

38 SERIES  
OFFSET  
WHEEL  
DISC



[www.monroetufline.com](http://www.monroetufline.com)

## TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the Tufline dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Owner's/Operator's Manual are completed before releasing equipment to the owner.

The dealer must complete the Warranty Registration located on page 24 and mail to Tufline

## TO THE OWNER:

Read this manual before operating your Tufline equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all the adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your selling dealer.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment.

For service, your authorized Tufline dealer has trained mechanics, genuine Tufline service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine Tufline service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

**Model:** \_\_\_\_\_ **Date of Purchase:** \_\_\_\_\_

**Serial Number:** (see Safety Decal section for location) \_\_\_\_\_

Provide this information to your dealer to obtain correct repair parts.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.



This Safety-Alert Symbol indicates a hazard and means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

### **DANGER**

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

### **WARNING**

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.

### **CAUTION**

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

### **IMPORTANT**

Indicates that failure to observe can cause damage to equipment.

### **NOTE**

Indicates helpful information.

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## GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your TUFLINE DISC. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance.

These instructions have been compiled from field experience and engineering data. Some information may be general in nature, due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to

your particular situation.

The illustrations and data used in this manual were current at the time of printing. However, due to possible in line production changes, your machine may vary slightly in detail. We reserve the right to redesign and change the machines as may be necessary without notification.

Throughout this manual, references are made to right and left direction. These are determined by standing behind the disc facing the direction of forward travel.

# SPECIFICATIONS

## 9" BLADE SPACING MODELS

Model #	Blades	# of Bearings	Width	Approx. HSP	Tube Weight	S/F Weight
38/91622	16-22"	6	6'	50	2614#	-----
38/91624	16-24"	6	6'	50	2806#	-----
38/91822	18-22"	6	6' 8"	55	2681#	2813#
38/91824	18-24"	6	6' 8"	55	2897#	3029#
38/92022	20-22"	8	7' 6"	55-60	2851#	3027#
38/92024	20-24"	8	7' 6"	55-60	3091#	3267#
38/92222	22-22"	8	8' 4"	60-65	2947#	3123#
38/92224	22-24"	8	8' 4"	60-65	3211#	3387#
38/92422	24-22"	8	9'	65-70	3044#	3220#
38/92424	24-24"	8	9'	65-70	3332#	3508#
38/92822	28-22"	8	10' 6"	75	3604#	3780#
38/92824	28-24"	8	10' 6"	75	3940#	4116#

## 10 1/2" BLADE SPACING MODELS

Model #	Blades	# of Bearings	Width	Approx. HSP	Tube Weight	S/F Weight
38/101422	14-22"	6	6'	50	2564#	-----
38/101424	14-24"	6	6'	50	2732#	-----
38/101622	16-22"	6	6' 10"	55	2777#	2909#
38/101624	16-24"	6	6' 10"	55	2969#	3101#
38/101822	18-22"	8	7' 8"	60	2889#	3065#
38/101824	18-24"	8	7' 8"	60	3105#	3281#
38/102022	20-22"	8	8' 6"	65	2999#	3175#
38/102024	20-24"	8	8' 6"	65	3239#	3415#
38/102222	22-22"	8	9' 4"	70	3044#	3220#
38/102224	22-24"	8	9' 4"	70	3308#	3484#
38/102422	24-22"	8	10' 2"	75	3312#	3488#
38/102424	24-24"	8	10' 2"	75	3600#	3776#

## SAFETY & INSTRUCTIONAL DECALS

**ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH**

Check that all safety decals are installed and in good condition.

Replace if decals are worn or damaged. Replacement Part numbers are listed here.

**Replace Decals Immediately If Damaged!**



1  
15194C



2  
15194B

Check that all safety decals are installed and in good condition. Replace if decals are worn or damaged. Replacement part numbers are listed here.



3  
15194D



4  
15194A



# SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by an operator's single careless act.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, judgement, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "The best safety device is an informed, careful operator." We ask you to be that kind of operator.

## TRAINING

- Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals are available from selling dealer.) Failure to follow instructions or safety rules can result in serious injury or death.
- If you do not understand any part of this manual and need assistance, see your dealer.
- Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.
- Never allow children or untrained persons to operate equipment.
- Train all new personnel and review instruction's frequently with existing workers. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or

death.

- Keep hands and body away from pressurized lines. Use paper or cardboard, not hands or other body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.
- Make sure that all operating and service personnel know that if hydraulic fluid penetrates skin, it must be surgically removed as soon as possible by a doctor familiar with this form of injury or gangrene, serious injury, or death will result.

**CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES. DO NOT DELAY.**

## PREPARATION

- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.
- Make sure attachment is properly secured, adjusted, and in good operating condition.
- Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. When connecting equipment or hoses or performing any hydraulic maintenance, purge any air in hydraulic system by operating all hydraulic functions several times. Do this before putting into service or allowing anyone to approach the equipment.
- Route hydraulic hoses carefully to prevent damage. Hoses must not be twisted, bent





# SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



## PREPARATION (cont'd)

sharply, kinked, frayed, pinched, or come into contact with any moving parts. Operate moveable components through full operational range to check clearances. Replace any damaged hose immediately.

- Do not connect a low-pressure hydraulic hose into a high-pressure system—it will burst the hose. Do not use a high-pressure hose in place of a low-pressure hose—it is possible to rupture the valve.
- Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in “locked up” position at all times.
- Do not exceed this implements transport speed of 20 mph (32 kmh). Exceeding this speed may cause loss of control during transport or braking and serious injury or death.
- Transport only with a properly ballasted tractor and a properly attached safety tow chain.
- Do not transport with a motor vehicle.
- Reduce speed and use additional caution when on inclines, towing when on adverse surface conditions, and turning.

## TRANSPORTATION

- Always comply with all state and local laws governing highway safety and lighting and marking requirements.
- Never allow riders on power unit or attachment.
- Do not operate or transport on steep slopes.

- Use extreme care and reduce ground speed on slopes and rough terrain.

- Do not operate or transport equipment while under the influence of alcohol or drugs. Consult your doctor about operating this machine while taking prescription medications.

## OPERATION

- Never go underneath equipment in the raised or transport position unless the transport lock is in place. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off.
- Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
- Always comply with all state and local laws governing highway safety and lighting and marking requirements.
- Do not exceed this implements transport speed of 20 mph (32 kmh). Exceeding this speed may cause loss of control during transport or braking and serious injury or death.
- Transport only with a properly ballasted tractor and a properly attached safety tow chain.
- Do not transport with a motor vehicle.
- Reduce speed and use additional caution when on inclines, towing when on adverse surface conditions, and turning.
- Operate only in daylight or good artificial light.
- Keep bystanders away from equipment.



# SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



## OPERATION (cont'd)

- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in “locked up” position at all times.
- Never allow riders on power unit or attachment.
- Always sit in power unit seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake, and ensure all other controls are disengaged before starting power unit engine.
- Look down and to the rear and make sure area is clear before operating in reverse.
- Use extreme care when working close to fences, ditches, other obstructions, or on hillsides.
- Do not operate or transport on steep slopes.
- Do not stop, start, or change directions suddenly on slopes. Always operate down slopes; never across the face.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Keep alert and watch the front as well as the rear when operating.
- Always relieve the pressure on the hydraulic lift system before performing service or maintenance on any hydraulic components. Failure to do so may cause serious injury from injection of pressurized hydraulic fluid.

- Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. When connecting equipment or hoses or performing any hydraulic maintenance, purge any air in hydraulic system by operating all hydraulic functions several times. Do this before putting into service or allowing anyone to approach the equipment.
- Do not use hands to search for leaks on any hydraulic components. Use cardboard or similar material. Failure to do so may cause serious injury from injection of pressurized hydraulic fluid.
- When making gang adjustments, be careful to keep hands and feet clear of sliding parts and possible pinch points.
- Stop power unit and equipment immediately upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation.
- Before leaving operator's seat, lower the lift carriage and put attachment on the ground. Engage brake, stop engine, remove key, and remove seat belt.

## MAINTENANCE

- Always wear relatively tight and belted clothing to avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.
- Never go underneath equipment (lowered to the ground or raised) unless it is properly blocked and secured. Never place any part of the body underneath equipment or between





# SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



## MAINTENANCE (cont'd)

moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- When performing maintenance or repairs make sure the equipment is in the lowered

position and both the mainframe and gangs are properly blocked and secured to prevent rolling. Failure to do so can cause serious injury or death.

- Make sure attachment is properly secured, adjusted, and in good operating condition.
- Before leaving operator's seat, lower the lift carriage and put attachment on the ground. Engage brake, stop engine, remove key, and remove seat belt.
- Never perform service or maintenance with engine running.
- Keep hands and body away from pressurized lines. Use paper or cardboard, not hands or other body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.
- Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. When connecting equipment or hoses or performing any hydraulic maintenance, purge any air in hydraulic system by operating all hydraulic functions several times. Do this before putting into service or allowing anyone to approach the equipment.

- Route hydraulic hoses carefully to prevent

damage. Hoses must not be twisted, bent sharply, kinked, frayed, pinched, or come into contact with any moving parts. Operate moveable components through full operational range to check clearances. Replace any damaged hose immediately.

- Do not connect a low-pressure hydraulic hose into a high-pressure system—it will burst the hose. Do not use a high-pressure hose in place of a low pressure hose—it is possible to rupture the valve.

- Make sure that all operating and service personnel know that if hydraulic fluid penetrates skin, it must be surgically removed as soon as possible by a doctor familiar with this form of injury or gangrene, serious injury, or death will result.

CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES. DO NOT DELAY.

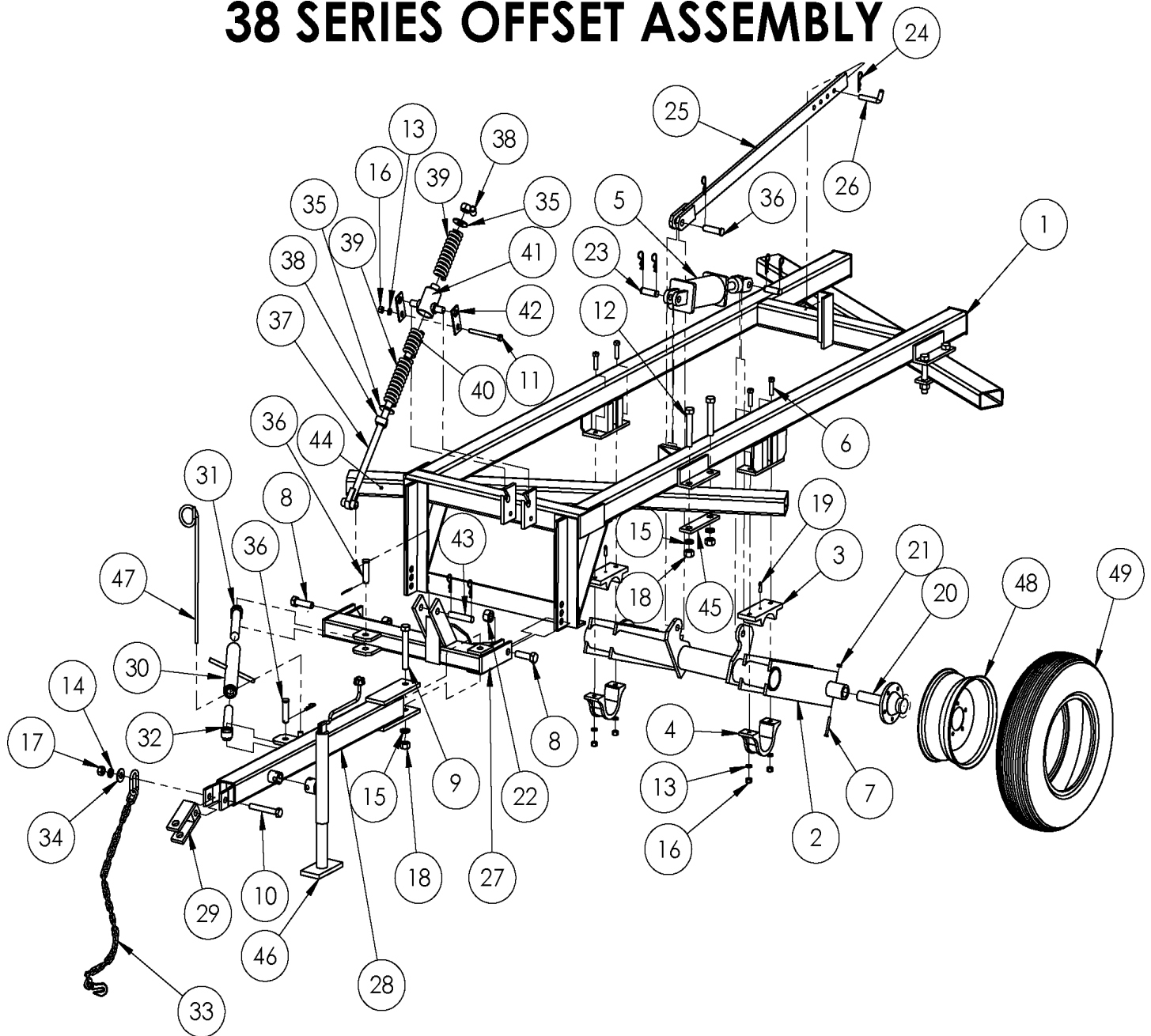
- Keep all persons away from operator control area while performing adjustments, service, or maintenance.

- Tighten all bolts, nuts, and screws to torque chart specifications (page 19). Check that all cotter pins are installed securely to ensure equipment is in a safe condition before putting unit into service.

