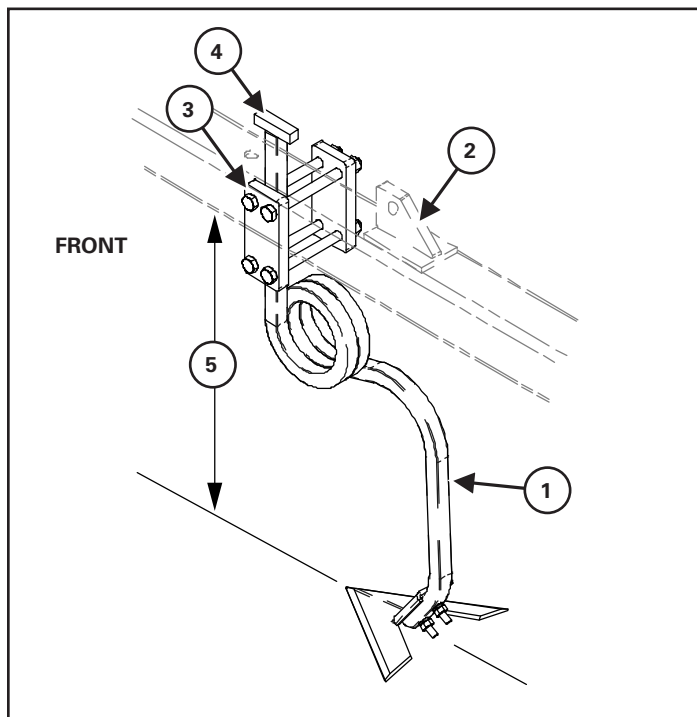


Adjust the scrapers (Item 1) and scraper bar (Item 2) so that the scrapers are slightly in contact with the blades [Figure 20].

See “Scraper Identification” on page 35.

CENTER TOOTH

Figure 21



Position center tooth assembly (Item 1) on the center weldment of the disc frame **[Figure 21]**.

Mount the center tooth between the locking bracket (Item 2) and rockshaft. Attach the two clamp plates using four 5/8" x 7-1/2" hex bolts (Item 3), 5/8" lock washers, and 5/8" hex nuts **[Figure 21]**.

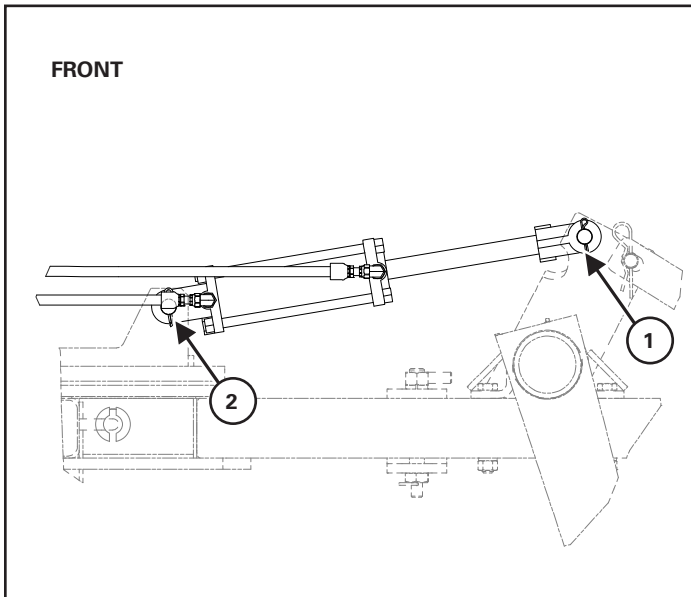
Position the upright handle (Item 4) of the center tooth on the LH side of the frame weldment so the point of the tooth shovel is centered **[Figure 21]**.

Adjust the center tooth to the correct height (Item 5) depending on blade size **[Figure 21]**:

- For 22" Blades, adjust height to 24-1/2"
- For 24" Blades, adjust height to 25-1/2"

HYDRAULIC CYLINDER

Figure 22



Attach the rod of the hydraulic cylinder to the rockshaft mount (Item 1) using one 1" x 3-1/2" cylinder pin and cotter pins **[Figure 22]**.

Attach the barrel of the hydraulic cylinder to the mount (Item 2) at the front of the frame using one 1" x 3-1/2" cylinder pin and cotter pins **[Figure 22]**.

Install two elbow fittings to the cylinder ports. Face the elbows towards the front of the disc.

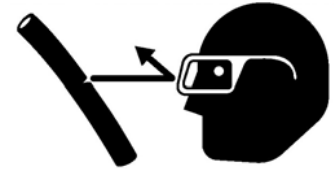
Connect two hydraulic hoses to the elbow fittings on the cylinder:

- Cylinder barrel fitting, hose [-06, 06-00, 06-00, 144"]
- Cylinder rod fitting, hose [-06, 06-00, 06-00, 156"]

Route the hydraulic hoses to the hitch and through the hose support.



WARNING



HIGH PRESSURE FLUID HAZARD

Do not disconnect hydraulic components when under pressure. Hydraulic components under pressure may cause parts and hydraulic fluid to fly out at high velocity.

Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required. Wear goggles. Use cardboard to check for leaks.



IMPORTANT

Fluid such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

GANG BEAM IDENTIFICATION

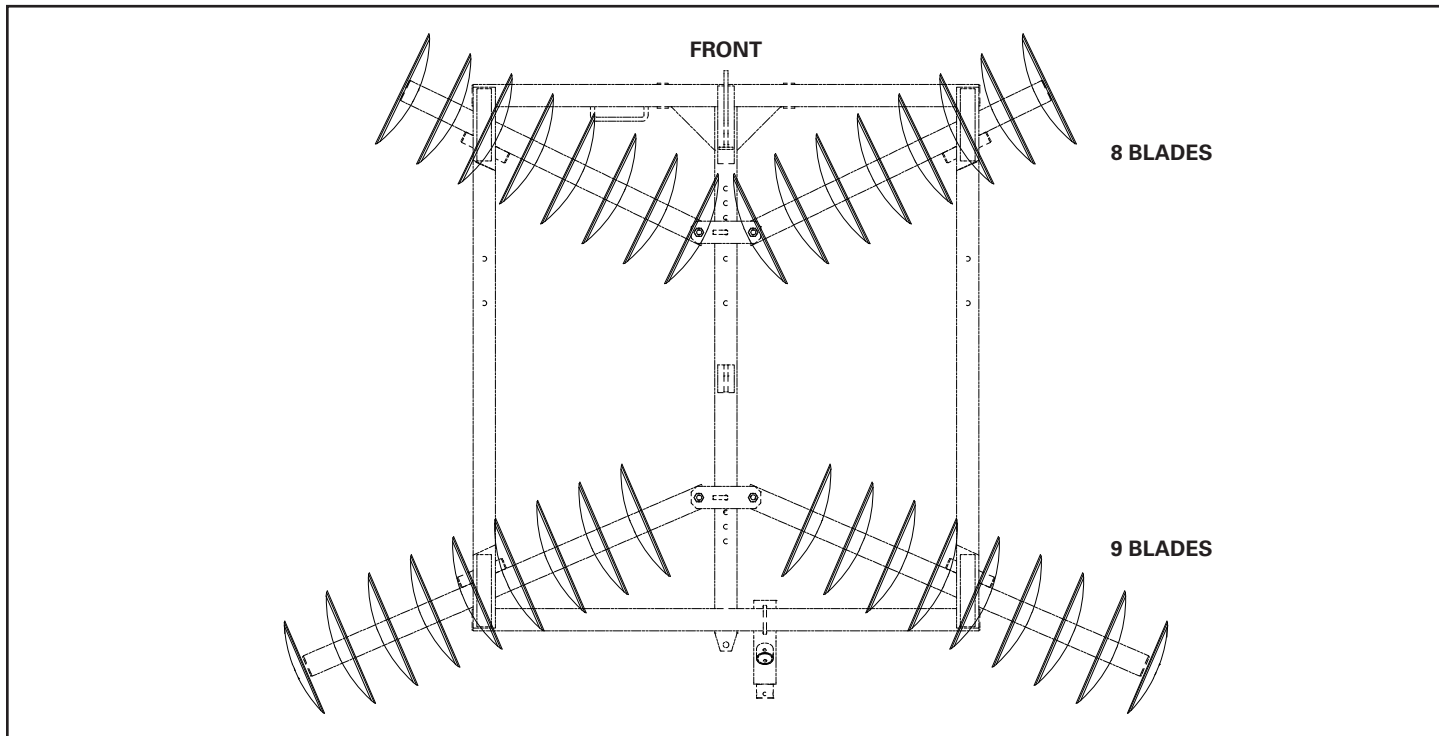
Total blades of unit	Blades per front gang	Front beam length	Blades per rear gang	Rear beam length
8" Spacing				
34	8	60"	9	78"
42	10	78"	11	90"
46	11	90"	12	102"
54	13	102"	14	120"
58	14	114"	15	126"
9" Spacing				
30	7	60"	8	72"
38	9	78"	10	96"
42	10	90"	11	102"
46	11	96"	12	114"
50	12	108"	13	120"

SCRAPER IDENTIFICATION

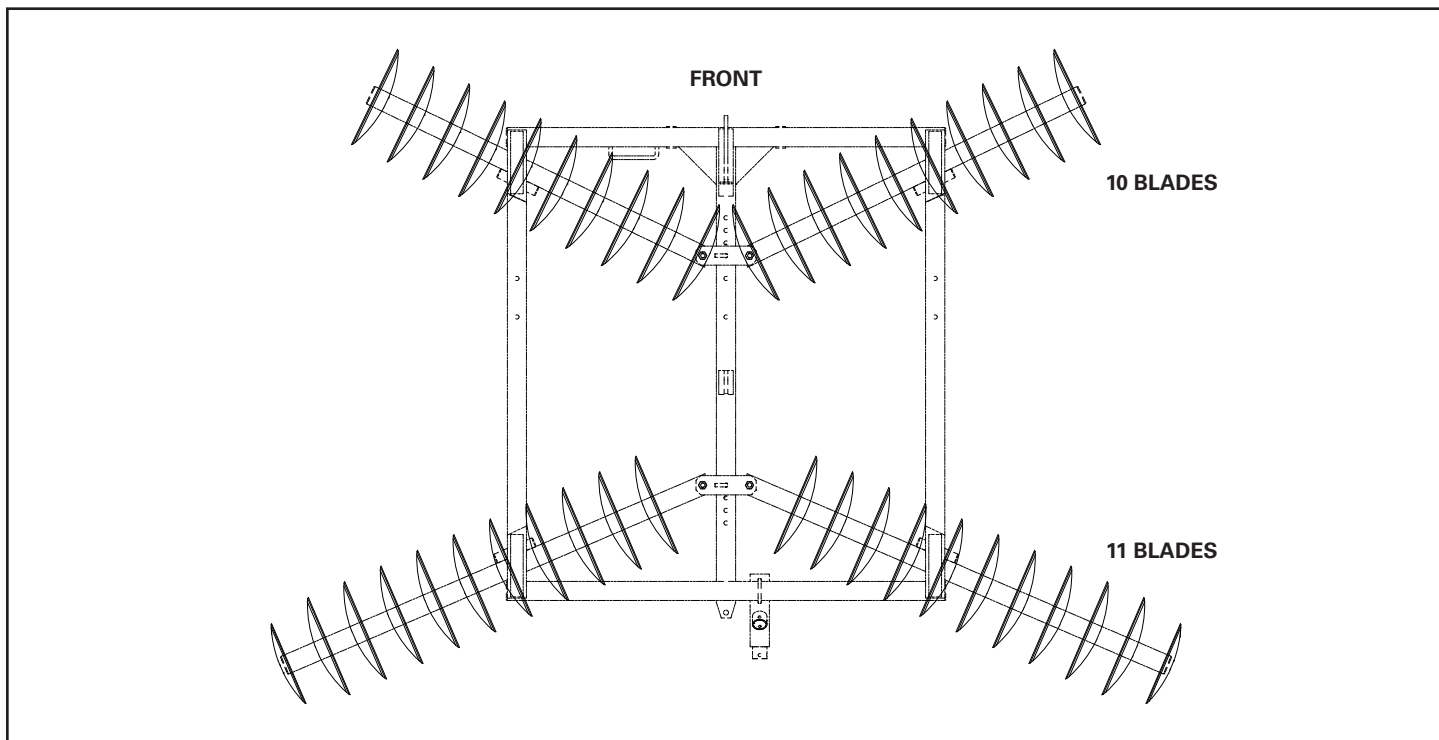
Total blades of unit	Blades per front gang	Scrapers per front gang	Front scraper bar length	Blades per rear gang	Scrapers per rear gang	Rear scraper bar length
8" Spacing						
34	8	7	58"	9	9	73"
42	10	9	74"	11	11	90"
46	11	10	82.5"	12	12	99"
54	13	12	99"	14	14	114.5"
58	14	13	107"	15	15	123"
9" Spacing						
30	7	6	55"	8	8	73"
38	9	8	73"	10	10	91.5"
42	10	9	82.5"	11	11	101.5"
46	11	10	91.5"	12	12	110"
50	12	11	101.5"	13	13	120"

GANG SECTION IDENTIFICATION

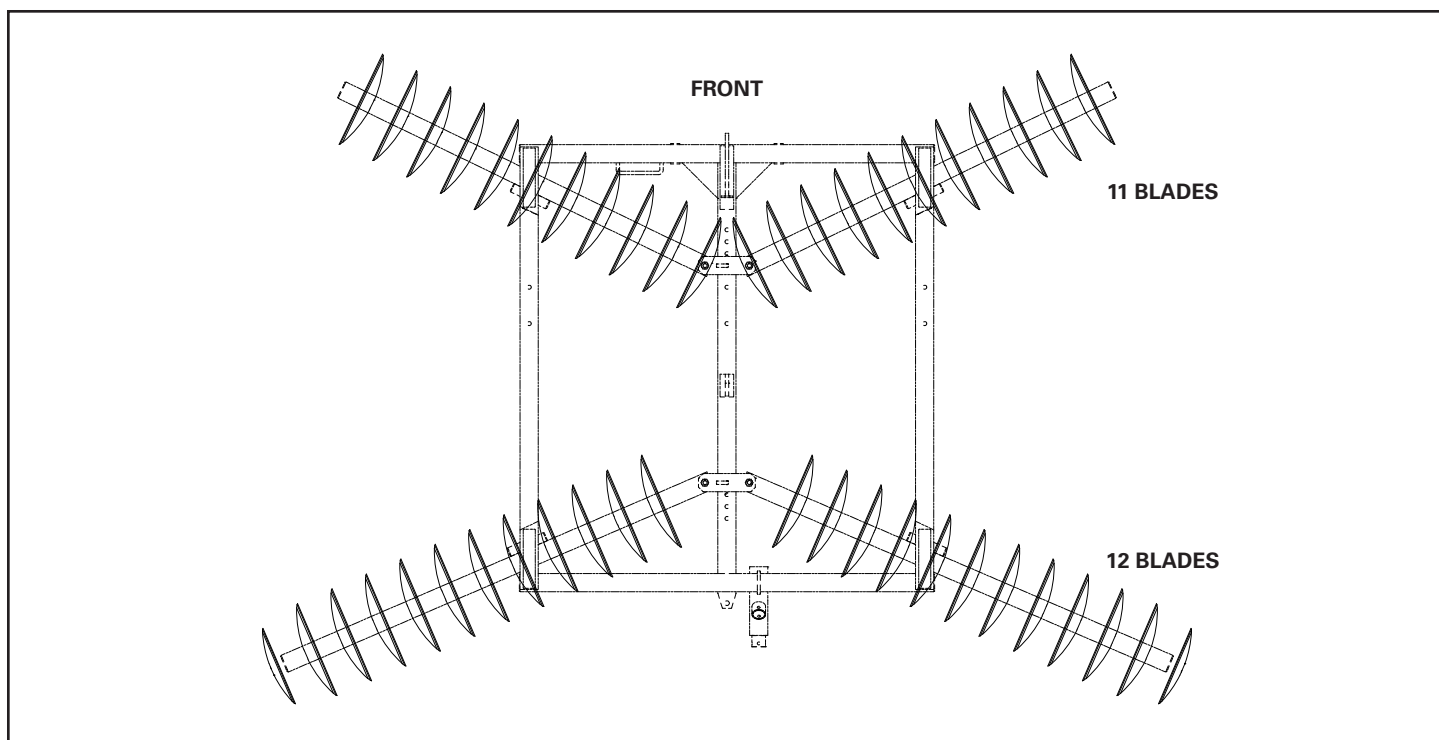
8" Spacing, 34 Blades, 8 Bearings, 11.5 Ft. Width



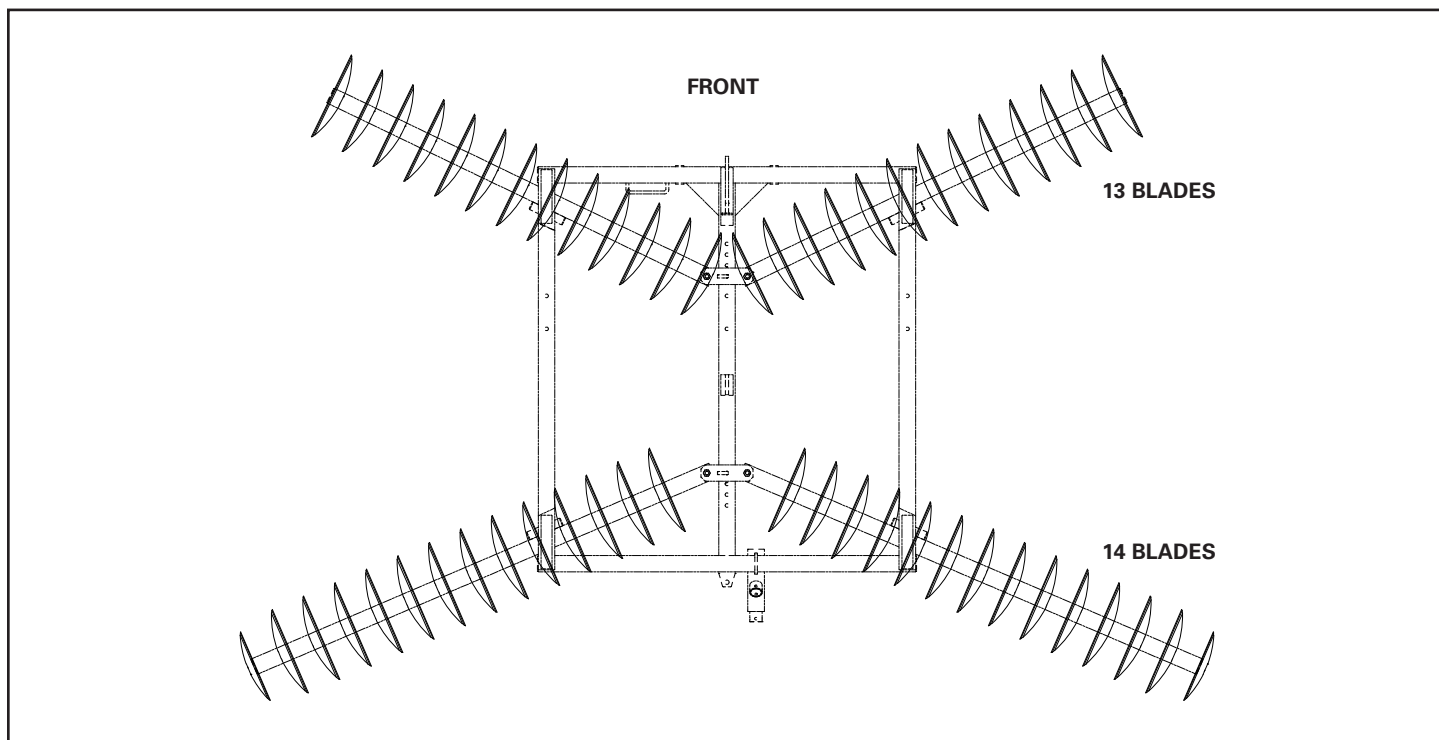
8" Spacing, 42 Blades, 12 Bearings, 14.5 Ft. Width



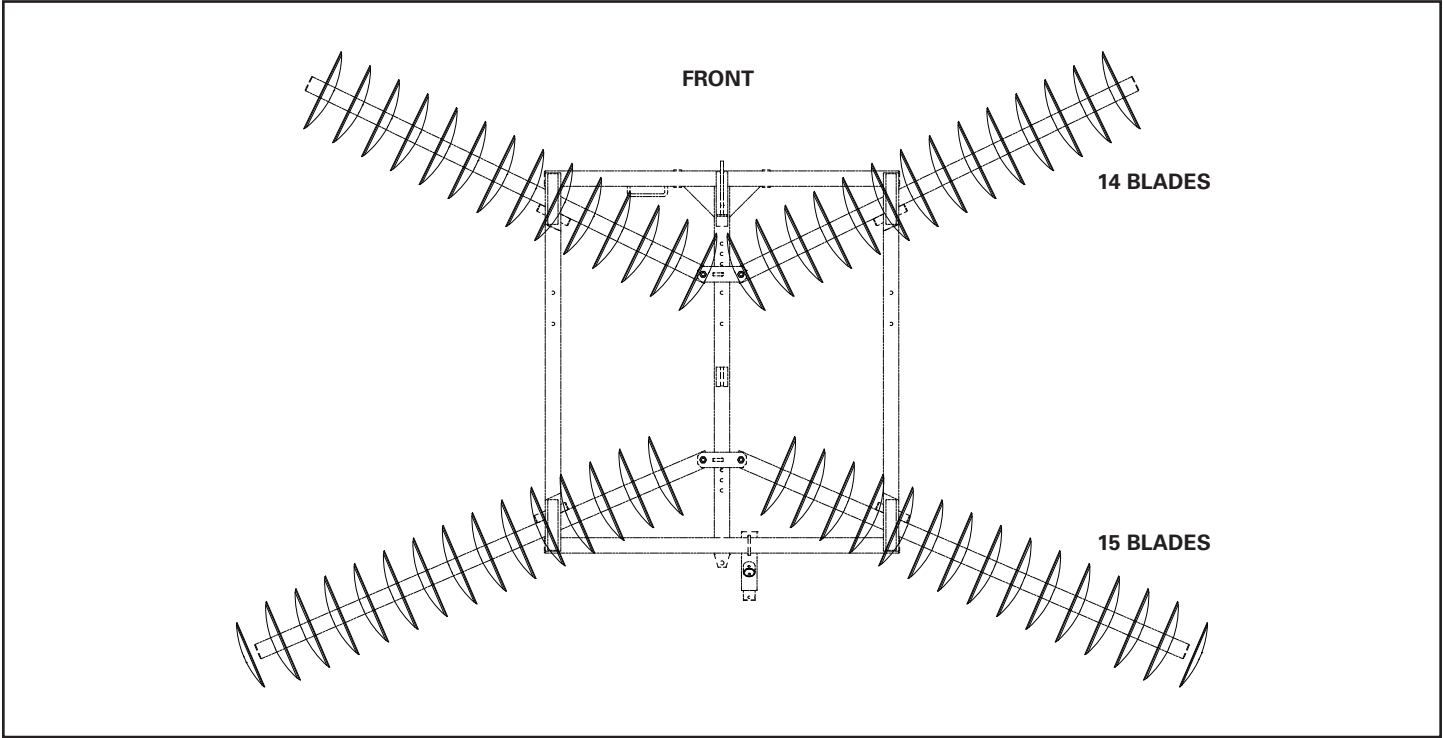
8" Spacing, 46 Blades, 12 Bearings, 16 Ft. Width



