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# ***STUBBLE TREADER***

***OPERATOR'S MANUAL***

**ORTHMAN  
MANUFACTURING  
INCORPORATED**

***STILL THE STRONGEST***

**ORTHMAN MFG. INC.  
75765 RD. 435  
LEXINGTON, NE 68850**

**OM06-03-01**

# Farm Safety

**Contrary to the popular image of fresh air and peaceful surroundings, a farm is not a hazard-free work setting. Every year, thousands of farm workers are injured and hundreds more die in farming accidents. According to the National Safety Council, agriculture is the most hazardous industry in the nation.**

## How You Can Improve Farm Safety

You can start by increasing your awareness of farming hazards and making a conscious effort to prepare for emergency situations including fires, vehicle accidents, electrical shocks from equipment and wires, and chemical exposures. Be especially alert to hazards that may affect children and the elderly. Minimize hazards by carefully selecting the products you buy to ensure that you provide good tools and equipment. Always use seat belts when operating tractors, and establish and maintain good housekeeping practices. Here are some other steps you can take to reduce illnesses and injuries on the farm:

- Read and follow instructions in equipment operator's manuals and on product labels.
- Inspect equipment routinely for problems that may cause accidents.
- Discuss safety hazards and emergency procedures with your workers.
- Install approved rollover protective structures, protective enclosures, or protective frames on tractors.
- Make sure that guards on farm equipment are replaced after maintenance.
- Review and follow instructions in material safety data sheets (MSDSs) and on labels that come with chemical products and communicate information on these hazards to your workers.

## Health and Safety Hazards on Farms

Farm workers including farm families and migrant workers are exposed to hazards such as the following:

Danger	Potential Effect or Injury	Prevention
Chemicals/Pesticides	Skin and respiratory injury or death	MSDS and proper Personal Protective Equipment. Review Manufacturers data sheets
Cold	Illness, Frostbite or death	Dress properly for the day.
Dust	Respiratory injury or explosive combinations	Be aware of your surroundings and activity
Electricity	Shock, burns, fire, death	Use a qualified professional for wiring dangerous electrical devices. Never overload a circuit. Replace damaged electrical devices or cords. Electrical tape will not insulate you from injury.
Grain bins, Silos	Entrapment, Suffocation, Explosion from formation of dangerous gases and poisoning.	Make sure the bin is properly ventilated and maintained. Never walk the grain.
Hand tools	Injury including cuts abrasions, electrocution, strains, sprains and death	Make sure you hand tools are in good condition. Never leave a damaged tooling accessible for someone else to use.
Highway traffic	Collisions resulting in injury or death	Follow regulations, stay alert. Avoid alcohol and use of communication devices while driving
Lifting and lifting devices	Back injury, sprains, strains. Falling material resulting in being struck or crushed by heavy material	Use proper lifting technique. Get help when the load is too heavy. Inspect chains, straps or cables routinely to make sure they are in good condition.
Livestock handling	Serious injury or death resulting from being pinned struck or trampled.	Always make sure you have adequate room and an escape route
Machinery/Equipment	Cuts, abrasions, amputations, death.	Thoroughly read and understand your Owners Equipment Manual. Never operate the equipment without guards in place. Make sure the equipment can not be energized or otherwise put into operation while you are working on it.
Manure pits	Explosion from formation of dangerous gases. Suffocation. Poisoning	Proper maintenance.
Mud	Sprains, strains, entrapment and suffocation. Eye injury and skin irritation.	Proper Personal Protective Equipment. In some conditions a "Spotter" may be needed.
Noise	Hearing damage	Personal Protective Equipment.
Ponds	Drowning	Wear a life preserver and make sure help is readily available.
Slips/Trips/Falls	Sprains, strains, back and neck injury, bone breaks or death	Keep work area free from clutter and organized. If working on anything elevated make sure you have appropriate guarding and/or fall protection such as a harness and lanyard.
Sun/Heat	Sun burn, Heat Stroke, shock, death	Use common sense on excessively hot days, use sun screen, wear a hat and stay hydrated.
Toxic gases	Skin and respiratory injury or death. Explosion.	MSDS and proper Personal Protective Equipment. Review Manufacturers data sheets
Tractors	Cuts, abrasions, amputations, death.	Thoroughly read and understand your Owners Equipment Manual. Never operate the equipment without guards in place. Anti-roll over devices.
Wells	Electrocution, amputation, death	Avoid contact with water while working on an electrical device. Always be sure the equipment can/will not be energized during repair or maintenance. Make sure all guarding is in place.
Severe Weather	Electrocution, "struck by" injuries, death	Move to a safe place. Lightning, hail and tornadoes are unpredictable.

**Orthman Manufacturing, Inc. does not limit the potential effects or injuries nor prevention measures to those listed above. They are provided solely as a guideline to making your farm life safer. Always consult your Owner/Operators Manual for specific tool and equipment safety requirements.**

## High Risk Factors on Farms

The following factors may increase risk of injury or illness for farm workers:

- **Age** – Injury rates are highest among children age 15 and under and adults over 65.
- **Equipment and Machinery** – Most farm accidents and fatalities involve machinery. Proper machine guarding and doing equipment maintenance according to manufacturers' recommendations can help prevent accidents.
- **Protective Equipment** – Using protective equipment, such as seat belts on tractors, and personal protective equipment (such as safety gloves, coveralls, boots, hats, aprons, goggles, face shields) could significantly reduce farming injuries.
- Take precautions to prevent entrapment and suffocation caused by unstable surfaces of grain storage bins, silos, or hoppers. Never "walk the grain."
- Be aware that methane gas, carbon dioxide, ammonia, and hydrogen sulfide can form in unventilated grain silos and manure pits and can suffocate or poison workers or explode.
- Take advantage of safety equipment, such as bypass starter covers, power take-off master shields, and slow-moving vehicle emblems.
- **Medical Care** – Hospitals and emergency medical care are typically not readily accessible in rural areas near farms.

## The Benefits of Improved Safety and Health Practices

Orthman Manufacturing Provides this document in the hope that everyone that has a job to do, does it SAFELY. Our goal and yours should be to end each day in the best possible health. Better safety and health practices reduce fatalities, injuries, and illnesses as well as associated costs such as workers' compensation insurance premiums, lost production, and medical expenses. A safer and more healthful workplace improves morale and productivity.



## WARRANTY

Orthman Mfg., Inc. warrants the whole goods products it manufactures to be free from defects in material or workmanship for a period of one (1) year from the date of sale of the product(s) to the original user. Products not manufactured, but supplied by Orthman Mfg., Inc. on Orthman products, are subject to, conform with, and are limited to the warranty of our suppliers.

Orthman Mfg., Inc. warrants the parts it manufactures to be free from defects in material or workmanship for a period of ninety (90) days from the date of delivery of the product(s) to the original user. Products not manufactured, but supplied by Orthman Mfg., Inc. on Orthman products, are subject to, conform with, and are limited to the warranty of our suppliers.

Warranty of Orthman whole goods and/or parts applies only to material and workmanship. Misuse, misapplication, neglect, alteration, accident, normal wear, or acts of God affecting Orthman products are not eligible for warranty.

Warranty of serial numbered goods will only be considered if the product has a completed Warranty Registration on file at Orthman. This Warranty Registration must be completed and returned to Orthman within thirty (30) days of the sale of the product(s) to the original user. **No serial numbered goods or related parts and/or labor will be warranted without a Warranty Registration on file.** Warranty issues falling within the first thirty days of a product's use will be handled at the discretion of Orthman. Warranty of parts will not require a Warranty Registration, but proof of date of delivery of the product to the original customer must be provided.

**WARRANTY CLAIMS:** A warranty claim and request to return defective product(s) must be presented to the Orthman Service Department by the selling dealer describing the defect in material or workmanship of an Orthman product(s) within ten (10) days of its discovery. This claim may be made via phone, e-mail, fax, or written request. Claims for warranty of serial numbered goods must include the Orthman product serial number and model number. Claims for warranty of parts will not require a product serial number or model number, but must be identified by an Orthman part number. Claims for warranty of whole goods or parts must also include proof of date of sale of the product to the original customer by an Orthman dealer.

The Orthman Service Department will proceed in making a preliminary decision as to the eligibility of the claim for warranty consideration. After the Orthman Service Department deems it necessary to proceed with warranty consideration, a Return Goods Authorization (RGA) will be completed by the Orthman Service Department in conjunction with the selling dealer. Upon completion of the RGA, the defective product(s) must be returned to Orthman to ensure warranty consideration. Defective product(s) must be returned to Orthman by either the selling dealer or the customer. Customer delivery of defective product(s) must be approved by Orthman and the selling dealer prior to delivery. The defective product(s) in question must be sent, freight prepaid, within sixty (60) days of the discovery of the product(s) failure and initial warranty claim. Replacement product(s) may be sent to the selling dealer, directly to the customer, or picked up at the Orthman facility. Replacement product(s), sent directly to the customer or picked up must be approved by Orthman and the selling dealer. At the discretion of the Orthman Service Department, replacement product(s) may be sent prior to, or after, the Orthman Service Department receives the defective product(s).

**Any variation in the above procedure is at the sole discretion of the Orthman Service Department.**

**No products will be accepted at Orthman without all proper paperwork completed including Warranty Registration and RGA(s). Parts returned to Orthman without proper authorization will be returned to the sender at the sender's expense.**

Orthman agrees to handle all warranty claims in a timely manner and will inform dealers of any revisions or modifications to the Orthman Warranty Policy. Eligible warranty claims will be processed by Orthman within sixty (60) days of receiving failed product(s) or a valid service or repair labor claim. Eligible warranty claims regarding returned product(s) or service and/or repair labor will be paid through a credit memo issued to the appropriate dealer's account as determined by the Orthman Service Department.

If a warranty claim is found to be ineligible for warranty coverage, the Orthman Service Department will be responsible to inform the dealer in order to determine the course of action to be taken. Orthman reserves the right to make changes in specification and design without notice and without incurring any obligations to owners of products previously sold.

# Stubble Treader

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## TABLE OF CONTENTS

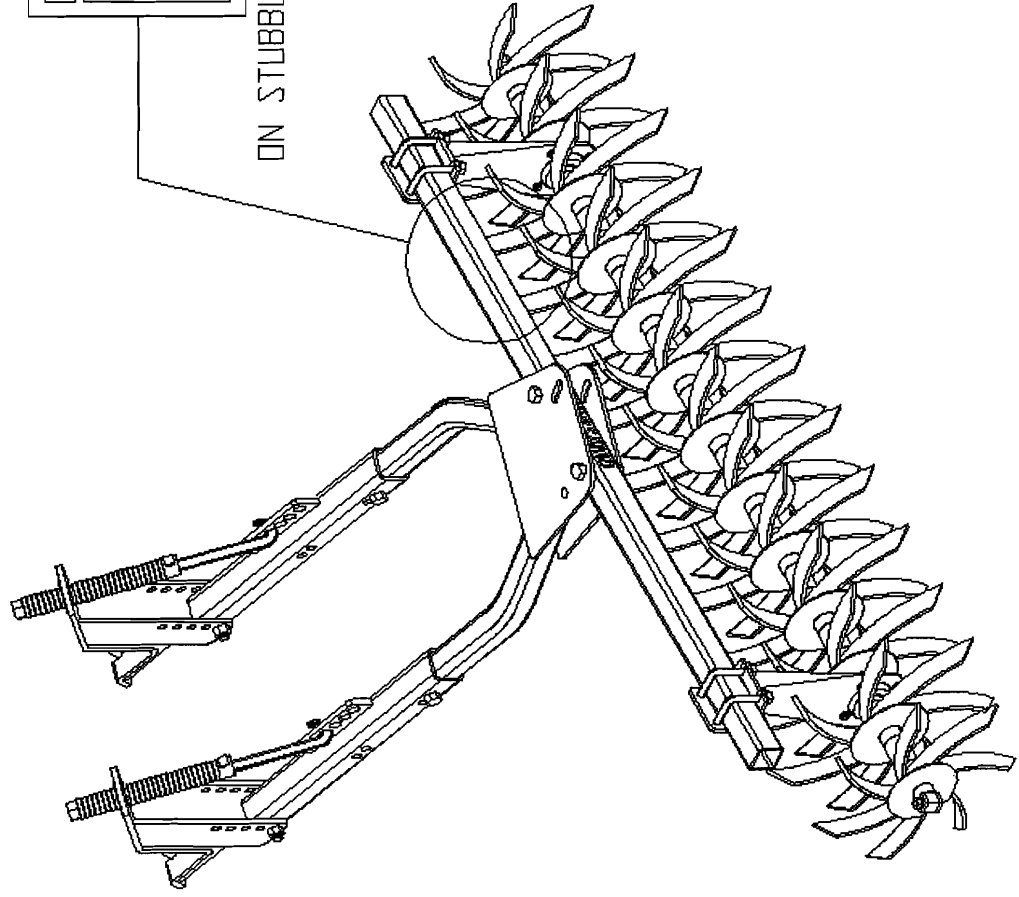
<b>Safety</b> .....	<b>1</b>
Safety Precautions.....	1
Safety Decal Placement.....	2
Specifications.....	3
<b>Stubble Treader Gang and Stubble Treader Assembly</b> .....	<b>4</b>
Stubble Treader Gang Assembly Parts List.....	4
Stubble Treader Gang Assembly.....	5
802628 – Hydraulic Lift Kit - Wide.....	6
802629 – Hydraulic Lift Kit- Narrow.....	7
900823 – Regular Assembly.....	8
900824 – Adjustable Mounting Assembly.....	9
900866 – “Vee” Mounting Assembly.....	10
901061 – Wide Assembly.....	11
901074 – Special Mount – Wide.....	12
901489 – Wide 55’ Special Mounting Bracket.....	13
901490 – Stubble Treader Mount - Short.....	14
901491 – Stubble Treader Mount - Narrowed.....	15
<b>Lazer Stubble Treader Placement</b> .....	<b>16</b>
3-26 Stubble Treader Placement.....	16
3-33 Stubble Treader Placement.....	17
5-40 Stubble Treader Placement.....	18
5-48 Stubble Treader Placement.....	19
5-55 Stubble Treader Placement.....	20

<b>Fallow Master Stubble Treader Placement</b> .....	<b>21</b>
3-21 Stubble Treader Placement.....	21
4-28 Stubble Treader Placement.....	22
5-35 Stubble Treader Placement.....	23
6-42 Stubble Treader Placement.....	24
7-49 Stubble Treader Placement.....	25
9-63 Stubble Treader Placement.....	26
<b>Blade Plow Stubble Treader Placement</b> .....	<b>27</b>
3 Section Plow Stubble Treader Placement.....	27
4 Section Plow Stubble Treader Placement.....	28
5 Section Plow Stubble Treader Placement.....	30
6 Section Plow Stubble Treader Placement.....	32
7 Section Plow Stubble Treader Placement.....	34
9 Section Plow Stubble Treader Placement.....	36
<b>Cylinder Breakdown</b> .....	<b>37</b>
330884 – 2 x 8 - Midway Cylinder.....	37
<b>Assembly Instructions</b> .....	<b>38</b>
Assembly Instructions.....	38
<b>Operation Instructions</b> .....	<b>47</b>
Operating Instructions.....	47

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## **MOST ACCIDENTS CAN BE AVOIDED WHEN SAFETY RULES ARE FOLLOWED.**

1. READ THE INSTRUCTIONS AND PARTS MANUAL CAREFULLY BEFORE USING MACHINE.
2. NEVER WALK UNDER AN UNPINNED IMPLEMENT WING.
3. ALWAYS REQUIRE BYSTANDERS TO STAND CLEAR OF MACHINE WHILE FOLDING AND UNFOLDING WINGS OR WHILE RAISING OR LOWERING MACHINE.
4. NEVER ALLOW FEET TO BE UNDER SHOVELS.
5. DO NOT WALK ON FRAMES.
6. DO NOT ADJUST, LUBRICATE OR CLEAN MACHINE WITH TRACTOR RUNNING.
7. ALWAYS USE LOCK-UP PINS WHEN WINGS ARE IN FOLDED POSITION.
8. ALWAYS USE ROAD LOCK-OUT BRACKETS WHEN ROADING.
9. COMPLY WITH ALL STATE AND LOCAL TRANSPORTATION LAWS.
10. CHECK WHEEL BOLTS EVERY 100 HOURS.
11. DO NOT TRANSPORT MACHINE OVER 15 MILES PER HOUR
12. NEVER ALLOW RIDERS ON IMPLEMENT.
13. DO NOT STAND OVER TONGUE WHEN HITCHING OR UNHITCHING.
14. NEVER REMOVE ANY LOCKING PINS UNLESS HYDRAULIC CYLINDERS AND LINES ARE FREE OF AIR AND FULL OF HYDRAULIC OIL.
15. CHECK TIRE PRESSURE, AND INSPECT TIRES FOR CUTS OR WEAR DAILY. (USE RECOMMENDED PRESSURES ON ALL TIRES)
16. DO NOT REMOVE OR TAMPER WITH SAFETY DEVICES - HYDRAULIC RESTRICTORS, LOCK-OUT BRACKETS, LOCK-UP ARMS, AND HYDRAULIC WINGFOLD PROTECTION VALVES.
17. WATCH FOR AND AVOID PROTRUDING OBJECTS - SHARP TEETH, SHARP BLADES.
18. STAY CLEAR OF CRUSH POINTS - HITCH AREA, TINES, SHOVELS, HINGE AREAS.
19. FOLD AND UNFOLD WINGS ON LEVEL GROUND.
20. INSPECT PINS FOR WEAR - REPLACE WORN PARTS.
21. INSPECT HYDRAULIC SYSTEM FOR WEAR - REPLACE WORN PARTS; BREAKS, FRAYED HOSES, AND FAILING FITTINGS.




**A WARNING**  
WATCH FOR SHARP OBJECTS ON TIRE/FRONT  
END  
SERIOUS INJURY CAN OCCUR

ON STUBBLE TREADER OVERFRAME TUBE



**!**

WATCH FOR SHARP OBJECTS ON IMPLEMENT



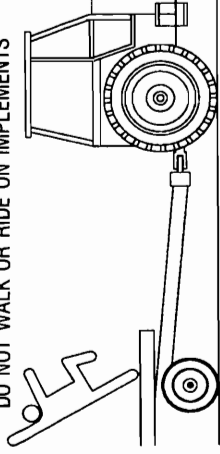
SERIOUS INJURY CAN OCCUR

300099

153-045

**!**

DO NOT WALK OR RIDE ON IMPLEMENTS




SERIOUS INJURY OR DEATH CAN OCCUR

300094

**!**

HYDRAULIC FLUID UNDER PRESSURE

- WEAR EYE PROTECTION WHEN WORKING ON HYDRAULIC LINES —
- DO NOT STOP FLUID LEAK WITH PARTS OF BODY —



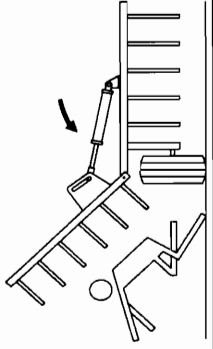
SERIOUS INJURY OR LOSS OF LIMB CAN OCCUR

300088

**!** **DANGER**

SERIOUS INJURY OR DEATH CAN OCCUR

- STAY CLEAR OF WING FRAMES —

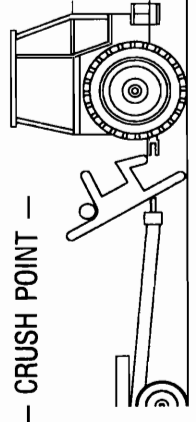


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**!**

SERIOUS INJURY OR DEATH CAN OCCUR

- CRUSH POINT —



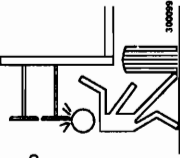
**STAND CLEAR**

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**!**

STAY CLEAR OF SHARP OVERHEAD OBJECTS

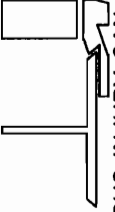
SERIOUS INJURY CAN OCCUR



300099

**!**

- KEEP FEET CLEAR —



SERIOUS INJURY CAN OCCUR

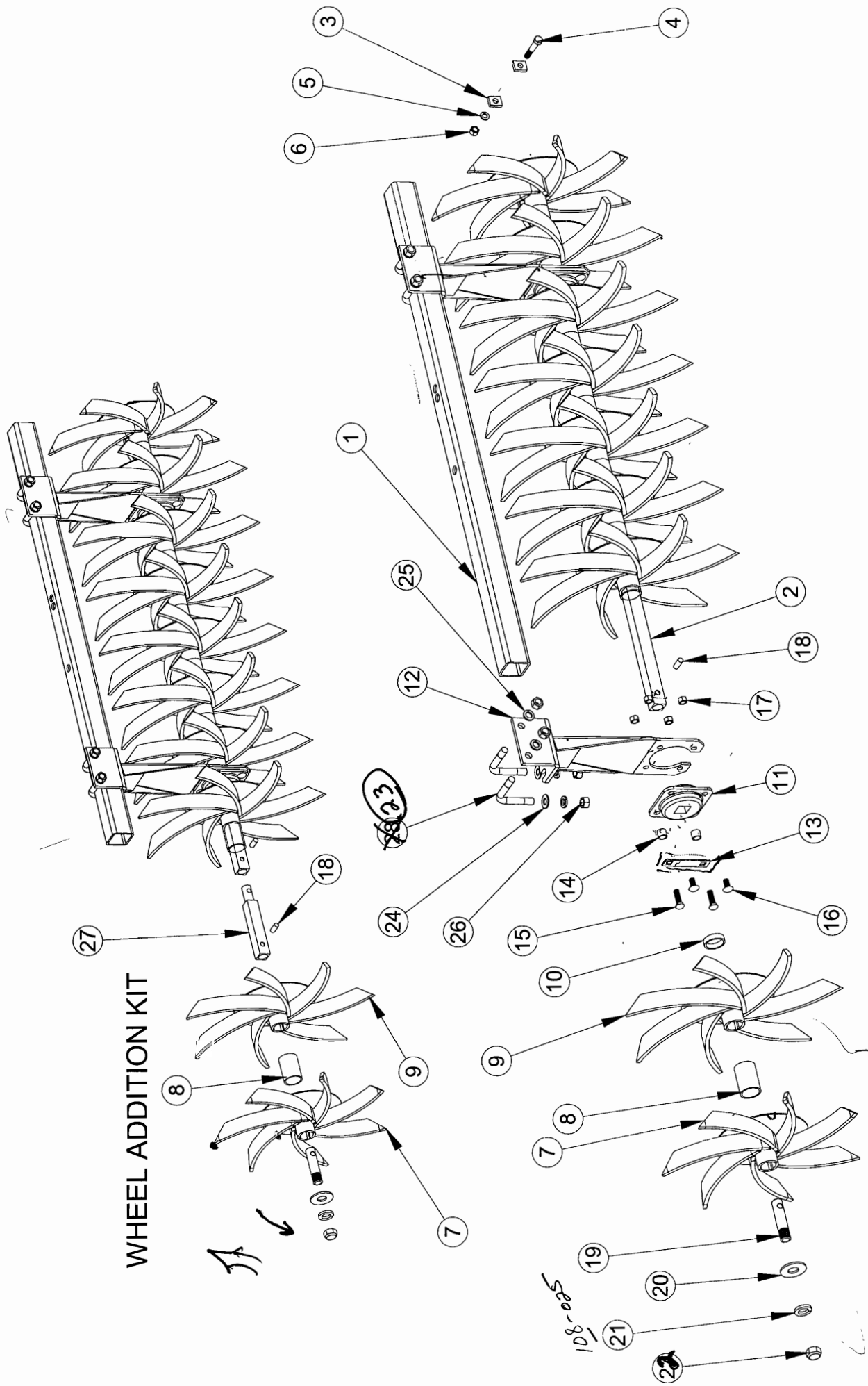
300092

**SAFETY DECALS**

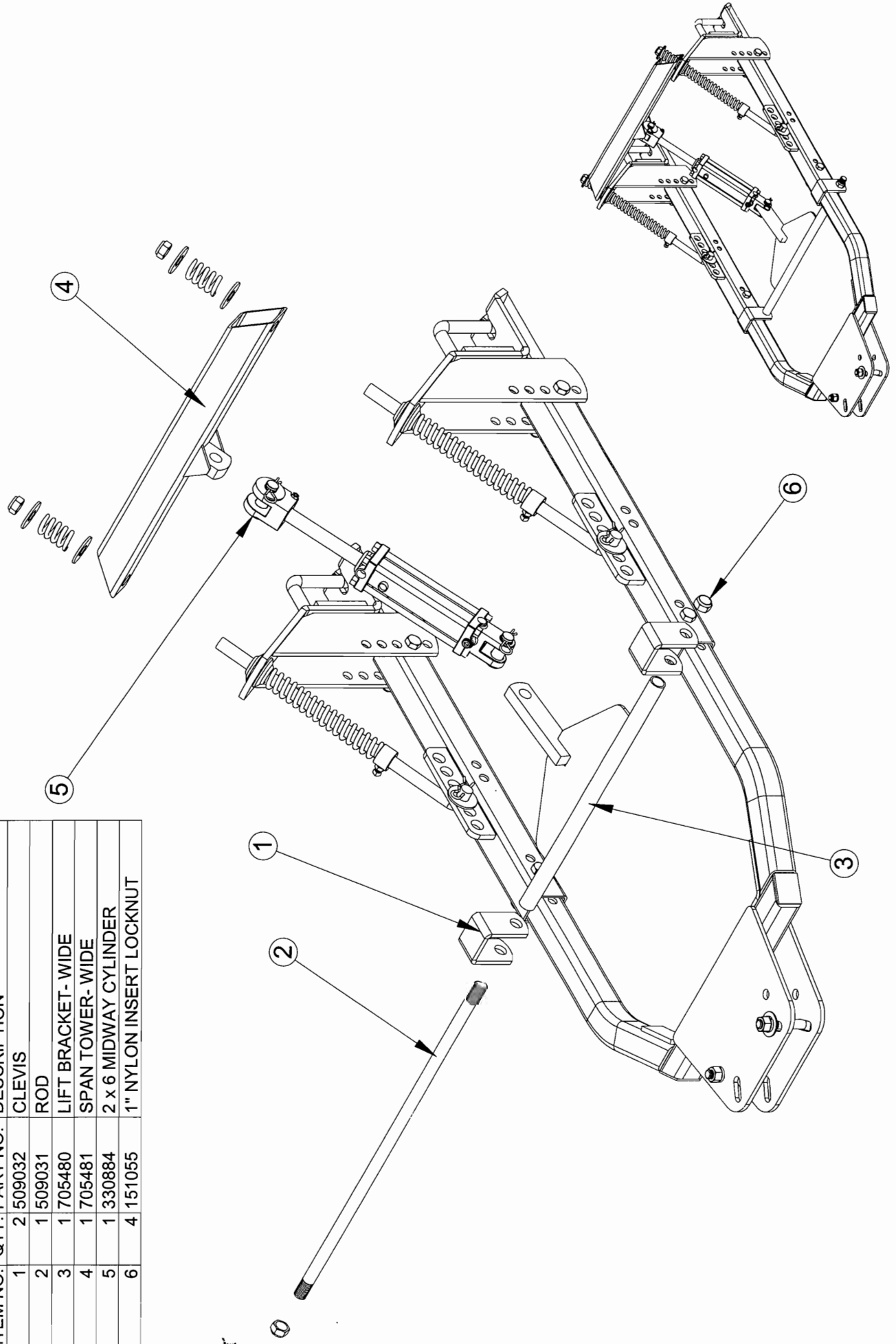
MODEL	DESCRIPTION	APPROXIMATE WEIGHT
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ST 7-42R (7 WHEELS, 42" WIDTH)	RIGHT GANG ASSEMBLY	193
ST 7-42L (7 WHEELS, 42" WIDTH)	LEFT GANG ASSEMBLY	193
ST 8-49R (8 WHEELS, 49" WIDTH)	RIGHT GANG ASSEMBLY	218
ST 8-49L (8 WHEELS, 49" WIDTH)	LEFT GANG ASSEMBLY	218
ST 9-56R (9 WHEELS, 56" WIDTH)	RIGHT GANG ASSEMBLY	243
ST 9-56L (9 WHEELS, 56" WIDTH)	LEFT GANG ASSEMBLY	243
ST 10-63R (10 WHEELS, 63" WIDTH)	RIGHT GANG ASSEMBLY	267
ST 10-63L (10 WHEELS, 63" WIDTH)	LEFT GANG ASSEMBLY	267
ST 11-70R (11 WHEELS, 70" WIDTH)	RIGHT GANG ASSEMBLY	292
ST 11-70L (11 WHEELS, 70" WIDTH)	LEFT GANG ASSEMBLY	292
ST 12-77R (12 WHEELS, 77" WIDTH)	RIGHT GANG ASSEMBLY	316
ST 12-77L (12 WHEELS, 77" WIDTH)	LEFT GANG ASSEMBLY	316
ST 13-84R (13 WHEELS, 84" WIDTH)	RIGHT GANG ASSEMBLY	340
ST 13-84L (13 WHEELS, 84" WIDTH)	LEFT GANG ASSEMBLY	340
ST 14-91R (14 WHEELS, 91" WIDTH)	RIGHT GANG ASSEMBLY	364
ST 14-91L (14 WHEELS, 91" WIDTH)	LEFT GANG ASSEMBLY	364