## STORAGE

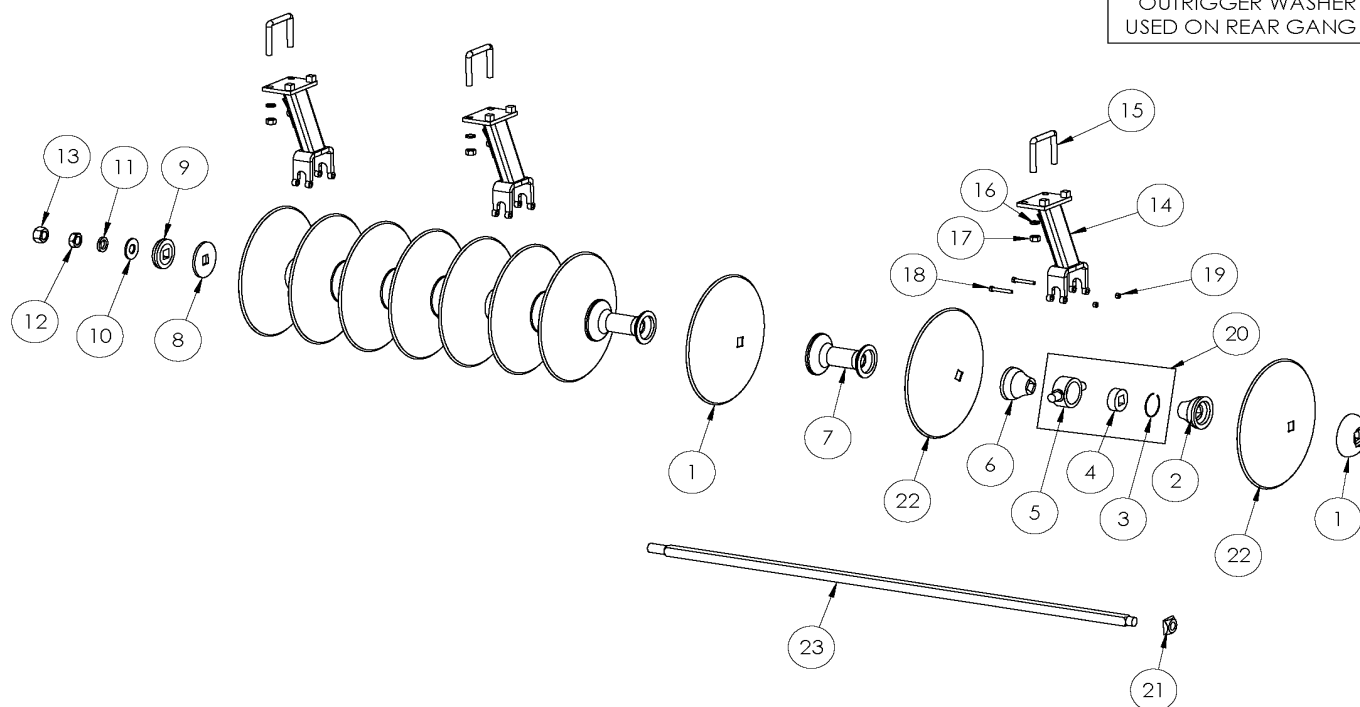
- Block equipment securely for storage in the lowered position.
- Keep children and bystanders away from storage area.

# 38 SERIES OFFSET ASSEMBLY



ITEM NO.	PART NUMBER	DESCRIPTION
1	15789	38 OFFSET FRAME WELDMENT
2	15790	WHEEL CARRIAGE WELDMENT
3	T-58	WHEEL CARRIAGE BEARING TOP
4	T-57	WHEEN CARRIAGE BEARING BOTTOM
5	10610	CYLINDER
6	9192	HEX BOLT, 5/8" X 2 1/2" GR. 5
7	T-892	HEX BOLT, 3/8" X 3" GR. 5
8	T-780	HEX BOLT, 1" X 3 1/2" GR. 5
9	13254	HEX BOLT, 1" X 7" GR. 5
10	15567	HEX BOLT, 7/8" X 6" GR. 5
11	T-749	HEX BOLT, 5/8" X 6 1/2" GR. 5
12	15349	HEX BOLT, 1" X 6" GR. 5
13	T-24	LOCK WASHER, 5/8"
14	T-21	LOCK WASHER, 7/8"
15	T-34	LOCK WASHER, 1"
16	T-22	HEX NUT, 5/8"
17	T-19	HEX NUT, 7/8"
18	T-18A	LOCK NUT, 1"
19	12511	EXTENDED GREASE FITTING
20	13630	SPINDLE & HUB ASSY.
21	12899	FLANGE LOCKNUT, 3/8"
22	T-18A	LOCK NUT, 1 1/8"
23	15374	CYLINDER PIN
24	9979	COTTOR HAIR PIN
25	15791	DEPTH CONTROL BAR
26	9690	DEPTH CONTROL PIN
27	11378	DRAWBAR WELDMENT
28	11380	TONGUE WELDMENT
29	T-2665	TONGUE CLEVIS WELDMENT
30	9876	TURNBUCKLE BARRELL 24"
31	11470	LH ADJUSTING SCREW, 12"
32	11469	RH ADJUSTING SCREW, 12"
33	15186	SAFETY CHAIN
34	15569	FLAT WASHER, 7/8"
35	T-698	FLATWASHER, 1 1/8"
36	13311	PIN, 1" X 3 1/2"
37	11596	LEVELING ROD SCREW, 31"
38	T-699	WING NUT
39	T-509	ADJUSTING SPRING 8 1/2"
40	T-511	ADJUSTING SPRING 4 1/2"
41	T-510	SPRING HOUSING
42	9006	RETAINER STRAP
43	T-934	PIN, 1" X 5"
44	T-1003	GANG BEAM SEE CHART
45	15792	GANG STRAP
46	T-933	TONGUE JACK
47	T-465	HOSE HOLDER
48	T-612	RIM
49	95L156T	TIRE

## 38 OFFSET GANG ASSEMBLY



REF NO.	PART NO.	DESCRIPTION
1	T-491	BUMPER WASHER, 1 1/2" SQ
2	T-495	END SPACER, 1 1/2" SQ X 3 7/8" (FOR 9" SP.)
	T-106	END SPACER, 1 1/2" SQ X 3 7/8" (FOR 10 1/2" SP.)
3	T-729	SNAP RING, 4"
4	T-604IP	BEARING, 1 1/2" SQ
5	TMD	TRUNNION BEARING HOUSING, 1 1/2"
6	T-495	END SPACER, 1 1/2" SQ X 3 7/8" (FOR 9" SP.)
	T-105	END SPACER, 1 1/2" SQ X 4 1/2" (FOR 10 1/2" SP.)
7	T-103	SPACER SPOOL, 9" SPACING
	T-104	SPACER SPOOL, 10 1/2" SPACING
8	15376	1 1/2" SPACER WASHER
9	T-492	END WASHER, 1 1/2"
10	T-605	FLATWASHER, 1 1/2"
11	T-728	LOCK WASHER, 1 1/2"
12	9472	JAM NUT, 1 1/2"
13	T-727A	LOCK NUT, 1 1/2"
14	12166	TUBE GANG HANGER
15	11975	U-BOLT, 7/8"
16	T-21	LOCKWASHER, 7/8"
17	T-19	HEX NUT, 7/8"
18	12163	HEX BOLT, 1/2" X 3 1/2" GR. 5
19	9226	HEX SELF LOCKING FLANGE NUT, 1/2"
20	TMDT604IP	HOUSING & BEARING ASSEMBLY
21	11397	OUTRIGGER NUT, 1 1/2"
22	3-22177-1	22" X .177" DISC BLADE SMOOTH
23	15717	AXLE, 1 1/2" X 87 1/2"

## 38 OFFSET BLADES AND AXLES

### REF. #21 DISC BLADES

PART NUMBER	HOLE SIZE	DIAMETER	THICKNESS	CUTOUT/ PLAIN
3-22177-1	1 1/2"	22"	0.177	PLAIN
3-22177-2	1 1/2"	22"	0.177	CUTOUT
3-24256-1	1 1/2"	24"	0.256	PLAIN
3-24256-2	1 1/2"	24"	0.256	CUTOUT
3-26256-1	1 1/2"	26"	0.256	PLAIN
3-26256-2	1 1/2"	26"	0.256	CUTOUT

### REF. #22 1 1/2" AXLES

PART NUMBER	# OF BLADES	SPACING	LENGTH
9879	4	9"	34 1/8"
9880	5	9"	43 1/4"
9881	6	9"	52 3/4"
9882	7	9"	61 3/4"
9883	8	9"	70 3/4"
9869	4	10 1/2"	37 5/8"
9870	5	10 1/2"	48 1/4"
9871	6	10 1/2"	58 3/4"
9872	7	10 1/2"	68 3/4"
9873	8	10 1/2"	79 5/8"

