

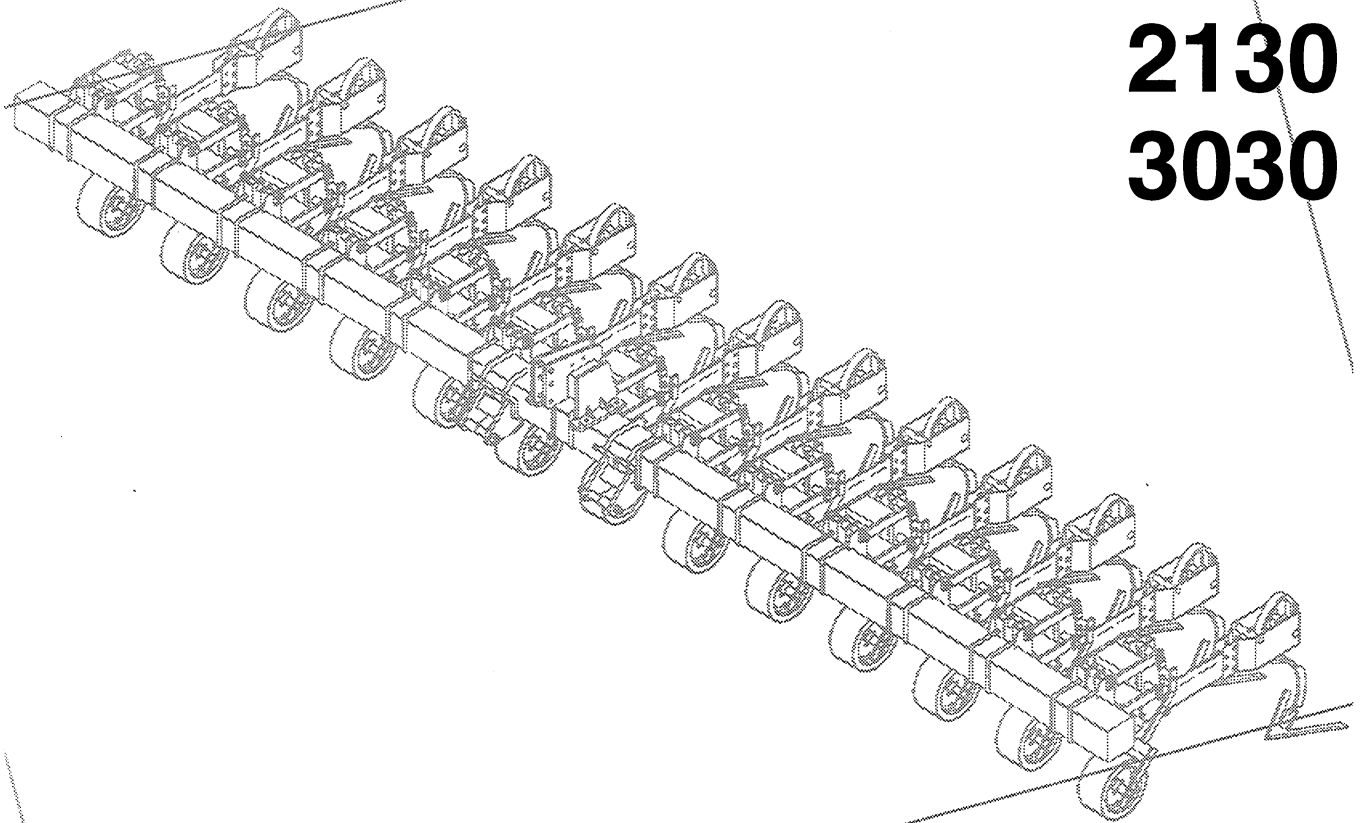
ALLOWAY ROW CROP CULTIVATORS

2040

2065

2130

3030



OPERATOR'S MANUAL

WOODS

TO THE DEALER:

The row crop cultivator assembly and proper installation to the tractor is the responsibility of the WOODS dealer. Read manual instructions and safety rules. Make sure all items on the Pre-Delivery and Delivery Check Lists are completed before releasing equipment to the owner.

TO THE OWNER:

Read this manual before operating your cultivator. 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 dealer or by calling 1-800-319-6637.

The unit 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 cultivator and tractor.

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

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

Model: _____

Serial Number: (see page 8 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.



The Safety-Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



CAUTION

Denotes a reminder of safety practices or directs attention to unsafe practices which could result in personal injury if proper precautions are not taken.



WARNING

Denotes a hazard exists which can result in injury or death if proper precautions are not taken.



Denotes an extreme intrinsic hazard exists which would result in high probability of death or irreparable injury if proper precautions are not taken.

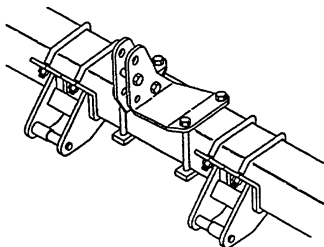
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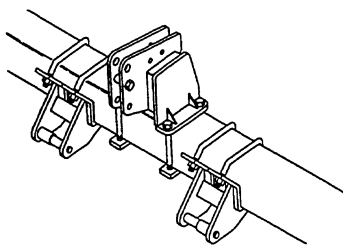
SPECIFICATIONS

The Alloway Cultivator has several toolbar types and a variety of optional equipment for row crop applications. Optional equipment may change these specifications. Cultivator weights do not include optional equipment.

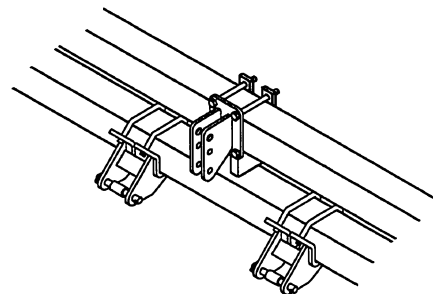
3 Point Hitches



C. 4 piece hitch for 7" x 7" beams. Recommended on 8 row and smaller units.

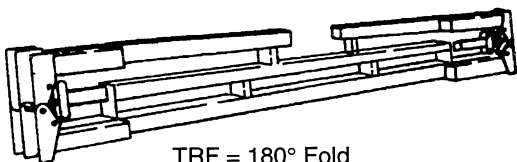


D. 3 piece heavy duty hitch for 7" x 7" beams. Recommended on 12 row and larger units.

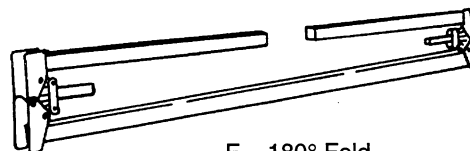


E. 3 piece heavy duty hitch for top reinforced 7" x 7" beams. Recommended on all TRF tool bars.

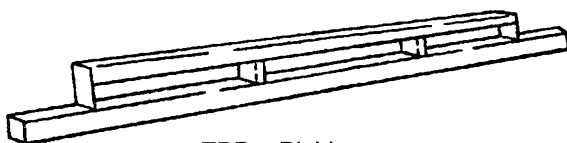
Tool Bar Codes



TRF = 180° Fold
Reinforced Hinges



F = 180° Fold



TRR = Rigid



FR = 180° Fold Reinforced
Double Bar

NOTE: All tool bars are made of 7" x 7" x 1/4" square tubing.

(Specifications continued on next page)

MODEL 2040 ADJUSTABLE

Size	Toolbar	3 Pt. Hitch	# of Tines	Trans. Width	Weight
4 Row 36-40"		C	21	200" ...	1530#
6 Row 22-24"		C	19	152" ...	1695#
6 Row 30"		C	31	200" ...	1955#
6 Row 36-40"		C	31	252" ...	2120#
8 Row 22"		C	25	200" ...	2150#
8 Row 30"		D	41	252" ...	2540#
8 Row 30"	F	D	41	145" ...	2995#
8 Row 36-40"		D	41	328" ...	2615#
8 Row 36-40" . F		D	41	187" ...	3065#
8 Row 36-40" . FR		D	41	187" ...	3675#
12 Row 22"		D	37	288" ...	3040#
12 Row 24"		D	37	300" ...	3060#
12 Row 22"	F	D	37	157" ...	3525#
12 Row 24"	F	D	37	171" ...	3530#
* 12 Row 30"	F	D	61	213" ...	4190#
* * 12 Row 30"	FR	D	61	213" ...	4790#
* 12 Row 30"	TRF	E	61	213" ...	4915#
* * 12 Row 38-40" . FR		D	81	213" ...	5235#
* 12 Row 38-40" . TRF ...		D	81	267" ...	5345#
* * 16 Row 30"	FR	D	81	267" ...	6085#
* * 18 Row 22"	FR	D	55	246" ...	5670#
* 18 Row 22"	TRF ...	E	55	246" ...	5835#
* * 24 Row 22"	FR	D	73	288" ...	7495#

MODEL 2065

Size	Toolbar	3 Pt. Hitch	# of Tines	Trans. Width	Weight
4 Row 30"		C	5	156" ...	1290#
4 Row 36-40"		C	5	172" ...	1380#
6 Row 30"		C	7	200" ...	1720#
6 Row 36-40"		C	7	252" ...	1880#
8 Row 30"		C	9	252" ...	2220#
8 Row 30"	F	C	9	145" ...	2675#
8 Row 36-40"		C	9	328" ...	2295#
8 Row 36-40" ... F		C	9	187" ...	2745#
* * 12 Row 30"	FR ...	D	13	213" ...	4415#
* * 12 Row 30"	TRF ...	E	13	213" ...	4290#
* * 12 Row 38-40" . FR ...		D	13	267" ...	4735#
* * 16 Row 30"	FR ...	D	17	267" ...	5410#
* 16 Row 30"	TRF ...	E	17	267" ...	5725#

* Two pair of support or guide wheels are recommended.

* * Lift Assist option is recommended when mounted on 2 wheel drive tractor.

MODEL 2130

Size	Toolbar	3 Pt. Hitch	# of Tines	Trans. Width	Weight
6 Row 22"		C	19	152" ..	1410#
6 Row 30"		C	31	200" ..	1645#
8 Row 22"		C	25	200" ..	1795#
8 Row 30"		C	41	252" ..	2150#
8 Row 30"	F	C	41	145" ..	2605#
8 Row 30"		C	41	252" ..	2150#
8 Row 30"	F	C	41	145" ..	2605#
12 Row 22"		C	37	288" ..	2600#
12 Row 24"		C	37	300" ..	2860#
12 Row 22"	F	C	37	157" ..	3085#
12 Row 24"	F	C	37	171" ..	3095#
12 Row 30"	TRF ..	E	61	213" ..	4340#
12 Row 30"	F	D	61	213" ..	3615#
12 Row 30"	FR	D	61	213" ..	4340#
12 Row 30"	F	D	61	213" ..	3615#
* 12 Row 30"	FR	D	61	213" ..	4340#
* 12 Row 30"	TRF ..	E	61	213" ..	4210#
* * * 16 Row 30"	FR	D	81	267" ..	5395#
* * * 16 Row 30"	TRF ..	D	81	267" ..	5505#
* * * 16 Row 30"	FR	D	81	267" ..	5395#
* * * 16 Row 30"	TRF ..	E	81	267" ..	5505#
* * * 18 Row 22"	FR	D	55	246" ..	5010#
* 18 Row 22"	TRF ..	E	55	246" ..	5000#
* * * 24 Row 22"	FR	D	73	288" ..	6630#

MODEL 3030

Size	Toolbar	3 Pt. Hitch	Trans. Width	Weight
6 Row 22"		C	152"	1780#
6 Row 30"		C	200"	2040#
8 Row 22"		C	200"	2250#
8 Row 30"		C	252"	2640#
8 Row 30"	F	C	145"	3080#
12 Row 22"		C	288"	3180#
12 Row 22"	F	C	157"	3675#
12 Row 24"		C	300"	3205#
12 Row 24"	F	C	171"	3685#
* 12 Row 30"	TRF ...	E	213"	4850#
* 12 Row 30"	FR	D	213"	4780#
* 12 Row 30"	F	D	213"	4230#
* 16 Row 30"	TRF ...	E	267"	5795#
* 16 Row 30"	FR	D	267"	5990#
* 18 Row 22"	TRF ...	E	246"	5930#
* * * 18 Row 22"	FR	D	246"	5865#
* * * 24 Row 22"	FR	D	288"	7750#

* Two pair of support or guide wheels are recommended.

* * Lift Assist option is recommended when mounted on 2 wheel drive tractor.

GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your row crop cultivator. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions have been compiled from extensive 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, but due to possible inline 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 equipment facing the direction of forward travel.

ABBREVIATIONS

ATF Automatic Transmission Fluid
CE Conforms to European
Community Machinery Safety
Directive 89/392/EEC
CV Constant Velocity
F Female
GA Gauge
GR (5, etc.) Grade (5, etc.)
HT Heat Treated
m Meter
mm Millimeter
M Male
MPa Mega Pascal
N Newton
NC National Coarse

NF National Fine
NPSM National Pipe Straight
Mechanical
NPT National Pipe Thread
P Pitch
psi Pounds per Square Inch
PTO Power Take Off
QD Quick Disconnect
ROPS Roll Over
Protective Structure
SAE Society of Automotive
Engineers
UNC Unified Coarse
UNF Unified Fine
UNS Unified Special

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 a single careless act of an operator.

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

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

The designed and tested safety of this equipment depends on it being operated within the limitations as explained in this manual.

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 dealer or in the United States and Canada, call 1-800-319-6637.) 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.

■ Know your controls and how to stop engine and attachment quickly in an emergency.

■ 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.

■ Keep hands and body away from pressurized lines. Use paper or cardboard, not body parts to check for leaks. Wear safety goggles. Hydraulic fluid (oil) under pressure will easily penetrate skin and can cause serious injury or death.

■ Make sure that all operating and service personnel know that in the event hydraulic fluid penetrates skin, it must be surgically removed within a few hours by a doctor familiar with this form of injury, or gangrene, serious injury or death can result. **CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES.**

■ Do not allow children or untrained persons to operate equipment.

PREPARATION

■ Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. Before operating or allowing anyone to approach the equipment, purge any air in the system by operating all hydraulic functions several times after connecting equipment, connecting hoses, or doing any hydraulic maintenance.

■ 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.

■ Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.

■ Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.

■ Ensure implement is properly attached, adjusted and in good operating condition.

■ Tractor must be equipped with ROPS or ROPS CAB and seat belt. Keep seat belt securely fastened. Falling off tractor can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.

■ Ensure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)

■ A minimum 20% of tractor and equipment weight must be on tractor front wheels with attachment in transport position. Without this weight, tractor could tip over causing personal injury or death. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. When attaining the minimum 20% weight on the front wheels, you must not exceed the Roll Over Protection Structure (ROPS) weight certification. Weigh the tractor and equipment. Do not estimate.

(Safety Rules continued on next page)

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

OPERATIONAL SAFETY

- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.
- Keep bystanders away from equipment while it is in operation.
- Operate only in daylight or good artificial light.
- Keep hands, feet, hair and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Tractor must be equipped with ROPS or ROPS CAB and seat belt. Keep seat belt securely fastened. Falling off tractor can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.
- Always comply with all state and local lighting and marking requirements.
- No riders are allowed on equipment.
- Always sit in tractor seat when operating controls or starting engine. Securely fasten seat belt, place transmission in park or neutral, engage brake and ensure all other controls are disengaged before starting tractor engine.
- Look down and to the rear and make sure area is clear before operating in reverse.
- Do not operate on steep slopes.
- Do not stop, start or change directions suddenly on slopes.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Watch for hidden hazards on the terrain during operation.
- Stop tractor and implement immediately upon striking an obstruction. Turn off engine, remove key, inspect and repair any damage before resuming operation.
- **AVOID INJURY OR DEATH FROM POWER LINES:**
 - Stay away from power lines.
 - Electrocution can occur without direct contact.
 - Check clearances before raising implement.
 - Do not leave the operator's seat if any part of the tractor or implement contacts electric lines.

- Before folding or unfolding cultivator:
 - Make sure you have adequate clearance on each side and overhead.
 - Make sure wing cylinder restrictor fittings are properly installed.
 - Make sure wing-mounted gauge wheels and guide coulters will not contact tractor cab or tires.
- Before dismounting tractor or performing any service or maintenance, disengage power to implement, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, stop engine, set parking brake, remove key, and unfasten seat belt.
- Before servicing, fold cultivator completely to stops or unfold completely to operating position. Do not service with wings partially folded.
- Never go underneath equipment lowered to the ground or raised. 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. Service work does not require going underneath.

MAINTENANCE SAFETY

- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.
- Before dismounting tractor or performing any service or maintenance, disengage power to implement, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, stop engine, set parking brake, remove key, and unfasten seat belt.
- Before servicing, fold cultivator completely to stops or unfold completely to operating position. Do not service with wings partially folded.
- Never go underneath equipment lowered to the ground or raised. 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. Service work does not require going underneath.

SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



- Do not modify equipment in any way.
- Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.
- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.
- Ensure implement is properly attached, adjusted and in good operating condition.
- Make sure hydraulic hoses and cylinders are fully purged of air before operating. Keep all persons away and fill the system by raising and lowering all wings several times. Air in the system can allow wings to fall unexpectedly.

- Keep all persons away from operator control area while performing adjustments, service or maintenance.
- Do not handle blades with bare hands. Careless or improper handling may result in serious injury.
- Tighten all bolts, nuts and screws, and check that all cotter pins are installed securely to ensure equipment is in a safe condition before operating.
- Ensure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Do not disconnect hydraulic lines until machine is securely blocked or placed in lowest position and system pressure is released by operating valve levers.

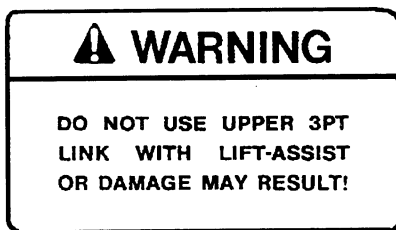
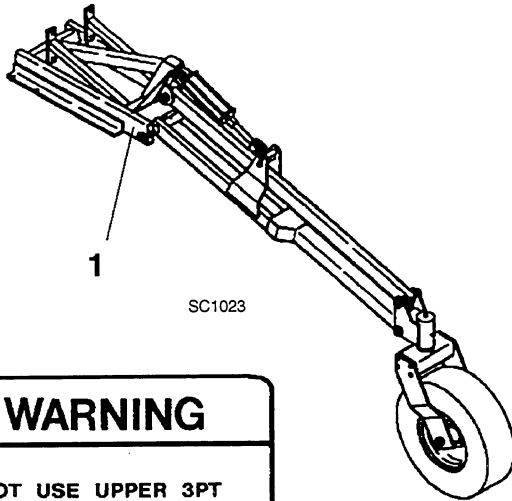
STORAGE

- Block equipment securely for storage.
- Keep playing children and bystanders away from storage area.

NOTES

SAFETY DECALS

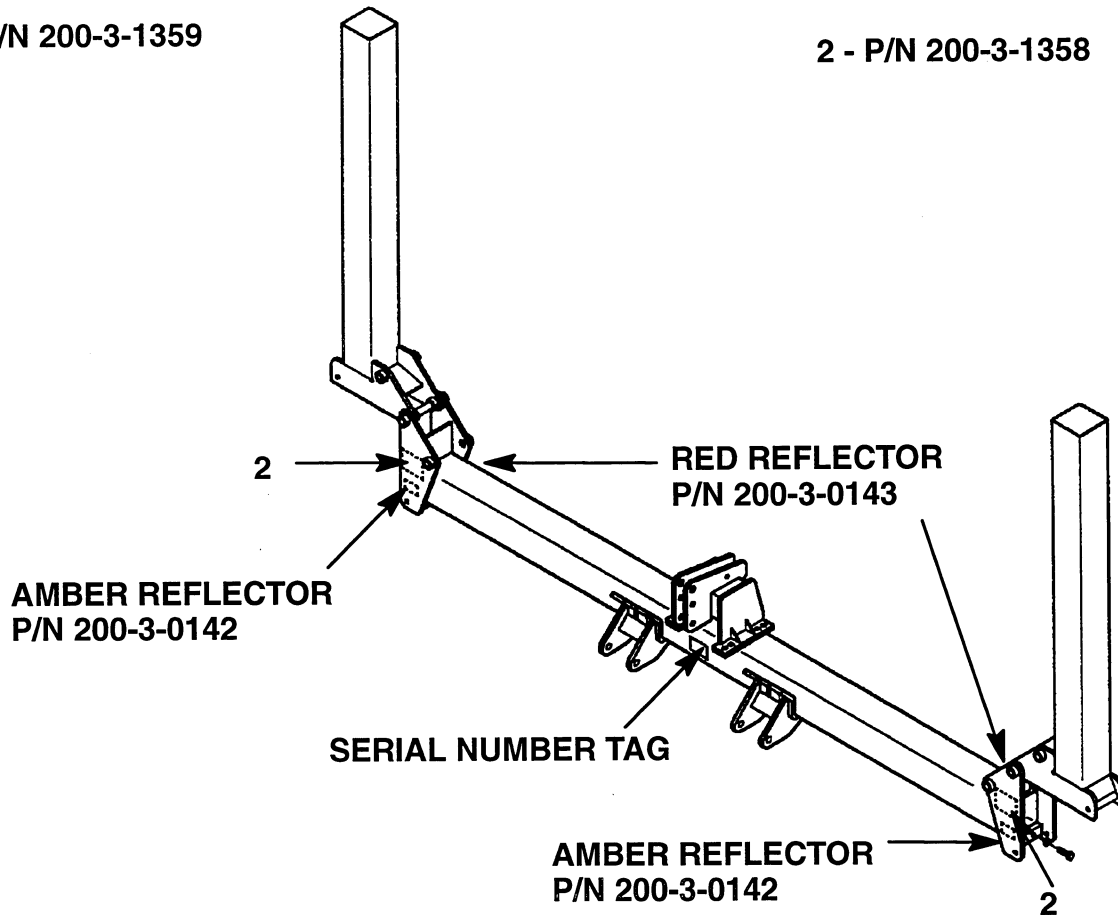
⚠ ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! ⚠
Replace Immediately If Damaged!



1 - P/N 200-3-1359



2 - P/N 200-3-1358



BOLT TORQUE CHART

After every ten (10) hours of operation, check all hardware and tighten where required.

SAE Series Torque Chart

DO NOT use these values if a different torque value or tightening procedure is listed for a specific application. Torque values listed are for general use only.

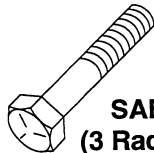
Fasteners should be replaced with the same grade.

Make sure fastener threads are clean and you properly start thread engagement. This will prevent them from failing when tightening.

SAE Bolt Head Identification



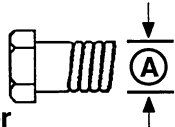
SAE Grade 2
(No Dashes)



SAE Grade 5
(3 Radial Dashes)



SAE Grade 8
(6 Radial Dashes)

Bolt Diameter "A"	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		Lbs.-Ft.	(N-m)	Lbs.-Ft.	(N-m)	Lbs.-Ft.	(N-m)
1/4"	7/16"	6	(8)	11	(15)	14	(19)
5/16"	1/2"	13	(18)	21	(28)	25	(34)
3/8"	9/16"	23	(31)	38	(52)	55	(75)
7/16"	5/8"	37	(50)	55	(75)	80	(110)
1/2"	3/4"	57	(77)	85	(115)	120	(165)
9/16"	13/16"	82	(111)	125	(170)	180	(245)
5/8"	15/16"	111	(150)	175	(240)	230	(310)
3/4"	1-1/8"	200	(270)	300	(410)	440	(600)
7/8"	1-5/16"	280	(380)	450	(610)	720	(975)
1"	1-1/2"	350	(475)	680	(925)	1035	(1400)
1-1/8"	1-11/16"	450	(610)	885	(1200)	 Bolt Diameter	
1-1/4"	1-7/8"	600	(815)	1255	(1700)		
1-3/8"	2-1/16"	675	(915)	1620	(2200)		
1-1/2"	2-1/4"	920	(1250)	2200	(2900)		

Metric Series Torque Chart

Use only metric tools on metric hardware. Other tools may not fit properly. They may slip and cause injury.

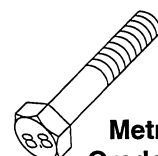
DO NOT use these values if a different torque value or tightening procedure is listed for a specific application. Torque values listed are for general use only.

Fasteners should be replaced with the same grade.

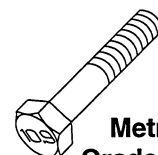
Make sure fastener threads are clean and you properly start thread engagement. This will prevent them from failing when tightening.

Bolt Diameter "A"	Wrench Size	MARKING ON HEAD			
		8.8		10.9	
		N-m	(Lbs.-Ft.)	N-m	(Lbs.-Ft.)
5 mm	8 mm	6	(4.5)	9	(6.5)
6 mm	10 mm	10	(7.5)	15	(11)
8 mm	13 mm	25	(18)	35	(26)
10 mm	16 mm	50	(37)	75	(55)
12 mm	18 mm	85	(63)	130	(97)
14 mm	21 mm	110	(80)	150	(110)
16 mm	24 mm	215	(159)	315	(232)
20 mm	30 mm	435	(321)	620	(457)
24 mm	36 mm	750	(553)	1070	(789)
30 mm	46 mm	1495	(1103)	2130	(1571)

Metric Bolt Head Identification



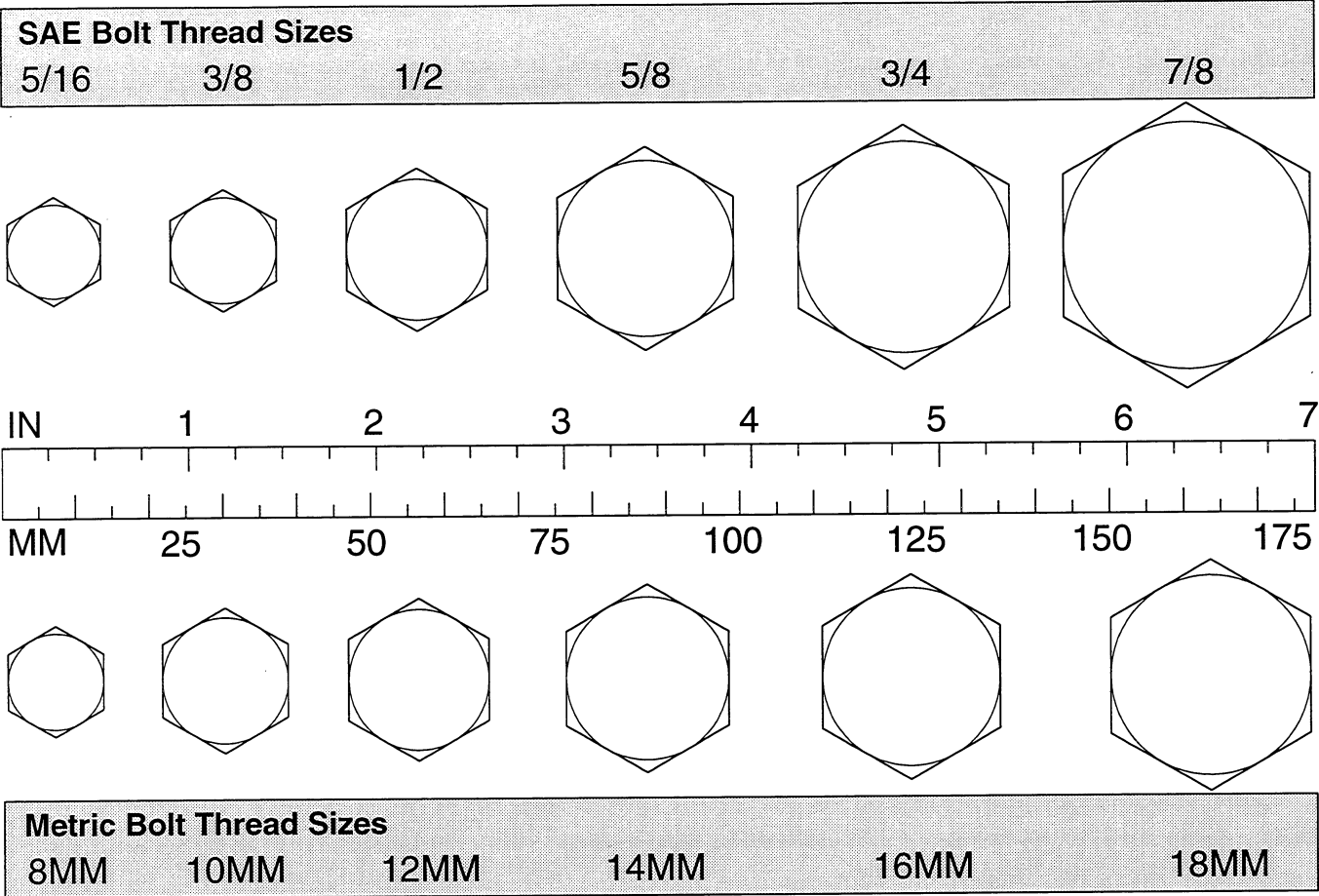
Metric Grade 8.8



Metric Grade 10.9

BOLT SIZE CHART

NOTE: Chart shows bolt thread sizes and corresponding head (wrench) sizes for standard SAE and Metric Bolts.



NOTES

OPERATION

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 a single careless act of an operator.

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

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



CAUTION

■ If you do not understand any part of this manual and need assistance, see your dealer.

■ Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.



WARNING

■ Know your controls and how to stop engine and attachment quickly in an emergency.

■ Keep hands and body away from pressurized lines. Use paper or cardboard, not body parts to check for leaks. Wear safety goggles. Hydraulic fluid (oil) under pressure will easily penetrate skin and can cause serious injury or death.

■ Make sure that all operating and service personnel know that in the event hydraulic fluid penetrates skin, it must be surgically removed within a few hours by a doctor familiar with this form of injury, or gangrene, serious injury or death can result. **CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES.**

■ Do not allow children or untrained persons to operate equipment.

■ Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.



WARNING

■ Before dismounting tractor or performing any service or maintenance, disengage power to implement, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, stop engine, set parking brake, remove key, and unfasten seat belt.



DANGER

■ AVOID INJURY OR DEATH FROM POWER LINES:

- Stay away from power lines.
- Electrocution can occur without direct contact.
- Check clearances before raising implement.
- Do not leave the operator's seat if any part of the tractor or implement contacts electric lines.



WARNING

■ Never go underneath equipment lowered to the ground or raised. 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. Service work does not require going underneath.

■ Before folding or unfolding cultivator:

- Make sure you have adequate clearance on each side and overhead.
- Make sure wing cylinder restrictor fittings are properly installed.
- Make sure wing-mounted gauge wheels and guide coulters will not contact tractor cab or tires.

PRE-OPERATION CHECK LIST

(OWNER'S RESPONSIBILITY)

- ___ Review and follow all safety rules and safety decal instructions on pages 5 through 8.
- ___ Check that all safety decals are installed and in good condition. Replace if damaged.
- ___ Check that all hardware and cotter pins are properly installed and secured.

(Check List continued on next page)

- ___ Check that equipment is properly and securely attached to tractor.
- ___ Do not allow riders.
- ___ Check all lubrication points and grease as instructed in "Service, lubrication information".
- ___ Check hydraulic reservoir level.
- ___ Check that all hydraulic hoses and fittings are in good condition and not leaking before starting tractor. Check that hoses are not twisted, bent sharply, kinked, frayed or pulled tight. Replace any damaged hoses immediately.
- ___ Raise and lower equipment and wings to make sure air is purged from hydraulic cylinder and hose.
- ___ Make sure tractor 3-point lift links do not interfere with hydraulic hoses.
- ___ Make sure tractor ROPS or ROPS CAB and seat belt are in good condition. Keep seat belt securely fastened during operation.
- ___ Before starting engine, operator must be in tractor seat with seat belt fastened. Place transmission in neutral or park, engage brake and disengage tractor PTO.

ATTACHING & UNHOOKING TRACTOR

The Cultivator should always be located on a level, dry area that is free of debris and other foreign objects. When attaching the machine to a tractor, follow this procedure:

Attaching Machine to Tractor with Quick-Hitch (Figure 1)

Before attaching cultivator to tractor be sure hitch pins and spacers are completely assembled to match the hitch configuration of your tractor as shown in Figure 1.

Set the height of the 3-point hitch so the quick-hitch coupler is lower than the mounting pins.

Be sure the lower links on the tractor are set in the free float position (see tractor manual for details).

Be sure the 3-point hitch is set in the sway position (see tractor manual for details).

Align the couplers under the mounting pins while backing up.

NOTE: Use the proper size bushings for lower link mounting pins and correct upper link pin location for Category II, III, or III N operation.

When the coupler is under the pins, slowly raise the 3-point hitch. Be sure each of the mounting pins seat in their respective coupler. Release the coupler retainer locks to secure the mounting pins in the coupler.

Connect hydraulic couplings. Couplings must be completely engaged.

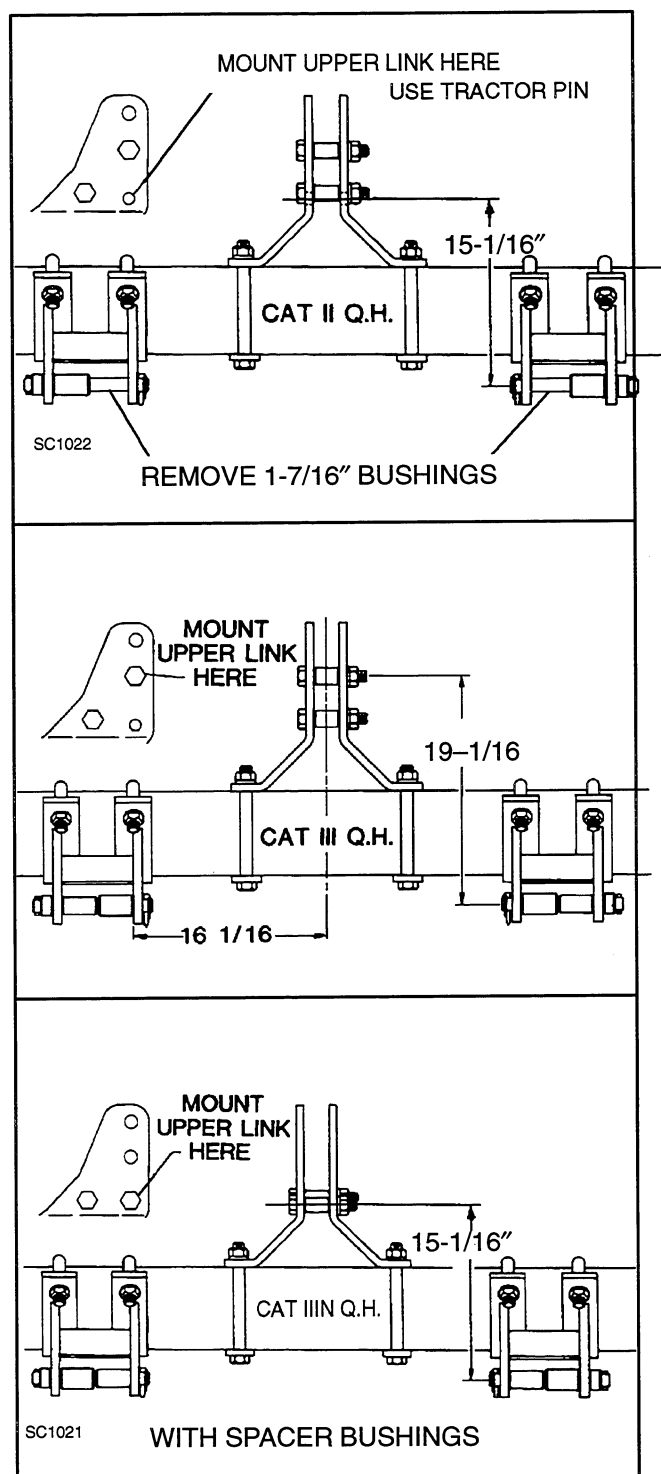


Figure 1. Quick Hitch Configuration

Attaching Machine to Tractor Without Quick-Hitch (Figure 2)

Remove 3-point hitch lower pins and upper link bolt. Back tractor and align lower links with hitch pins. Stop engine and set brakes.

Install pins with correct bushings and secure quick-lock pins.

Align upper link and fasten with bolt and spacer bushing.

Connect hydraulic fold quick couplings. Coupling must be completely engaged.

Raise the parking stands.

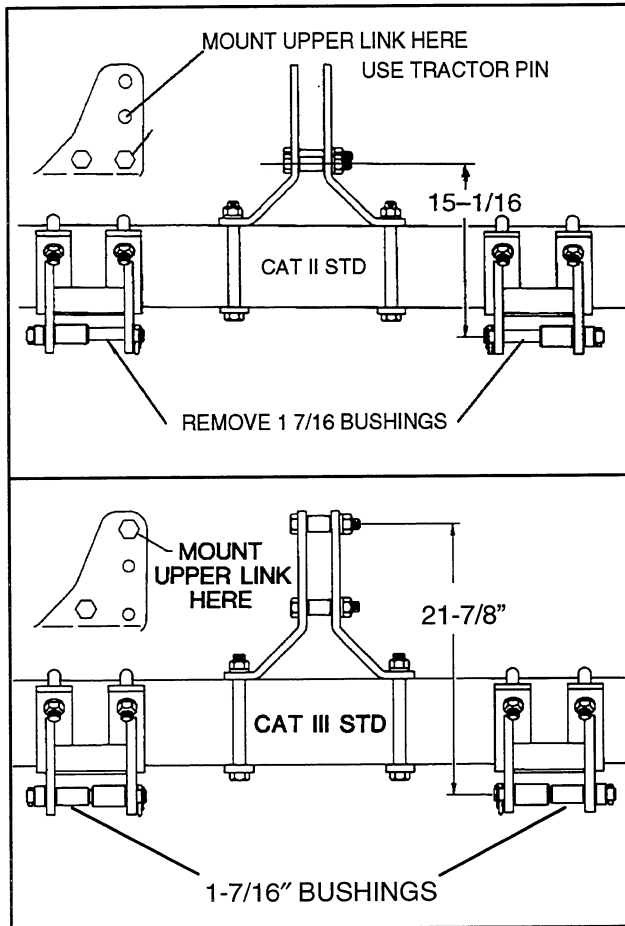


Figure 2. Standard Hitch Configuration

Unhooking Cultivator from Tractor

Be sure bystanders are clear from working area.

Lower parking stands. Lower cultivator onto level surface. Loosen center link as necessary to remove load from hitch.

(Without Quick-Hitch) Remove upper link pin and disconnect upper link.

(Without Quick-Hitch) Remove hitch pins or (With Quick Hitch), release latch levers.

Detach tractor from cultivator.

FOLDING CULTIVATOR

Position tractor and cultivator in a level area, free of overhead obstacles.

Secure any shields or attachments that may be loose.

Using tractor 3-point hitch and lift assist wheels (if equipped), raise cultivator to a level position off the ground.

Activate fold control lever and move cultivator wings until they contact the wing rests attached to the main frame.

Raise the cultivator into transport position.

UNFOLDING CULTIVATOR

Position tractor and cultivator in a level area free of overhead obstacles and with enough clear area to permit the cultivator to unfold.

Move and secure any shields or attachments that might interfere during unfolding.

Using the tractor 3-point hitch and lift assist wheels (if equipped), raise cultivator to a level position off the ground.

Activate fold control lever and move cultivator wings off wing rests into operating position.

Move tractor into position for cultivating.

LIFT ASSIST

3-Point Hitch Mounted Cultivator

IMPORTANT

■ Hydraulic accumulator kit must be installed if the cultivator is fully mounted to the tractor 3-point hitch and lift assist wheels are used. The accumulator reduces the possibility of damage to the tractor 3-point hitch during transport.

Adjustment nuts on the lift assist cylinders may be used to level and control the operating position of the cultivator.

Double acting Lift Assist cylinders will permit the Assist wheels to be lifted off the ground during operation so that wheel tracks will not be made.

Lift assist cylinders may be connected directly to the tractor 3point hitch for single control operation. Convert the lift assist cylinders to single acting by installing a breather plug in each cylinder return port (rod end of cylinder). Do not install a solid plug in the return port, use only a breather plug. Connect the lift assist hose coupler to the tractor 3-point lift circuit, (see tractor operator's manual for connecting instructions).

Semi-Mounted Cultivator

IMPORTANT

■ If the cultivator is used with lift assist wheels and without the hydraulic accumulator kit, it must be operated as a semi-mounted unit to prevent damage to the 3-point hitch components. Remove the upper link mast and attach the cultivator to the lower 3-point hitch links only. Lift assist wheels will always carry part of the cultivator weight and can not be lifted off the ground.

Adjustment nuts on the lift assist cylinders must be used to level and control the rear operating position of the cultivator.

Lift assist cylinders may be connected directly to the tractor 3-point hitch for single control operation. Convert the lift assist cylinders to single acting by installing a breather plug in each cylinder return port (rod end of cylinder). Do not install a solid plug in the return port; use only a breather plug. Connect the lift assist hose coupler to the tractor 3-point lift circuit (see tractor operator's manual for connecting instructions).

FIELD OPERATION



WARNING

■ A minimum 20% of tractor and equipment weight must be on tractor front wheels with attachment in transport position. Without this weight, tractor could tip over causing personal injury or death. The weight may be attained with front wheel weights, ballast in tires or front tractor weights. When attaining the minimum 20% weight on the front wheels, you must not exceed the Roll Over Protection Structure (ROPS) weight certification. Weigh the tractor and equipment. Do not estimate.

Enter field and straddle rows in same direction of planter travel. Make sure no one is near cultivator when raising or lowering wings. Unfold into operating position.

Lower cultivator and move forward approximately 20 feet.

Check shovel working depth. This is done by brushing worked soil aside to determine amount of ground penetration. Shovel depth is adjusted by raising or lowering the gauge wheel on each gang. Gangs behind tractor wheels are often adjusted deeper to loosen compacted soil.

If necessary, readjust tine placement for proper coverage.

If necessary, readjust upper 3-point link to provide equal ground penetration of front and rear shovels.

If necessary, reset the 3-point lever stop and adjust the support wheels after the working depth has been established to maintain a slight downward angle on the parallel bars.

Refer to "Adjusting," page 15, for adjustment of individual attachments.

TRANSPORTING

When transporting the machine, review and follow these instructions:

Be sure all bystanders are clear of the machine.

Be sure that the machine is securely attached to the tractor and all retainer pins are installed.

Raise the machine.

Check the pressure in the tires. Be sure they are to their specified pressure.

Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder if permitted by law.

Do not allow riders.

Use pilot vehicles front and rear if required.

Never disengage tractor drivetrain and coast down hills. Always keep tractor in gear.

Never transport the machine faster than 10 mph (16 kph).

Know the transport height and width of your cultivator.

Stay away from overhead power lines. Electrocution can occur without direct contact.

STORAGE



CAUTION

■ Keep playing children and bystanders away from storage area.

At the end of the season, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the beginning of the next season. To insure a long, trouble-free life, this procedure should be followed when preparing the unit for storage:

Clear the area of bystanders, especially small children.

Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris and residue.

Repair or replace damaged parts. Remove any entangled material.

Inspect all hydraulic hoses, lines, couplers and fittings. Tighten any loose fittings. Replace any hose that is badly cut, nicked, abraded or is separating from the crimped end of a fitting.

Lubricate all grease fittings. Make sure that all grease cavities have been filled with grease to remove any water residue from the washing.

Touch up all paint nicks and scratches to prevent rusting.

Move to storage area. Select an area that is dry, level and free of debris. Unhook from tractor (see Unhooking from Tractor, page 13).

NOTE: Do not deflate tires.

Store the machine in an area away from human activity. Do not allow children to play on or around the stored machine.

ADJUSTING

Leveling Toolbar Wings (Figure 3)

Level wings to center toolbar using stop adjustment bolts.

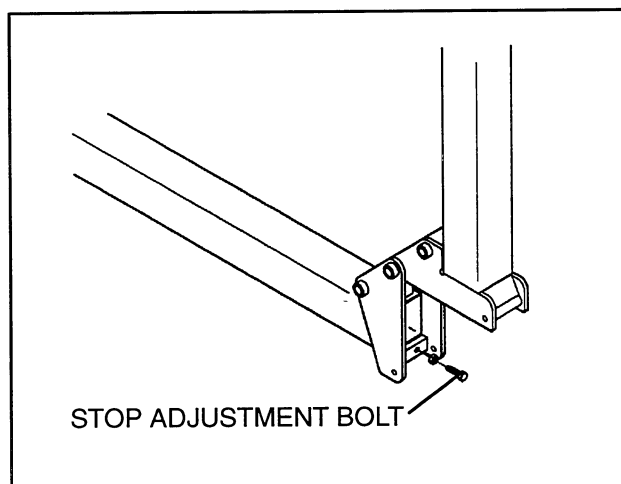


Figure 3. Toolbar Wings

Adjusting Gang (Figure 4)

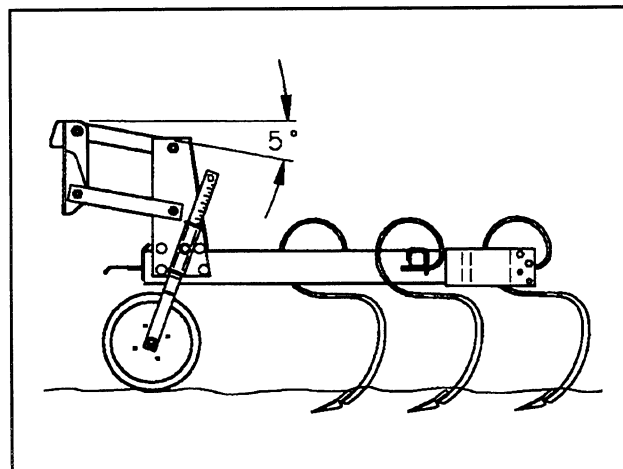


Figure 4. Gang Adjustment

Keep gang level with ground by adjusting upper link on tractor. This will keep more consistent ground penetration of each tine.