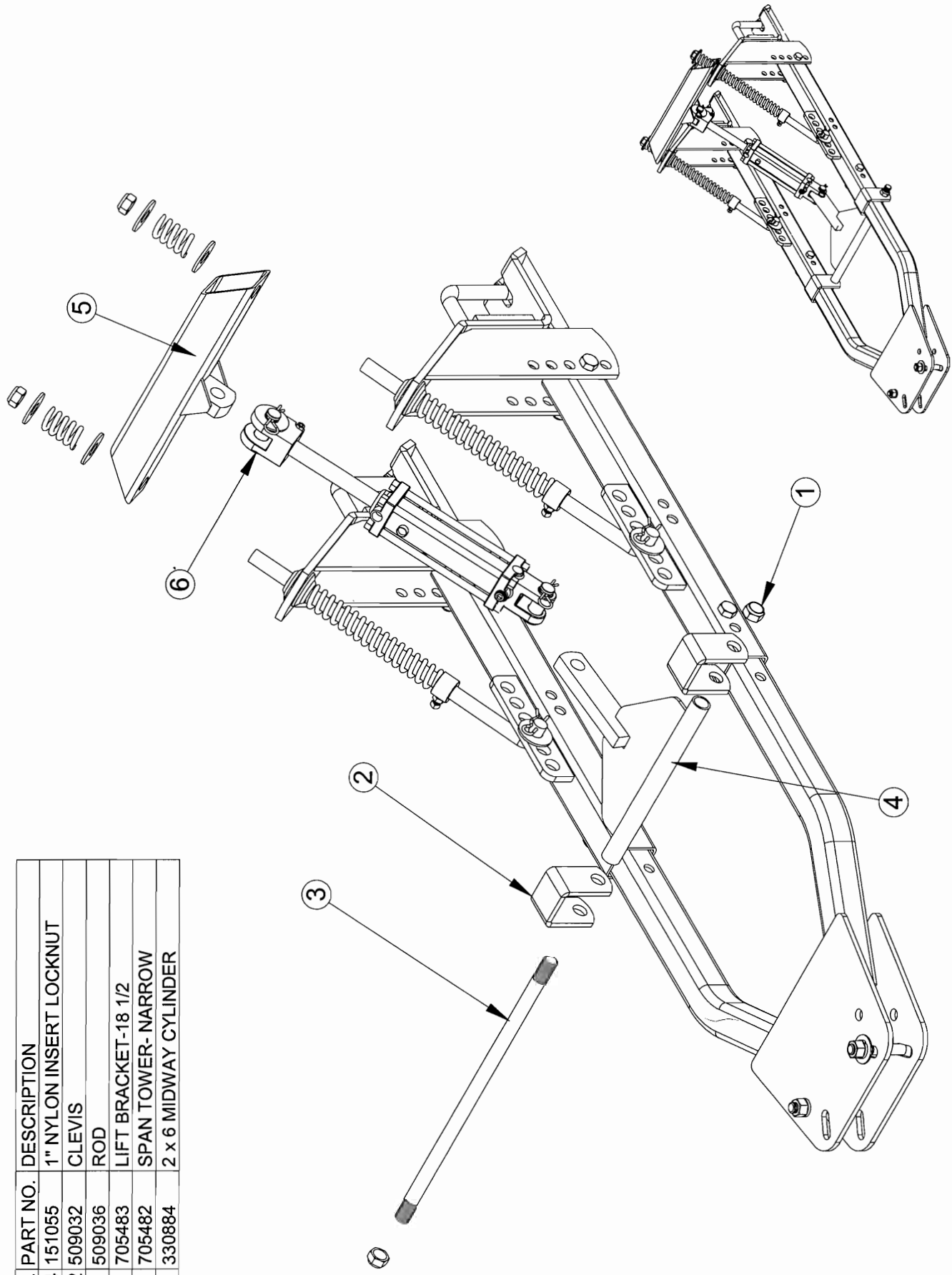
REF.	PART#	QTY.	MODEL	DESCRIPTION	REF.	PART#	QTY.	MODEL	DESCRIPTION
AR* - AS REQUIRED									
1	501266	1	ST 7-42	46" OVERFRAME TUBE	18	501195	1	ALL MODELS	1/2" x 1-3/16" HIGH STRENGTH PIN
	501176	1	ST 8-49	53" OVERFRAME TUBE	19	351020	1	ALL MODELS	1" THREADED STUD
	501176	1	ST 9-56	53" OVERFRAME TUBE	20	150698	1	ALL MODELS	1" USS FLAT WASHER
	501178	1	ST 10-63 .0197	65" OVERFRAME TUBE	21	150033	1	ALL MODELS	1" SPLIT LOCK WASHER / <i>1" Nylon Wash</i>
	501179	1	ST 11-70	71" OVERFRAME TUBE	22	150035	1	ALL MODELS	1" CENTERLOCK HEX NUT <i>Has Nut</i>
	501180	1	ST 12-70	77" OVERFRAME TUBE	23	150257	4	ALL MODELS	5/8 x 3-3/4 x 3-3/4 L - BOLT
	501180	1	ST 13-84	77" OVERFRAME TUBE	24	150283	4	ALL MODELS	5/8" SAE FLAT WASHER
	501180	1	ST 14-91	77" OVERFRAME TUBE	25	150040	8	ALL MODELS	5/8" LOCK WASHER
2	501265	1	ST 7-42 .0236	46" AXLE (023-028)	26	150041	8	ALL MODELS	5/8" HEX NUT
	501258	1	ST 8-49 .0263	53" AXLE	<b>WHEEL ADDITION KITS</b>				
	501243	1	ST 9-56 .0307	60" AXLE	802058	AR*	OPTIONAL	WHEEL ADDITION KIT - LEFT	
	501259	1	ST 10-63 .0328	67" AXLE	802059	AR*	OPTIONAL	WHEEL ADDITION KIT - RIGHT	
	501245	1	ST 11-70 .031	74" AXLE	9	702097	1	OPTIONAL	LEFT REG. ST WHEEL
	501260	1	ST 12-70 .0399	81" AXLE	18	702098	1	OPTIONAL	RIGHT REG. ST WHEEL
	501246	1	ST 13-84 .0401	88" AXLE	18	501195	1	OPTIONAL	1/2" x 1-3/16" HIGH STRENGTH PIN
	501270	1	ST 14-91 .0403	95" AXLE	27	501256	1	OPTIONAL	2-7/8" WHEEL SPACER
3	504232	2	ALL MODELS	COLLAR STRAP	27	501261	1	OPTIONAL	EXTENSION STUD
4	150024	1	ALL MODELS	1/2" x 2-3/4" HEX SCREW GRADE 2					
5	150030	1	ALL MODELS	1/2" SPLIT LOCKWASHER					
6	150031	1	ALL MODELS	1/2" HEX FINISH NUT					
7	702999	2	All Left Gangs	LEFT TAPER ST WHEEL					
	703000	2	All Right Gangs	RIGHT TAPER ST WHEEL					
8	501256	AR*	ALL MODELS	2-7/8" WHEEL SPACER					
9	702997	AR*	All Left Gangs	LEFT REG. ST WHEEL					
	702998	AR*	All Right Gangs	RIGHT REG. ST WHEEL					
10	501257	4	ALL MODELS	1/2" BEARING SPACER					
11	311007	2	ALL MODELS	SEALED BEARING 1-1/4" SQ. HOLE					
12	701101	2	ALL MODELS	BEARING STRUT					
13	503271	2	ALL MODELS	STRAP					
14	503272	4	ALL MODELS	SPACER					
15	150297	4	ALL MODELS	1/2" x 1-3/4" CGE SCREW GRADE 5					
16	150185	4	ALL MODELS	1/2" x 1" CGE SCREW GRADE 5 ZC					
17	150112	8	ALL MODELS	1/2" CENTERLOCK HEX NUT					



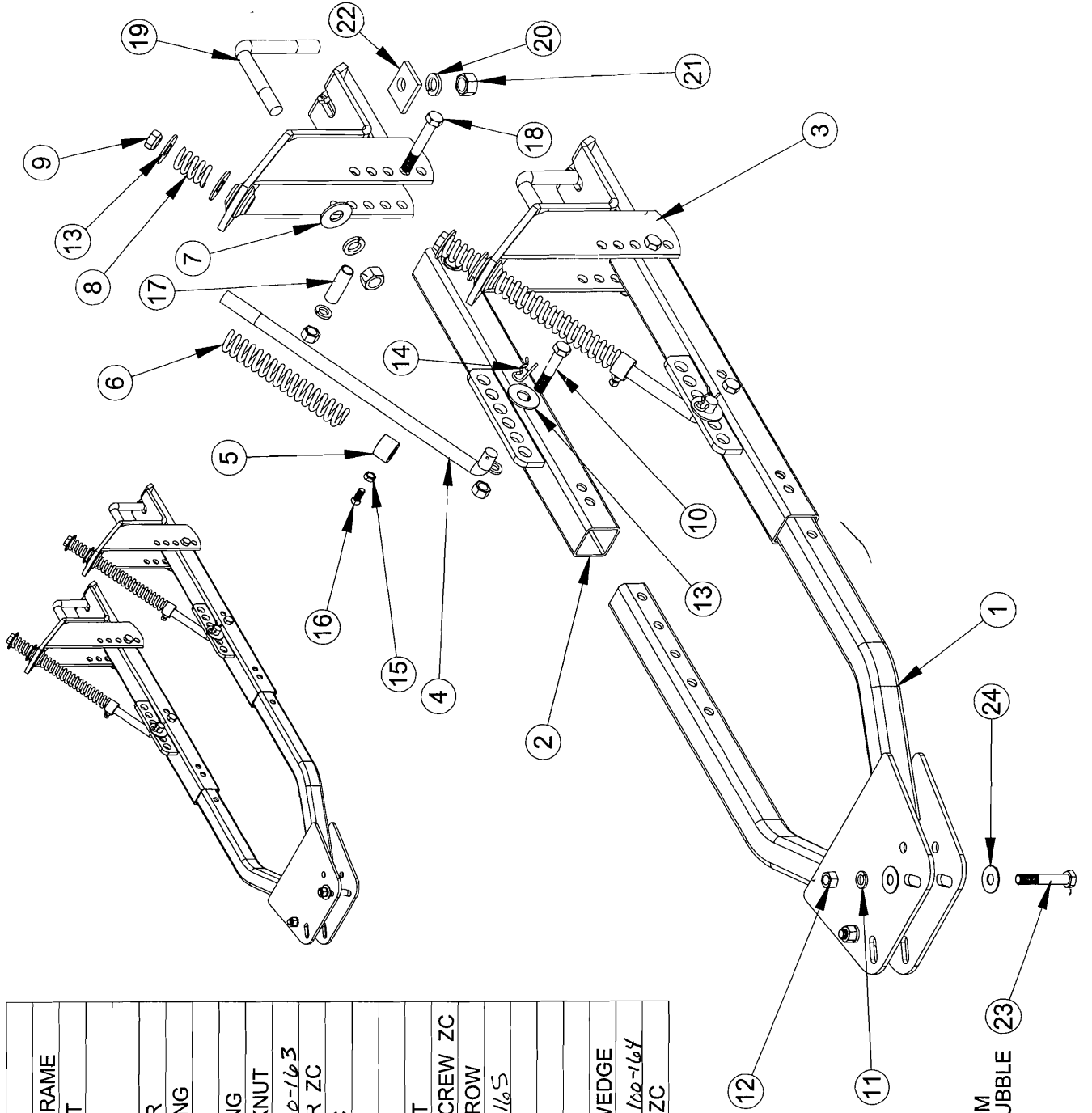
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	509032	CLEVIS
2	1	509031	ROD
3	1	705480	LIFT BRACKET - WIDE
4	1	705481	SPAN TOWER - WIDE
5	1	330884	2 x 6 MIDWAY CYLINDER
6	4	151055	1" NYLON INSERT LOCKNUT



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	4	151055	1" NYLON INSERT LOCKNUT
2	2	509032	CLEVIS
3	1	509036	ROD
4	1	705483	LIFT BRACKET-18 1/2
5	1	705482	SPAN TOWER- NARROW
6	1	330884	2 x 6 MIDWAY CYLINDER



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	701119	UNIVERSAL HARROW FRAME
2	2	701107	FRAME PIVOT TUBE - ST
3	2	701092	MOUNTING BRACKET
4	2	501164	1" ADJUSTABLE ROD
5	2	351023	HARROW LOCK COLLAR
6	2	361003	LOWER HARROW SPRING
7	2	150067	1" USS FLAT WASHER
8	2	361002	UPPER HARROW SPRING
9	2	151055	1" NYLON INSERT LOCKNUT
10	2	150298	3/4 X 4 HHCS, GR. 5 100-163
11	6	150037	3/4 SPLIT LOCKWASHER ZC
12	6	150038	3/4 HEX FINISH NUT ZC
13	6	150173	1" SAE FLATWASHER
14	2	150047	.177 HAIRPIN COTTER
15	2	150045	1/2 HEX FINISH JAM NUT
16	2	150044	1/2 x 1 SQ. HEAD SET SCREW ZC
17	2	501168	LOOSE BUSHING - HARROW
18	2	150153	3/4 x 5 HHCS GR. 5 100-165
19	2	150258	1 x 6 x 7 L BOLT
20	4	150033	1" SPLIT LOCKWASHER
21	4	150034	1" HEX FINISH NUT
22	2	501229	MOUNTING BRACKET WEDGE
23	2	150090	3/4 x 4 1/2 HHCS, GR. 5 100-164
24	2	150255	3/4 SAE FLATWASHER ZC

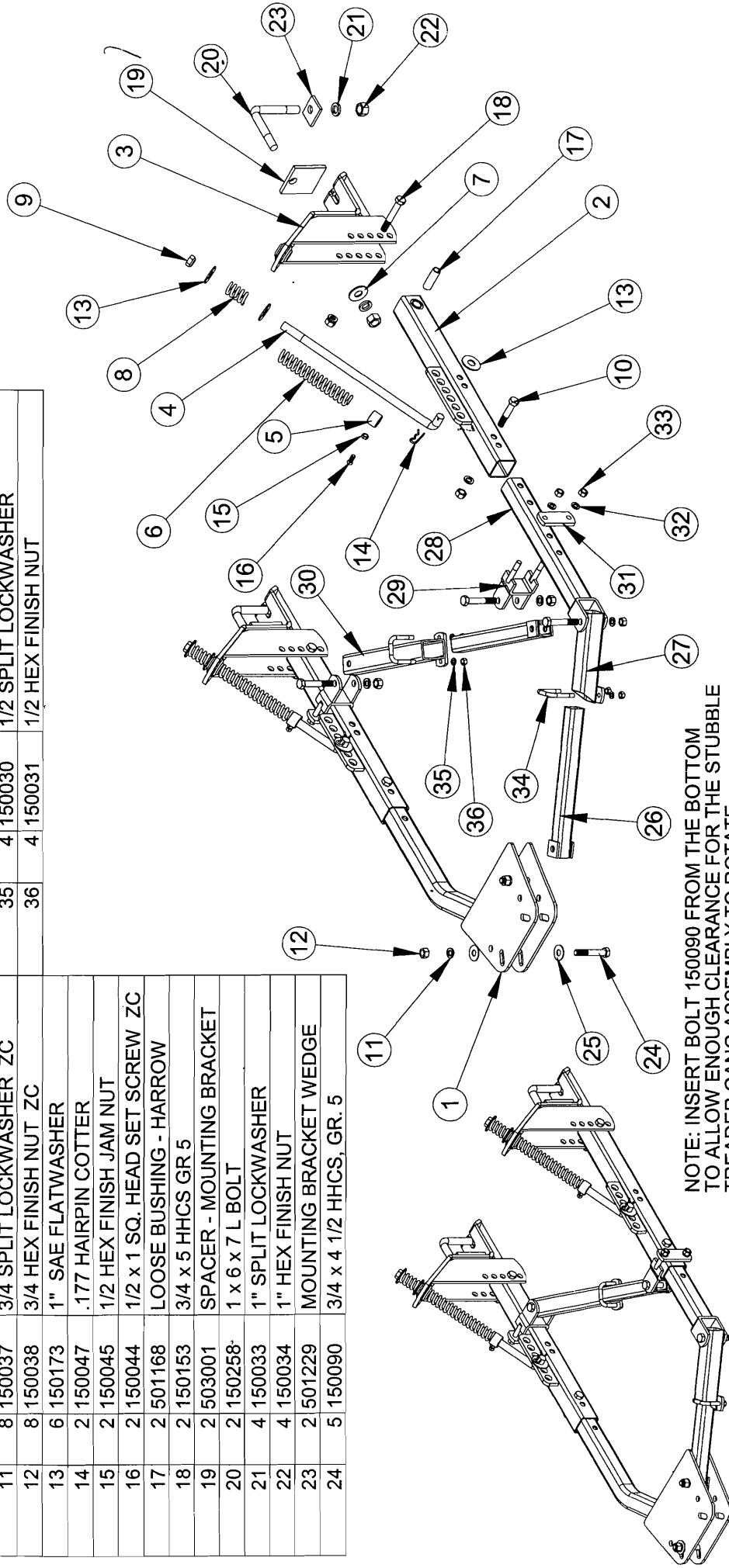


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NOTE: INSERT BOLT 150090 FROM THE BOTTOM TO ALLOW ENOUGH CLEARANCE FOR THE STUBBLE TREADER GANG ASSEMBLY TO ROTATE

ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	701120	ADJUSTABLE HARROW FRAME	25	2	150255	3/4 SAE FLATWASHER ZC
2	2	701107	FRAME PIVOT TUBE - ST	26	2	701095	ADJUSTABLE PIVOT TUBE
3	2	701092	MOUNTING BRACKET	27	1	701103	ADJUSTABLE SLEEVE TUBE
4	2	501164	1" ADJUSTABLE ROD	28	1	701109	ADJUSTABLE FRAME TUBE
5	2	351023	HARROW LOCK COLLAR	29	2	702549	BRACE BRACKET
6	2	361003	LOWER HARROW SPRING	30	1	702550	SLEEVE TUBE
7	2	150067	1" USS FLAT WASHER	31	2	503343	CLAMP PLATE
8	2	361002	UPPER HARROW SPRING	32	5	150040	5/8 LOCKWASHER
9	2	151055	1" NYLON INSERT LOCKNUT	33	5	150041	5/8 HEX NUT
10	2	150298	3/4 X 4 HHCS, GR. 5 100-L63	34	2	151053	1/2 x 2 9/16 x 3 U-BOLT
11	8	150037	3/4 SPLIT LOCKWASHER ZC	35	4	150030	1/2 SPLIT LOCKWASHER
12	8	150038	3/4 HEX FINISH NUT ZC	36	4	150031	1/2 HEX FINISH NUT
13	6	150173	1" SAE FLATWASHER				
14	2	150047	.177 HAIRPIN COTTER				
15	2	150045	1/2 HEX FINISH JAM NUT				
16	2	150044	1/2 x 1 SQ. HEAD SET SCREW ZC				
17	2	501168	LOOSE BUSHING - HARROW				
18	2	150153	3/4 x 5 HHCS GR 5				
19	2	503001	SPACER - MOUNTING BRACKET				
20	2	150258	1 x 6 x 7 L BOLT				
21	4	150033	1" SPLIT LOCKWASHER				
22	4	150034	1" HEX FINISH NUT				
23	2	501229	MOUNTING BRACKET WEDGE				
24	5	150090	3/4 x 4 1/2 HHCS, GR. 5				