# MAIN FRAME ASSEMBLY

1. Assemble wheel hub on spindle according to Fig. 4 and instructions on page 12.
2. Insert the spindles into wheel carriage tubes and insert the 3/8" x 3" Gr. 5 hex bolt, Fig 1, Ref. 36.
3. Attach wheel hubs and tighten lug nuts evenly. These should be rechecked after 4 or 5 hours of operation.
4. Maneuver wheel carriage, with legs extending to the rear as shown in Fig.1, until it is underneath the three sets of holes on each side of the main frame.
5. Lubricate three T-58 wheel carriage bearing tops, Ref. 22, page 7, and place them on tip of the wheel carriage pipe with one on each end and one in the center. Raise the carriage until it is in place. Install the T-57 wheel carriage bearing bottoms, Ref. 23, and bolt into place with the 5/8" x 5" Gr. 5 bolts, Ref.26.
6. If a standard 8" turnbuckle is available, install it between the cylinder anchor and the wheel carriage cylinder arm or use the hydraulic cylinders that go with the harrow. Whatever is used, be certain to block the frame up for absolute safety.
7. Attach the tongue and tongue braces as shown in Fig, 1 using 1" x 3 1/2" Gr. 5 bolts, Ref. 5.
8. Install the leveling assembly as per instructions on page 13, Fig.6.
9. Install the two slide plate top weldments with "U" downward over the center member of the main frame. Place one on the front and one on the rear near where the gang beams will be mounted. See Fig, 1, Ref. 44 & 23.
10. Select the correct main gang beam from the gang diagram page and insert the pivot hole end of the gang beam through the frame. Install the 5/8" x 5 "Gr. 5 bolts, Ref. 31.



# GANG POSITIONING

1. Mount the tubular gang hangers, Ref. 1, Fig. 2, to the gangs at the bearing housing using the 3/8 x 3 " Gr. 5 hex bolts, Ref. 2. Be sure the "lean" of the hanger is with the concavity of the blade. Lift the entire gang (with hangers attached) underneath the gang beam until the top of the hanger is flush against the bottom of the gang beam. Place the U-bolt, Ref. 3, over the gang beam and into the tubular gang hanger and tighten loosely. Do not fully tighten these U-bolts until all gangs are mounted and properly spaced.



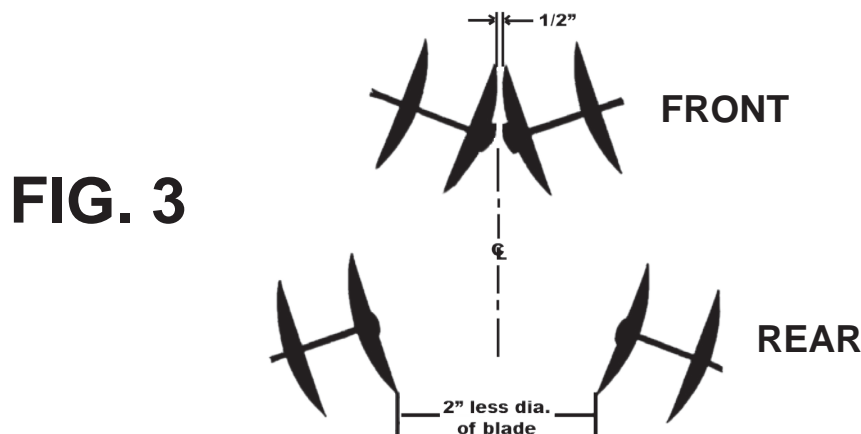
**FIG. 2**

2. Install the rear gangs first since it is easy to hoist the tongue and lower the rear of the harrow down to the gangs. Space the rear gangs so that the inside blades are equal distances from the center of the main frame and so that the rear edges of the blades at the closest point are about 2" less than the diameter of the disc blades. For example, 22" blades would be spaced 20" apart on the rear. See Fig. 3.

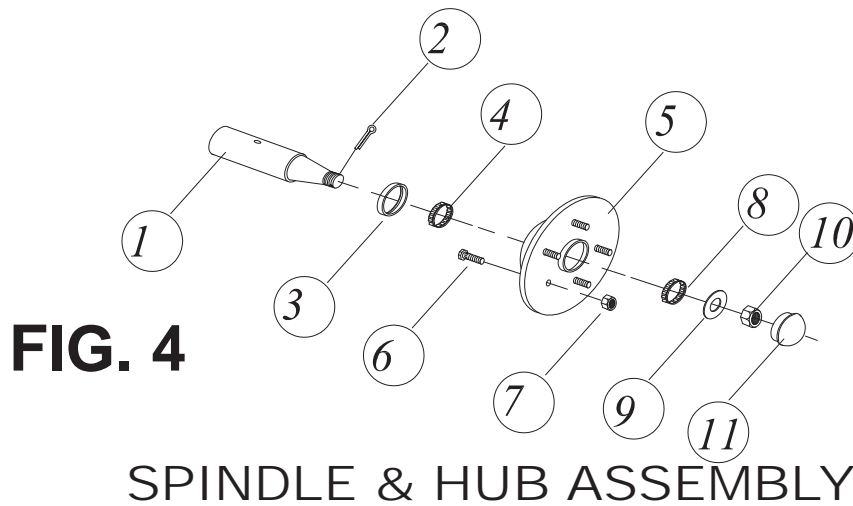
3. Space the next gang out so the space between them is the same as all the other blades.

4. To install the front gangs, you will probably have to adjust the wheel carriage and lower the tongue, Space the inside front blades so that they just clear each other (about 1/4 " to 1/2 ") and are perfectly center under the main frame at maximum gang angle.