Set shovel working depth by adjusting gauge wheel. Loosen set screw on side of mounting plate, adjust to proper height and tighten set screw.

Support Wheels (Figure 5)

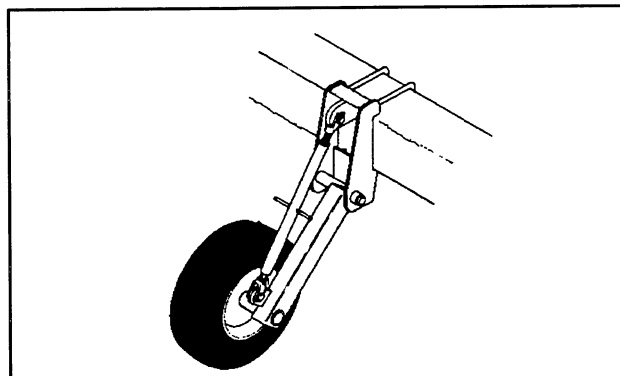


Figure 5. Support Wheels

Weight of the toolbar should be supported primarily by the tractor 3-point. The support wheels, mounted on solid beam toolbars or on center section of folding toolbars, should be adjusted to provide vertical stability, not to carry the total toolbar weight. The support wheels, mounted on the wings of folding toolbars, should be positioned and adjusted to maintain a proper working height at the wing's outer end.

Adjustable Sweep Adapter (Figure 6)

Loosen bolts on side of sweep adapter. Loosen jam nut on back set screw. Adjust set screw until desired angle is reached. Tighten jam nut on set screw and side bolts.

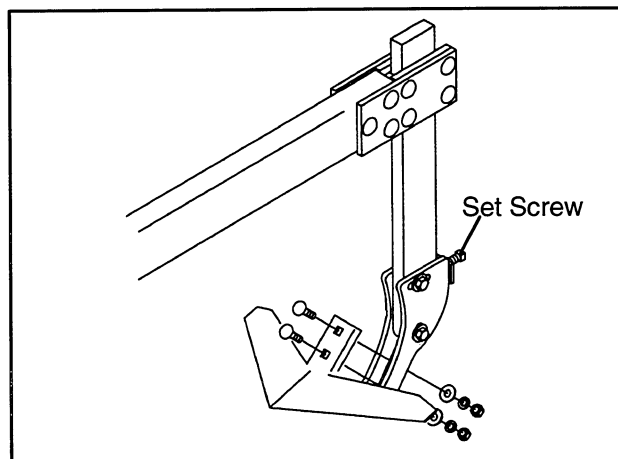


Figure 6. Sweep Adapter

Rear Trip Shank (Figure 7)

In hard packed field conditions the spring pressure may need to be increased. Tighten nut on eyebolts; try to keep even pressure on both springs.

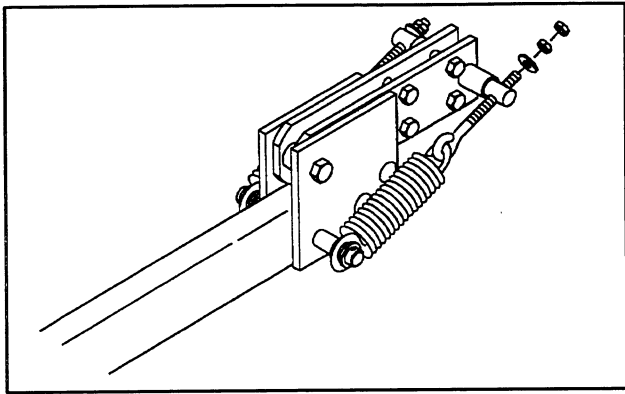


Figure 7. Rear Trip Shank

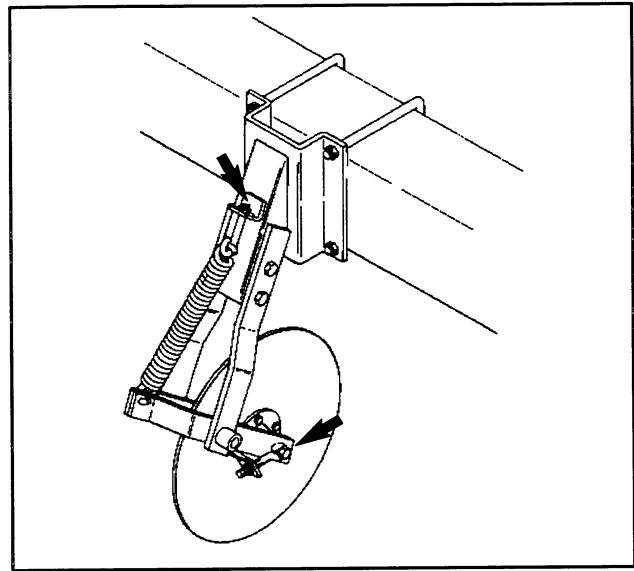


Figure 9. Front Stabilizer Coulter

Adjusting Coulter (Figure 8)

Loosen bolt through center of disc, loosen nuts on adjustment tab and adjust angle. Tighten all hardware.

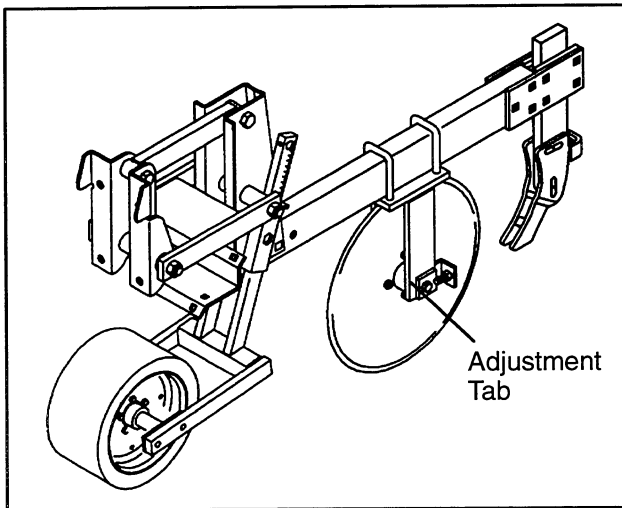


Figure 8. Coulter Disc (2060)

Rear Stabilizer (Figure 10)

Stabilizer coulters should be adjusted to no more than 3 inches of ground penetration. Adjust penetration by adjusting screw jack to desired depth.

Horizontal and vertical adjustments may be obtained by adjusting set screws on mounting frame. After adjusting, be sure to tighten jam nuts on set screws.

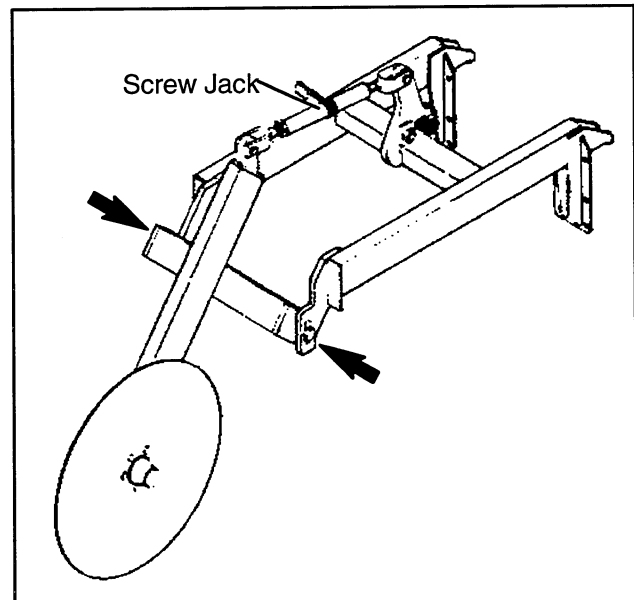


Figure 10. Rear Stabilizer

Front Stabilizer Coulters (Figure 9)

Stabilizer coulters should be adjusted to no more than 3 inches of ground penetration. Adjust pressure using eyebolt on spring.

Steering adjustment may be adjusted by loosening bolts on center of coulter disc and adjusting adjustment tab.

After proper adjustment, tighten all hardware.

Slide Mount Tunnel Shields (Figure 11)

Level the shields by loosening side bolt on slide mount bracket. Adjust shield front bolt on top side. After shields are level, snug rear bolt and tighten side bolt. Be sure to tighten jam nuts.

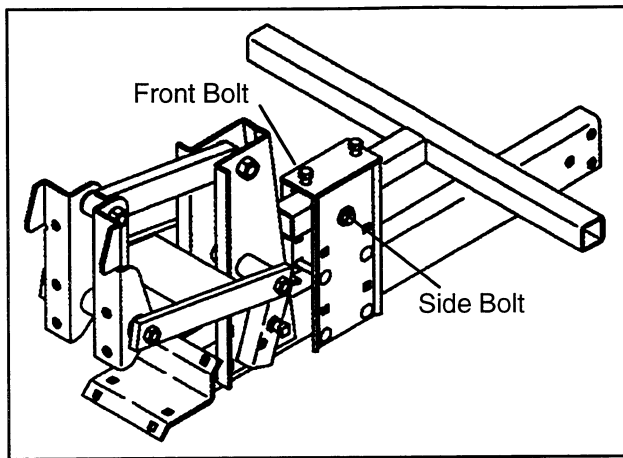


Figure 11. Slide Mount Tunnel Shields

Dual Discs (Figure 12)

Adjust width of discs by loosening bolts and jam nuts on top of disc clamp. Slide discs on rails until desired width is reached. Tighten bolts and jam nuts.

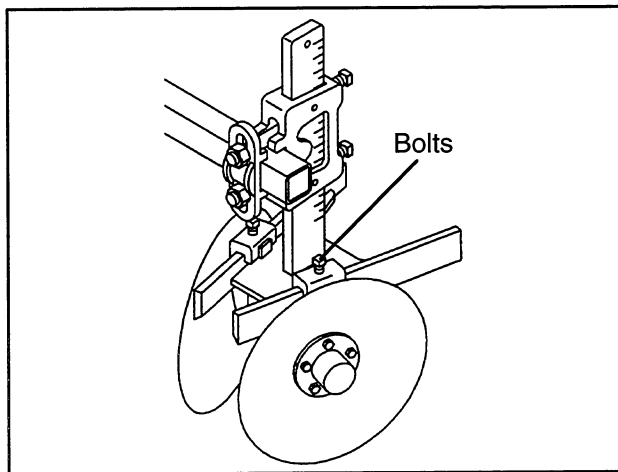


Figure 12. Dual Discs

Sweeps (Figure 13)

Adjust pitch of sweep by using different hole location on the tine (straight edge tine). For adjustment of additional attachments, refer to "Assembly" section.

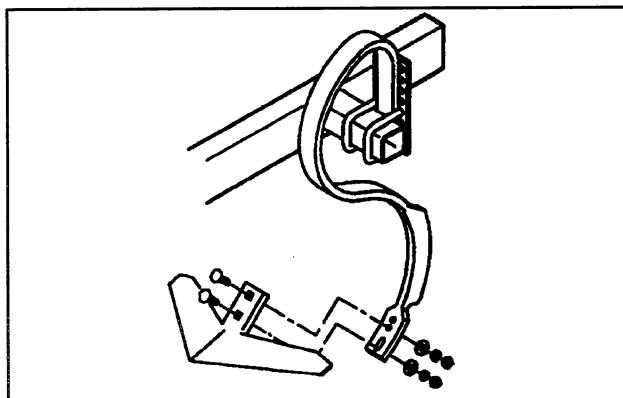


Figure 13. Sweeps

SERVICE

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 a single careless act of an operator.

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

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

The information in this section is written for operators who possess basic mechanical skills. Should you need help, your dealer has trained service technicians available. For your protection, read and follow all safety information in this manual.



CAUTION

- If you do not understand any part of this manual and need assistance, see your dealer.
- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.



WARNING

- Know your controls and how to stop engine and attachment quickly in an emergency.
- Keep hands and body away from pressurized lines. Use paper or cardboard, not body parts to check for leaks. Wear safety goggles. Hydraulic fluid (oil) under pressure will easily penetrate skin and can cause serious injury or death.
- Make sure that all operating and service personnel know that in the event hydraulic fluid penetrates skin, it must be surgically removed within a few hours by a doctor familiar with this form of injury, or gangrene, serious injury or death can result. **CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES.**
- Do not allow children or untrained persons to operate equipment.



WARNING

- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.
- Before dismounting tractor or performing any service or maintenance, disengage power to implement, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, stop engine, set parking brake, remove key, and unfasten seat belt.
- Before servicing, fold cultivator completely to stops or unfold completely to operating position. Do not service with wings partially folded.
- Never go underneath equipment lowered to the ground or raised. 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. Service work does not require going underneath.

GREASING

Grease

Use an SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multi-purpose lithium based grease.

Use a hand-held grease gun for all greasing.

Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.

Replace and repair broken fittings immediately.

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

Storing Lubricants

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

SERVICING INTERVALS

The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication.

10 HOURS

Lubricate 180 degree folding toolbar (Figure 14).

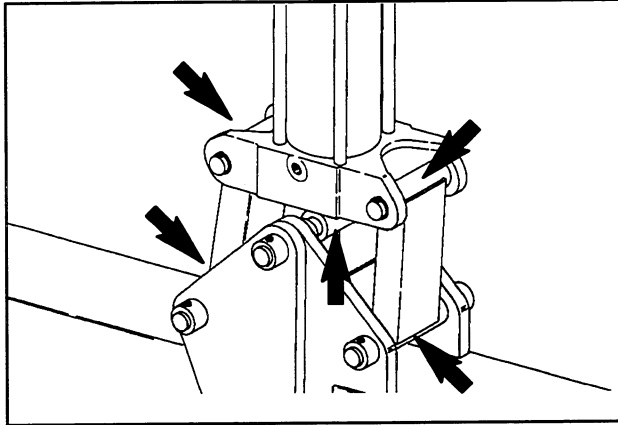


Figure 14. 180 Degree Folding Toolbar

Lubricate rear stabilizer coupler hub (Figure 15).
Check air pressure in all pneumatic tires. Pressure should be 28 to 32 psi.

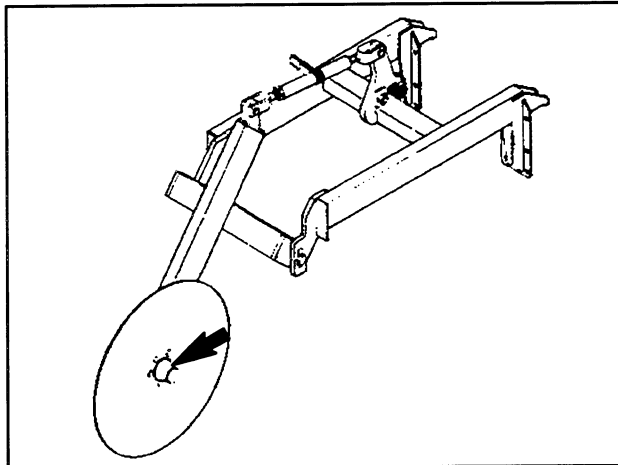


Figure 15. Rear Stabilizer Coupler

25 HOURS

Lubricate lift assist (light-duty) (Figure 16).

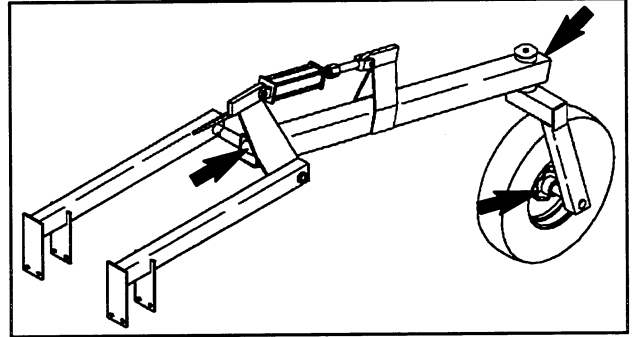


Figure 16. Lift Assist (Light-Duty)

Lubricate lift assist (heavy-duty) (Figure 17).

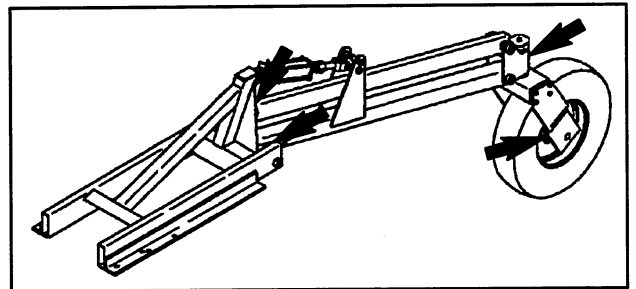


Figure 17. Lift Assist (Heavy-Duty)

ANNUALLY

Repack all wheel bearings.

NOTES

ASSEMBLY

DEALER SET-UP INSTRUCTIONS

Assembly of this cultivator is the responsibility of the WOODS dealer. The cultivator should be delivered to the owner completely assembled, lubricated and adjusted for normal conditions.

Set up cultivator as received from the factory with these instructions. Complete check lists on page 20 when it is set up.

Cultivators are shipped disassembled. When you receive shipment, examine the unit carefully for any hidden damage during shipment. Check and compare the parts, bundles and cartons to the packing list to identify any shortages before assembly starts. If any parts shortages are noted, contact WOODS immediately.

Select an assembly location that is clean, and level with a firm dry surface. The area must not have any overhead power lines or obstructions and must be large enough to safely work around and accommodate the machine when fully assembled.

Remove cultivator from carton. Open parts box and lay parts out to make location easy. Refer to parts lists and exploded view drawings in this manual.

Recommended torque values for hardware are given on page 9.

CAUTION

- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.

WARNING

- Keep hands and body away from pressurized lines. Use paper or cardboard, not body parts to check for leaks. Wear safety goggles. Hydraulic fluid (oil) under pressure will easily penetrate skin and can cause serious injury or death.
- Make sure that all operating and service personnel know that in the event hydraulic fluid penetrates skin, it must be surgically removed within a few hours by a doctor familiar with this form of injury, or gangrene, serious injury or death can result. CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES.

WARNING

- Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. Before operating or allowing anyone to approach the equipment, purge any air in the system by operating all hydraulic functions several times after connecting equipment, connecting hoses, or doing any hydraulic maintenance.
- Before folding or unfolding cultivator:
 - Make sure you have adequate clearance on each side and overhead.
 - Make sure wing cylinder restrictor fittings are properly installed.
 - Make sure wing-mounted gauge wheels and guide coulters will not contact tractor cab or tires.
- Do not allow children or untrained persons to operate equipment.
- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.
- Before dismounting tractor or performing any service or maintenance, disengage power to implement, lower the 3-point hitch and all raised components to the ground, operate valve levers to release any hydraulic pressure, stop engine, set parking brake, remove key, and unfasten seat belt.
- Do not handle blades with bare hands. Careless or improper handling may result in serious injury.

PRE-DELIVERY CHECK LIST

(DEALER'S RESPONSIBILITY)

Inspect the equipment thoroughly after assembly to ensure it is set up properly before delivering it to the customer.

The following check lists are a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- ___ Check that all safety decals are installed and in good condition. Replace if damaged.
- ___ Properly attach implement to tractor and make all necessary adjustments.
- ___ Check all bolts to be sure they are tight.
- ___ Check wheel bolts for proper torque.
- ___ Check that all cotter pins and safety pins are properly installed. Replace if damaged.

- ___ Check and grease all lubrication points as identified in "Service, lubrication information".
- ___ Check that hydraulic reservoir has been serviced and that hydraulic system and all functions have been operated through full cylinder stroke to purge air from system.

DELIVERY CHECK LIST

(DEALER'S RESPONSIBILITY)

- ___ Show customer how to make adjustments.
- ___ Instruct customer how to lubricate and explain importance of lubrication.
- ___ Point out the safety decals. Explain their meaning and the need to keep them in place and in good condition. Emphasize the increased safety hazards when instructions are not followed.
- ___ Present Operator's Manual and request that customer and all operators read it before operating equipment. Point out the manual safety rules, explain their meanings and emphasize the increased safety hazards that exist when safety rules are not followed.
- ___ Explain to customer the potential crushing hazards of going underneath raised equipment. Instruct customer that service work does not require going underneath unit and never to do so.
- ___ Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- ___ For mounted units, add wheel weights, ballast in front tires, and/or front tractor weight to enhance front end stability. A minimum 20% of tractor and equipment gross weight must be on front tractor wheels. When adding weight to attain 20% of tractor and equipment weight on front tractor wheels, you must not exceed the ROPS weight certification. Weigh the tractor and equipment. Do not estimate!
- ___ Explain to customer that when equipment is transported on a road or highway, a Slow Moving Vehicle (SMV) sign should be used to provide adequate warning to operators of other vehicles.
- ___ Make customer aware of optional equipment available so that customer can make proper choices as required.

ORDER OF ASSEMBLY

It is suggested to completely assemble two rows of the cultivator including all options and accessories prior to assembling the entire cultivator. There are many variations in assembly all depending upon your application and conditions. Once you have completed the initial assembly of two rows and approve the configuration, then continue assembling balance of cultivator.

1. Mount 3-point hitch.
2. Fasten "Alloway" decal.
3. Assemble toolbar.
4. Mount linkages to toolbar.
5. Mount trees to linkages.
6. Mount gauge wheels to trees.
7. Mount front tubes (Optional).
8. Mount dual disc/dual knife (Optional).
9. Mount branches to trees.
10. Fasten rear tine brackets.
11. Fasten rear extensions (Optional).
12. Fasten sweeps or shovels to tines (Optional).
13. Attach tines.
14. Attach rear shanks.
15. Mount guide wheels and/or support wheels (Optional).
16. Fasten parking stand (Included with all King Guide Struts).
17. Mount shields (Optional).
18. Mount lift assist (Optional).
19. Fasten remaining decals.
20. Tighten all bolts to specifications in Bolt Torque Chart.
21. Check that all tire pressures are 28–32 psi.

Decal Installation Procedure

Be sure that the installation area is clean and dry.

Decide on the exact position before you remove the backing paper.

Remove the smallest portion of the split backing paper.

Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.

Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.

Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

Decal Locations (Figure 18)

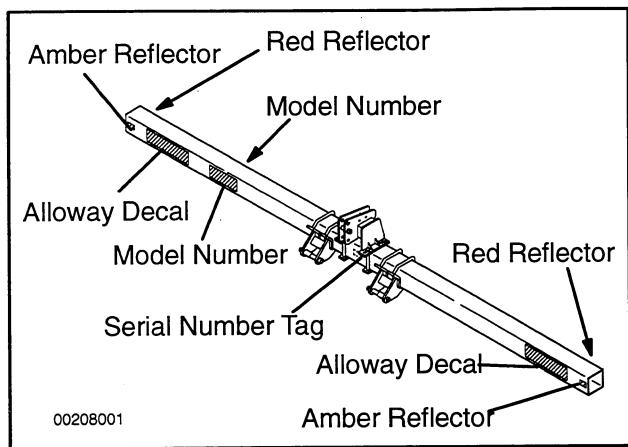


Figure 18. Decal Location

To avoid decals from interfering with cultivator components, all decals other than the “Alloway” decal can be applied after cultivator is assembled. On row spacings 36” and above, even the “Alloway” decal can be applied after cultivator assembly.

Place amber reflectors on the front side of toolbar as close to each end as possible. Place red reflectors on the back side of toolbar as close to each end as possible.

Attach serial number tag to the front center of the toolbar using U-drive screws.

Attach “Alloway” decals to the front side of toolbar. Place them towards the end of the beams or on the wings of folding beams.

Attach model number decals on front and back side of toolbar. Place them towards the end of the toolbar or on the wings of folding toolbars.

Fasten the tube caps to the end of the toolbars using adhesive provided.

MOUNTING 3-POINT HITCHES

Support the toolbar on suitable stands. Determine toolbar type, Figure 20, and locate center point of toolbar. Mark center point for reference during assembly.

Mount the upper hitch mast supplied with cultivator that matches the toolbar type.

Four Piece Upper Mast for F & FR Bars, 8 Row and Smaller

Install upper mast using backstraps, 7/8 NC x 10” hex bolts, lockwashers and nuts. Fasten the 1-1/4” OD bushings between the plates using 1 x 5” hex bolts, lockwashers and nuts. See Figure 21 and Figure 22 for the correct bushing location to fit the hitch that will be used.

Be sure upper mast is centered on the toolbar.

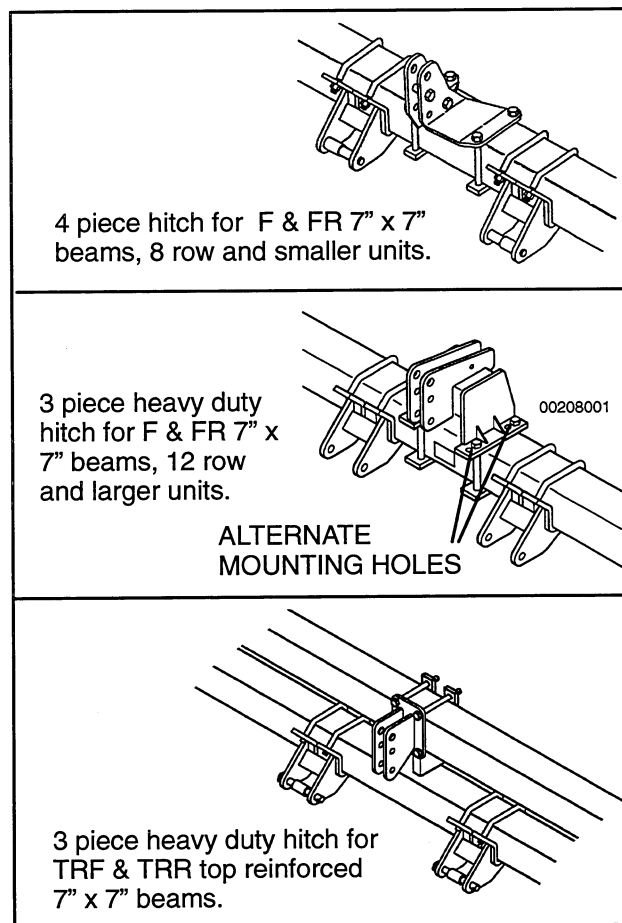


Figure 19. Upper Hitch Masts

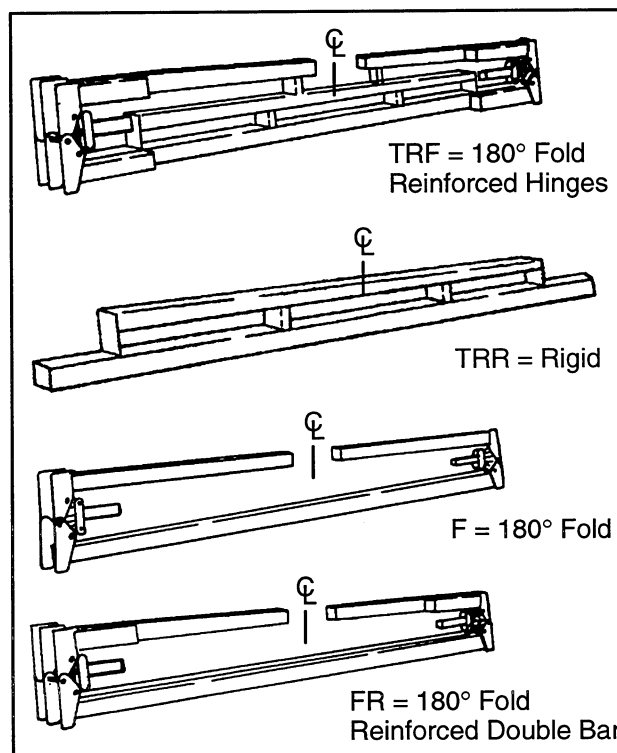


Figure 20. Toolbar Identification

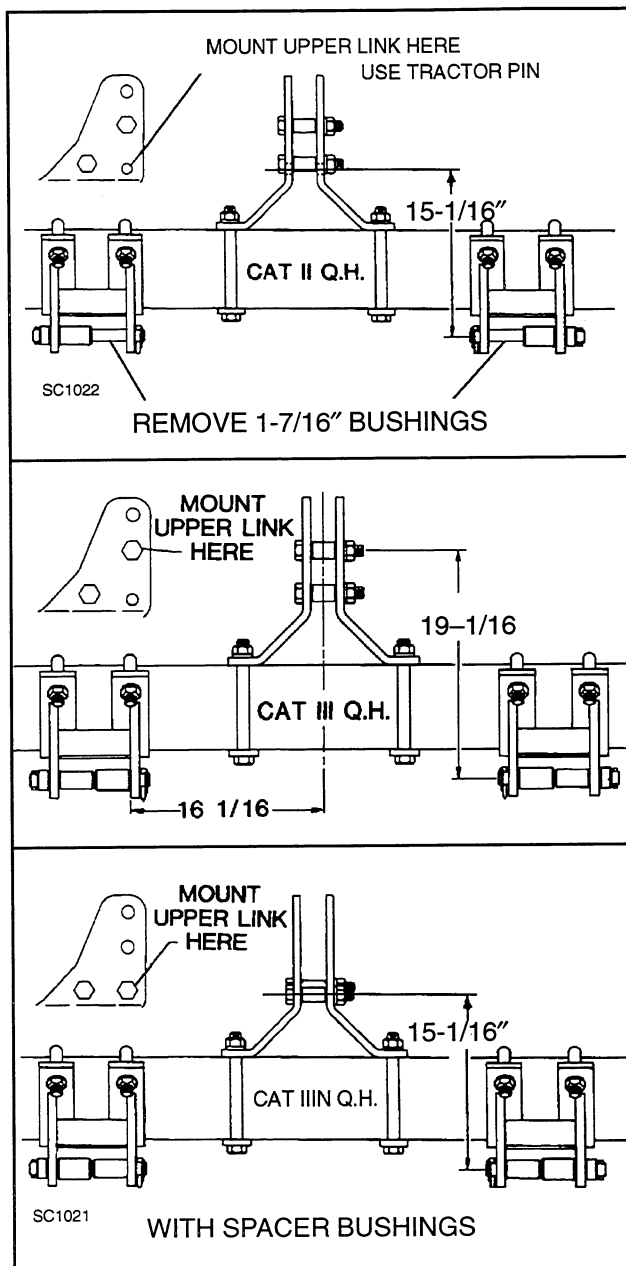


Figure 21. Quick Hitches

Three Piece Heavy-Duty Mast for F & FR bars, 12 Row and Larger

Install upper mast using backstraps, 7/8 NC x 10" hex bolts, lockwashers and nuts. Fasten the 1-1/4" OD bushings between the plates using 1 x 5" hex bolts, lockwashers and nuts. See Figure 21 and Figure 22 for the correct bushing location to fit the hitch that will be used. Be sure upper mast is centered on the toolbar.

NOTE: The upper mast may be attached using the front mounting holes when additional leveling adjustment is needed. Tractors with 46" tires and FWA may require this alternate mounting position.

Three Piece Heavy-Duty Mast for TRR & TRF Bars

Install upper mast using backstraps, 7/8 NC x 10" hex bolts, lockwashers and nuts. Fasten the 1-1/4" OD bushings between the plates using 1 x 5" hex bolts, lockwashers and nuts. See Figure 21 and Figure 22 for the correct bushing location to fit the hitch that will be used. Be sure upper mast is centered on the toolbar.

NOTE: On TRF and FR toolbars, the short side of wings must be on tractor side of toolbar.

IMPORTANT

■ Do not use the upper mast when using lift assist without accumulator.

Fasten the two lower 3-point brackets to the toolbar using 7/8" A-bolts, lockwashers and nuts. Position lower 3-point brackets and spacers to match tractor hitch, Figure 21 and Figure 22.

Mount spacer to lower 3-point brackets using 1-1/8" OD x 9-5/16" pins and 7/16 x 2" snap ring.

Do not tighten bolts until entire cultivator is assembled. Hitch mounting bolts may need to be remounted between U-bolts as on 20"-22" row spacing.

Row spacing or optional equipment may prevent lower hitch bracket installation at the 16-1/16" dimension. CAT II applications can be installed at 13-1/16" and CAT III applications at 19-1/16". Move the lower hitch bushings to the proper location to engage the hitch.

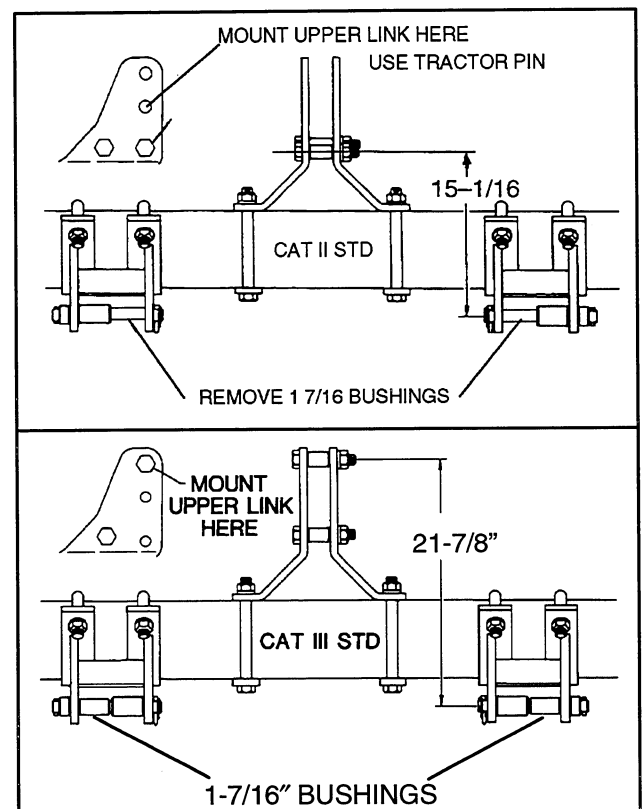


Figure 22. Standard Hitches

MOUNTING WINGS

On toolbars with 180 degree folding wings, assemble the cylinder yoke assembly at the same time the wings are mounted. Use longest pins on 7 x 7" toolbars. The ports on the cylinder should face toward the tractor side of the cultivator. Secure the hinge pins with 5/16 x 2-1/2" bolts and locknuts. Assemble 3/4" jam nuts onto the 3/4" x 2-1/2" bolts and turn them into the hinge plates located at the underside of the hinge. The head of the bolt faces wings.

Note: On double toolbars, short side of wings must be on tractor side of toolbar or bolts used to level wings will not be in proper placement.

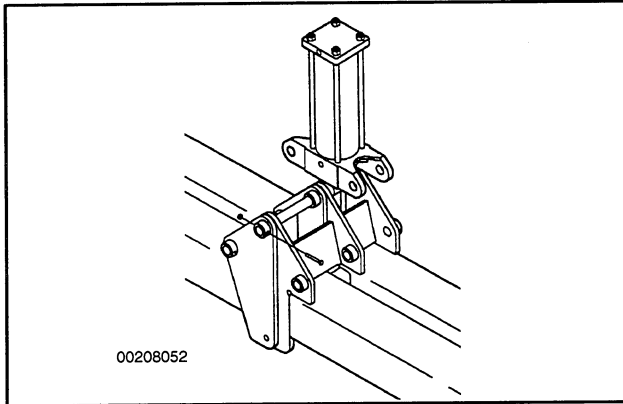


Figure 23. Mounting Wings

Assemble grease zerks in cylinder linkage bars. Mount the linkage bars to the center section using longest pins. Mount the linkage bars to the wings using medium length pins. The grease zerks should point outward from the hinge. Secure the linkage bar pins with 5/16" x 2-1/2" bolts and locknuts.

Assemble the linkage bars to the cylinder casting using welded head pins and snap ring pins as shown in Figure 24. The snap ring pins go through the pin on the tractor side of the cylinder.

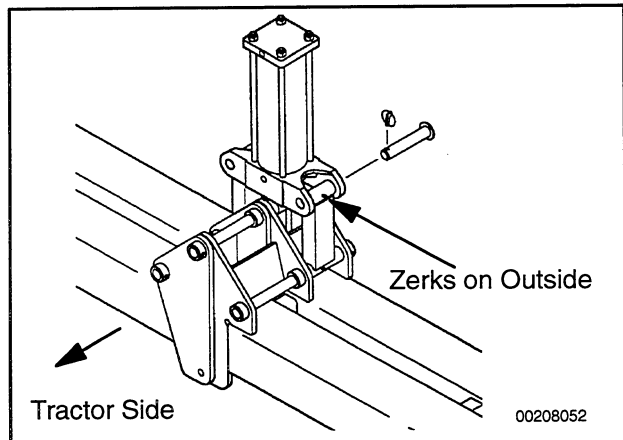


Figure 24. Cylinder Linkage Bars

MOUNTING HYDRAULICS

WARNING

■ **Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. Before operating or allowing anyone to approach the equipment, purge any air in the system by operating all hydraulic functions several times after connecting equipment, connecting hoses, or doing any hydraulic maintenance.**

■ **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.**

Note: Use thread sealant on all NPT hydraulic fittings.

Fasten the 3/4" MORB x 1/2" FPTX elbows to the cylinders. Then attach the 1/2" NPT swivel restrictors to the elbows. They should point downwards and toward the center of the cultivator.

Fasten the long hoses to the upper ports on cylinders and medium hoses to the lower ports on cylinders.

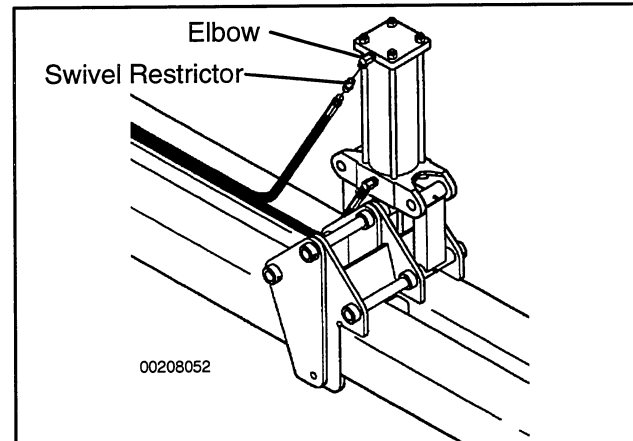


Figure 25. Fittings

Run the hoses to the center of toolbar and fasten the two long hoses and two shorter hoses together using 1/2" pipe tees. Fasten two 60" hoses to the tees and run them toward the tractor.

NOTE: If you prefer to lift wings separately you need to purchase (two) 60" hoses and four elbows and replace the tees with elbows.

Fasten the hoses to toolbar using the plastic cable ties. Do this after cultivator is completely assembled.

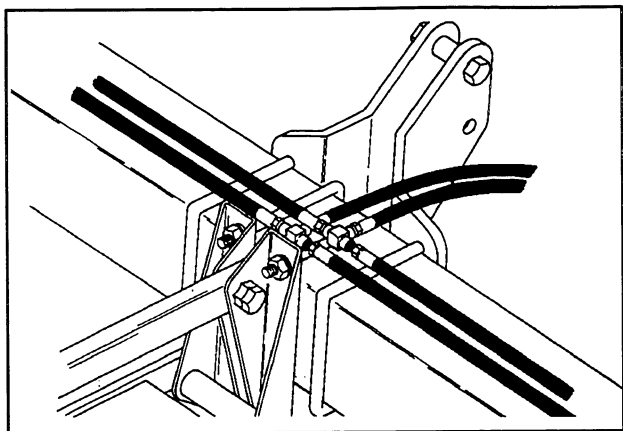


Figure 26. Hoses

Fasten the wing rests to the center section using 5/8" U-bolts, nuts and lockwashers (not required on 24 row 22" machines). Locate them by measuring from hinge pin other directions to assure there is no interference with gang assemblies when folded. Do not tighten until entire cultivator is assembled as they may require moving to miss other components bolted to center toolbar or wings.

Alloway does not supply hydraulic hose coupler tips as we do not know which type you require. Install your hydraulic tips and attach 3-point hitch to front of toolbar. Attach to tractor and slowly fold and unfold, then make final adjustments.

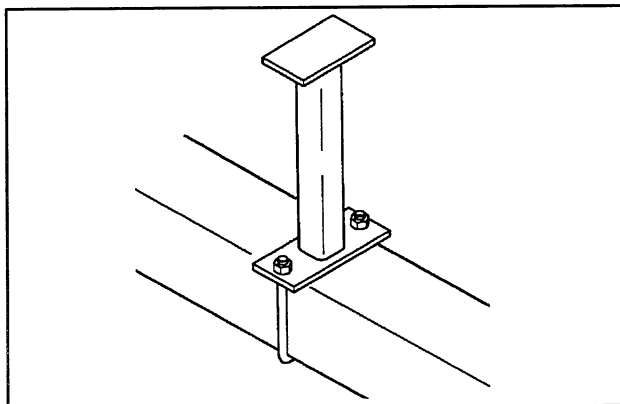


Figure 27. Wing Rest

When first charging the hydraulic cylinders on folding toolbars, you must slightly raise (1 foot) and unfold the wings several times to ensure that the hydraulic cylinders are completely filled with oil. Failure to do this will cause damage to the cultivator and possible personal injury as the wings will "free fall" into the transport position. Stay clear of folding toolbars when folding.

Level wings to the center toolbar using 3/4 x 2-1/2" hex bolts and jam nuts. These may require readjusting after final assembly of cultivator.

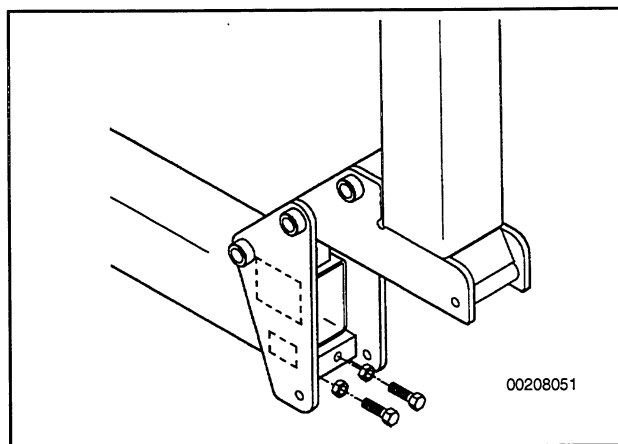


Figure 28. Leveling Wings

See decal location section for decal locations.

Mounting Linkages (Figure 29)

Locate the center of the toolbar and mark it. Mark off the row spacings on both sides of the center mark.

Example 1 – on even row units (8 or 12 rows) if the cultivator is for 30" rows, mark off every 30" on both sides of center mark.

Example 2 – on odd row units (9 rows) if the cultivator is for 30" rows, mark off 15" on both sides of center mark and then every 30" (there is no gang on center of toolbar).

Center the linkage assemblies over the marks made on the toolbar and fasten them using 5/8" U-bolts and serrated flanged nuts. On 2065 cultivators, fasten plate weldment in front of linkage and tighten set screws on bottom.

Note: On some vertical folding beams, the ear on the linkage closest to the hinge plate may have to be sawed or torch off. On 20"-22" row spacing cultivators, the U-bolt on linkage closest to lower 3-point goes through lower 3-point bracket.

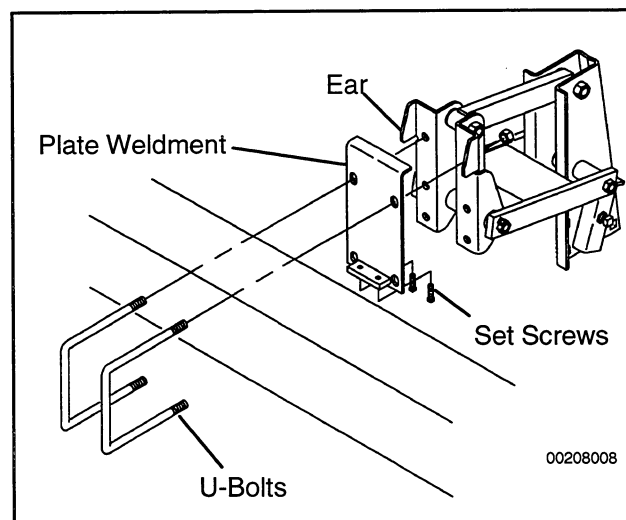


Figure 29. Linkage

Mounting Trees to Linkage (Figure 30)

Mount the tree to the linkage using four 5/8 x 3-1/2" carriage bolts and serrated flange nuts. The bolts go over the top of tree and through the holes in the tree. Be sure front tube clamp faces up as shown. On models 2130, 2140 and 2065, Carriage bolts must go through gauge arm pocket. On model 2065, do not tighten until yoke gauge wheel arm mounts are installed.

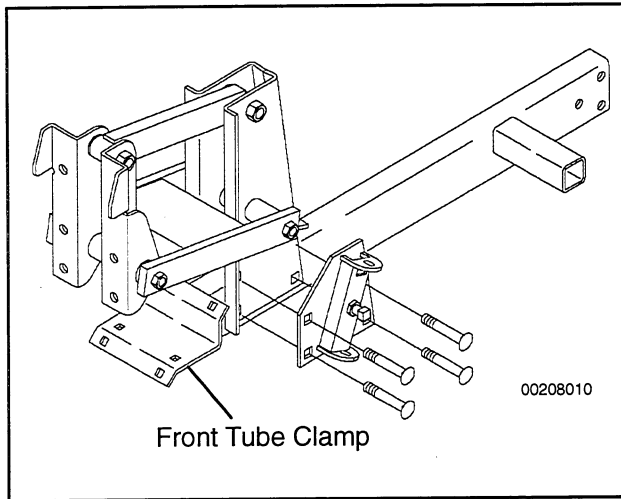


Figure 30. Tree

Mounting Gauge Wheels (Figure 31 & Figure 32)

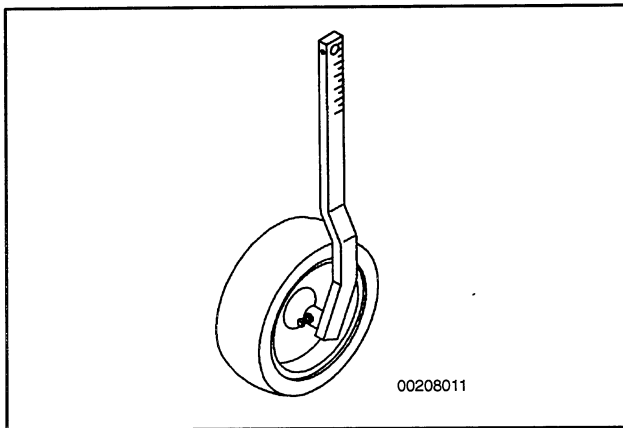


Figure 31. Gauge Arm & Wheel Assembly

Alloway supplies gauge wheel arms that extend the wheels forward to get them ahead of any possible dirt flow off other ground engaging tools. However, this is not possible behind the tractor tires when vertical guide wheels are utilized, therefore we also supply two straight gauge arms with each cultivator. If vertical guide wheels are not used, install the straight gauge

arms on the end gangs of cultivator where potential dirt flow into gauge wheels is minimized.