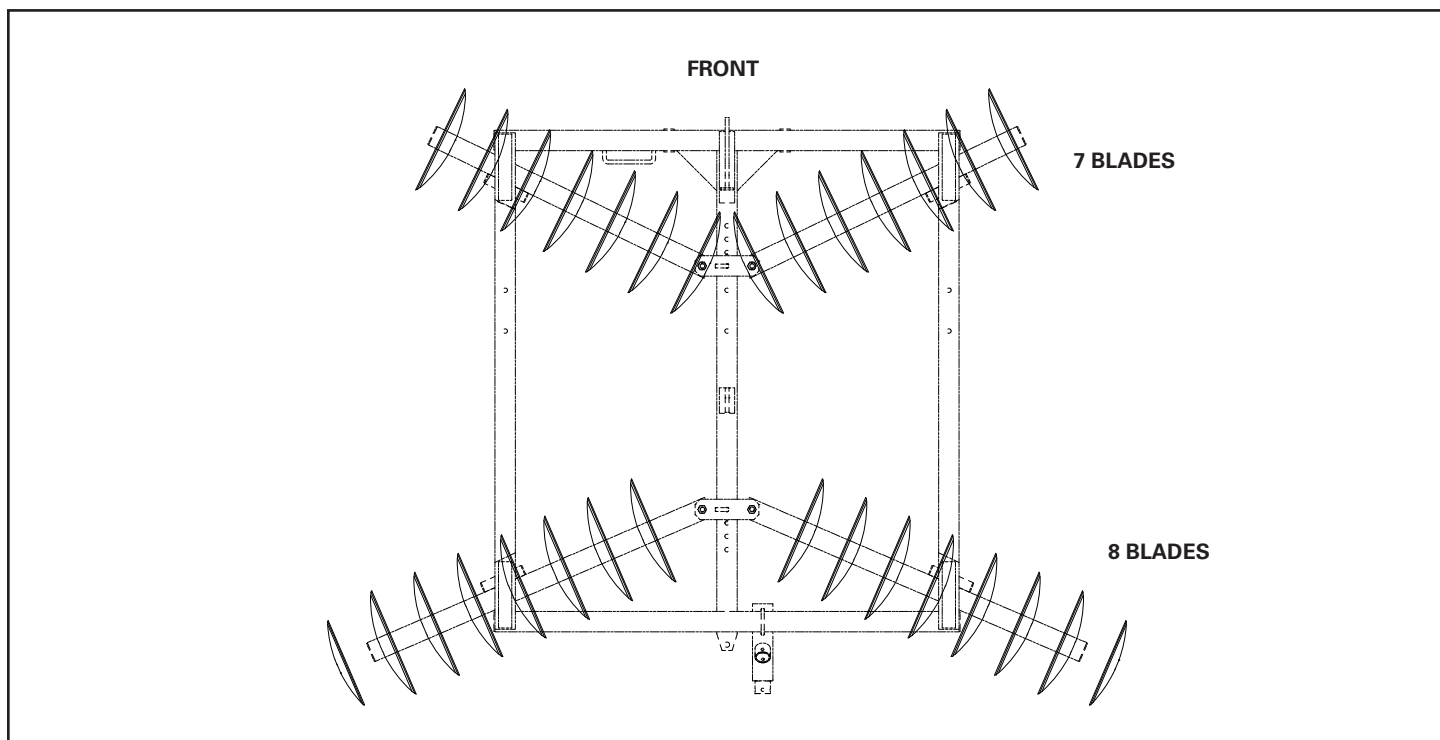
8" Spacing, 54 Blades, 12 Bearings, 18.5 Ft. Width



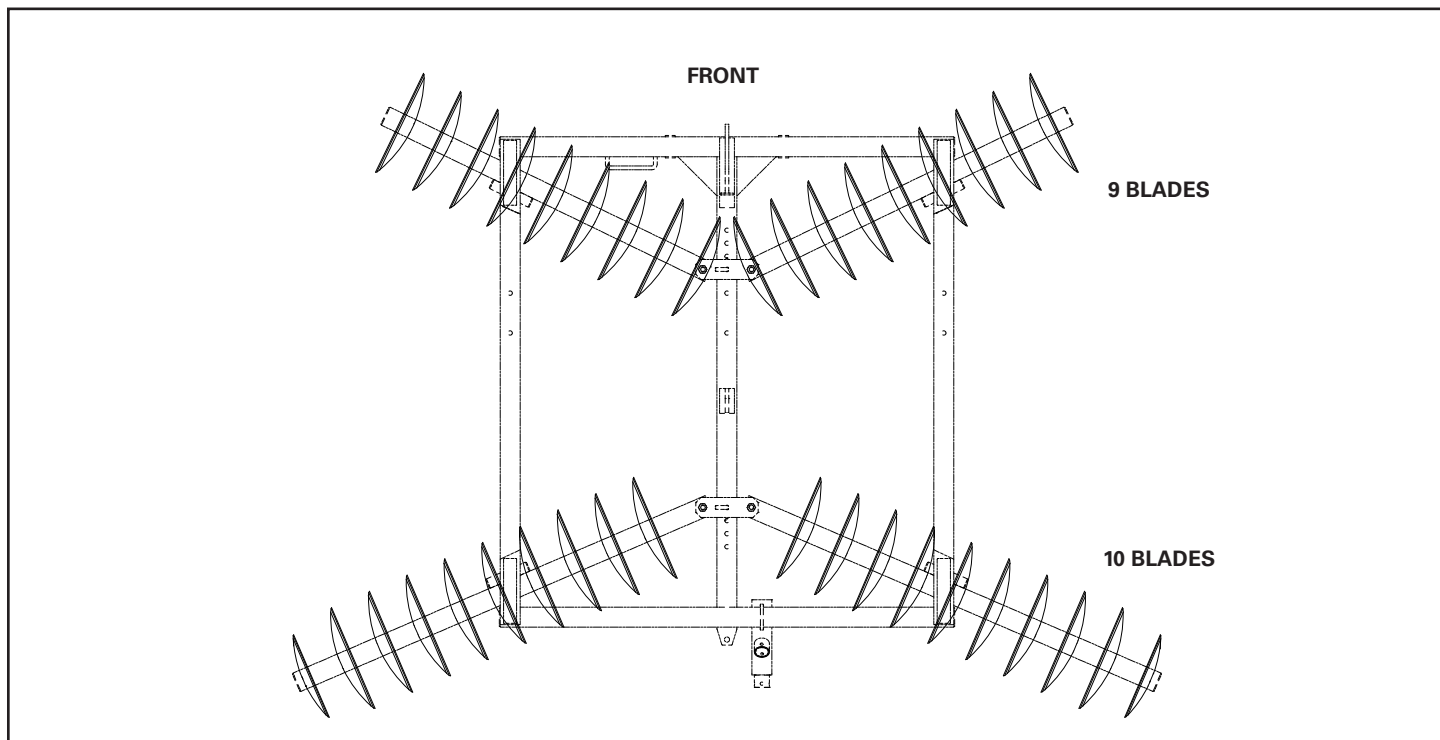
8" Spacing, 58 Blades, 12 Bearings, 20 Ft. Width



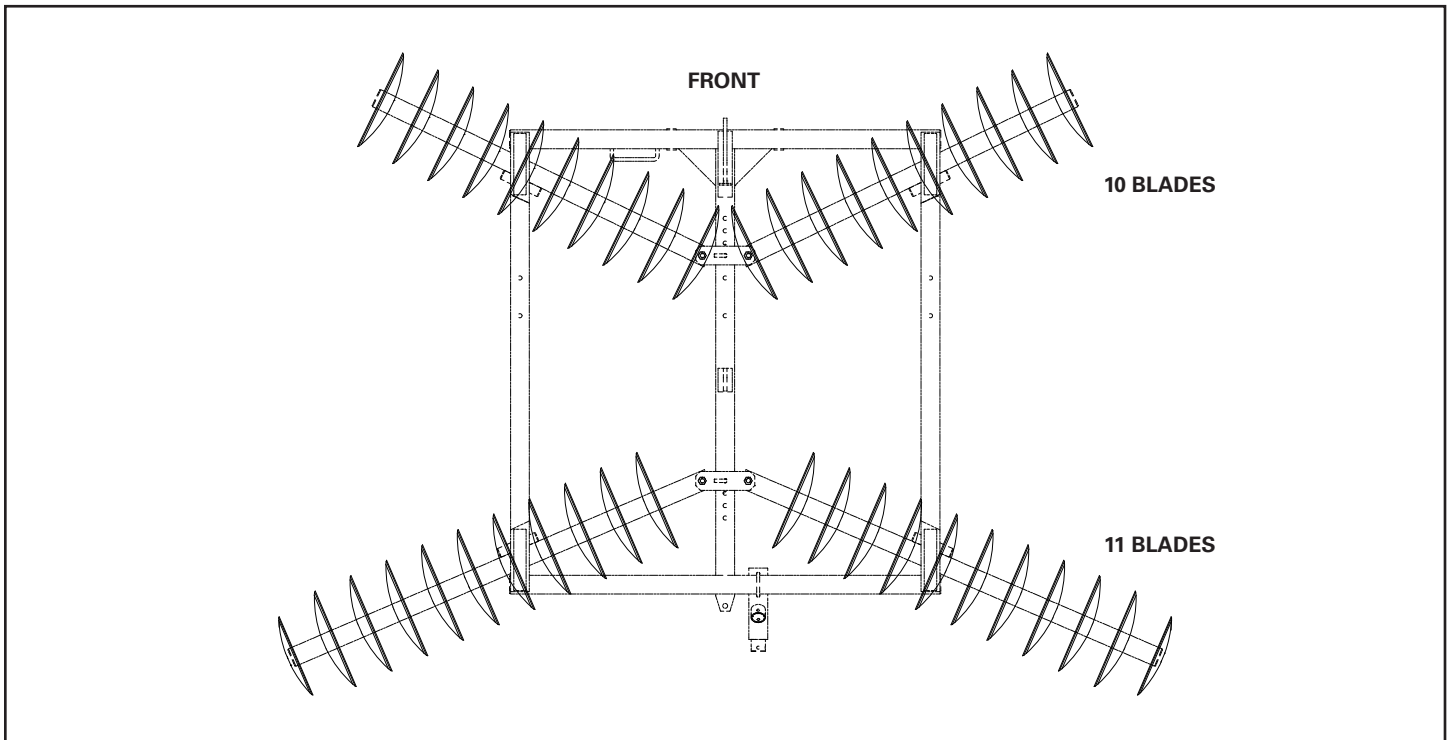
9" Spacing, 30 Blades, 12 Bearings, 11.5 Ft. Width



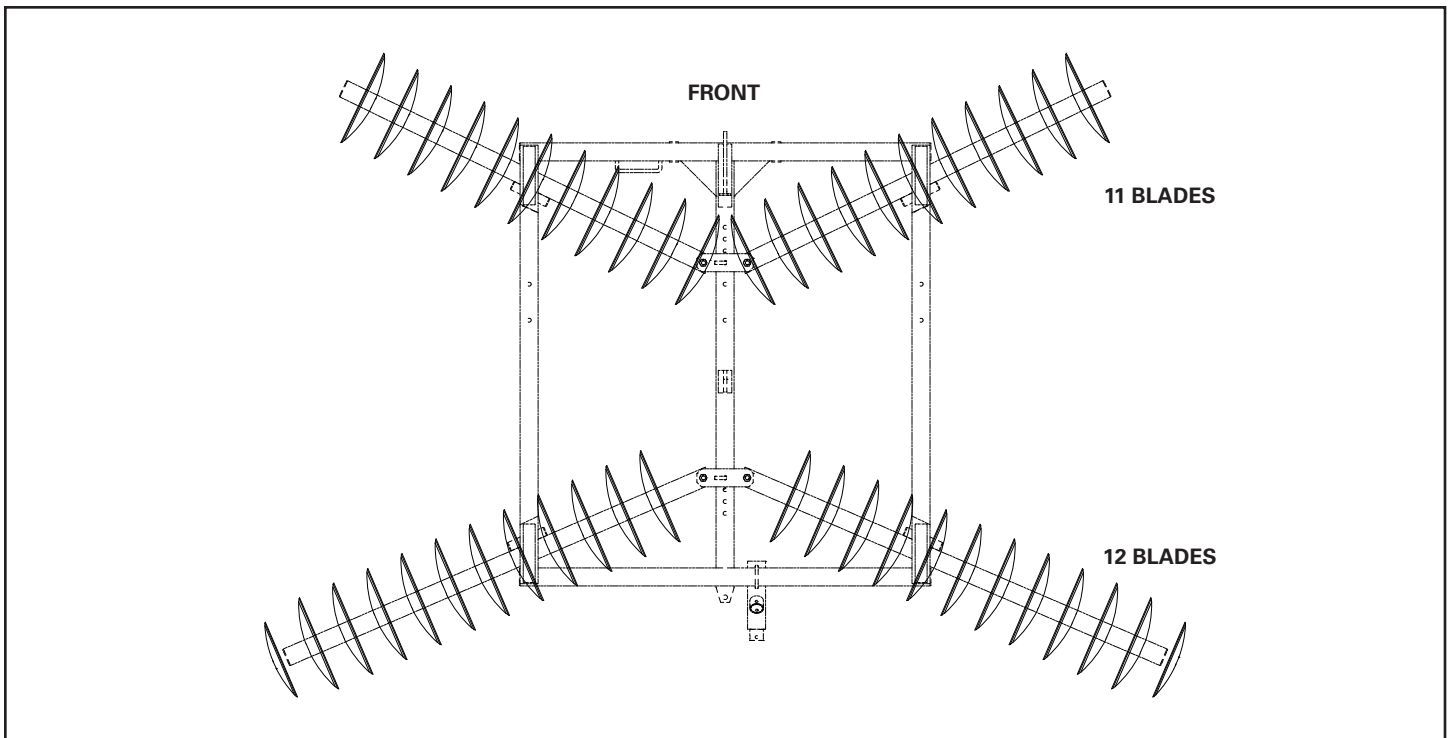
9" Spacing, 38 Blades, 12 Bearings, 14.5 Ft. Width



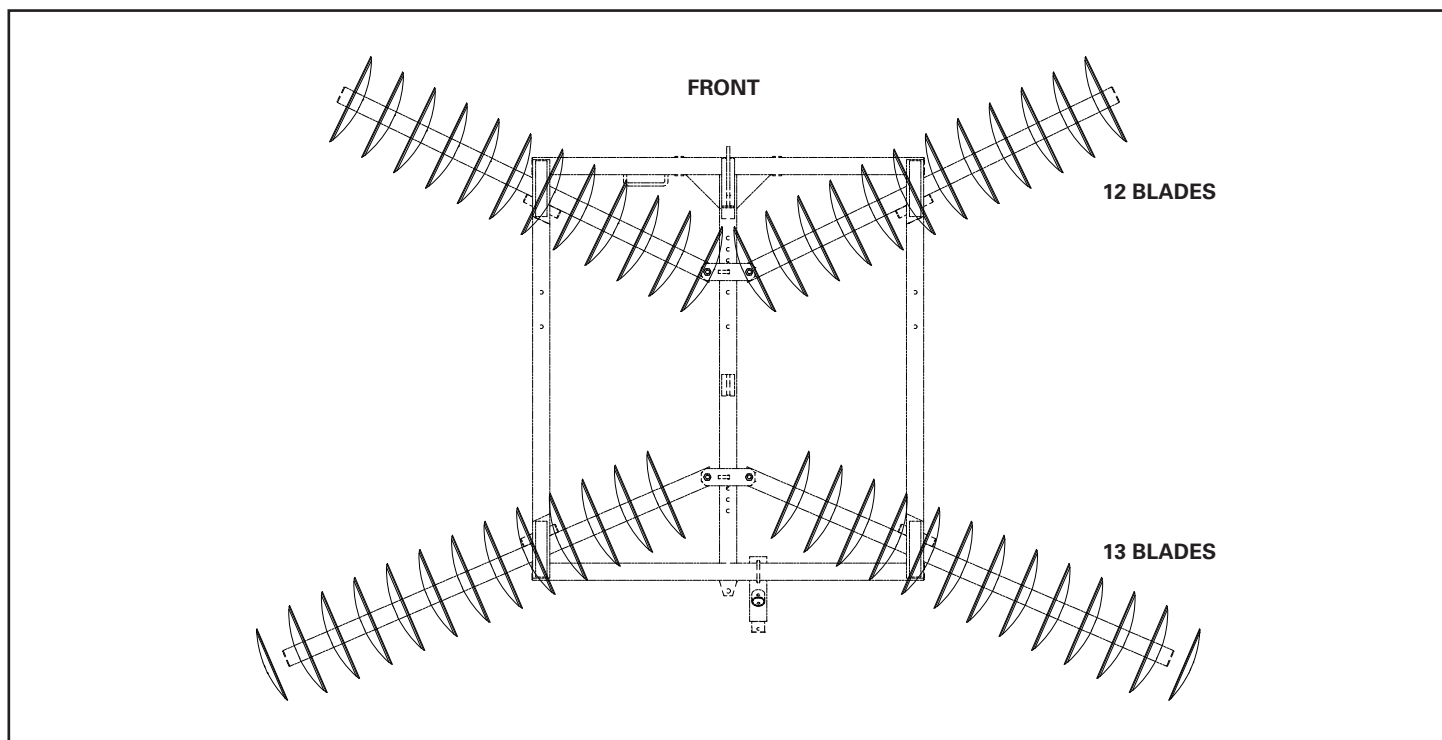
9" Spacing, 42 Blades, 12 Bearings, 16.5 Ft. Width



9" Spacing, 46 Blades, 12 Bearings, 18 Ft. Width



9" Spacing, 50 Blades, 12 Bearings, 19.5 Ft. Width



Farm King



OPERATION

GENERAL INFORMATION.....	45
Pre - Operation Checklist.....	45
Break - In Checklist.....	45
TRACTOR REQUIREMENTS.....	46
Drawbar Adjustment.....	46
ENTERING AND LEAVING THE OPERATOR'S POSITION.....	47
CONNECTING TO THE TRACTOR.....	48
CONNECTING HYDRAULIC LINES.....	49
ADJUSTMENTS.....	50
Gang Angle.....	50
Leveling.....	52
Tilling Depth.....	52
FIELD OPERATION.....	54
TRANSPORT.....	55

Farm King



GENERAL INFORMATION

Pre - Operation Checklist

Before operating the equipment for the first time and each time thereafter, check the following items:

1. Lubricate the equipment per the schedule outlined in the Maintenance Section.
2. Check the hitch for damaged, loose or missing parts. Repair as needed before operation.
3. Check the tire pressure.
4. Check wheel bolt torque.
5. Fully clean the equipment.
6. Inspect all electrical connections to ensure proper function of the machine.
7. Inspect all safety reflective decals, slow moving vehicle decals, and lights where applicable.



WARNING

MOVING PART HAZARD

To prevent serious injury or death from moving parts:

- Clear area of all bystanders before starting or moving the tractor and equipment.
- Keep hands, feet, hair and clothing away from moving parts.
- Do not stand or climb on machine when operating.



WARNING

AVOID INJURY OR DEATH

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Tools are being used.



WARNING



HIGH PRESSURE FLUID HAZARD

Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required.

Wear goggles. Use cardboard to check for leaks.

Do not operate with hydraulic leaks.

8. Check condition of all hydraulic components for leaks. Repair as required.
9. Verify that the equipment is properly connected to the tractor with the safety chain.

Break - In Checklist

Check the following mechanical items after 1 hour of operation and again after 10 hours of operation:

1. Check condition of all hydraulic components for leaks. Tighten fittings to correct leaks or replace components. Do not operate with hydraulic leaks.
2. Check the hitch for damaged, loose or missing parts. Repair as needed before operation.
3. Check for loose fasteners and hardware. Tighten as required.
4. Check the tire pressure.
5. Check the wheel bolt torque.



IMPORTANT

Wheel bolts must be kept tight. If bolts are not tight, bolts will loosen causing severe damage to hub, wheel and tire. Check wheel bolts periodically, especially the first few hours of either transport or field work.

TRACTOR REQUIREMENTS



WARNING

AVOID SERIOUS INJURY OR DEATH

The tractor must be equipped with an approved Roll Over Protection Structure (ROPS) and safety belts to help prevent personal injury or death caused by tractor roll over.

NOTE: The following information will depend on tilling depth, soil type, field speed, etc.

Horsepower requirements:

8" spacing units - 4.5 to 6.0 hp/ft (11 - 15 kW/m)

9" spacing units - 5.0 to 7.0 hp/ft (12 - 17 kW/m)



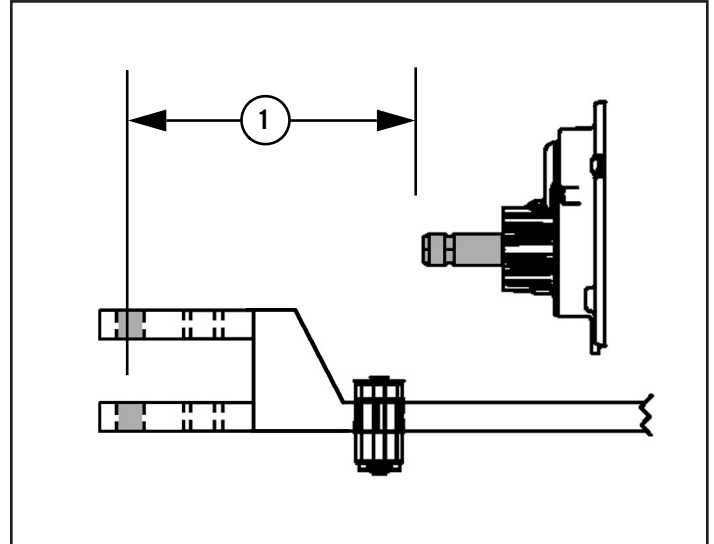
CAUTION

Using a tractor with greater HP than the recommended range may cause severe damage to frame and / or gang components of implement and thereby void warranty.

Drawbar Adjustment

NOTE: Tractor must be equipped with a clevis type drawbar to pull the equipment.

Figure 23

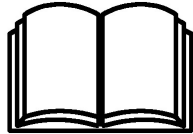


Adjust the tractor's drawbar in / out, until the center of the hitch pin hole is 16" (410 mm) (Item 1) from the end of the tractor's PTO shaft. See your tractor's owner's manual for correct adjustment procedures [Figure 23].

ENTERING AND LEAVING THE OPERATOR'S POSITION



IMPORTANT



Follow the instructions in your tractor's operation manual for the correct procedure.

Entering The Operator's Position

Move to the operator's position, start the engine and release the parking brake.

Leaving The Operator's Position



WARNING

AVOID INJURY OR DEATH

Before you leave the operator's position:

- Always park on a flat level surface.
 - Place all controls in NEUTRAL.
 - Engage the park brake.
 - Stop the engine and remove the key.
-

Park the tractor / equipment on a flat level surface.