5. When all gangs are in place and properly spaced, tighten all U-bolts.



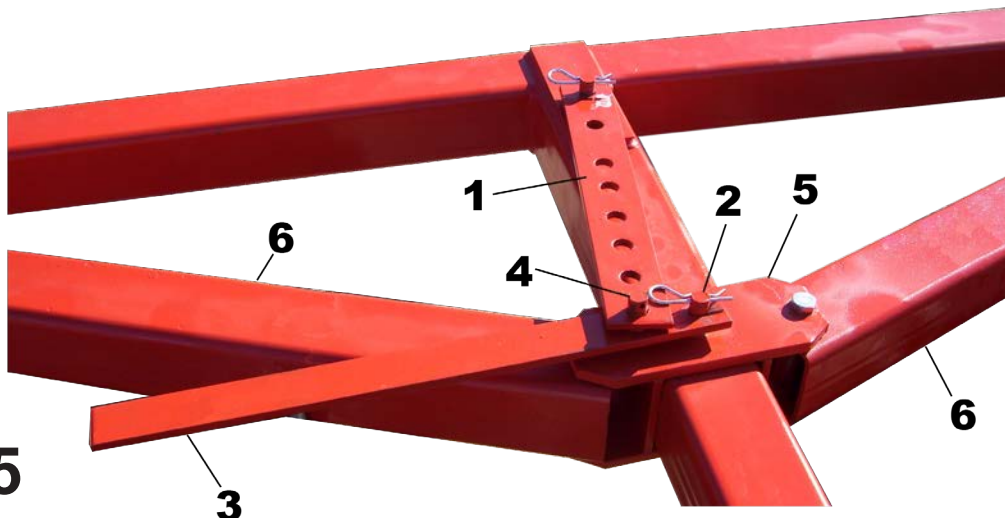
**FIG. 3**

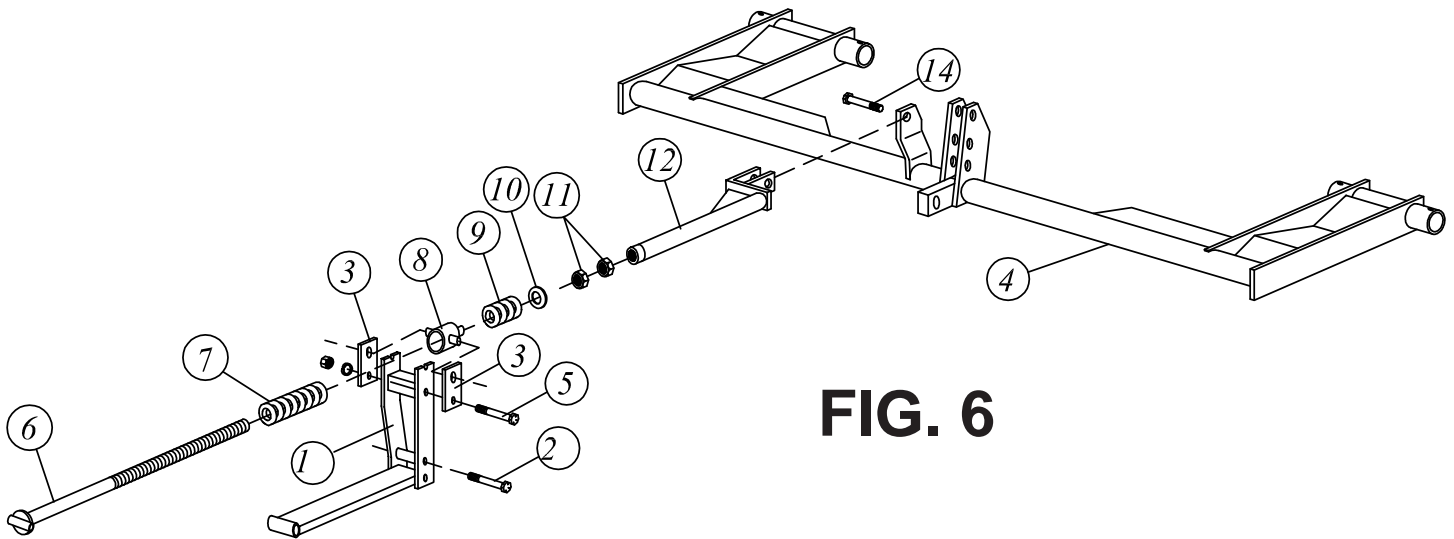


1. Refer to Fig. 4. Using the utmost cleanliness, pack the wheel bearings with grease and stuff the hub.
2. Install the large bearing, Ref. 4, and seal, Ref. 3, with the seal lip toward the hub.
3. Insert the bearing, washer, and nut, Ref. 8, 9, and 10. Always use the washer.
4. Tighten the nut, Ref. 10, until the hub is very hard to turn and then back off one slot on the nut. Insert the cotter pin, Ref. 2. NOTE: Attention to initial assembly and proper maintenance of hub, spindles, and wheels is very important. Farm implement wheel bearings should not be as free as automotive.

## GANG ANGLE ADJUSTMENT

1. Insert the gang adjusting bar, Ref. 1, over the slide plate stud, Ref. 2. Next insert the adjusting lever stud, Ref. 4, into the proper hole in the bar which will provide leverage to shift the slide plate, Ref. 5, in whichever direction desired to provide the angle of the gang beams, Ref. 6. Shift until the desired hole position in bar aligns with stud and remove lever, Ref. 3, and pin in a vacant hole in the bar. See Fig. 5.
2. Re-pin the bar on the stud. The end of the lever should be positioned to rest on top of the frame of gang beam.





**FIG. 6**

## LEVELING SYSTEM

The leveling system automatically controls the harrow from full depth penetration all the way up to transport height. Once it is set for a particular tractor drawbar height, only minor adjustments will ever be required. The springs allow pressure controlled flexibility when obstructions and/or uneven terrain are encountered.

1. Be sure that the 8 ½ " spring, Ref. 7, Fig. 6, is in front and goes into the recess of the trunnion , Ref. 8. Tighten one nut, Ref. 11, until the springs measure 12 ½" from end to end. Use one nut, Ref. 11, to jam and lock the adjustment. Except to increase or decrease flexibility, you will never need to adjust these springs again.
2. Position the rocker arm and link bar weldment, Ref. 1, between the brackets on the front of the main frame and insert the pin, Ref. 2. Be sure offset in rocker arm is to the right as shown and that the bottom ends are clipped off on the rear corner.
3. Loosen the bolt, Ref. 5, and insert the trunnion, Ref. 8, into the slots. Then place both retainer straps, Ref. 3, over the trunnion ears and tighten bolt, Ref. 5.
4. Apply a little oil to washers and nuts at each end of the springs so that the adjusting rod, Ref. 6, can be turned easier.
5. Attach the adjusting tube, Ref. 12, with the ¾ " x 2 ½ " Gr.5 hex bolt, Ref. 14. Screw the adjusting rod, Ref. 6, until the top of the tongue is about 22" above the ground with the gangs on the ground.

# MAINTENANCE AND LUBRICATION

## LUBRICATION

Lubricate the following every 50 hours of operation:

1. Wheel carriage bearings.
2. Leveling tube.
3. Leveling rocker pivot.

Lubricate the following every 150 hours of operation:

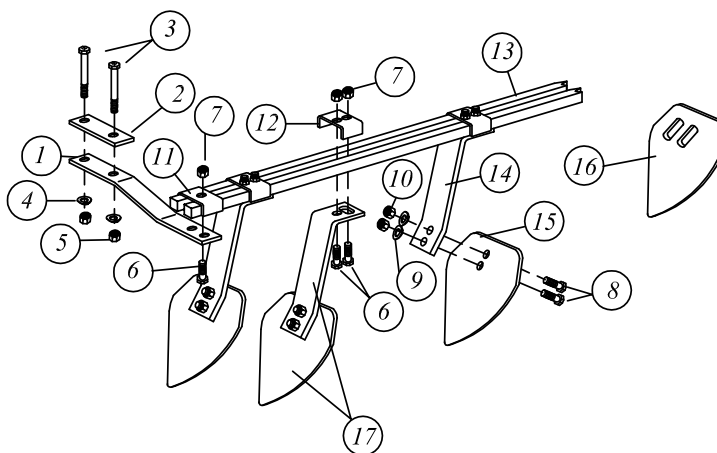
1. Optional regreasable bearings.

Lubricate at the end of each season:

1. Transport wheel bearings. Pack with heavy wheel bearing grease.

## MAINTENANCE

1. Check all gang axle nuts for proper torque every 150 hours.
2. Check gang beam clamps and gang hanger bolts every 150 hours.
3. Lower unit for storage on level ground with gangs resting on plyboard or other sheet material to keep components out of ground.