Mount the wheel assembly to the gauge wheel arm using 3/8 x 3/4" square head set screw and jam nut. The set screw bottoms out in groove in axle.

Position the gauge wheel arm assembly into the pocket on the linkage assembly and fasten with 5/8" square head set screw, be sure all the wheels are set at equal depths using the marks on the gauge arms. A typical initial setting is with four marks exposed above the mounting pocket.

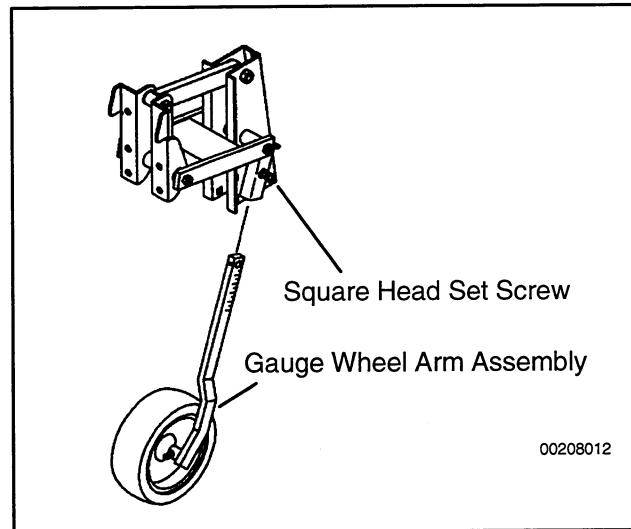


Figure 32. Mounting Gauge Wheel Assembly

YOKE STYLE GAUGE ARM – MODEL 2065 (Figure 33 – Figure 36)

Fasten bushing plates to both sides of gauge wheel assemblies using 3/8 x 3/4" square head set screws and jam nuts.

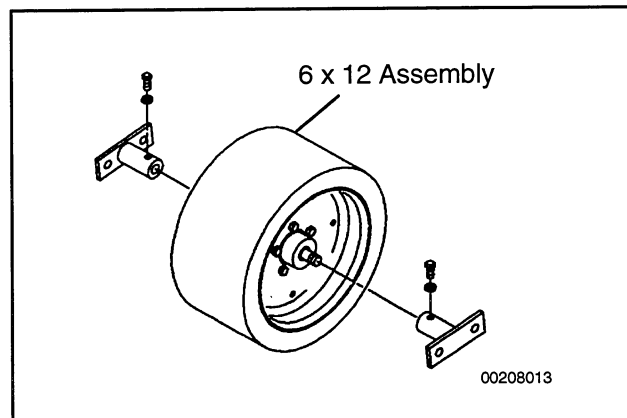


Figure 33. Bushing Plates

Mount the bushing plates to the gauge arm(s) using four 1/2 x 1-1/2 hex bolts and serrated flanged nuts.

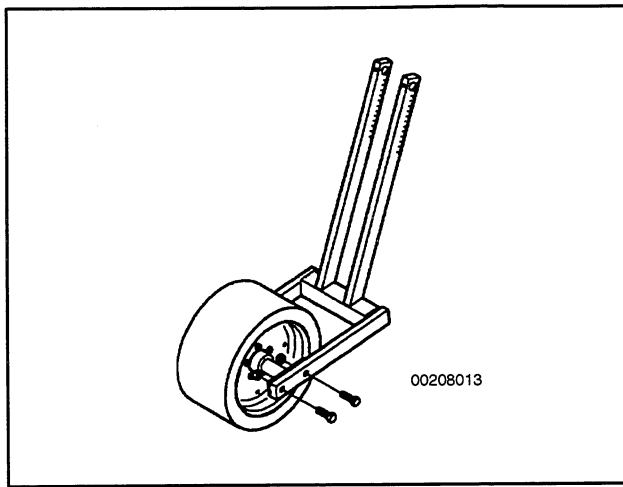


Figure 34. Wheel to Gauge Arm

Loosen the tree bolts and mount a gauge arm pocket to the linkage assembly using the carriage bolts and serrated flanged nuts that mount the trees.

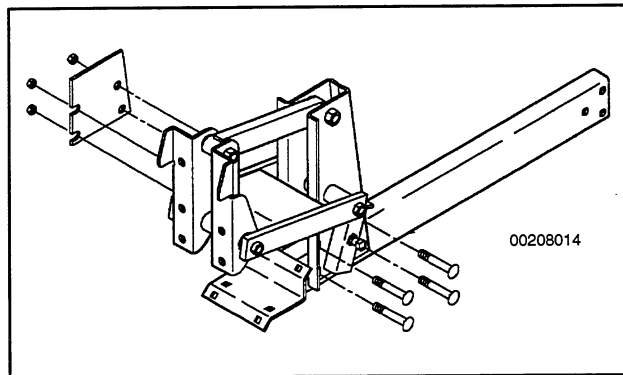


Figure 35. Gauge Arm Pocket

Slide the gauge arm assembly into the pockets on both sides of the linkage and mount using 5/8" square head set screws on one side, pack plate and hex bolts on the other. Be sure all gauge wheels are at equal depths, check marks on gauge arm.

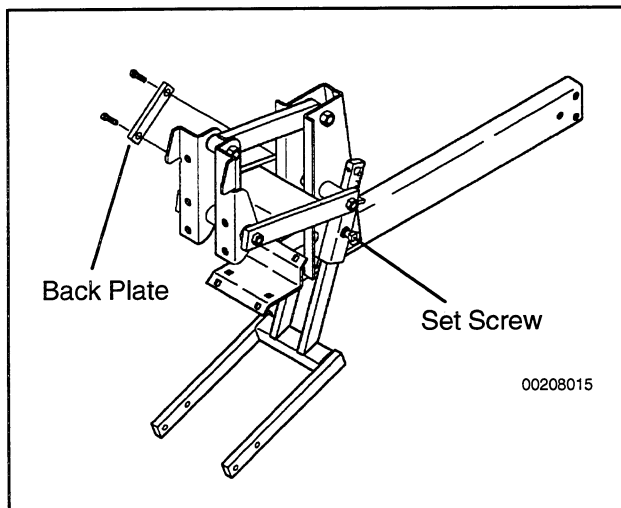


Figure 36. Gauge Arm Assembly

YOKE STYLE GAUGE ARM – MODEL 3030 (Figure 37 & Figure 38)

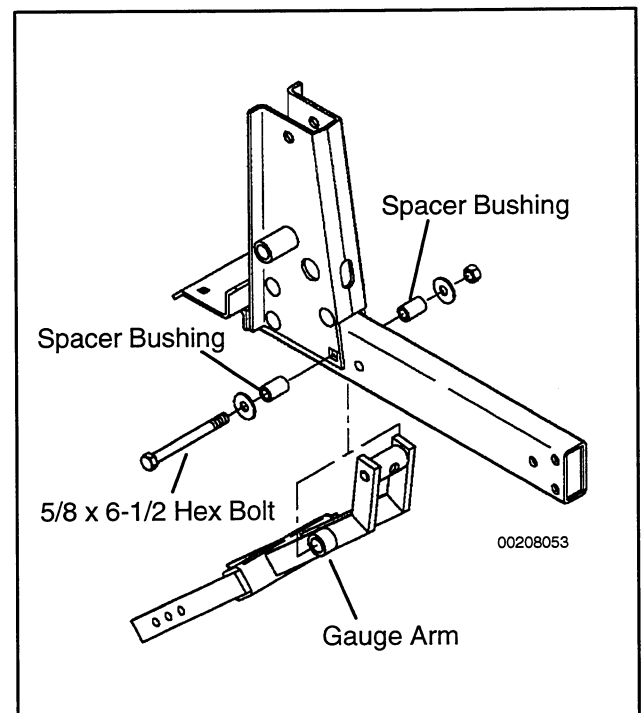


Figure 37. Mounting Gauge Arm - Model 3030

Fasten gauge wheel assembly to gauge arm as shown in Figure 34.

Slide spacer bushing into gauge arm and fasten to tree assembly using 5/8 x 6-1/2" hex bolt, flat washers and locknuts.

Slide bolt through trunion on gauge arm and flat washer, fasten using roll pin. Place trunion through holes in upright and thread bolt into trunion. Place plastic rod into end of trunion and secure with set screw.

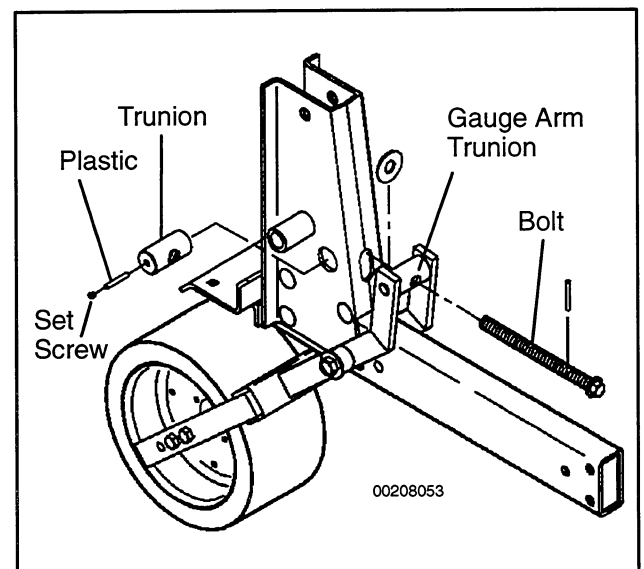


Figure 38. Mounting Gauge Arm - Model 3030

Adjustable Depth Control (Optional)

(Figure 39)

Place collar into gauge arm and fasten using a 1/4 x 1-1/4" roll pin.

Thread screw crank through collar. Place washer on each side of gauge arm pocket tab and fasten with 1/2 NF slotted hex nut and 1/8 x 3/4" roll pin.

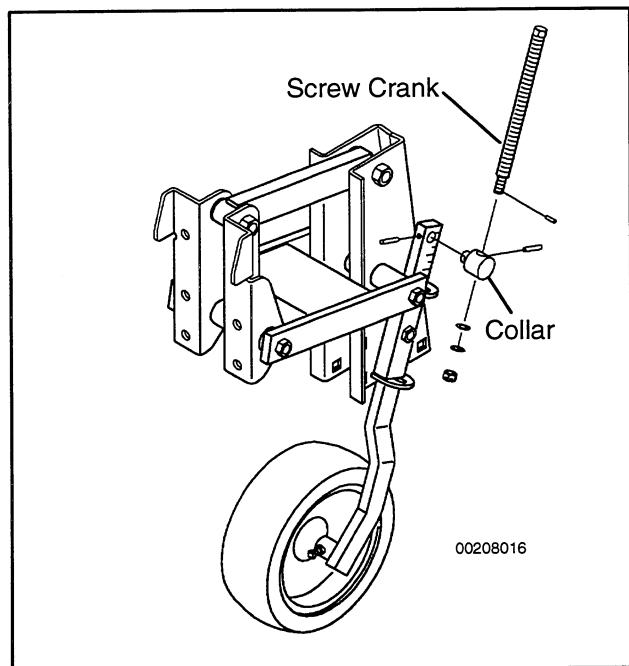


Figure 39. Adjustable Depth Control

King Guide Strut (Figure 40)

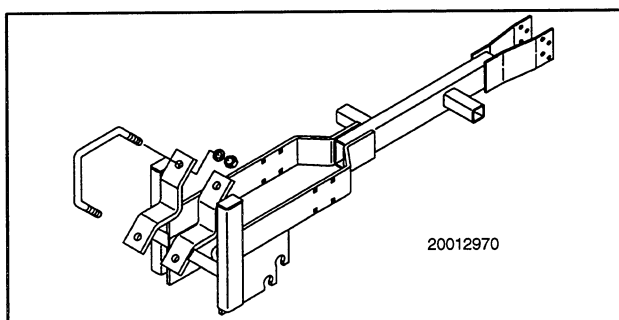


Figure 40. Mounting King Guide Strut

Fasten king guide strut to the toolbar using 7/8" A-bolts, lockwashers and hex nuts. Be sure strut is centered over guide marks.

Fasten hub assembly to wheel assembly using wheel nuts provided on hub assembly.

Loosen nuts on axle and slide wheel assembly into desired slot in frame. Tighten nuts. Typically in soft soil with deep wheel tracks use lower hole.

On 30" rows, fasten branch weldments to frame using 1/2 x 1-1/2" carriage bolts and serrated flanged nuts.

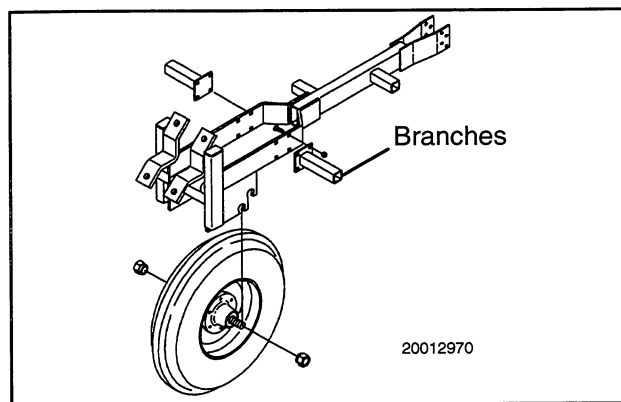


Figure 41. Mounting Branches

Mounting Branches

2040 CULTIVATOR

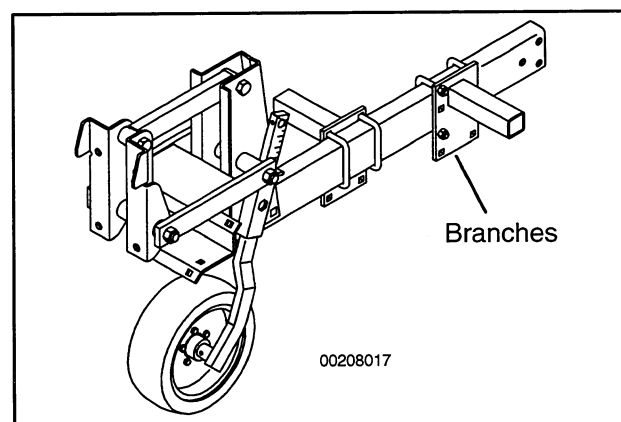


Figure 42. Tine Tree

On three tine trees, bolt the branches to the trees using four 1/2" U-bolts and serrated flange nuts. Space the branches equally along the tree for trash clearance. Note: The branches may be lowered or turned around to give different tine penetration. Initial set up is usually with all tine branches level with top of tree.

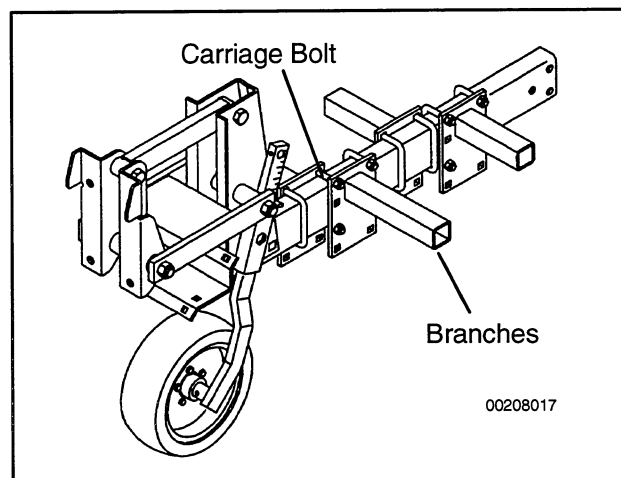


Figure 43. Tine Tree

On five tine trees, bolt the branches to the trees using six 1/2" U-bolts, two 1/2 x 3-1/2" carriage bolts and serrated flange nuts. The front branches will be bolted together with the carriage bolts. Space the branches equally along the tree for trash clearance. Note: the branches may be lowered or turned around to give different tine penetration. Initial set up is usually with all tine branches level with top of tree.

2065 CULTIVATOR

Fasten 17" long tubes to tree using 2" bracket on tree and 2-1/2" bracket on top of tube with two 1/2" U-bolts through the brackets. Space branches evenly between front and back of tree.

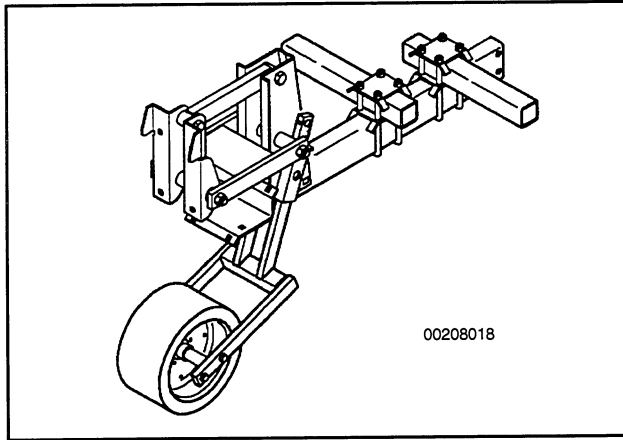


Figure 44. Model 2070 Branches

MOUNTING FRONT TUBES

Rigid Front Tubes

When mounting rigid front tubes, bolt the tube in place using a single tube clamp and 7/16 x 1-1/2" carriage bolts, lockwashers and hex nuts.

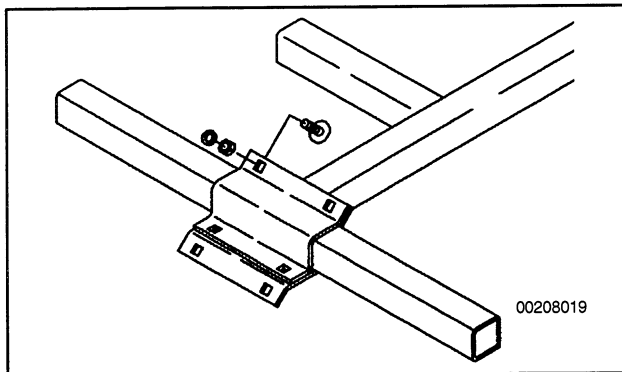


Figure 45. Rigid Front Tubes

Telescoping Front Tubes

When mounting telescoping front tubes, bolt the tube in place using a double tube clamp and 7/16 x 1-1/2" carriage bolts, lockwashers and hex nuts.

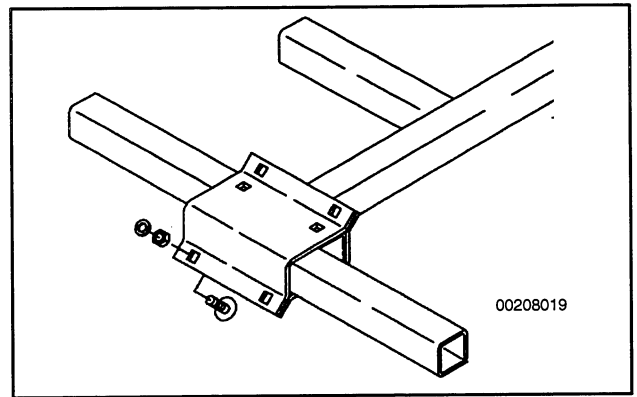


Figure 46. Telescoping Front Tubes

Offset Front Telescoping Tubes (2065 only)

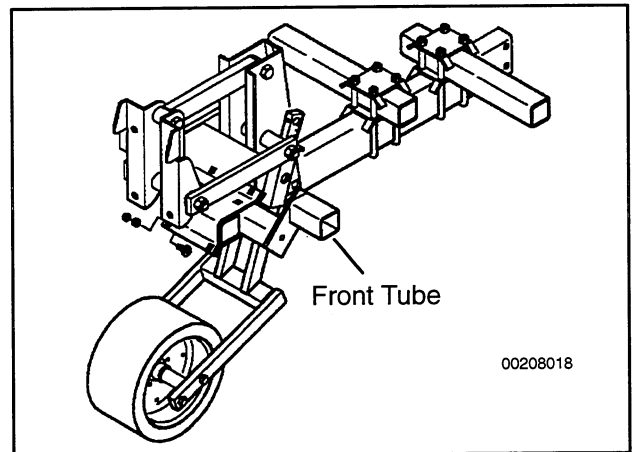


Figure 47. Offset Front Tubes

When mounting front tubes on 2065 cultivator, fasten the tubes in place using 7/16 x 1-1/2" carriage bolts and serrated flange nuts. Be sure the tubes are turned up and back as shown.

Mounting Rear Tine Bracket

ADJUSTABLE REAR TINE BRACKET

Fasten rear tine bracket to tree using 5/8 x 3-1/2" carriage bolts and serrated flange nuts. This bracket may be turned or lowered to adjust rear tine height.

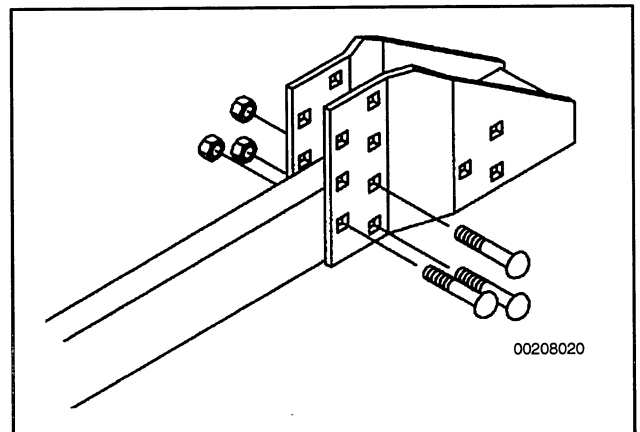


Figure 48. Adjustable Rear Tine Bracket

REAR TINE BRACKET (2130, KING GUIDE STRUT)

Fasten rear tube to tree using two 1/2 x 4-1/2" hex bolts and one 1/2 x 1" hex bolt and serrated flange nuts. This tube may be lowered or raised for different tine heights.

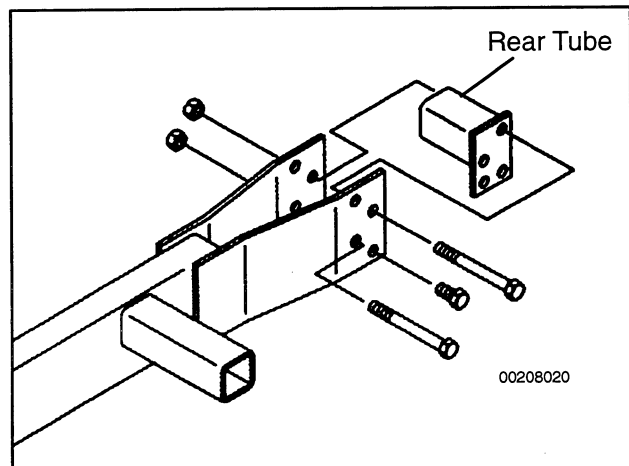


Figure 49. Rear Tine Bracket - Model 2130

PITCH BRACKET (2130)

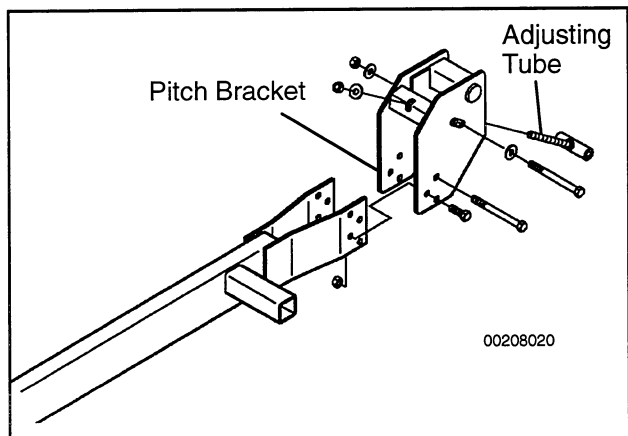


Figure 50. Pitch Bracket - Model 2130

Fasten rear bracket to tree using two 1/2 x 1" hex bolts, two 1/2 x 5" hex bolts and serrated flange nuts. Place adjusting tube into angle on pitch bracket and fasten using flat washer and locknut. Align adjusting screw, tube plates and slots in side plates and fasten using 1/2 x 5" hex bolt, two 1/2" flat washers and top locknut.

REAR TINE BRACKET (3030 AND 3030 KING GUIDE STRUT)

Fasten rear bracket to tree using three 5/8 x 3-1/2" carriage bolts and serrated flange nuts. Place trunion into rear tine bracket. Attach adjusting screw to trunion using washer and 1/4 x 2" roll pin. Slide plastic rod into end of lower trunion and secure with set screw. Thread adjusting screw into lower trunion and adjust until rear tube is level.

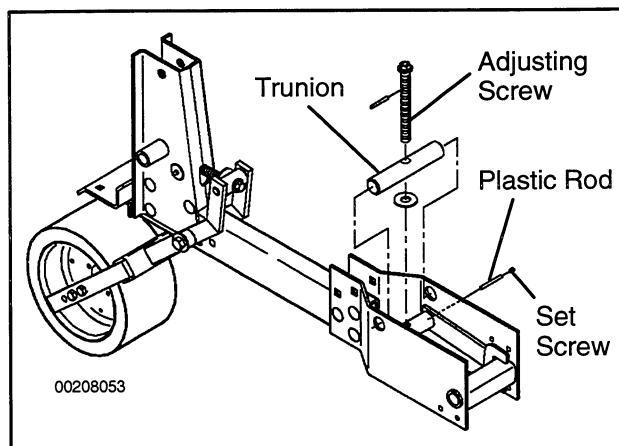


Figure 51. Rear Tine Bracket - Model 3030

Rear Extensions

MODEL 2040

Fasten rear extension to tree using 5/8 x 1-1/2" carriage bolts and serrated flange nuts.

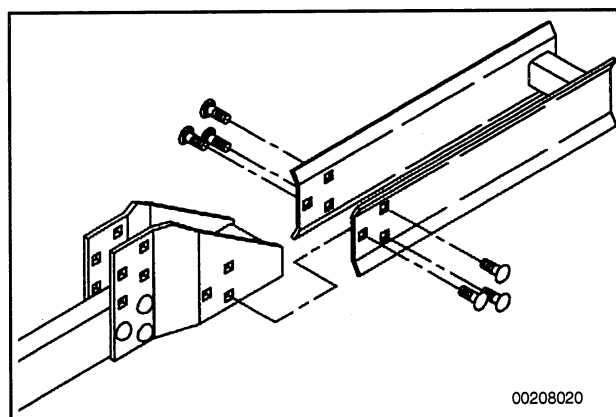


Figure 52. Rear Extension - Model 2030 & 2040

MODEL 2130

Fasten rear extension to (2130 cultivator) tree using two 1/2 x 1-1/4" hex bolts and two 1/2 x 5" hex bolts, lockwashers and hex nuts. You must keep cross tube in place.

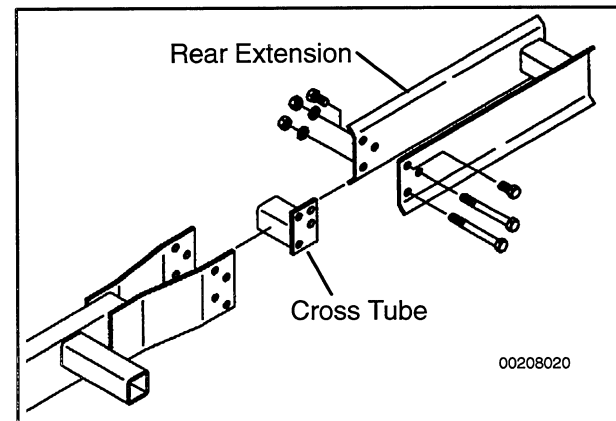


Figure 53. Rear Extension - Model 2130, King Guide

MODEL 3030

Fasten rear extension to (3030 cultivator) tree using four 3/8 x 1" hex bolts and serrated flanged nuts. Bolts must be mounted from inside of rear bracket pointing outward.

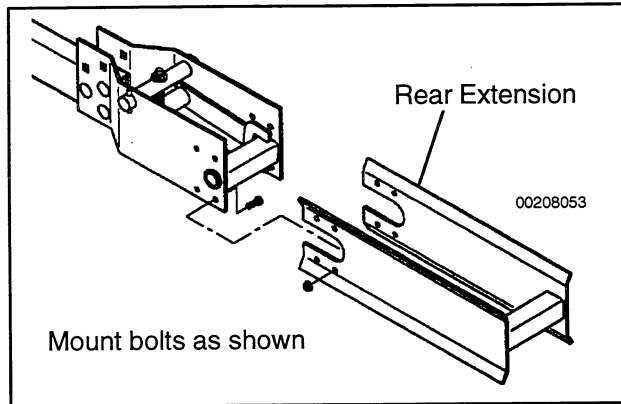


Figure 54. Rear Extension - Model 3030

MODEL 2065

Fasten rear extensions to (2065 cultivator) tree using three 5/8 x 4" carriage bolts and serrated flanged nuts. Slide shank, side plates and spacer plates into rear extension and fasten with four 5/8 x 4" carriage bolts and serrated flanged nuts.

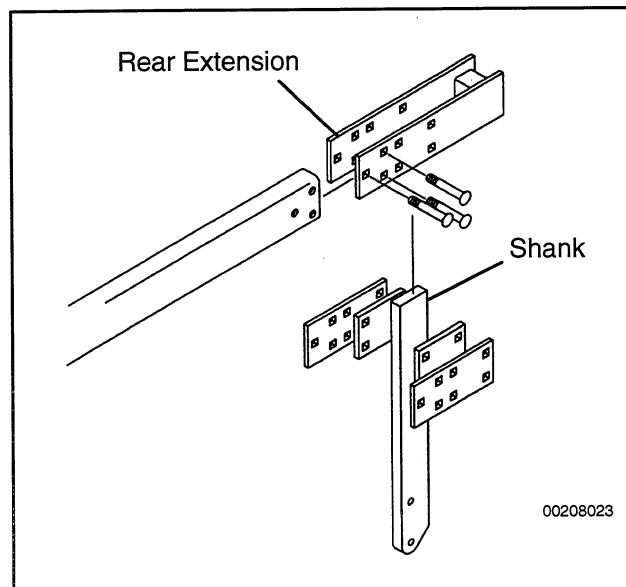


Figure 55. Rear Extension - Model 2065

SPIDER GANG

Fasten rear bracket to tree using 5/8 x 3-1/2 hex bolts and locknuts.

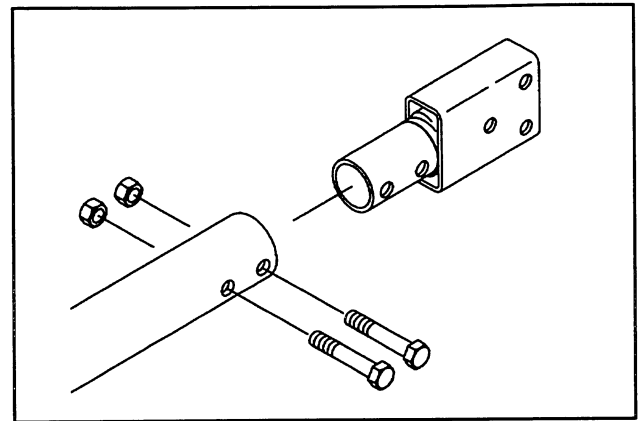


Figure 56. Rear Extension - Spider Gang

Rigid Rear Shank

2065 CULTIVATOR

Mount the shank to rear of tree with two side plates and two spacer plates using 5/8 x 3-1/2" carriage bolts and serrated flanged nuts.

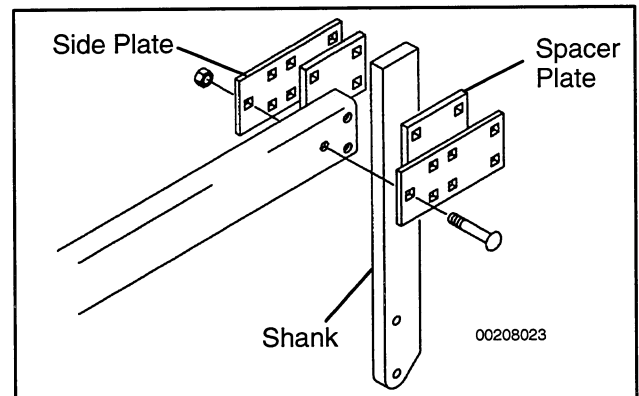


Figure 57. Mounting Shank

2040 CULTIVATOR

Mount clamp assembly to tree using hardware provided with clamp. Slide shank into slot in clamp and fasten with set screws on back side of clamp. Clamp may be placed on inside or outside of rear bracket.

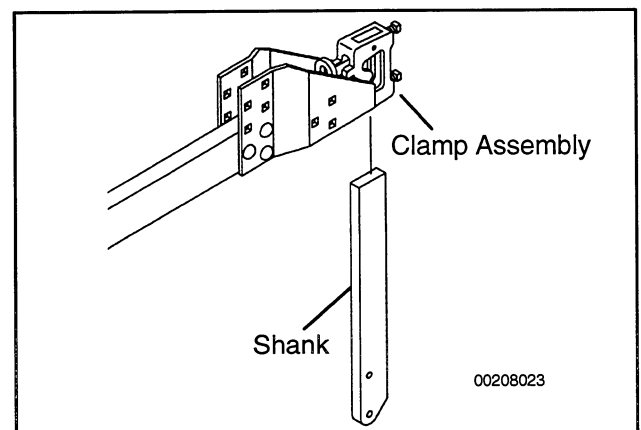


Figure 58. Clamp Mounted Rear Shank

Slide 1/2" serrated flanged nut into hex shaped hole in back of sweep adapter; be sure flange is on inside of sweep adapter. Fasten sweep adapter to shank using spacer plate, two 1/2 x 2-1/2" hex bolts and serrated flanged nuts. Adjust pitch of sweeps using 1/2 x 3" square head set screw and jam nut through flanged nut.

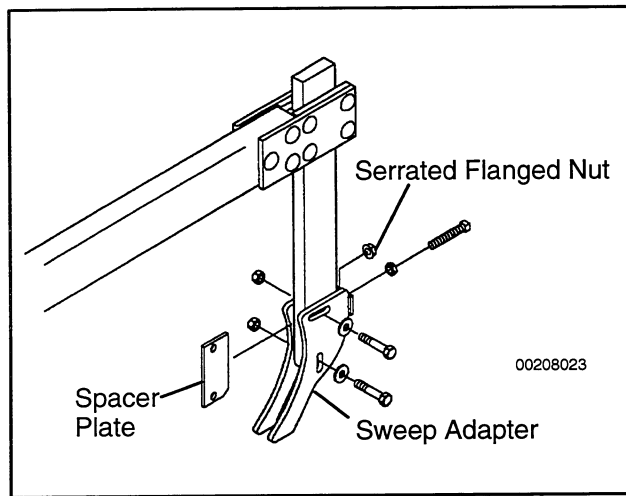


Figure 59. Mounting Sweep Adapter

Rear Trip Shank

Fasten trip assembly to tree using three 5/8 x 3-1/2" carriage bolts and serrated flanged nuts.

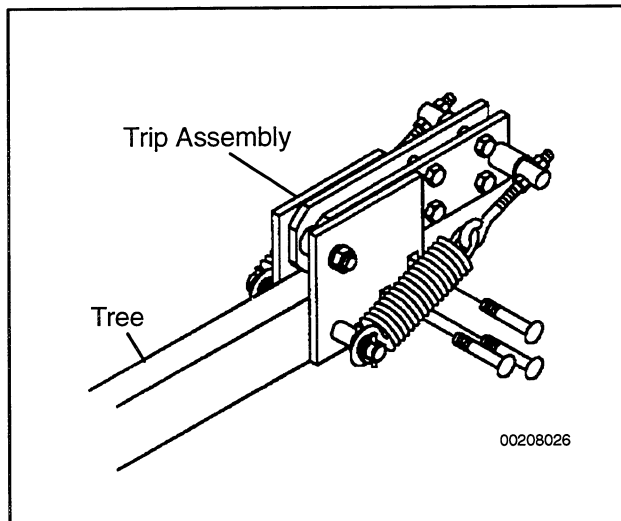


Figure 60. Disc Assembly

Mount shank to trip assembly using the four bolts in trip assembly; be sure shank faces direction shown. Mount sweep adapter as shown on rigid rear shank.

Tighten springs to field condition using eyebolts.

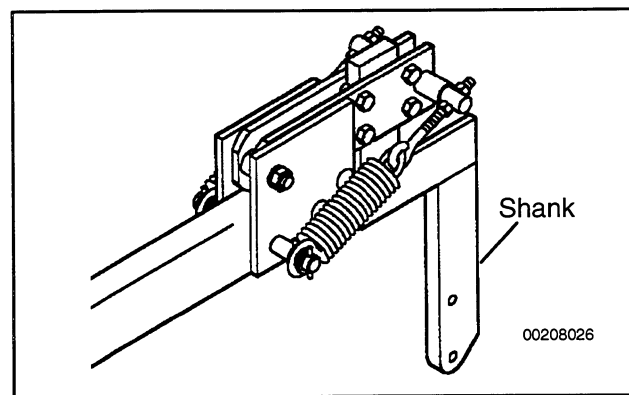


Figure 61. Mounting Shank

Mounting Coulter Discs (2065)

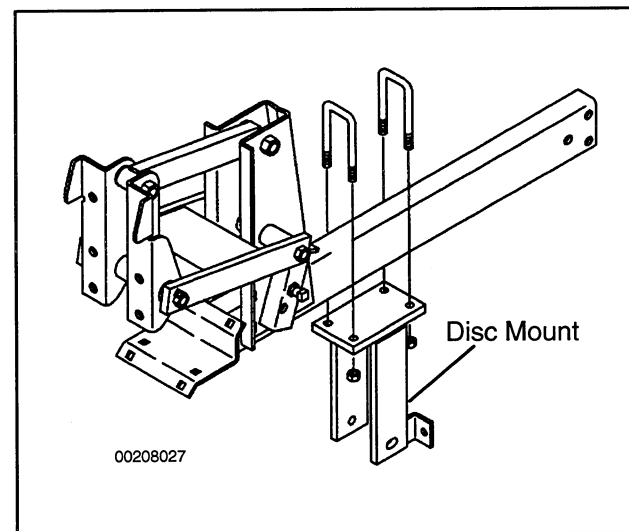


Figure 62. Disc Mount

Fasten disc mount to tree using 1/2" U-bolts and serrated flanged nuts. Mount the disc as close to rear shank as possible.

Fasten hub assembly to disc using 3/8 x 1-1/4" hex bolts, lockwashers and hex nuts.

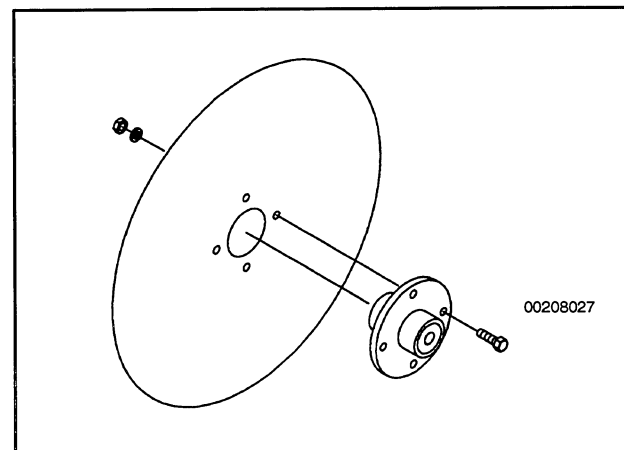


Figure 63. Disc Assembly

Mount disc assembly and adjustment tab to disc mount using 5/8 x 5-1/2" hex bolt and serrated flanged nut. Place 1/2" serrated flanged nut on adjustment tab and slide through ear on mount. Adjust disc to run straight and tighten all hardware. A typical front to rear adjustment of this coultter disc is such that the disc is directly ahead of the front nose of the shovel.

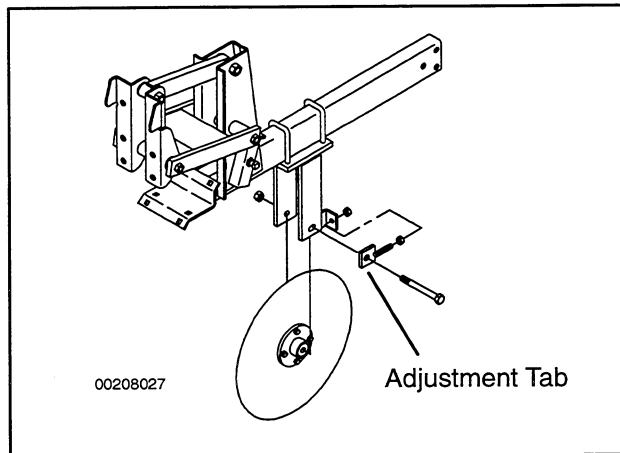


Figure 64. Mounting Disc Assembly

Toggle Trips CLAMP MOUNTED

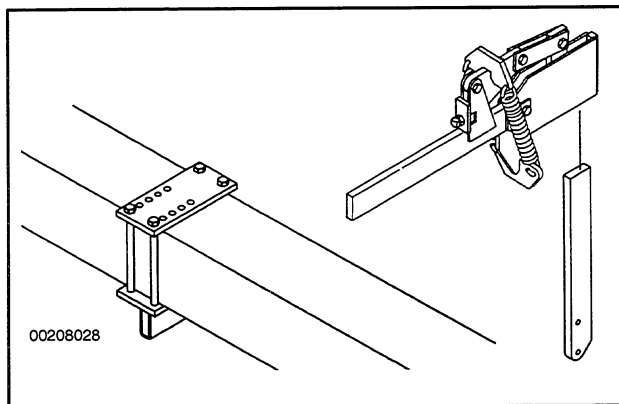


Figure 65. Clamp Mounted Toggle Trip

TREE MOUNTED

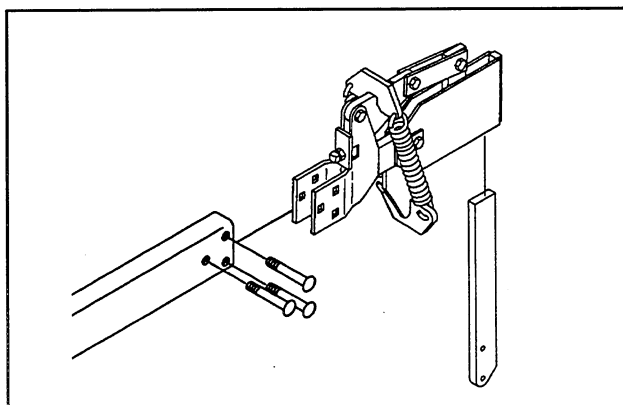


Figure 66. Tree Mounted Toggle Trip

Mount toggle trip assembly to tree using 5/8 x 3-1/2" carriage bolts provided with toggle trip. You may mount clamp to toolbar or trees.

Mount shank into toggle trip and fasten with hardware provided with toggle trip.

Mounting Tines

When mounting tines, a typical setting is with 1" of tine tube exposed beyond tine clamp.

STANDARD S-TINE & PENETRATOR TINE

Mount tine to tube using spring tine clip and (7/16 x 3-1/2" carriage bolt on standard S-tine), (1/2 x 3-1/2" carriage bolt on penetrator tine), lockwasher and hex nut.

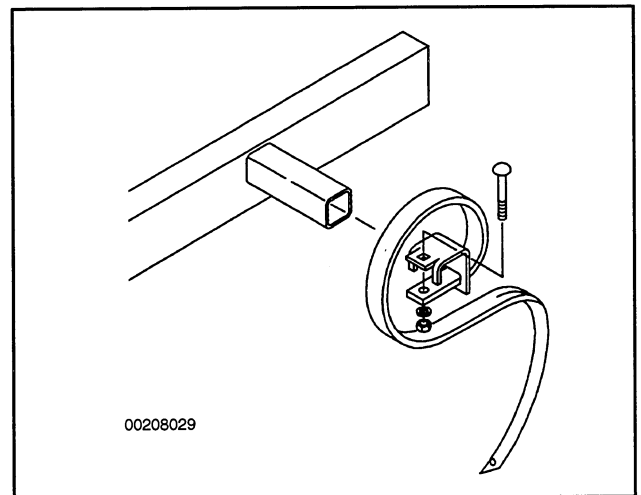


Figure 67. Standard S-Tine & Penetrator Tine

STANDARD S-TINE WITH HELPER SPRING

Place helper spring over tine and mount to tube using spring tine clip and 7/16 x 3-1/2 carriage bolt, lockwasher and hex nut.

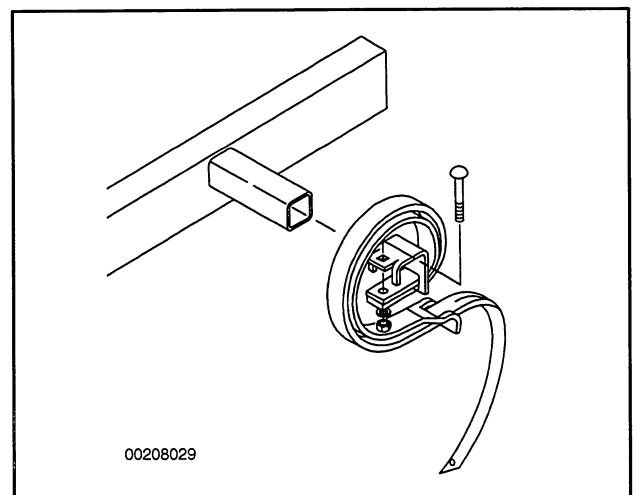


Figure 68. Standard S Tine with Helper Spring

VERTICAL TINE

Place tine clamp plate into tine clamp, slide tine into clamp on opposite side of tube as tine clamp plate. Fasten tine into position using 1/2 x 1-3/4" square head set screw and jam nut. This tine is adjustable for depth.