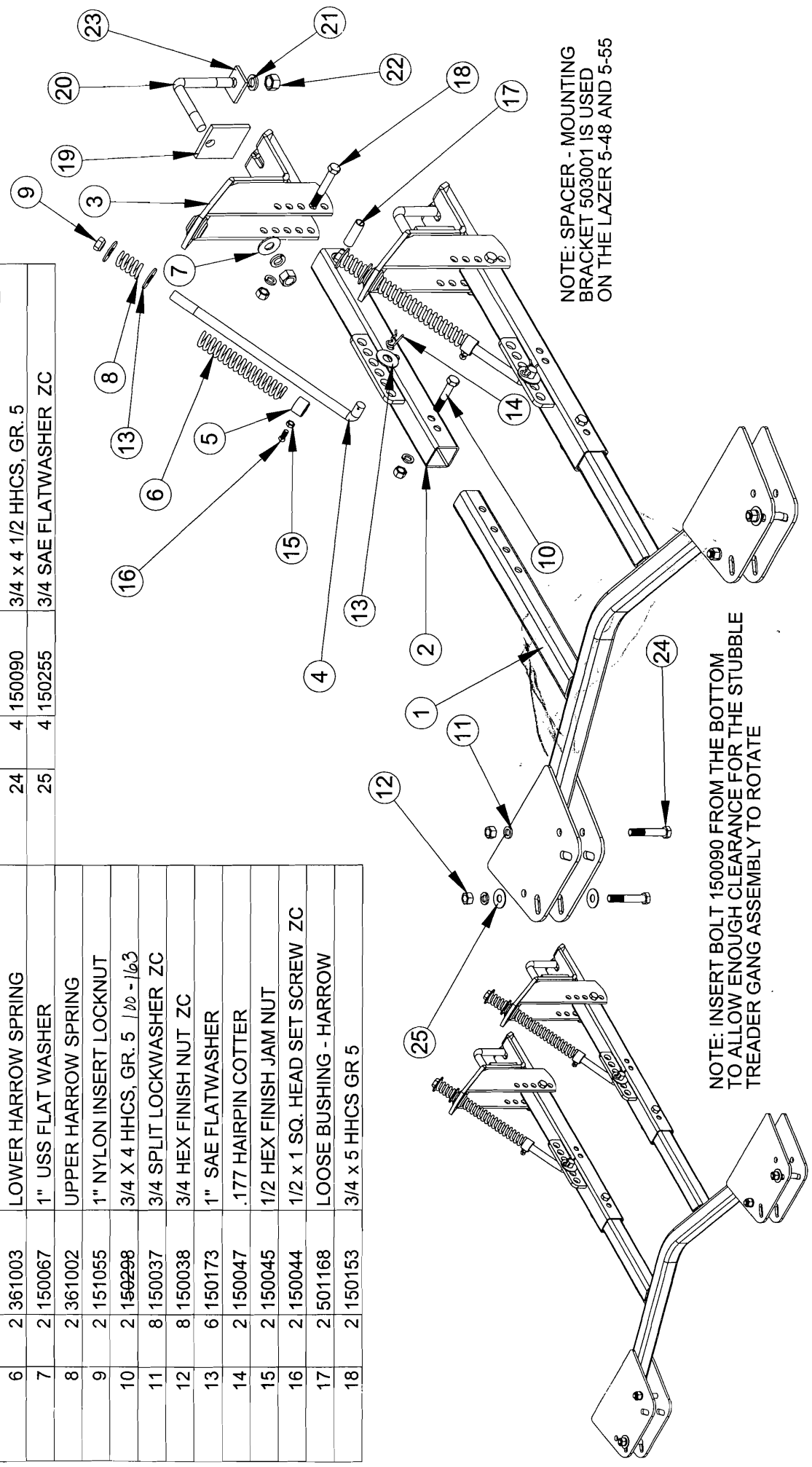
NOTE: SPACER - MOUNTING BRACKET 503001 IS USED ON THE LAZER 5-48 AND 5-55



NOTE: INSERT BOLT 150090 FROM THE BOTTOM TO ALLOW ENOUGH CLEARANCE FOR THE STUBBLE TREADER GANG ASSEMBLY TO ROTATE



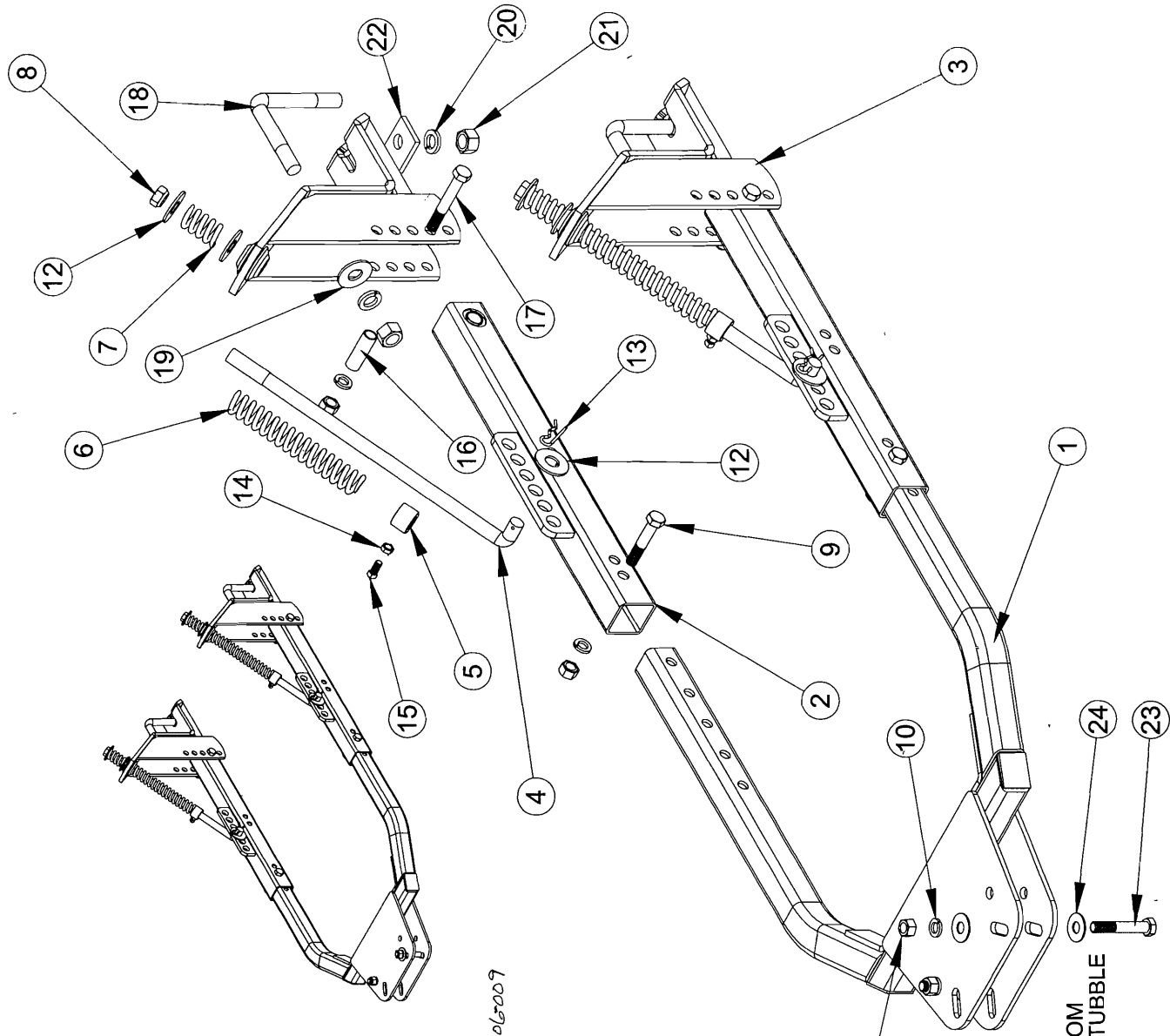
ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	701118	REVERSING VEE ADJUSTING TUBE	19	2	503001	SPACER - MOUNTING BRACKET
2	2	701107	FRAME PIVOT TUBE - ST	20	2	150258	1 x 6 x 7 L BOLT
3	2	701092	MOUNTING BRACKET	21	4	150033	1" SPLIT LOCKWASHER
4	2	501164	1" ADJUSTABLE ROD	22	4	150034	1" HEX FINISH NUT
5	2	351023	HARROW LOCK COLLAR	23	2	501229	MOUNTING BRACKET WEDGE
6	2	361003	LOWER HARROW SPRING	24	4	150090	3/4 x 4 1/2 HHCS, GR. 5
7	2	150067	1" USS FLAT WASHER	25	4	150255	3/4 SAE FLATWASHER ZC
8	2	361002	UPPER HARROW SPRING				
9	2	151055	1" NYLON INSERT LOCKNUT				
10	2	150298	3/4 X 4 HHCS, GR. 5 / 100 - 1/63				
11	8	150037	3/4 SPLIT LOCKWASHER ZC				
12	8	150038	3/4 HEX FINISH NUT ZC				
13	6	150173	1" SAE FLATWASHER				
14	2	150047	.177 HAIRPIN COTTER				
15	2	150045	1/2 HEX FINISH JAM NUT				
16	2	150044	1/2 x 1 SQ. HEAD SET SCREW ZC				
17	2	501168	LOOSE BUSHING - HARROW				
18	2	150153	3/4 x 5 HHCS GR 5				



NOTE: INSERT BOLT 150090 FROM THE BOTTOM TO ALLOW ENOUGH CLEARANCE FOR THE STUBBLE TREADER GANG ASSEMBLY TO ROTATE

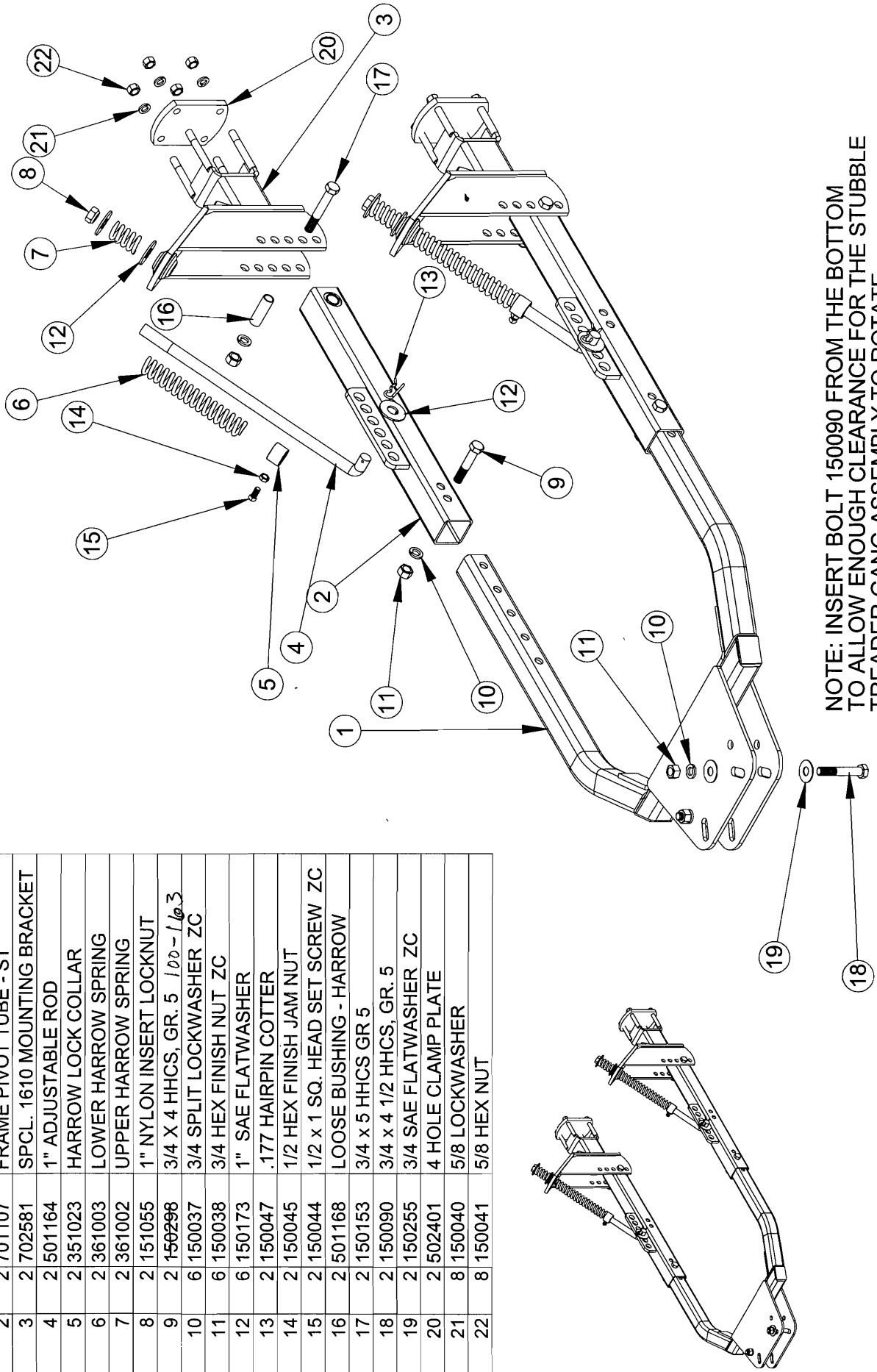
NOTE: SPACER - MOUNTING BRACKET 503001 IS USED ON THE LAZER 5-48 AND 5-55

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	703707	28 1/2" HARROW FRAME
X	2	701107	FRAME PIVOT TUBE - ST
X	2	701092	MOUNTING BRACKET
4	2	501164	1" ADJUSTABLE ROD
5	2	351023	HARROW LOCK COLLAR
6	2	361003	LOWER HARROW SPRING
7	2	361002	UPPER HARROW SPRING
8	2	151055	1" NYLON INSERT LOCKNUT 102-214
9	2	150298	3/4 X 4 HHCS, GR. 5 100-163
10	6	150037	3/4 SPLIT LOCKWASHER ZC 108-002
11	6	150038	3/4 HEX FINISH NUT ZC 102-009
12	6	150173	1" SAE FLATWASHER 108-004
13	2	150047	.177 HAIRPIN COTTER 104-144
14	2	150045	1/2 HEX FINISH JAM NUT 102-015
15	2	150044	1/2 x 1 SQ. HEAD SET SCREW ZC 106-009
16	2	501168	LOOSE BUSHING - HARROW
17	2	150153	3/4 x 5 HHCS GR 5 100-165
18	2	150258	1 x 6 x 7 L BOLT
19	2	150067	1" USS FLAT WASHER 108-014
20	4	150033	1" SPLIT LOCKWASHER 108-005
21	4	150034	1" HEX FINISH NUT 102-111
22	2	501229	MOUNTING BRACKET WEDGE
23	2	150090	3/4 x 4 1/2 HHCS, GR. 5 100-164
24	2	150255	3/4 SAE FLATWASHER ZC 108-003



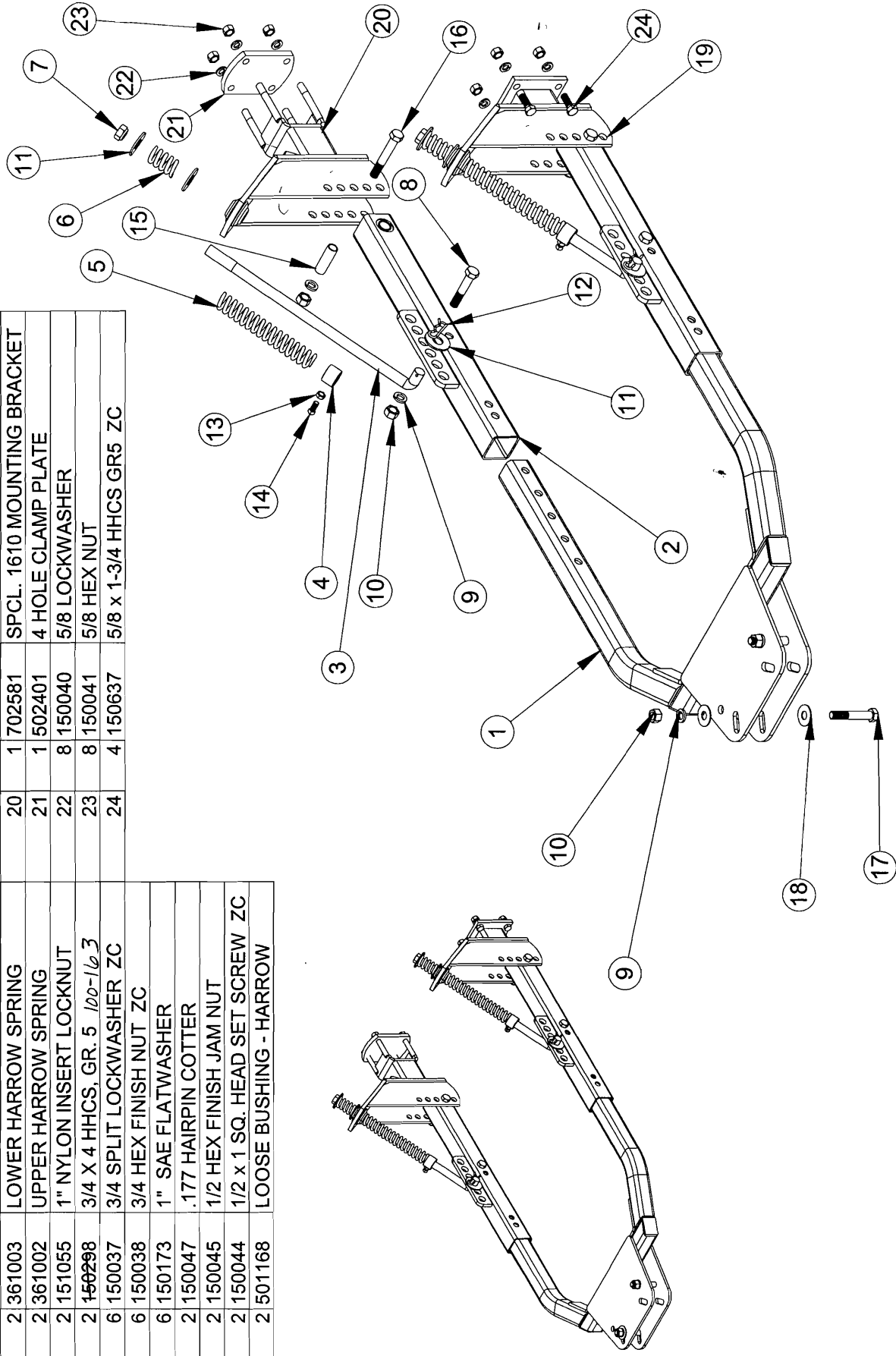
NOTE: INSERT BOLT 150090 FROM THE BOTTOM TO ALLOW ENOUGH CLEARANCE FOR THE STUBBLE TREADER GANG ASSEMBLY TO ROTATE

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	703707	28 1/2" HARROW FRAME
2	2	701107	FRAME PIVOT TUBE - ST
3	2	702581	SPCL. 1610 MOUNTING BRACKET
4	2	501164	1" ADJUSTABLE ROD
5	2	351023	HARROW LOCK COLLAR
6	2	361003	LOWER HARROW SPRING
7	2	361002	UPPER HARROW SPRING
8	2	151055	1" NYLON INSERT LOCKNUT
9	2	150298	3/4 X 4 HHCS, GR. 5 /DD-1/6.3
10	6	150037	3/4 SPLIT LOCKWASHER ZC
11	6	150038	3/4 HEX FINISH NUT ZC
12	6	150173	1" SAE FLATWASHER
13	2	150047	.177 HAIRPIN COTTER
14	2	150045	1/2 HEX FINISH JAM NUT
15	2	150044	1/2 x 1 SQ. HEAD SET SCREW ZC
16	2	501168	LOOSE BUSHING - HARROW
17	2	150153	3/4 x 5 HHCS GR 5
18	2	150090	3/4 x 4 1/2 HHCS, GR. 5
19	2	150255	3/4 SAE FLATWASHER ZC
20	2	502401	4 HOLE CLAMP PLATE
21	8	150040	5/8 LOCKWASHER
22	8	150041	5/8 HEX NUT



NOTE: INSERT BOLT 150090 FROM THE BOTTOM TO ALLOW ENOUGH CLEARANCE FOR THE STUBBLE TREADER GANG ASSEMBLY TO ROTATE

ITEM NO.	QTY.	PART NO.	DESCRIPTION	ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	703707	28 1/2" HARROW FRAME	16	2	150153	3/4 x 5 HHCS GR 5
2	2	701107	FRAME PIVOT TUBE - ST	17	2	150090	3/4 x 4 1/2 HHCS, GR. 5
3	2	501164	1" ADJUSTABLE ROD	18	2	150255	3/4 SAE FLATWASHER ZC
4	2	351023	HARROW LOCK COLLAR	19	1	1705441	MOUNTING BRACKET SPECIAL 2
5	2	361003	LOWER HARROW SPRING	20	1	702581	SPCL. 1610 MOUNTING BRACKET
6	2	361002	UPPER HARROW SPRING	21	1	502401	4 HOLE CLAMP PLATE
7	2	151055	1" NYLON INSERT LOCKNUT	22	8	150040	5/8 LOCKWASHER
8	2	150298	3/4 X 4 HHCS, GR. 5 100-163	23	8	150041	5/8 HEX NUT
9	6	150037	3/4 SPLIT LOCKWASHER ZC	24	4	150637	5/8 x 1-3/4 HHCS GR5 ZC
10	6	150038	3/4 HEX FINISH NUT ZC				
11	6	150173	1" SAE FLATWASHER				
12	2	150047	.177 HAIRPIN COTTER				
13	2	150045	1/2 HEX FINISH JAM NUT				
14	2	150044	1/2 x 1 SQ. HEAD SET SCREW ZC				
15	2	501168	LOOSE BUSHING - HARROW				

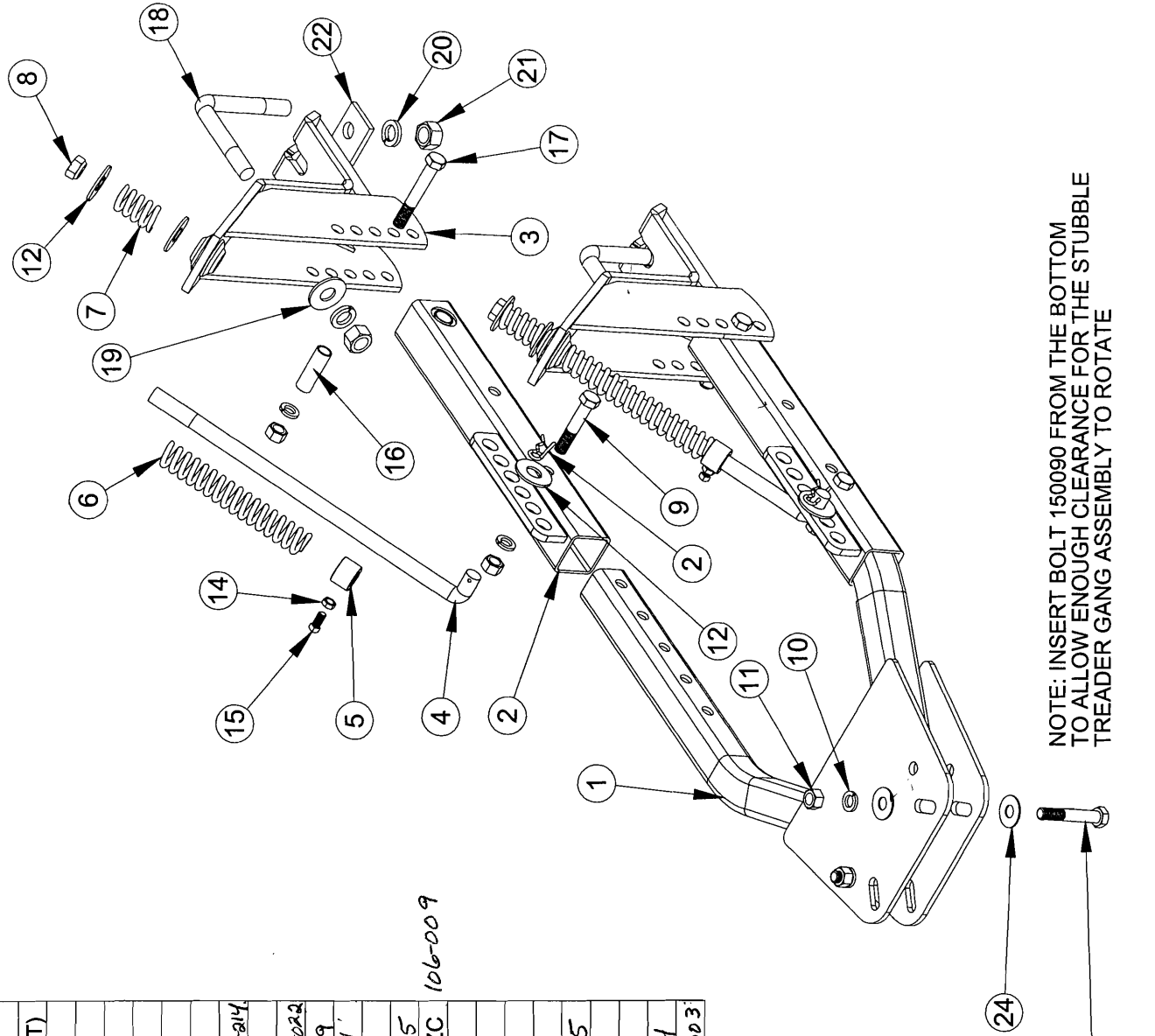


**901490 - STUBBLE  
TREADER MOUNT - SHORT**

**STUBBLE TREADER 8/10/01**

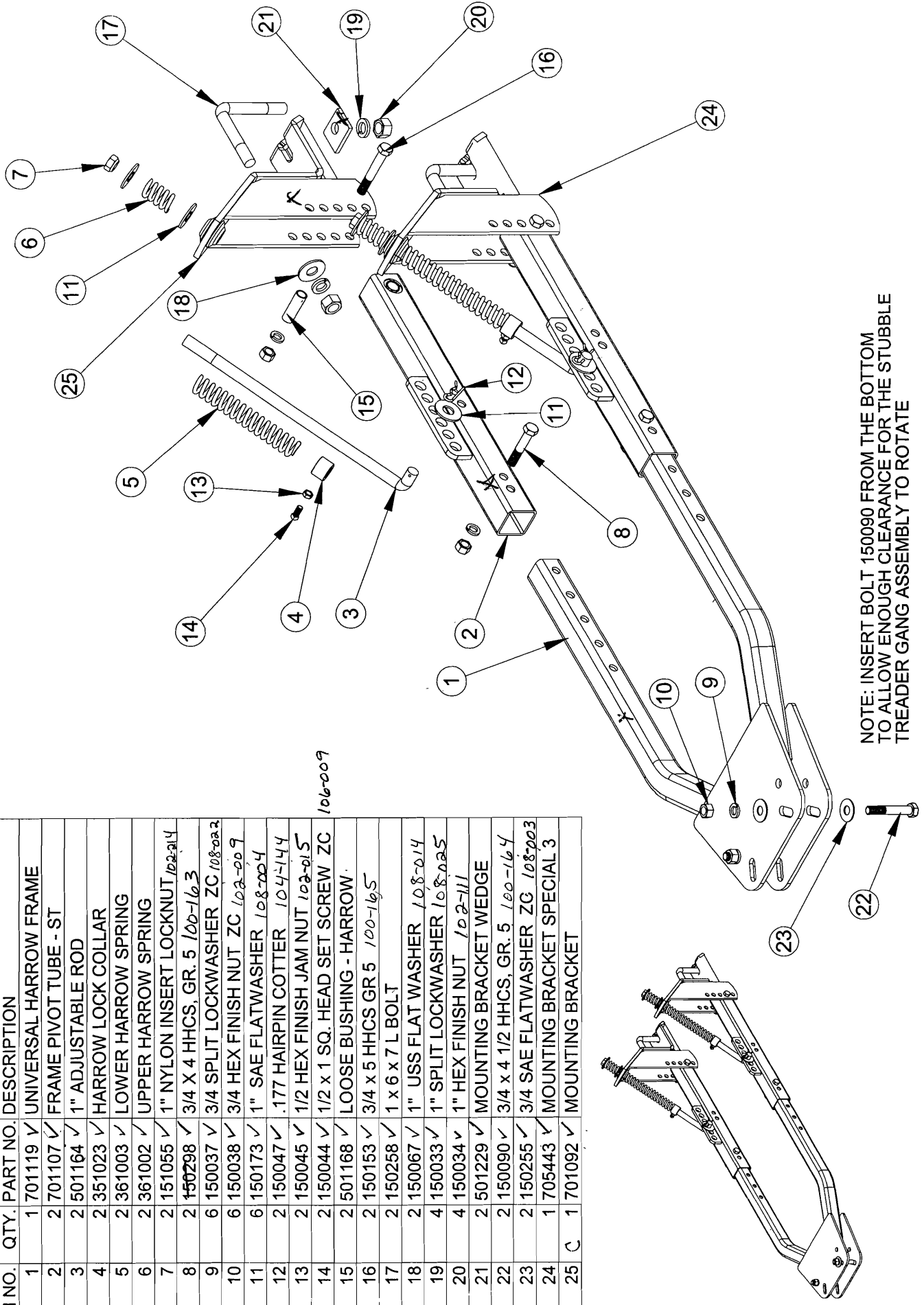
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	705434 ✓	18 1/2" HARROW FRAME (SHORT)
2	2	705433	FRAME PIVOT TUBE - ST
3	2	701092 ✓	MOUNTING BRACKET
4	2	501164 ✓	1" ADJUSTABLE ROD
5	2	351023 ✓	HARROW LOCK COLLAR
6	2	361003 ✓	LOWER HARROW SPRING
7	2	361002 ✓	UPPER HARROW SPRING
8	2	151055 ✓	1" NYLON INSERT LOCKNUT 102-214
9	2	150298 ✓	3/4 X 4 HHCS, GR. 5 100-163
10	6	150037 ✓	3/4 SPLIT LOCKWASHER ZC108-022
11	6	150038 ✓	3/4 HEX FINISH NUT ZC 102-009
12	6	150173 ✓	1" SAE FLATWASHER 108-004
13	2	150047 ✓	.177 HAIRPIN COTTER 104-144
14	2	150045 ✓	1/2 HEX FINISH JAM NUT 102-015
15	2	150044 ✓	1/2 x 1 SQ. HEAD SET SCREW ZC
16	2	501168 ✓	LOOSE BUSHING - HARROW
17	2	150153 ✓	3/4 x 5 HHCS GR 5 100-165
18	2	150258 ✓	1 x 6 x 7 L BOLT
19	2	150067 ✓	1" USS FLAT WASHER 108-014
20	4	150033 ✓	1" SPLIT LOCKWASHER 108-025
21	4	150034 ✓	1" HEX FINISH NUT 102-111
22	2	501229 ✓	MOUNTING BRACKET WEDGE
23	2	150090 ✓	3/4 x 4 1/2 HHCS, GR. 5 100-164
24	2	150255 ✓	3/4 SAE FLATWASHER ZC 108-003