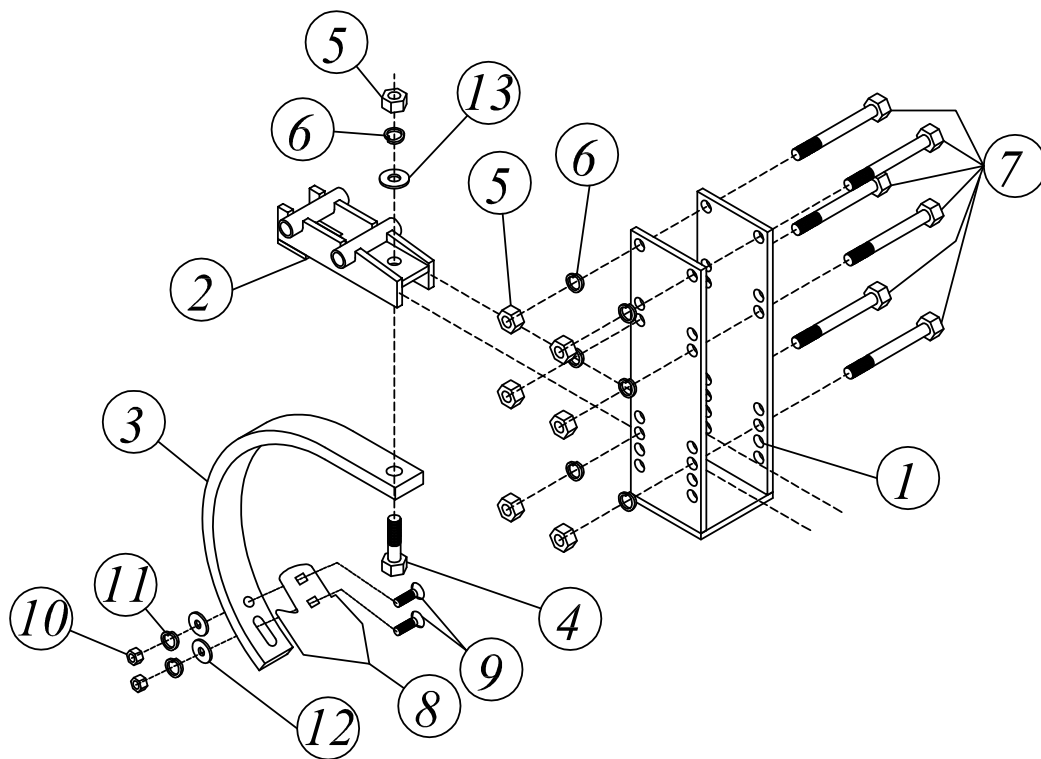
## HEAVY SCRAPER KIT

REF #	PART#	DESCRIPTION	REF #	PART#	DESCRIPTION
1	12892	SCRAPER BAR MOUNTING BRACKET (TW5 8'-9'6" MODELS )	9	T-25	LOCKWASHER, 1/2"
	12891	SCRAPER BAR MOUNTING BRACKET (TW5 10'6"-15' MODELS)	10	T-26	HEX NUT, 1/2"
2	12090	SCRAPER BAR TOP MOUNTING PLATE (TW5 8'-9'6" MODELS)	11	T-803	CLAMP, 1 HOLE
	12894	SCRAPER BAR TOP MOUNTING PLATE (TW5 10'6"-15' MODELS)	12	9356	CLAMP, 2 HOLE
3	T-745	HEX BOLT, 5/8" X 5" GR.2	13		HEAVY SCRAPER BAR
4	T-24	LOCKWASHER, 5/8"			( SEE BELOW )
5	T-22	HEX NUT, 5/8"	14	10151	SCRAPER ARM
6	11082	HEX BOLT, 1/2" X 2 1/2" GR.2	15	11081	SCRAPER BLADE
7	9226	FLANGE LOCK NUT, 1/2"	16	11065	OUTRIGGER SCRAPER BLADE
8	T-733	HEX BOLT, 1/2" X 1 1/2" GR.2	17	11027	ARM & BLADE ASSEMBLY RIGHT FRONT/ LEFT REAR WITH SCRAPER ARM
				11028	ARM & BLADE ASSEMBLY LEFT FRONT/ RIGHT REAR WITH SCRAPER ARM

## REF. # 13 HEAVY SCRAPER BAR

PART #	DESCRIPTION	MODEL USE ON
12338	HEAVY SCRAPER BAR, 37"	FRONT - TW920, TW724, TW9722
T-2551	HEAVY SCRAPER BAR, 43"	FRONT - TW924, TW728, TW9726
11729	HEAVY SCRAPER BAR, 45"	REAR - TW920, TW724, TW9722
11739	HEAVY SCRAPER BAR, 48"	REAR - TW924, TW728, 9726
12344	HEAVY SCRAPER BAR, 55"	FRONT - TW928, TW732, TW9730
T-2621	HEAVY SCRAPER BAR, 58"	REAR - TW928, TW732, TW9730
12346	HEAVY SCRAPER BAR, 61"	FRONT - TW736
T-2531	HEAVY SCRAPER BAR, 66"	FRONT - TW932, TW9734
T-2561	HEAVY SCRAPER BAR, 69"	FRONT - TW740 REAR - TW932, TW736, TW9734
T-2581	HEAVY SCRAPER BAR, 73"	FRONT - TW936, TW9738 REAR - TW740
T-2635	HEAVY SCRAPER BAR, 78"	FRONT - TW744 REAR - TW936, TW9738,
T-2645	HEAVY SCRAPER BAR, 81"	FRONT - TW9742, TW940, TW6940 REAR - TW744/5, 38/920, 42/920
T-2646	HEAVY SCRAPER BAR, 84"	FRONT - TW61036 REAR - TW9742