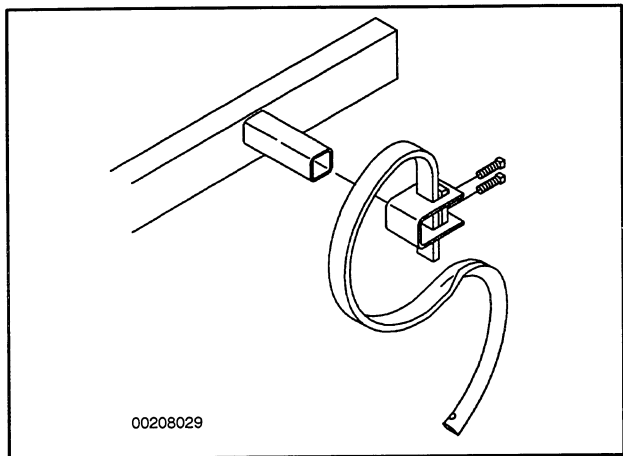


Figure 69. Vertical Tine

STRAIGHT EDGE TINE

Fasten tine to tine plate using 1/2 x 1-1/2" hex bolt and serrated flange nut. Mount tine and plate to tube using 1/2" U-bolts and serrated flange nuts.

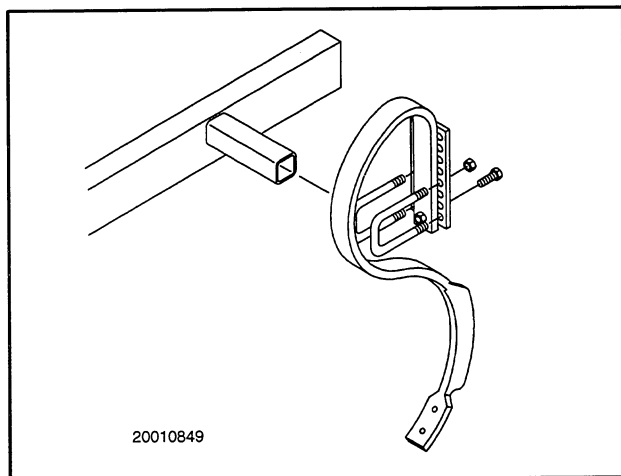


Figure 70. Straight Edge Tine

STRAIGHT EDGE TINE (2130) (OPTIONAL)

Fasten tine to mount using back plate, 1/2 x 1-3/4" hex bolts and serrated flanged nuts.

Fasten tine assembly to rear of tree using four 1/2 x 1-1/4" hex bolts and serrated flanged nuts.

NOTE: Remove rear tine tube.

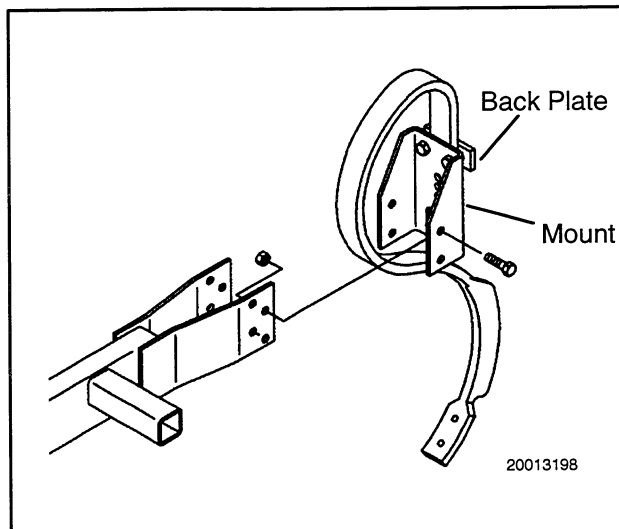


Figure 71. Tine Mount - (Straight Edge Tine)

TIP UP TINE BRACKET (OPTIONAL)

For standard s-tine and penetrator tine.

Fasten tine mount to standard s-tine using 7/16 NC x 1-1/2" hex bolt, lockwasher and hex nut.

Fasten tine mount to penetrator tine using 1/2 NC x 1-1/2" hex bolt lock, washer and hex nut.

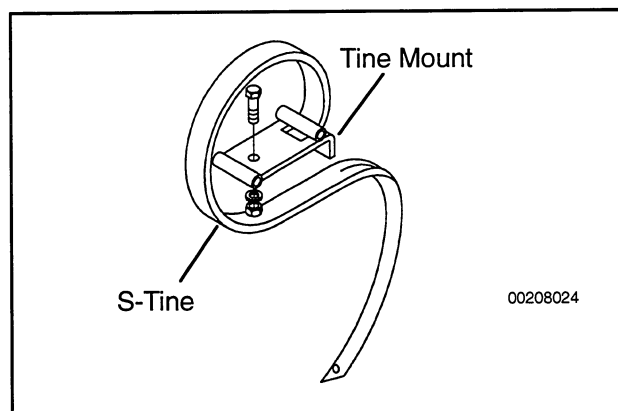


Figure 72. Tine Mount

Slide clamp weldment over tube on tree and fasten using two 3/8 NC x 1" square head set screws.

Fasten tine assembly to clamp weldment using pins. See Figure 73 for pin to tine locations.

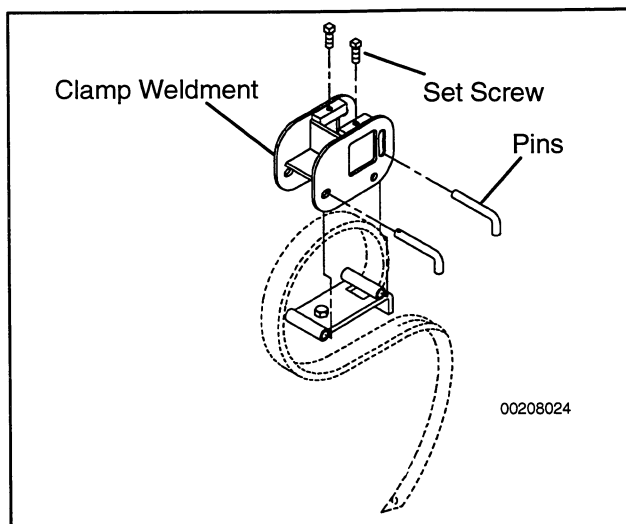


Figure 73. Tine & Clamp Assembly

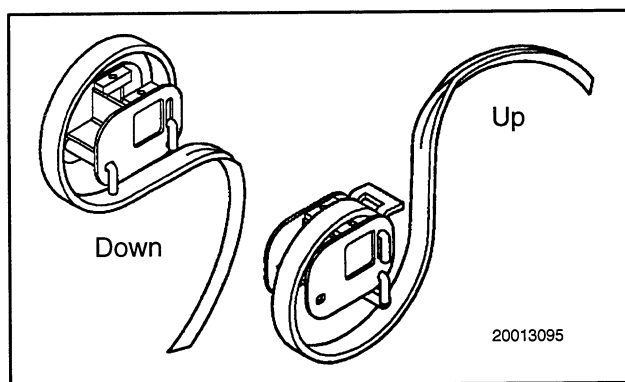


Figure 74. Pin Locations

Mounting Shovels & Sweeps

STANDARD S-TINE & VERTICAL TINE

Fasten shovels to tine using 3/8 x 1-1/2" plow bolt, tine washer and hex nut.

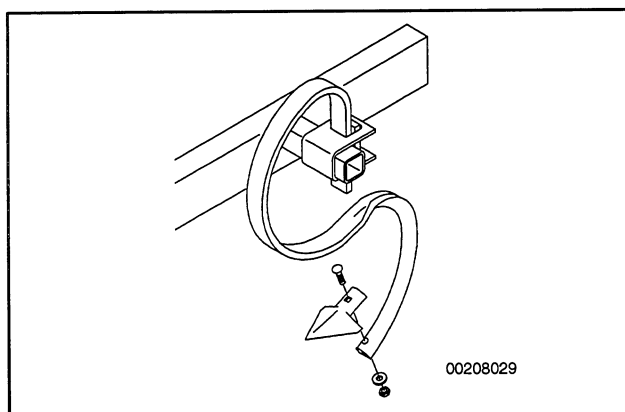


Figure 75. Standard S-Tine & Vertical Tine

PENETRATOR TINE

Fasten shovels to tine using two 7/16 x 1-3/4" plow bolts, flat washers, lockwashers and hex nuts.

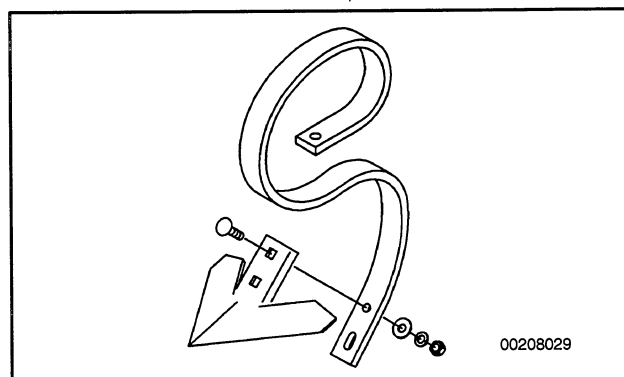


Figure 76. Penetrator Tine

HEAVY DUTY ADJUSTABLE TINE

Fasten shovels to tine using two 7/16 x 2" plow bolts with 1/2" heads, flat washers, lockwashers and hex nuts. Adjust the pitch of shovel by using top or bottom holes in tine.

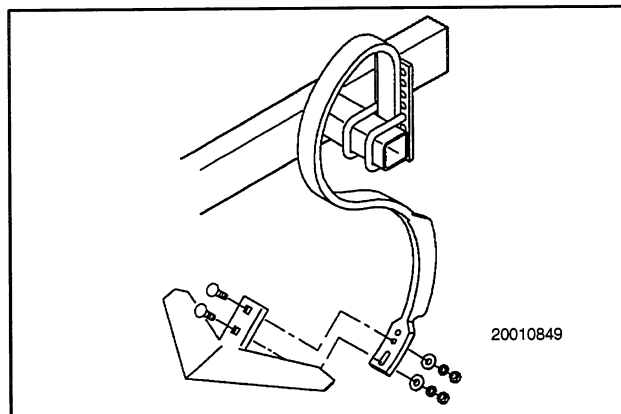


Figure 77. Heavy-Duty Adjustable Tine

REAR SHANK

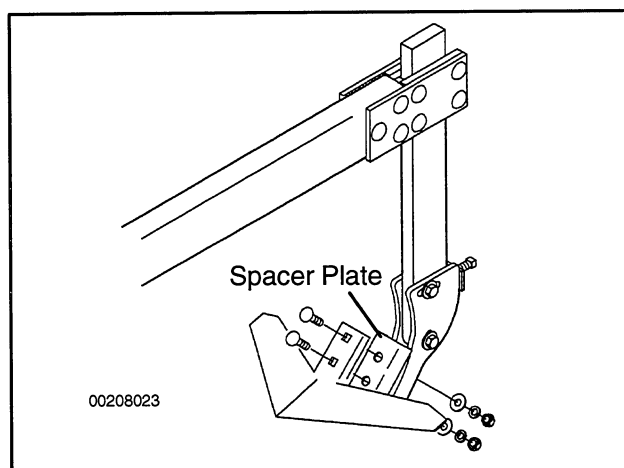


Figure 78. Rear Shank

Fasten shovels to shank using two 1/2 x 3" plow bolts, flat washers, lockwashers and hex nuts. Large sweeps use 1/2 x 3-1/2" plow bolts and spacer plates.

Adjustable Guide & Support Wheel

IMPORTANT

- These wheels may not be used behind tractor tires.
- If mounted on flat folding cultivators, must be located as to not hit tractor cab when toolbar is folded.

FASTEN STRUT MOUNT

Fasten strut mount using two 3/4" U-bolts, lockwashers and hex nuts.

Note: Mount guide and support wheels over a linkage facing towards the tractor. Do not tighten the U-bolts until assembly is complete.

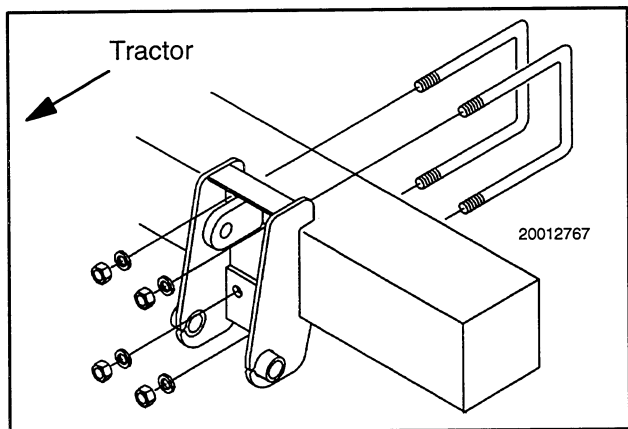


Figure 79. Fastening Strut Mount

MOUNTING PIVOT ARM

Attach pivot arm using pin and two 5/16 x 1-5/8" roll pins.

When mounting pivot arms, be sure that left and right sides are opposite each other. The spindle side either faces the tractor or both face outward.

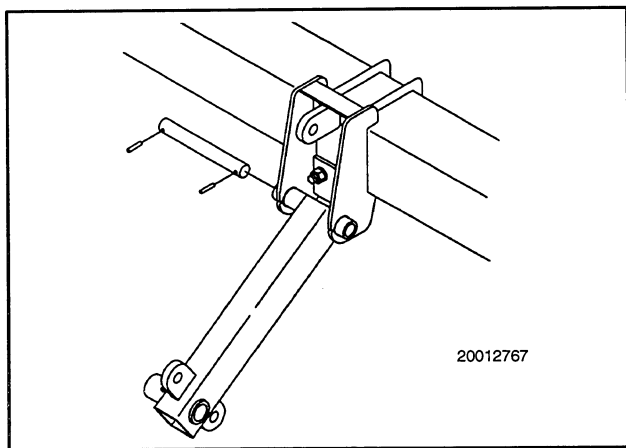


Figure 80. Mounting Pivot Arm

ATTACH SCREWJACK

Attach screwjack using two 1 x 3" hex bolts, lockwashers and hex nuts.

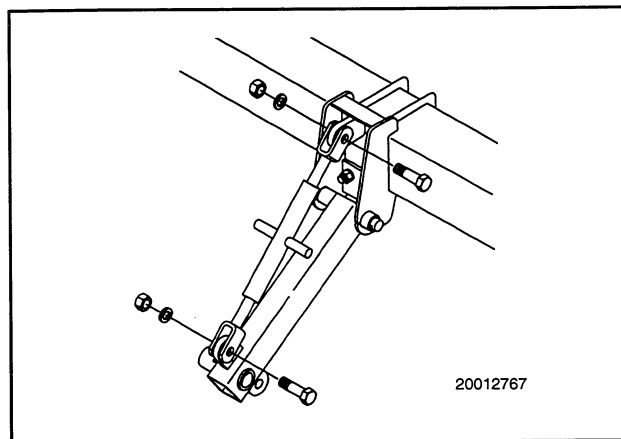


Figure 81. Attaching Screwjack

FASTEN HUB AND SPINDLE ASSEMBLY

Fasten hub and spindle assembly using 1/2 x 3" hex bolt, lockwasher and hex nut.

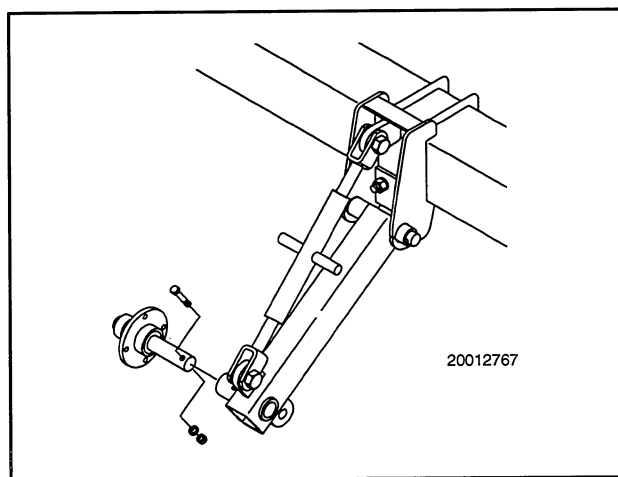


Figure 82. Fastening Hub & Spindle Assembly

FASTEN TIRE AND RIM ASSEMBLY

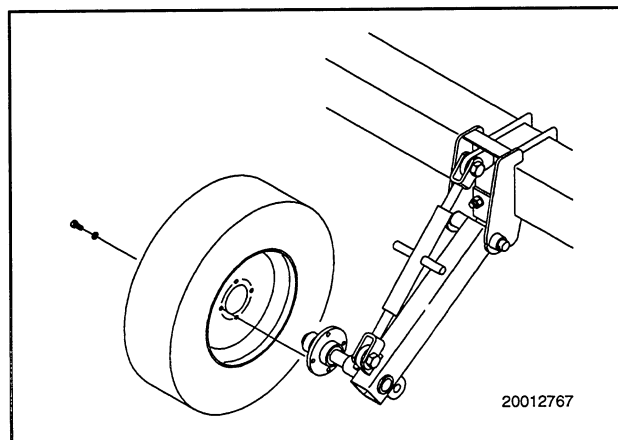


Figure 83. Fastening Tire & Rim Assembly

Fasten tire and rim assembly using bolts provided in hub.

If you have a guide wheel, be sure tire is centered over the guide marks, then tighten U-bolts on mount.

Semi-Pneumatic & Steel Guide Wheel

Mount guide wheels centered over guide marks using U-bolts provided. For some applications, these wheels may be mounted behind tractor tires.

IMPORTANT

- When placing behind tractor tires, carefully check the clearance in all positions. Some tractors without quick hitch may not have adequate clearance when the cultivator is raised.

Adjust wheels by removing bolt in angle and turning adjustment plate.

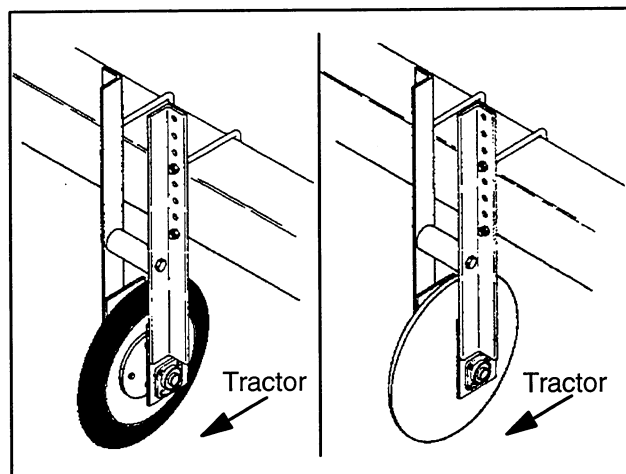


Figure 84. Semi-Pneumatic & Steel Guide Wheels

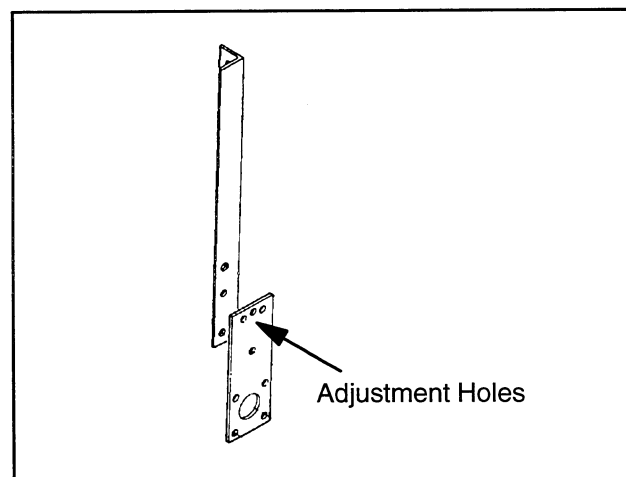


Figure 85. Adjusting Wheel

Curved Arm Support Wheel & Single Rib Guide Wheel

FASTEN WHEEL MOUNTING BRACKET

Fasten wheel mounting bracket using two 3/4" U-bolts, lockwashers and hex nuts.

Note: Do not tighten the U-bolts until assembly is complete.

IMPORTANT

- If mounted on flat folding cultivators, must be located as to not hit tractor cab when toolbar is folded. These wheels may not be used behind tractor tires.

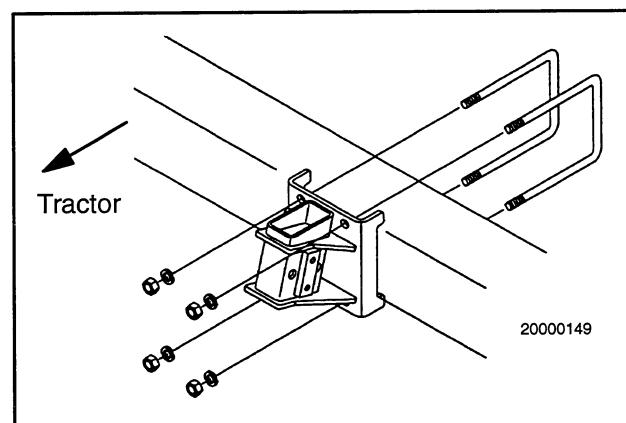


Figure 86. Fastening Wheel Mounting Bracket

MOUNTING SUPPORT WHEEL ARM

Attach support wheel arm using pin and two 1/2 x 1-1/2" square head set screws. The set screws are used to adjust the wheels square to the toolbar.

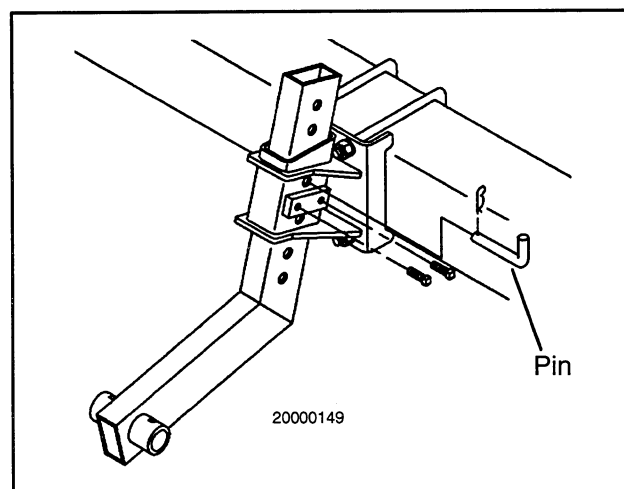


Figure 87. Mounting Support Wheel Arm

FASTEN HUB AND SPINDLE ASSEMBLY

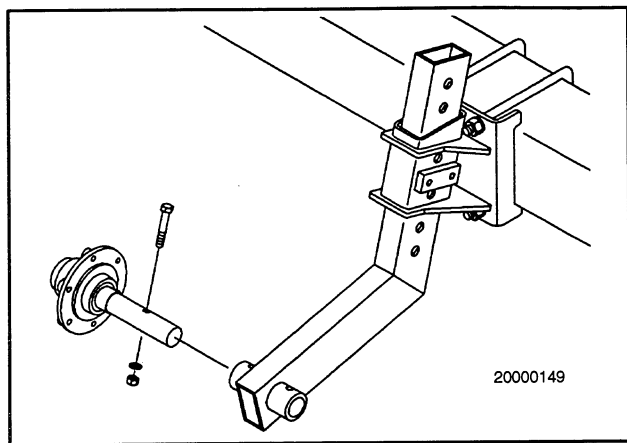


Figure 88. Fastening Hub & Spindle Assembly

Fasten hub and spindle assembly using 1/2 x 3" hex bolt, lockwasher and hex nut.

When mounting spindle assembly, be sure that left and right guide wheels are opposite each other. The spindles either face the tractor or both face outward.

FASTEN TIRE AND RIM ASSEMBLY

Fasten tire and rim assembly using bolts provided in hub. Move so tire is centered on linkage assembly and tighten nuts.

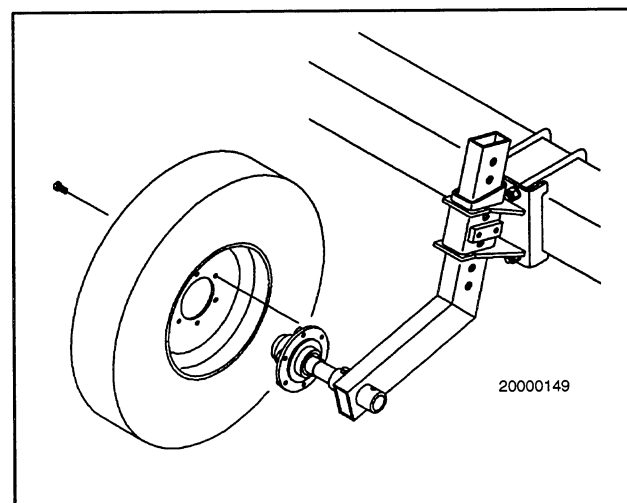


Figure 89. Fastening Tire & Rim Assembly

Parking Stand

Fasten parking stand assembly to front side of toolbar using 5/8" U-bolts and serrated flanged nuts.

Recommended quantity: one per 4–6 row cultivators; two per 8 row and larger cultivators. Parking stands are included with all king struts.

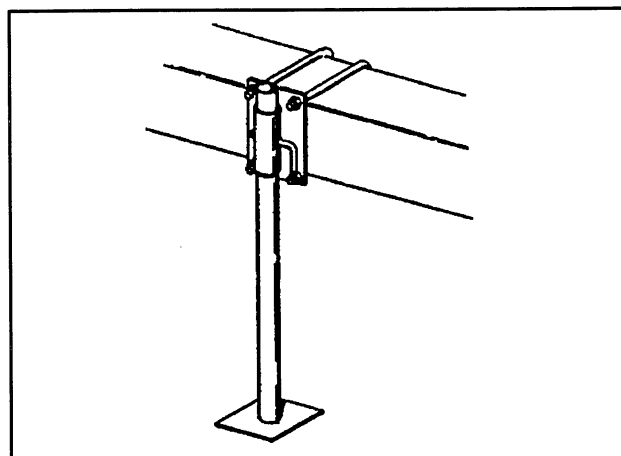


Figure 90. Mounting Parking Stand

Front Stabilizer Coulter

Fasten stabilizer assembly to front side of toolbar using 5/8" U-bolts and serrated flanged nuts provided with assembly.

Recommended quantity: two per 4–12 row cultivators; four per larger cultivators.

IMPORTANT

- These coulters may not be used behind tractor tires.
- If mounted on flat folding cultivators, must be located as to not hit tractor cab when toolbar is folded.

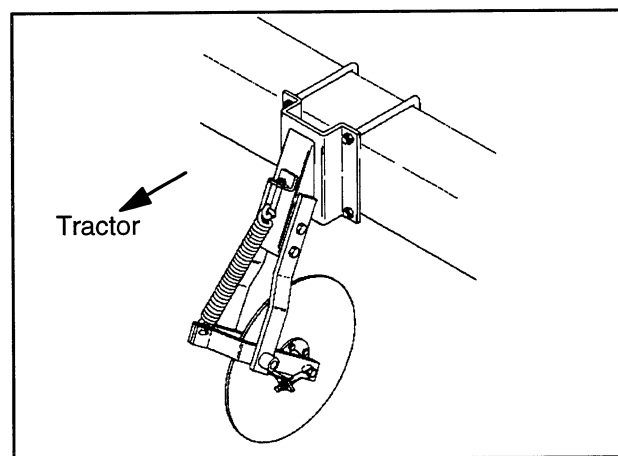


Figure 91. Mounting Stabilizer Coulter Assembly

Rear Stabilizer Coulter

FASTEN MOUNTING FRAME

Fasten mounting frame to toolbar using 3/4" U-bolts, lockwashers and hex nuts. Be sure frame is centered over cultivator gang. Do not tighten nuts at this time.

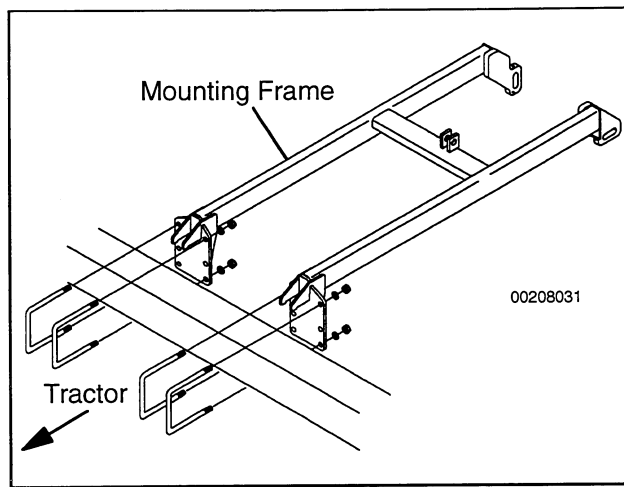


Figure 92. Fastening Mounting Frame

MOUNTING REAR FRAME

Fasten rear frame to mounting frame using two 1 x 5" hex bolts, flat washers, lockwashers and hex nuts. Be sure to place flat washers as shown.

Center rear frame using four 3/8 x 3-1/2" square head set screws with jam nuts.

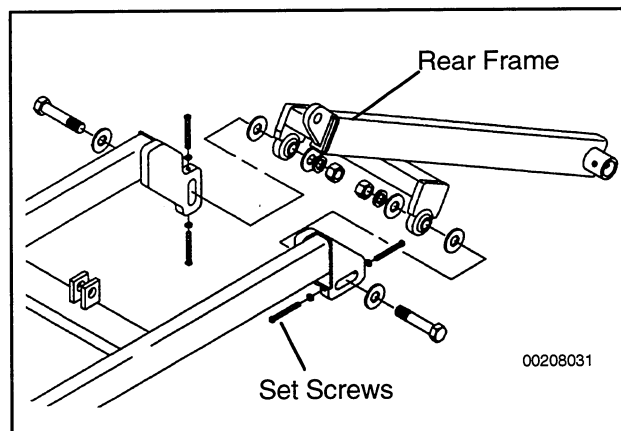


Figure 93. Mounting Rear Frame

MOUNTING SCREW JACK

Place rubber bushing into arm weldment and fasten to mounting frame using 1 x 3-1/2" hex bolt, lockwasher and hex nut.

Fasten screw jack to arm weldment and rear frame using pins provided with screw jack.

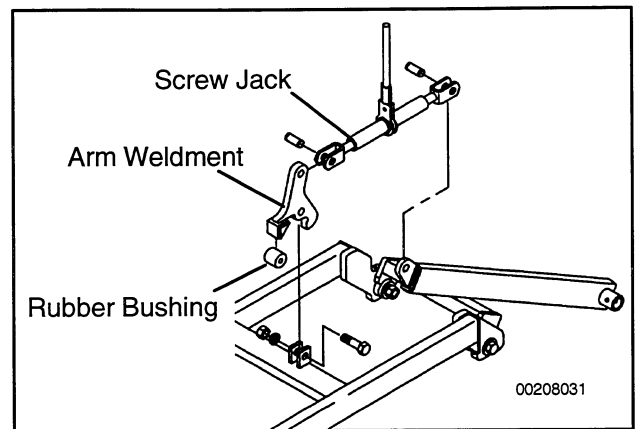


Figure 94. Mounting Screw Jack

MOUNTING DISC

Fasten hub assembly to rear frame using 1/2 x 3" hex bolt and hex nut.

Fasten disc to hub using 1/2" lockwashers and hex nut.

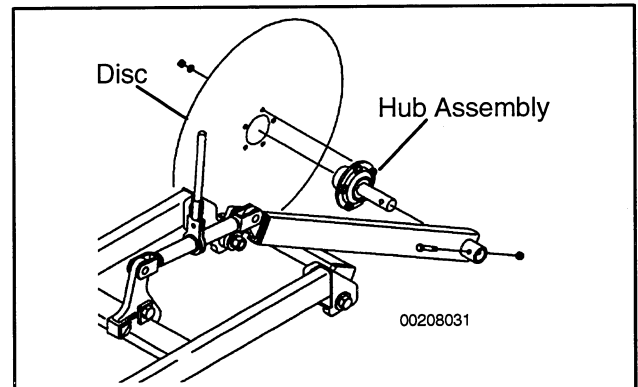


Figure 95. Mounting Disc

Slide Mount Assembly (Shields)

FASTEN SLIDE MOUNT

Slide 1/2 NC x 3-1/2" carriage bolts into bolt locations in slide mount, place slide mount on tree in desired location. Place spacer between plates on slide mount above carriage bolts. Tighten bolts using serrated flanged nuts.

Do not tighten bolts until assembly is complete.

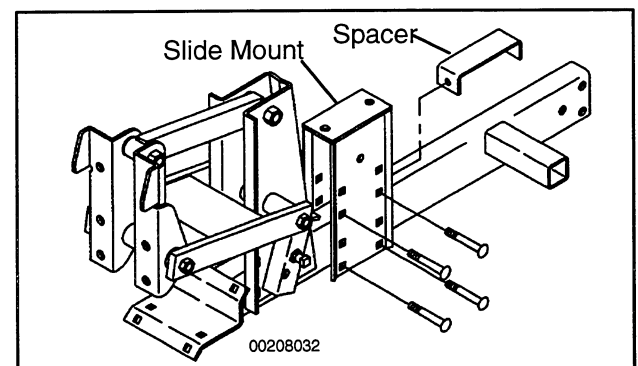


Figure 96. Fastening Slide Mount & Spacer

LOCATIONS OF BOLTS AND SPACER

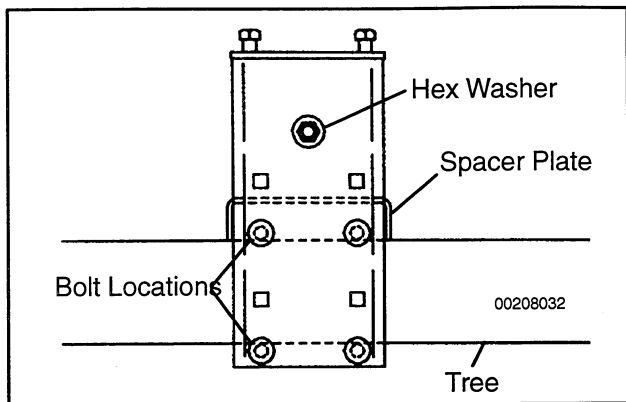


Figure 97. Spacer Plate Location

Note the locations of bolts and spacer plate. On 5-tine 2040 cultivators you may bolt branches directly over slide mount.

MOUNTING TEE WELDMENT

Fasten 1/2 NC x 3-1/2 hex bolt, flat washer and locknut into top hole in slide mount. Slide tee weldment over bolt and tighten.

Attach 1/2 NC x 1-1/2 hex bolts and jam nuts into top of Slide Mount.

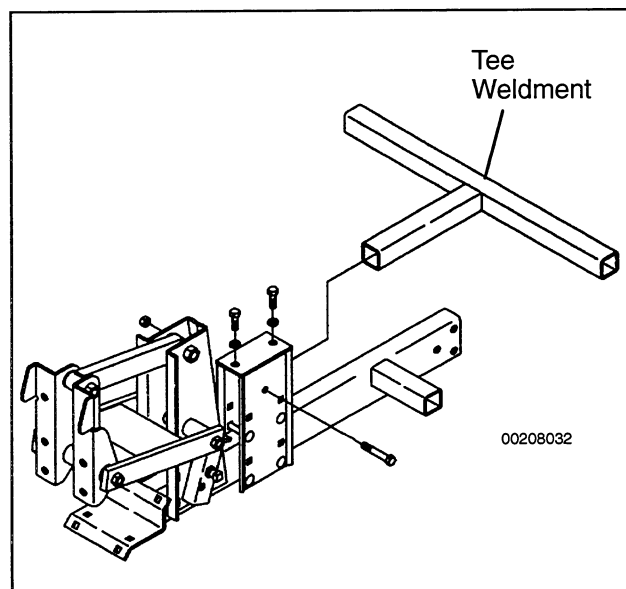


Figure 98. Mounting Tee Weldment

Adjust pitch of shields by adjusting 1/2 NC x 1-1/2" hex bolts on top of slide mount. Front 1/2 x 1-1/2" bolt sets pitch of shields, rear 1/2 x 1-1/2" bolt is for locking tee into place.

NOTE: Model 2040 adjustable tine branches may be mounted directly over holes in slide mount.

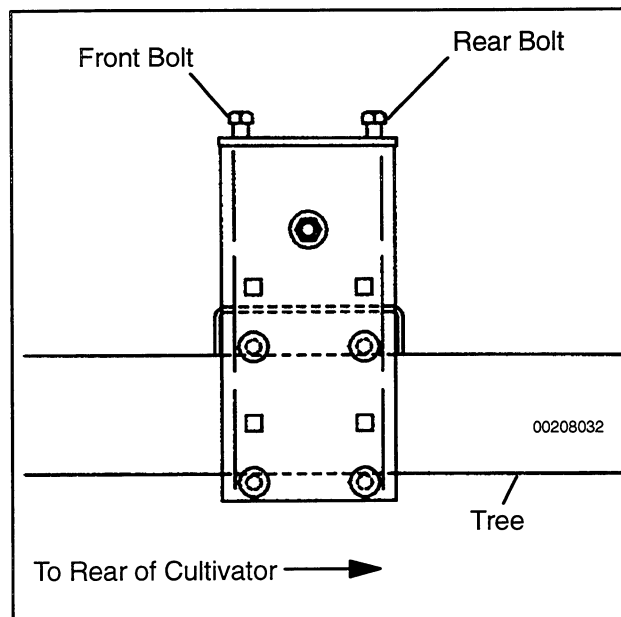


Figure 99. Adjusting

FASTEN TUNNEL MOUNT ASSEMBLIES

Slide tunnel mount assemblies over tee weldment and tighten bolt.

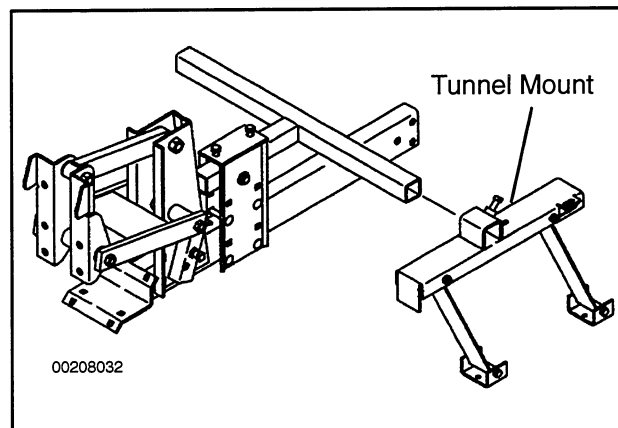


Figure 100. Fastening Tunnel Mount Assembly

FASTEN TUNNEL SHIELDS & ADJUSTMENT STRAP

Fasten tunnel shields to tunnel mount assemblies using back plate, 3/8" clip, 3/8 NC x 1" carriage bolt, lockwasher and hex nut.

Slide adjustment strap through slot in tunnel mount assembly and fasten to front pivot strap using 7/16 NC locknut and hair pin cotter. Be sure tunnel shields are centered over the rows and tighten all bolts.

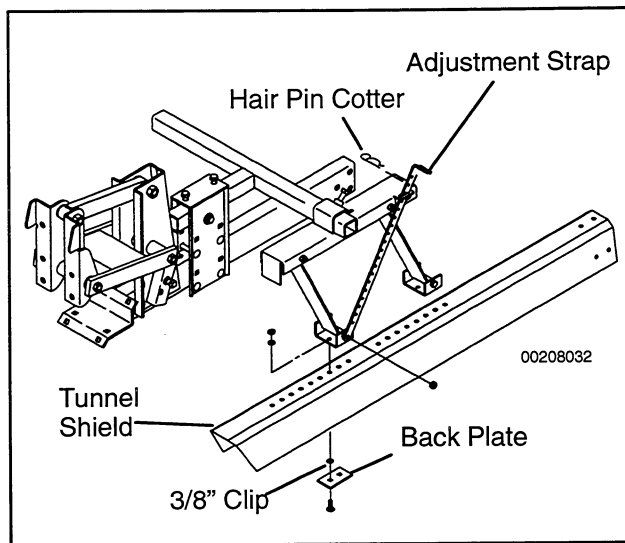


Figure 101. Tunnel Shields & Adjustment Strap

Center Mount Tunnel Shields

FASTEN TUBE ATTACH WELDMENT

Fasten tube attach weldments to tree using 1/2 x 3-1/2" carriage bolts and serrated flanged nuts. Center the tube between first and second branch on tree.

Do not tighten bolts until assembly is complete.

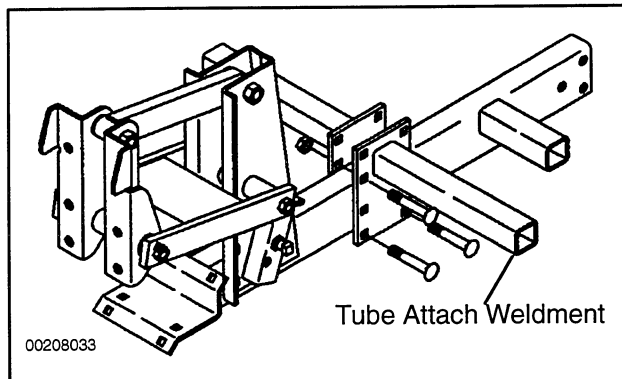


Figure 102. Fastening Tube Attach Weldment

FASTEN MOUNT ASSEMBLY

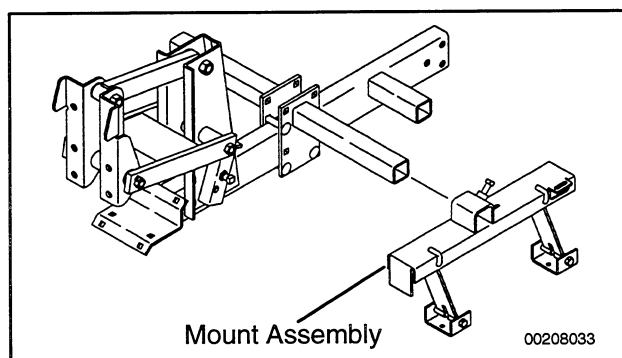


Figure 103. Fastening Mount Assembly

Slide the mount assembly over the tube attach weldments and tighten bolt.

MOUNT ADJUSTMENT STRAP

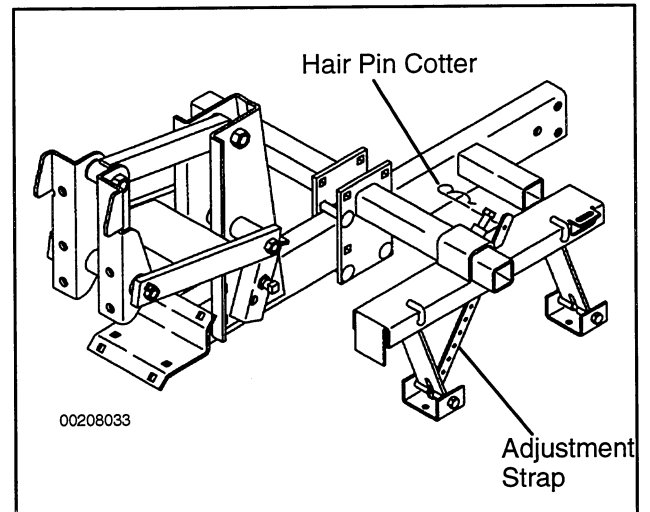


Figure 104. Mounting Adjustment Strap

Remove the bolt from bottom of front pivot arm slide adjustment strap between slot in pivot arm and replace bolt and nut. Fasten 5/32" hair pin cotter to hole in top side of adjustment strap.

FASTEN TUNNEL SHIELDS

Fasten tunnel shields to tunnel mount assemblies using back plate, 3/8" clip, 3/8 NC x 1" carriage bolt, lockwasher and hex nut. Be sure tunnel shields are centered over the rows and tighten all bolts.

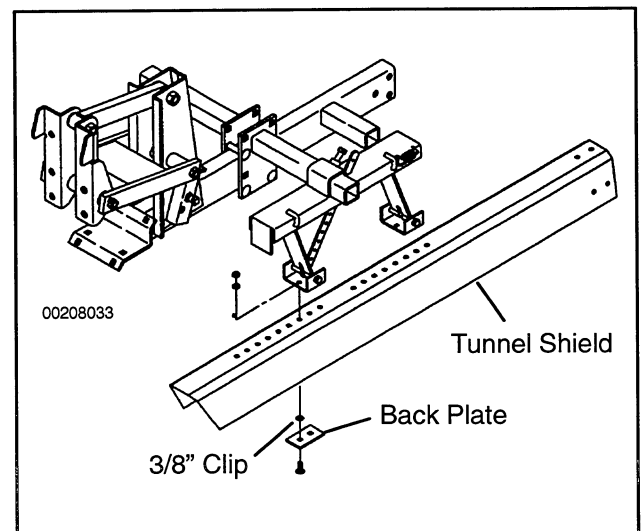


Figure 105. Fastening Tunnel Shields

Tunnel Shield Extensions

Fasten tunnel shield extension to tunnel shield using three 3/8 x 3/4" hex bolts and serrated flanged nuts. Be sure the nuts are on outside of shield.