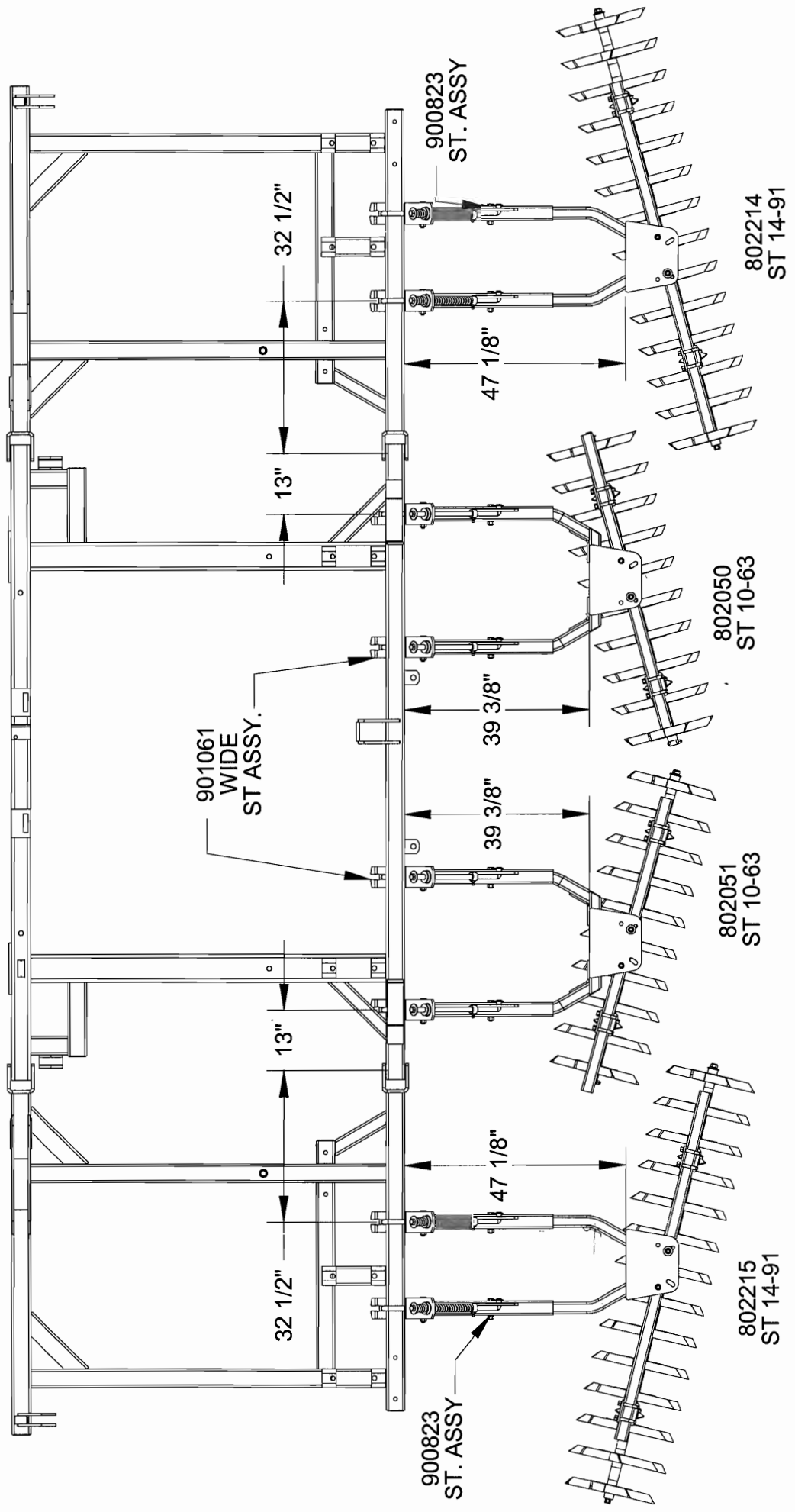
106-009

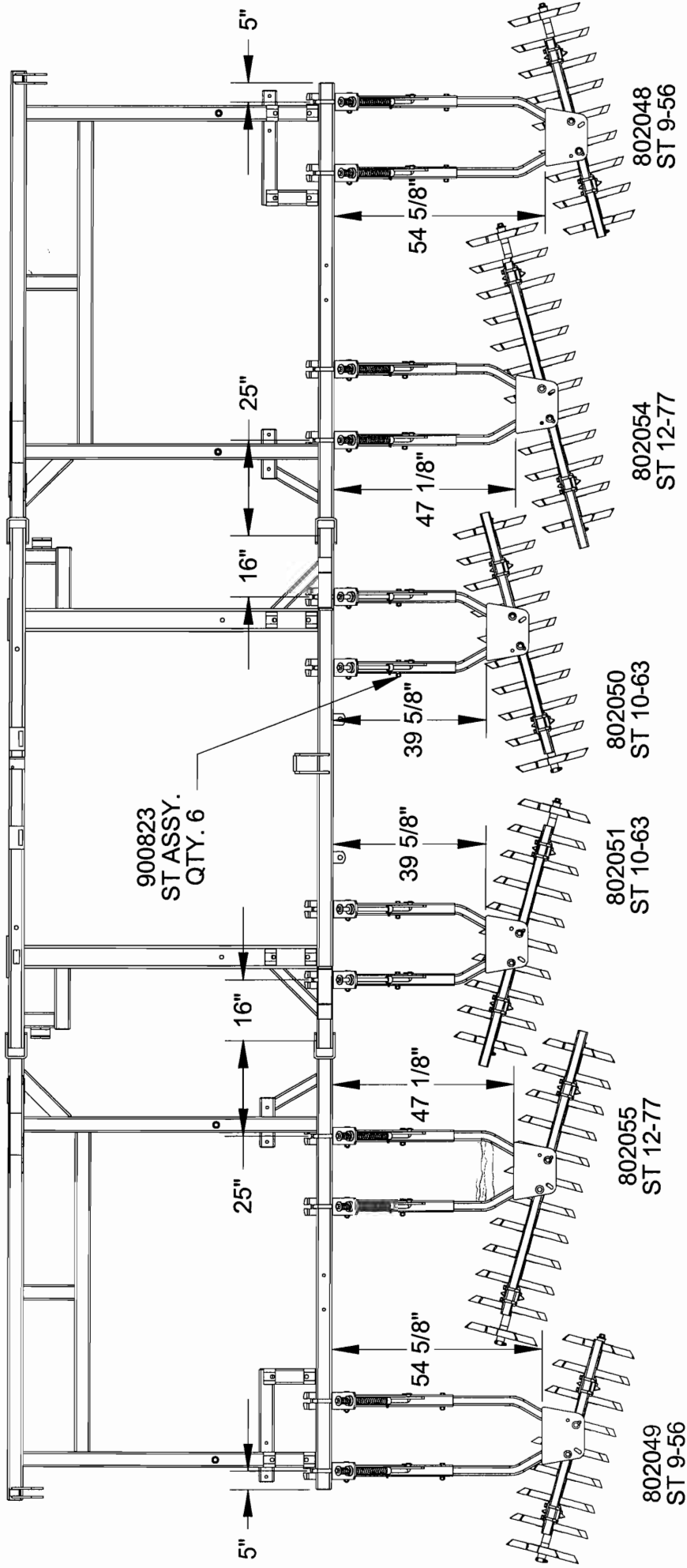


NOTE: INSERT BOLT 150090 FROM THE BOTTOM TO ALLOW ENOUGH CLEARANCE FOR THE STUBBLE TREADER GANG ASSEMBLY TO ROTATE

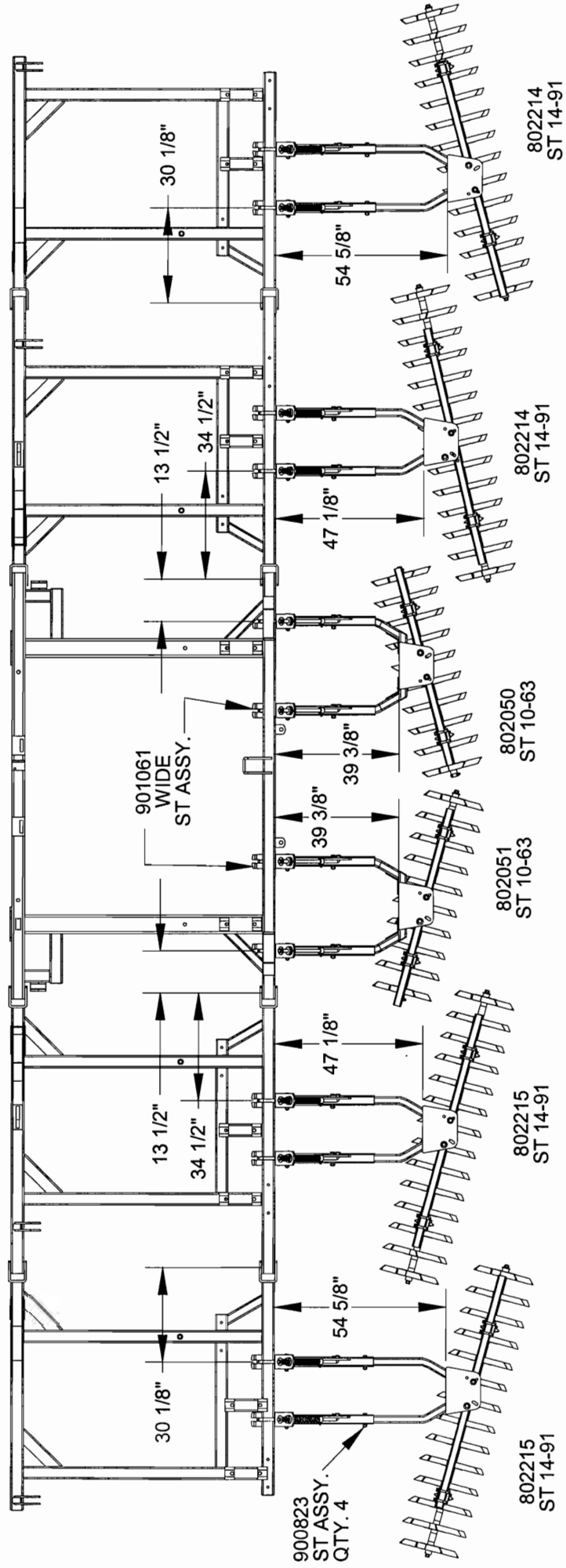
ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	701119	UNIVERSAL HARROW FRAME
2	2	701107	FRAME PIVOT TUBE - ST
3	2	501164	1" ADJUSTABLE ROD
4	2	351023	HARROW LOCK COLLAR
5	2	361003	LOWER HARROW SPRING
6	2	361002	UPPER HARROW SPRING
7	2	151055	1" NYLON INSERT LOCKNUT 102-214
8	2	50298	3/4 X 4 HHCS, GR. 5 100-163
9	6	150037	3/4 SPLIT LOCKWASHER ZC 108-202
10	6	150038	3/4 HEX FINISH NUT ZC 102-009
11	6	150173	1" SAE FLATWASHER 108-204
12	2	150047	.177 HAIRPIN COTTER 104-144
13	2	150045	1/2 HEX FINISH JAM NUT 102-015
14	2	150044	1/2 X 1 SQ. HEAD SET SCREW ZC 106-009
15	2	501168	LOOSE BUSHING - HARROW.
16	2	150153	3/4 X 5 HHCS GR 5 100-165
17	2	150258	1 X 6 X 7 L BOLT
18	2	150067	1" USS FLAT WASHER 108-214
19	4	150033	1" SPLIT LOCKWASHER 108-205
20	4	150034	1" HEX FINISH NUT 102-111
21	2	501229	MOUNTING BRACKET WEDGE
22	2	150090	3/4 X 4 1/2 HHCS, GR. 5 100-164
23	2	150255	3/4 SAE FLATWASHER ZC 108-203
24	1	705443	MOUNTING BRACKET SPECIAL 3
25	C	1701092	MOUNTING BRACKET

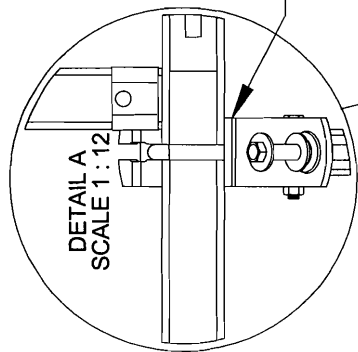












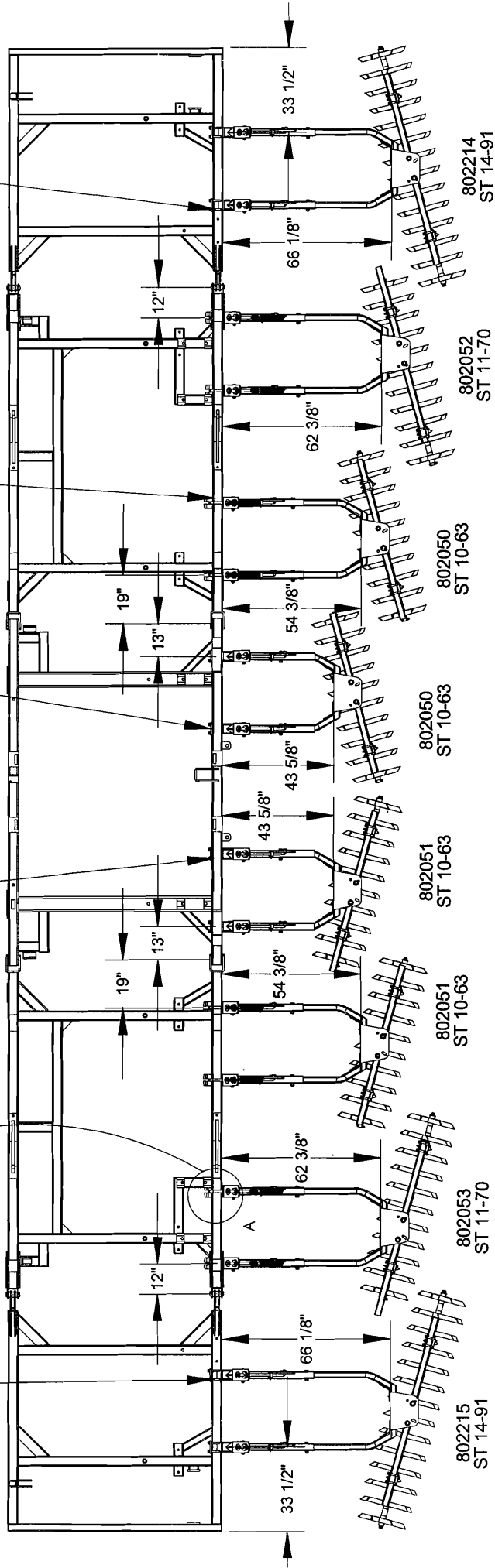
503001  
SPACER PLATE  
QTY. 4

901074  
WIDE J.D.  
MOUNT ASSY.

901061  
WIDE  
ST. ASSY.  
QTY. 4

901074  
WIDE J.D.  
MOUNT ASSY.

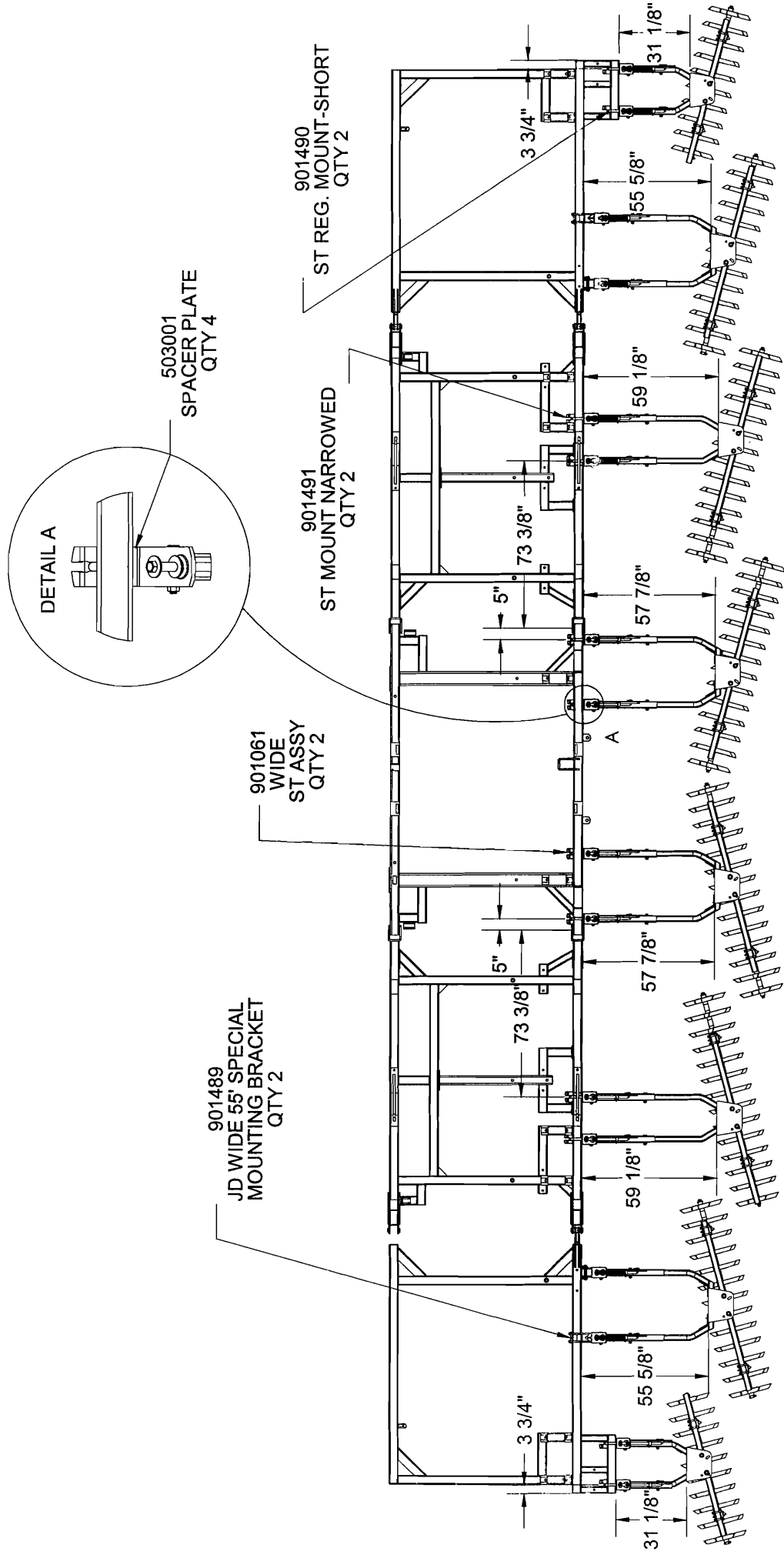
901074  
WIDE J.D.  
MOUNT ASSY.



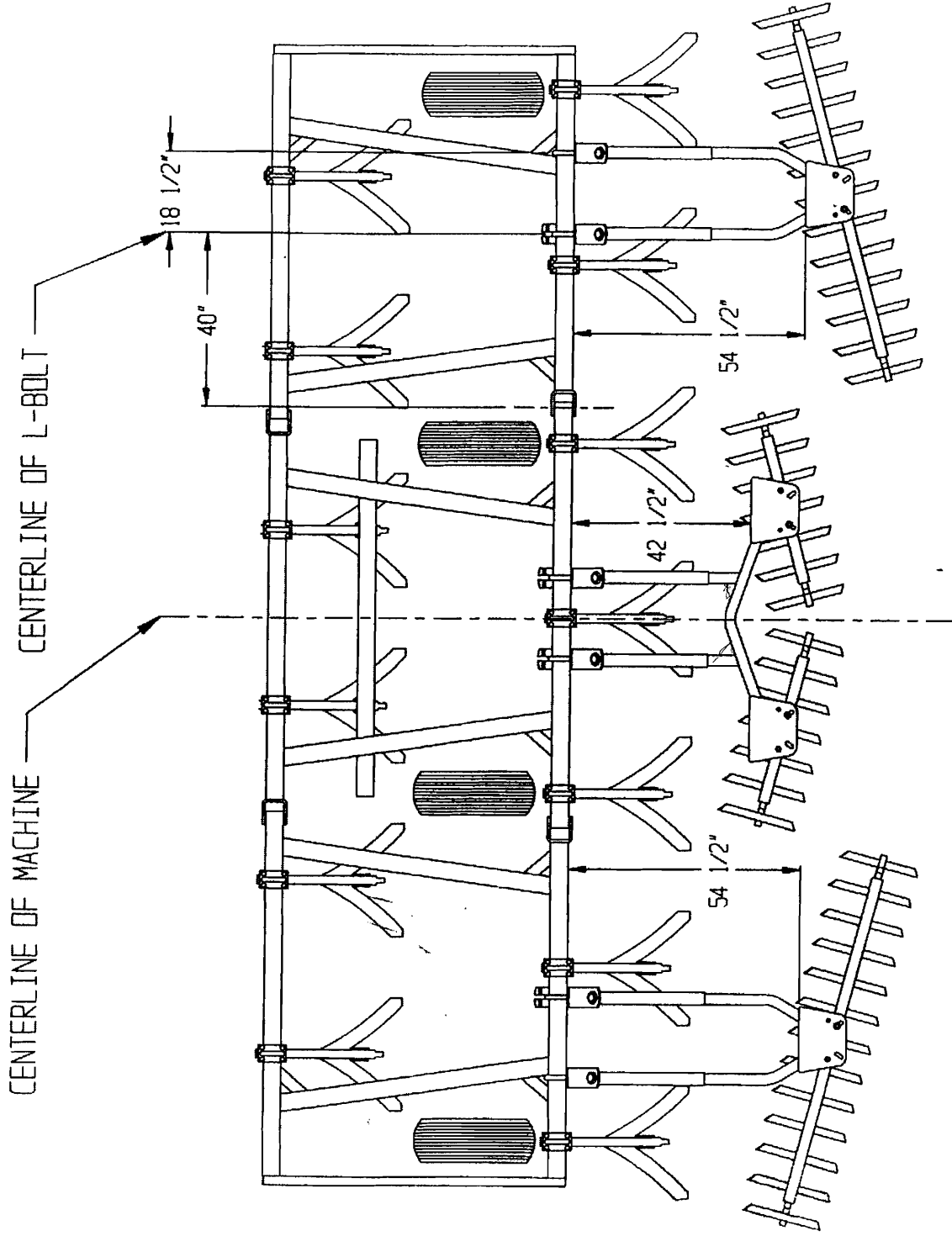
9104 97

5-55 STUBBLE  
TREADER PLACEMENT

STUBBLE TREADER 6/13/00



802050	ST 10-63	802056	ST 13-84	802214	ST 14-91	802214	ST 14-91	802215	ST 14-91	802057	ST 13-84	802051	ST 802051
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CENTERLINE OF MACHINE

CENTERLINE OF L-BOLT

18 1/2"

40"

54 1/2"

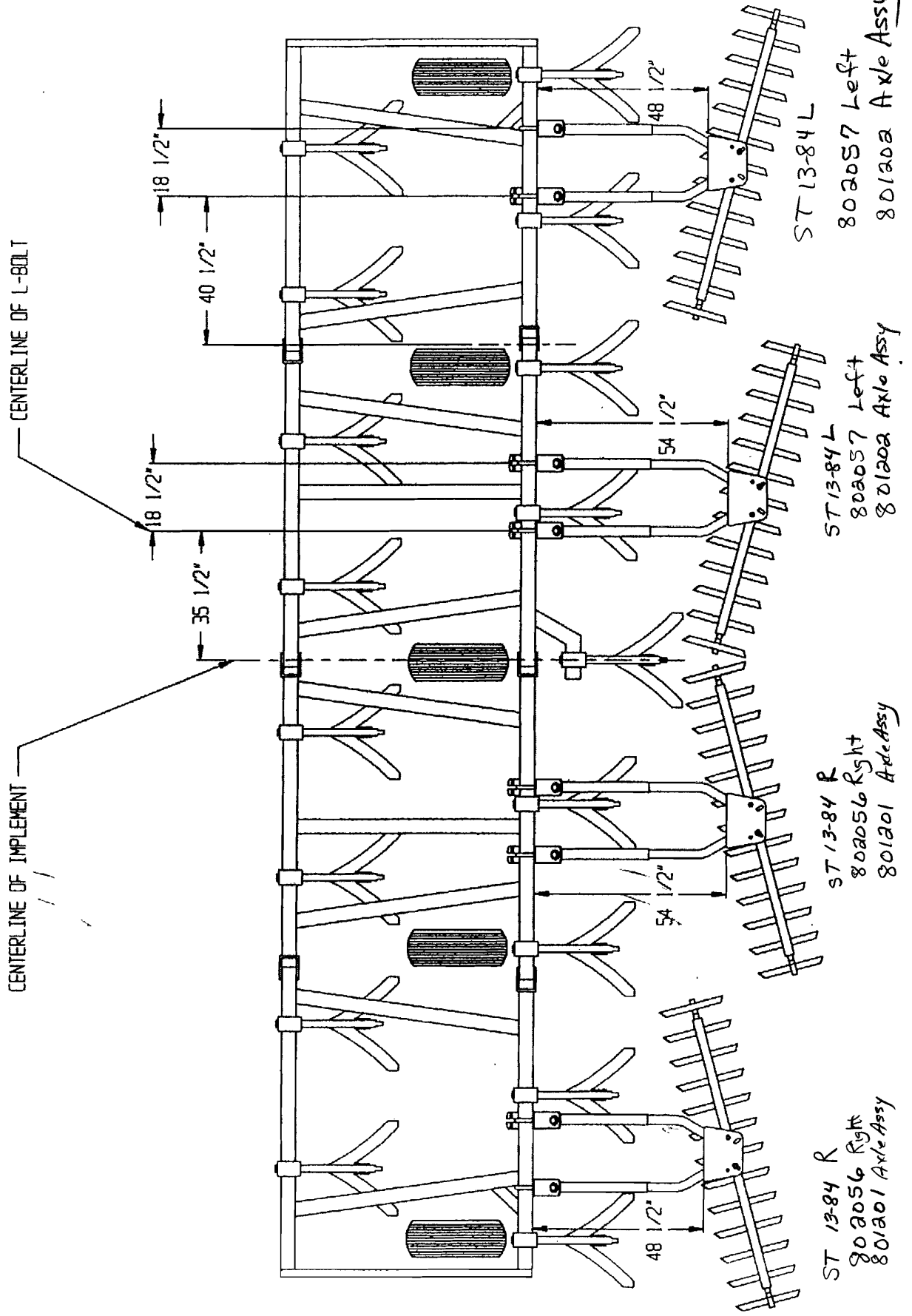
42 1/2"