Place all controls in neutral, engage the park brake, stop the engine and wait for all moving parts to stop. Leave the operator's position.

CONNECTING TO THE TRACTOR



IMPORTANT

Ballast may need to be added to the front of the tractor for proper operation when the equipment is connected. See the tractor's owner's manual for detailed information on installing front ballast.

Always inspect the tractor's drawbar and equipment hitch before connecting. See the tractor's owner's manual.

Verify that the tractor's drawbar is adjusted correctly for use with the Disc.

Enter the operator's position.

Move the tractor into position in front of the Disc.



WARNING



AVOID INJURY OR DEATH

Before moving the tractor, look in all directions and make sure no bystanders, especially small children are in the work area. Do not allow anyone between the tractor and the equipment when backing up to the equipment for connecting.

Move the tractor backwards, aligning the drawbar with the equipment hitch.

NOTE: The jack may need to be lowered or raised for proper alignment of the drawbar and hitch.

If the hitch needs to be adjusted, stop the tractor when drawbar is just in front of the equipment hitch.

Leave the operator's position.

~~Turn the jack handle clockwise to raise the hitch or counterclockwise to lower the hitch.~~

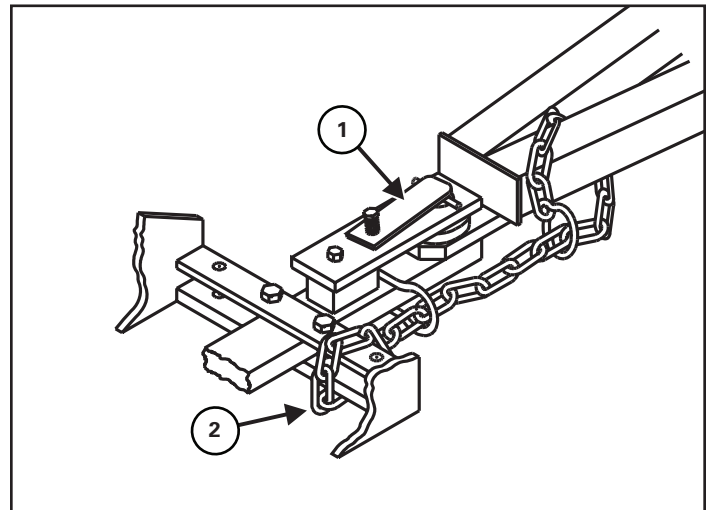
Lower or raise the hitch until aligned with the tractor's drawbar.

Move to the operator's seat, start the engine and release the parking brake.

Move the tractor backwards, aligning the drawbar hitch pin hole with the hitch pin hole(s).

Stop the tractor and leave operator's position.

Figure 24



Install the hitch pin (Item 1) and retaining pin to securely fasten the hitch to the tractor drawbar [Figure 24].

NOTE: Always use a hitch pin of adequate size and strength and a retaining pin with a locking device.

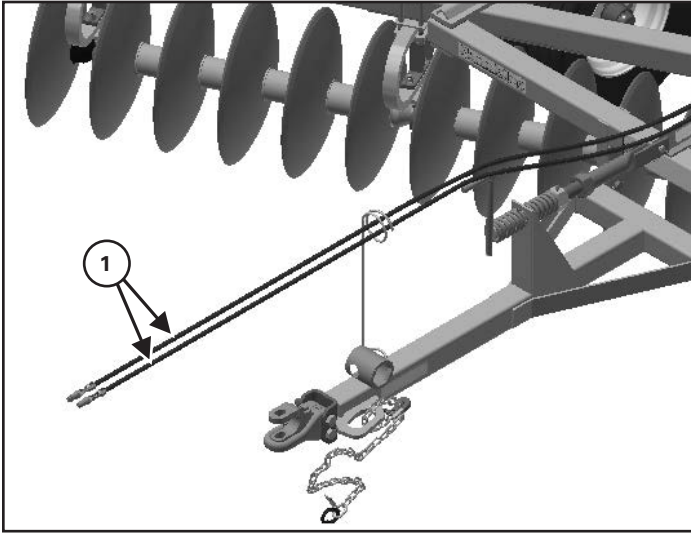
Attach the safety chain (Item 2) around the drawbar mount [Figure 24].

NOTE: Always use a safety chain with a strength rating greater than the gross weight of the towed machine.



CONNECTING HYDRAULIC LINES

Figure 25



Connect the two hydraulic lines (Item 1) from the rockshaft hydraulic cylinder to the tractor [Figure 25].

NOTE: Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and type.



HIGH PRESSURE FLUID HAZARD

To prevent serious injury or death from high pressure fluid:

- Relieve pressure on system before repairing or adjusting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.



IMPORTANT

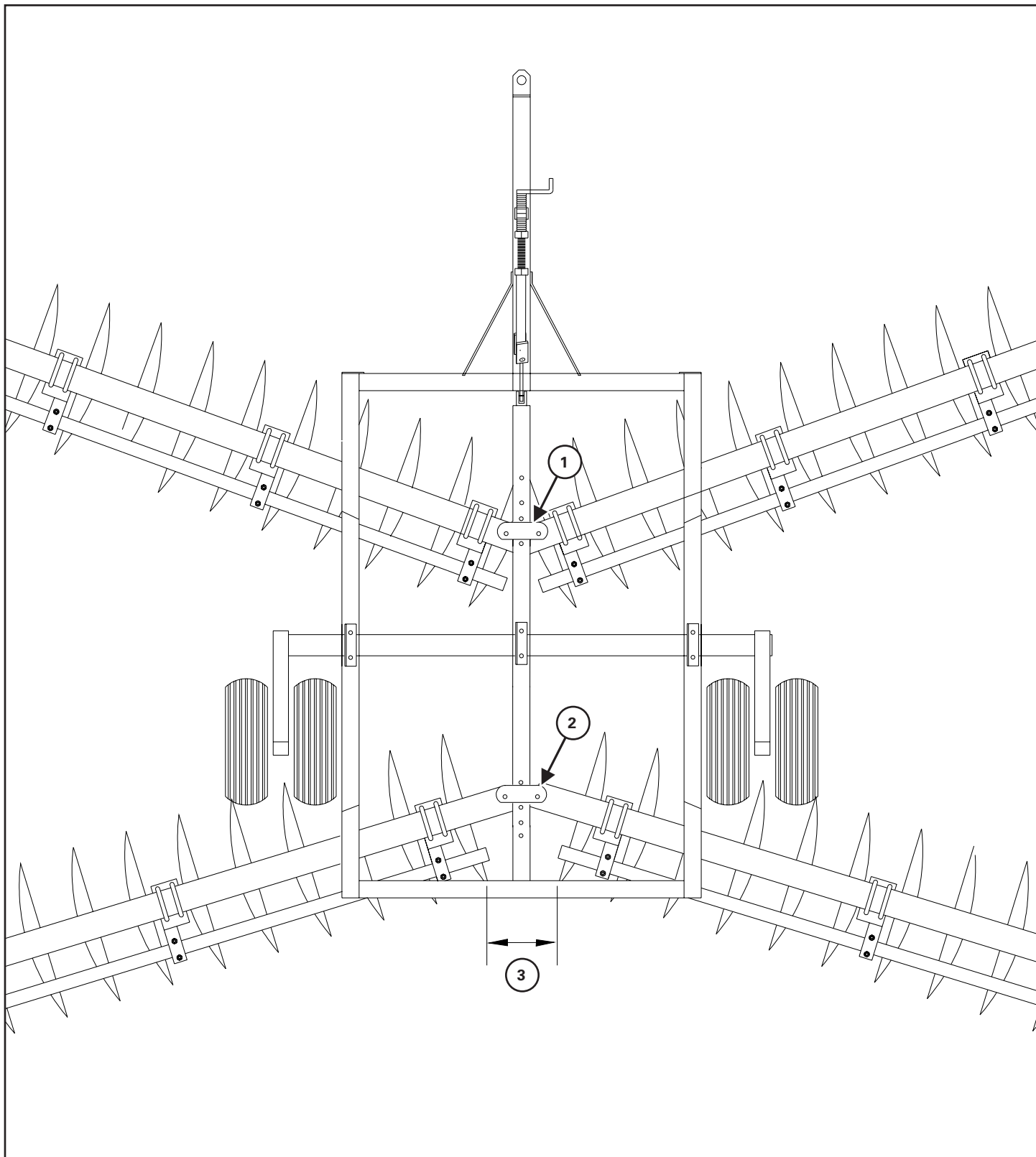
Contain and dispose of any oil leakage in an environmentally safe manner.

Thoroughly clean the quick couplers before making connections. Dirt can quickly damage the system.

ADJUSTMENTS

Gang Angle

Figure 26



Each gang can be set at four different angles.

Front gang:

- 20°, 21°, 22°, 23°

Rear gang:

- 18°, 19°, 20°, 21°

The gang angle adjustment holes in the frame are arranged so that the rear gangs are set at 2° less than the front gangs.

For example, if the front and rear gangs are both set in the first hole, the rear gangs will be set 2° less than the front gangs (20° and 18°).

The gang angles should be determined by the soil conditions.

A field with hard soil will require an increased cutting angle to penetrate the soil.

If the disc pushes dirt instead of cutting through, less of a cutting angle is required.

To set the angle, remove the center pin from the gang adjustment brackets (Item 1, 2) and select the hole which will give the desired angle. Re-install center pin [Figure 26].



IMPORTANT

Excessive gang angle will put added pressure on the gangs and will decrease the life of the bearings and blades.

When gangs are set at an excessive angle, more horsepower is required to pull the disc.

The distance (Item 3) the rear gangs are set apart is determined by the discing speed, depth, angle, and soil conditions [Figure 26].

The distance must be set to allow the furrow left by the front gangs to be filled evenly by the rear gangs.

The rear gangs will leave a ridge at the center if set too close together. The rear gangs will leave a furrow at the center if set too far apart.

When gang angle is increased [Figure 26]:

- Blades will dig deeper.
- Distance (Item 3) between rear gangs must be increased.

When gang angle is decreased [Figure 26]:

- Blades will dig shallower.
- Distance (Item 3) between rear gangs must be decreased.

An increase in discing speed may require the rear gangs to be set further apart.

A decrease in discing speed may require the rear gangs to be set closer together.

NOTE: Recommended operating speed is 5 MPH (8 KPM).

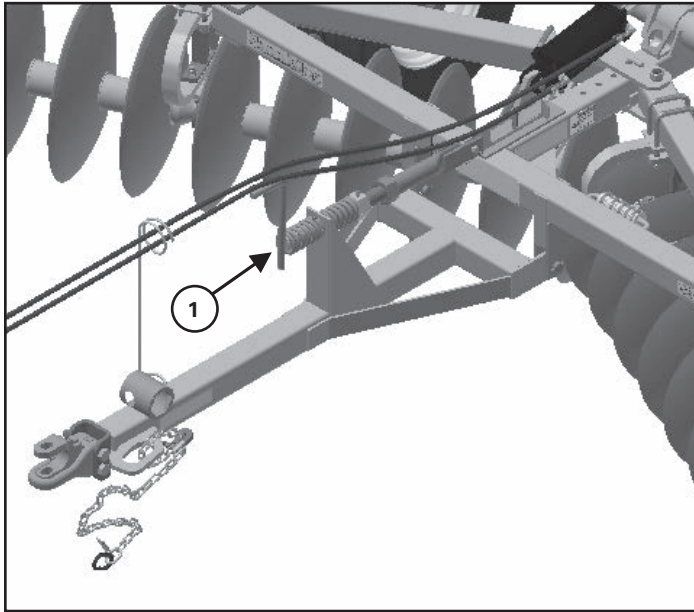
To start, set rear gangs at a distance equal to 2" less than the diameter of the blades [Figure 26]:

- 24" blades - set distance (Item 3) to 22"
- 22" blades - set distance (Item 3) to 20"

NOTE: After first time use, check results and adjust the disc as required.

Leveling

Figure 27



Use the hitch crank (Item 1) to level disc so that the front and rear gangs are cutting at the same depth [Figure 27].

Ridging may occur at the outside of the front gangs if front gangs are cutting too deep.

Ridging may occur at the center of disc if rear gangs are cutting too deep.

If left hand side of Disc is cutting deeper than right hand side, or vice versa, check tire pressure. Low tire pressure on one side of Disc will cause uneven penetration.



IMPORTANT

Reduce discing speed if leveling does not solve problem.

Recommended discing speed is 5 MPH (8 KPH).

Tires (11L x 15) recommended pressure is 45 LBS. (311 KPA)

Tilling Depth

Set the discing depth:

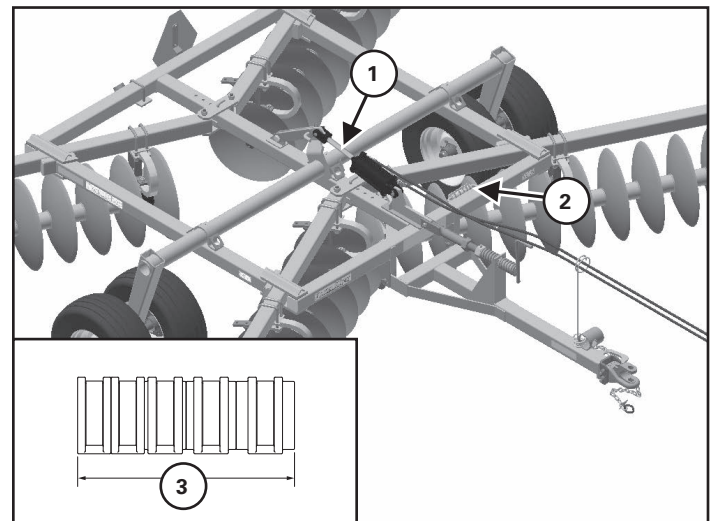
1. Move to the operator's position.
2. While moving forward, lower disc into the ground until disc reaches desired discing depth.

NOTE: Tilling depth is based on blade diameter.

3. Stop the tractor and leave the operator's position.
4. Install the necessary depth control stops on the center frame cylinder (Item 1) to maintain the desired cutting depth [Figure 28].

BLADE SIZE	RECOMMENDED TILLING DEPTH
22 in.	5" to 6.5"
24 in.	6" to 7.5"

Figure 28

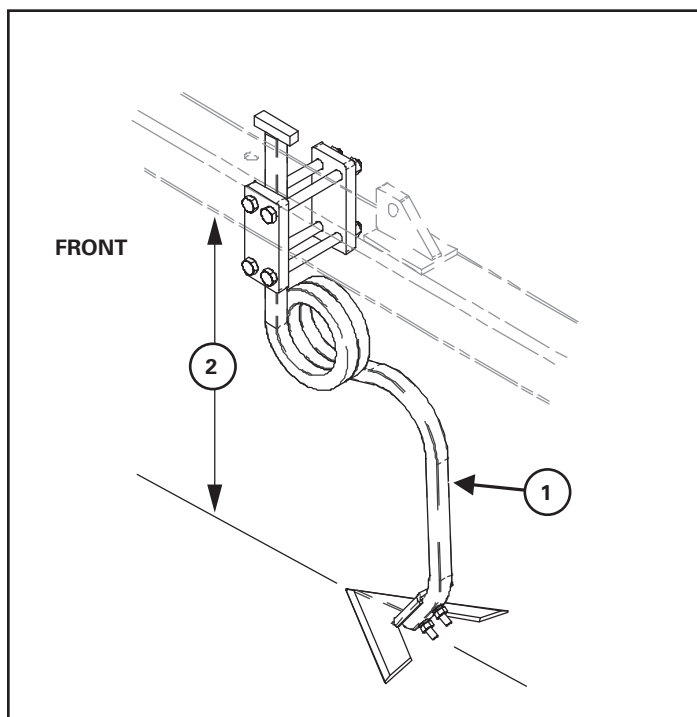


Depth stops (Item 2) are stored on the rail located on the front frame [Figure 28].

DEPTH STOP SEGMENT WIDTH	QTY.
1"	2
1.25"	1
1.5"	1
1.75"	1

Total width of depth stop complete package is 6.5" (Item 3) [Figure 28].

Figure 29



Adjust the center tooth (Item 1) to the correct height (Item 2) depending on blade size **[Figure 29]**:

- For 22" Blades, adjust height to 24-1/2"
- For 24" Blades, adjust height to 25-1/2"

FIELD OPERATION

Move to the operator's position, start the engine and release the parking brake.

Move the tractor / equipment to the starting point of the work area.

Stop the tractor and engage the parking brake.

Leave the operator's position.

Perform the following adjustments, see **"Adjustments" on page 50:**

1. Level implement
2. Adjust gang angle
3. Set tilling depth

Move to the operator's position, start the engine and release the parking brake.

Move tractor and tandem disc forward, slowly lower tandem disc into the ground until the desired discing depth is reached.

Recommended operating speed is 5 MPH (8 KPH).



MACHINE TIPPING OR ROLL OVER CAN CAUSE SERIOUS INJURY OR DEATH

- Always lift the implement out of ground when turning.
- Turn on level ground. Slow down when turning.
- Go up and down slopes, not across.
- Check for adequate traction.



AVOID SEVERE EQUIPMENT DAMAGE

When operating the Disc:

- Always keep implement level when operating.
- Do not operate implement with front gangs cutting deeper than rear gangs.
- Always place the jack in the horizontal / transport position when operating.
- Always operate the implement with the tractor drawbar pinned at center of tractor.

TRANSPORT

Comply with federal, state, local and provincial laws regarding the transport of farm equipment on public roadways.



WARNING

AVOID SERIOUS INJURY OR DEATH

Use of an unapproved hitch or tractor can result in loss of control, leading to serious injury or death.

Tractor and hitch must have the rated capacity to tow equipment.



WARNING

AVOID SERIOUS INJURY OR DEATH

Excess weight will greatly increase tractor stopping distance and may cause the operator to lose control of the tractor.



IMPORTANT

Tractor must have adequate braking capacity to safely control equipment GVW (Gross Vehicle Weight) trailing load. Tractor unit should weigh approximately 67% of GVW.

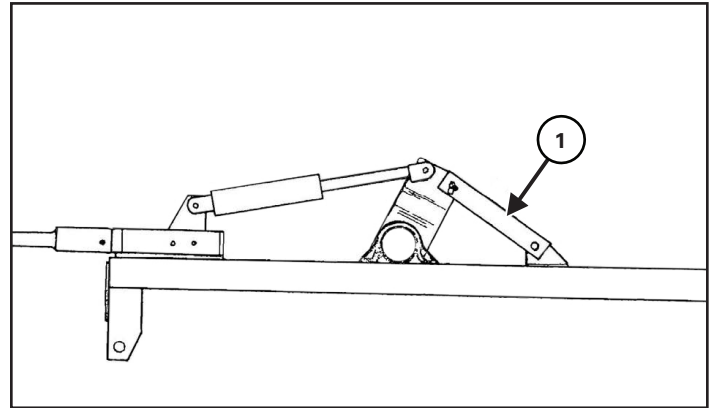
Do not transport at speeds over 10 MPH (16 KPH).

Verify that the tractor is approved for transporting the equipment and that the equipment is securely attached to the tractor.

Verify safety chain is installed and properly connected before transporting equipment.

Verify that the SMV (Slow Moving Vehicle) emblem, all lights and reflectors are clean and visible.

Figure 30



Completely raise the disc and install transport lock (Item 1) to rockshaft [Figure 30].

Place the jack in the horizontal / transport position.

Farm King



MAINTENANCE

TROUBLESHOOTING.....59
GANG SECTION.....60
 Hanger Bolts.....60
 Gang Bolts.....60
AXLES.....61
 Wheel Bolt Torque.....61
 Tighten wheel bolts to 130 Ft.-Lbs. (176.3 N.m).....61
 Wheel Replacement.....61
 Wheel Bearings.....61
 Tire Pressure.....61
LUBRICATION.....62
STORAGE AND RETURN TO SERVICE.....64

Farm King



TROUBLESHOOTING



WARNING

Instructions are necessary before operating or servicing equipment. Read and understand the Operator And Parts Manual and safety signs (decals) on equipment. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

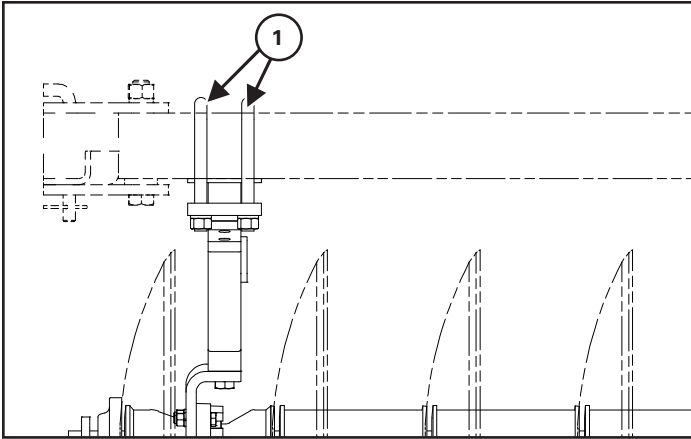
NOTE: If a problem is encountered that is difficult to solve, even after having read through this troubleshooting section, please call your local Farm King dealer. Before you call, please have this Operator And Parts Manual and the serial number of your machine at hand.

PROBLEM	CAUSE	CORRECTION
Uneven tillage, machine leaves furrows or ridges.	Frame not level.	Level the machine by adjusting the leveling link.
	Tire pressure is low.	Check tires and inflate to recommended pressure.
	Exceeding recommended operating speed.	Slow down to recommended operating speed.
Machine buckles or drifts side to side.	Frame not level.	Level the machine by adjusting the leveling link.
	Blades are cutting too deep.	Adjust depth.
Machine settles when in transport mode.	Transport lock is not installed.	Always install transport lock when machine is not in use.
Disc gangs are plugging.	Scrapers are too far from blades.	Adjust scrapers closer to blades.
	Unfavorable soil condition.	Wait until conditions are more favorable.
	Blades are cutting too deep.	Adjust depth.
Disc not penetrating soil.	Gang angle too low.	Increase angle of front and rear gangs.
	Unfavorable soil condition.	Wait until conditions are more favorable.

GANG SECTION

Hanger Bolts

Figure 31



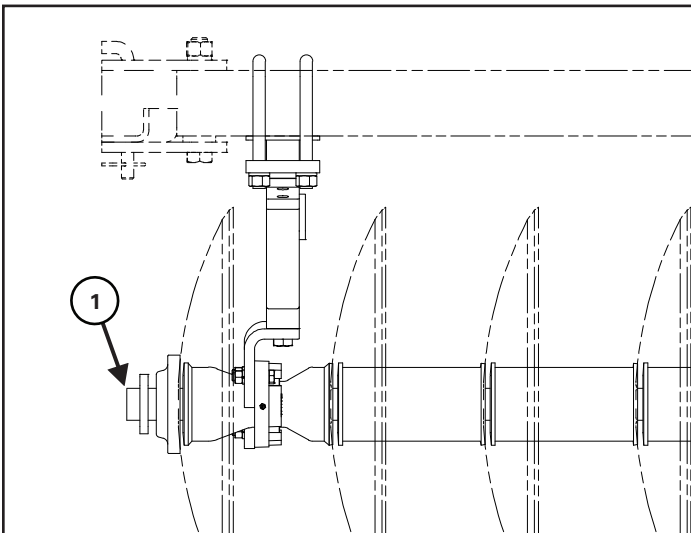
Inspect all bearing hanger u-bolts (Item 1) [Figure 31].