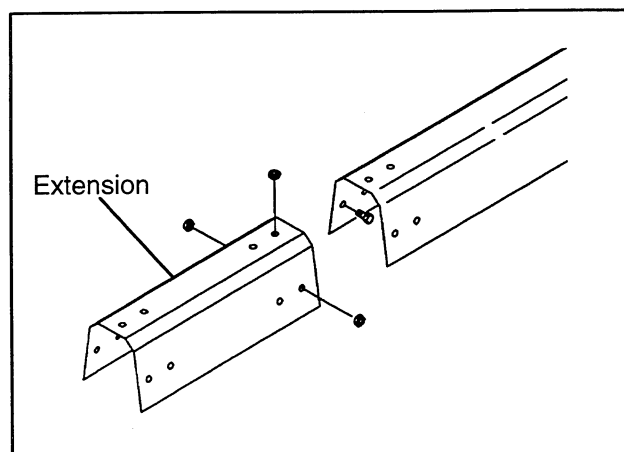


Figure 106. Mounting Tunnel Shield Extension

Tunnel Shield Dirt Sweeps

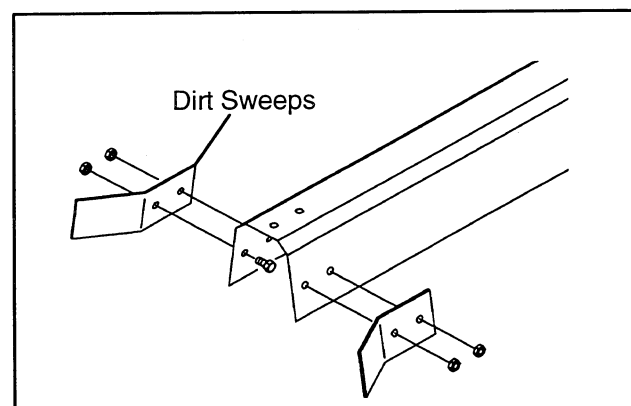


Figure 107. Fastening Tunnel Shield Dirt Sweeps

Fasten tunnel shield dirt sweeps to tunnel shield using (four) 3/8 x 3/4 hex bolts and serrated flanged nuts. Be sure the nuts are on outside of shield.

VARIABLE WIDTH TUNNEL SHIELDS

ASSEMBLE TUNNEL SHIELD

Fasten left and right tunnel shield halves together using two 3/8 x 1" carriage bolts, flat washer, lockwasher and hex nut. Adjust to desired width and tighten bolts.

After assembly is complete, mount tunnel shield to tunnel mount as shown at top of page.

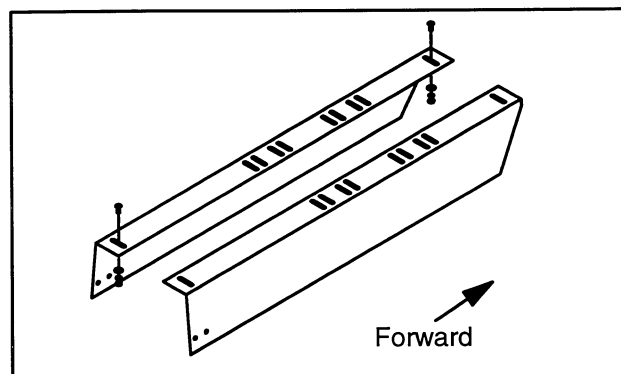


Figure 108. Fastening Shields Together

END SHIELD

FASTEN MOUNT ASSEMBLY

Slide end shield mount assembly over tree and tighten bolt.

Never attach end shield brackets so they face towards tractor. On model 2040, 2065, 2070 cultivators, a bolt-on branch is required to attach shields.

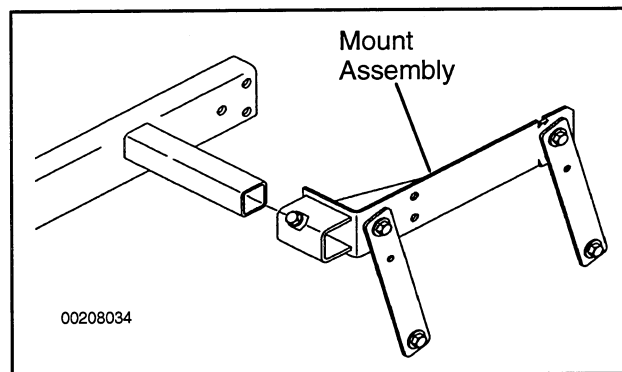


Figure 109. Fastening Mount Assembly

FASTEN END SHIELD

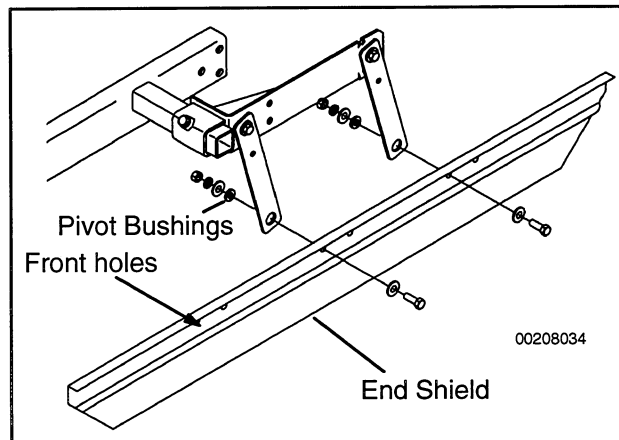


Figure 110. Fastening End Shields

Fasten end shield to mount assembly using hardware provided. The picture shows mounting to rear tine branch. Mount front pivot strap in front holes when mounting to front tine branch. Make sure pivot bushings are not left out. Make sure pivot arms are parallel to each other when doing assembly as they may be attached in wrong holes.

ROLLING SHIELDS

TOOLBAR MOUNTED (MODEL 2040)

Fasten mount to toolbar using 5/8" U-bolt and serrated flanged nuts. Be sure mounts are centered over the row.

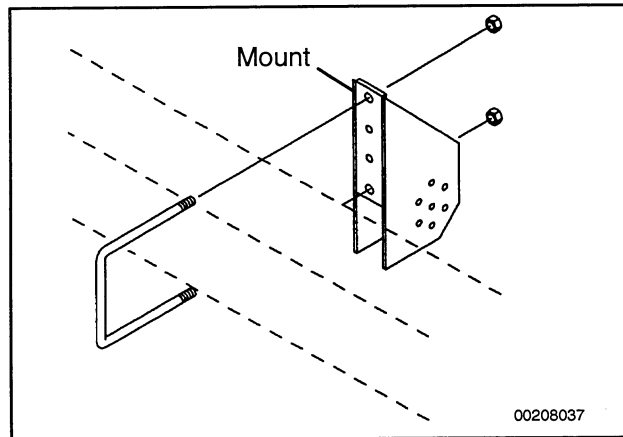


Figure 111. Toolbar Mounted

TOOLBAR MOUNTED (JEFFERS)

Fasten mount to toolbar using 5/8" U-bolt and serrated flanged nuts. Be sure mounts are centered over the row.

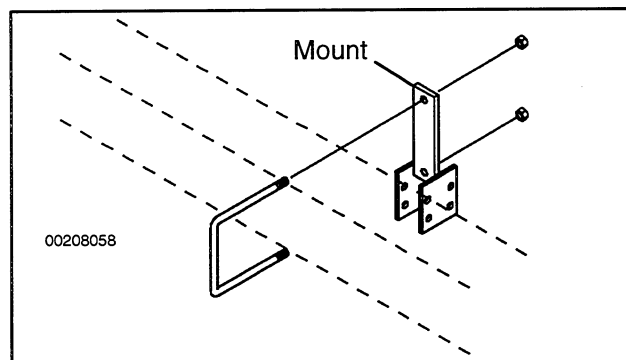


Figure 112. Toolbar Mounted

BRANCH MOUNTED

Fasten tube attach weldments to tree using 1/2 x 3-1/2" carriage bolts and serrated flanged nuts. Center the tube on the tree.

Do not tighten bolts until assembly is complete.

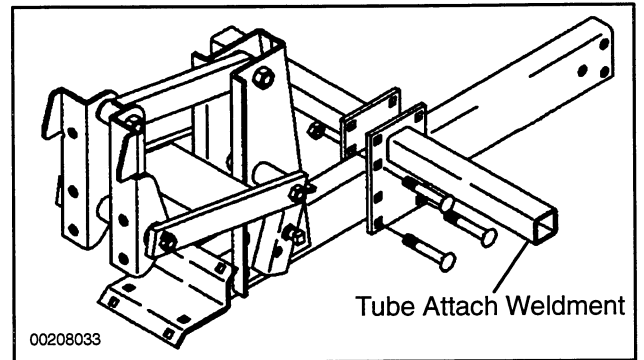


Figure 113. Branch Mounted

REAR TINE BRACKET MOUNTED (MODEL 3030)

Fasten fixed shield mount to rear tine bracket using two 5/8 NC x 3" carriage bolts and serrated flanged nuts.

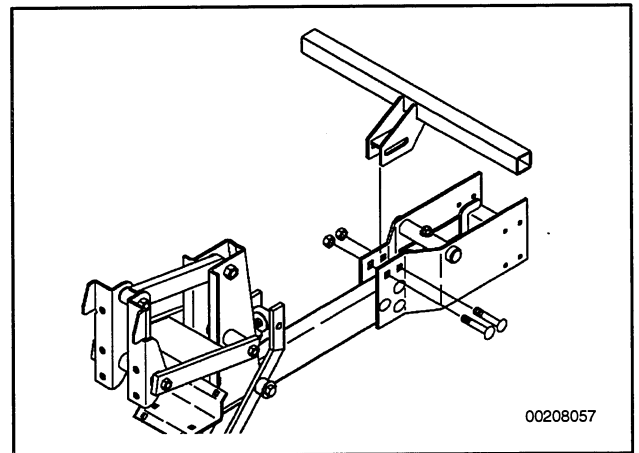


Figure 114. Rear Tine Bracket Mounted

BRANCH MOUNTED

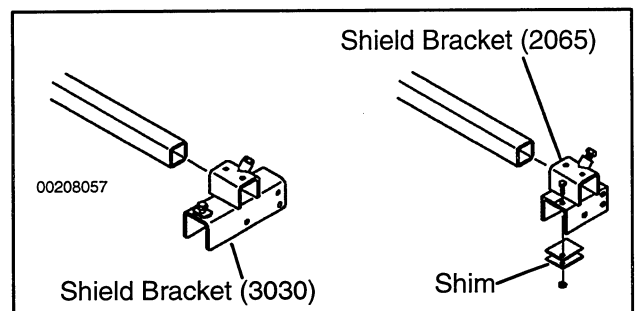


Figure 115. Branch Mounted

Fasten shield bracket to tube using bolt on shield bracket. On Model 2065, attach shims to bracket using 5/16 x 1" hex bolt and serrated flanged nut. Shims are used to adjust down travel when cultivator is raised.

FASTENING TUBES (7 X 7" MOUNTED)

Fasten upper tube to the mount using bushings and 7/16 NC x 4" hex bolt with serrated flanged nut.

Slide lower tube into upper tube and fasten with bolt on upper tube.

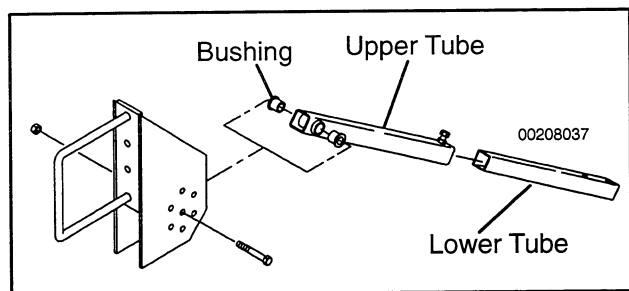


Figure 116. Fastening Tubes

FASTENING TUBES (BRANCH MOUNTED)

Fasten upper tube to the bracket using bushings and 7/16 NC x 4" hex bolt and serrated flanged nut.

Pivot tube into up position and fasten using pin.

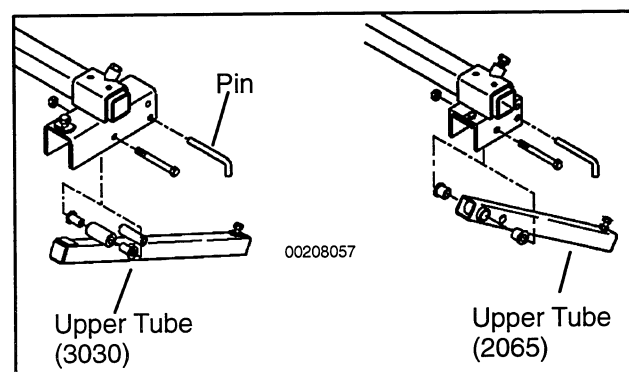


Figure 117. Fastening Tubes

ATTACHING LOWER TUBES AND SHIELDS

Slide lower tube into upper tube and fasten using bolt on upper tube.

Remove nuts and lockwashers from spindle assembly. Slide spacer plates and shields onto spindle assembly and fasten using lockwashers and nuts.

For narrow shields, place spacers on spindle assembly to outside of support plates.

Fasten shield assembly to lower tube using two 3/8 x 2-1/2" hex bolts and serrated flanged nuts.

Note: Be sure left hand nuts are on left hand side of shield.

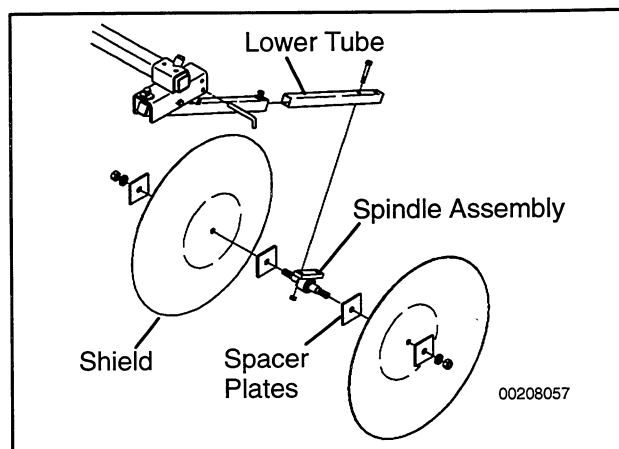


Figure 118. Fastening Tubes & Shields

OFFSET BRACKETS

These brackets are used to get around 3-point hitches or hinges on folding toolbars.

Slide one offset tube into upper tube and tighten bolt. Slide the other offset tube into the tube at end of offset tube and tighten bolt. Reattach bottom assembly.

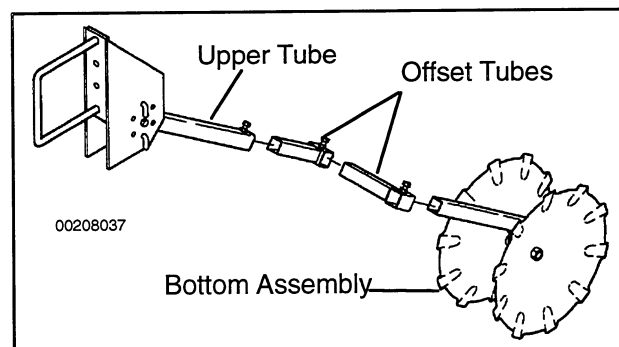


Figure 119. Offset Brackets

FASTENING TUBES (TEXAS ROLLING SHIELDS)

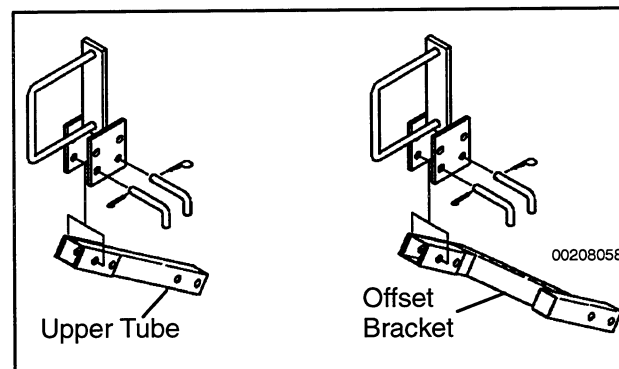


Figure 120. Fastening Upper Tubes

Fasten upper tube to the bracket using L-pin and cotter pin in hole shown. Place other pin and hair pin cotter in back hole to hold upper tube in transport position.

SHIELD ASSEMBLY (TEXAS ROLLING SHIELD)

Attach zerk to lower tube weldment. Assemble axle, bearings, dust caps, shields and washers using 1/2 x 9" hex bolt, lockwashers and hex nuts.

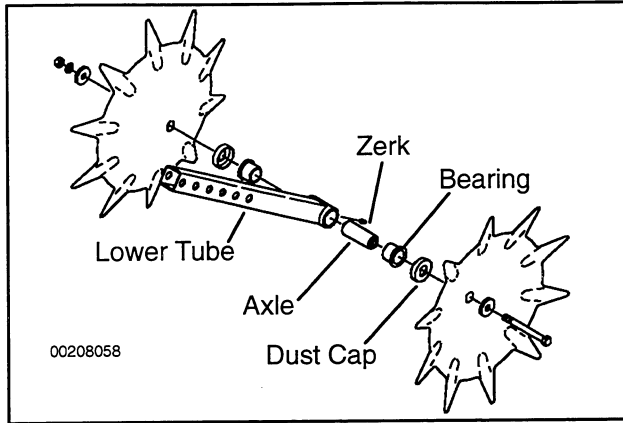


Figure 121. Shield Assembly

ATTACHING SHIELD ASSEMBLY (TEXAS ROLLING SHIELDS)

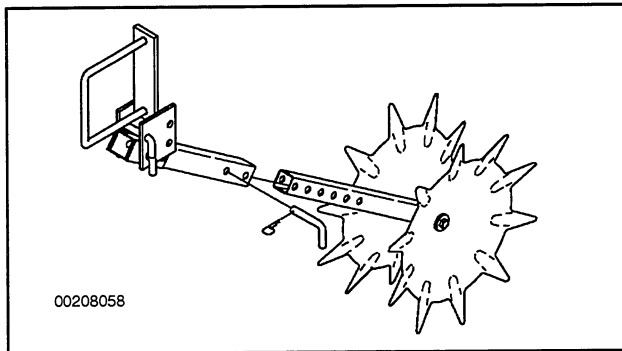


Figure 122. Attaching Shield Assembly

Attach shield assembly to upper tube using L-pin and hair pin cotter.

Open Top Shields

FASTENING MOUNT TO TREE

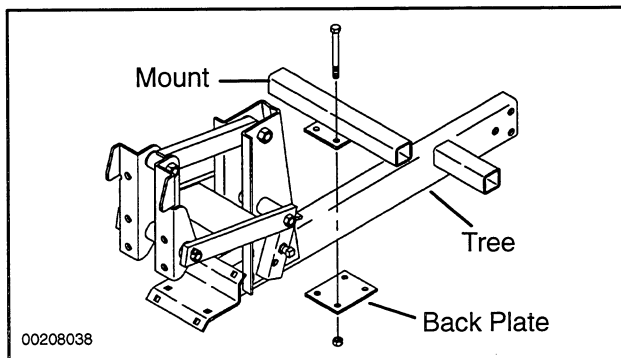


Figure 123. Fastening Mount

Fasten mount to tree centered between the branches using back plate and four 1/2 x 5" hex bolts on 2 x 4" trees or four 1/2 x 3" hex bolts on 2 x 2" trees with serrated flanged nuts.

FASTENING MOUNT TO SPIDER TREE

Fasten mount to back plate using serrated flanged nuts. Fasten mount and back plate to tree using U-bolts and serrated flanged nuts.

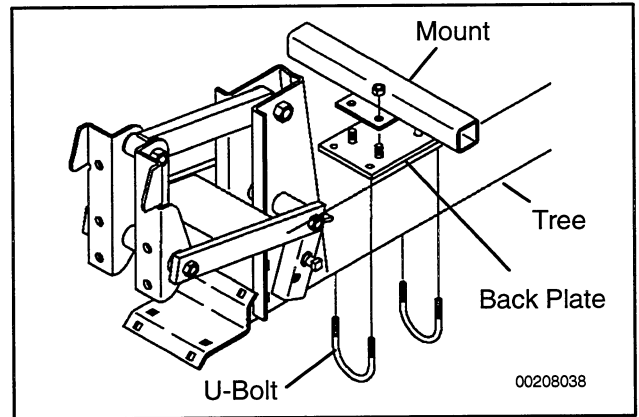


Figure 124. Fastening Mount - Spider Tree

ASSEMBLING SHIELDS

Fasten parallel arms to shields using 7/16 x 1-1/4" hex bolts on back arm and 7/16 x 2" hex bolts on front arm with flat washers and locknuts.

Fasten pivot bracket to parallel arms using 7/16 x 1-1/4" hex bolts and locknuts.

Attach chain to 7/16 x 2" hex bolt on front parallel arm using locknut and run to pivot bracket, fastening with 3/8 x 2-3/4" clevis pin, 5/16" flat washer and hair pin cotter.

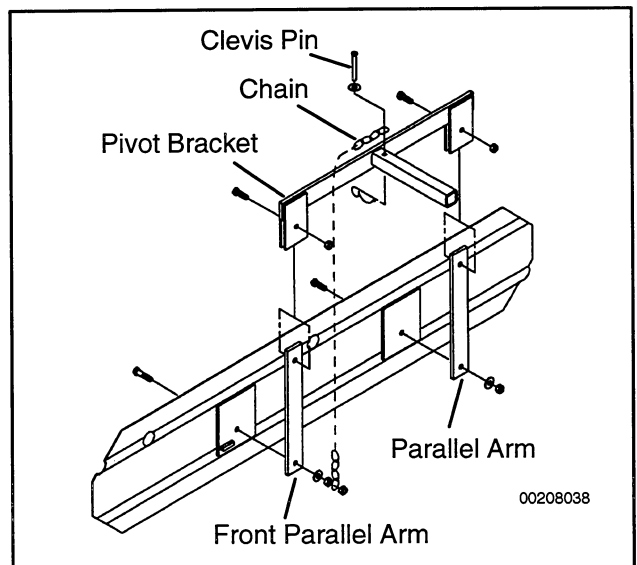


Figure 125. Assembling Shields

ATTACHING SHIELD ASSEMBLY

Slide shield assemblies into mount weldment and fasten into place with 1/2 x 1" square head set screws.

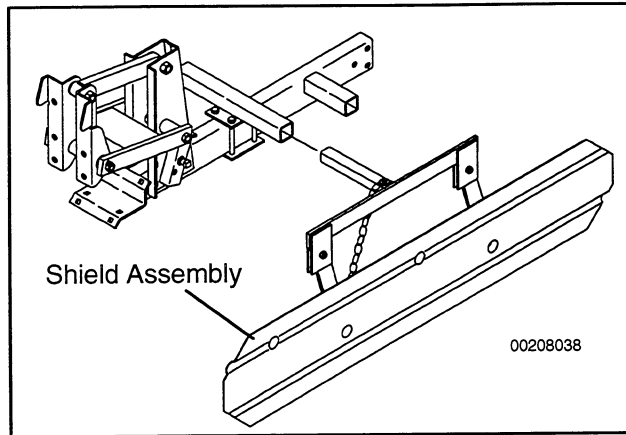


Figure 126. Attaching Shields

ATTACHING REAR EXTENSION

Fasten rear extension to shield using 3/8 x 1" hex bolts, flat washers and serrated flanged nuts.

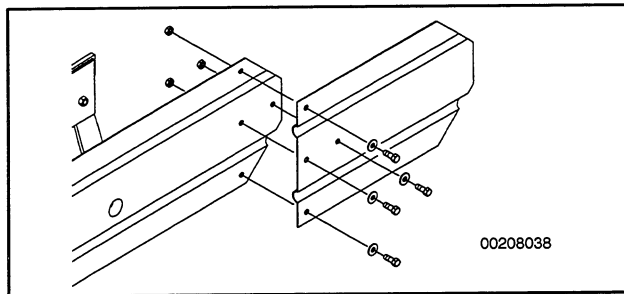


Figure 127. Attaching Rear Extension

Dual Disc / Dual Knife

FASTEN FLIP UP DISC TUBE (MODEL 2130, 2040)

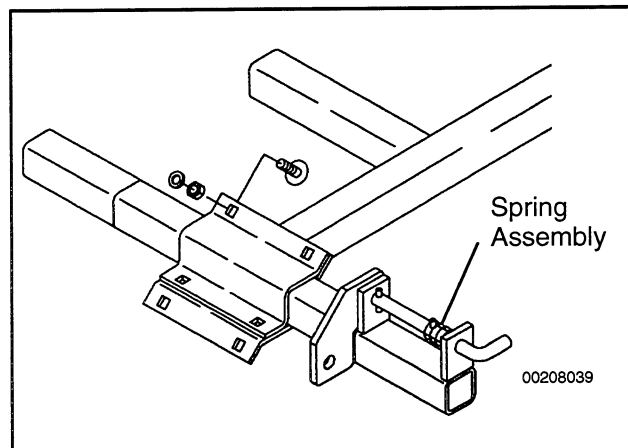


Figure 128. Flip-Up Disc Tube

Fasten tube assembly to front tube bracket using front tube clamp, 7/16 x 1-1/2" carriage bolts, lockwashers and hex nuts.

NOTE: Be sure tube is centered and spring assembly is on top. Spring assembly should always be on left side of tree.

FASTEN CLAMP ASSEMBLY

Fasten clamp assembly to front tube using the hardware provided with clamp assembly. Mount clamps on the back side of front tube as shown.

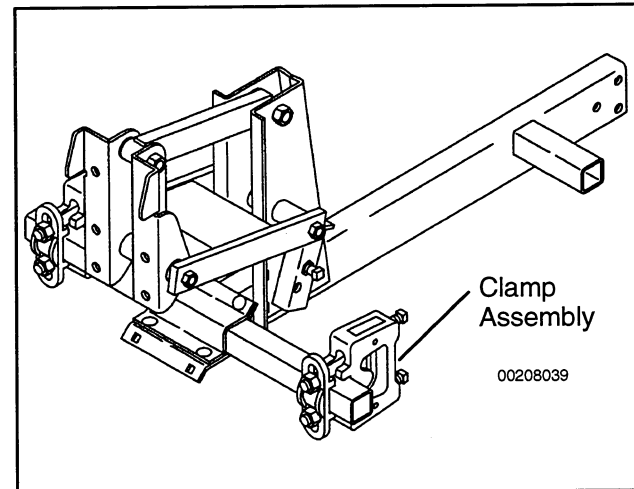


Figure 129. Fastening Clamp

ATTACH SHANK WELDMENT

Slide shank weldment into clamp assembly. Adjust shank to proper height and tighten set screws in clamp assembly.

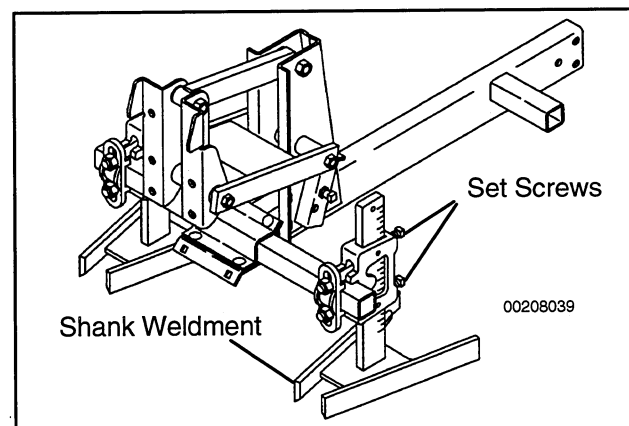


Figure 130. Attaching Shank Weldment

FASTEN DUAL DISC ASSEMBLY

Slide dual disc assemblies over the rail on shank weldment. Adjust to proper width and tighten hex bolt and jam nut on top of disc assembly. There are left and right disc assemblies. When mounted, the back of disc should be farther away from rail than the front to throw dirt away from the row.

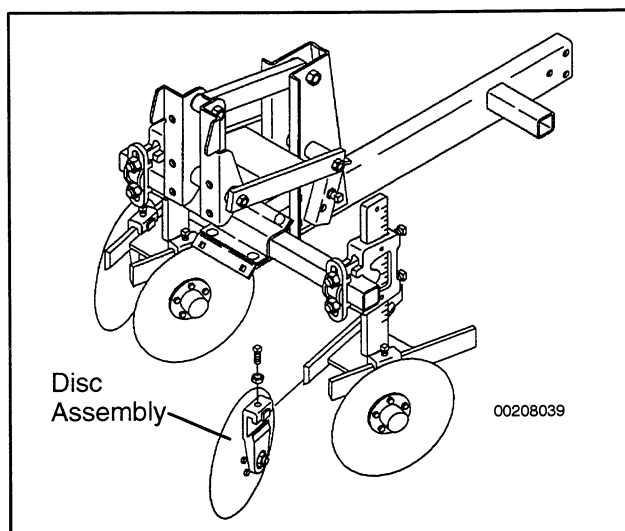


Figure 131. Fastening Disc Assembly

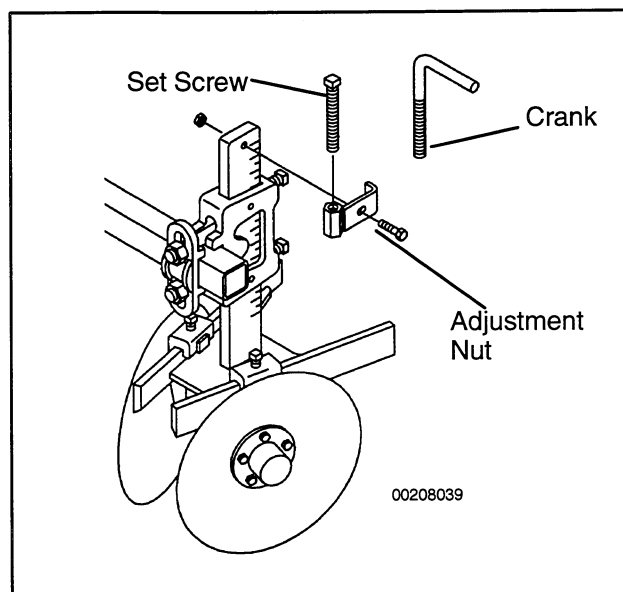


Figure 133. Adjustable Screw Kit

ATTACHING DUAL KNIFE

Fasten the knife to the adapter using two 3/8 x 1-1/2" carriage bolts, flat washers, lockwashers and hex nuts. (Knife must go on inside of adapter.)

Slide dual knife assemblies over the rail on shank weldment and fasten with 1/2" hex bolt and jam nut.

Note: The mounting surface of left and right knife adapters must be parallel to the row.

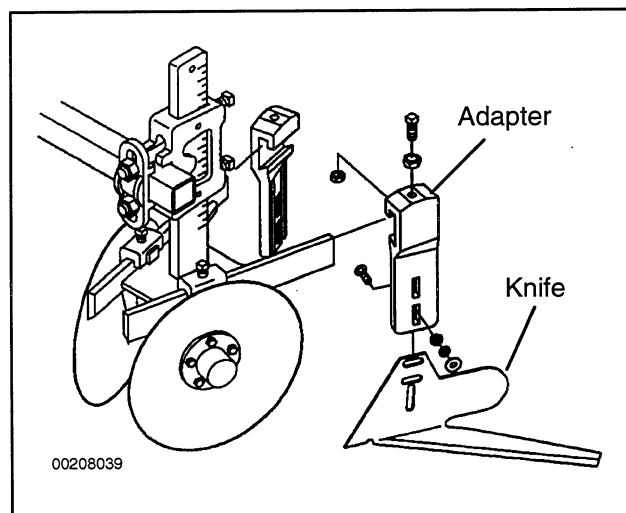


Figure 132. Dual Knife

Adjustable Screw Kit

Fasten adjustment nut to the shank weldment using a 3/8 x 1-1/2" hex bolt and serrated flanged nut. Thread the 5/8 x 4-1/2" square head set screw or crank into adjustment nut.

Mounting Round Shank Discs

Fasten clamp assembly to front tube using the hardware provided with the clamp assembly. Mount the clamps on the back side of front tube as shown.

Slide shank into slot in clamp assembly. Adjust shank to proper height and desired pitch, tighten set screws in clamp assembly.

Slide dual disc assemblies over the rail on shank weldment. Adjust to proper width and tighten hex bolt and jam nut on top of disc assembly. There are left and right disc assemblies. When mounted, the back of disc should be farther away from rail than the front to throw dirt away from the row.

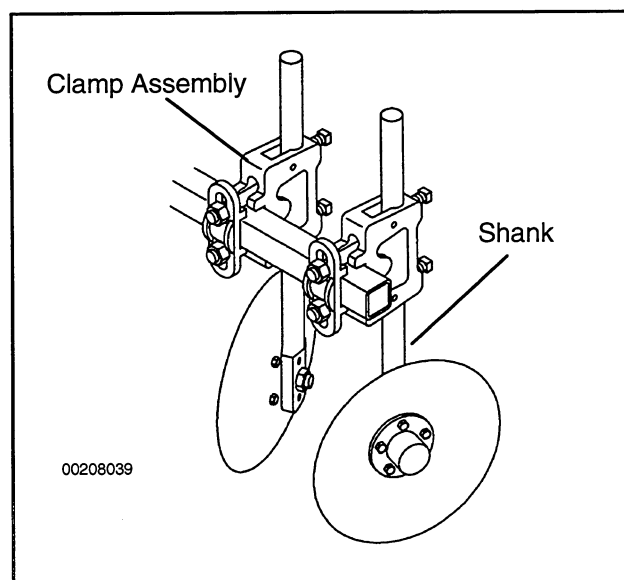


Figure 134. Mounting Discs

Mounting Round Shank Knives

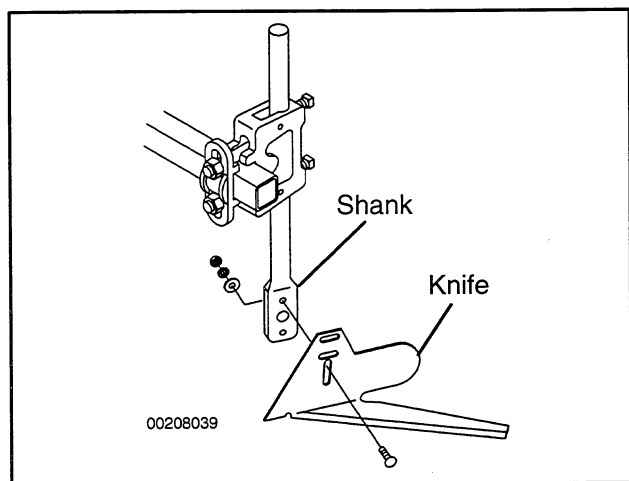


Figure 135. Mounting Knives

Fasten clamp assembly to front tube using the hardware provided with the clamp assembly. Mount the clamps on the back side of front tube as shown.

Slide shank into slot in clamp assembly. Adjust shank to proper height and desired pitch, tighten set screws in clamp assembly.

Fasten knife using two 3/8 x 1-1/2" carriage bolts, flat washers, lockwashers and hex nut.

Row Weeder Discs

Typically used to remove weeds next to the row. Can be reversed to move dirt to the row.

FASTEN TUBES TO TREE

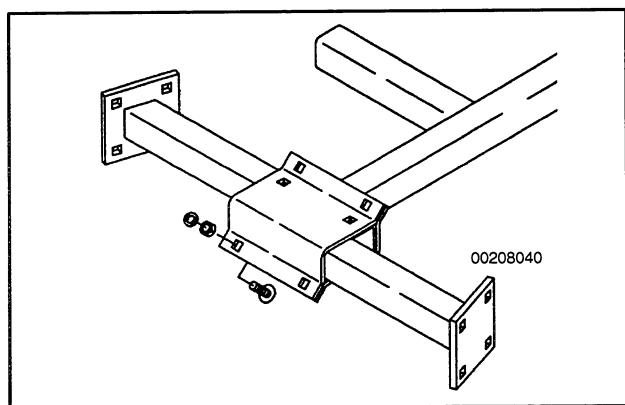


Figure 136. Fastening Tubes to Tree

Place front tubes on tree with plates facing as shown and fasten using 7/16 x 1-1/2" carriage bolts and serrated flanged nuts.

FASTEN DISC ASSEMBLIES TO TUBES

Fasten shank and disc assembly to tubes using back plate, 1/2 x 2-1/2" carriage bolts and serrated flanged nuts.

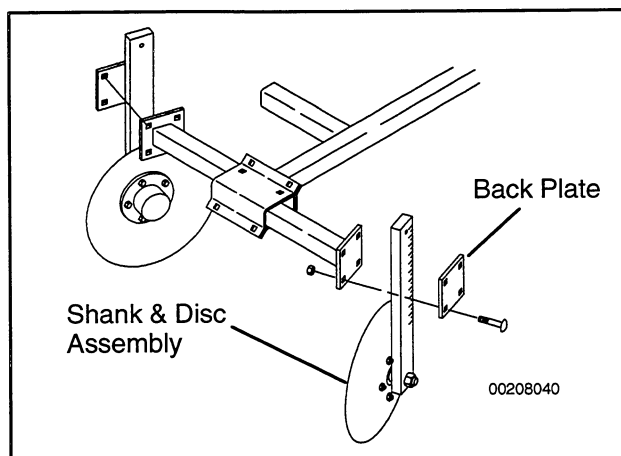


Figure 137. Mounting Discs

Row Weeder Disc Crank

CRANK ASSEMBLY

Thread crank through adjustment nut and fasten 5/8" jam nut and 5/8" serrated flanged nut on end. Be sure the nuts are jammed together.

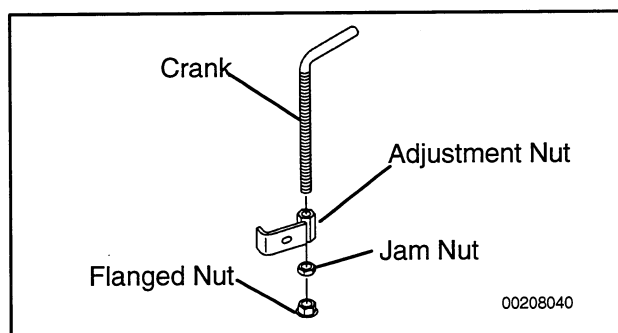


Figure 138. Disc Crank

MOUNTING CRANK ASSEMBLY

Fasten crank assembly to shank using 3/8 x 1-3/4" hex bolt and serrated flanged nut.

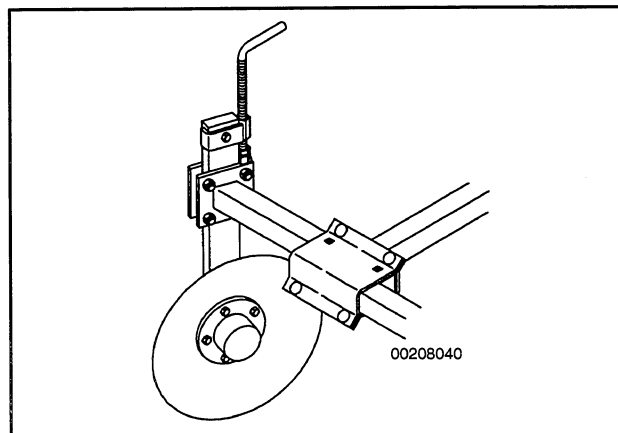


Figure 139. Mounting Crank Assembly

Hiller Attachment

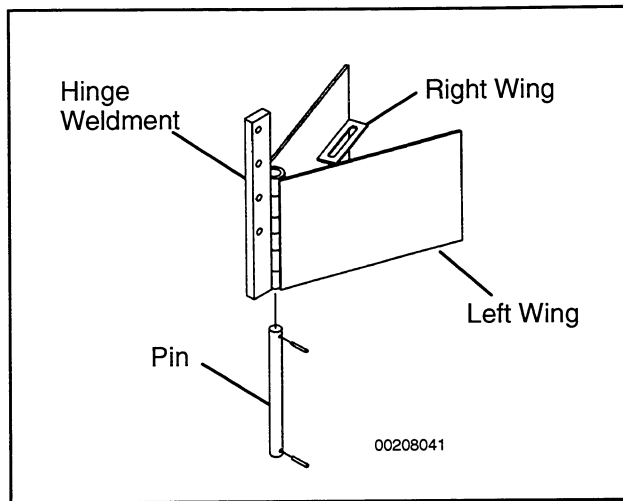


Figure 140. Assembling Hiller

Attach wing weldments and hinge together using pin and two 3/16 x 1-1/4" roll pins.

Place wings to desired width and fasten strap using 3/8 x 3/4" hex bolts and serrated flanged nuts.

Fasten side plates and spacer plates to hinge weldment using 3/8 x 2" hex bolts and serrated flanged nuts on shank mounted hillers, or 3/8 x 1-1/2" hex bolts and serrated flanged nuts on straight edge tine-mounted hillers. There are no spacer plates on straight edge tine-mounted hillers.

NOTE: Place point of side plates facing down on straight edge tine-mounted hillers.

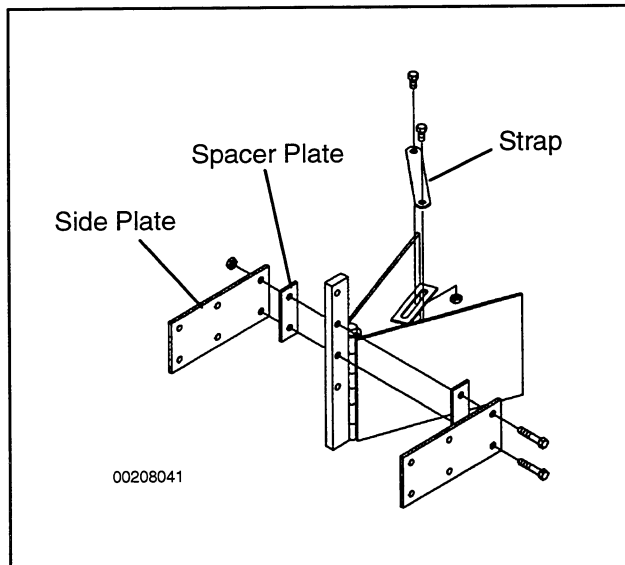


Figure 141. Assembling Side Plates to Hiller

FASTEN TO STRAIGHT EDGE TINE

Fasten to tine using four 3/8 x 1-1/2" hex bolts and serrated flanged nuts.

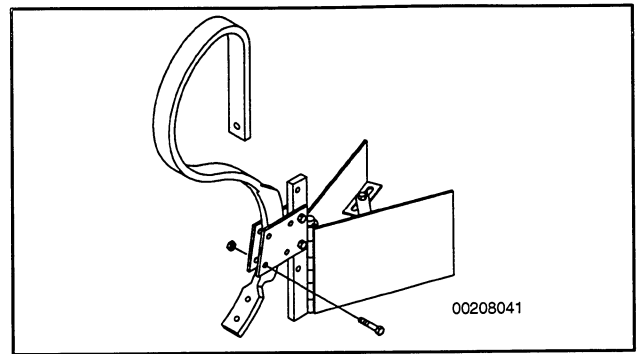


Figure 142. Fastening to Straight Edge Tine

FASTEN TO SHANK

Fasten to shank using 3/8 x 2" hex bolts and serrated flanged nuts.

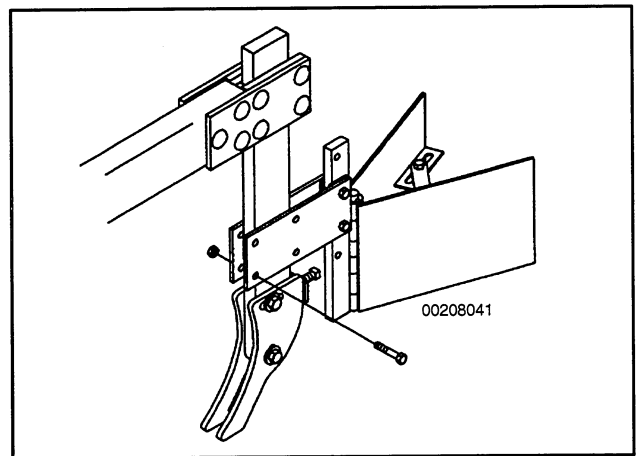


Figure 143. Fastening to Shank

Anhydrous Attachment (Model 3030)

FASTEN REAR EXTENSION

Fasten rear extension to rear tine bracket using four 3/8 x 1" hex bolts and serrated flanged nuts.

Fasten tine clamp to rear extension using four 1/2 x 2" hex bolts and serrated flanged nuts.

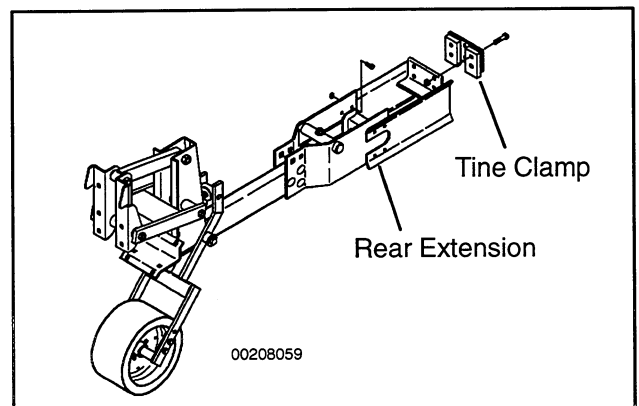


Figure 144. Fastening Rear Extension

FASTEN TINE AND KNIFE

Slide tine into tine clamp and secure with two 1/2 x 1" hex bolts and serrated flanged nuts. Fasten knife to tine using two 1/2 x 1-3/4" hex bolts and serrated flanged nuts.

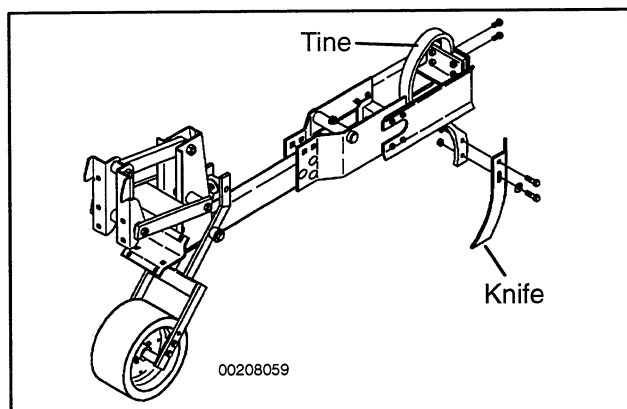


Figure 145. Fastening to Straight Edge Tine

Row Guide

Fasten clamp assembly to rear tube on tree using hardware provided with clamp. Slide row guide shank into clamp assembly and fasten with set screws on clamp assembly. Fasten cleanout wings to shank using 3/8 x 2" hex bolt and serrated flanged nuts.