54 1/2"

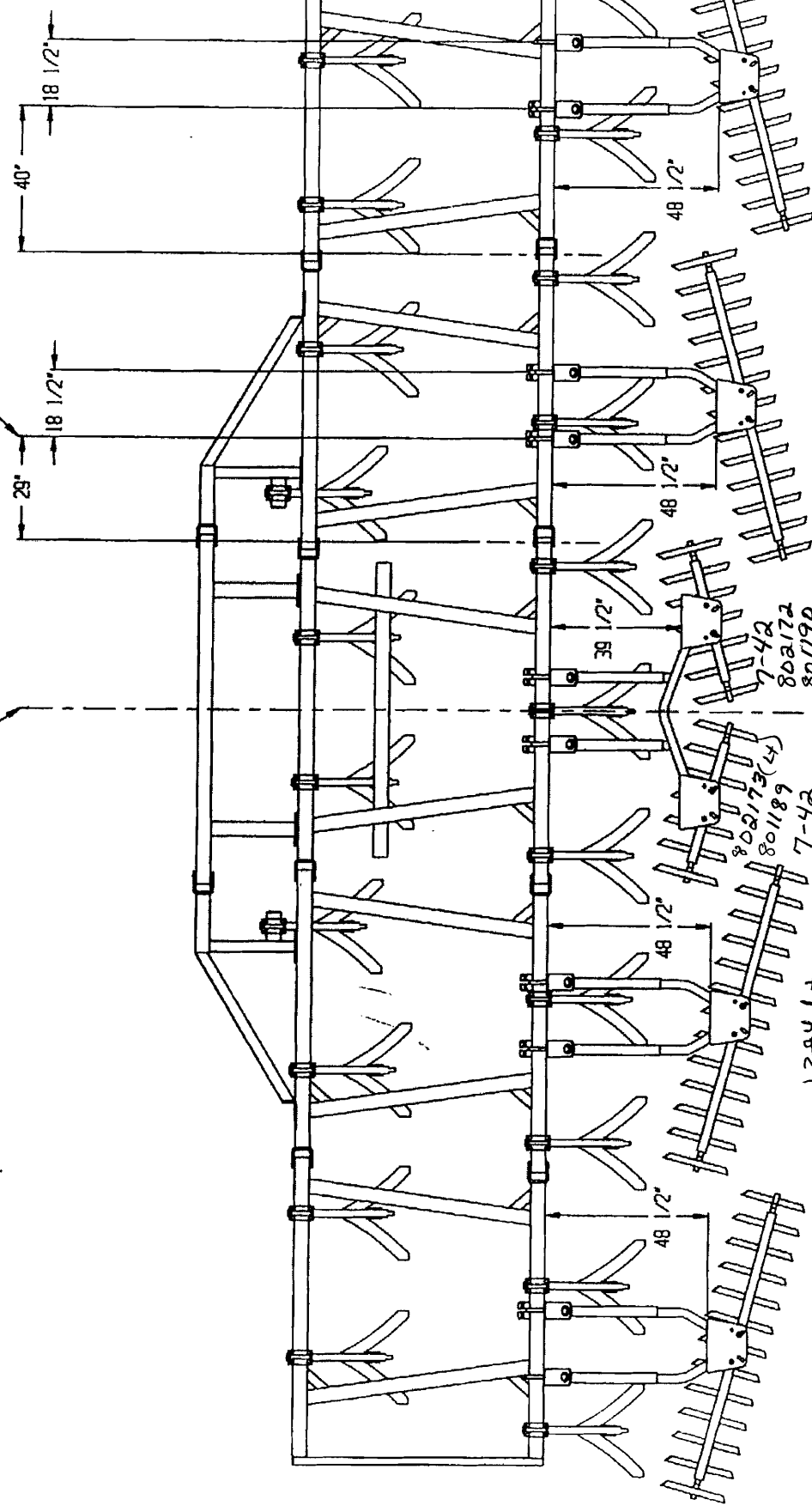
910320

# 4-28 STUBBLE TREADER PLACEMENT

# STUBBLE TREADER 06/08/00



CENTERLINE OF MACHINE  
 CENTERLINE OF L-BOLT



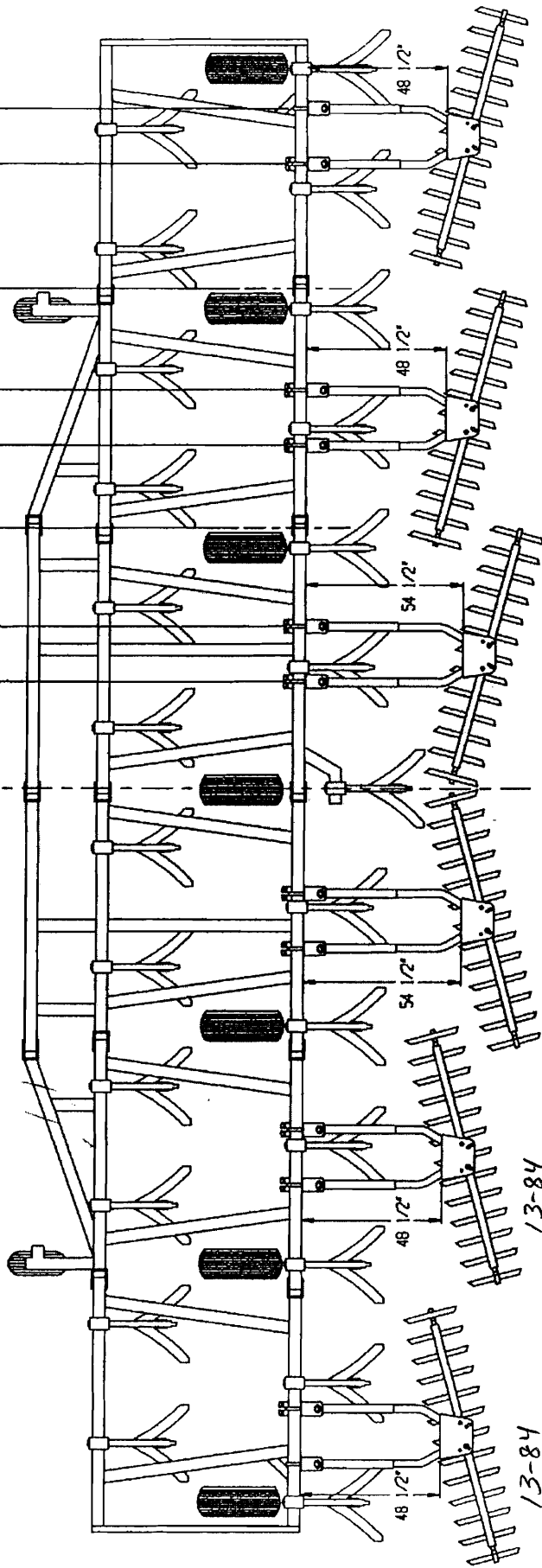
5-35 STUBBLE  
 TREADER PLACEMENT

910351

STUBBLE TREADER  
 06/08/00

CENTERLINE OF IMPLEMENT  
CENTERLINE OF L-BOLT

34"  
18 1/2"  
28'  
18 1/2"  
40 1/2"  
18 1/2"



13-84  
802056Rt  
801201 Rt

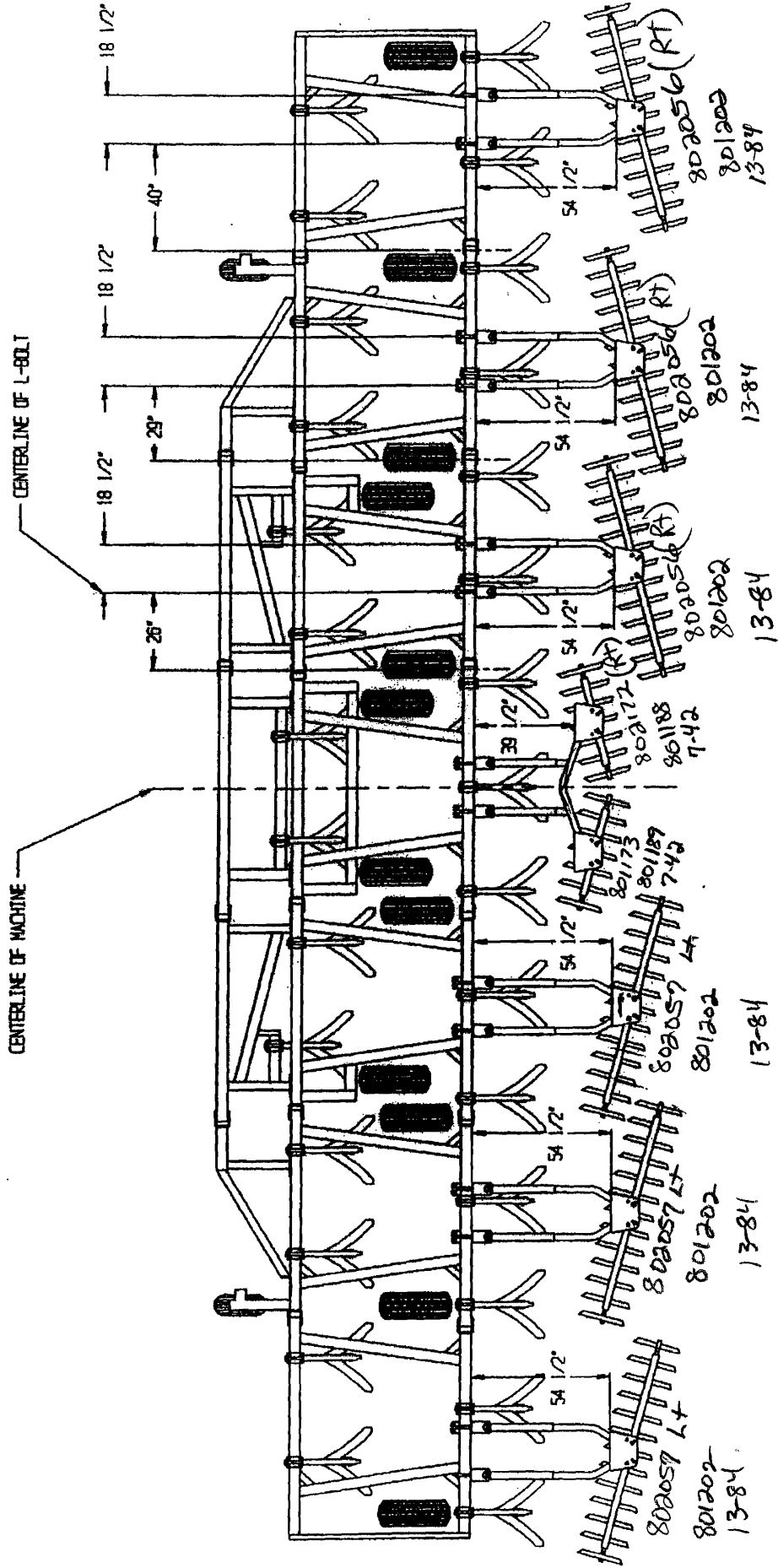
13-84  
802056Rt  
801201 Rt

13-84  
802056Rt  
801201 Rt

13-84  
802057Lt  
801202 Lt + Adk Assy

13-84  
802057Lt  
801202 Lt + Adk Assy

13-84  
802057Lt  
801202 Lt + Adk Assy



7-49 STUBBLE TREADER  
TREADER PLACEMENT

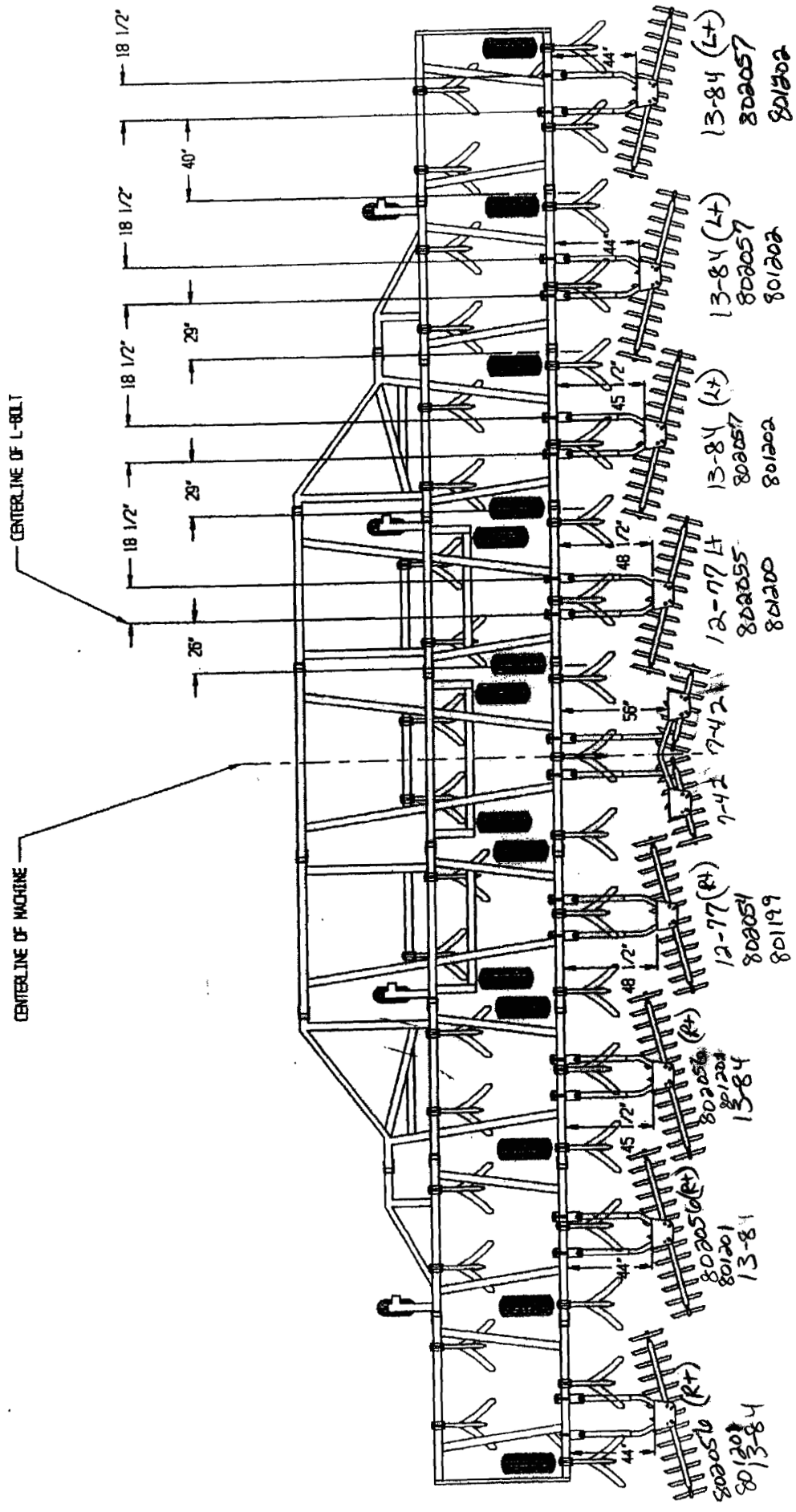
910352

STUBBLE TREADER  
placement



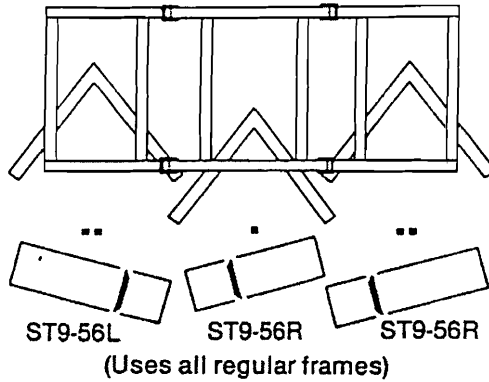
STUBBLE TREADER  
06/08/00

9-63 STUBBLE  
TREADER PLACEMENT

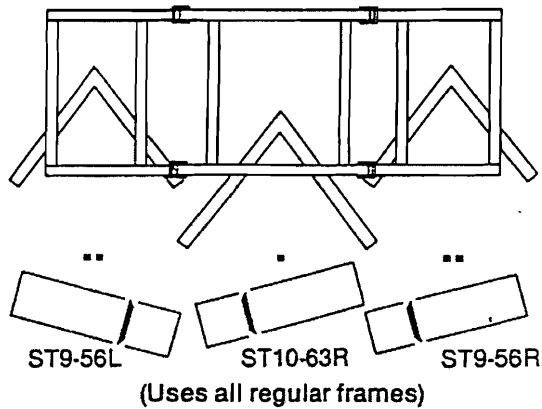


- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position

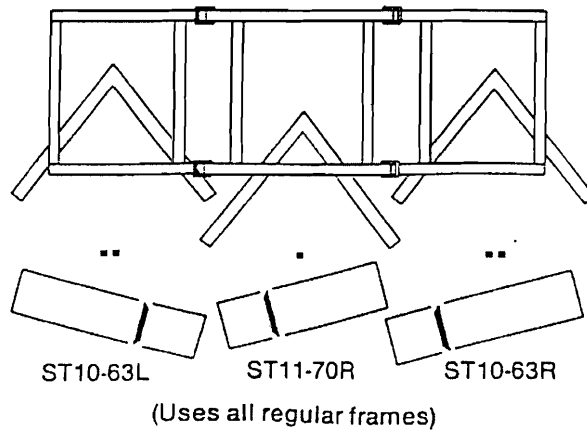
3 Sec. 14' Plow (5' blades)



3 Sec. 15' Plow (5' & 6' blades)

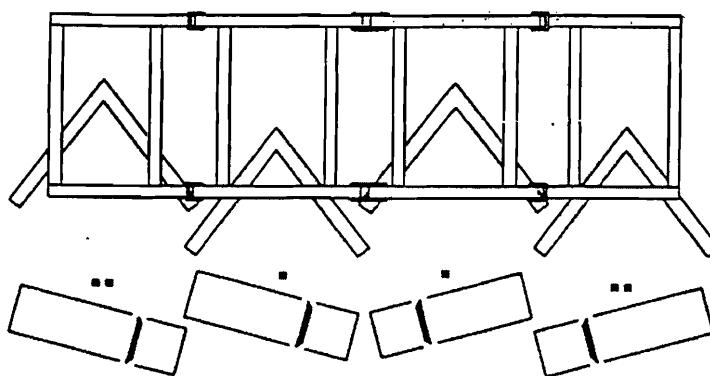


3Sec. 17' Plow (6' blades)



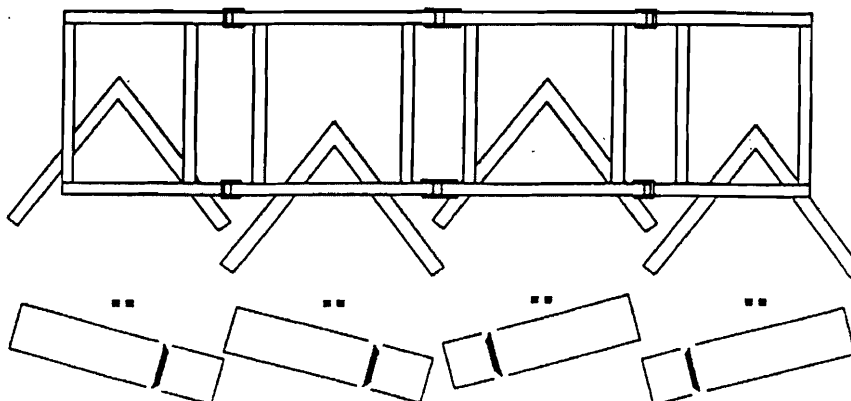
- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position

4 Sec. 18' Plow (5' blades)



ST9-56L w/Regular Frame	ST9-56L w/Regular Frame and Spacers	ST9-56R w/Regular Frame and Spacers	ST9-56R w/Regular Frame
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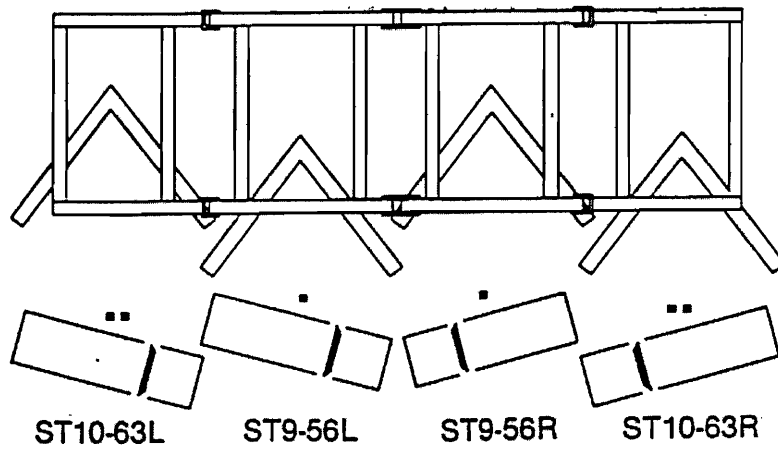
4 Sec. 22' Plow (6' blades)



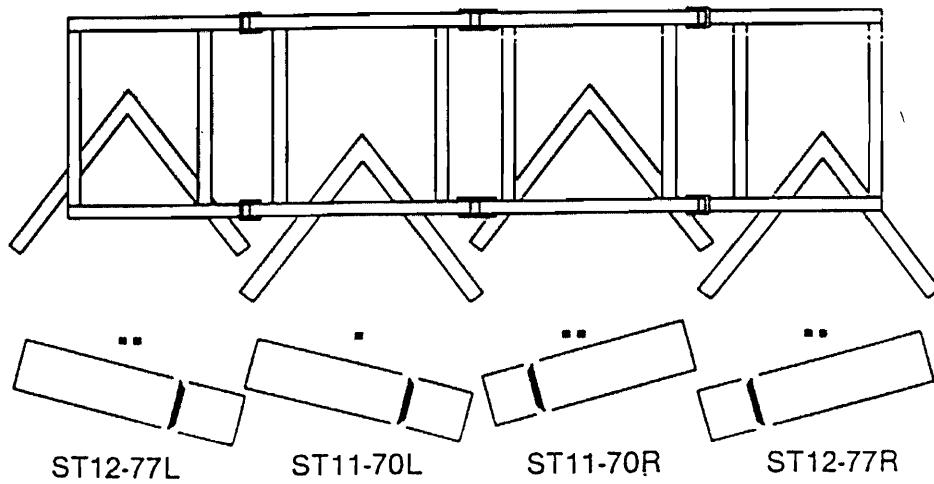
ST11-70L w/Regular Frame	ST10-63L w/Adjustable Frame	ST10-63R w/Adjustable Frame	ST11-70R w/Regular Frame
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- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position

4 Sec. 20' Plow (5' & 5 1/2' blades)

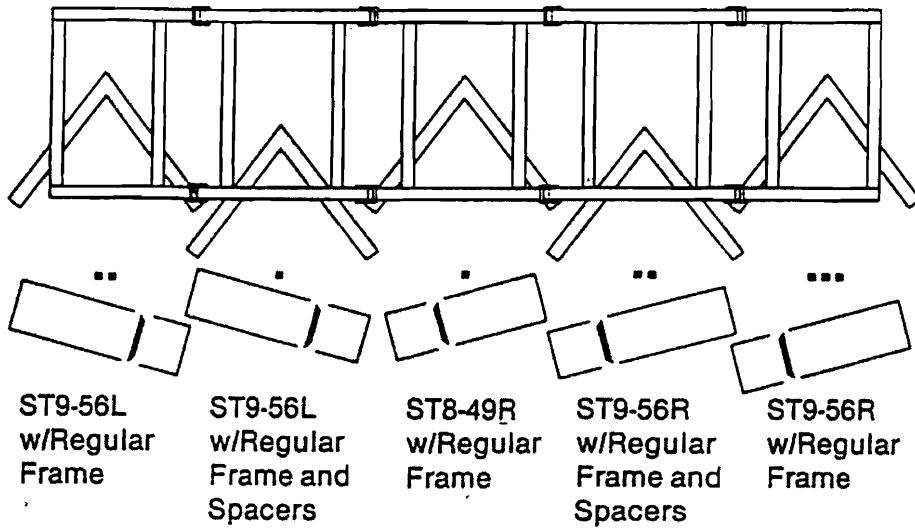


4 Sec. 24' Plow (6' & 6 1/2' blades)

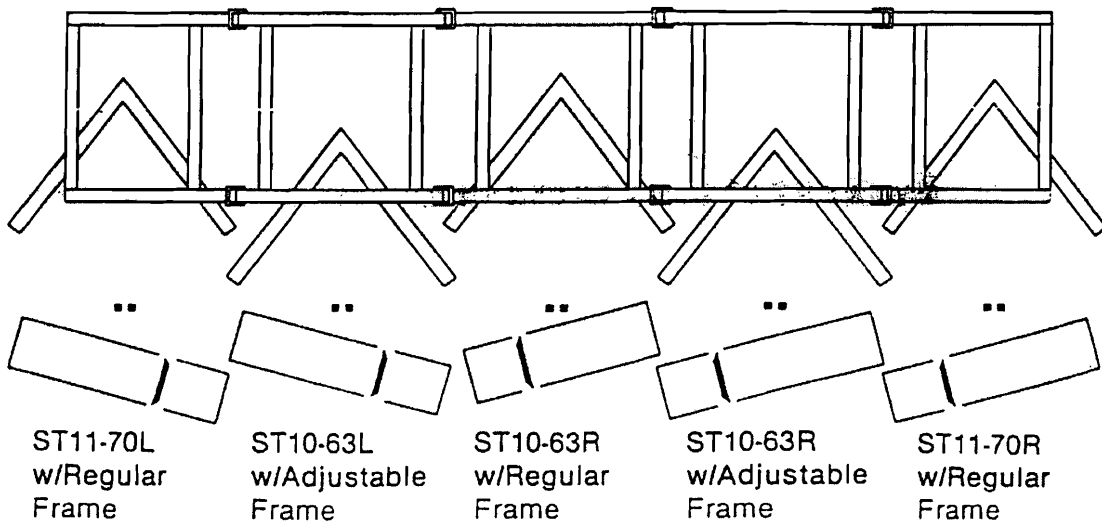


- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position
- ■ ■ Designates 57 1/2" Frame Position