**Optional Equipment 16**

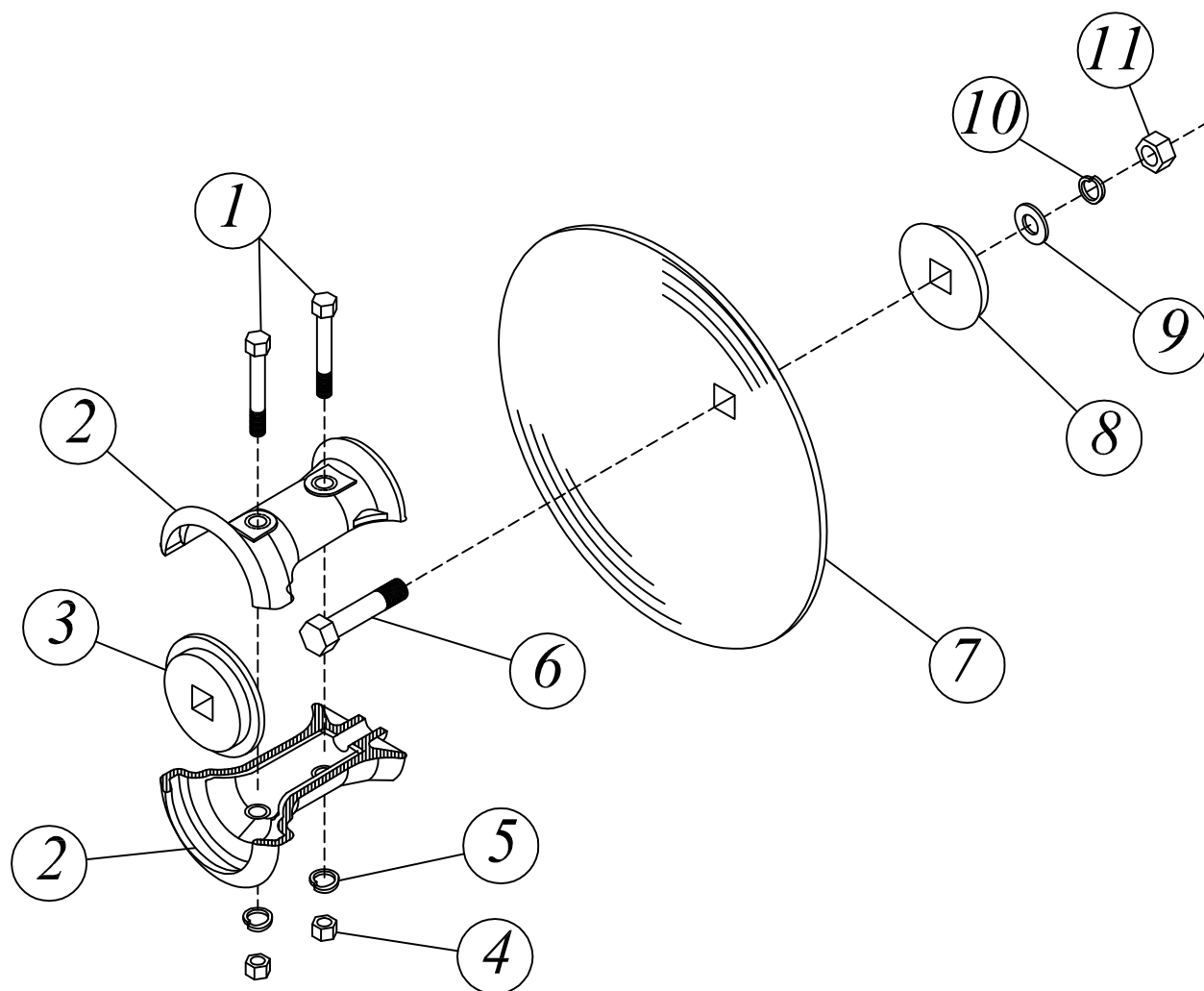


## ***BALK BREAKER***

<i>REF #</i>	<i>PART#</i>	<i>DESCRIPTION</i>
<i>1</i>	<i>15375</i>	<i>SHANK BRACKET 3" BEAM (TW5 8'-9'6" MODELS)</i>
	<i>10388</i>	<i>SHANK BRACKET 4" BEAM (TW5 10'6"-15' MODELS)</i>
<i>2</i>	<i>10599</i>	<i>SHANK HOLDER 3" BEAM (TW5 8'-9'6" MODELS)</i>
	<i>9175</i>	<i>SHANK HOLDER 4" BEAM (TW5 10'6"-15' MODELS)</i>
<i>3</i>	<i>10602</i>	<i>BALK BREAKER SHANK</i>
<i>4</i>	<i>9192</i>	<i>HEX BOLT, 5/8" X 2 1/2", GR. 5</i>
<i>5</i>	<i>T-22</i>	<i>HEX NUT, 5/8"</i>
<i>6</i>	<i>T-24</i>	<i>LOCK WASHER, 5/8"</i>
<i>7</i>	<i>T-744</i>	<i>HEX BOLT, 5/8" X 4 1/2" GR. 2 (TW5 8'-9'6" MODELS)</i>
	<i>T-746</i>	<i>HEX BOLT, 5/8" X 5 1/2", GR. 2 (TW5 10'6"-15' MODELS)</i>
<i>8</i>	<i>13614</i>	<i>4" SWEEP POINT</i>
<i>9</i>	<i>14984</i>	<i>PLOW BOLT, 7/16" X 1 1/2"</i>
<i>10</i>	<i>14986</i>	<i>HEX NUT, 7/16"</i>
<i>11</i>	<i>14987</i>	<i>LOCK WASHER, 7/16"</i>
<i>12</i>	<i>14985</i>	<i>FLAT WASHER, 7/16"</i>
<i>13</i>	<i>9354</i>	<i>FLAT WASHER, 5/8"</i>

## ***17 Optional Equipment***





## OUTRIGGER KIT

REF #	PART#	DESCRIPTION	REF #	PART#	DESCRIPTION
1	12163	HEX BOLT, 1/2" X 3 1/2" GR. 5	8	T-1	END WASHER, 1 1/8"
2	T-OR2	OUTRIGGER HALF	9	T-723	FLAT WASHER, 3/4"
3	T-OR1	OUTRIGGER WASHER, 1 1/8" (NOT INCLUDED IN KIT)	10	T-31	LOCK WASHER, 3/4"
	T-OR15	OUTRIGGER WASHER, 1 1/2" (NOT INCLUDED IN KIT)	11	T-27	HEX NUT, 3/4"
4	T-26	HEX NUT, 1/2"	NOTE:	T-703	OUTRIGGER KIT INCLUDES 2 COMPLETE ASSEMBLIES LESS BLADES FOR TW5
5	T-25	LOCK WASHER, 1/2"			
6	T-760	HEX BOLT, 3/4" X 3 1/2" GR. 5			
7	5-16118-1	DISC BLADE, 16" X 1" PLAIN			
	5-18118-1	DISC BLADE, 18" X 1" PLAIN			
	2-20138-1	DISC BLADE, 20" X 1" PLAIN			

# ADJUSTMENTS PRIOR TO FIELD TEST

These adjustments can be made when the harrow is completely assembled and attached to the tractor.



1. Adjust until the rear blades touch the ground when the front blades are about 2" above the ground.
2. Fine tune this adjustment to obtain equal penetration by the front and rear gangs and to stabilize the direction and side shift of the harrow as well as leveling across the pass being cut.
3. Most operating problems are caused by unequal pressure and penetration of the front and rear gangs. Turn the adjusting screw clockwise to lower the rear and counter clockwise to raise it. Recheck adjusted length of springs to be sure they haven't unlocked.

## FIELD TEST & ADJUSTMENTS

Your harrow should be ready for use after proper assembly and lubrication. As in any new machine, all bolts and nuts should be checked to insure they are tight prior to use. (See bolt torque chart for details.) Pay special attention to axle nuts and gang hanger bolts. If the harrow has been in storage for a lengthy period of time, it is recommended that it be lubricated prior to use. It is important that only one adjustment be made at a time and then tried between each adjustment. Remember each adjustment affects another; therefore, extreme care should be used when adjusting. Keep in mind that any disc with 7 ½" spacing is primarily a pulverizing disc and will perform better in tilled soil. Normally a blade spacing of 9" or 10 ½" is recommended for cutting untilled soil.

Each trial run should be made with the tractor in the same gear and approximately the same RPM. Changing discing speed while attempting to adjust will result only in excessive time and labor loss due to changing conditions. Be sure that the tractor drawbar is pinned or locked in one position prior to use.

While making your first trial run, observe the disc closely as it is traveling. It should be level from the front to rear as it travels. Insure that the depth control or transport lock arm is unpinned and free before adjusting up or down on the leveling rod. Screwing the adjusting rod in the tube (shortening the assembly) will lower the front gangs in order for them to penetrate more. After making the necessary adjustments, the disc should pull level with both the front and rear gangs penetrating the soil at approximately the same depth.

Now observe the soil behind the disc. It should be level and smooth. If after making the above adjustments the disc leaves a water furrow in the center (example: ) , it would indicate that the front gangs are more aggressive than the rear gangs. Conversely, if the disc is ridging, (example: ) , this would indicate that the rear gang is more aggressive. To correct this, either decrease the angle of the rear gangs or increase the angle of the front gangs.