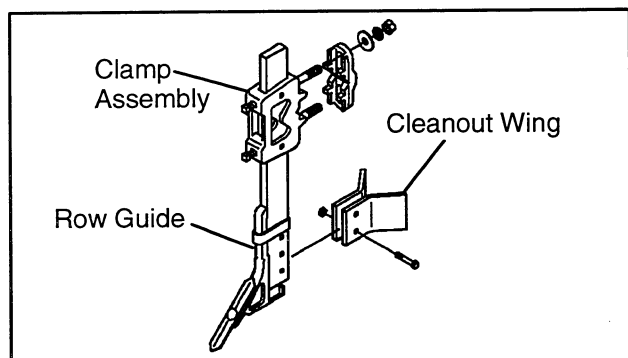


Figure 146. Row Guide

Spider Mount

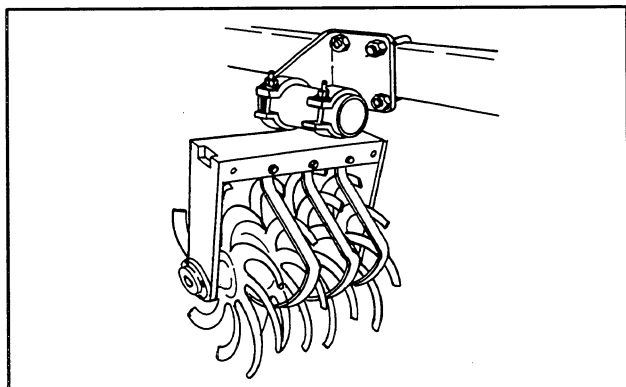


Figure 147. Spider Mounts

Fasten spider mount to tree using 1/2" U-bolts and serrated flanged nuts. Alloway does not supply spider wheel assembly.

Lift Assist (Light-Duty)

This lift assist is to be mounted on single beam 12 row or narrower units and may be used with hydraulic accumulator kit.

FASTEN TO TOOLBAR

Fasten frame assembly to toolbar using 3/4 x 9" hex bolts, flat washers, lockwashers and hex nuts.

Remove clevis from rod end of hydraulic cylinder and attach depth stop nut. Replace clevis.

Fasten hydraulic cylinder to ears on frame and fasten using pins provided with cylinder.

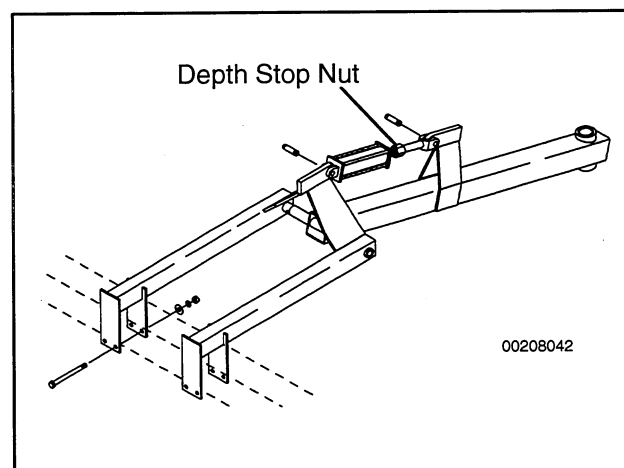


Figure 148. Fastening to Toolbar

FASTEN CASTER ASSEMBLY

Remove cap, 1/2 x 1" hex bolt and lockwasher from top of caster assembly, slide assembly through bushings in frame assembly, fasten using cap, bolt and locknut.

Place decal on tube in position shown.

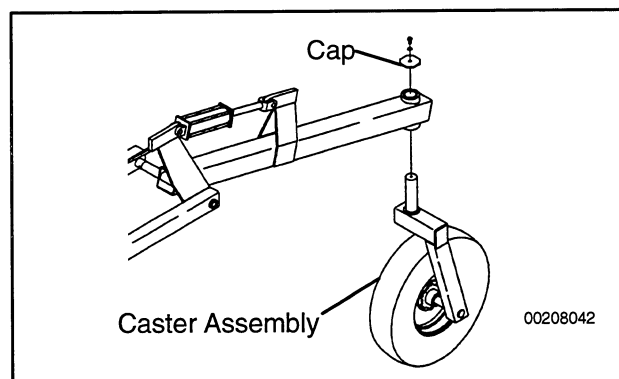


Figure 149. Fastening Caster Assembly

MOUNTING HYDRAULICS

Fasten 3/4-16 MORB x 1/2 FPT elbow to hydraulic cylinder. Attach hoses to elbows and 1/2" swivel restrictor to other end of hose.

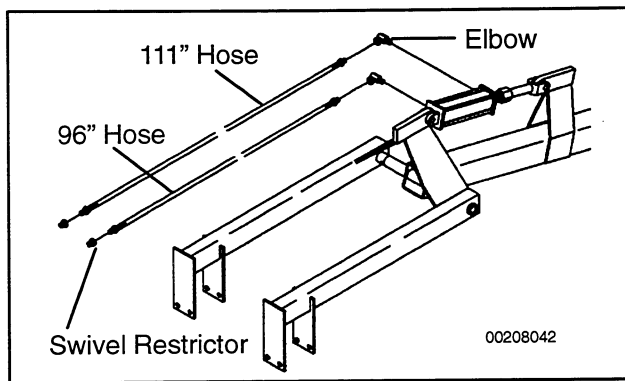


Figure 150. Mounting Hydraulics

Lift Assist (Heavy-Duty) FASTEN TO TOOLBAR

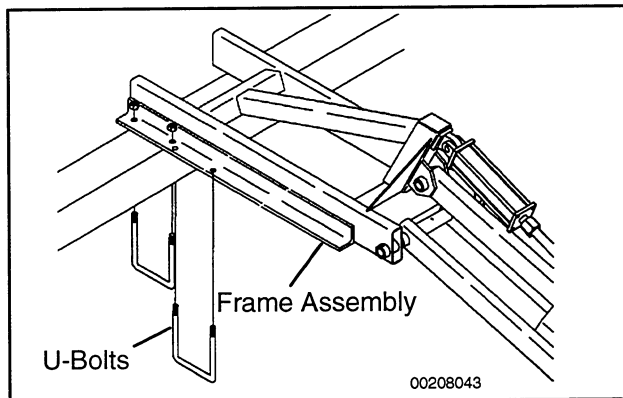


Figure 151. Fastening to Toolbar

Fasten frame assembly to toolbar using 3/4" U-bolts, lockwashers and hex nuts. On double toolbar, mount as shown; On single beam, mount to toolbar using front set of holes in lift assist frame, or you may use rear set of holes and cut off excess frame.

FASTEN HYDRAULIC CYLINDER

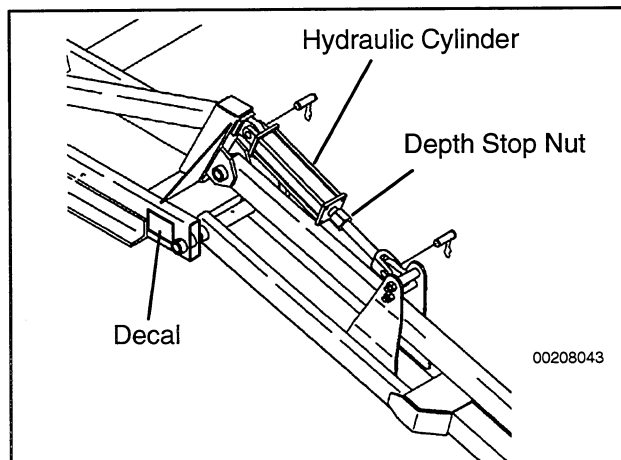


Figure 152. Fastening Cylinder

Remove clevis from rod end of hydraulic cylinder and attach depth stop nut. Replace clevis.

Fasten hydraulic cylinder to ears on frame and fasten using pins provided with cylinder.

Place warning decal on tube in position shown.

FASTEN CASTER ASSEMBLY

Remove cap, 1/2 x 1" hex bolt and lockwasher from top of caster assembly. Slide assembly through bushings in frame assembly and fasten using cap, bolt and lockwasher.

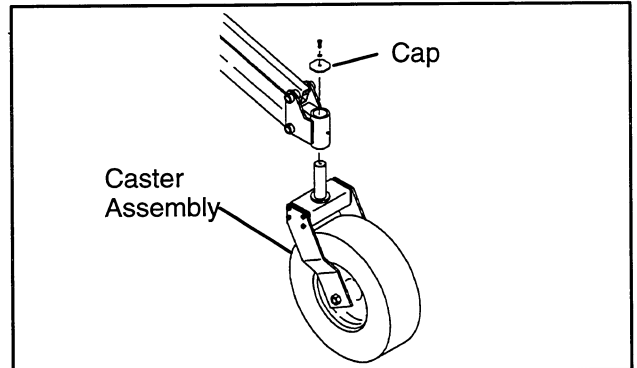


Figure 153. Fastening Caster Assembly

MOUNTING HYDRAULICS

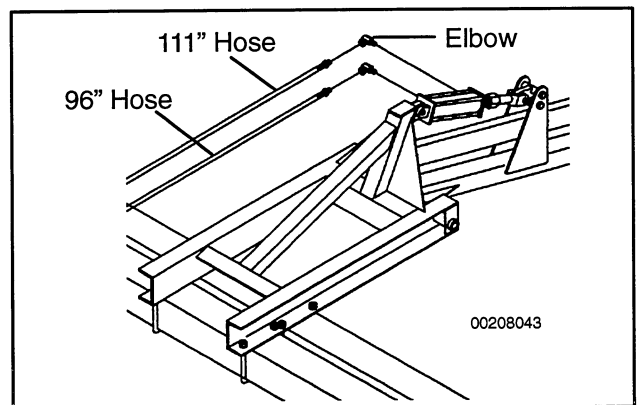


Figure 154. Mounting Hydraulics

Fasten 3/4-16 MORB x 1/2 FPT elbow to hydraulic cylinder. Attach hydraulic hoses to elbows and 1/2" swivel restrictor to other end of hose.

When using double lift assist, run 134" hose and 122" hose up to cylinder. Longer hoses go to rod end ports.

Run hoses to center of toolbar and fasten tees to hoses. Fasten 1/2" swivel restrictor to tees and 60" hose to restrictors.

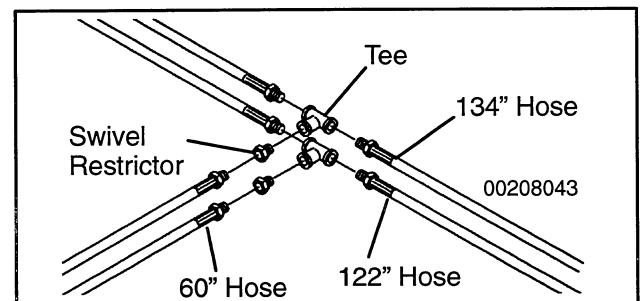


Figure 155. Mounting Hydraulics

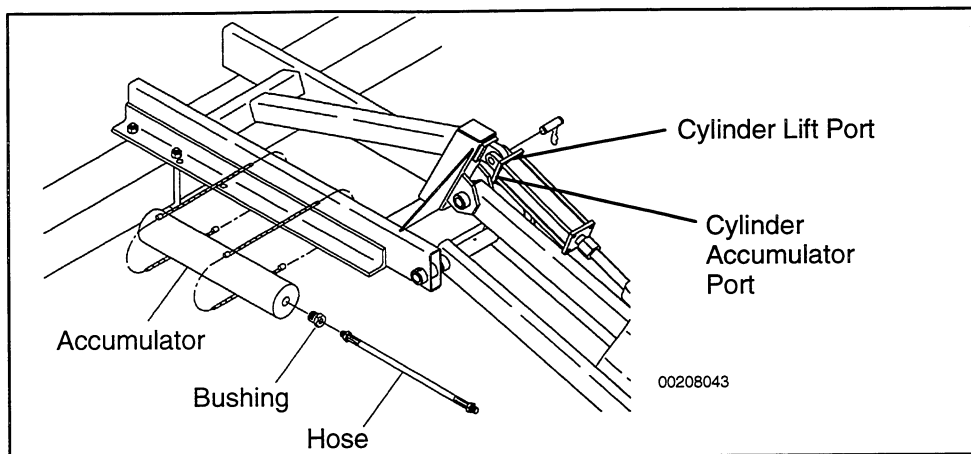


Figure 156. Accumulator Kit

Lift Assist Accumulator Kit (Figure 156)

IMPORTANT

■ Hydraulic Accumulator Kit must be installed if the cultivator is fully mounted to the tractor 3-point hitch and lift assist wheels are used. The accumulator reduces the possibility of damage to the tractor 3-point hitch during transport.

■ If cultivator is used with lift assist wheels and without the Hydraulic Accumulator kit, it must be operated as a semi-mounted unit to prevent damage to the 3-point hitch components. Remove the upper link mast and attach the cultivator to the lower 3-point hitch links only. Lift Assist wheels will always carry part of the cultivator weight and can not be lifted off the ground.

Adjustment nuts on the Lift Assist Cylinders must be used to level and control the rear operating position of the cultivator.

Attach accumulator to lift assist frame using hose clamps as shown. Fasten bushing to accumulator and hose to bushing. Run hose to extra port on the base end of cylinder.

Only one accumulator is required even if using two lift assist wheels.

Accumulators are charged with 1200-1500 psi of nitrogen.

Spray Fender Shields

Fasten linkage assembly to toolbar using 5/8" U-bolts and flanged nuts.

Fasten spring to linkage assembly in location shown. When installing the spring, make sure the spacer tube weldment that the spring hooks to is positioned so that on one end of the spring, the spacer tube weldment is on the left side of the spring hook and on

the opposite end, it is to the right side of the spring hook. This will keep the spring centered on the linkage assembly. Note that the spring can be mounted in many positions that will allow it to "float" on ground or down pressure can be added. Undue wear will occur to the skids and shoes on bottom of shield if too much downward pressure is applied. (Pins are shown in most common location.)

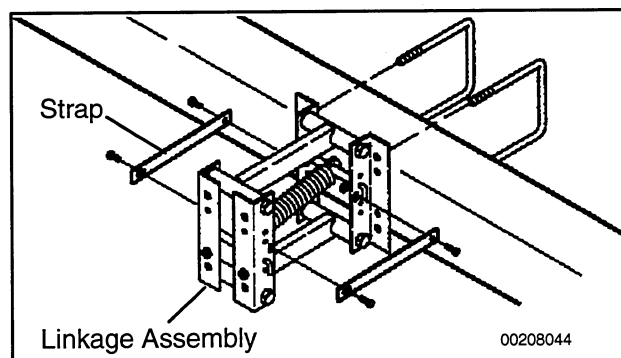


Figure 157. Fastening to Toolbar

Attach straps to linkage assembly using 3/8 x 1" hex bolts and flanged nuts

Attach tree assembly to linkage assembly using nuts on linkage assembly. Tighten nuts securely.

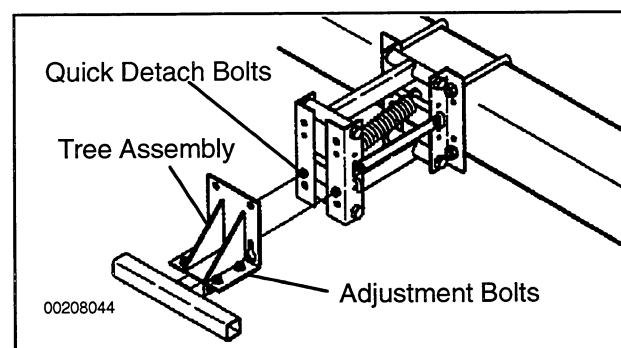


Figure 158. Attaching Tree Assembly

Fasten tube weldment to tree assembly using 1/2 x 2 x 3-1/2" long U-bolts, flat washers, lockwashers and hex nuts.

Fasten shield to tube weldment using two 3/8 x 1-3/4" carriage bolts on bottom and one 3/8 x 1-3/4" hex bolt on top with serrated flanged nuts.

Fasten skid to shield using 3/8 x 1" carriage bolts and flanged nuts.

Fasten shoe to shield using 3/8 x 1" carriage bolt in lower hole from mounting skid and 3/8 x 1 hex bolt in upper hole with flat washer and serrated flanged nut.

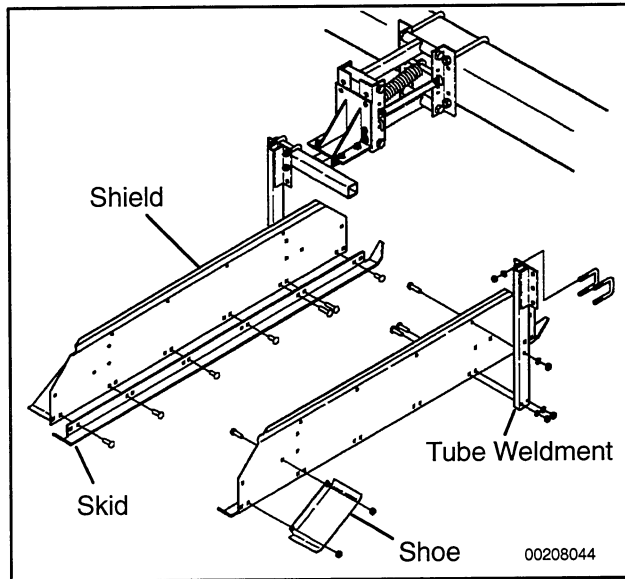


Figure 159. Mounting Shields

Mount angles to shields using 3/8 NC x 1" hex bolts, flat washers and flanged nuts.

Attach square tube to top of angles using two square tube mounting clamps, 3/8 x 1" hex bolts, flat washers and serrated flanged nuts.

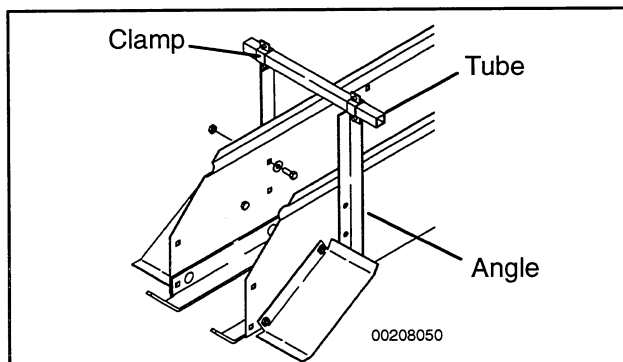


Figure 160. Mounting Supports

Slip pivot bracket on rear mounting bracket and tighten with 3/8 x 3/4" hex bolt. Assemble yellow cap, Q.J. body, elbow weldment and hose barb fitting together. Attach this assembly to pivot bracket using 3/8" flanged nuts. Then fasten the entire assembly to

the inside rear hole in skid using 3/8 x 1" hex bolt and flanged nut.

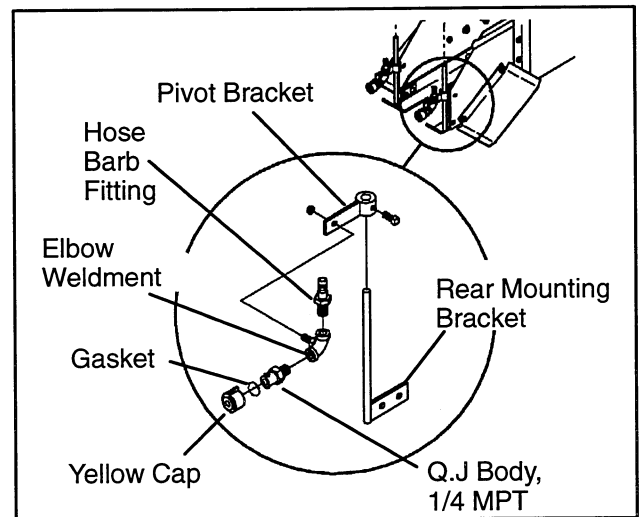


Figure 161. Rear Spray Bracket

Attach tee weldment to cross tube using nut provided. Attach three hose barb fittings to tee weld.

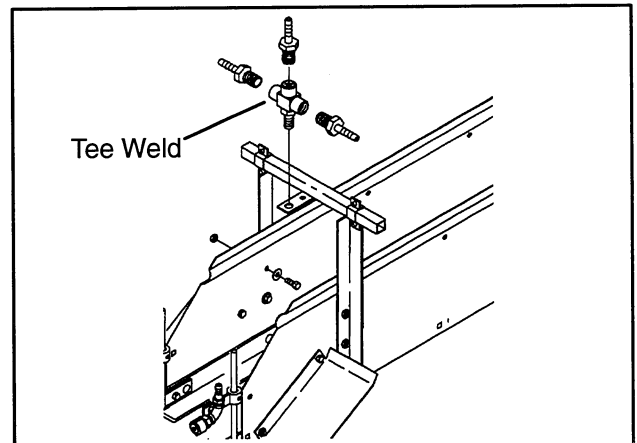


Figure 162. Top Spray Bracket

Run hoses as shown in dotted lines. Fasten hoses using hose clamps.

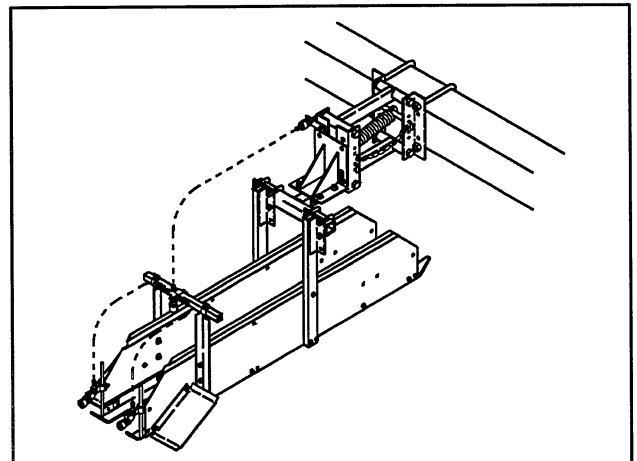


Figure 163. Hoses

MOUNTING OFFSET BRACKET

Used to mount spray fender over hinges on folding beams.

Remove U-bolts from linkages. Fasten offset bracket and spacer plate to toolbar using U-bolts and serrated flanged nuts. Fasten linkage assembly to offset bracket using 5/8 x 1-1/2" hex bolts and serrated flanged nuts.

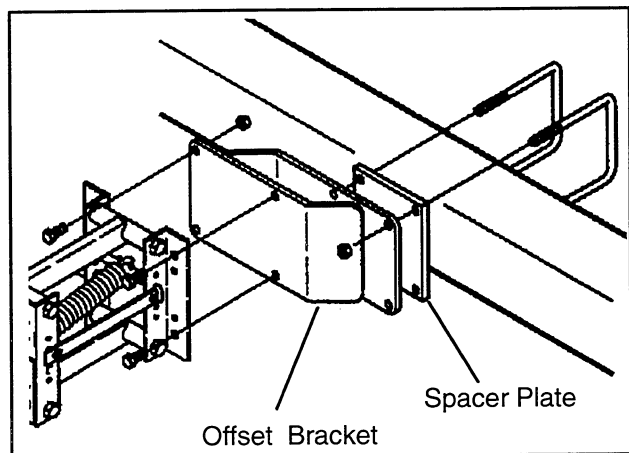


Figure 164. Mounting Offset Bracket

PLUMBING TOOLBAR

Fasten 1/2" hoses to tees and elbows using 1/2" wire clamps. Fasten 3/4" hose to tee using worm gear clamp. When assembly is complete, fasten hoses to toolbar and linkages using plastic cable ties.

Example in diagram is 4 row sprayer.

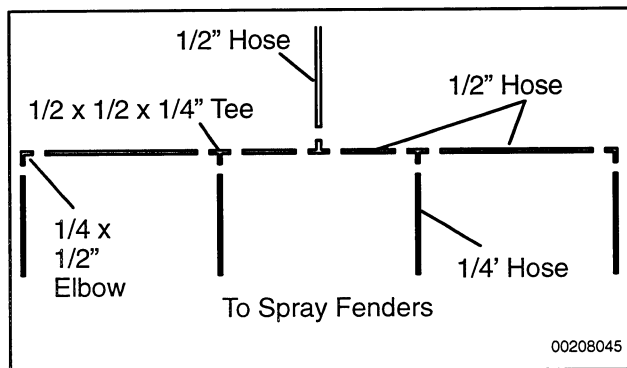


Figure 165. Plumbing Toolbar

Lay By Nozzle Attachment

Slide pipe through pivot bracket and fasten together using set screw. Fasten swivel nozzle body to pipe and yellow cap to swivel nozzle body.

Fasten hose to pipe using wire clamp. Slide hose shank into round hole cap and fasten to hose using worm gear clamp.

Fasten this assembly to back of tree on rigid shank.

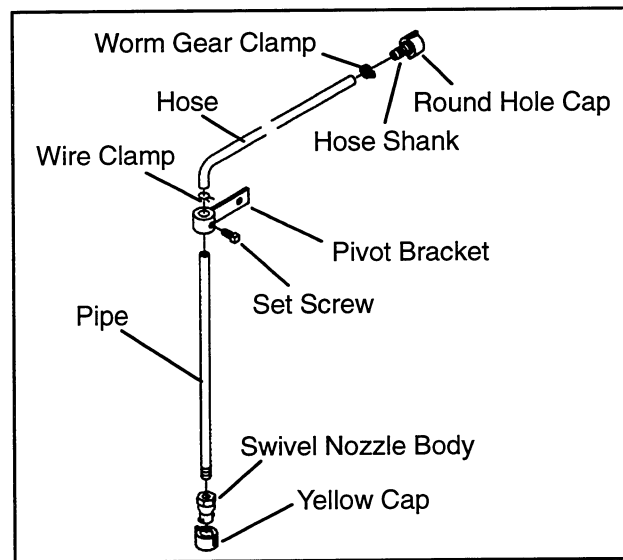


Figure 166. Lay By Nozzle Attachment

Down Pressure Springs

Fasten bracket weldment to upright using bolts holding pivot tube.

Fasten mounting plate to linkage using U-bolts and serrated flanged nuts on linkage assembly. Place springs into the holes at end of mounting plate.

Slide spring into place with washer on each end and fasten into place with cotter pins.

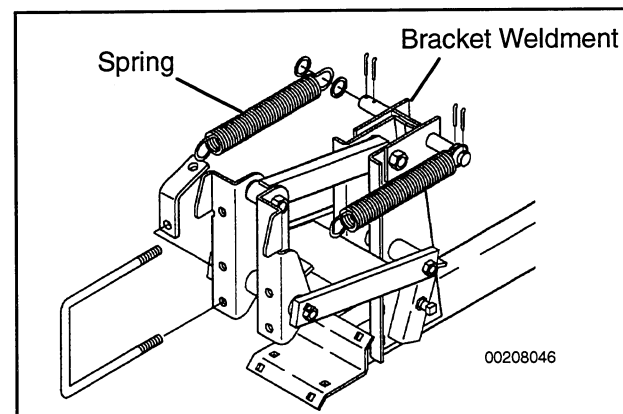


Figure 167. Down Pressure Springs

Down Pressure Springs (3030)

Slide spring into place with washer on each end and fasten into place with spring retainers.

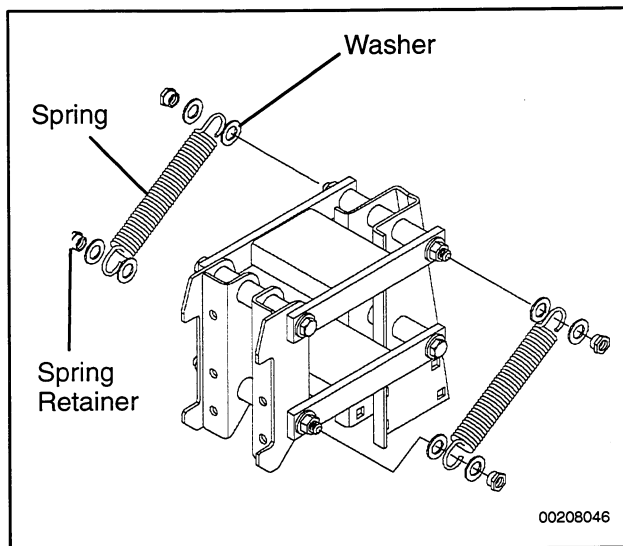


Figure 168. Down Pressure Springs - Model 3030

Vegetable Gang

On single row narrow cultivators, you get 1 pair discs, 1 pair standard knives and 2 gauge wheels.

On double row narrow cultivators, you get 2 pair discs, 2 pair standard knives and 1 gauge wheel.

The above can be attached to the tool carrying frame at locations to fit your needs.

Note: For very wide beds (80") you can bolt two of the above gang assemblies together. The bolts to attach together go through the tool carrying frames and then you would have a double wide frame carried by two parallel linkages on each wide bed. Extra knives or standard S-tines can be added to suit your needs.

Never attach large soil engaging tools such as furrowing shovels to these tool carrying frames. The furrows should be tilled and reshaped using a separate furrow gang with tines and furrowing shank.

MOUNTING TREE

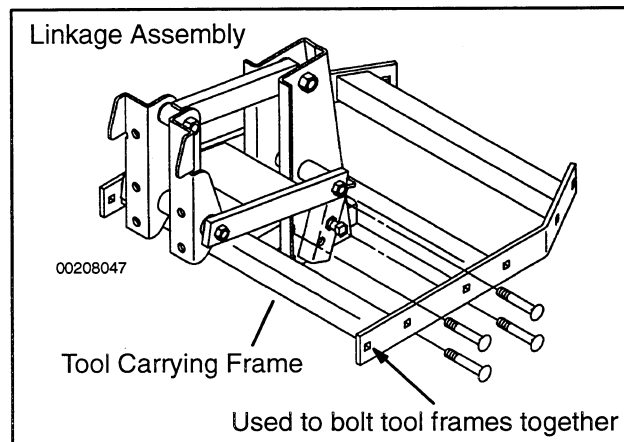


Figure 169. Mounting Tree

Fasten tree to linkage assembly using four 5/8 x 3-1/2" carriage bolts, lockwashers and hex nuts.

ASSEMBLING GAUGE WHEELS

Fasten wheel holder to gauge arm using two 3/8 x 1-1/4" hex bolts, lockwashers and hex nuts.

Fasten tire assembly to gauge arm assembly using 3/8 x 3/4" square head set screw with jam nut.

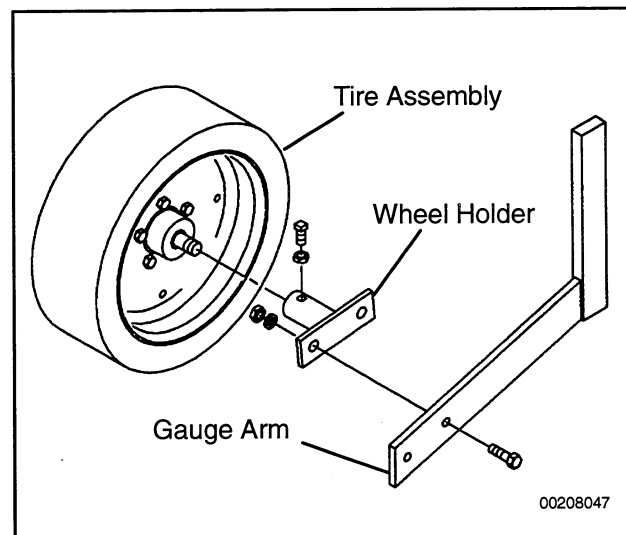


Figure 170. Assembling Gauge Wheel

MOUNTING GAUGE WHEEL ASSEMBLY

Fasten clamp to tree using back strap and 5/8 x 2-1/2" hex bolts in clamp assembly. Fasten gauge wheel assembly to clamp assembly using set screw.

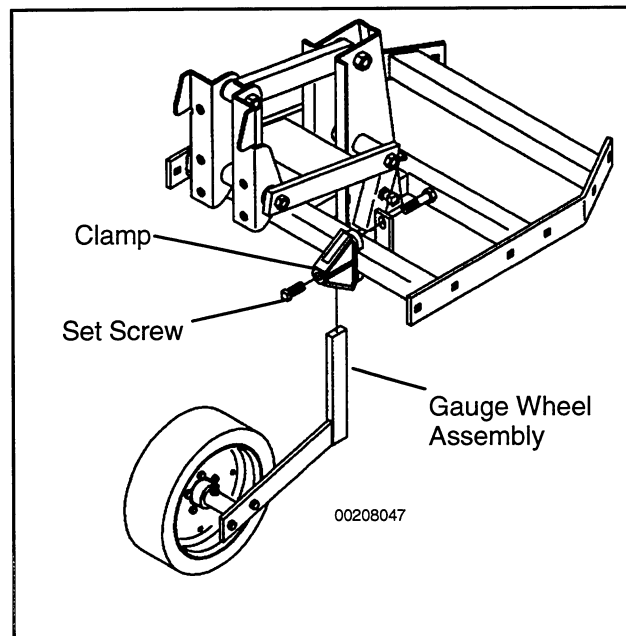


Figure 171. Mounting Gauge Wheel Assembly

MOUNTING DISCS

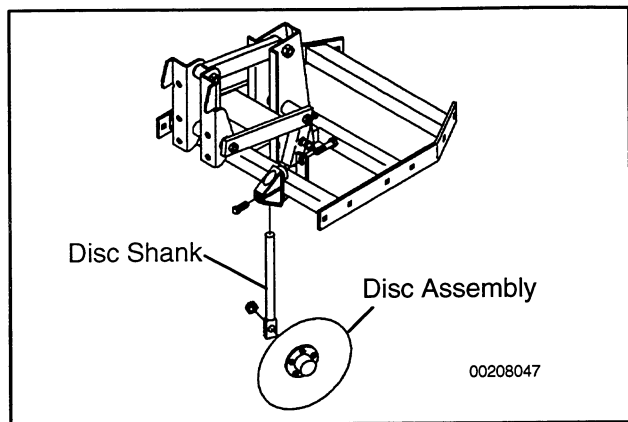


Figure 172. Mounting Discs

Fasten disc assembly to disc shank using 3/4" jam nut on back of disc assembly. The serrated washer goes between shank and disc assembly.

Fasten disc and shank assembly to clamp using 5/8 x 1-1/2" square head set screw in clamp assembly.

Fasten clamp to tree using back strap and 5/8 x 2-1/2" hex bolts in clamp assembly.

MOUNTING KNIVES

Fasten knife to standard shank using 1/2 x 1-1/4" carriage bolts, 1/2" lockwashers and hex nuts.

Fasten knife and standard shank assembly to clamp using 5/8 x 1-1/2" square head set screw in clamp assembly.

Fasten clamp to tree using back strap and 5/8 x 2-1/2" hex bolts in clamp assembly.

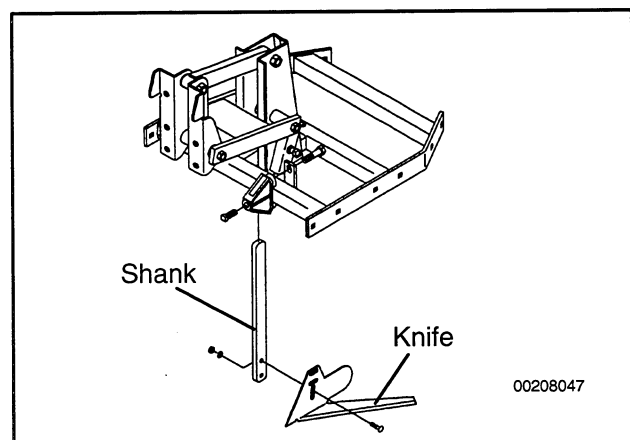


Figure 173. Mounting Knives

Double "H" Linkage

Remove parallel tube from linkage assembly and discard bolts. Press the four flanged bushings into the other parallel tube.

Bolt all the components together with 5/8" long bushings on outside and 2" long bushings on inside as shown.

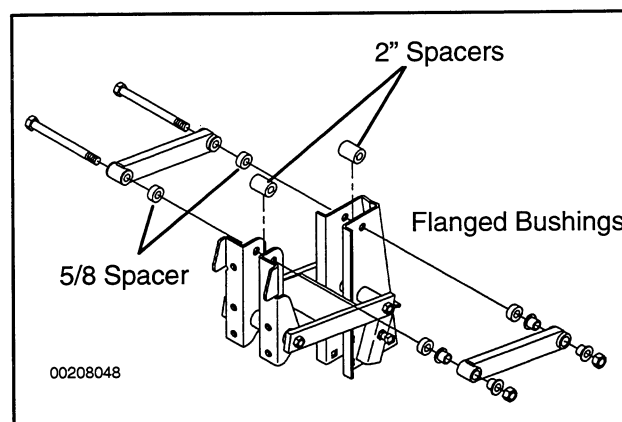


Figure 174. Double H Linkage

Anhydrous Tank Hitch

Center hitch mounts on toolbar and bolt on with four 3/4 x 9-1/2" hex bolts, flat washers, lockwashers and hex nuts.

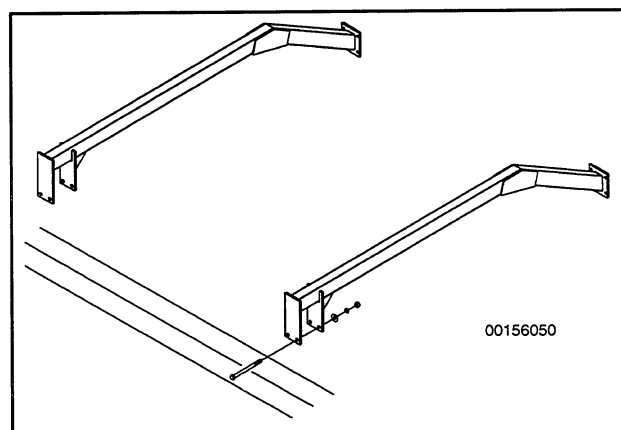


Figure 175. Mounting Hitch Mounts

Fasten cross tube to hitch mounts with four U-bolts and spiral lock flange nuts.

Bolt on rear hitch to cross tube using U-bolts and spiral lock flange nuts.

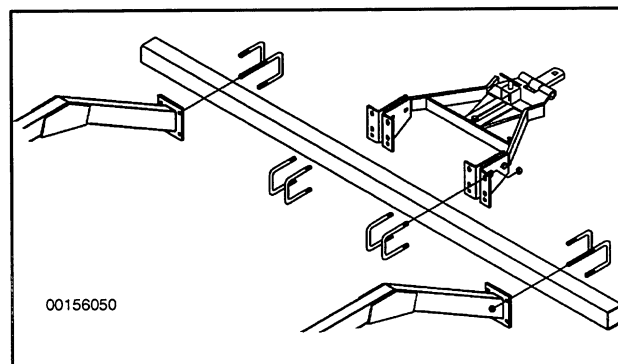
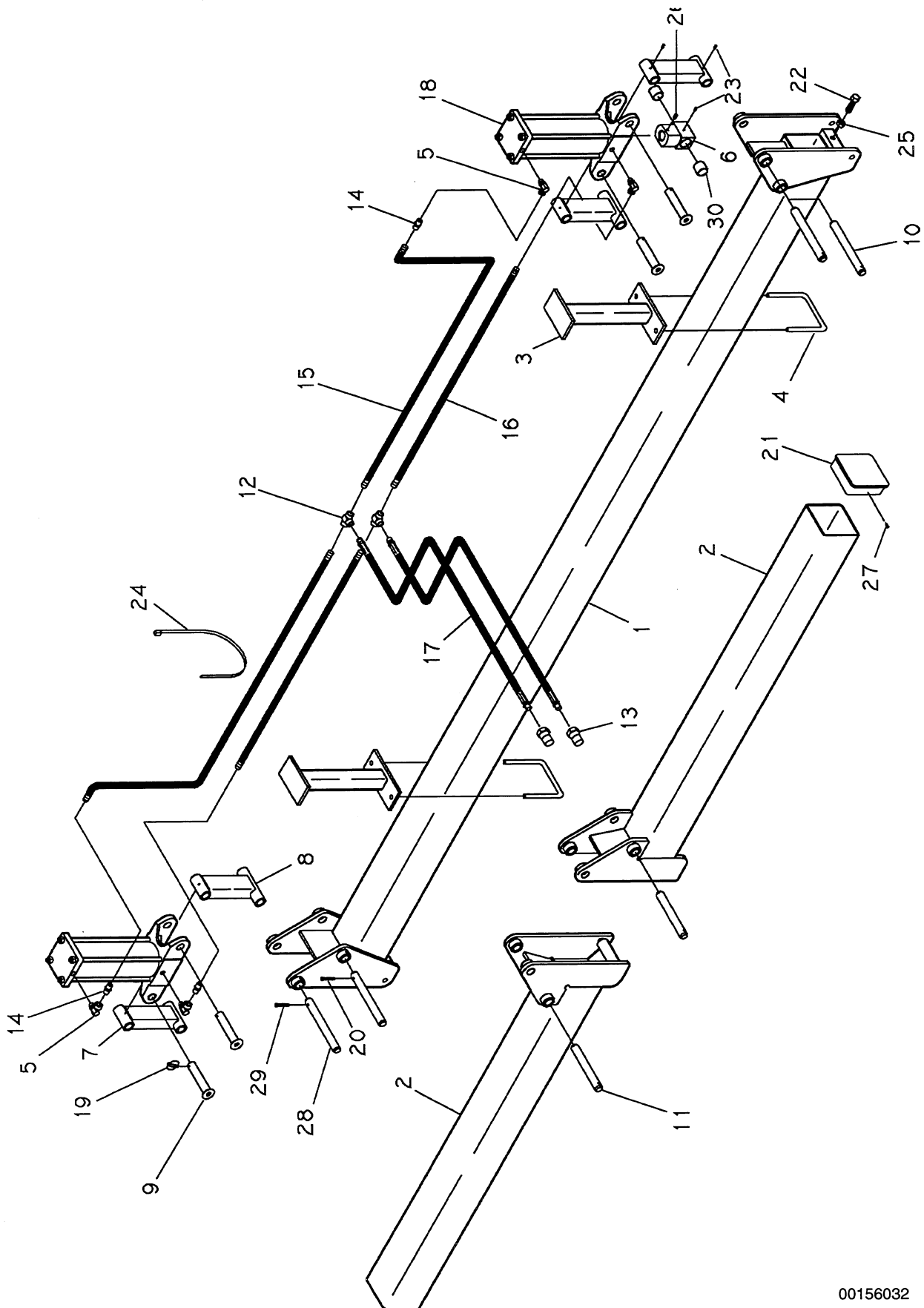