5 Sec. 23' Plow (5' blades)

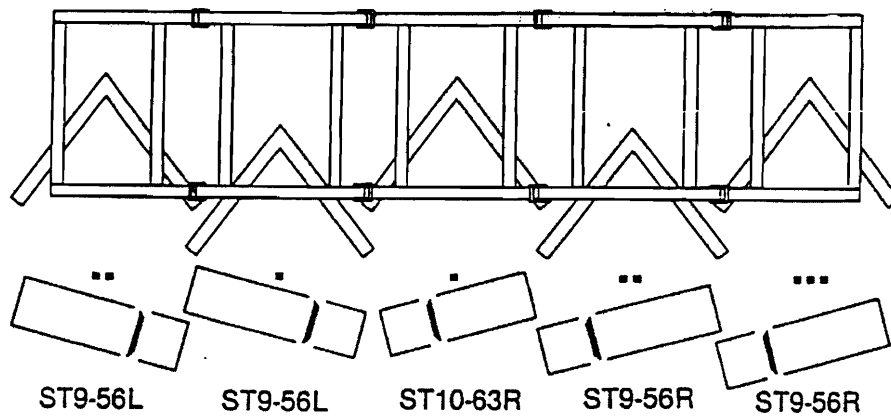


5 Sec. 28' Plow (6' blades)

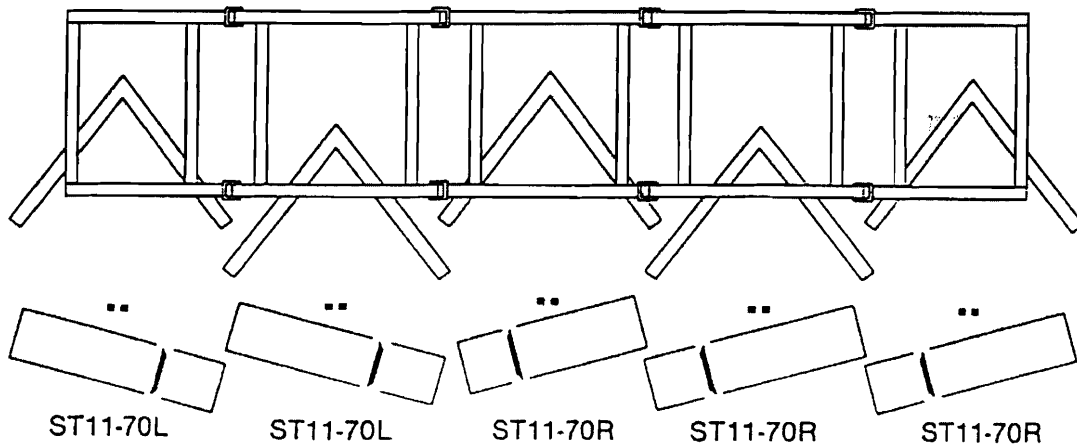


- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position
- ■ ■ Designates 57 1/2" Frame Position

5 Sec. 25' Plow (5' & 5 1/2' blades)

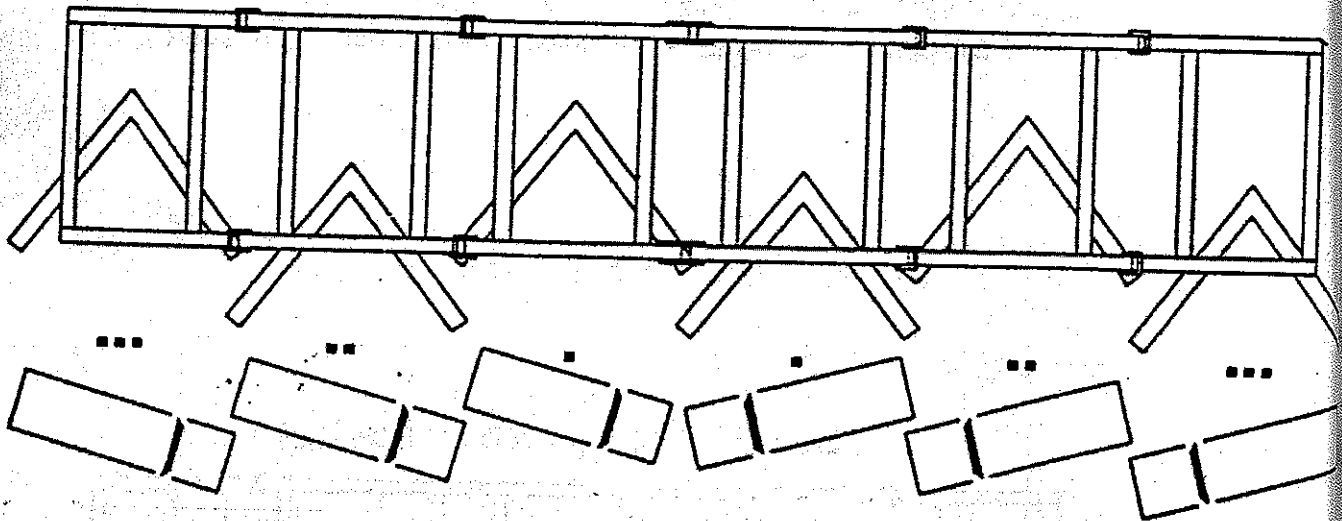


5 Sec. 30' Plow (6' & 6 1/2' blades)



- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position
- ■ ■ Designates 57 1/2" Frame Position

6 Sec. 28' Plow (5' blades)



ST9-56L  
w/Regular  
Frame

ST9-56L  
w/Regular  
Frame and  
Spacers

ST8-49L  
w/Regular  
Frame and  
Spacers

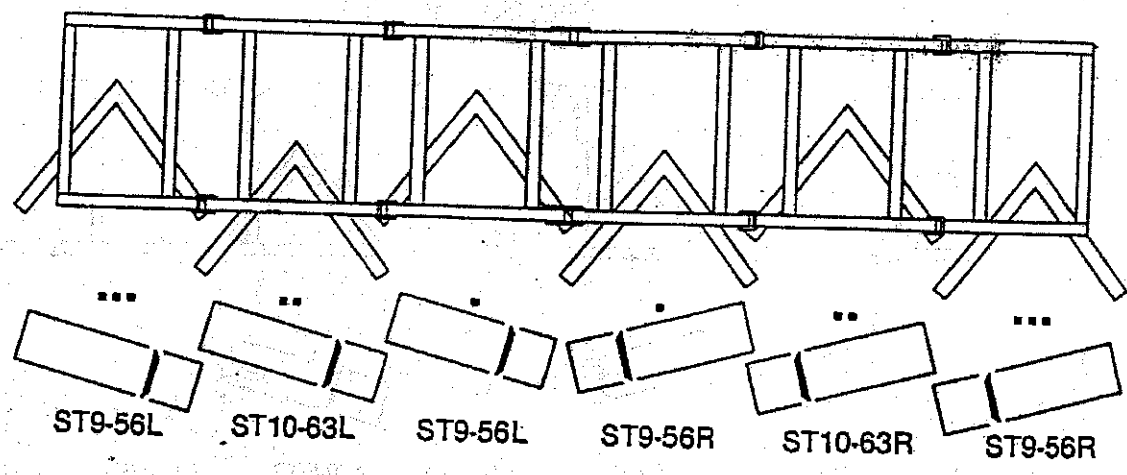
ST8-49R  
w/Regular  
Frame and  
Spacers

ST9-56R  
w/Regular  
Frame and  
Spacers

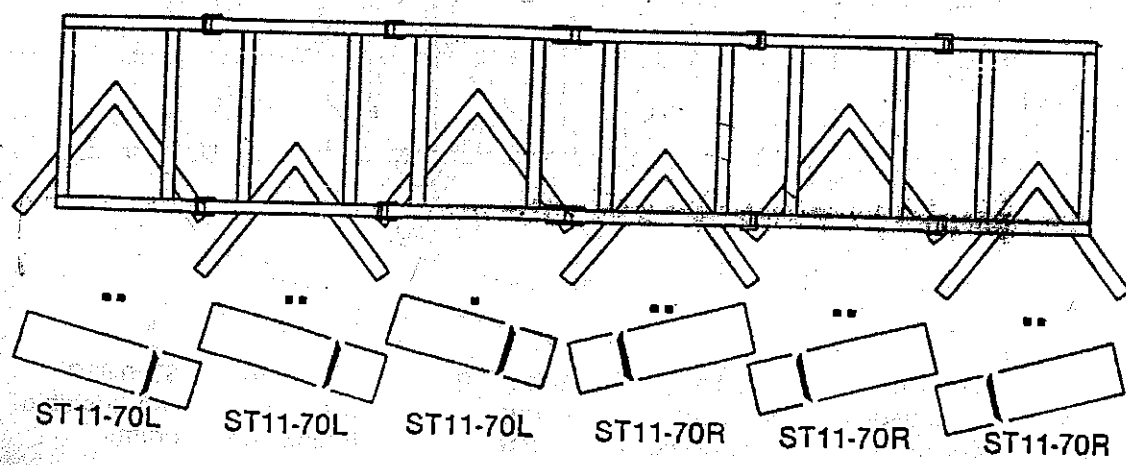
ST9-56R  
w/Regular  
Frame

- Designates 39 1/2" Frame Position
- ■ Designates 48 1/2" Frame Position
- ■ ■ Designates 57 1/2" Frame Position

6 Sec. 30' Plow (5' & 5 1/2' blades)



6 Sec. 36' Plow (6' & 6 1/2' blades)





Copy 910322 (Routes)

LE TREADER PLACEMENT

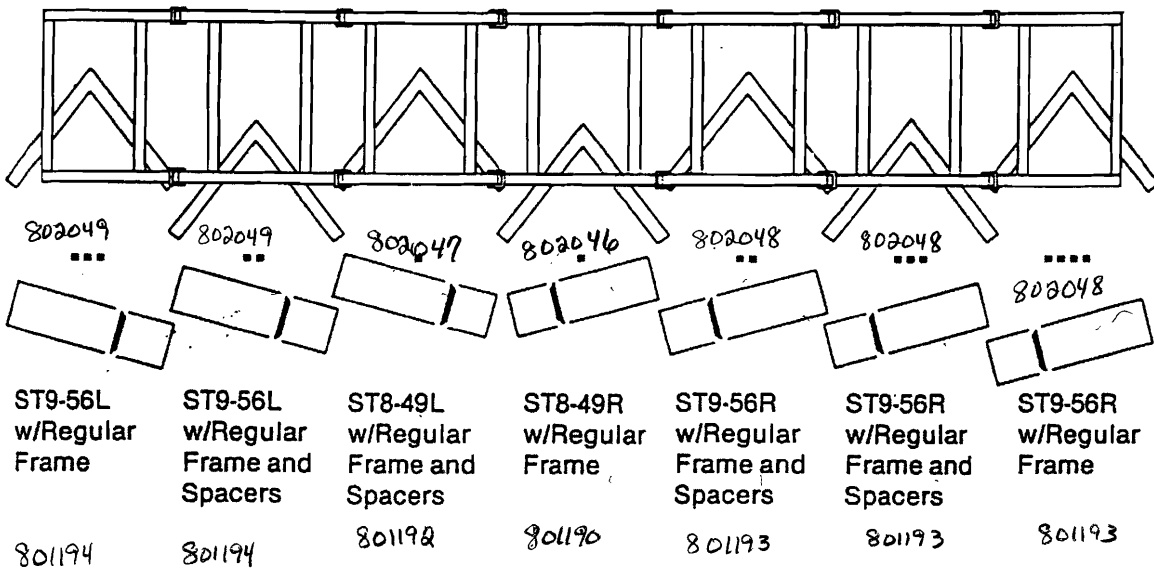
Change Cycles to 7

Assembly has Cycle two also

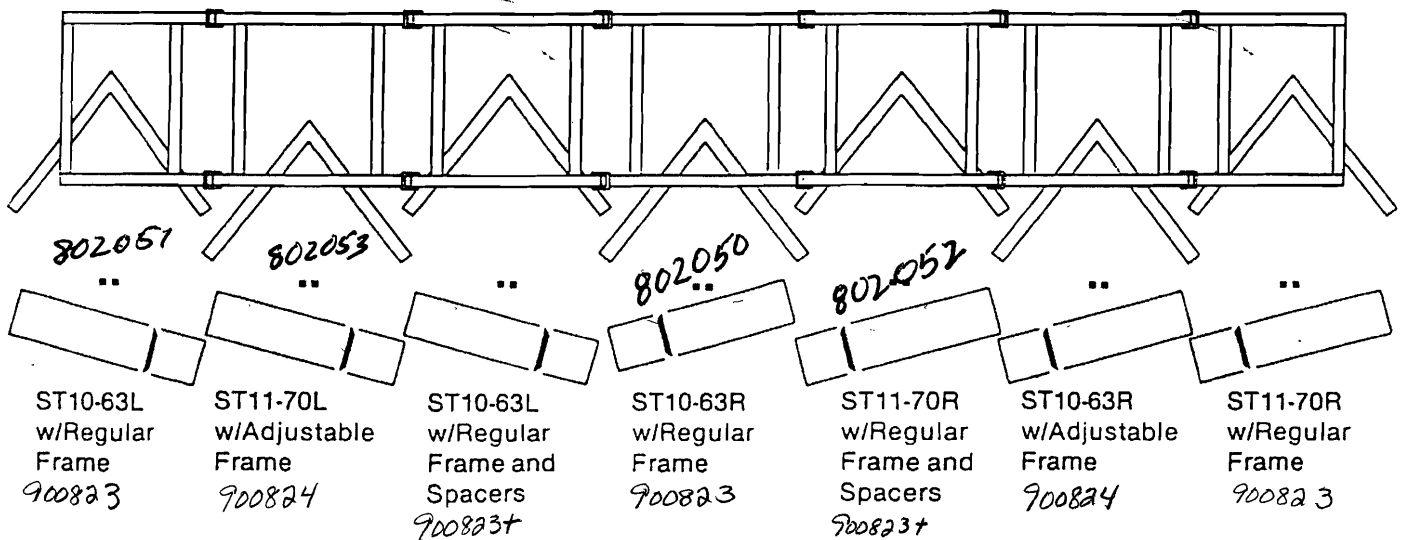
- Designates 39 1/2" Frame Position
- Designates 47" Frame Position
- Designates 54 1/2" Frame Position
- Designates 60 1/2" Frame Position

9.

7 Sec. 33' (5' blades)

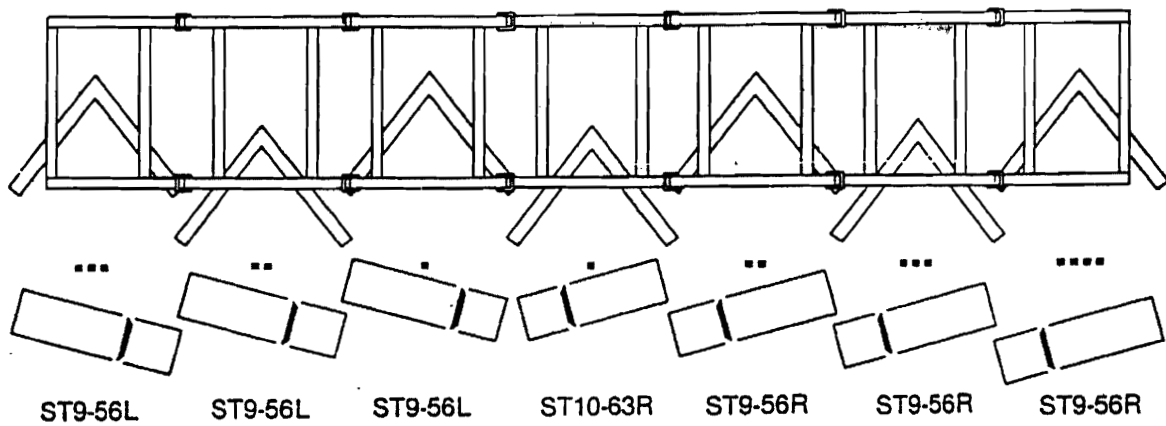


7 Sec. 40' (6' blades) 910311

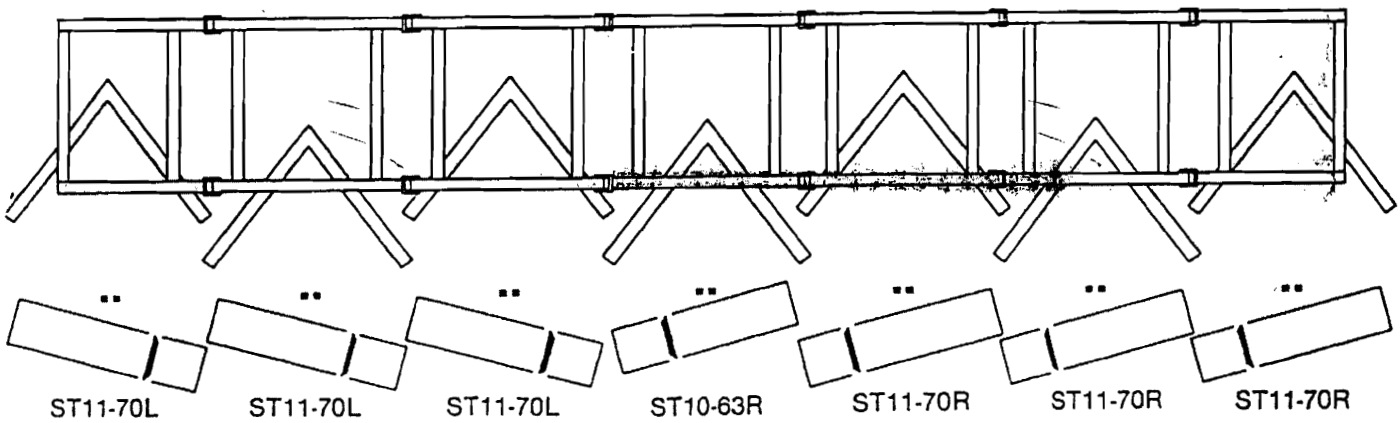


- Designates 39 1/2" Frame Position
- ■ Designates 47" Frame Position
- ■ ■ Designates 54 1/2" Frame Position
- ■ ■ ■ Designates 60 1/2" Frame Position

7 Sec. 35' Plow (5' & 5 1/2' blades)

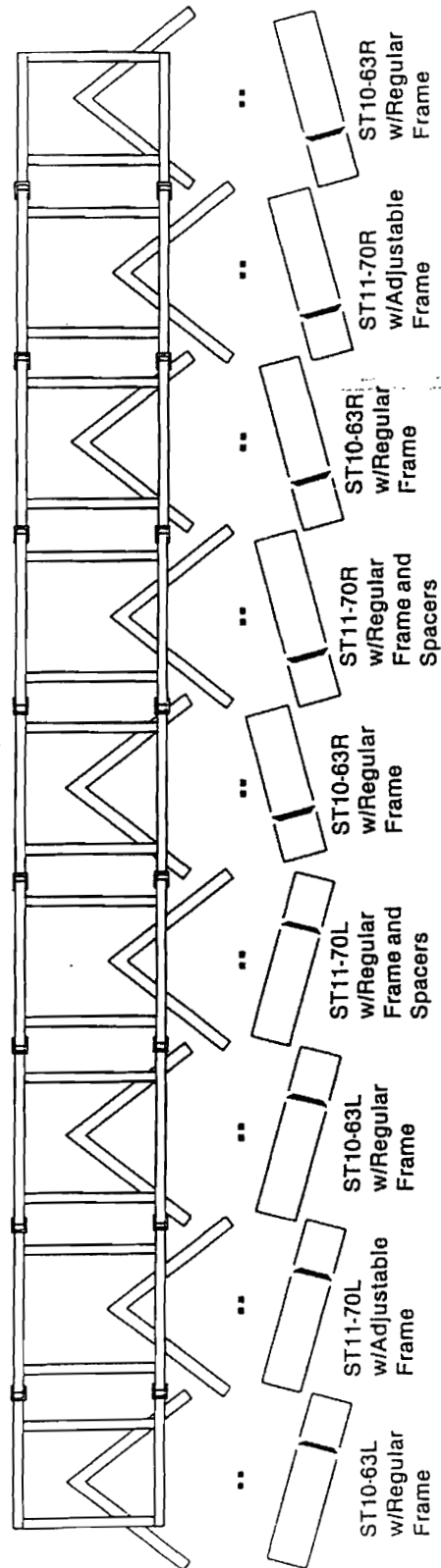


7 Sec. 42' Plow (6' & 6 1/2' blades)

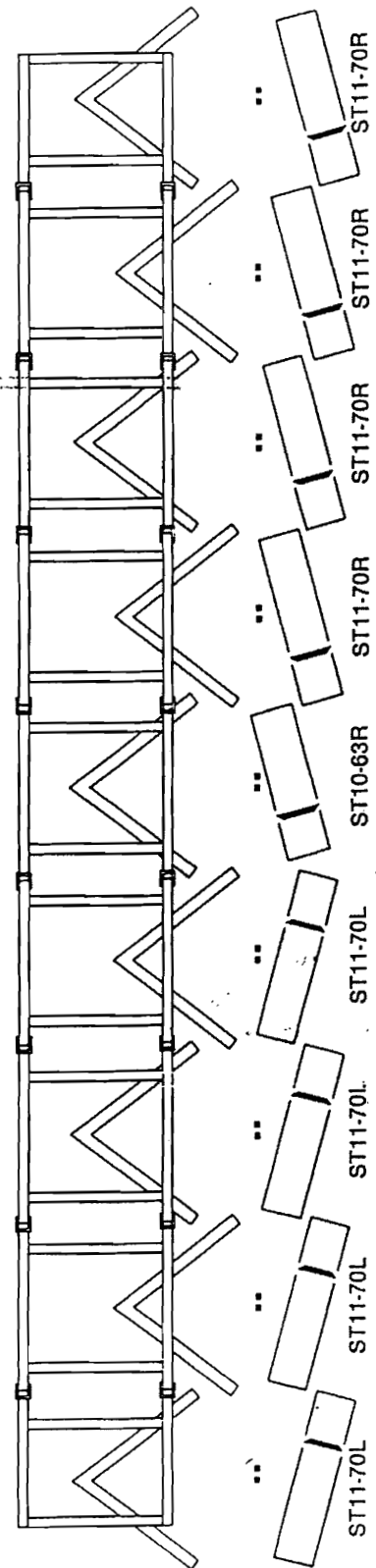


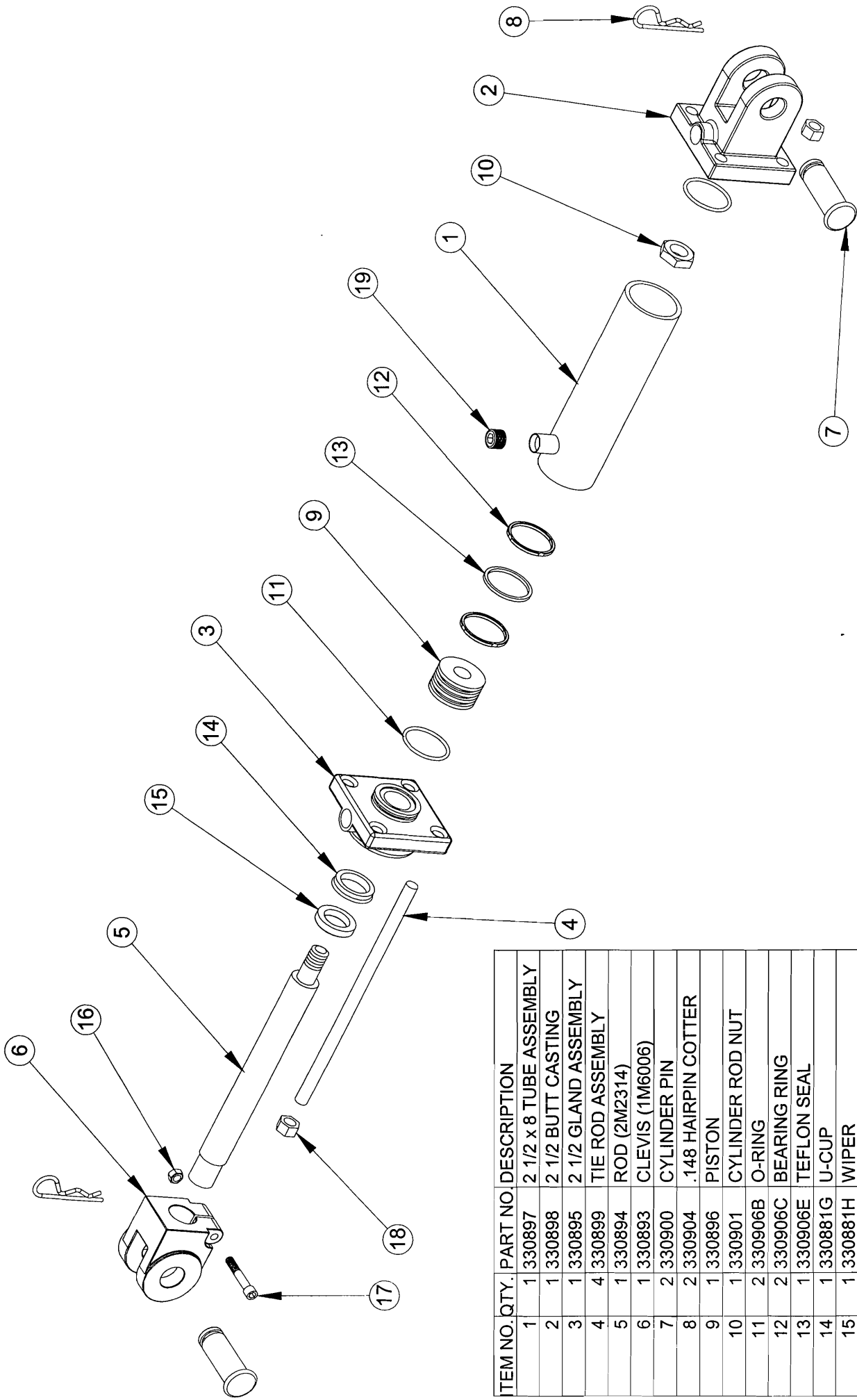
■ ■ Designates 47" Frame Position

9 Sec. 52' Plow (6' blades)



9 Sec. 54' Plow (6' & 6½' blades)



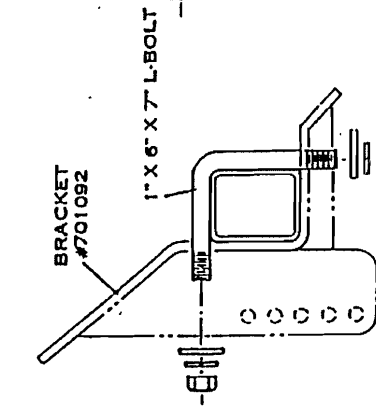


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	330897	2 1/2 x 8 TUBE ASSEMBLY
2	1	330898	2 1/2 BUTT CASTING
3	1	330895	2 1/2 GLAND ASSEMBLY
4	4	330899	TIE ROD ASSEMBLY
5	1	330894	ROD (2M2314)
6	1	330893	CLEVIS (1M6006)
7	2	330900	CYLINDER PIN
8	2	330904	.148 HAIRPIN COTTER
9	1	330896	PISTON
10	1	330901	CYLINDER ROD NUT
11	2	330906B	O-RING
12	2	330906C	BEARING RING
13	1	330906E	TEFLON SEAL
14	1	330881G	U-CUP
15	1	330881H	WIPER
16	1	150450	5/16 HEX FINISH NUT
17	1	330903	5/16 X 2 1/2 HHCS GR2 ZC
18	8	330902	TIE ROD NUT
19	1	330905	PLUG

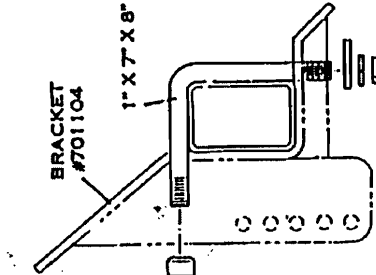
1. STUDY THE ASSEMBLY DRAWINGS IN THE PARTS SECTION AND THE PHOTOS AND ILLUSTRATIONS IN THIS SECTION OF THE CATALOG. THIS WILL HELP TO FAMILIARIZE YOURSELF WITH THE PARTS INVOLVED AND THEIR RELATIONSHIP TO ONE ANOTHER. ALSO, NOTE DESCRIPTIVE NAMES GIVEN TO PARTS.