Tighten all bearing hanger carriage bolts to 430 Ft.-Lbs. (583.0 N•m).

Check hanger u-bolts daily.

Gang Bolts

Figure 32

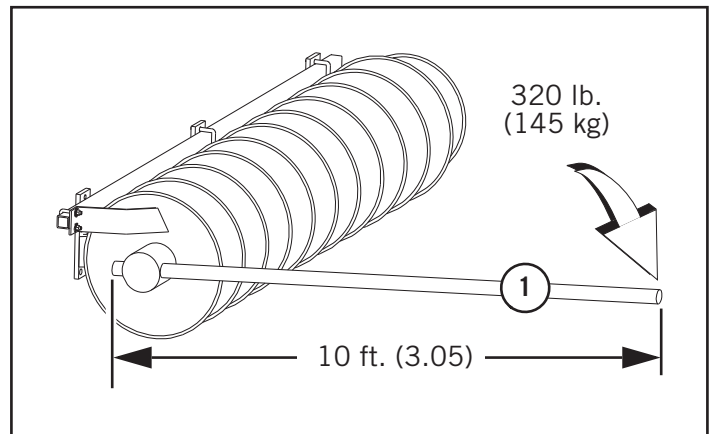


Inspect all gang bolts (Item 1) [Figure 32].

Tighten 1-15/16" gang bolts to 3200 Ft.-Lbs. (4339 N•m) torque.

Check gang bolts daily.

Figure 33



Tightening Gang Bolts

Install a 10 Ft. bar (Item 1) of adequate size in socket wrench [Figure 33].

Apply 320 lb. (145 kg) of force to end of bar to tighten gang bolt to 3200 Ft.-Lbs. (4339 N•m).



IMPORTANT

After repairing a gang, the gang bolt should be re-tightened after 2 hours of operation.



WARNING

Severe damage will occur if gang bolts are loose.

Always lower the implement to the ground when servicing or making adjustments.

If implement must be serviced or adjusted in the raised position, place blocks under frame.

AXLES

Wheel Bolt Torque



IMPORTANT

CHECK WHEEL BOLTS AFTER:

- First five hours of field operation.
- First twenty-five hours of field operation.
- First fifty hours of field operation.
- Every two hundred hours of operation.

REPEAT PROCEDURE IF A WHEEL IS REMOVED OR REINSTALLED

Tighten wheel bolts to 130 Ft.-Lbs. (176.3 N.m).

Wheel Replacement

Periodically check tires for cuts, bulges and damaged rims.



WARNING

AVOID INJURY OR DEATH

Before you leave the operator's position:

1. Always park on a flat level surface.
2. Place all controls in NEUTRAL.
3. Engage the park brake.
4. Stop the engine and remove the key.
5. Wait for all moving parts to stop.

Park the tractor / equipment on a flat level surface.

Place all controls in neutral, engage the park brake, stop the engine and wait for all moving parts to stop. Leave the operator's position.



WARNING

AVOID INJURY OR DEATH

Always chock tires before performing any maintenance or service.

Raise wheel and frame. Secure frame using blocks or stands.

Remove the wheel bolts and remove the tire / wheel.

Install the new tire with the valve stem facing out.

Reinstall wheel bolts.

Tighten wheel bolts in a criss-cross pattern to proper torque.

Wheel Bearings

Inspect and re-pack the wheel bearings annually with a quality SAE multi purpose type grease.

Tire Pressure

Check tire pressure daily.

Fill tires to 45 PSI (311 KPa).



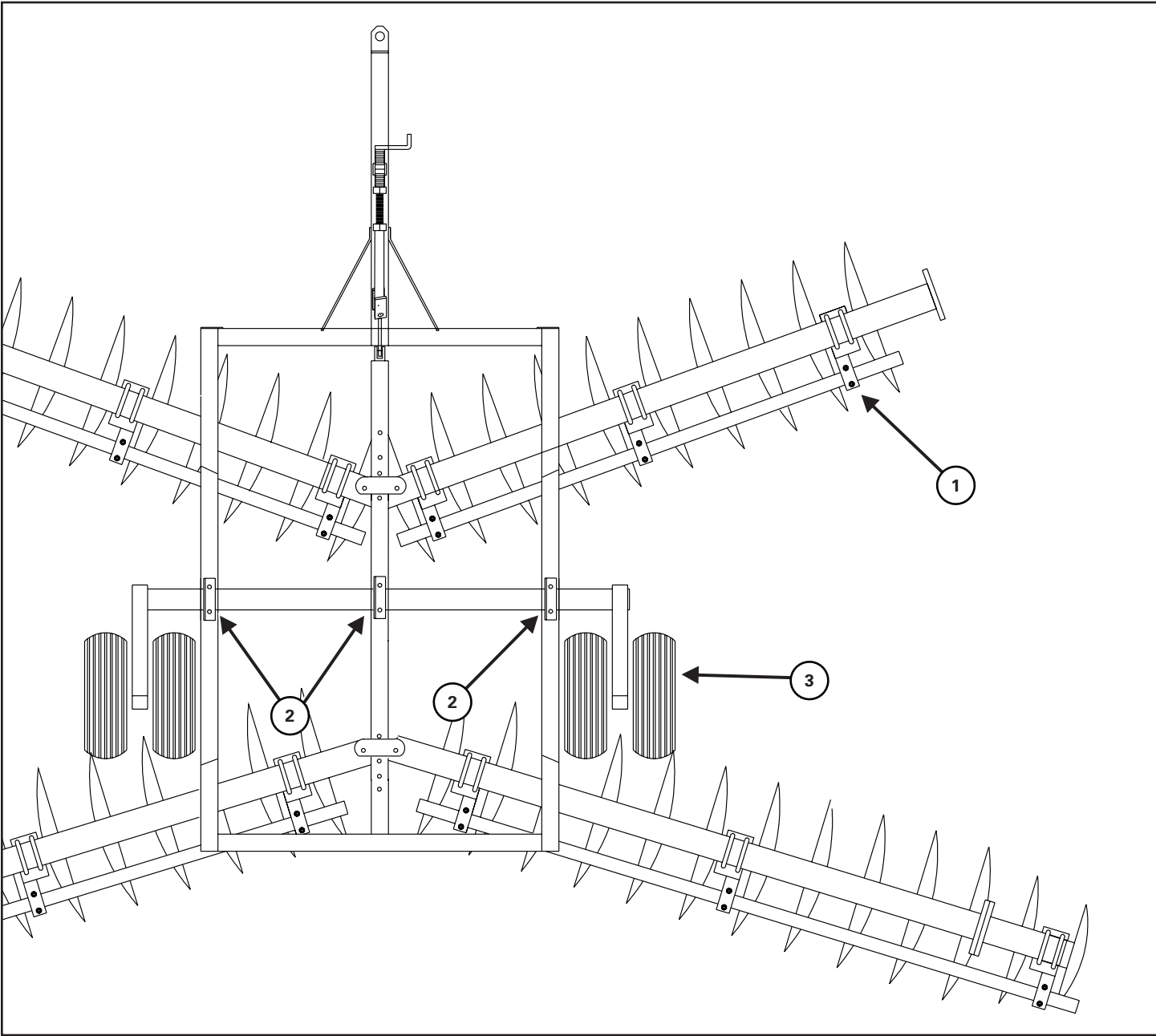
CAUTION



When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly.

LUBRICATION

Figure 34



ITEM	LOCATIONS	LUBRICATION INTERVALS
1	Gang Bearings	Every 20 hours of use.
2	Rockshaft Bearings	Every 20 hours of use.
3	Wheel Hubs	Every 1 hours of use.

Always use a good quality multi-purpose / lithium base grease when lubricating the equipment.

Always use a hand-held grease gun.

Clean fitting before greasing, to avoid injecting dirt and grit.

Replace and repair broken fittings immediately.

If fittings will not take grease, remove and clean thoroughly. Replace fitting if necessary.



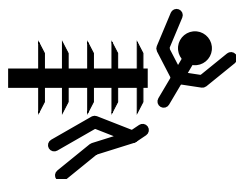
IMPORTANT

Over-lubrication of gang bearings may cause seals to be pushed out. This is more likely to happen when bearings are new.



WARNING

AVOID INJURY OR DEATH



Always lower the implement to the ground when servicing or making adjustments.

DO NOT lubricate or perform maintenance when disc is in motion.

STORAGE AND RETURN TO SERVICE

Sometimes it may be necessary to store your Farm King Tandem Disc for an extended period of time.



WARNING

AVOID INJURY OR DEATH

Always relieve the pressure in hydraulic system when the disc is not being operated.



IMPORTANT

Do not leave cylinders under hydraulic pressure, especially if cylinders are activated during cool temperatures. The expansion of oil which takes place when machine is in a warmer environment may cause serious damage to cylinder, lines or hoses. Always release hydraulic pressure before unhitching from tractor.



IMPORTANT

DO NOT permit children to play on or around the stored machine.

When storing the equipment perform the following:

- Set planks under each wheel.
- Lower wheels to lift disc blades above the ground.
- Relieve pressure in all hydraulic cylinders.
- Disconnect hydraulic hoses from tractor and cap.
- Thoroughly clean the equipment.
- Lubricate the equipment.
- Inspect the hitch and all welds on the equipment for wear and damage.
- Check for loose hardware, missing guards, or damaged parts.

- Check for damaged or missing safety signs. Replace if necessary.
- Replace worn or damaged parts.
- Touch up all paint nicks and scratches to prevent rusting.
- Store the tandem disc in a clean, dry, sheltered area.
- Place the equipment flat on the ground.
- When storing outdoors, coat all exposed cylinder shafts and blades with grease to prevent rust.

When returning the equipment to service perform the following:

- Do not attempt to lift disc out of frozen ground by lowering transport wheels causing serious damage to disc components.
- Lubricate the equipment.
- Clean and inspect tandem disc.
- Tighten loose hardware and replace any damaged parts.
- Inspect and repack wheel bearings with a SAE multi-purpose type grease.
- Check that tires are properly inflated.
- Connect to a tractor and operate equipment, verify all functions operate correctly.
- Check for leaks. Repair as needed.
- Review the Operator's Manual.

PARTS IDENTIFICATION

GENERAL PARTS INFORMATION.....	123
MAIN FRAME.....	123
HITCH AND CRANK.....	124
ROCKSHAFT.....	126
HYDRAULICS.....	128
TWO WHEELS.....	130
FOUR WHEELS.....	132
SMV SIGN.....	134
CENTER TOOTH.....	136
WARNING LIGHTS.....	138
GANG BEAMS.....	140
BLADES - 8 IN. SPACING.....	142
BLADES - 9 IN. SPACING.....	143
GANGS AND HANGERS - 8 IN. SPACING.....	144
GANGS AND HANGERS - 9 IN. SPACING.....	148
SCRAPERS - 8 IN. SPACING.....	152
SCRAPERS - 9 IN. SPACING.....	156

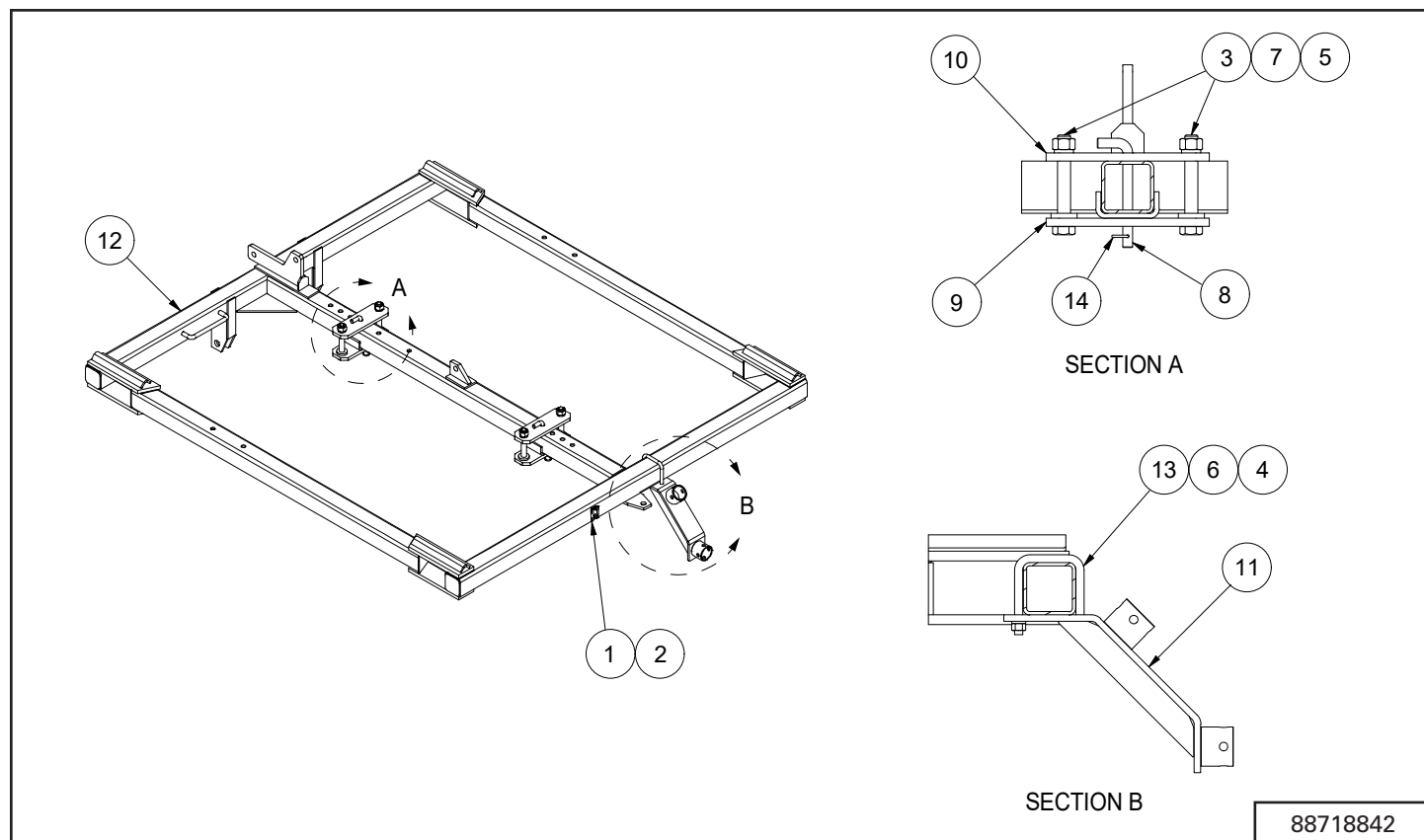
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GENERAL PARTS INFORMATION

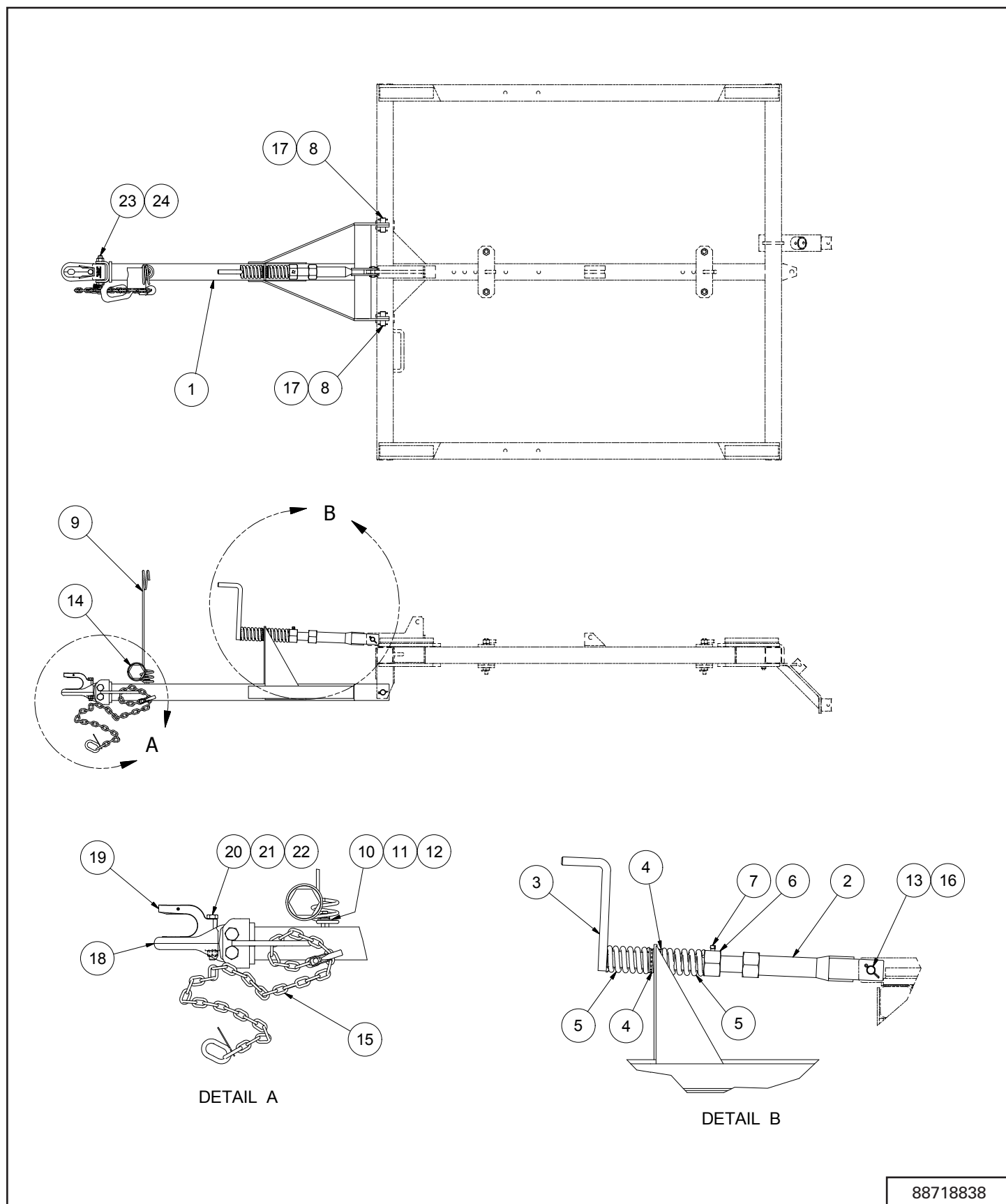
The parts identification section list descriptions, part numbers and quantities for all North America Base Model 395 Tandem Discs. Contact your Farm King dealer for additional part information.

MAIN FRAME



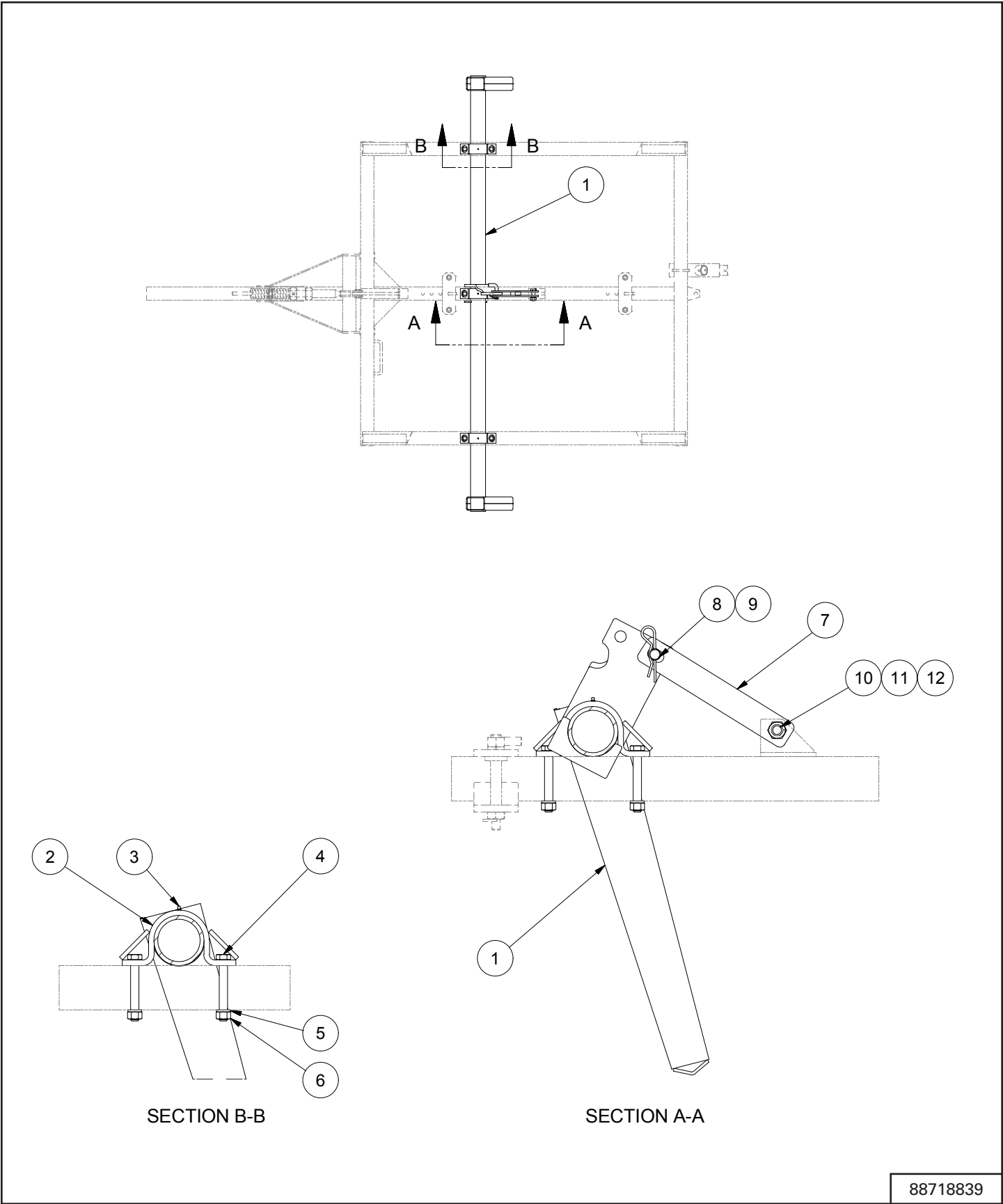
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	35827	MTG SOCKET-SMV SIGN	1
2	813602	RIVET 1/4 X 3/4 FLATHEAD	2
3	EZB100070	G5 P 1.0 X 7.0 NC HEX BOLT	4
4	EZBN062	N G5 P 5/8 86505599	2
5	EZBN100	NUT HEX 1-8 NC GR 5 ZNCR	4
6	EZBW062L	LW P 5/8 86505602	2
7	EZBW100L	WASHER LOCK 1X1-1/2X1/4GR5ZNCR	4
8	EZDF37	GANG LOCK PIN	2
9	EZDFA6026	BOTTOM GANG MNT PLATE(390)	2
10	EZDFA6029	TOP GANG MNT PLATE(390)	2
11	EZDFA6055	SUPPORT/HOLDER -REAR JACK	1
12	EZDFB6000	390-395 FRAME	1
13	EZDG6080	SQUARE BEND U-BOLT 5/8 X 4-11/16	1
14	EZDW25	HAIR PIN COTTER	2