# TROUBLE SHOOTING CHART

## PROBLEM

## POSSIBLE SOLUTION

- |  |  |
|--|--|
| 1. Furrow gradually worsening in low area toward the center of each pass sometimes accompanied by slightly high area at the edge of the cut. | A. Tilt disc down in rear if necessary, far enough to see if it will start to bed in center slightly. If this can be done, the leveling adjustment will correct the problem.<br><br>B. If the problem persists, increase the speed and/or reduce the space in the center of the harrow. All Gang hangers on both sides will have to be loosened and the gang moved toward the center in equal amounts.   |
| 2. Unit leaving a bed in center of the pass.   | A. Make opposite adjustments to those above.   |
| 3. Leaving a ridge outside of cut with a furrow just inside.   | A. Reduce the amount of soil being thrown out by the front gang by checking front to rear leveling and if the front is low, turn the leveling screw counter clockwise. Also reduce the angle in the front gangs slightly.<br><br>B. If no outrigger is being used, add an outrigger with a blade 4" to 6" smaller than the disc blade diameter.<br>C. If the problem persists, check the space between the rear gangs and if it appears close, you may need to move both rear gangs out slightly in order to pick up the soil being thrown out by the front gangs. |
| 4. Leaving a bed just inside the cut approximately 1 ½" to 2" and a furrow on the edge of the cut.   | A. Rear gangs are spaced too wide causing the outside rear gangs to pick up soil beyond where the front gangs are working.   |
| 5. Harrow does not run straight behind the tractor and/or shifts from side to side.  | A. Check to see if both the front and rear gangs are centered on the harrow.<br><br>B. Front gangs running deeper than rear gangs. The rear gang must be held down firmly to stabilize the disc.<br>C. Check the spring tension adjustments on the leveling assembly. It should be 12 ¼" to 12 ½" long. This helps stabilize the rear gang.<br>D. Check if both sides of the front and rear gangs are set at equal angles.   |
| 6. Leaves a low area or "swag" behind the tractor wheels.  | A. Check for tire slippage and/or deep tractor tracks due to load or soil conditions.<br>B. Add duals to the tractor and/or increase speed, gang angle, and cutting depth.<br>C. Rear of harrow may need lowering.   |

- |     |   |    |  |
|-----|---|----|--|
| 7.  | Bending or breaking outside front disc blades or gang axle. | A. | Do not make sharp turns with discs in the ground.  |
|     |   | B. | Keep gang axle nuts tightened to torque chart specifications.                                  |
| 8.  | Bearing problems or wear on bearing housings.               | A. | Gang axles may be bent thus causing gangs to wobble.   |
|     |   | B. | Dirt or trash between spacers causing them to misalign.  |
|     |   | C. | Damaged seals  |
|     |   | D. | Frequent lubrication without cleaning the fittings causing contamination.                      |
|     |   | E. | Seals popping out due to high speed lubrication in cold weather. Lubricate slowly.             |
| 9.  | Gang axles won't stay tight.<br>Bending of axles.           | A. | End washer or disc blade not going on square of axle giving a false tightness.                 |
|     |   | B. | Trash between spacers working out during operation and causing loosening.                      |
|     |   | C. | Check soil areas for rocks or stumps. Operation in this type of conditions is not recommended. |
| 10. | Harrow does not penetrate as desired.                       | A. | Increase front gang angle about 2 degrees more than the rear.                                  |
|     |   | B. | Fill harrow tires with water.  |
|     |   | C. | Be sure harrow tires are clearing the ground. Check depth control and cylinders.               |
| 11. | Not leaving ground as smooth as expected.                   | A. | Too much gang angle. Using the least angle required is always the best.                        |

## WARRANTY

Please enter information below and save for future reference:

Date Purchase: \_\_\_\_\_ From (Dealer): \_\_\_\_\_  
Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Monroe-Tuflin Manufacturing Co., Inc. ("Monroe-Tuflin") warrants this product to be free from defect in material and workmanship. Except as otherwise set forth below, the duration of this Warranty shall be for SIX (6) MONTHS COMMENCING ON THE DATE OF DELIVERY OF THE PRODUCT TO THE ORIGINAL PURCHASER.

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of Monroe-Tuflin, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not apply in the event that the product has been materially modified or repaired by someone other than Monroe-Tuflin, a Monroe-Tuflin authorized dealer or distributor, and/or a Monroe-Tuflin authorized service center. This Warranty does not cover normal wear or tear, or normal maintenance items. This Warranty also does not cover repairs made with parts other than those obtainable through Monroe-Tuflin.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

Monroe-Tuflin makes no warranty, express or implied, with respect to cutting edges, shanks, tires or other parts or accessories not manufactured by Monroe-Tuflin. Warranties for these items, if any, are provided separately by their respective manufacturers.

Monroe-Tuflin's obligation under this Warranty is limited to, at Monroe-Tuflin's option, the repair or replacement, free of charge, of the product if Monroe-Tuflin, in its sole discretion, deems it to be defective or in noncompliance with this Warranty. Such parts shall be provided by the selling dealer to the user during regular working hours. **If requested, the product must be returned to Monroe-Tuflin with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.** Monroe-Tuflin shall complete such repair or replacement within a reasonable time after Monroe-Tuflin receives the product. THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. MONROE-TUFLIN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MONROE-TUFLIN SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE (EXCEPT WHERE PROHIBITED BY LAW).

**Monroe-Tuflin shall not be liable for any incident or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory.** Monroe-Tuflin's obligation under this warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed for a particular purpose and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery of equipment or parts resulting from acts beyond the control of Monroe-Tuflin.

This Warranty is subject to any existing conditions of supply which may directly affect Monroe-Tuflin's ability to obtain materials or manufacture replacement parts.

No agent, representative, dealer, distributor, serviceperson, salesperson, or employee of any company, including without limitation, Monroe-Tuflin, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

**This Warranty is subject to the warranty registration being submitted.** For warranty services, contact your selling dealer.



## WARRANTY FOR PARTS

Monroe-Tufline Manufacturing Co., Inc. ("Monroe-Tufline") warrants its parts to be free from defect in material and workmanship for a period of ninety (90) days from the date of delivery of the part(s) to the original purchaser.

Replacement or repair parts installed in the equipment covered by warranty are warranted for ninety (90) days from date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later.

Under no circumstances will this Warranty apply in the event that the product the parts are installed in, in the good faith opinion of Monroe-Tufline, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not cover normal wear or tear, or normal maintenance items.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to a third party purchaser in any way. There are no third party beneficiaries of this Warranty.

Monroe-Tufline's obligation under this Warranty is limited to, at Monroe-Tufline's option, the repair or replacement, free of charge, of the product if Monroe-Tufline, in its sole discretion, deems it to be defective or in noncompliance with this Warranty. The selling dealer shall provide such parts to the user during regular working hours. **If requested, the product must be returned to Monroe-Tufline with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.** Monroe-Tufline shall complete such repair or replacement within a reasonable time after Monroe-Tufline receives the product. THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. MONROE-TUFLINE MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND MONROE-TUFLINE SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE (EXCEPT WHERE PROHIBITED BY LAW).

**Monroe-Tufline shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory.** Without limiting the generality of the foregoing, Monroe-Tufline specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

This Warranty is subject to any existing conditions of supply which may directly affect Monroe-Tufline's ability to obtain materials or manufacture replacement parts.

No agent, representative, dealer, distributor, service person, salesperson, or employee of any company, including without limitation, Monroe-Tufline, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

For warranty services, contact your selling dealer.

NOTES: \_\_\_\_\_

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FILL OUT REGISTRATION CARD BELOW AND MAIL TO:

MONROE TUFLINE  
Attn; Owner Registration  
PO BOX 7755  
Columbus, MS 39705

-----

OWNER WARRANTY REGISTRATION

NAME \_\_\_\_\_ ADDRESS / CITY / STATE \_\_\_\_\_

DEALER NAME \_\_\_\_\_ CITY / STATE \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_ MODEL # \_\_\_\_\_ SERIAL # \_\_\_\_\_

COMMENTS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PART NO.  
14319



MONROE TUFLINE MFG. CO., INC.  
PO BOX 7755 / 2219 TUFLINE LANE  
COLUMBUS, MS 39705-0004  
(662)328-8347

[www.monroetufline.com](http://www.monroetufline.com)

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