Figure 176. Mounting Hitch

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180° FOLD TOOL BAR

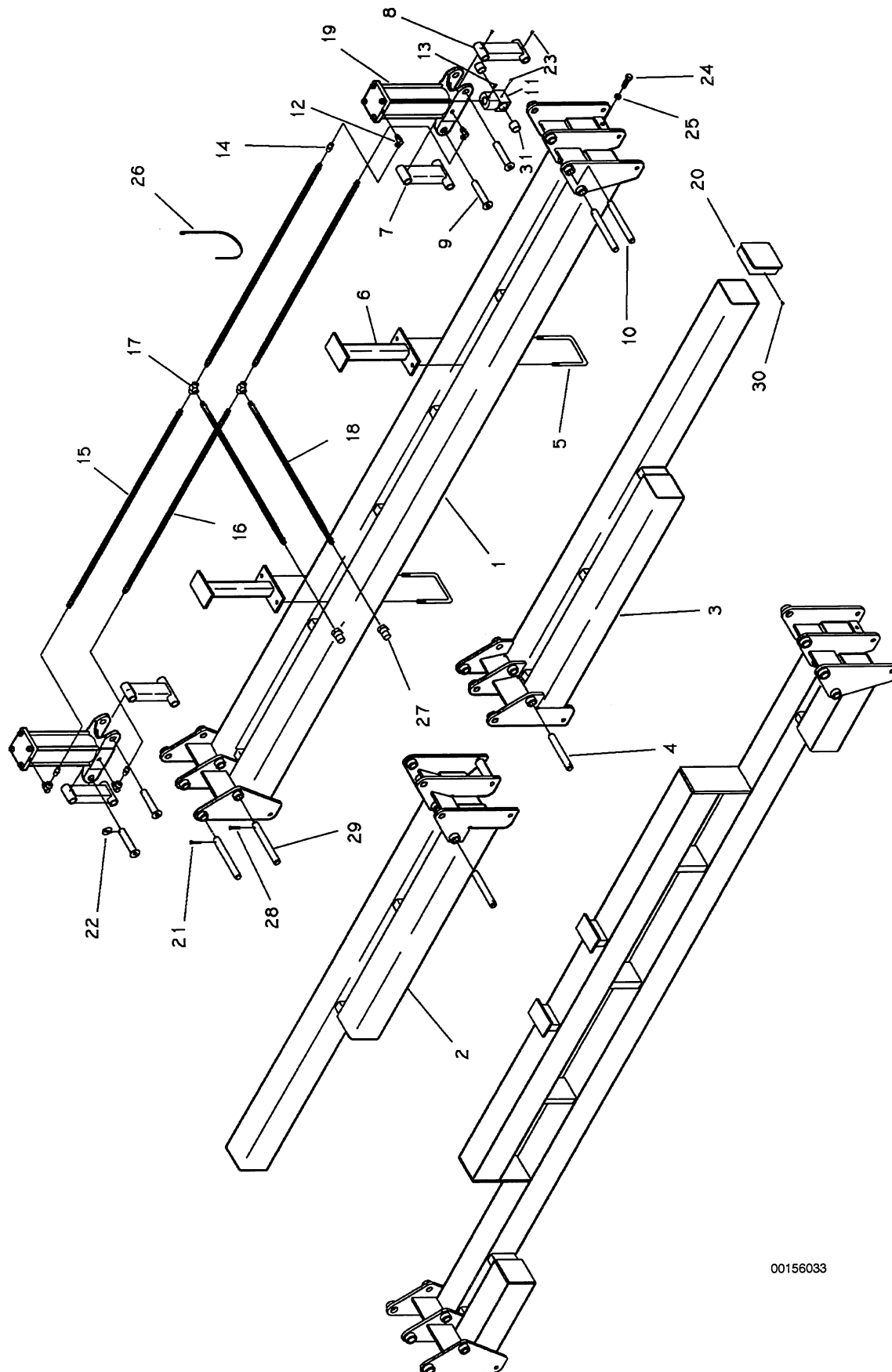


00156032

180° FOLD TOOL BAR

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1278	Center Section, 142" (830)	1
	200-2-0414	Center Section, 154" (1222, 640 Skip)	1
	200-2-1626	Center Section, 158" (1030)	1
	200-2-1304	Center Section, 168" (1224)	1
	200-2-1490	Center Section, 176" (1522)	1
2	200-2-0415	Center Section, 184" (836-840)	1
	200-2-1403	Center Section, 198" (1622)	1
	200-2-0382	Center Section, 202" (1230)	1
	200-2-1444	Center Section, 242" (1822)	1
	200-2-1277	Wing, 63-1/2" (830, 1222, 1224)	2
	200-2-0413	Wing, 72" (836-840, 640 Skip)	2
	200-2-1627	Wing, 75" (1030)	2
	200-2-1491	Wing, 84" (1522)	2
	200-2-0381	Wing, 92" Bar (1230, 1622, 1822)	2
	200-2-0321	Wing Rest	2
4	200-3-0344	5/8" U-Bolt, for 7 x 7 Beam	2
5	905-01528	Elbow, 3/4-16 MORB x 1/2 FPT, 90 degree	4
6	200-3-3324	Pin Eye Clevis	2
	200-2-1776	Pin Eye Clevis Assembly, 1-1/2" ID	2
7	200-2-0317	Cylinder Linkage, Wing	2
8	200-2-0316	Cylinder Linkage, Center	2
9	200-2-1317	Cylinder Pin, 6.63" Long	4
10	200-3-0513	Cylinder Pin 1-1/4" x 11-1/4" Long	4
11	200-3-0526	Pin 1-1/4 x 9-5/8" Long	2
12	905-01358	Tee, 1/2 NPT (Steel)	2
13	905-19003	Quick Coupler, Male Tip	2
14	905-01531	1/2" Swivel Flow Restrictor, 1/16"	4
15	210-2-0192	3/8" Hose x 1/2 mp/mp x 96" (142", 154", 158" Center)	2
	210-2-0180	3/8" Hose x 1/2 mp/mp x 111" (168" Center, 176" Center, 184" Center)	2
	210-2-0181	3/8" Hose x 1/2 mp/mp x 122" (198" Center, 202" Center)	2
16	210-2-0175	3/8" Hose x 1/2 mp/mp x 142" (242" Center)	2
	210-2-0169	3/8" Hose x 1/2 mp/mp x 82" (142" Center, 154" Center, 158" Center)	2
	210-2-0192	3/8" Hose x 1/2 mp/mp x 96" (168" Center, 176" Center, 184" Center)	2
	210-2-0180	3/8" Hose x 1/2 mp/mp x 111" (198" Center, 202" Center)	2
	210-2-0172	3/8" Hose x 1/2 mp/mp x 134" (242" Center)	2
17	210-2-0183	3/8" Hose x 1/2 mp/mp x 60"	2
18	200-2-0503	5 x 12 Cylinder Complete with Clevis	2
	200-2-0500	5 x 12 Cylinder, Less Clevis	2
	905-21263	Seal Kit, 5 x 12 Cylinder	1
19	900-25010	1/4 x 1-1/4 Klic Pin	4
20	900-01071	5/16 x 2-1/2 Hex Bolt	4
21	200-3-2636	Rubber Tube Cap, 7 x 7	2
22	900-03024	3/4 NC x 2-1/2 Hex Bolt, Full Thread	4
23	905-15024	Zerk, 1/4-28 UNF Straight	10
24	905-07086	32" Plastic Cable Tie	6
25	900-06282	3/4 NC Jam Nut	4
26	900-16033	3/4 NC x 1 Sq. Head Set Screw	2
27	900-16897	#6 x 3/4 Pan Head Sheet Metal Screw	4
28	200-3-3431	Hinge Pin, 1-1/2 x 11-1/4	2
29	900-01125	3/8 x 3 Hex Bolt	2
30	200-3-3285	Garmax Bushing, 1-1/2" ID	4

180° FOLD DOUBLE & SINGLE REINFORCED TOOL BARS

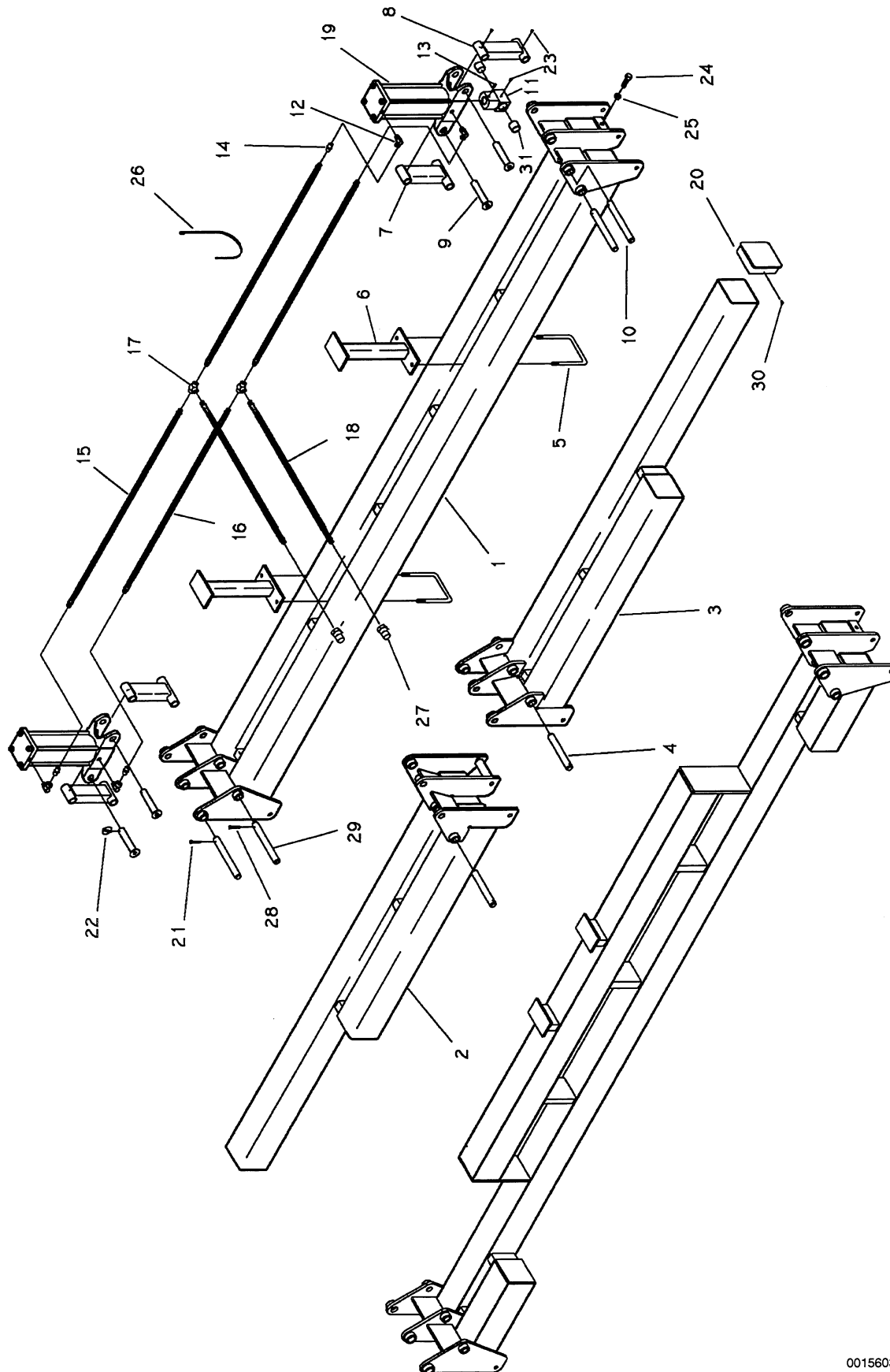


00156033

180° FOLD DOUBLE & SINGLE REINFORCED TOOL BARS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1308	Double Center Section, 184" (836-840)	1
	200-2-1389	Double Center Section, 198" (1622)	1
	200-2-1746	Single Reinforced Center Section, 198" TRF (1622)	1
	200-2-1305	Double Center Section, 206" (1228-1232)	1
	200-2-1583	Single Reinforced Center Section, 206" TRF (1230)	1
	200-2-1585	Single Reinforced Center Section, 242" TRF (1822)	1
	200-2-1628	Double Center Section, 256" (1040 Skip)	1
	200-2-1584	Single Reinforced Center Section, 264" TRF (1630)	1
	200-2-1307	Double Center Section 242" (1822,1530)	1
	200-2-1306	Double Center Section, 264" (1236-1240, 1630)	1
2	200-2-1386	Double Center Section, 286" (2422)	1
	200-2-1309	Right Wing, 72" (836-840)	1
	200-2-1311	Right Wing, 92" (1228-1232, 1622, 1822)	1
	200-2-1632	Right Wing, 110" (1530)	1
	200-2-1313	Right Wing, 122" (1236-1240, 1630)	1
3	200-2-1629	Right Wing, 125" (1040 Skip)	1
	200-2-1387	Right Wing, 127-1/2" (2422)	1
	200-2-1310	Left Wing, 72" (836-840)	1
	200-2-1312	Left Wing, 92" (1228-1232, 1622, 1822)	1
	200-2-1631	Left Wing, 110" (1530)	1
4	200-2-1314	Left Wing, 122" (1236-1240, 1630)	1
	200-2-1630	Left Wing, 125" (1040 Skip)	1
	200-2-1388	Left Wing, 127-1/2" (2422)	1
	200-3-2451	Hinge Pin 1-1/4" x 18-3/8" Long	2
	200-3-0344	5/8" U-Bolt, 7 x 7	2
6	200-2-0321	Wing Rest	2
7	200-2-0316	Cylinder Linkage, Center	2
8	200-2-0317	Cylinder Linkage, Wings	2
9	200-2-1317	Pin, Cylinder Linkage (5 x 12 Cylinder)	4
	200-2-1611	Pin, Cylinder Linkage (6 x 12 Cylinder)	4
10	200-3-2450	Hinge Pin, 1-1/4" x 19-3/4" Long	2
11	200-3-3324	Pin Eye Clevis	2
	200-2-1776	Pin Eye Clevis Assembly, 1-1/2" ID w/bushings	2
12	905-01528	Elbow, 3/4-16 MORB, 1/2 FPT x 90 degree	4
13	900-16033	3/8 NC x 1 Sq. Head Set Screw	2
14	905-01531	1/2" Swivel Flow Restrictor, 1/16"	4
15	210-2-0180	3/8" Hose x 1/2 mp/mp x 111" (184" Center)	2
	210-2-0181	3/8" Hose x 1/2 mp/mp x 122" (202" Center, 198" Center)	2
	210-2-0175	3/8" Hose x 1/2 mp/mp x 142" (242" Center)	2
	210-2-0194	3/8" Hose x 1/2 mp/mp x 152" (264" Center)	2
	210-2-0185	3/8" Hose x 1/2 mp/mp x 160" (286" Center)	2
16	210-2-0192	3/8" Hose x 1/2 mp/mp x 96" (184" Center)	2
	210-2-0180	3/8" Hose x 1/2 mp/mp x 111" (202" Center, 198" Center)	2
	210-2-0172	3/8" Hose x 1/2 mp/mp x 134" (242" Center)	2
	210-2-0175	3/8" Hose x 1/2 mp/mp x 142" (264" Center)	2
	210-2-0194	3/8" Hose x 1/2 mp/mp x 152" (286" Center)	2
17	905-01358	Tee, 1/2 NPT (Steel)	2
18	210-2-0183	3/8" Hose x 1/2 mp/mp x 60"	2
19	200-2-0503	5 x 12 Cylinder Complete with Clevis	2
	200-2-0500	5 x 12 Cylinder less Clevis	2

180° FOLD DOUBLE & SINGLE REINFORCED TOOL BARS



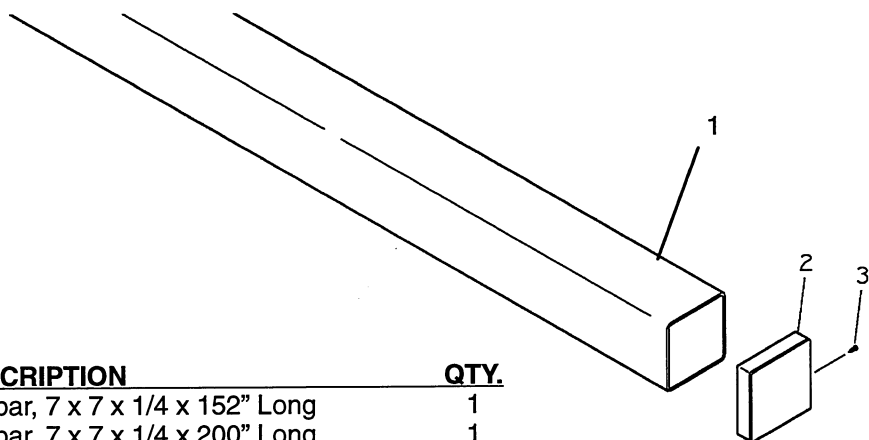
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180° FOLD DOUBLE & SINGLE REINFORCED TOOL BARS

REF.	PART NO.	DESCRIPTION	QTY.
	905-21263	Seal Kit, 5 x 12 Cylinder	1
	905-21382	5 x 12 Cylinder Rod	1
	905-21383	5 x 12 Cylinder Rod Cap	1
	905-21384	5 x 12 Cylinder Cap	1
	200-2-1564	6 x 12 Cylinder Complete with Clevis	1
	200-2-2937	6 x 12 Cylinder less Clevis	1
	905-21386	6 x 12 Cylinder Rod	1
	905-21387	6 x 12 Cylinder Rod Cap	1
	905-21388	6 x 12 Cylinder Cap	1
	905-21368	Seal Kit, 6 x 12 Cylinder	1
	200-2-1762	Clevis Assy. (1-1/4 Pin)	1
	905-21385	1-1/4" Nut	1
20	200-3-2636	Rubber Tube Caps, 7 x 7	4
21	900-01071	5/16 x 2-1/2 Hex Bolt	6
22	900-25010	1/4 x 1-1/4 Klic Pin	4
23	905-15024	Zerk, 1/4-28 UNF, Straight	10
24	900-03024	3/4 NC x 2-1/2 Hex Bolt	4
25	900-06282	3/4 NC Jam Nut	4
26	905-07086	32" Plastic Cable Ties	6
27	905-19003	Quick Coupler, Male Tip	2
28	900-01071	5/16 x 2-1/2 Hex Bolt (1-1/4 Hinge Pin)	2
	900-01125	3/8 x 3 Hex Bolt (1-1/2" Hinge Pin)	2
29	200-3-3170	Hinge Pin, 1-1/2" x 19-3/4" long	2
30	900-16897	#6 x 3/4 Pan Head Sheet Metal Screw	4
31	200-3-3285	1-1/2" Garmax Bushing	1
	200-3-3355	1-1/4" Garmax Bushing	1

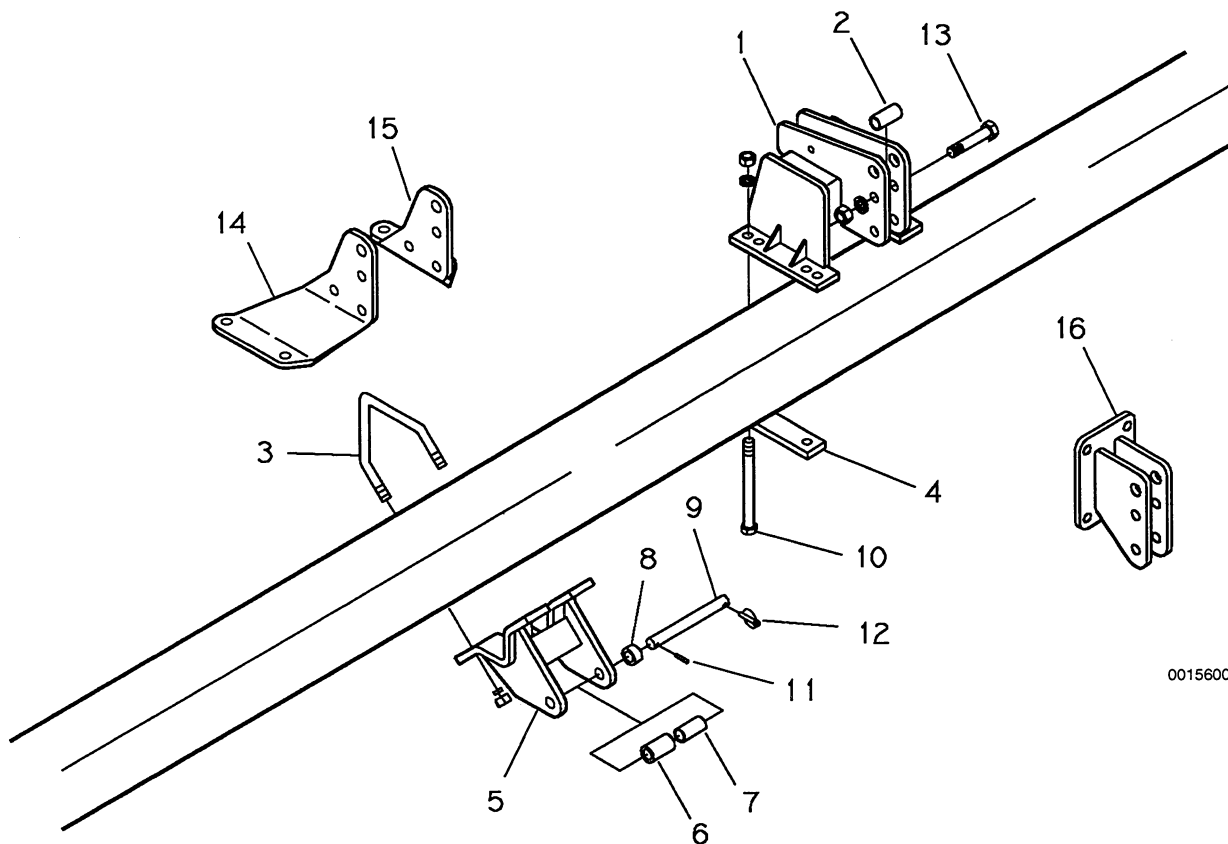
RIGID TOOL BARS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-2109	Toolbar, 7 x 7 x 1/4 x 152" Long	1
	200-3-2425	Toolbar, 7 x 7 x 1/4 x 200" Long	1
	200-3-1986	Toolbar, 7 x 7 x 1/4 x 252" Long	1
	200-3-2426	Toolbar, 7 x 7 x 1/4 x 288" Long	1
	200-3-1983	Toolbar, 7 x 7 x 1/4 x 300" Long	1
	200-3-1984	Toolbar, 7 x 7 x 1/4 x 328" Long	1
	200-2-1687	Toolbar, 7 x 7 x 1/4 x 328" Long (TRR)	1
	200-2-1748	Toolbar, 7 x 7 x 1/4 x 399" Long (TRR)	1
2	200-3-2636	Rubber Tube Cap, 7 x 7	2
3	900-16897	#6 x 3/4 Pan Head Set Screw	4



00156030

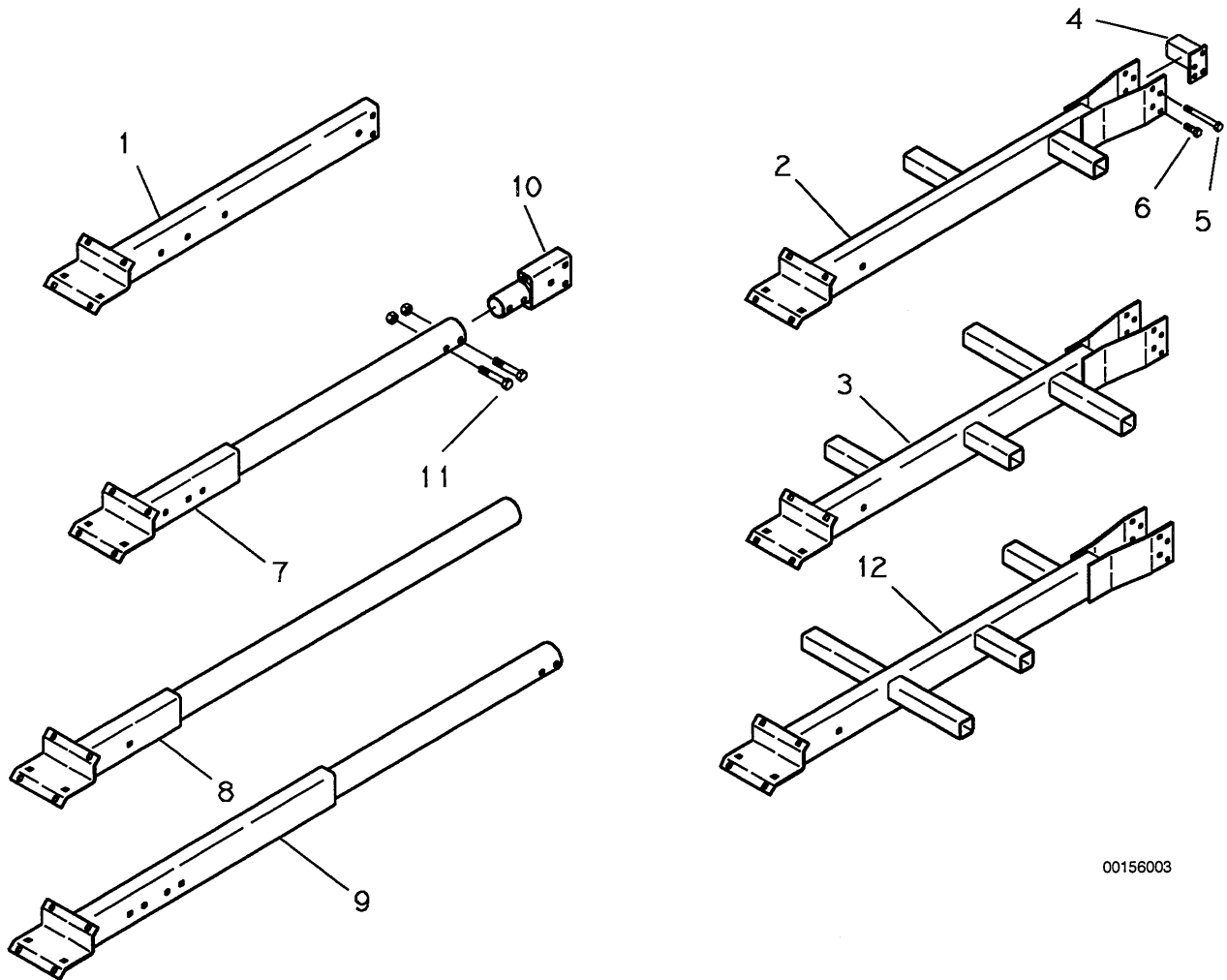
3-POINT HITCH — 3-PIECE, 4-PIECE



00156002

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0670	Upper Mast Bracket, 3 Piece (Heavy Duty)	1
2	200-3-0151	Mast Spacer Bushing, 1 ID x 1-1/4 OD x 2-1/8 Long	2
3	200-3-1443	A-Bolt, 7/8 x 7 x 7	4
4	200-3-0970	Back Strap	2
5	200-2-0554	Lower 3 Point Hitch	2
6	200-3-0959	Spacer, 1-3/4 OD	2
7	200-3-0961	Bushing, 1-7/16 OD x 3 Long	2
8	200-3-0960	Spacer, 1-3/4 OD x 1 Long	2
9	200-3-0962	Pin	2
	200-2-0553	Pin Assembly (Ref. 9 and 11)	2
10	900-03039	7/8 NC x 10 Hex Bolt	4
11	900-29204	Roll Pin, 5/16 x 1-5/8 Long	2
12	900-25012	7/16 x 2 Klic Pin	2
13	900-01531	1 NC x 5 Hex Bolt	2
14	200-3-0964	Upper Mast Plate, Right (4 Piece)	1
15	200-3-0963	Upper Mast Plate, Left (4 Piece)	1
16	200-2-1793	Upper Mast Bracket (TRF Toolbars)	1

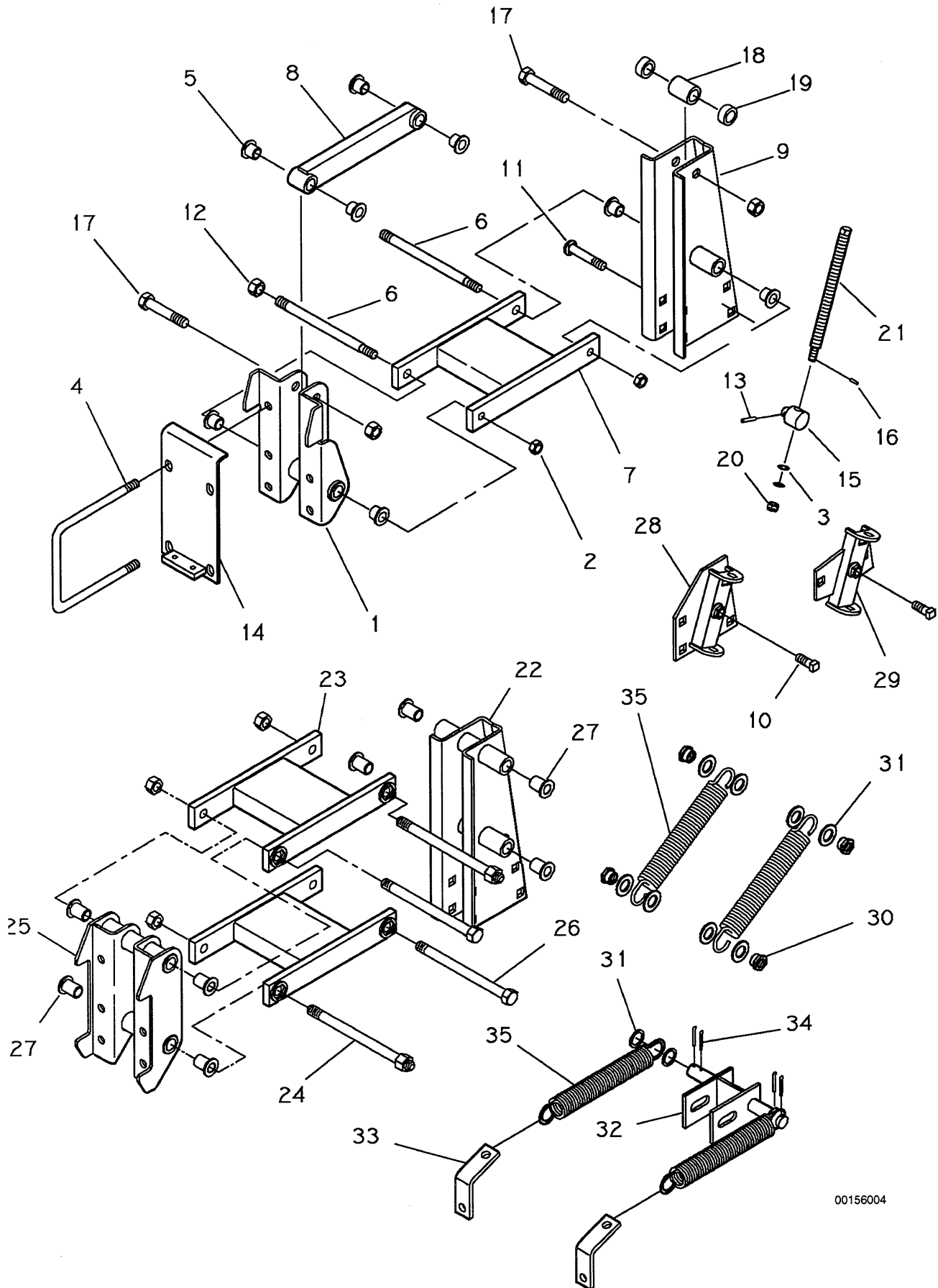
TINE TREES



00156003

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0575	2 x 4 Adjustable Tree, (Model 2040 & 2065), 37.50" Long	1
	200-2-1146	2 x 4 Adjustable Tree, (Model 3030), 27" Long	1
	200-2-1845	2 x 4 Adjustable Tree, (Model 3030), 20" Long	1
2	200-2-1480	2 x 4 Welded 3 Tine, Model 2130 (22" Rows), 39.50" long	1
	200-2-1657	2 x 4 Welded 3 Tine, Model 2130 (22" Rows), Extended 44.31" long	1
3	200-2-1524	2 x 4 Welded 5 Tine, Model 2130 (30" Rows), 48.50" Long	1
	200-2-1650	2 x 4 Welded 5 Tine, Model 2130 (24"-24" Rows) 53.31" Long	1
4	200-2-1639	Rear Tube Weldment, Model 2130	1
5	900-01247	1/2 NC x 4-1/2 Hex Bolt	2
6	900-01221	1/2 NC x 1 Hex Bolt	1
7	200-2-1702	Tree Weldment (Spider Gang)	1
8	200-2-1732	Tree Weldment (Spider Gang), Extended, without holes	1
9	200-2-1825	Tree Weldment (Spider Gang)	1
10	200-2-1708	Rear Tube Attachment	1
11	900-01357	5/8 x 3-1/2 Hex Bolt	2
12	200-2-1747	2 x 4 Welded 5 Tine, Model 2130	1
	200-2-1845	2 x 4 Adjustable Tree, Model 3030, 20" long	1

LINKAGE COMPONENTS

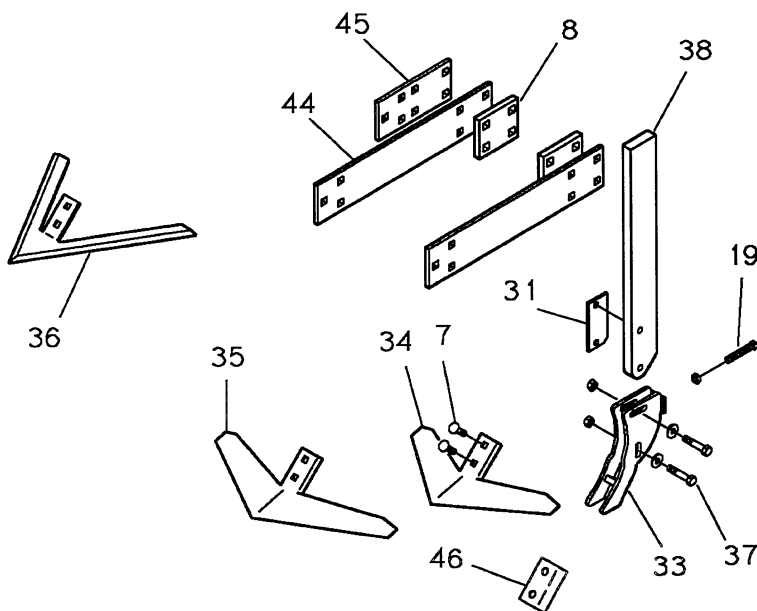
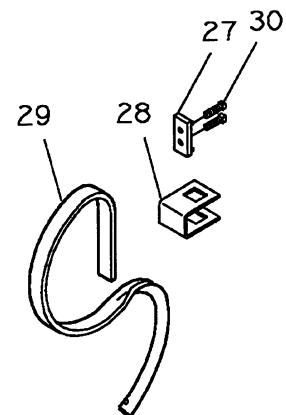
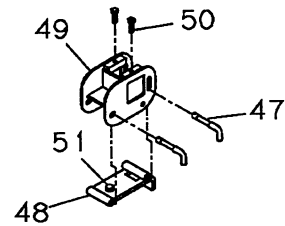
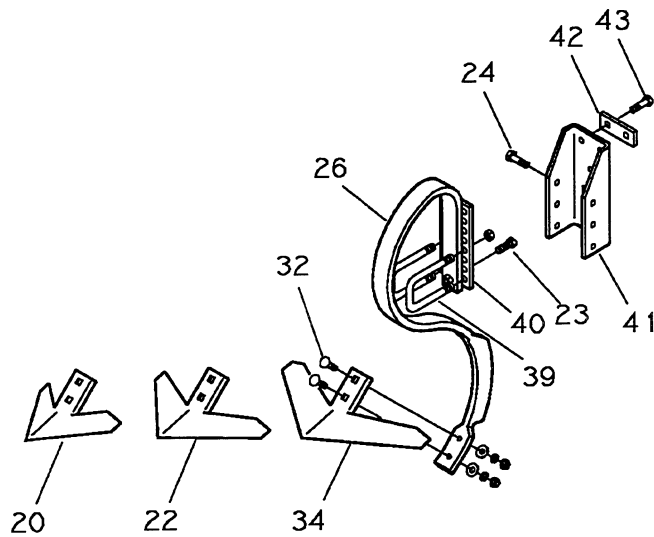
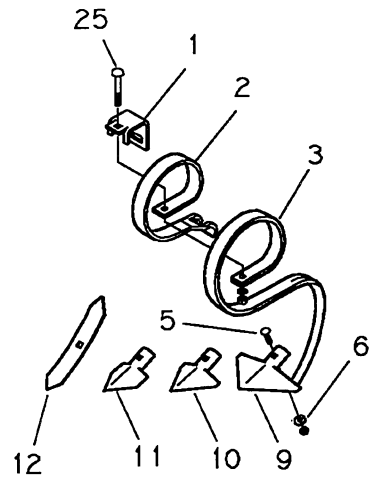
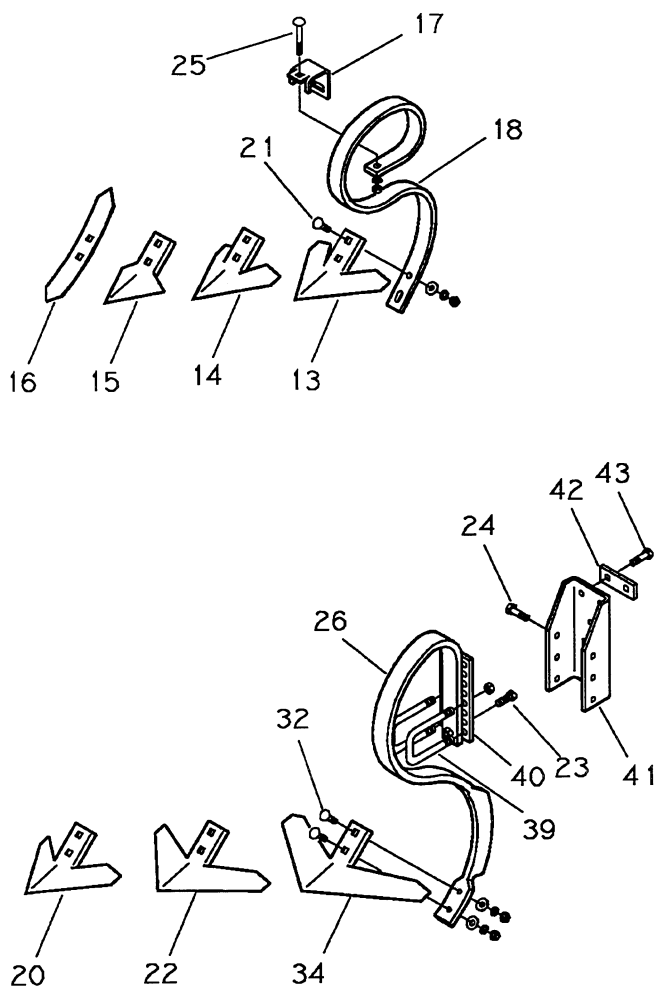


00156004

LINKAGE COMPONENTS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1318	Mounting Angle without Oilite Bushings	1
2	900-06145	5/8 NC Flanged Whiz Nut	2
3	900-11146	Machine Bushings, .88 OD x .53 ID	2
4	200-3-0344	5/8 U-bolt, 7" Inside, 8.5" Long	2
5	200-3-0877	Oilite Bushing	8
6	200-3-2631	Pivot Shaft	2
7	200-2-1412	Parallel Arm	1
8	200-2-1744	Parallel Tube	1
	200-2-1779	Parallel Tube (Double "H" Kit)	1
9	200-2-1707	Upright Weld without Oilite Bushings	1
10	900-16093	5/8 NC x 1-1/2 Sq. Head Set Screw	1
11	900-01792	5/8 NC x 3-1/2 Carriage Bolt	4
12	900-06510	3/4 NC Lock Nut	4
13	900-29176	1/4 x 1-1/4 Roll Pin	1
14	200-2-1729	Clamp Weldment, Model 2065	1
15	200-3-1319	Collar, Screw Kit	1
16	900-29082	1/8 x 3/4 Roll Pin	2
17	900-01419	3/4 NC x 4 Hex Bolt	2
	900-01441	3/4 NC x 9-1/2 Hex Bolt (Double "H" Kit)	2
18	200-3-3104	Spacer, 2" Long (Double "H" Kit)	2
19	200-3-3103	Spacer (Double "H" Kit)	4
20	900-06052	1/2" NF Slotted Hex Nut	2
21	200-3-3190	Adjusting Screw	1
22	200-2-1856	Upright Weld without Oilite Bushings (Double "H")	1
23	200-2-1859	Parallel Arm (Double "H")	2
24	200-2-1860	Pin (Double "H")	2
25	200-2-1852	Mounting Angle without Oilite Bushings (Double "H")	1
26	200-2-1861	Bolt (Double "H")	2
27	200-3-3544	Oilite Bushing (Double "H")	8
28	200-2-1864	Gauge Arm Pocket, 4 Bolt (2140 & 2130)	1
29	200-2-1926	Gauge Arm Pocket, 2 Bolt (2065)	1
30	200-3-3546	Retainer	4
31	900-11073	1 x 10 Ga. Nar Rim Mach. Bushing	A/R
32	200-2-1371	Spring Mount Bracket	1
	200-2-1694	Spring Mount Bracket (Double "H" Linkage Kit)	1
33	200-3-3264	Hook Weldment	2
34	900-23043	3/16 x 1-1/2 Cotter Pin	4
35	200-3-2163	Spring, (Double "H")	2
	200-2-1738	Linkage Assembly (Ref. 1,2,5-12)	1
	200-2-1857	Linkage Assembly, Double "H" (Ref. 22-27)	1

TINES, SHOVELS & SWEEPS

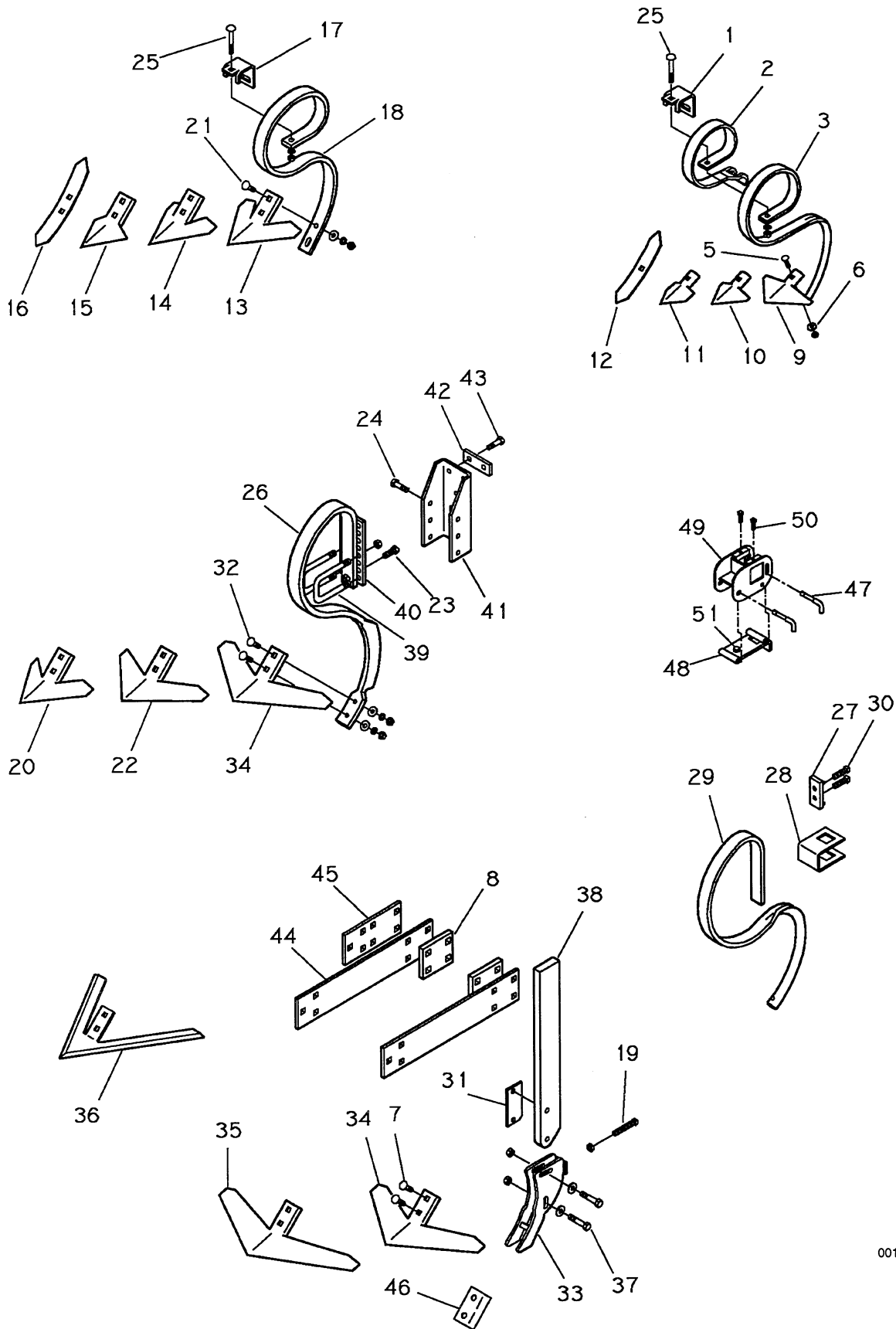


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TINES, SHOVELS & SWEEPS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-1835	Spring Tine Clamp with Helper	1
2	200-3-1754	Spring Tine Helper	1
3	200-3-1755	Spring Tine	1
4	200-3-1833	Spring Tine Clamp	1
5	900-01841	3/8 NC x 1-1/2 Elliptical Head Plow Bolt	1
	200-1-0648	Box of 100 Bolts and Nuts	1
6	900-11229	Tine Washer	1
7	900-01865	Plow Bolt, 1/2 NC x 3-1/2	2
8	200-3-2539	Spacer Plate, 1 x 3 Shank (2065)	2
	200-3-3127	Spacer Plate, 3/4 x 2-1/2 Shank	2
9	905-10005	Regular Shovel, 7" x 1/4" (S-Tine)	1
10	905-10004	Regular Shovel, 4" x 1/4" (S-Tine)	1
11	905-10003	Regular Shovel, 2-3/4" x 1/4" (S-Tine)	1
12	905-10088	Regular Spike, 1-1/2" Reversible (S-Tine)	1
13	905-10072	Penetrator Shovel, 8" x 1/4" x 47 Degree	1
14	905-10071	Penetrator Shovel, 6" x 1/4" x 47 Degree	1
15	905-10019	Penetrator Shovel, 4" x 1/4" x 47 Degree	1
16	905-10018	Penetrator Spike, 1-3/4" x 1/4"	1
17	200-3-0539	Clamp, Penetrator Tine	1
18	200-3-0470	Penetrator Tine	1
19	900-16066	1/2 NC x 2 Sq. Head Set Screw	1
20	905-10112	8" Penetrator Sweep, 43 deg (Straight Edge Tine)	1
	905-10123	7" Penetrator Sweep (Ultra Wing)	1
21	900-01851	7/16 x 1-3/4 Plow Bolt	1
22	905-10113	12" Sweep, 43 deg (Straight Edge Tine)	1
23	900-01225	1/2 NC x 1-1/2 Hex Bolt	1
24	900-01223	1/2 NC x 1-1/4 Hex Bolt	4
25	900-01734	7/16 NC x 3-1/2 Carriage Bolt	1
26	200-3-3524	Tine, Heavy Duty 20" Adjustable (5/8")	1
	200-3-3525	Tine, Heavy Duty 20" Adjustable (3/4")	1
27	200-2-1391	Tine Clamp Weldment	1
28	200-3-2594	Tine Clamp	1
29	200-3-2379	Vertical Tine	1
30	900-16065	1/2 NC x 1-3/4 Sq. Head Set Screw	1
31	200-3-1066	Spacer	1
32	900-01902	Plow Bolt, 1/2" Head, 7/16 x 2	1
33	200-2-1642	Sweep Adapter Weldment, 2" Wide	1
	200-2-1840	Sweep Adapter Weldment, 1-3/4" Wide	1
34	905-10107	16" Sweep (43 Degree)	1
35	905-10115	18" Sweep (43 Degree)	1
	905-10108	20" Sweep (43 Degree)	1
	905-10109	24" Sweep (43 Degree)	1
	905-10116	26" Sweep (43 Degree)	1
	905-10117	28" Sweep (43 Degree)	1
36	905-10114	14" Beet Sweep	1
	905-10126	14" Beet Sweep (Heavy Duty)	1
	905-10120	20" Beet Sweep	1
37	900-01233	1/2 NC x 2-1/2 Hex Bolt	1
38	200-3-1064	Shank, 3/4 x 23" Long	1
	200-3-1063	Shank, 3/4 x 30" Long	1
	200-3-1062	Shank, 1 x 16" Long	1