(SEE BELOW). ALSO, IN SOME CASES, A SPECIAL 1/2" SPACER PLATE IS NEEDED BETWEEN THE MOUNTING BRACKET AND THE FRAME TUBE. THIS IS NEEDED, IN SOME CASES (SEE MOUNTING DIAGRAMS) TO MAKE CLEARANCE BETWEEN THE MOUNTING BRACKETS AND THE CYLINDERS.

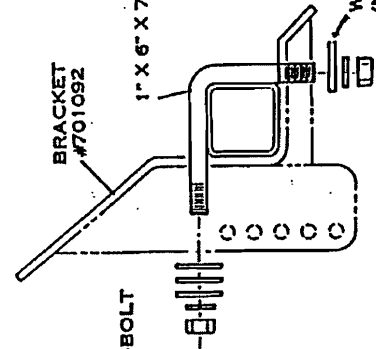
2. BEGIN ASSEMBLY BY LOOSELY ATTACHING THE MOUNTING BRACKETS TO THE REAR FRAME TUBE OF MACHINE. USE ONE, 1" x 6" x 7" L-BOLT, TWO 1" LOCKWASHERS, ONE 1" FLATWASHER, ONE WEDGE, AND TWO 1" HEX NUTS FOR EACH BRACKET MOUNTED TO 4" x 5" BOXING. WHEN MOUNTING TO 4" x 4" OR 4" x 6" BOXING, SPECIAL BRACKETS, L-BOLTS, OR EXTRA WASHERS ARE NEEDED



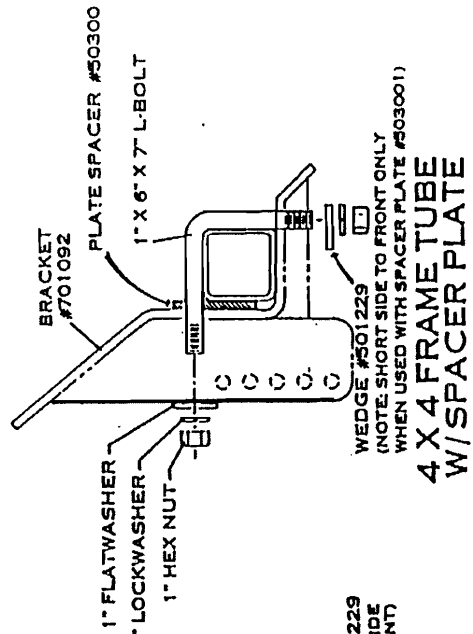
4 X 5 FRAME TUBE



4 X 6 FRAME TUBE



4 X 4 FRAME TUBE

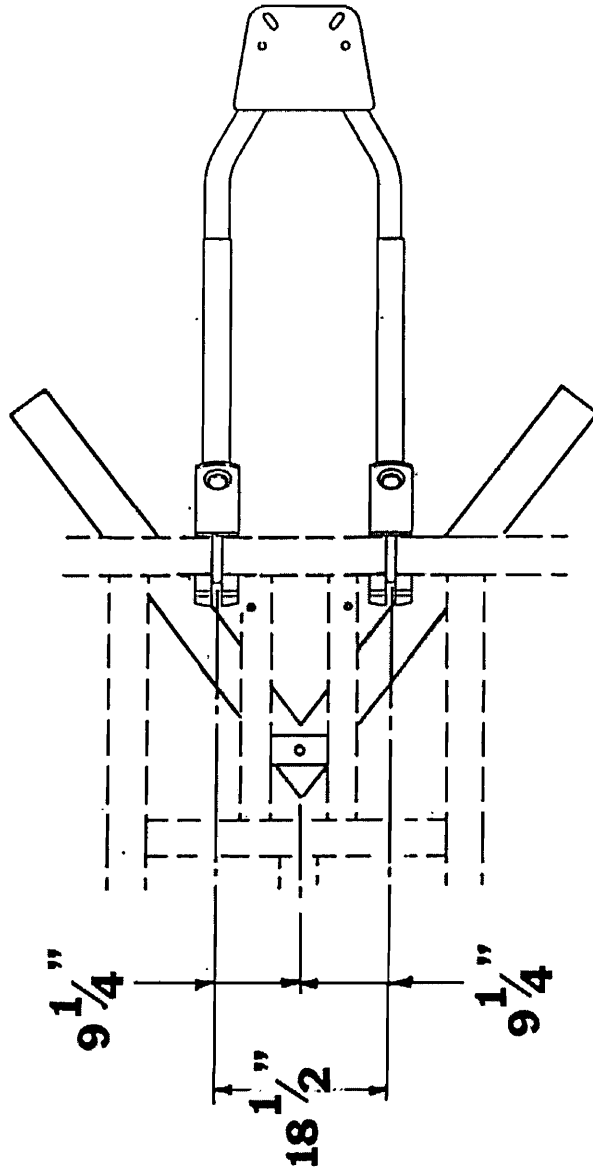


4 X 4 FRAME TUBE  
W/ SPACER PLATE

IF TREADER IS TO BE MOUNTED TO A BLADE PLOW, REFER TO MOUNTING DIAGRAMS AND INSTRUCTIONS IN THE BLADE PLOW SECTION. THIS WILL HELP YOU LOCATE THE MOUNTING BRACKETS IN THEIR PROPER POSITION.

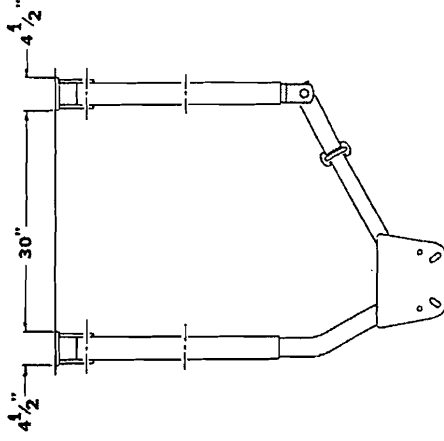
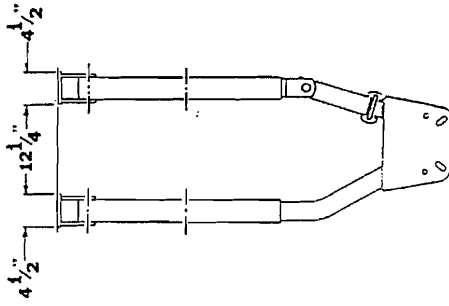
FOR EASE OF MOUNTING AND ADJUSTMENT ON BLADE PLOWS, EACH TREADER SECTION SHOULD BE CENTERED DIRECTLY BEHIND BLADE CENTER (SEE BELOW). AFTER THE OTHER ASSEMBLY STEPS ARE PERFORMED AND HARROW GANGS ARE

MOUNTED TO BRACKETS, GANGS AND BRACKETS CAN THEN BE SHIFTED EITHER LEFT OR RIGHT TO GET THE PROPER COVERAGE AND OVERLAP.



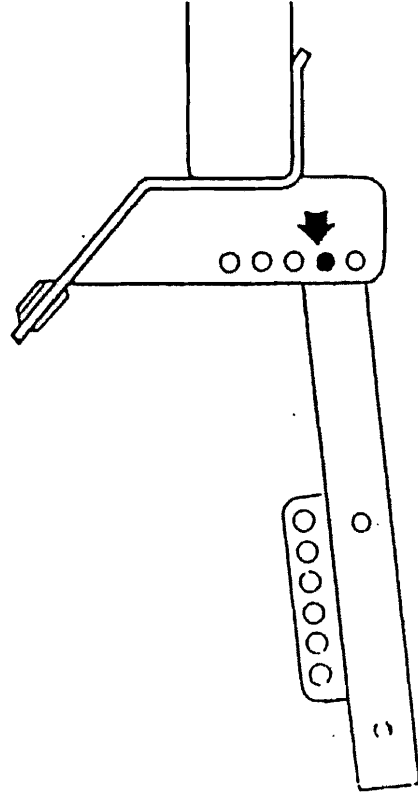
EACH L-BOLT AND BRACKET SHOULD BE CENTERED APPROX. 9-1/4" EITHER SIDE OF BLADE CENTER (SEE ABOVE), WHERE OBSTRUCTIONS ARE ENCOUNTERED. MOVE BOTH BRACKETS EITHER LEFT OR RIGHT TO CLEAR OBSTRUCTION (NOT MORE THAN 3"-4" EITHER WAY). ALWAYS KEEP APPROX. 18-1/2" BETWEEN CENTER TO CENTER ON L-BOLTS. IF BRACKETS WILL NOT CLEAR OBSTRUCTION BY MOVING IN THIS MANNER, AND KEEPING 18-1/2"

DIMENSION, AN ADJUSTABLE FRAME MUST BE USED IN PLACE OF REGULAR FRAME. IN MOST CASES, THE REGULAR FRAME CAN BE USED. IF THE ADJUSTABLE FRAME MUST BE USED, MOUNTING BRACKETS SHOULD BE ATTACHED TO REAR FRAME TUBE WHEREVER THERE IS CLEARANCE (SEE ILLUSTRATIONS ON NEXT PAGE FOR LIMITATIONS).



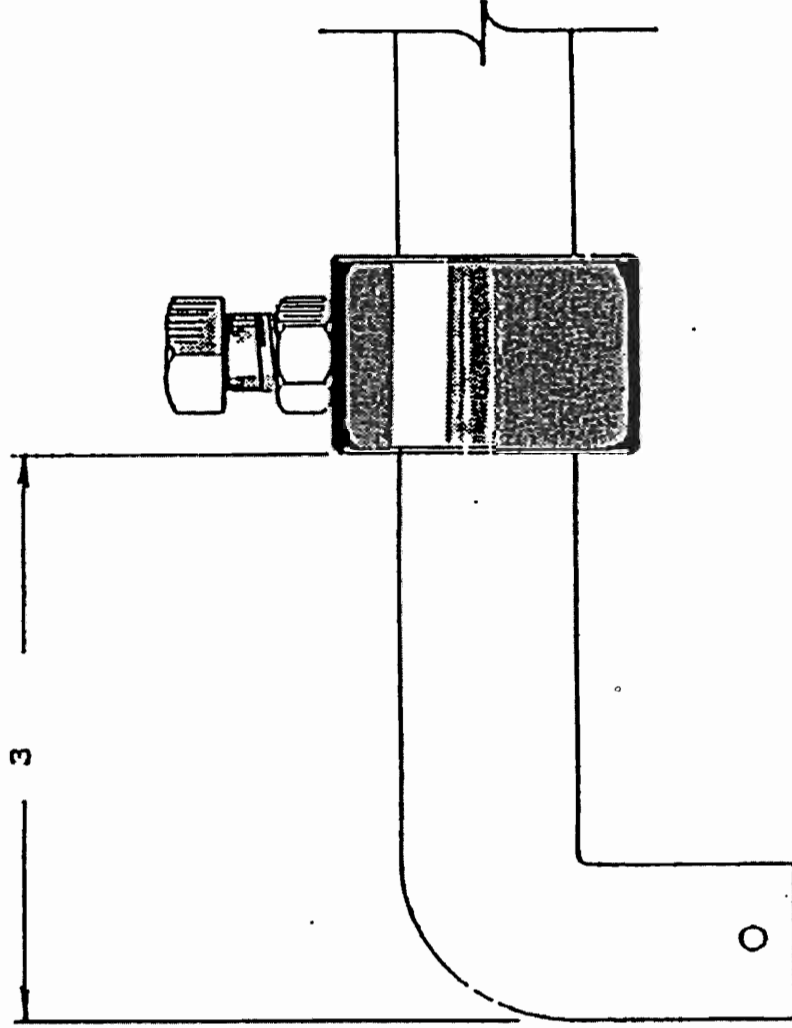
3. AFTER ATTACHING MOUNTING BRACKETS IN PROPER POSITIONS ACCORDING TO APPLICABLE BLADE PLOW MOUNTING, ATTACH THE FRAME PIVOT TUBES TO THE MOUNTING BRACKETS. THIS WILL REQUIRE ONE LOOSE BUSHING #501168, ONE 3/4" x 5" BOLT (HHCS), ONE 3/4" LOCKWASHER, AND ONE 3/4" HEX NUT. THE MOUNTING BRACKET HAS 5 ADJUSTING HOLES FOR DIFFERENT APPLICATIONS. FOR PLOWS WITH A DIMENSION OF 29" FROM

BOTTOM FRAME TO CUTTING EDGE OF BLADE, THE FRAME PIVOT TUBES SHOULD BE IN THE SECOND HOLE FROM THE BOTTOM OF THE BRACKET. MACHINES WITH A 25" DIMENSION AT THIS POINT SHOULD HAVE THE FRAME PIVOT TUBE IN THE 3<sup>RD</sup> OR 4<sup>TH</sup> HOLE UP FROM THE BOTTOM. THIS WILL DEPEND SOMEWHAT ON THE DEPTH OF TILLAGE OPERATION (SEE OPERATING NSTRUCTIONS).



4. ATTACH THE LOCK COLLARS APPROX. 3" UP FROM THE BENT END OF EACH ADJUSTING ROD (SEE BELOW).
5. SLIDE ONE LOWER (LONG) HARROW SPRING OVER THREADED END OF ADJUSTING ROD; SLIDE THREADED END OF ROD THROUGH BALL JOINT IN EACH MOUNTING BRACKET.
6. SLIDE ONE UPPER (SHORT) HARROW SPRING OVER THREADS ON ROD, AND THEN ATTACH 1" LOCK NUT TO THREADED END OF ROD. THE LOCK NUT SHOULD BE FLUSH WITH THE THREADED END OF ROD (IN MOST CASES).

7. SLIDE THE BENT END OF ROD THROUGH ONE OF THE ADJUSTING HOLES IN THE FRAME PIVOT TUBES. THIS ADJUSTMENT WILL VARY AS DESCRIBED IN STEP NO. 3. FOR MACHINES WITH 29"-30" FROM BOTTOM OF PLOW FRAME TO CUTTING EDGE OF BLADE, BENT END OF ROD SHOULD BE IN THE 3<sup>RD</sup> HOLE BACK. FINE-TUNING OF THIS FEATURE WILL BE DESCRIBED IN THE OPERATING INSTRUCTIONS. SECURE THE ROD IN THE PROPER HOLES BY USING ONE 1" SAE FLATWASHER AND ONE NO. 6 HAIRPIN CLIP.

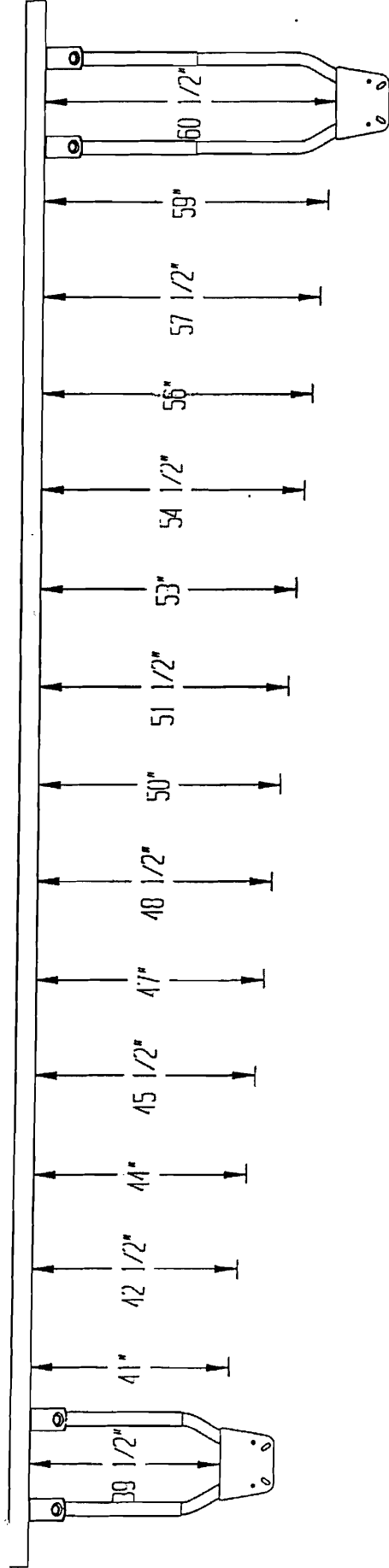




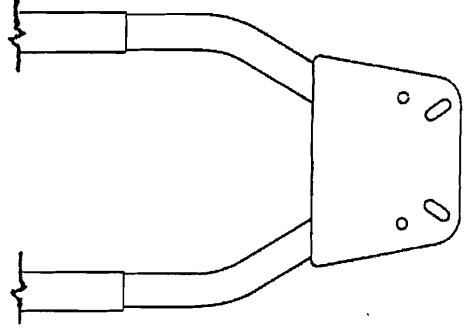
ATTACH EITHER THE REGULAR TREADER FRAME OR THE ADJUSTABLE FRAME TO THE FRAME PIVOT TUBES. THIS WILL REQUIRE TWO 3/4" x 4" HEX NUTS, PLEASE REFER TO THE HARROW MOUNTING DIAGRAM THAT APPLIES TO YOUR IMPLEMENT SIZE.

THE HARROW FRAME SHOULD NORMALLY BE SET IN ONE OF THE DIFFERENT POSITIONS SHOWN BELOW. THIS IS TO ALLOW END TEETH ON GANGS TO CLEAR ONE ANOTHER.

NOTE: DIMENSIONS ARE APPROXIMATE



THE UNIVERSAL WISH-BONE MOUNT CAN BE SET IN EITHER A LEFT OR RIGHT POSITION.

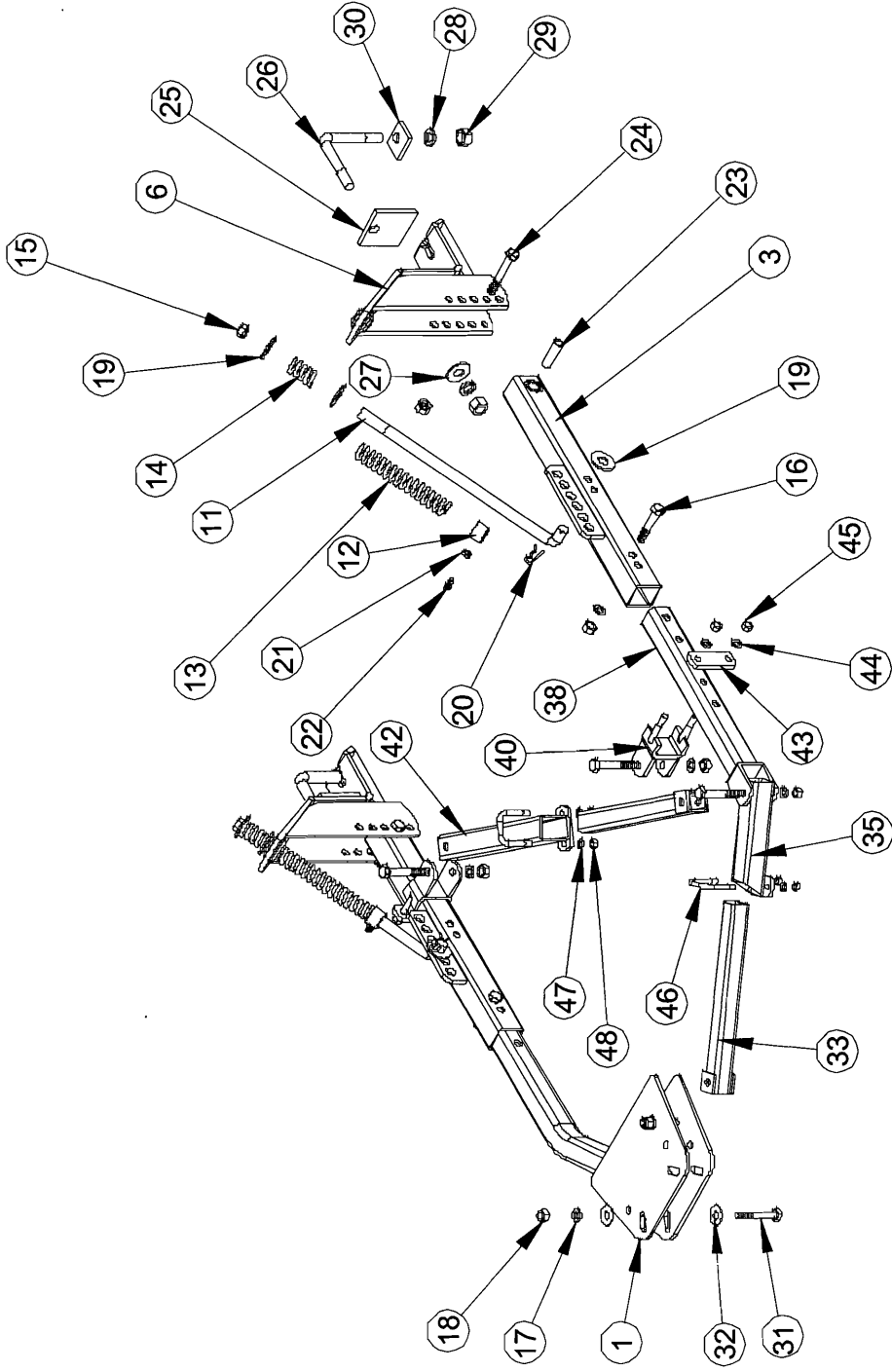


9. MOST MACHINES WILL REQUIRE ONLY THE REGULAR TREADER FRAME. THIS IS A WELDED UNIT AND DOESN'T NEED TO BE PREASSEMBLED. FOR MACHINES USING THE ADJUSTABLE TREADER FRAME, ASSEMBLY INSTRUCTIONS WILL FOLLOW. MACHINES USING ONLY THE REGULAR FRAME, PLEASE GO ON TO STEP NO.12. THE ADJUSTABLE FRAME DOES REQUIRE SOME PREASSEMBLY...PLEASE REFER TO PAGE NO. 9 TO BECOME FAMILIARIZED WITH PARTS AND PART NUMBERS. ATTACH THE ADJUSTABLE HARROW FRAME PART #701120 AND THE ADJUSTABLE FRAME TUBE PART #701109 TO THE FRAME PIVOT TUBES IN THEIR

PROPER FRONT TO REAR POSITION (REFER TO NO. 9 AND HARROW MOUNTING DIAGRAM).

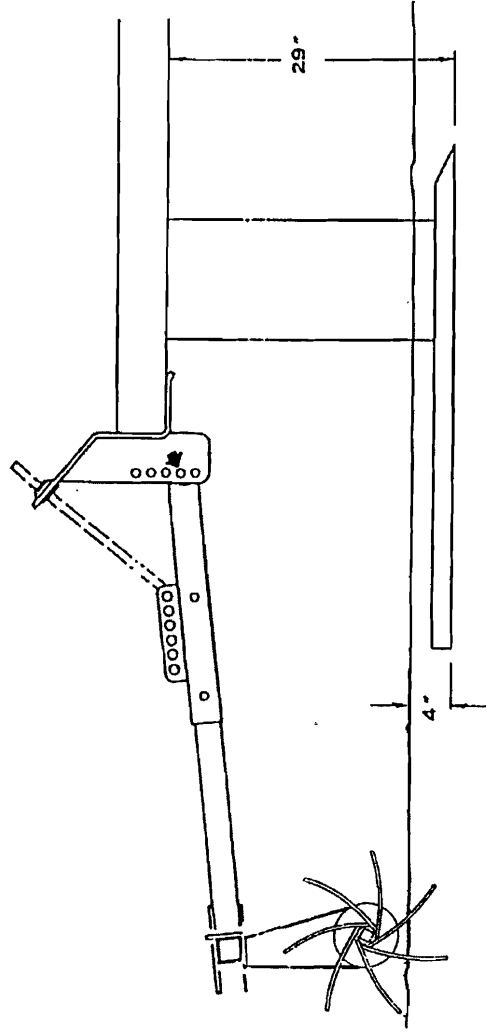
10. SLIDE THE ADJUSTABLE PIVOT TUBE #701095 INTO ADJUSTABLE SLEEVE TUBE PART#701103.

11. ALIGN HOLES IN EACH END OF THESE PARTS WITH HOLE IN ADJUSTABLE TREADER FRAME AND HOLE IN ADJUSTABLE SLEEVE TUBE. ADJUSTABLE PIVOT TUBE IS HELD IN PROPER ADJUSTMENT WITH ONE 1/2" x 2-9/16" x 3" U-BOLT, TWO 1/2" LOCKWASHERS AND TWO 1/2" NUTS. TIGHTEN ALL BOLTS, ASSEMBLE AND ATTACH BRACKET AS SHOWN IN ASSEMBLY DIAGRAM.