HITCH AND CRANK



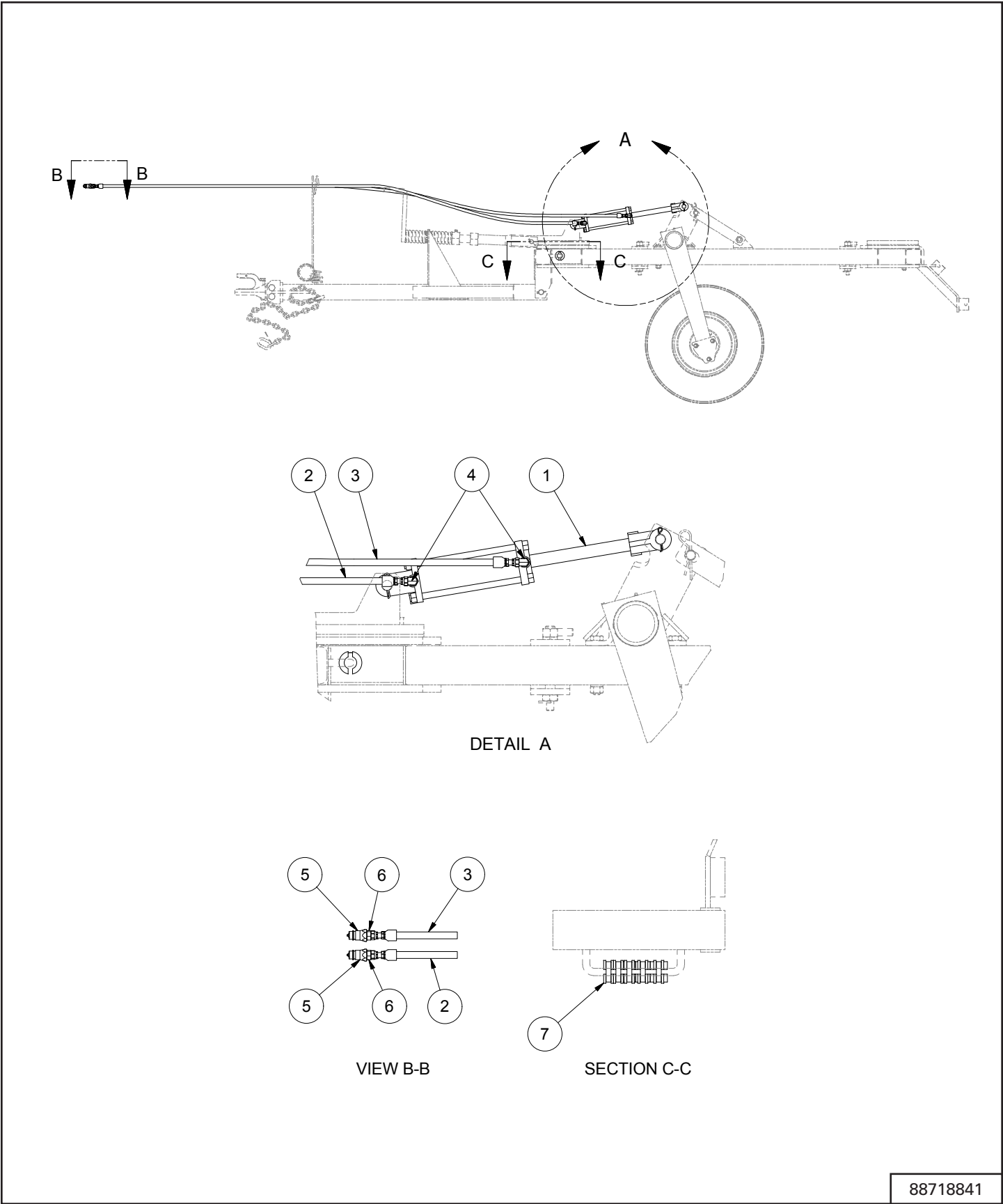
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDHA6036	HITCH (390/395)	1
2	EZDHA6047	LEVELLING LINK (390)	1
3	EZDHA6049	LEVELLING CRANK - HITCH	1
4	EZDC15	BEARING-THRUST TIMKENT199	2
5	EZDH1	COMPRESSION SPRING - 5" LG	2
6	EZDH5	NUT HEX 2 NC GR2 W/SET	1
7	EZB050010S	SCREW SQ HD SET 1/2 NC X 1	1
8	EZDH6056	HITCH PIN (390-395)	2
9	EZDH9961	SUPPORT-HOSE SPRING	1
10	EZBW17506812F	WSHR FLT 11/16X1-3/4X1/8 ZNCR	1
11	EZBW062L	LW P 5/8 86505602	1
12	EZBN062	N G5 P 5/8 86505599	1
13	EZDF6024	PIN ROCKSHAFT LUG (290-390)	1
14	EZDGA35	SOCKET-W.A. WRENCH	1
15	EZP80508	CHAIN-SAFETY HITCH 10100 LBS	1
16	EZBP18175	PIN COTTER 3/16 X 1-3/4	2
17	EZBP25150	1/4 X 1-1/2 COTTER PIN	4
18	EZDH7163	HITCH TONGUE - CAST BOLT-ON	1
19	EZDH7164	CLEVIS INSERT -HITCH -CAST	1
20	EZB075050-8	3/4 X 5 NC HEX BOLT - GR 8	1
21	EZBW17508112F	WASHER FLAT 13/16X1-3/4X1/8	1
22	88664890	LOCKNUT 3/4-10 TOP LOCK GRC PL	1
23	EZB100065	BOLT - HXHD 1-8UNC X 6.5 GR5	2
24	EZBN100SL	LOCKNUT 1-8 TOP LOCK GRC PL	2

ROCKSHAFT



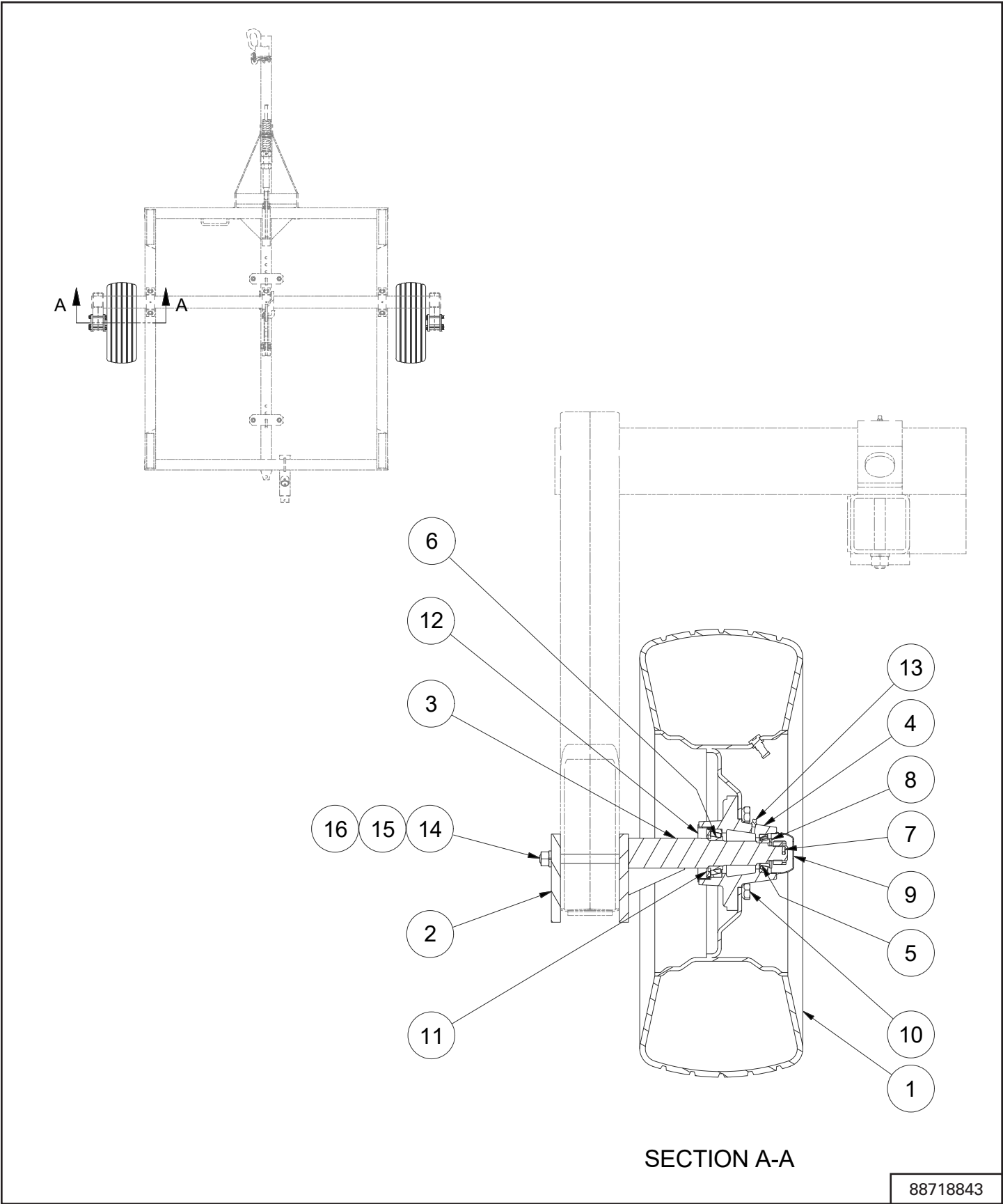
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDRA6060	ROCKSHAFT (390/395 DISC)	1
2	EZDFA40	REINFORCED ROCK. CLAMP	3
3	EZ10GN1	FITTING 1/4 UNF ST ZERK	3
4	EZB075055	BOLT HEX 3/4NC X 5-1/2	6
5	EZBW075L	WASHER LOCK 3/4X1-1/4X3/16ZNCR	6
6	EZBN075	NUT HEX 3/4 NC GR5 ZNCR	6
7	EZDRA6020	LOCK-UP STRAP (390)	1
8	EZDR5249	LOCK-UP PIN	1
9	EZDW25	HAIR PIN COTTER	1
10	EZB100030	BOLT HEX 1 NC X 3	1
11	EZBW100L	WASHER LOCK 1X1-1/2X1/4GR5ZNCR	1
12	EZBN100	NUT HEX 1-8 NC GR 5 ZNCR	1

HYDRAULICS



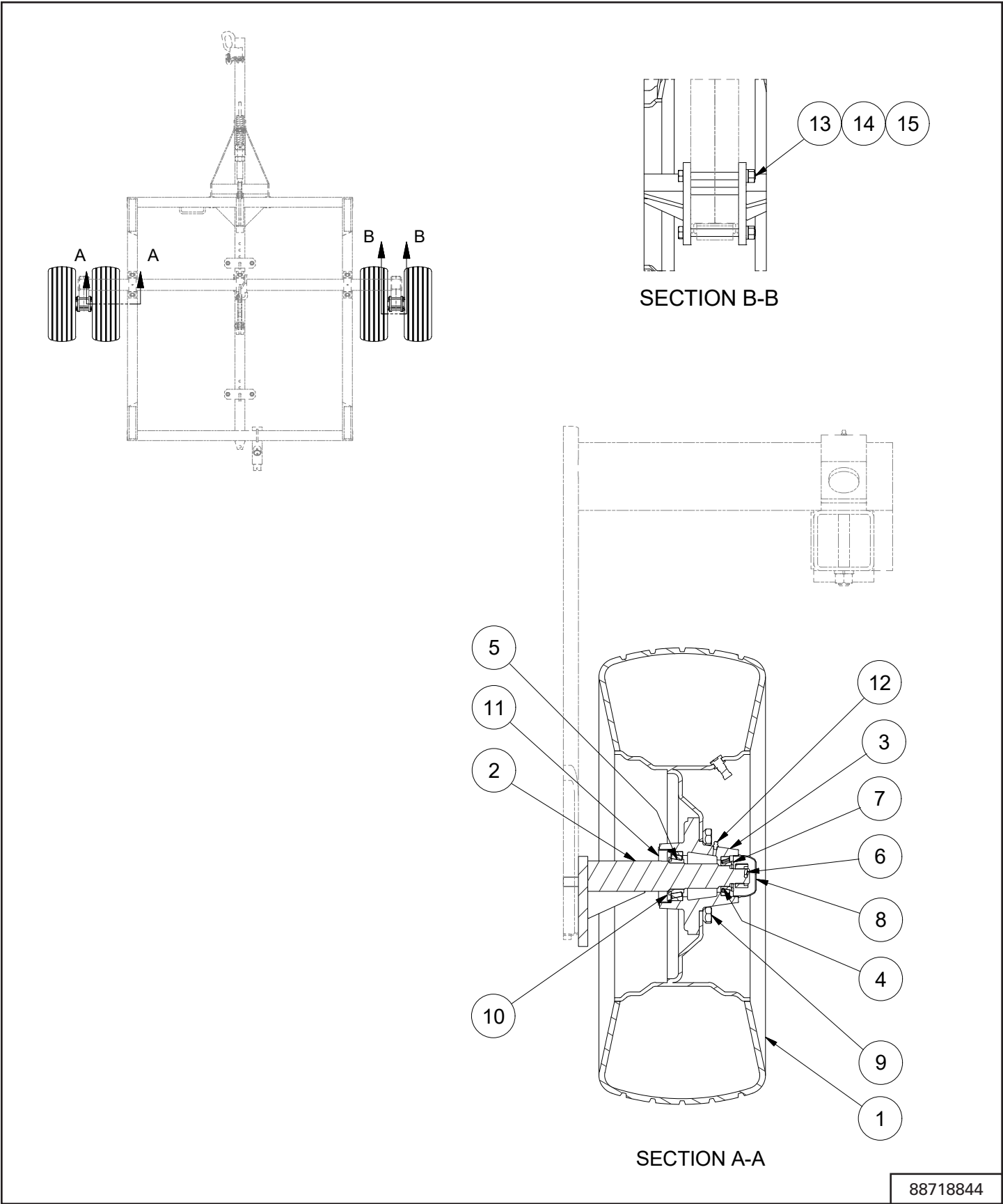
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	88719424	CYL 3-1/2" X 8" TIE ROD ORB	1
2	88719425	HOSE [-06, 06-00, 06-00, 144]	1
3	88719426	HOSE [-06, 06-00, 06-00, 156]	1
4	86018376	ELBOW 90 DEGREE	2
5	88713042	COUPLER 1/2", MALE NIPPLE	2
6	9626421	CONNECTOR, -8MB-6MOR (6-8 F5OLO)	2
7	EZDRB6072	DEPTH STOP SEGMENT PACKAGE	1

TWO WHEELS



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	88713979	ASSY-WHEEL AND TIRE 11L15FID	2
2	EZDR76	AXLE BACKING PLATE	2
3	EZDRA8	H618 AXLE - 3 HOLE	2
4	EZDRA9	HUB-ASSY W/CUPS 6 BOLT	2
5	EZDR91	BEARING CONE-LM48548	2
6	EZDR120	BEARING CONE-25580	2
7	EZBP18175	PIN COTTER 3/16 X 1-3/4	2
8	EZBW20010614F	1" SAE FLAT WASHER	2
9	EZDR123	HUB CAP	2
10	EZDR125	BOLT-WHEEL 9/16 NF X 1-1/8	12
11	EZDR13190	SEAL-TRIPLE LIP	2
12	EZDR13191	CUP-SEAL	2
13	EZ10GN1	FITTING 1/4 UNF ST ZERK	2
14	EZB062060	CSHH GR5 ZNCR 5/8-11 X 6	6
15	EZBW062L	LW P 5/8 86505602	6
16	EZBN062	N G5 P 5/8 86505599	6

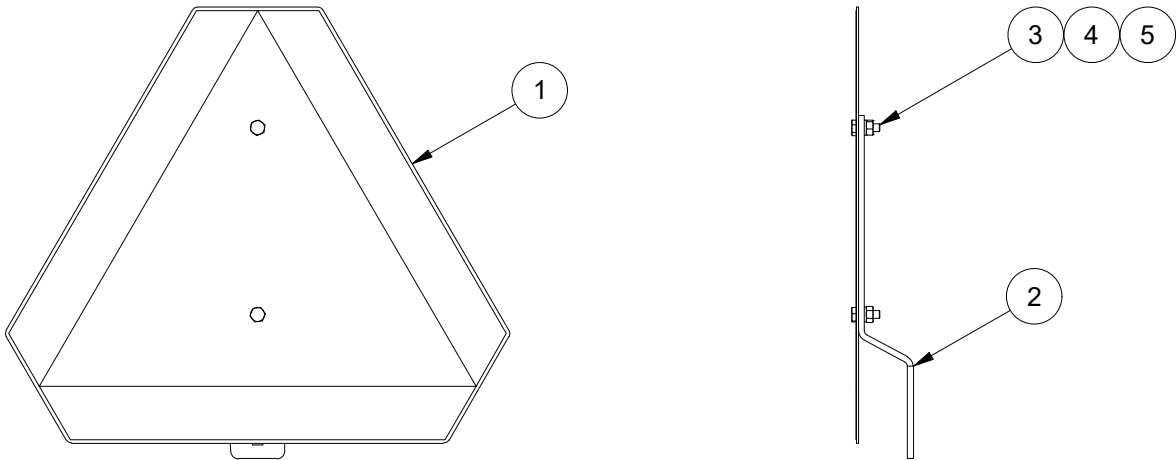
FOUR WHEELS



88718844

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	88713979	ASSY-WHEEL AND TIRE 11L15FID	4
2	EZDRA8	H618 AXLE - 3 HOLE	4
3	EZDRA9	HUB-ASSY W/CUPS 6 BOLT	4
4	EZDR91	BEARING CONE-LM48548	4
5	EZDR120	BEARING CONE-25580	4
6	EZBP18175	PIN COTTER 3/16 X 1-3/4	4
7	EZBW20010614F	1" SAE FLAT WASHER	4
8	EZDR123	HUB CAP	4
9	EZDR125	BOLT-WHEEL 9/16 NF X 1-1/8	24
10	EZDR13190	SEAL-TRIPLE LIP	4
11	EZDR13191	CUP-SEAL	4
12	EZ10GN1	FITTING 1/4 UNF ST ZERK	4
13	EZB062060	CSHH GR5 ZNCR 5/8-11 X 6	6
14	EZBW062L	LW P 5/8 86505602	6
15	EZBN062	N G5 P 5/8 86505599	6

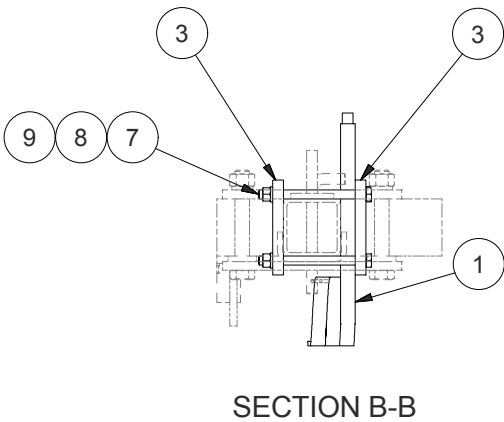
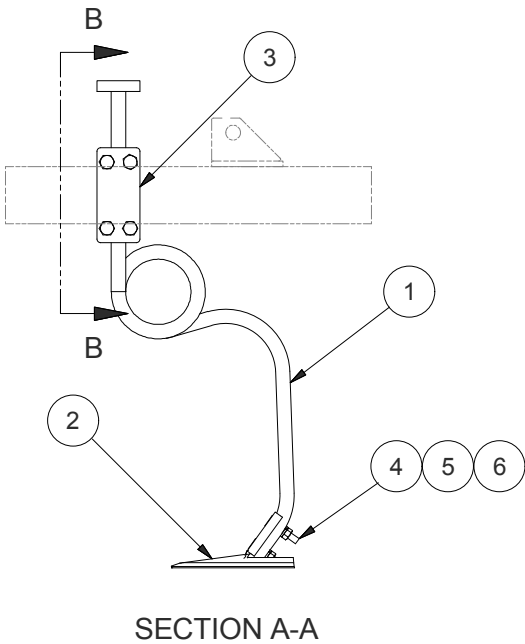
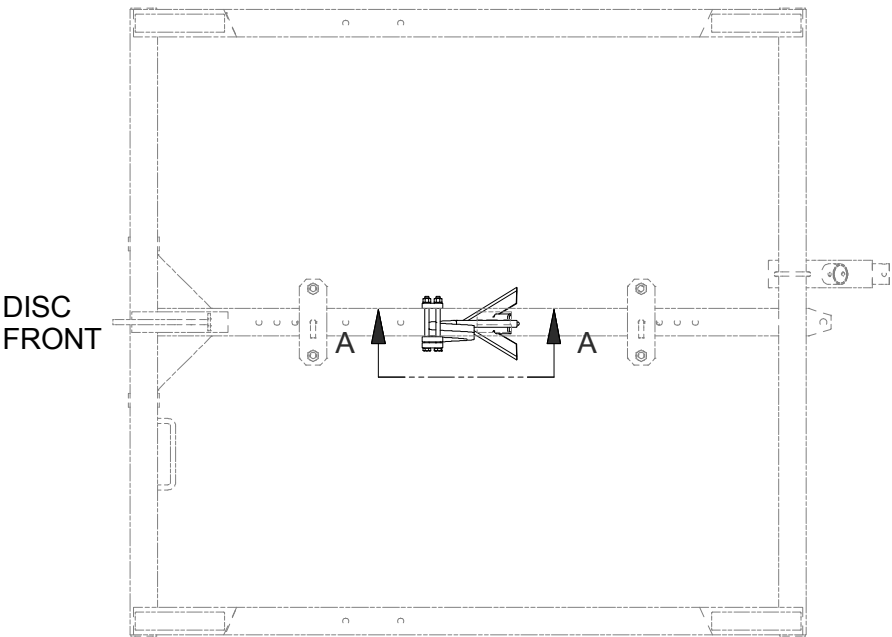
SMV SIGN



88721778

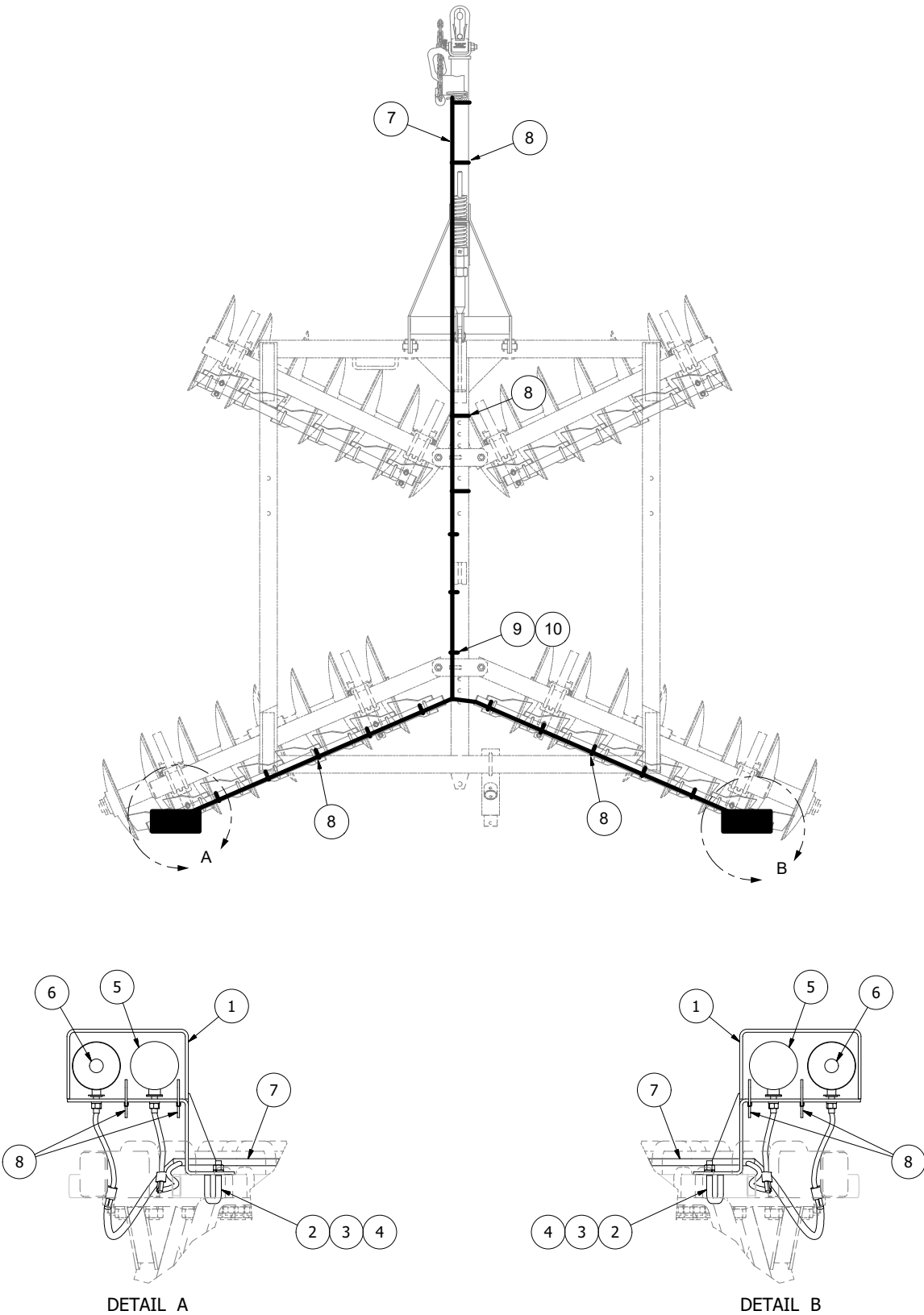
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	86026897	SIGN-SMV	1
2	86063839	BRACKET-SMV	1
3	EZB025007	BOLT HEX 1/4 NC X 3/4 LG	2
4	EZBN025	1/4 Nc Hex. Nut	2
5	EZBW025L	1/4 Lockwasher	2

CENTER TOOTH



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDT6200	CENTER TOOTH SHANK(390/395)	1
2	EZDT6201	SHOVEL - 10" (390/395)	1
3	EZDT6202	CLAMP PLATE - CENTER TOOTH	2
4	EZC50943	7/16" X 2" PLOW BOLT	2
5	EZBW043L	WASHER LOCK 7/16X11/16X1/8	2
6	EZBN043	NUT HEX 7/16 NC	2
7	EZB062075	5/8 X 7-1/2 N.C. HEX BOLT	4
8	EZBW062L	LW P 5/8 86505602	4
9	EZBN062	N G5 P 5/8 86505599	4

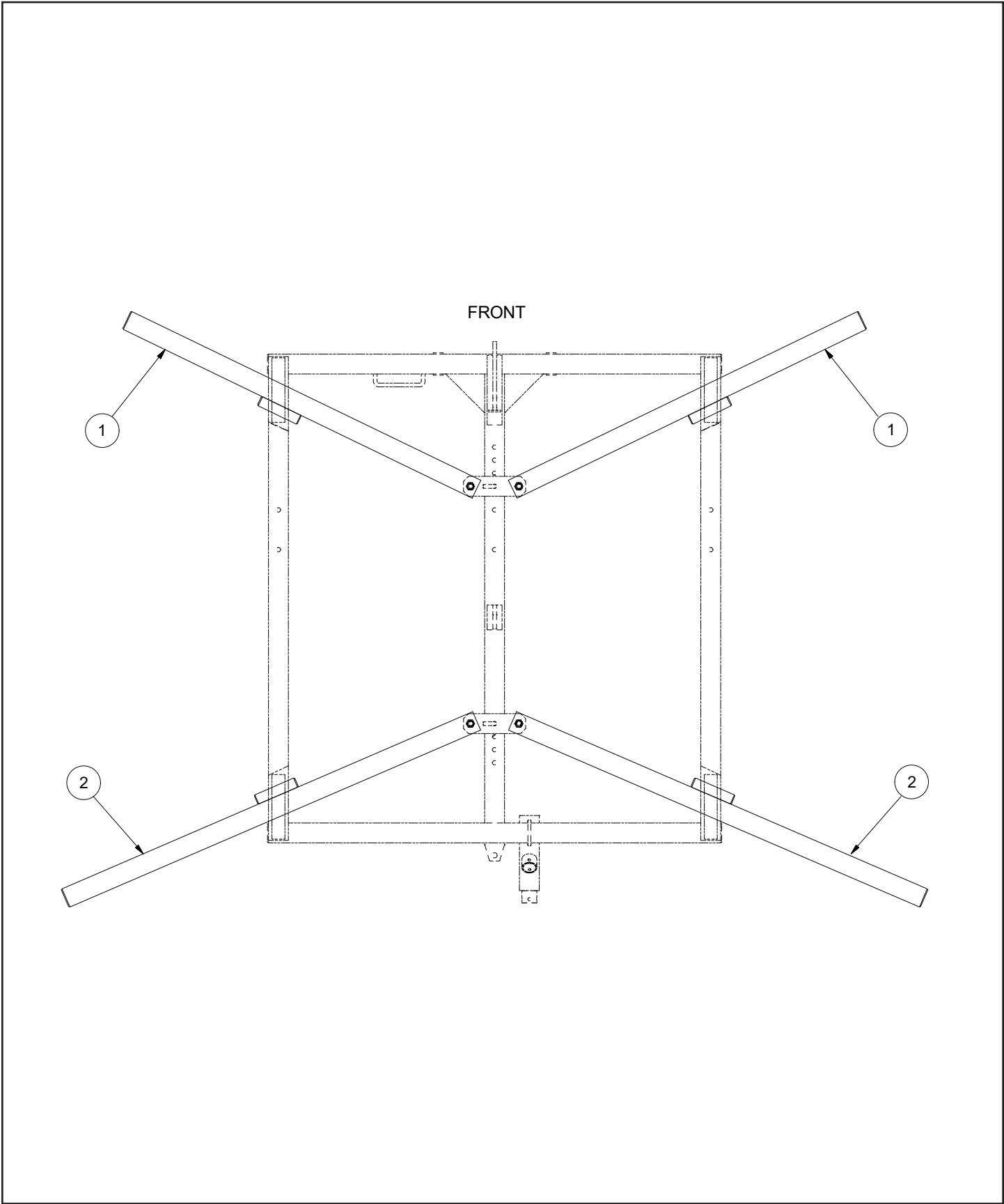
WARNING LIGHTS



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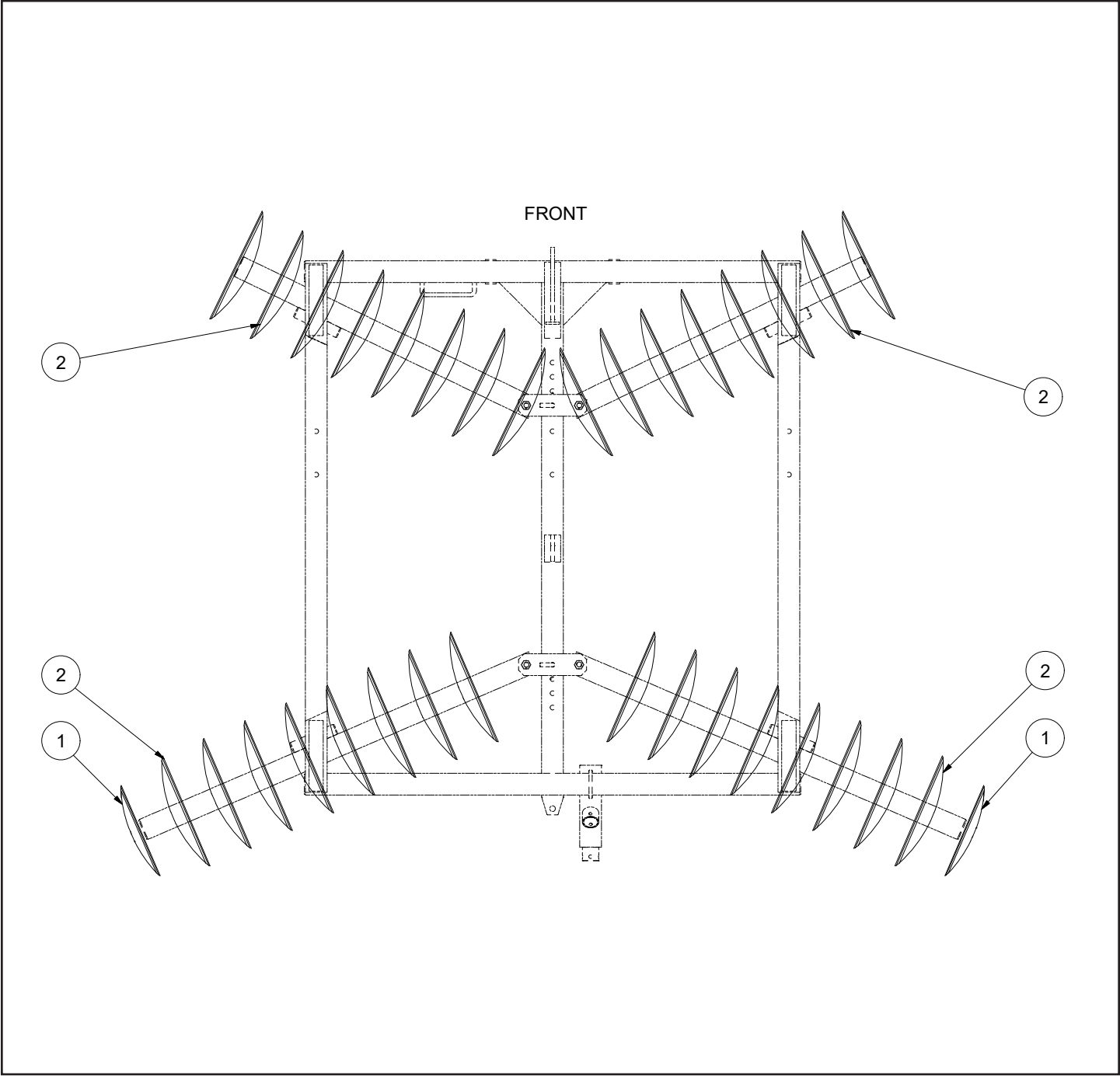
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZLK6396	BRACKET-W.A. SAFETY LIGHT KIT	2
2	EZDG5308	U-BOLT 1/2-13X2-1/2ZNCR	2
3	EZBN050	NUT HEX 1/2 NC ZNCR	4
4	EZBW050L	WASHER LOCK 1/2X7/8X1/8 ZNCR	4
5	EZLK6425	RED LAMP W/3 PIN PLUG	2
6	EZLK6426	AMBER LAMP W/2 PIN PLUG	2
7	EZLK6427	HARNESS-WARNING LIGHTS	1
8	EZLK6438	CABLE TIE 11"	29
9	SZ103259	CLAMP HOSE TIE-DOWN	5
10	SZ000565	5/16-12 X 3/4 STAPSCW #3 PNT	5

GANG BEAMS



ITEM	PART NUMBER	DESCRIPTION	QTY.
8" SPACING			
1	EZDBS4-60-1	60 Solid Gang Beam (MODEL: 34 Blades, 8 Bearings)	2
	EZDBS4-78-1	78 Solid Gang Beam (MODEL: 42 Blades, 12 Bearings)	2
	EZDBS4-90-1	90 Solid Gang Beam (MODEL: 46 Blades, 12 Bearings)	2
	EZDBS4-102-1	102 Solid Gang Beam (MODEL: 54 Blades, 12 Bearings)	2
	EZDBS4-114-1	114 Solid Gang Beam (MODEL: 58 Blades, 12 Bearings)	2
2	EZDBS4-78-1	78 Solid Gang Beam (MODEL: 34 Blades, 8 Bearings)	2
	EZDBS4-90-1	90 Solid Gang Beam (MODEL: 42 Blades, 12 Bearings)	2
	EZDBS4-102-1	102 Solid Gang Beam (MODEL: 46 Blades, 12 Bearings)	2
	EZDBS4-120-1	120 Solid Gang Beam (MODEL: 54 Blades, 12 Bearings)	2
	EZDBS4-126-1	126 Solid Gang Beam (MODEL: 58 Blades, 12 Bearings)	2
9" SPACING			
1	EZDBS4-60-1	60 Solid Gang Beam (MODEL: 30 Blades, 8 Bearings)	2
	EZDBS4-78-1	78 Solid Gang Beam (MODEL: 38 Blades, 12 Bearings)	2
	EZDBS4-90-1	90 Solid Gang Beam (MODEL: 42 Blades, 12 Bearings)	2
	EZDBS4-96-1	96 Solid Gang Beam (MODEL: 46 Blades, 12 Bearings)	2
	EZDBS4-108-1	108 Solid Gang Beam (MODEL: 50 Blades, 12 Bearings)	2
2	EZDBS4-72-1	72 Solid Gang Beam (MODEL: 30 Blades, 8 Bearings)	2
	EZDBS4-96-1	96 Solid Gang Beam (MODEL: 38 Blades, 12 Bearings)	2
	EZDBS4-102-1	102 Solid Gang Beam (MODEL: 42 Blades, 12 Bearings)	2
	EZDBS4-114-1	114 Solid Gang Beam (MODEL: 46 Blades, 12 Bearings)	2
	EZDBS4-120-1	120 Solid Gang Beam (MODEL: 50 Blades, 12 Bearings)	2

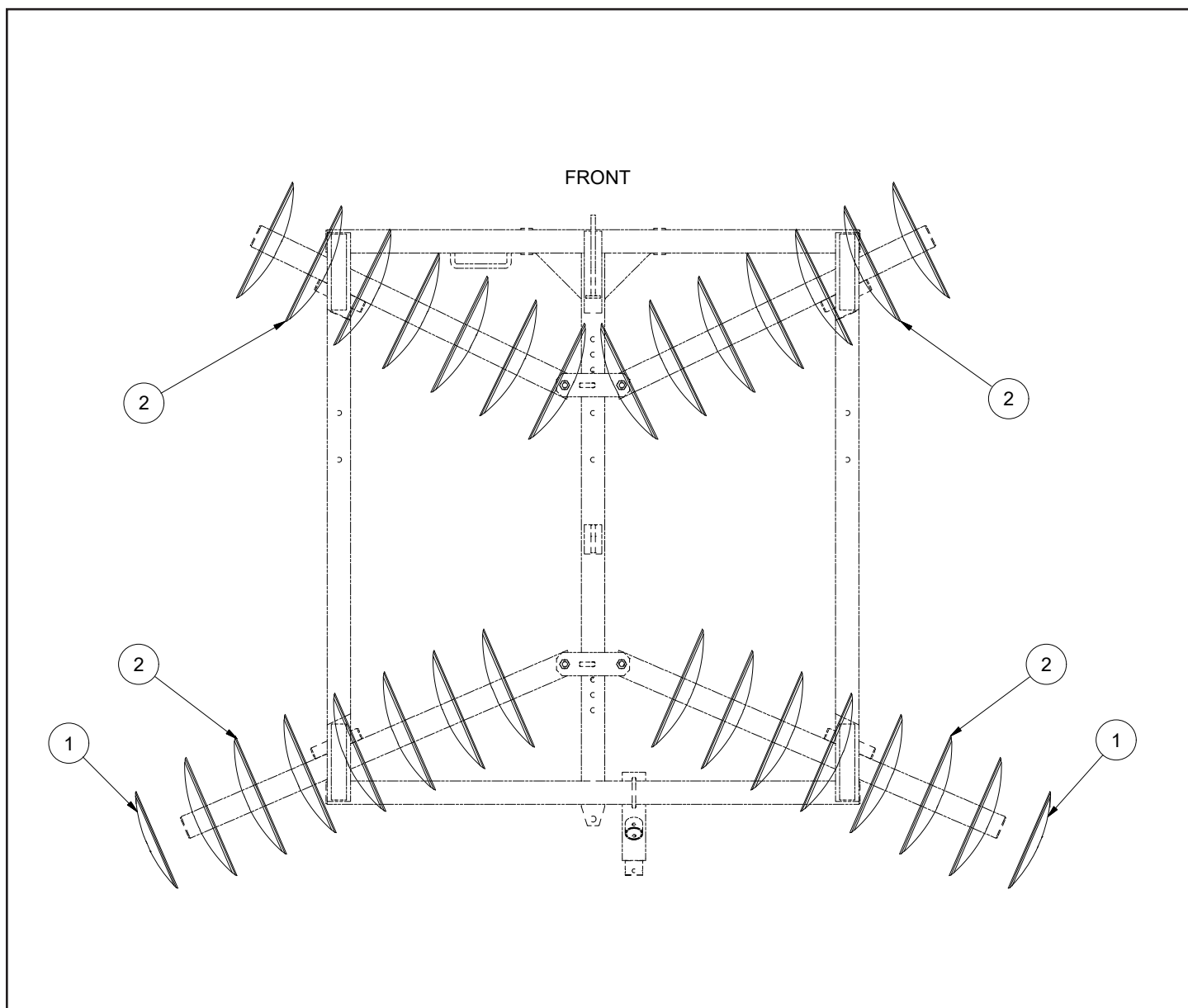
BLADES - 8 IN. SPACING



ITEM	PART NUMBER	DESCRIPTION	QTY.
22" BLADES			
1	EZDG133	OUTRIG BLADE-PLAIN 18 X 3/16	2
2	EZDG64	BLADE-PLAIN 22 X 1/4	*
	EZDG61	BLADE-NOTCHED 22 X 1/4	*

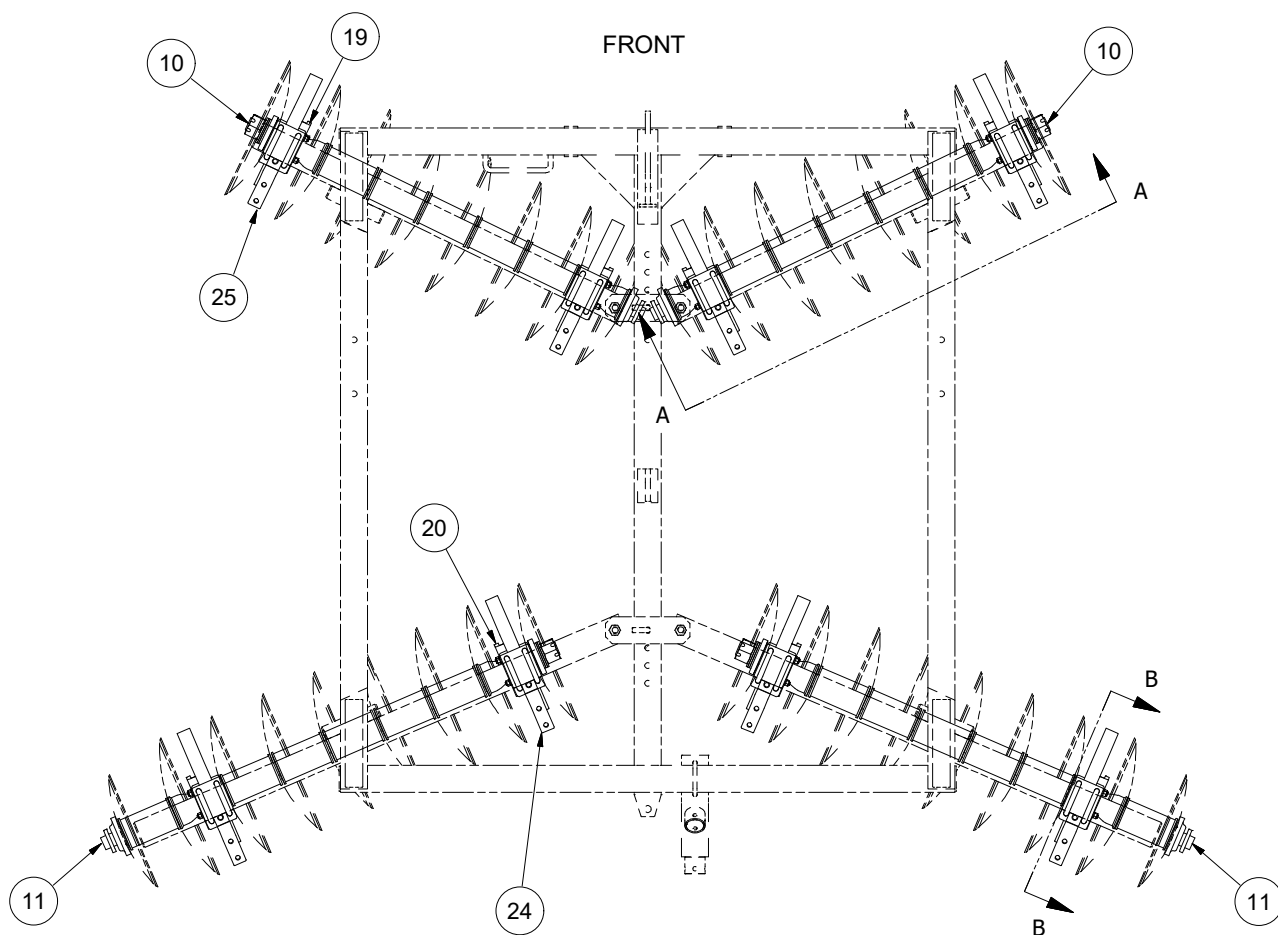
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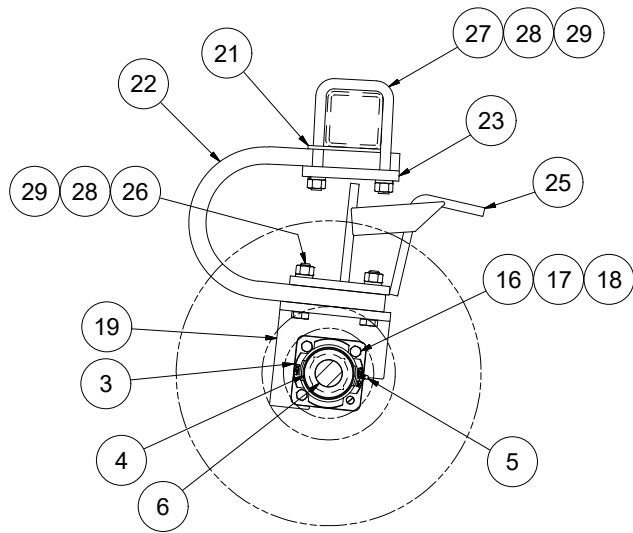
BLADES - 9 IN. SPACING