5. WITH PLOW IN THE FIELD AT DESIRED WORKING DEPTH, FROM A SIDE VIEW THE TREADER SHOULD BE SLIGHTLY LOWER IN THE REAR (WHEEL END) THAN ON THE MOUNTING BRACKET END (SEE ILLUSTRATION). IF, FROM A SIDE VIEW, THE TREADER IS HIGHER IN THE REAR, THE PIVOT TUBES ARE LOCATED IN TOO LOW OF A

HOLE SETTING IN THE MOUNTING BRACKET. THIS COULD CAUSE RIDGING. PIVOT TUBES SHOULD BE CHANGED TO THE NEXT ONE OR TWO HOLES UP IN THE MOUNTING BRACKETS. THIS SETTING CAN VARY DEPENDING ON DEPTH OF TILLAGE OPERATION.



FOR MACHINES WITH A DIMENSION OF 29" FROM BOTTOM OF FRAME TO CUTTING EDGE OF BLADE, THE PIVOT TUBES SHOULD BE SET IN THE SECOND HOLE FROM THE BOTTOM OF THE MOUNTING BRACKET. THIS SETTING IS USED WHEN TILLAGE DEPTH IS 3" - 4". IF TILLAGE DEPTH INCREASES, PIVOT TUBES SHOULD BE ADJUSTED TO A HIGHER SETTING ON THE MOUNTING BRACKETS. FOR MACHINES WITH A DIMENSION OF 25" FROM BOTTOM OF FRAME TO CUTTING EDGE OF BLADE AND A TILLAGE DEPTH OF 3" - 4" IS REQUIRED, THE PIVOT TUBES SHOULD BE SET IN THE THIRD HOLE FROM THE BOTTOM OF THE MOUNTING BRACKET. IN MOST CASES, CHISEL PLOWS WILL USE THE FIRST HOLE UP FROM THE BOTTOM OF THE MOUNTING BRACKET.

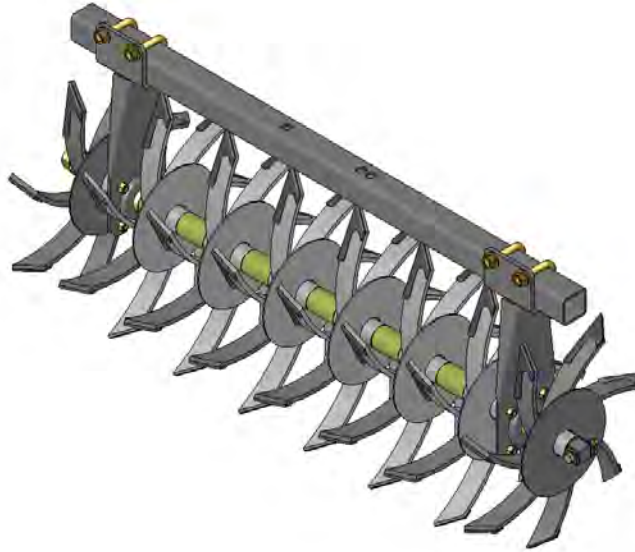
6. AFTER TREADER IS SET IN PROPER HOLE IN MOUNTING BRACKET, RAISE MACHINE OUT OF GROUND AND CHECK FOR

ADEQUATE ROADING CLEARANCE BETWEEN TREADER WHEELS AND GROUND. IF THERE IS NOT ENOUGH CLEARANCE, THE LOCKNUTS ON TOP OF THE ADJUSTING RODS CAN BE SCREWED DOWN TO COMPENSATE. WHEN IN FIELD USE, THERE SHOULD BE NO WEIGHT DOWN ON THE UPPER SPRING ON THE ADJUSTING ROD. THIS SPRING IS FOR MINIMIZING ROAD SHOCK ONLY. TREADER SHOULD BE ALLOWED TO FLOAT WHEN IN FIELD USE. A GOOD GENERAL ROLE OF THUMB WHEN ADJUSTING THE LOCKNUTS IS: WITH BLADES SITTING ON HARD, FLAT SURFACE AND PLOW FRAME LEVEL, TREADER TEETH SHOULD BE TOUCHING THE GROUND AND HAVE 1/2" CLEARANCE BETWEEN UPPER SPRING AND THE LOCKNUTS.

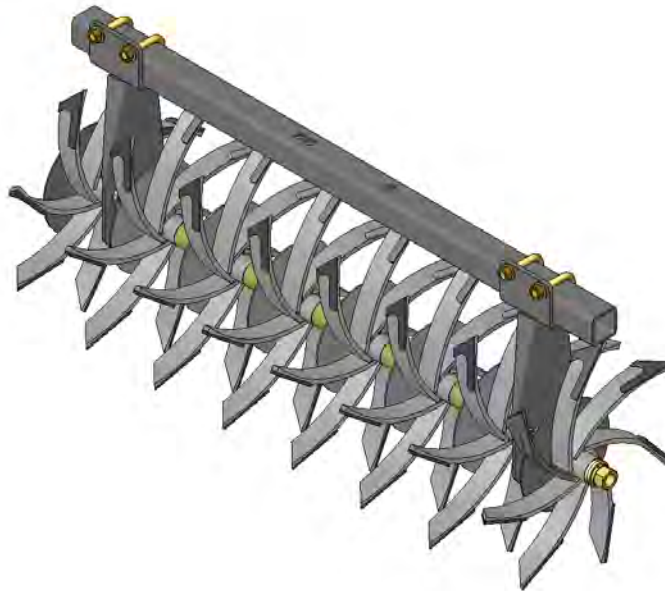


## PARTS IDENTIFICATION

part # 802046



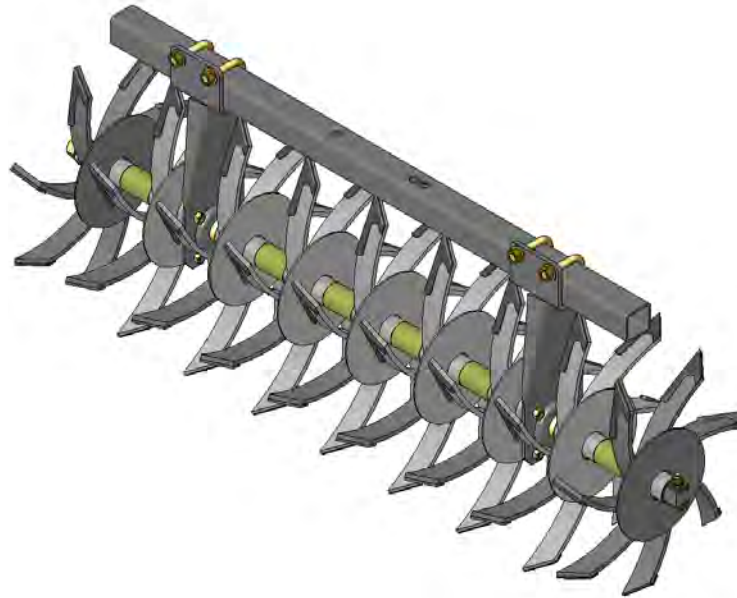
part # 802047



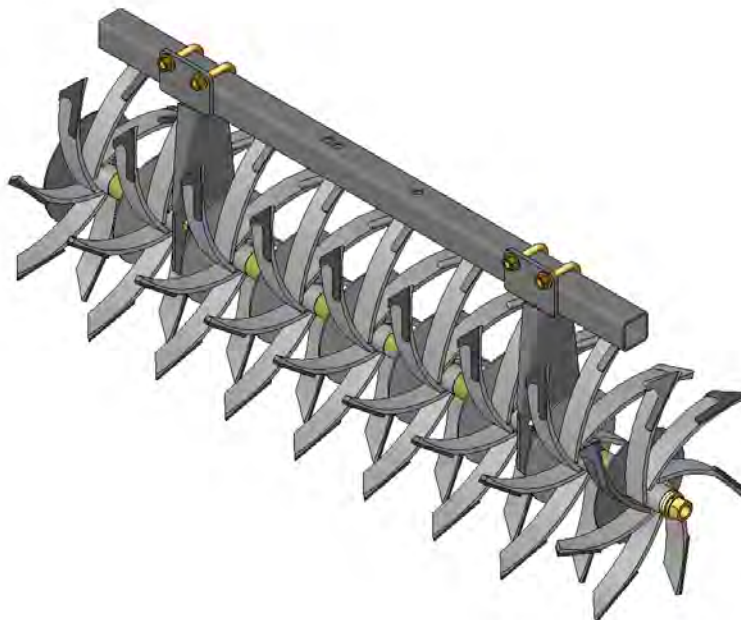


## PARTS IDENTIFICATION

part # 802048



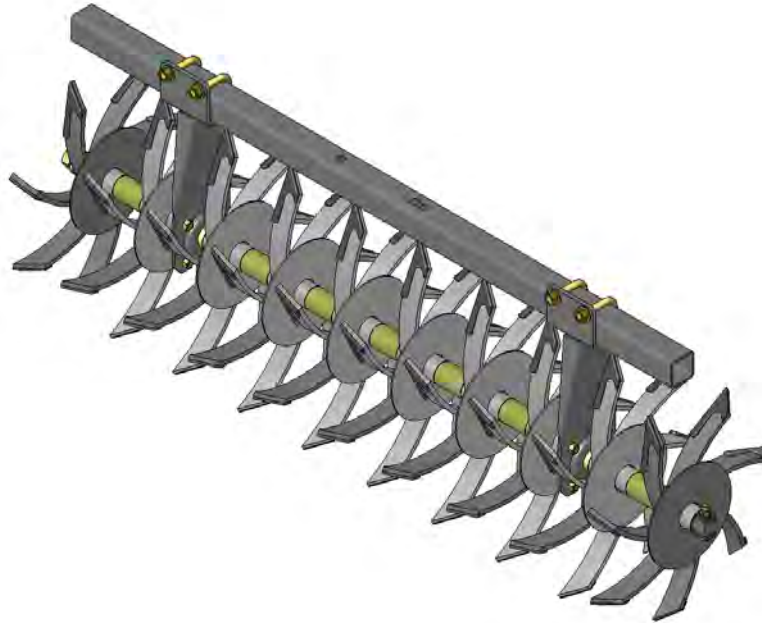
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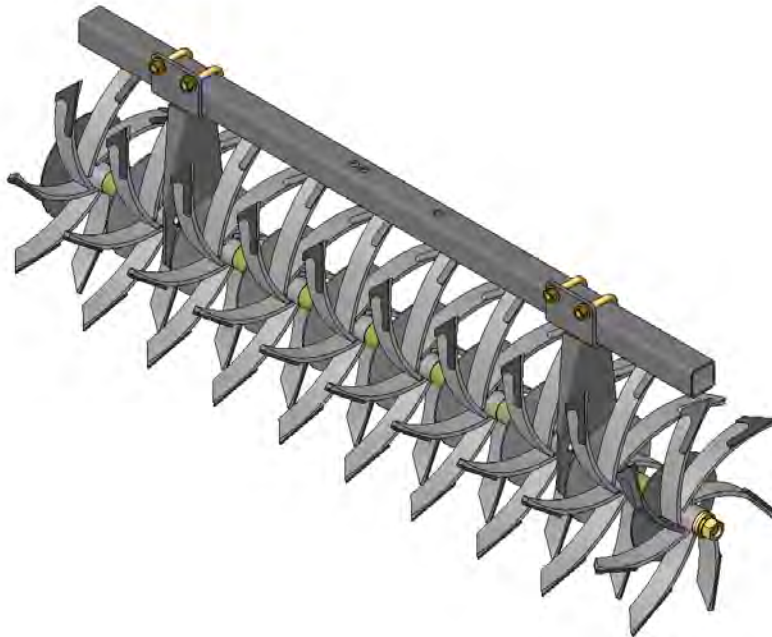


## PARTS IDENTIFICATION

part # 802050



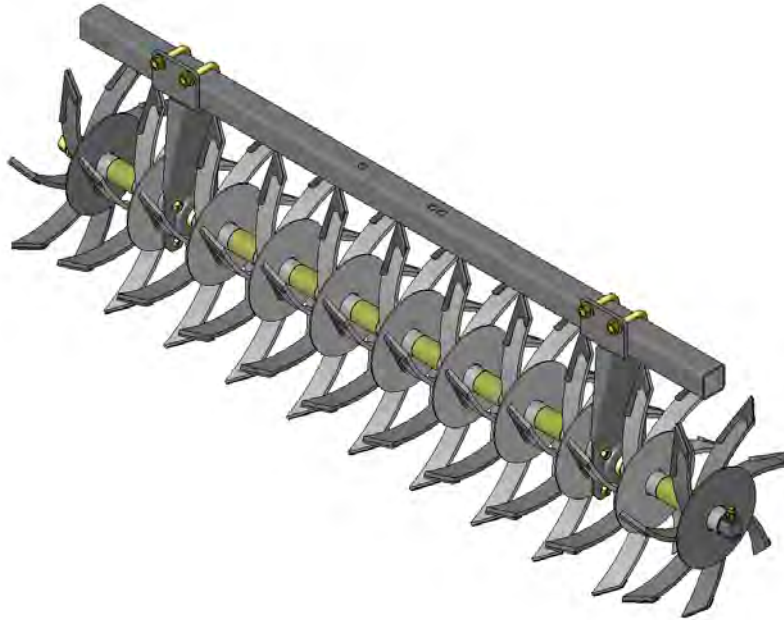
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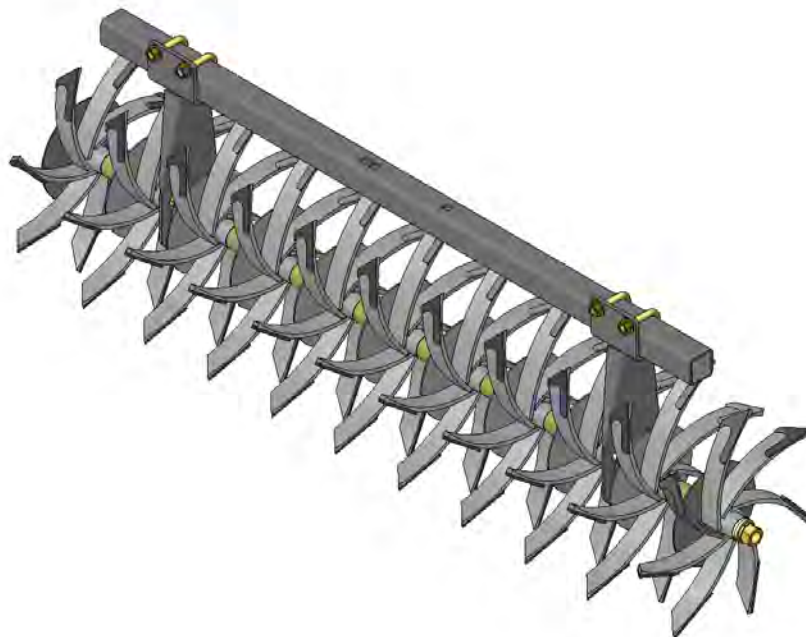


## PARTS IDENTIFICATION

part # 802052



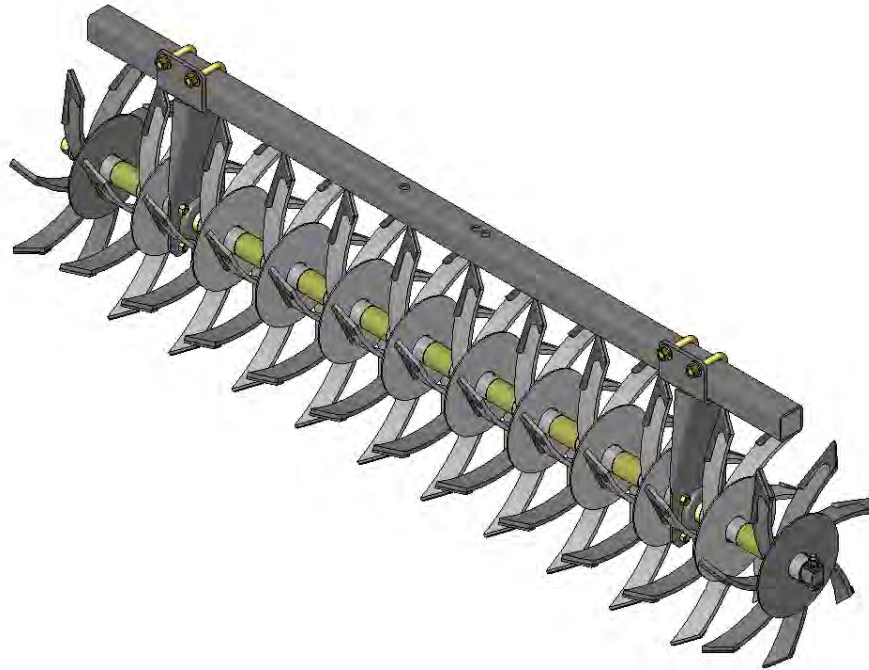
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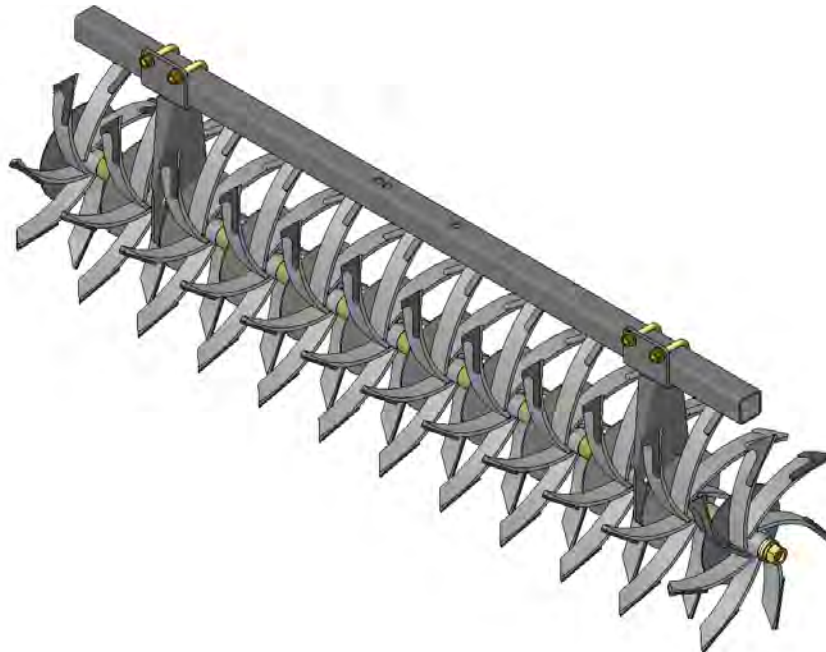


## PARTS IDENTIFICATION

part # 802054



part # 802055

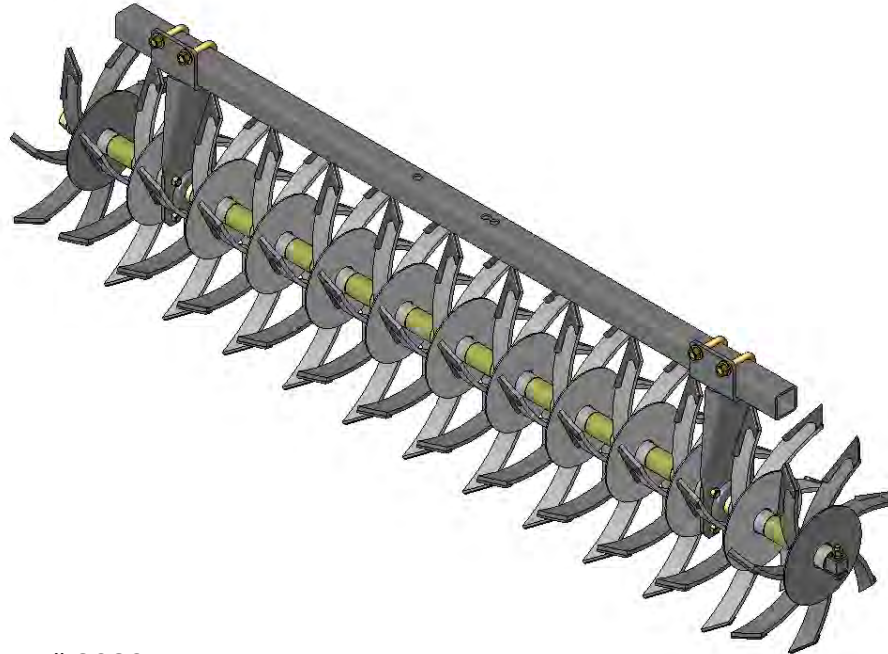




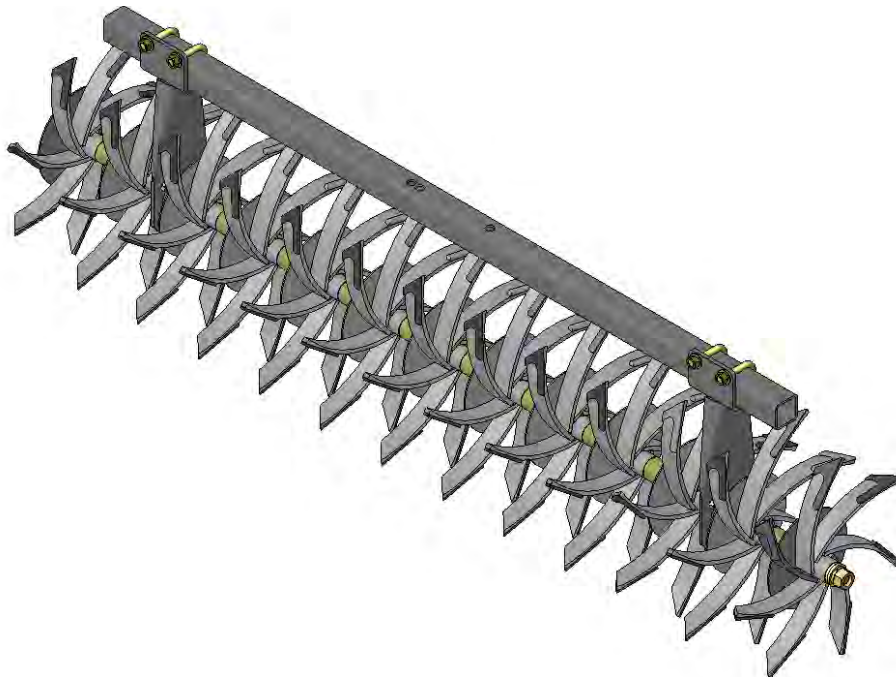


## PARTS IDENTIFICATION

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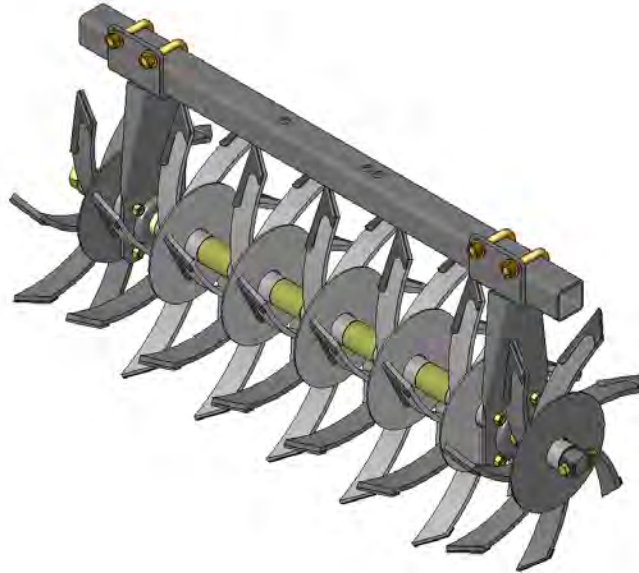
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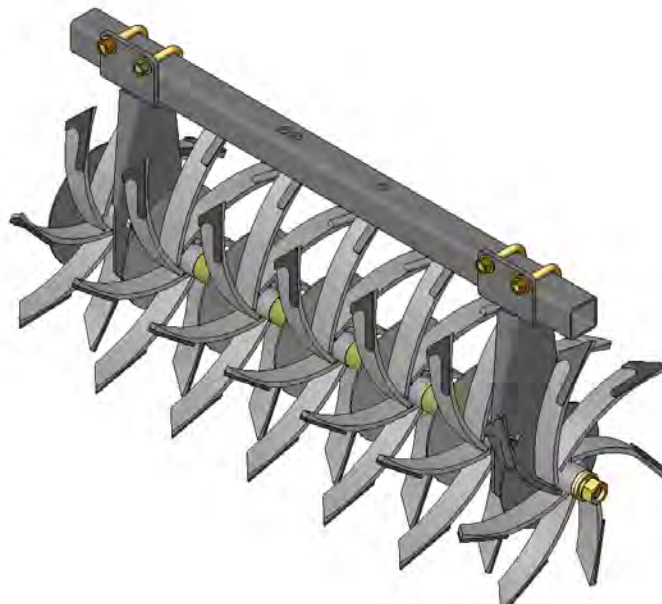


## PARTS IDENTIFICATION

part # 802172



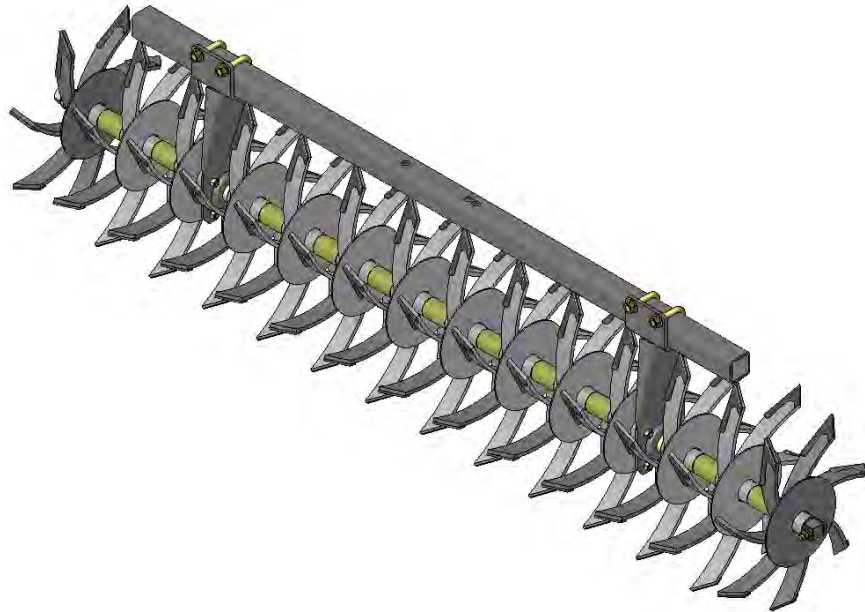
part # 802173





## PARTS IDENTIFICATION

part # 802214



part # 802215