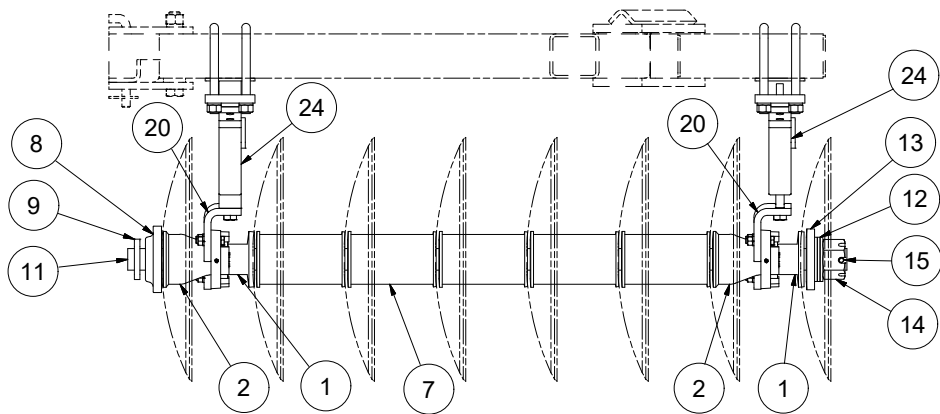
ITEM	PART NUMBER	DESCRIPTION	QTY.
22" BLADES			
1	EZDG133	OUTRIG BLADE-PLAIN 18 X 3/16	2
2	EZDG64	BLADE-PLAIN 22 X 1/4	*
	EZDG61	BLADE-NOTCHED 22 X 1/4	*
24" BLADES			
1	EZDG149	OUTRIG BLADE-PLAIN 20 X .236	2
2	EZDG76	BLADE-PLAIN 24 X .256	*
	EZDG138	BLADE-NOTCHED 24 X .313	*

*AS REQUIRED

GANGS AND HANGERS - 8 IN. SPACING



SECTION B-B



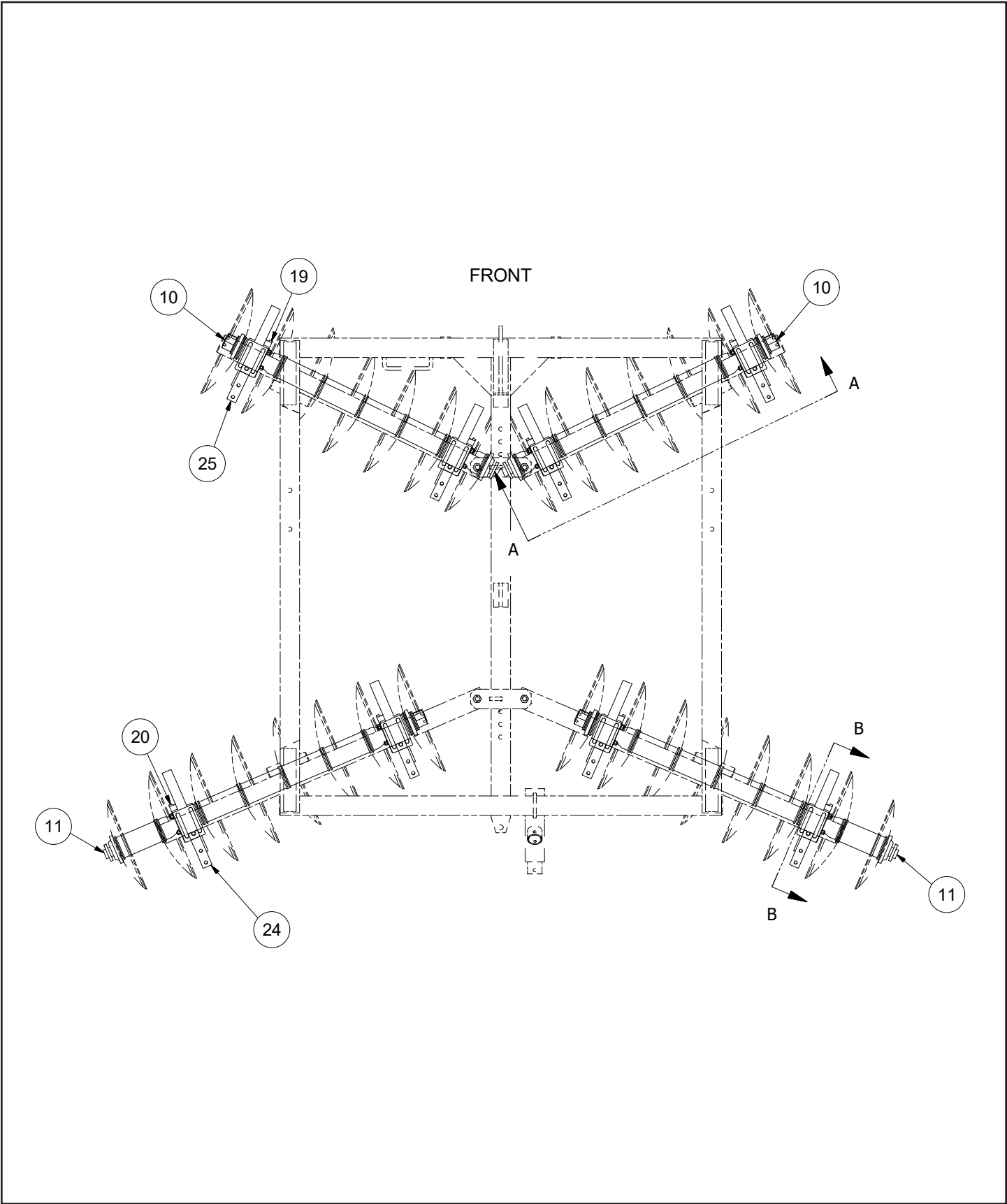
SECTION A-A

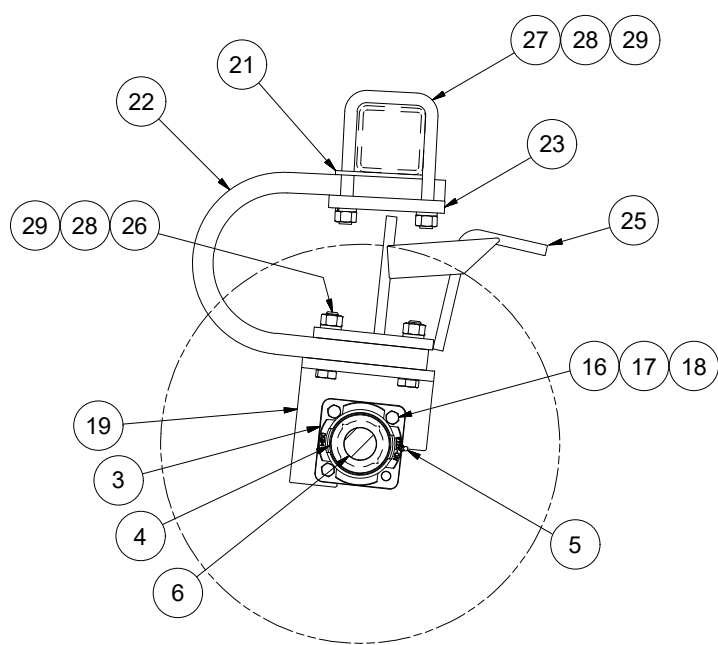
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDGA108	8 SHORT 1/2 SPOOL (FAB.)	*
2	EZDGA102	8 & 9 LG 1/2 SPOOL (FAB.)	*
3	EZDG94	211 HOUSING ONLY	*
4	EZDG95	211 GREASEABLE BEARING	*
5	EZ10GN1	FITTING 1/4 UNF ST ZERK	*
6	EZDG236	211 SHIELD	*
7	EZDGA113	8" SPACING FULL SPOOL	*
8	EZDGA5370	PLATE-END DISC GANG	*
9	EZDG5371	PLATE-HOLDING LUG DISC GANG	*
10	88713303	BOLT-GANG - 65" - 8 BLADE GANG	*
	88713302	BOLT-GANG - 73.25" - 9 BLADE GANG	*
	88713301	BOLT-GANG - 81.75" - 10 BLADE GANG	*
	88713316	BOLT-GANG - 90.5" - 11 BLADE GANG	*
	88713300	BOLT-GANG - 98.25" - 12 BLADE GANG	*
	88713299	BOLT-GANG - 106.5" - 13 BLADE GANG	*
	88713331	BOLT-GANG - 114.75" - 14 BLADE GANG	*
11	88713302	BOLT-GANG - 73.25" - 9 BLADE GANG	*
	88713301	BOLT-GANG - 81.25" - 10 BLADE GANG	*
	88713316	BOLT-GANG - 90.5" - 11 BLADE GANG	*
	88713300	BOLT-GANG - 98.25" - 12 BLADE GANG	*
	88713299	BOLT-GANG - 106.5" - 13 BLADE GANG	*
	88713331	BOLT-GANG - 114.75" - 14 BLADE GANG	*
	88713296	BOLT-GANG - 123.25" - 15 BLADE GANG	*
12	EZDG89	WASHER-SHIM	*
13	EZDG13185	WASHER - 215 OUTBOARD	*
14	EZDG12252	NUT-HEAVY HEX SN G5 2-4.5 ZNCR	*
15	EZDG10310	PIN-LOCK DISC GANG	*
16	EZB050022	1/2X 2-1/4 NC HEX BOLT	*
17	EZBW050L	WASHER LOCK 1/2X7/8X1/8 ZNCR	*
18	EZBN050	NUT HEX 1/2 NC ZNCR	*
19	88719441	BRKT - 211 MNT FRT LH & RR RH	*
20	88719442	BRKT - 211 MNT FRT RH & RR LH	*
21	EZDG13510	BEARING PLATE - 2 HOLE	*
22	EZDG8150	1-1/4 X 2 SPRING SHANK	*
23	EZDGA10295	BACKING PLATE(3/4 U-BOLT)	*
24	EZDGA8611	BRKT-W.A. SCRAPER BAR STD FRT RH & RR LH	*
25	EZDGA8612	BRKT-W.A. SCRAPER BAR STD FRT LH & RR RH	*
26	EZB075035	BOLT HEX 3/4 NC X 3-1/2	*
27	EZDG10290	3/4 X 4 U-BOLT	*
28	EZBW075L	WASHER LOCK 3/4X1-1/4X3/16ZNCR	*

ITEM	PART NUMBER	DESCRIPTION	QTY.
29	EZBN075	NUT HEX 3/4 NC GR5 ZNCR	*
30	86050059	STD GREASE - LITHUM	*

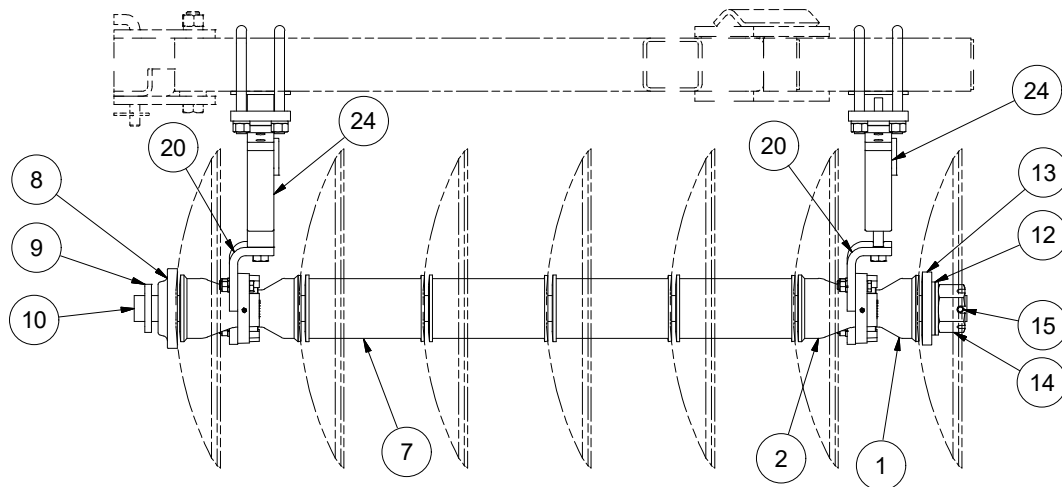
* AS REQUIRED

GANGS AND HANGERS - 9 IN. SPACING





SECTION B-B



SECTION A-A

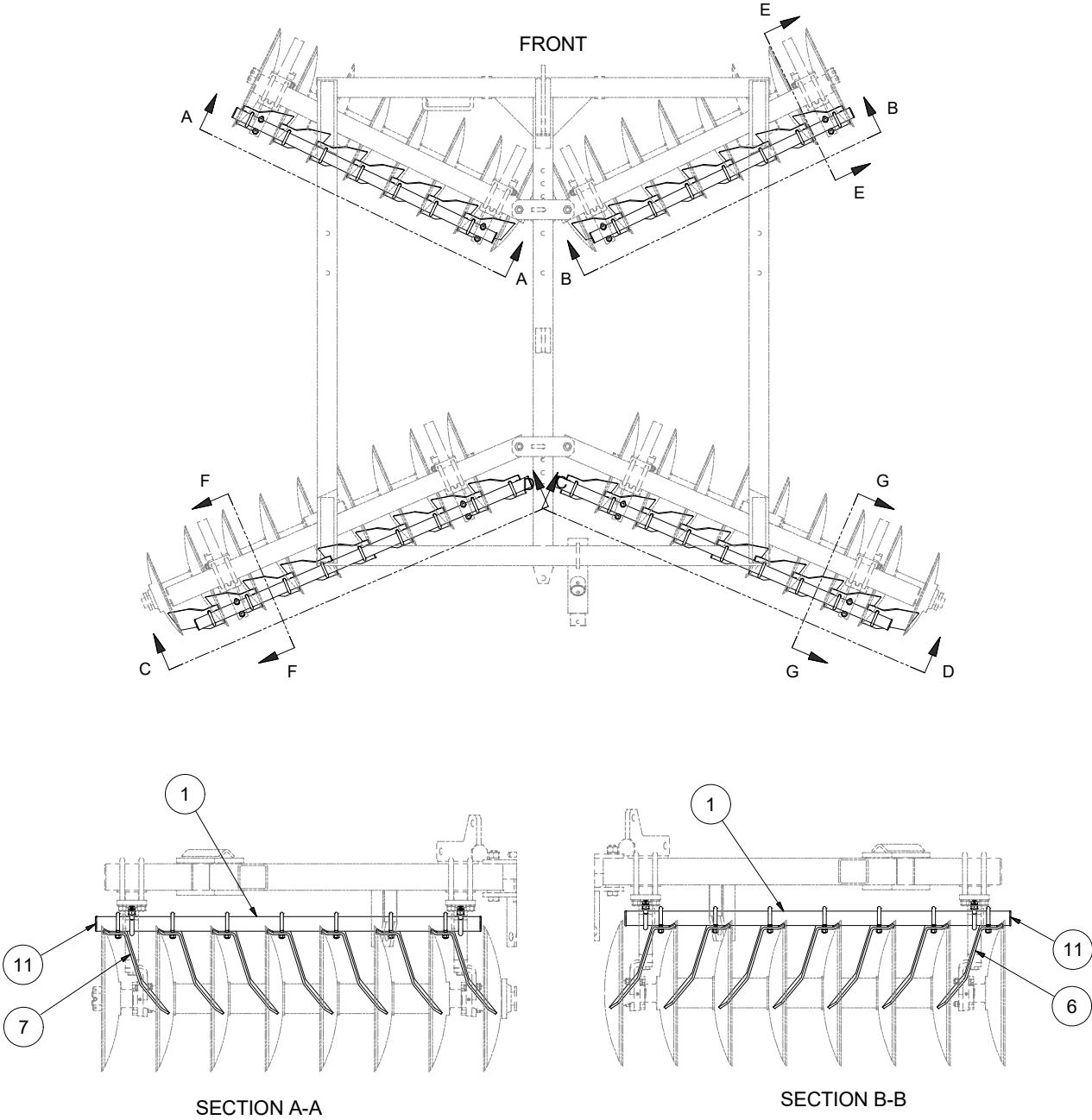
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDGA97	9 & 10.5 SHORT 1/2 SPOOL (FAB)	*
2	EZDGA102	8 & 9 LG 1/2 SPOOL (FAB.)	*
3	EZDG94	211 HOUSING ONLY	*
4	EZDG95	211 GREASEABLE BEARING	*
5	EZ10GN1	FITTING 1/4 UNF ST ZERK	*
6	EZDG236	211 SHIELD	*
7	EZDGA98	9 FULL SPOOL (FAB) W/5"	*
8	EZDGA5370	PLATE-END DISC GANG	*
9	EZDG5371	PLATE-HOLDING LUG DISC GANG	*
10	88713314	BOLT-GANG - 62.75" - 7 BLADE GANG	*
	88713315	BOLT-GANG - 72" - 8 BLADE GANG	*
	88713293	BOLT-GANG - 81" - 9 BLADE GANG	*
	88713316	BOLT-GANG - 90.5" - 10 BLADE GANG	*
	88713321	BOLT-GANG - 99.5" - 11 BLADE GANG	*
	88713322	BOLT-GANG - 109" - 12 BLADE GANG	*
11	88713315	BOLT-GANG - 72" - 8 BLADE GANG	*
	88713293	BOLT-GANG - 81" - 9 BLADE GANG	*
	88713316	BOLT-GANG - 90.5" - 10 BLADE GANG	*
	88713321	BOLT-GANG - 99.75" - 11 BLADE GANG	*
	88713322	BOLT-GANG - 109" - 12 BLADE GANG	*
	88713323	BOLT-GANG - 118.5" - 13 BLADE GANG	*
12	EZDG89	WASHER-SHIM	*
13	EZDG13185	WASHER - 215 OUTBOARD	*
14	EZDG12252	NUT-HEAVY HEX SN G5 2-4.5 ZNCR	*
15	EZDG10310	PIN-LOCK DISC GANG	*
16	EZB050022	1/2X 2-1/4 NC HEX BOLT	*
17	EZBW050L	WASHER LOCK 1/2X7/8X1/8 ZNCR	*
18	EZBN050	NUT HEX 1/2 NC ZNCR	*
19	88719441	BRKT - 211 MNT FRT LH & RR RH	*
20	88719442	BRKT - 211 MNT FRT RH & RR LH	*
21	EZDG13510	BEARING PLATE - 2 HOLE	*
22	EZDG8150	1-1/4 X 2 SPRING SHANK	*
23	EZDGA10295	BACKING PLATE(3/4 U-BOLT)	*
24	EZDGA8611	BRKT-W.A. SCRAPER BAR STD FRT RH & RR LH	*
25	EZDGA8612	BRKT-W.A. SCRAPER BAR STD FRT LH & RR RH	*
26	EZB075035	BOLT HEX 3/4 NC X 3-1/2	*
27	EZDG10290	3/4 X 4 U-BOLT	*
28	EZBW075L	WASHER LOCK 3/4X1-1/4X3/16ZNCR	*
29	EZBN075	NUT HEX 3/4 NC GR5 ZNCR	*
30	86050059	STD GREASE - LITHUM	*

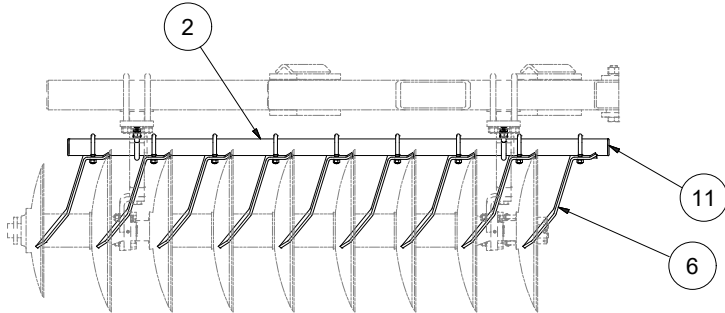
* AS REQUIRED

Farm King

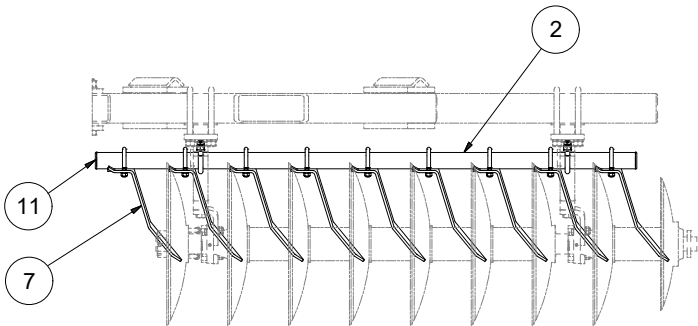


SCRAPERS - 8 IN. SPACING

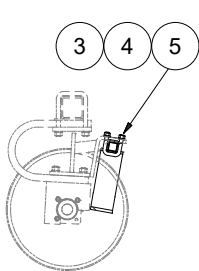




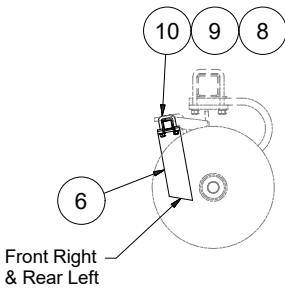
SECTION C-C



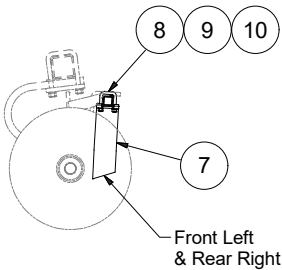
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

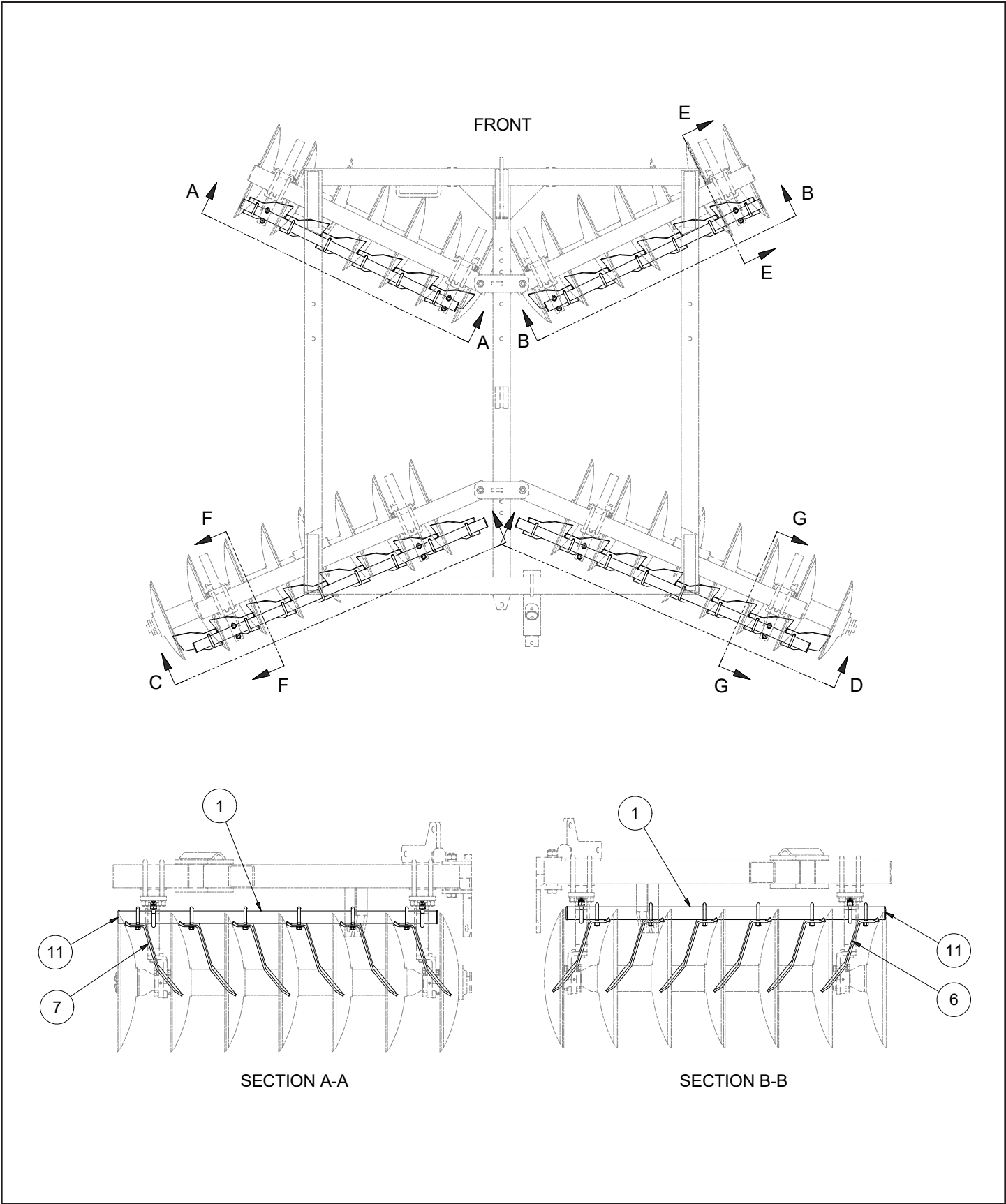
ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDS58	TUBE-SCRAPER - 58" - 8 Blade Gang	*
	EZDS65	TUBE-SCRAPER - 65.5" - 9 Blade Gang	*
	EZDS74	TUBE-SCRAPER - 74" - 10 Blade Gang	*
	EZDS82	TUBE-SCRAPER - 82.5" - 11 Blade Gang	*
	EZDS90	TUBE-SCRAPER - 90" - 12 Blade Gang	*
	EZDS99	TUBE-SCRAPER - 99" - 13 Blade Gang	*
	EZDS107	TUBE-SCRAPER - 107" - 14 Blade Gang	*
2	EZDS73	TUBE-SCRAPER - 73" - 9 Blade Gang	*
	EZDS82	TUBE-SCRAPER - 82.5" - 10 Blade Gang	*
	EZDS90	TUBE-SCRAPER - 90" - 11 Blade Gang	*
	EZDS99	TUBE-SCRAPER - 99" - 12 Blade Gang	*
	EZDS107	TUBE-SCRAPER - 107" - 13 Blade Gang	*
	EZDS114	TUBE-SCRAPER - 114.5" - 14 Blade Gang	*
	EZDS123	TUBE-SCRAPER - 123" - 15 Blade Gang	*
3	EZDG5309	U-BOLT 5/8-11X2-11/16ZNCR	*
4	EZBW062L	LW P 5/8 86505602	*
5	EZBN062	N G5 P 5/8 86505599	*
6	EZDG6083	FRT RH & RR LH SCRAPER	*
7	EZDG6084	FRT LH & RR RH SCRAPER	*
8	EZDG5308	U-BOLT 1/2-13X2-1/2ZNCR	*
9	EZBW050L	WASHER LOCK 1/2X7/8X1/8 ZNCR	*
10	EZBN050	NUT HEX 1/2 NC ZNCR	*
11	88719268	PLUG - 2X2TUBE	*

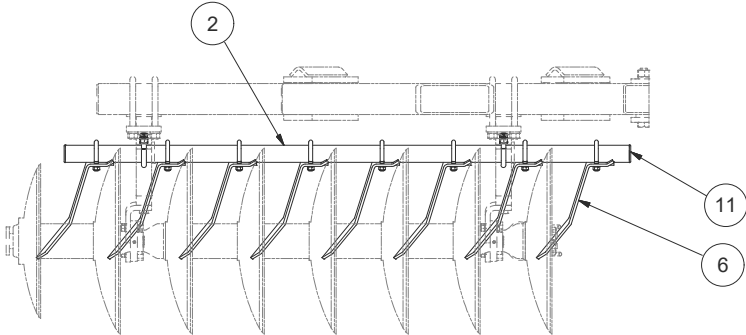
* AS REQUIRED

Farm King

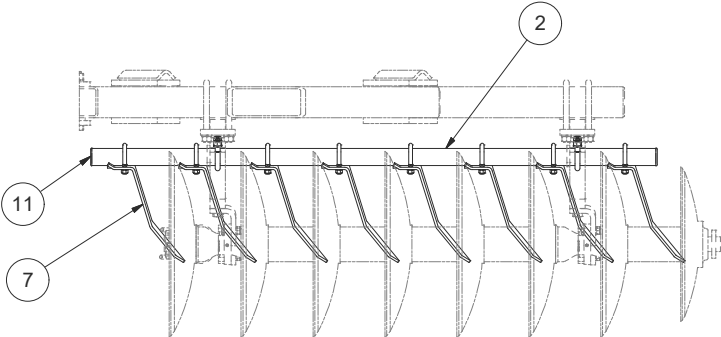


SCRAPERS - 9 IN. SPACING

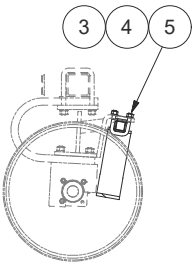




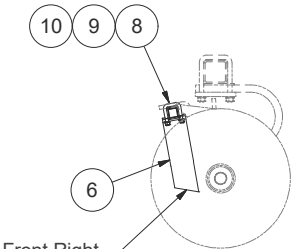
SECTION C-C



SECTION D-D

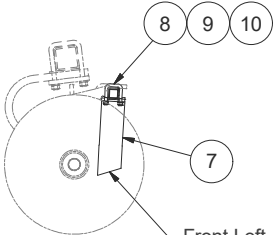


SECTION E-E



Front Right
& Rear Left

SECTION F-F



Front Left
& Rear Right

SECTION G-G

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	EZDS55	TUBE-SCRAPER - 55" - 7 Blade Gang	*
	EZDS64	TUBE-SCRAPER - 64" - 8 Blade Gang	*
	EZDS73	TUBE-SCRAPER - 73" - 9 Blade Gang	*
	EZDS82	TUBE-SCRAPER - 82.5" - 10 Blade Gang	*
	EZDS91	TUBE-SCRAPER - 91.5" - 11 Blade Gang	*
	EZDS101	TUBE-SCRAPER - 101.5" - 12 Blade Gang	*
2	EZDS73	TUBE-SCRAPER - 73" - 8 Blade Gang	*
	EZDS82	TUBE-SCRAPER - 82.5" - 9 Blade Gang	*
	EZDS91	TUBE-SCRAPER - 91.5" - 10 Blade Gang	*
	EZDS101	TUBE-SCRAPER - 101.5" - 11 Blade Gang	*
	EZDS110	TUBE-SCRAPER - 110" - 12 Blade Gang	*
	EZDS120	TUBE-SCRAPER - 120" - 13 Blade Gang	*
3	EZDG5309	U-BOLT 5/8-11X2-11/16ZNCR	*
4	EZBW062L	LW P 5/8 86505602	*
5	EZBN062	N G5 P 5/8 86505599	*
6	EZDG6083	FRT RH & RR LH SCRAPER	*
7	EZDG6084	FRT LH & RR RH SCRAPER	*
8	EZDG5308	U-BOLT 1/2-13X2-1/2ZNCR	*
9	EZBW050L	WASHER LOCK 1/2X7/8X1/8 ZNCR	*
10	EZBN050	NUT HEX 1/2 NC ZNCR	*
11	88719268	PLUG - 2X2TUBE	*

* AS REQUIRED

SPECIFICATIONS

SPECIFICATIONS.....	161
Dimensions.....	161
Structure.....	161
HYDRAULIC CONNECTION SPECIFICATIONS.....	163
O-Ring Fitting (Straight Thread).....	163
O-Ring Face Seal Connection.....	163
Flare Fitting.....	163
Port Seal (O-Ring Boss) Fitting.....	164
Tubelines And Hoses.....	164
HARDWARE TORQUE VALUES.....	165
Metric Chart.....	165
Imperial Chart.....	166

Farm King



SPECIFICATIONS

Dimensions

DESCRIPTION	395 TANDEM DISC	
	8 IN. SPACING	9 IN. SPACING
WORKING WIDTH (24" BLADES)	11' 6", 14' 6", 16', 18' 6", 20' (3.5 - 6.0 M)	11' 6", 14' 6", 16' 6", 18', 19' 6" (3.5 - 5.9 M)
TRANSPORT WIDTH	13' - 21' 6" (4.0 - 6.6 M)	13' - 21' (4.0 - 6.4 M)
TRANSPORT HEIGHT	N/A	
WEIGHT	350 LB/FT (521 KG/M)	
HP REQUIRED*	4.5 - 6.0 HP/FT (11 - 15 KW/M)	5.0 - 7.0 HP/FT (12 - 17 KW/M)

* Depends on working depth, soil type, field speed, etc.

Structure

DESCRIPTION	395 TANDEM DISC	
FRAME	WELDED, 4" X 4" (102 X 102 MM) TUBULAR STEEL FRAME	
BEARINGS	211 WSS SERIES	
GANG ANGLE	20°, 21°, 22°, 23° FRONT 18°, 19°, 20°, 21° REAR	
GANG SHAFT	1-15/16" (49 MM) HIGH CARBON STEEL, TORQUED TO 3200 FT-LB (4340 NM)	
BLADES	22" X 1/4" (560 X 6.5 MM) SMOOTH 22" X 1/4" (560 X 6.5 MM) NOTCHED	22" X 1/4" (560 X 6.5 MM) SMOOTH 22" X 1/4" (560 X 6.5 MM) NOTCHED 24" X 0.256" (610 X 6.5 MM) SMOOTH 24" X 0.313" (610 X 8 MM) NOTCHED
TIRES	11L X 15 FI (11.5' -14.5' SIZES)	
DEPTH CONTROL	SINGLE CYLINDER SYSTEM C/W DEPTH STOP SEGMENTS	
HITCH	AUTO-LEVELING, FULL FLOATING HITCH	

Hydraulic Cylinders

APPLICATION	SIZE	# REQUIRED
ROCKSHAFT LIFT	3.5" X 8" CYLINDER	1

Bolt Torques

DESCRIPTION	TORQUE
GANG BOLTS (1-15/16" (49 MM) DIAMETER)	3200 FT. - LB. (4339 N•M)
WHEEL BOLTS (9/16" (14 MM) DIAMETER)	130 FT. - LB. (176.3 N•M)
BEARING HANGER U-BOLTS - 7/8" (15 MM) DIAMETER)	430 FT. - LB. (583 N•M)

HYDRAULIC CONNECTION SPECIFICATIONS

O-Ring Fitting (Straight Thread)

Lubricate the O-ring before installing the fitting. Loosen the jam nut and install the fitting. Tighten the jam nut until the washer is tight against the surface.

O-Ring Face Seal Connection

Figure 35

O-ring Face Seal Tightening Torque		
Tubeline O.D.	Thread Size	N•m (ft-lb)
1/4"	9/16" - 18	13 (18)
3/8"	11/16" - 16	22 (30)
1/2"	13/16" - 16	40 (54)
5/8"	1" - 14	60 (81)
3/4"	1-3/16" - 12	84 (114)
7/8"	1-3/16" - 12	98 (133)
1"	1-7/16" - 12	118 (160)
1-1/4"	1-11/16" - 12	154 (209)
1-1/2"	2" - 12	163 (221)

When the fitting is tightened, you can feel when the fitting is tight to eliminate leakage caused by under or over torqued fittings. Use petroleum jelly to hold the O-ring in position until the fittings are assembled **[Figure 35]**.

Flare Fitting

Figure 36

Flare Fitting Tightening Torque		
Tubeline O.D.	Thread Size	N • m (ft-lb)
1/4"	7/16" - 20	13 (18)
5/16"	1/2" - 20	17 (23)
3/8"	9/16" - 18	22 (30)
1/2"	3/4" - 16	40 (54)
5/8"	7/8" - 14	60 (81)
3/4"	1-1/16" - 12	84 (114)
7/8"	1-3/16" - 12	98 (133)
1"	1-5/16" - 12	118 (160)
1-1/4"	1-5/8" - 12	154 (209)
1-1/2"	1-7/8" - 12	163 (221)
2"	2-1/2" - 12	252 (342)

Tighten until the nut makes contact with the seat. Use the chart to find the correct tightness needed **[Figure 36]**.

Port Seal (O-Ring Boss) Fitting**Figure 37**

Port Seal And O-ring Boss Tightening Torque		
Tubeline O.D.	Thread Size	N•m (ft-lb)
1/4"	7/16" - 20	13 (18)
3/8"	9/16" - 18	22 (30)
1/2"	3/4" - 16	40 (54)
5/8"	7/8" - 14	60 (81)
3/4"	1-1/16" - 12	84 (114)
7/8"	1-3/16" - 12	98 (133)
1"	1-5/16" - 12	118 (160)
1-1/8"	1-7/16" - 12	154 (209)
1-1/4"	1-5/8" - 12	163 (221)

NOTE: Port seal and nut, washer and O-ring (O-ring Boss) fittings use the same tightening torque valve chart [Figure 37].

If a torque wrench cannot be used, use the following method.

Tighten the nut until it just makes metal to metal contact, you can feel the resistance.

Tighten the nut with a wrench no more than one hex flat maximum.

Do not over tighten the port seal fitting.

NOTE: If a torque wrench cannot be used, use the hex flat tightening method as an approximate guideline.

NOTE: Port seal fittings are not recommended in all applications. Use O-ring boss fittings in these applications.

Tubelines And Hoses

Replace any tubelines that are bent or flattened. They will restrict flow, which will slow hydraulic action and cause heat.

Replace hoses which show signs of wear, damage or weather cracked rubber.

Always use two wrenches when loosening and tightening hose or tubeline fittings.

HARDWARE TORQUE VALUES

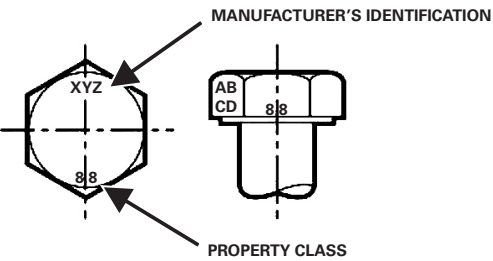
Metric Chart

NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.

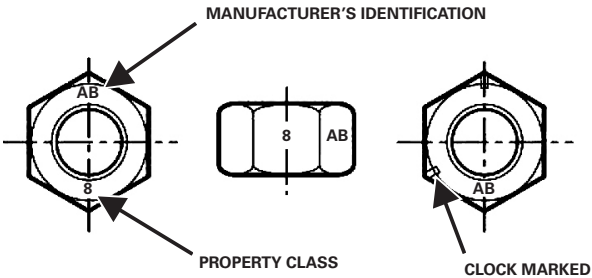
Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. Torque values are listed in newton-meters (inch* or foot pounds) for normal assembly applications.

Nominal Size	Class 5.8		Class 8.8		Class 10.9		Lock nuts
	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	Unplated	Plated W / ZnCr	CL.8 W/ CL. 8.8 Bolt
M4	1.7 (15*)	2.2 (19*)	2.6 (23*)	3.4 (30*)	3.7 (33*)	4.8 (42*)	1.8 (16*)
M6	5.8 (51*)	7.6 (67*)	8.9 (79*)	12 (102*)	13 (115*)	17 (150*)	6.3 (56*)
M8	14 (124*)	18 (159*)	22 (195*)	28 (248*)	31 (274*)	40 (354*)	15 (133*)
M10	28 (21)	36 (27)	43 (32)	56 (41)	61 (45)	79 (58)	30 (22)
M12	49 (36)	63 (46)	75 (55)	97 (72)	107 (79)	138 (102)	53 (39)
M16	121 (89)	158 (117)	186 (137)	240 (177)	266 (196)	344 (254)	131 (97)
M20	237 (175)	307 (226)	375 (277)	485 (358)	519 (383)	671 (495)	265 (195)
M24	411 (303)	531 (392)	648 (478)	839 (619)	897 (662)	1160 (855)	458 (338)
NOTE: Torque values shown with * are inch pounds.							

Identification of Hex Cap Screws and Carriage Bolts - Classes 5 and up



Identification of Hex Nuts and Lock Nuts - Classes 5 and up



HARDWARE TORQUE VALUES (CONT'D)**Imperial Chart**

NOTE: Do not use the values listed in the charts if a different torque value or tightening procedure is specified in this manual for a specific application. Torque values listed are for general use only.

Use the following charts to determine the correct torque when checking, adjusting or replacing hardware. **Torque values are listed in newton-meters (inch* or foot pounds) for normal assembly applications.**

Nominal Size	SAE Grade 5		SAE Grade 8		LOCK NUTS			
	Unplated or Plated Silver	Plated W / ZnCr Gold"	Unplated or Plated Silver	Plated W / ZnCr Gold"	Unplated or Plated Silver	Plated W / ZnCr Gold"	Grade W / Gr. 5 Bolt	Grade W / Gr. 8 Bolt
1/4	6.2 (55*)	8.1 (72*)	9.7 (86*)	12.6 (112*)	13.6 (121*)	17.7 (157*)	6.9 (61*)	9.8 (86*)
5/16	13 (115*)	17 (149*)	20 (178*)	26 (229*)	28 (250*)	37 (324*)	14 (125*)	20 (176*)
3/8	23 (17)	30 (22)	35 (26)	46 (34)	50 (37)	65 (48)	26 (19)	35 (26)
7/16	37 (27)	47 (35)	57 (42)	73 (54)	80 (59)	104 (77)	41 (30)	57 (42)
1/2	57 (42)	73 (54)	87 (64)	113 (83)	123 (91)	159 (117)	61 (45)	88 (64)
9/16	81 (60)	104 (77)	125 (92)	163 (120)	176 (130)	229 (169)	88 (65)	125 (92)
5/8	112 (83)	145 (107)	174 (128)	224 (165)	244 (180)	316 (233)	122 (90)	172 (127)
3/4	198 (146)	256 (189)	306 (226)	397 (293)	432 (319)	560 (413)	217 (160)	306 (226)
7/8	193 (142)	248 (183)	495 (365)	641 (473)	698 (515)	904 (667)	350 (258)	494 (364)
1	289 (213)	373 (275)	742 (547)	960 (708)	1048 (773)	1356 (1000)	523 (386)	739 (545)
NOTE: Torque values shown with * are inch pounds.								

Identification of Hex Cap Screws and Carriage Bolts

GRADE 2 SAE
BOLT



GRADE 5 SAE
BOLTS



GRADE 8 SAE
BOLTS



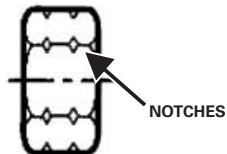
GRADE 2 SAE
NUTS



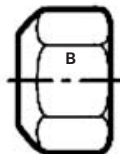
GRADE 5 SAE
HEX NUTS



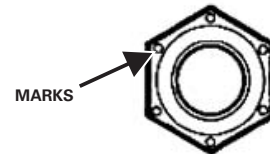
GRADE 8 SAE
HEX NUTS

Identification of Hex Nuts and Lock Nuts

GRADE IDENTIFICATION
GRADE A: NO NOTCHES
GRADE B: ONE CIRCUMFERENTIAL NOTCH
GRADE C: TWO CIRCUMFERENTIAL NOTCHES



GRADE IDENTIFICATION
GRADE A: NO MARK
GRADE B: LETTER B
GRADE C: LETTER C



GRADE IDENTIFICATION
GRADE A: NO MARKS
GRADE B: THREE MARKS
GRADE C: SIX MARKS
MARKS NEED NOT BE
LOCATED AT CORNERS

WARRANTY

WARRANTY.....169

 BASE LIMITED WARRANTY.....169

 REPAIR PARTS LIMITED WARRANTY.....169

 COMMERCIAL USE.....169

 WHAT IS NOT COVERED.....169

 AUTHORIZED DEALER AND LABOR COSTS.....170

 WARRANTY REQUIREMENTS.....170

 EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY.....170

Farm King



WARRANTY

Farm King

Limited Warranty

BASE LIMITED WARRANTY

Farm King provides this warranty only to original retail purchasers of its products. Farm King warrants to such purchasers that all Farm King manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of three (3) years. This limited warranty applies only to those parts and components manufactured by Farm King. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

100% Parts and Labor are covered for the first year.

100% Parts only, are covered for the second year.

50% Parts only, are covered for the third year.

Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Farm King will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Farm King. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance.

Farm King warrants that the following disc gang bearing parts used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for an extended period following delivery to the original retail purchaser.

T2-215 bearings are covered for seven (7) years. Extended coverage (12-84 months) is limited to replacement of ball bearings and seals only. Labour and associated bearing parts are not included.

REPAIR PARTS LIMITED WARRANTY

Farm King warrants genuine Farm King replacement parts purchased after the expiration of the Farm King Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Farm King will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Farm King within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to the Farm King factory at the purchaser's expense.

COMMERCIAL USE

Warranty for commercial (other than bona fide farmers), rental, or custom use is limited to 100% parts and labor for ninety (90) days.

WHAT IS NOT COVERED

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Farm King; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and / or authorized by Farm King.

Farm King

Limited Warranty

AUTHORIZED DEALER AND LABOR COSTS

Repairs eligible for labor under this limited warranty must be made by Farm King or an authorized Farm King dealer. Farm King retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Farm King determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Farm King will not approve or pay invoices sent for repairs that Farm King has not previously approved. Warranty service does not extend the original term of this limited warranty.

WARRANTY REQUIREMENTS

To be covered by warranty, each new product must be registered with Farm King within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Farm King will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

EXCLUSIVE EFFECT OF WARRANTY AND LIMITATION OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

TO THE EXTENT PERMITTED BY LAW, FARM KING DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON FARM KING'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON FARM KING'S PRODUCTS ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL FARM KING BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT. (Note that some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Farm King neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Farm King to the purchaser, and Farm King shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Farm King's ability to obtain materials or manufacturer replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

www.farm-king.com

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