TINES, SHOVELS & SWEEPS

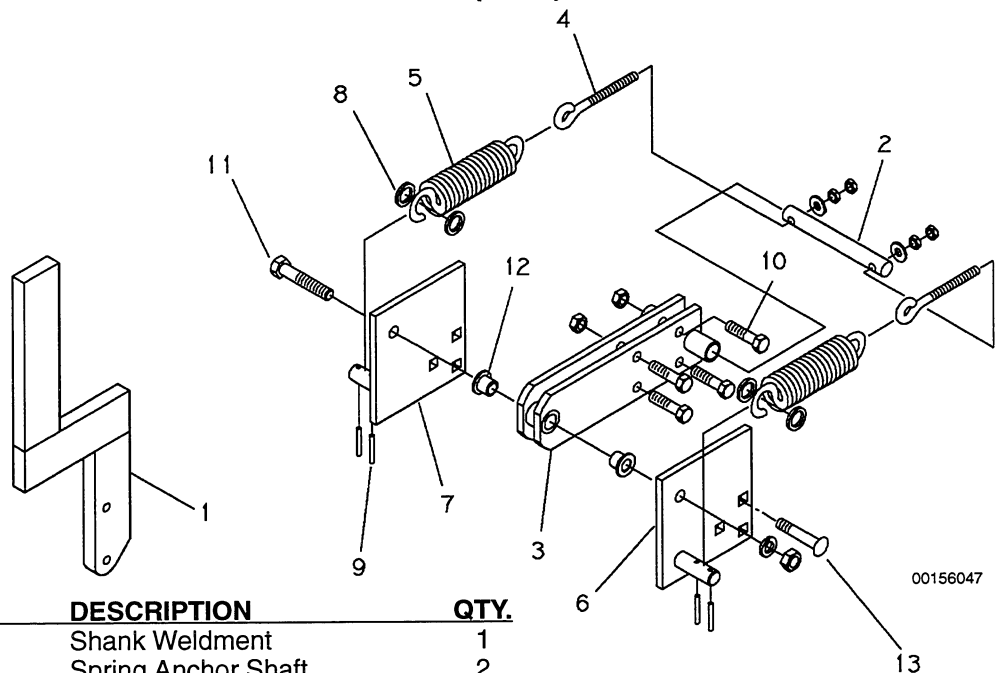


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TINES, SHOVELS & SWEEPS

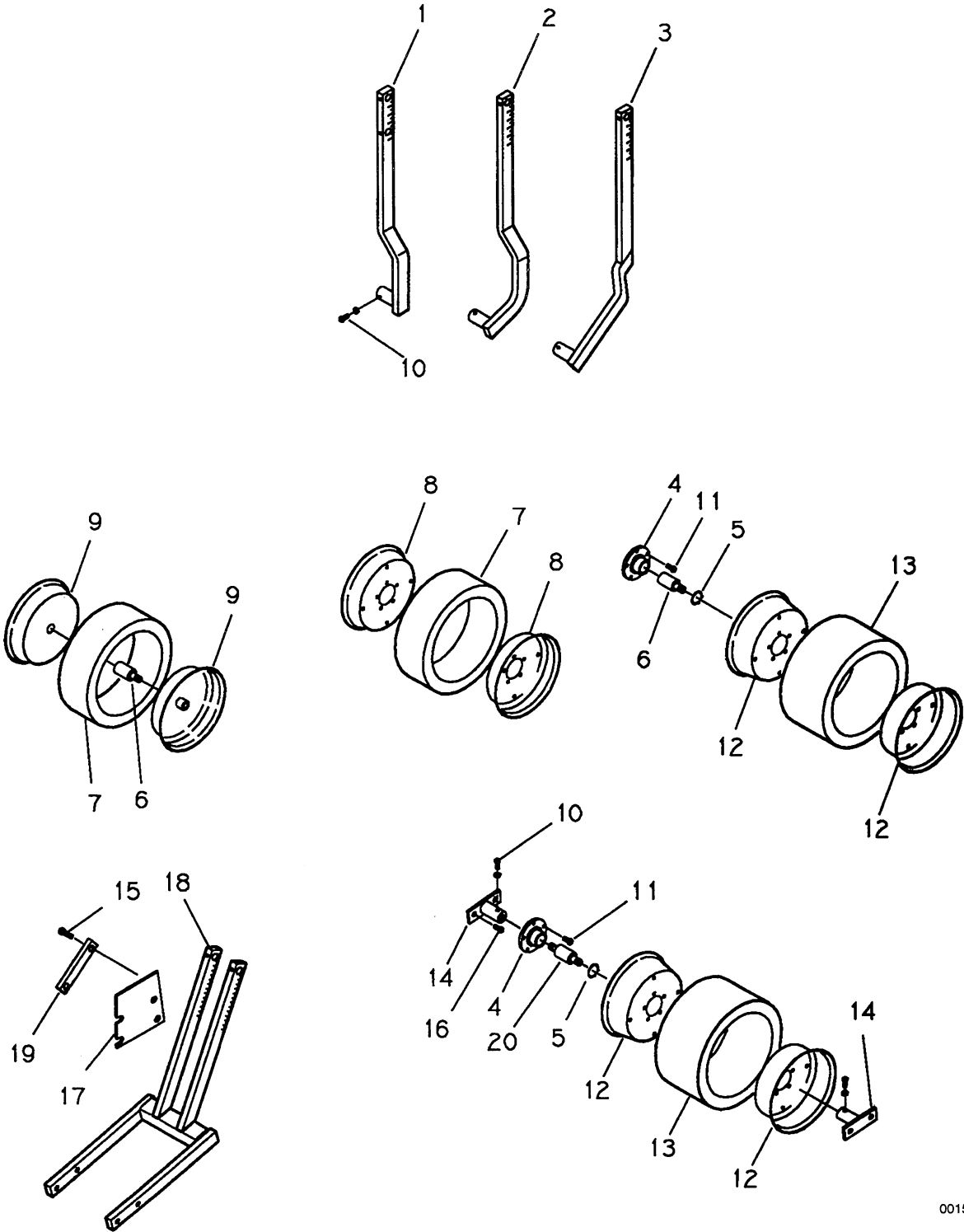
REF.	PART NO.	DESCRIPTION	QTY.
39	200-3-2856	U-Bolt, 1/2 NC x 2-1/2 x 4-1/4	2
	200-3-2954	U-Bolt, 1/2 NC x 2 x 3-3/4	2
40	200-3-2847	Plate, 2 x 2	1
	200-3-2955	Plate, 2-1/2 x 2-1/2	1
41	200-3-2938	Bracket, (2130)	1
42	200-3-2944	Back Strap, (2130)	1
43	900-01227	1/2 NC x 1-3/4 Hex Bolt	3
44	200-3-3147	Side Plate, 1 x 3 Shank (Long)	2
	200-3-3148	Side Plate, 3/4 x 2-1/2 Shank	2
45	200-3-2538	Side Plate, 1 x 3 Shank (Short) (2065)	2
46	200-3-3421	Spacer, Wide Sweeps	1
47	900-25024	7/16 X 3 Hitch Pin	2
48	200-2-1530	Tine Mount (Standard)	1
	200-2-1589	Tine Mount (Penetrator)	1
49	200-2-1531	Clamp Weldment	1
50	900-16033	3/8 NC x 1 Square Head Set Screw	2
51	900-01175	7/16 NC x 1-1/2 Hex Bolt (Standard)	1
	900-01225	1/2 NC x 1-1/2 Hex Bolt (Penetrator)	1

SPRING TRIP SHANK (2065)

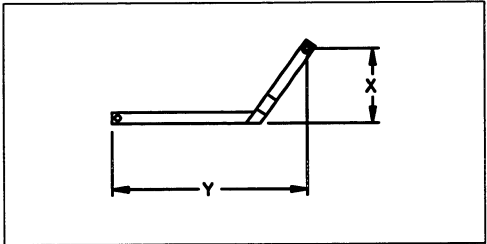


REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1737	Shank Weldment	1
2	200-3-3267	Spring Anchor Shaft	2
3	200-2-1733	Pivot Weldment	1
4	100-3-0148	1/2 Eye Bolt	2
5	200-3-1745	Spring	2
6	200-2-1734	Plate Weldment L.H.	1
7	200-2-1735	Plate Weldment R.H.	1
8	900-11073	1 x 10 Ga. Mach. Bushing	4
9	900-29182	1/4 x 2 Roll Pin	4
10	900-01349	5/8 NC x 2-1/2 Hex Bolt	4
11	900-01419	3/4 NC x 4 Hex Bolt	1
12	200-3-0877	Flanged Bushing	2
13	900-01792	5/8 NC x 3-1/2 Carriage Bolt	3
	200-2-1736	Trip Assembly	1

GAUGE ARMS & WHEELS



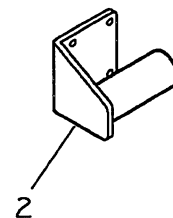
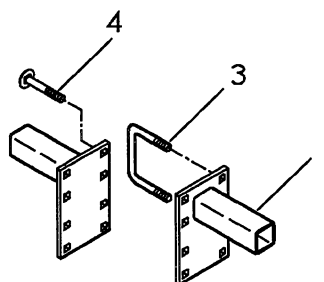
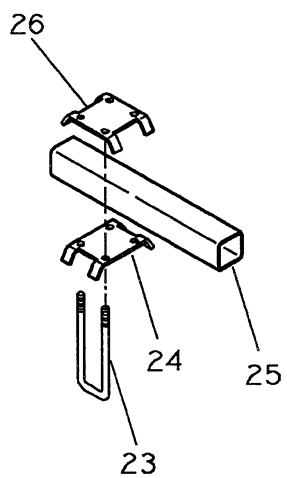
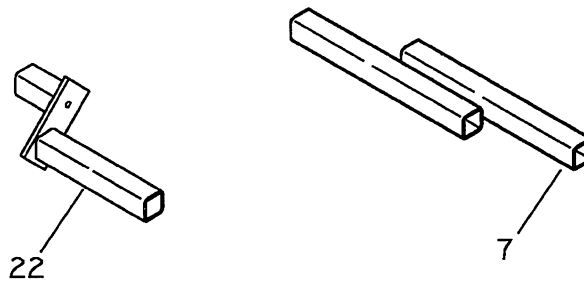
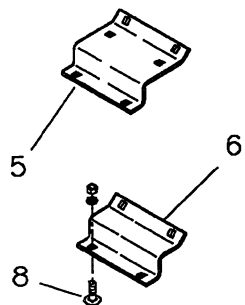
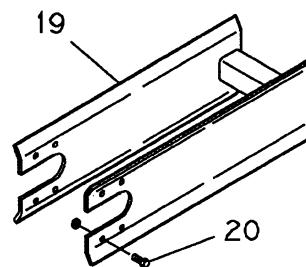
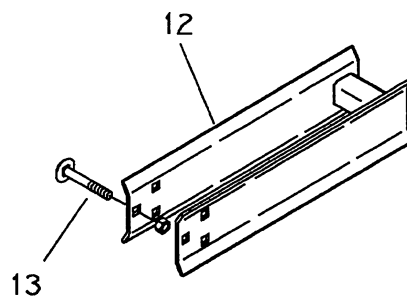
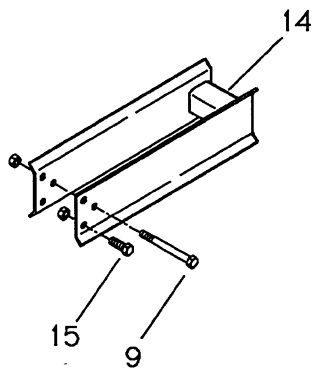
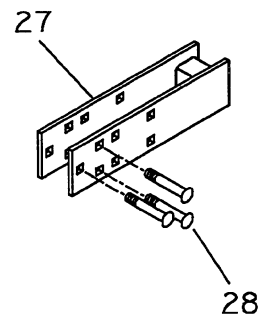
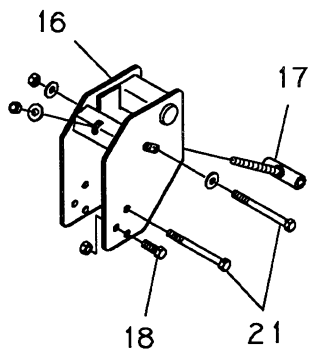
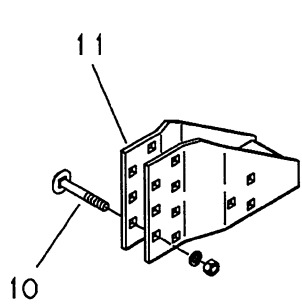
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GAUGE ARMS & WHEELS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1672	Gauge Arm, 6" Wide Tire (x=0, y=26) 2040 Shannon	1
2	200-2-1674	Gauge Arm, 6" Wide Tire(x=4, y=26) 2040 Delta	1
3	200-2-1673	Gauge Arm, 6" Wide Tire (x=9, y=26)	1
4	200-3-0669	Hub	1
5	900-39022	Retaining Ring	1
6	901-01013	Gauge Wheel Bearing	1
7	905-09105	Gauge Wheel Tire, 4 x 12	1
8	905-09048	Rim Half, 4 x 12 (Hub Type)	2
9	905-09017	Rim Half, 4 x 12	2
10	900-16031	3/8 NC x 3/4 Sq. Head Set Screw	1
11	900-01055	5/16 NC x 3/4 Hex Bolt	8
12	200-3-3106	Rim Half, 6 x 12 Tire	2
13	200-3-3107	Gauge Wheel Tire, 6 x 12	1
14	200-2-1684	Wheel Holder, 2-9/16" long Bushing (6 x 12 Tire)	2
15	900-01221	1/2 NC x 1 Hex Bolt	2
16	900-01111	3/8 NC x 1-1/4 Hex Bolt	4
17	200-2-1755	Gauge Pocket Weldment, Model 2065	1
18	200-2-1756	Gauge Arm Weldment, Model 2065	1
19	200-3-3311	Strap, Model 2065	1
20	901-01264	Fork Type Bearing	1
	200-2-1365	Gauge Wheel Tire Assembly (Ref. 7 and 8)	1
	905-09016	Gauge Wheel Tire Assembly (Ref. 6, 7, and 9)	1
	200-2-1669	Gauge Wheel Tire Assembly, 6" Wide (Ref 12 and 13)	1
	200-2-1379	Hub Assembly (Ref. 4, 5, and 6)	1
	200-2-1615	Fork Hub Assembly (Ref. 4, 5, and 20)	1
	200-2-0475	Gauge Wheel Tire & Hub Assembly (Ref. 4-8)	1
	200-2-1685	6" Gauge Wheel Tire & Fork Hub Assembly (Ref. 4,5,12,13, and 20)	1
	200-2-1668	6" Gauge Wheel Tire & Hub Assembly (Ref. 4,5,6,12, and 13)	1

REAR TINE BRACKETS, BRANCHES & TUBES

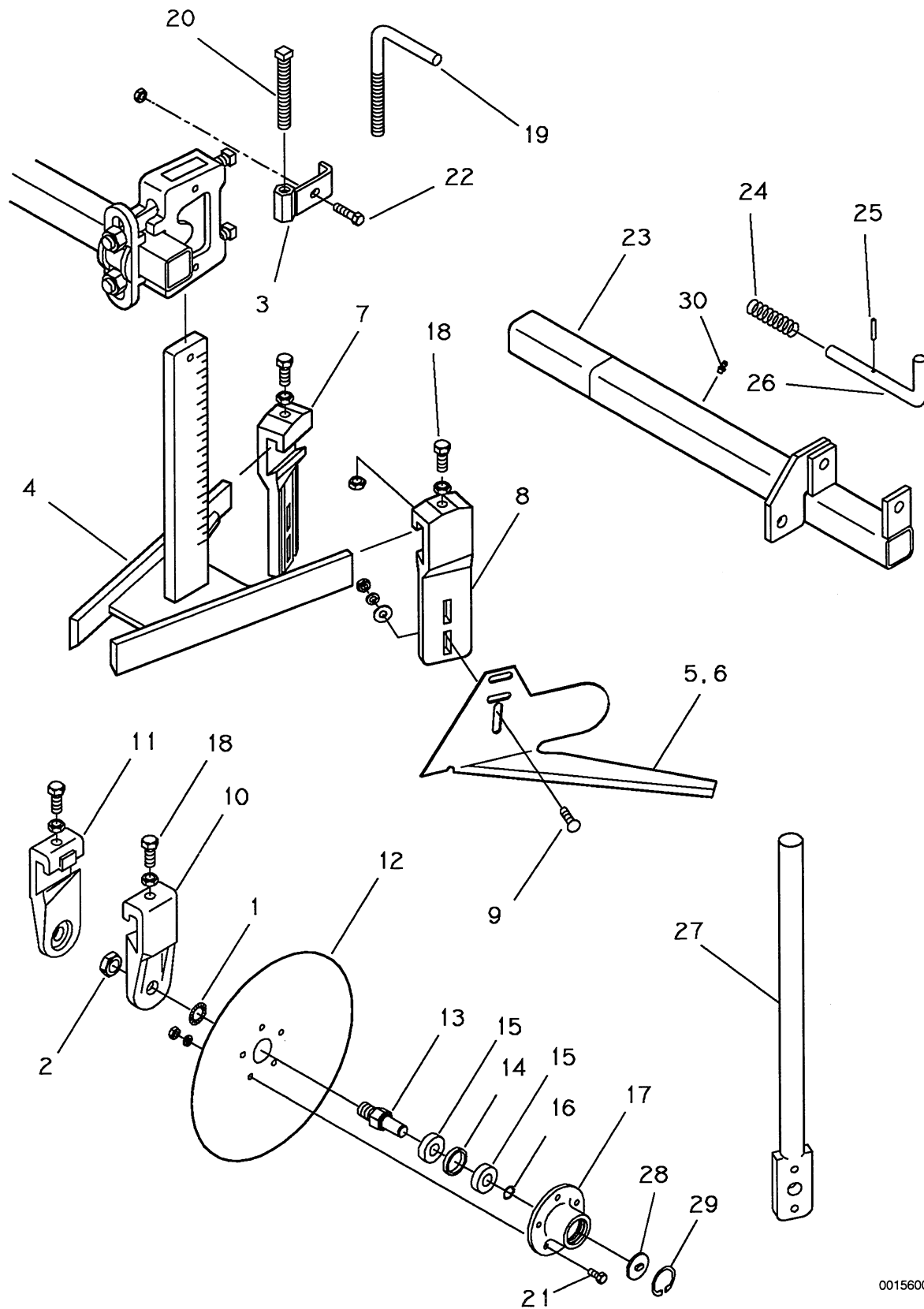


00156009

REAR TINE BRACKETS, BRANCHES & TUBES

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0574	Bolt on Branches, 8 Hole x 7"	1
	200-2-0573	Bolt on Branches, 8 Hole x 10"	1
	200-2-0672	Bolt on Branches, 8 Hole x 14"	1
	200-2-0671	Bolt on Branches, 8 Hole x 17"	1
	200-2-0673	Bolt on Branches, 8 Hole x 22"	1
2	200-2-1449	Mount Weldment, Spider Gang	
3	200-3-1445	U-Bolt, 1/2 NC x 4 x 2	4
4	900-01759	1/2 NC x 3-1/2 Carriage bolt	4
5	200-3-2533	Double Tube Clamp	1
6	200-3-0994	Single Tube Clamp	1
7	200-3-0019	Front Tube, 17-1/2"	1
	200-3-0993	Front Tube, 20"	1
	200-3-0992	Front Tube, 30"	1
	200-3-0990	Front Tube, 38"	1
	200-3-0988	Front Tube, 48"	1
8	900-01726	7/16 NC x 1-1/2 Carriage Bolt	4
9	900-01249	1/2 NC x 5 Hex Bolt, Model 2130	2
10	900-01792	5/8 NC x 3-1/2 Carriage Bolt, Standard	3
11	200-2-0668	Rear Tine Bracket, Adjustable	1
12	200-2-1162	Rear Extension, Long 23-1/2" Long, Model 2040	1
	200-2-1299	Rear Extension, Short 17" Long	1
13	900-01784	5/8 NC x 1-1/2 Carriage Bolt, Standard	6
14	200-2-1481	Rear Extension, Model 2130, 18" Long x 4" Wide	1
	200-2-1806	Rear Extension, Model 2130 Pitch Bracket, 18" Long x 4-1/2" Wide	1
15	900-01223	1/2 NC x 1-1/4 Hex Bolt, Model 2130	2
16	200-2-1766	Pivot Weldment, Model 2130	1
17	200-2-1768	Spacer Tube Weldment, Model 2130	1
18	900-01221	1/2 NC x 1 Hex Bolt	6
19	200-2-1763	Rear Setback, Model 3030	1
20	900-01109	3/8 NC x 1 Hex Bolt	4
21	900-01251	1/2 NC x 5-1/2 Hex Bolt	3
22	200-2-1691	Front Tube Weldment, 2 x 2	2
	200-2-1616	Front Tube Weldment, 2-1/2 x 2-1/2 (Prior 1994)	2
23	200-3-2855	U-Bolt, 1/2 NC x 2 x 7.75" Long	4
24	200-3-2853	Bracket, 2"	1
25	200-3-2852	Tube, 2-1/2" Sq. x 17" Long	2
26	200-3-2854	Bracket, 2-1/2"	1
27	200-2-1550	Rear Extension (2065)	1
28	900-01794	5/8 NC x 4 Carriage Bolt	3

DUAL DISC & DUAL KNIFE ASSEMBLY

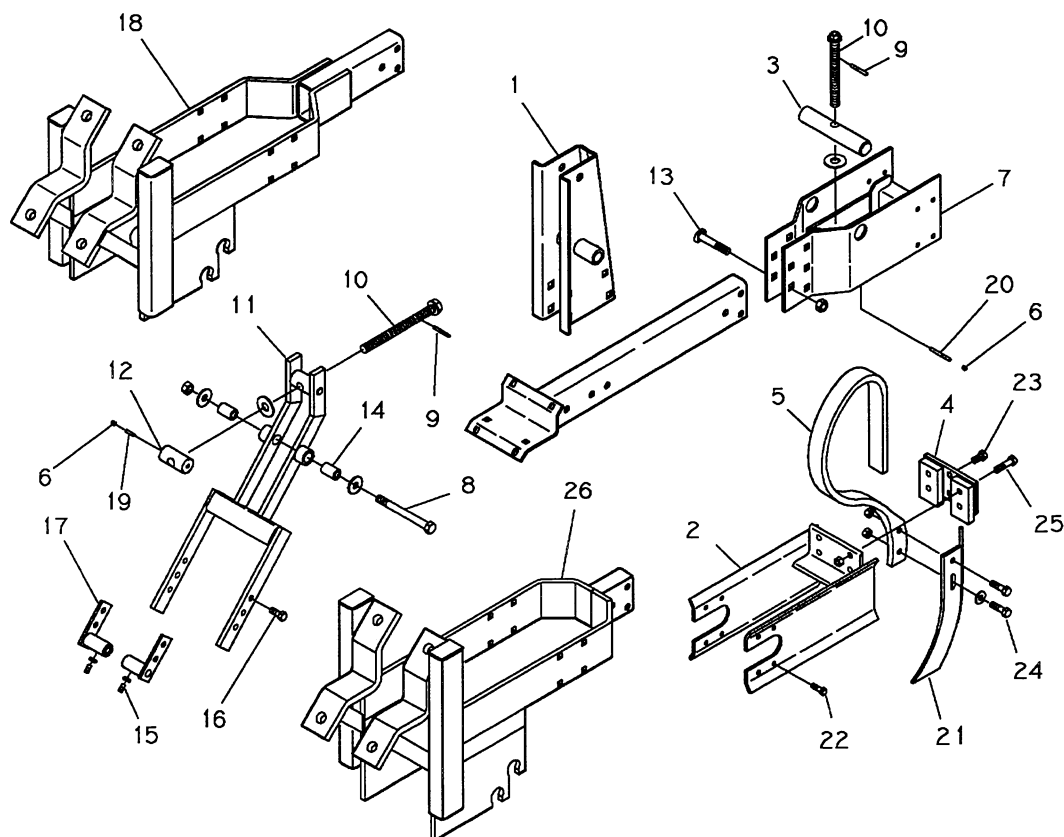


00156006

DUAL DISC & DUAL KNIFE ASSEMBLY

REF.	PART NO.	DESCRIPTION	QTY.
1	900-11190	3/4 Internal Star Washer	1
2	900-06282	3/4 NC Jam Nut	1
3	200-2-1418	Adjustable Nut Weld, 3/4 x 2-1/2 Shank	1
	200-2-1445	Adjustable Nut Weld, 5/8 x 2 Shank (Old)	1
4	200-2-0690	Shank Weld, Heavy Duty, 3/4 x 2-1/2	1
	200-2-1486	Shank Weldment (Model 2130) 3/4 x 2-1/2	1
	200-2-0697	Shank Weldment (Old) 5/8 x 2	1
5	200-3-1256	Weeder Knife, Left, Long	1
	200-3-1816	Weeder Knife, Left, Short	1
6	200-3-1255	Weeder Knife, Right, Long	1
	200-3-1817	Weeder Knife, Right, Short	1
7	200-3-1251	Weeder Knife Bracket, Right (501000)	1
8	200-3-1253	Weeder Knife Bracket, Left (501001)	1
9	900-01697	3/8 x 1-1/2 Carriage Bolt	2
10	200-3-1257	Dual Disc Bracket, Left (18 Deg.) Standard #501002	1
11	200-3-1259	Dual Disc Bracket, Right (18 Deg.) Standard #501003	1
	200-3-3155	Dual Disc Bracket (12 Deg.) Left & Right, Optional	1
12	905-10078	Disc, 12" STD	2
	905-10110	Disc, 14"	2
13	200-3-1261	Axle	1
14	200-3-1264	Spacer	1
15	901-01143	Bearing	2
16	900-39029	Snap Ring, 5/8 ID, 3/4 OD x 1/32	1
17	200-3-3279	Hub, Machined	1
18	900-01225	1/2 NC X 1-1/2 Hex Bolt	1
19	200-3-2767	Adjustment Rod (Shown)	1
20	900-16319	Adjustment Rod, 2130 Only 5/8 x 4 Sq. Head Set Screw	1
21	900-01055	5/16 NC x 3/4 Hex Bolt	1
22	900-01113	3/8 NC x 1-1/2 Hex Bolt (Model 2130)	1
	900-01115	3/8 NC x 1-3/4 Hex Bolt (Model 2060)	1
23	200-2-1695	Disc Tube Weldment, 22"-24"	1
	200-2-1696	Disc Tube Weldment, 26"-30"	1
	200-2-1697	Disc Tube Weldment, 36"-40"	1
24	200-3-2735	Spring	1
25	900-29132	3/16 x 1-1/4 Roll Pin	1
26	200-3-3184	Pin	1
	200-3-2736	Pin (Prior 1992)	1
27	200-3-1945	Shank, 1-1/4 (for Disc or Knife)	1
28	200-3-3278	Plastic Dust Cap	1
29	900-39048	Snap Ring	1
30	905-15013	Zerk, 3/16 Drive In	1
	200-2-0694	Axle & Bearing Assembly (Ref. 13,14,15,16)	1
	200-2-0695	Hub Assembly (Ref. 13-17)	1
	200-2-0696	12" Disc & Hub Assembly	1
	200-2-1636	14" Disc & Hub Assembly	1
	200-2-0926	12" Disc Assembly & Adapters, Right 18 Deg. (Ref. 11-18,21,24,25,)	1
	200-2-0925	12" Disc Assembly & Adapters, Left 18 Deg. (Ref. 10,12-18,21,24,25)	1
	200-2-1637	14" Disc Assembly & Adapters, 12 Deg. (Ref. 11-18,21,24,25)	1
	200-2-1698	Disc Mount Tube Assembly, 22"-24" (Ref 23-26)	1
	200-2-1699	Disc Mount Tube Assembly, 26"-30" (Ref 23-26)	1
	200-2-1700	Disc Mount Tube Assembly, 36"-40" (Ref 23-26)	1
	200-2-1775	Hub Assy. (Ref 17, 28, 29)	1

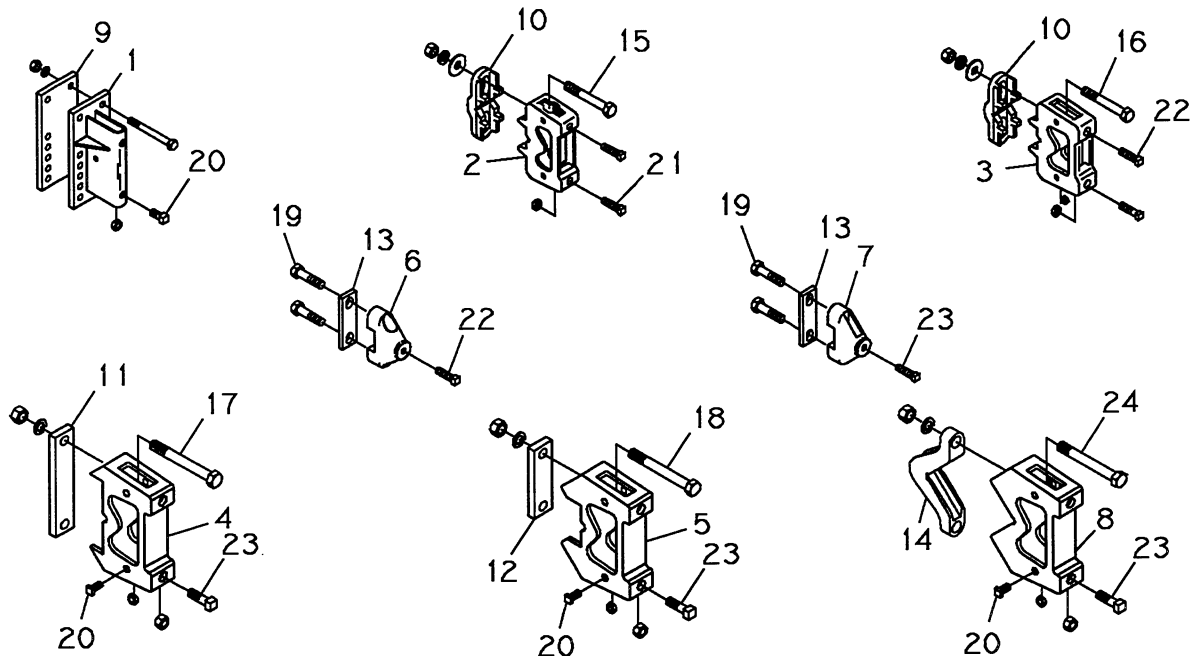
MODEL 3030 COMPONENTS



00156028

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1707	Upright Weldment	1
2	200-2-1848	Setback Weldment	1
3	200-3-3523	Trunion, Tine Adjustment	1
4	200-2-1849	Guide Block Weldment	1
5	200-3-3512	Tine, Heavy Duty - NH3	1
6	900-16237	5/16 x 5/16 Socket Set Screw	2
7	200-2-1850	Pivot Assembly	1
8	900-01371	5/8 NC x 6-1/2 Hex Bolt	1
9	900-29182	1/4 x 2 Roll Pin	1
10	200-3-3219	Screw, Gauge Arm	1
11	200-2-1704	Gauge Arm Weldment	1
12	200-3-3201	Trunion, Threaded	1
13	900-01792	5/8 NC x 3-1/2 Carriage Bolt	6
14	200-3-3200	Bushing, Pivot	2
15	900-16031	3/8 NC x 3/4 Square Head Set Screw	2
16	900-01223	1/2 NC x 1-1/4 Hex Bolt	4
17	200-2-1705	Wheel Holder	2
18	200-2-1770	Strut Weldment	1
19	200-3-3437	1/4" RND, 1", UHMW	1
20	200-3-3438	1/4" RND, 2-1/2", UHMW	1
21	200-3-3517	Anhydrous Knife	1
22	900-01109	3/8 NC x 1 Hex Bolt	4
23	900-01221	1/2 NC x 1 Hex Bolt	2
24	900-01227	1/2 NC x 1-3/4 hex Bolt	2
25	900-01229	1/2 NC x 2 Hex Bolt	4
26	200-2-1925	Strut Weldment, (20" Tree)	1
	200-2-1738	Linkage Assembly (all parts not shown on this page).	1

TOOL BAR CLAMPS

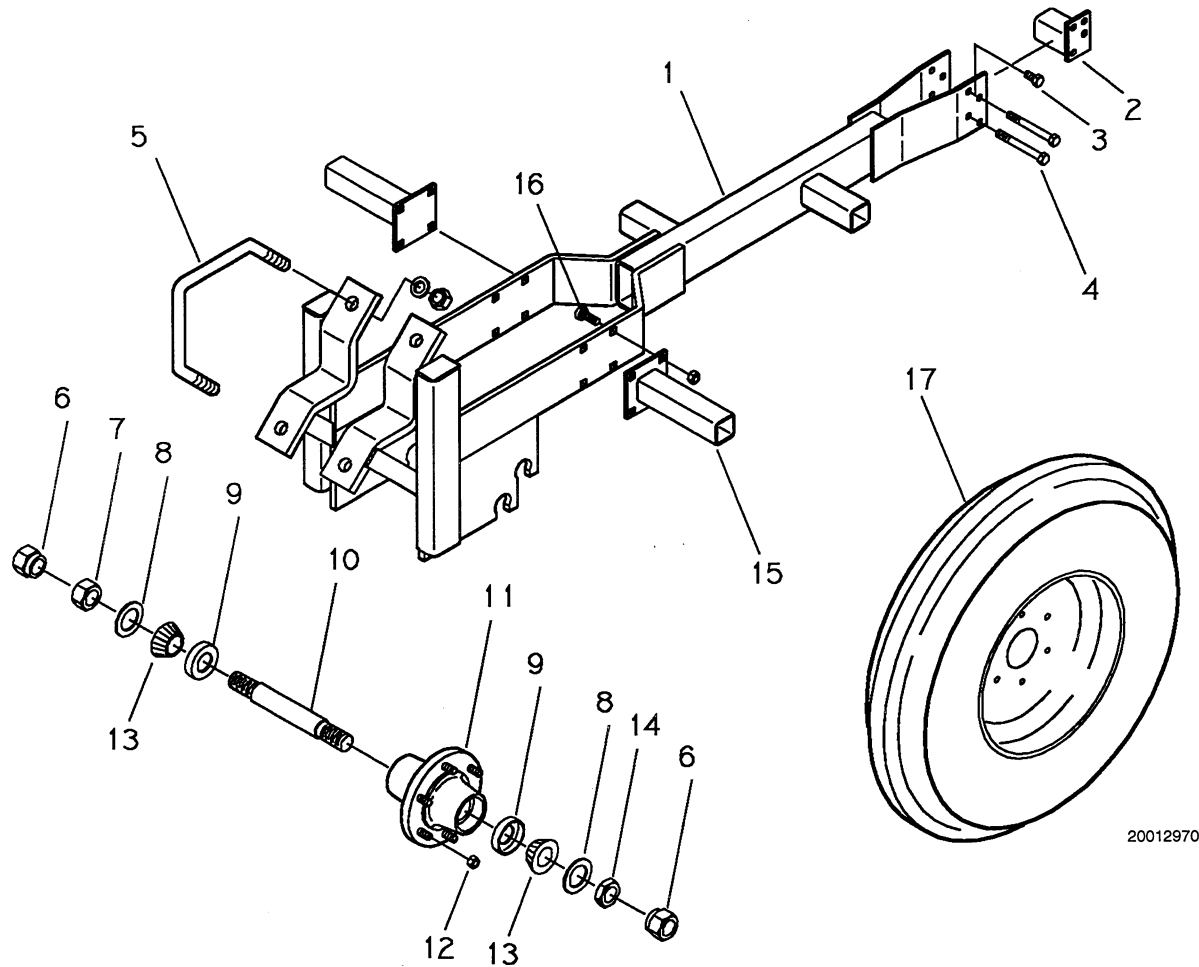


00156037

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0583*	Clamp Body	1
	200-2-0582	Clamp Assembly, 3"-7" Square or Rectangular	1
2	200-3-1015*	Clamp Body	1
	200-2-0581	Clamp Assembly, 2" Square or Rectangular, Diamond thru 2"	1
3	200-3-2242*	Clamp Body, Medium	1
	200-2-1414	Clamp Assembly, 2" Square or Rectangular, Diamond thru 2"	1
4	200-3-1022*	Clamp Body	1
	200-2-0586	Clamp Assembly	1
5	200-3-1025*	Clamp Body	1
	200-2-0587	Clamp Assembly	1
6	200-3-2776*	Clamp Body	1
	200-2-1455	Clamp Assembly	1
7	200-3-2689*	Clamp Body	1
	200-2-1457	Clamp Assembly	1
8	200-3-2241*	Clamp Body	1
	500-2-0143	Clamp Assembly	1
9	200-3-2357*	Back Plate	1
10	200-3-1759*	Clamp Back Bracket	1
11	200-3-1024*	Back Strap, 7"	1
12	200-3-1026*	Back Strap, 4"	1
13	200-3-2686*	Back Strap	1
14	500-3-0523*	Clamp Back, Diamond	1
15	900-01363	5/8 NC x 4-1/2 Hex Bolt	2
16	900-01421	3/4 NC x 4-1/2 Hex Bolt	2
17	900-01441	3/4 NC x 9-1/2 Hex Bolt	2
18	900-01429	3/4 NC x 6-1/2 Hex Bolt	2
19	900-01349	5/8 NC x 2-1/2 Hex Bolt	2
20	900-16063	1/2 NC x 1-1/4 Sq. Head Set Screw	2
21	900-16065	1/2 NC x 1-3/4 Sq. Head Set Screw	2
22	900-16093	5/8 NC x 1-1/2 Sq. Head Set Screw	2
23	900-16095	5/8 NC x 2 Sq. Head Set Screw	2
24	900-01425	3/4 NC x 5-1/2 Hex Bolt	2

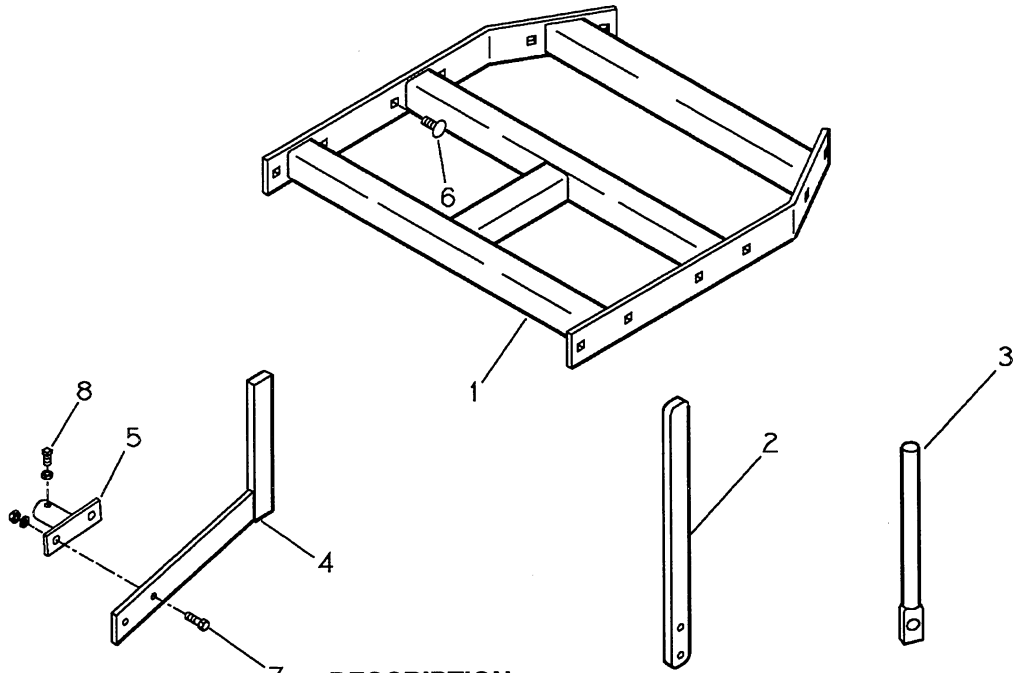
* Parts Available in assemblies only

KING GUIDE STRUT ASSEMBLY



REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1392	Strut Weldment	1
2	200-2-1639	Rear Tube Weldment	1
3	900-01221	1/2 NC x 1 Hex Bolt	1
4	900-01247	1/2 NC x 4-1/2 Hex Bolt	2
5	200-3-1443	A-Bolt, 7/8 NC x 7 x 7	2
6	200-3-1847	1-1/4 NF Shoulder Nut	2
7	200-3-2726	1-1/4 NF Nut, Short	2
8	901-09127	Seal	2
9	901-01148	Bearing Cup	2
10	200-3-1240	Spindle	1
11	905-09082	Hub with Cups	1
12	905-09011	Wheel Nuts, 1/2 NF	6
13	901-01149	Bearing Cone	2
14	900-06024	1-1/4 NF Hex Nut	1
15	200-2-1435	Tube Weldment	1
16	900-01751	1/2 NC x 1-1/2 Carriage Bolt	8
17	200-2-0988	Rim and Tire Assembly (Ref. 14,15)	1
	905-09014	Rim, 16 x 6 LB, 6 Bolt	1
	905-09019	Tire, 5.50 x 16 Single Rib	1
	200-2-0928	Hub and Spindle Assembly (Ref. 6-13)	1

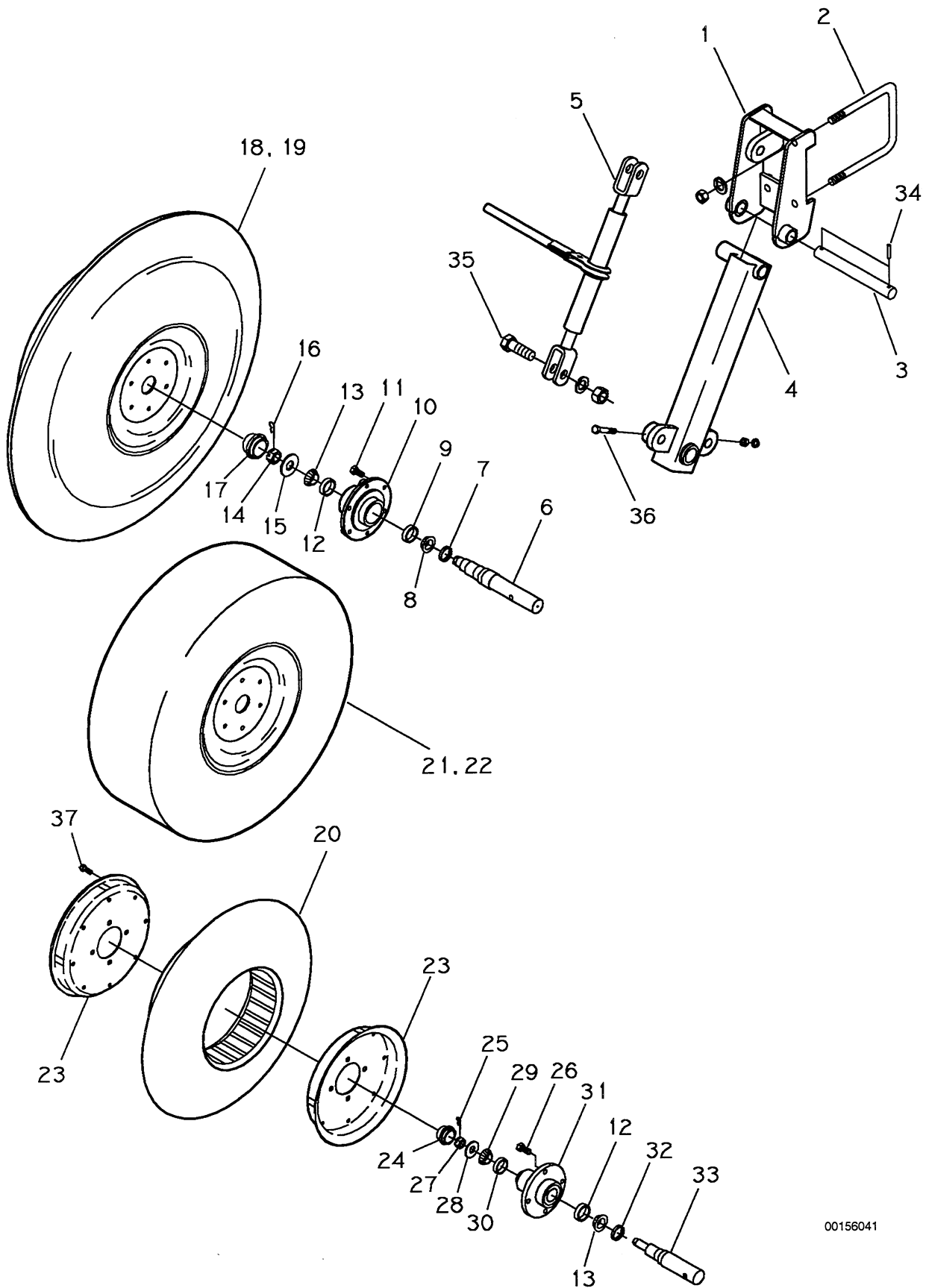
VEGETABLE GANG COMPONENTS



REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1420	Tree Weldment	1
2	200-3-2651	Knife Shank, 5/8 x 1-1/2	2
3	200-3-2654	Disc Shank, 1" Round	2
4	200-2-1653	Gauge Arm Weldment, Rectangular	2
	200-2-1421	Gauge Arm Weldment, 1" Round	2
5	200-2-1422	Gauge Wheel Holder	2
6	900-01750	1/2 NC x 1-1/4 Carriage Bolt	2
7	900-01111	3/8 NC x 1-1/4 Hex Bolt	4
8	900-16031	3/8 NC x 3/4 Square Head Set Screw	2

NOTES

ADJUSTABLE GUIDE WHEELS

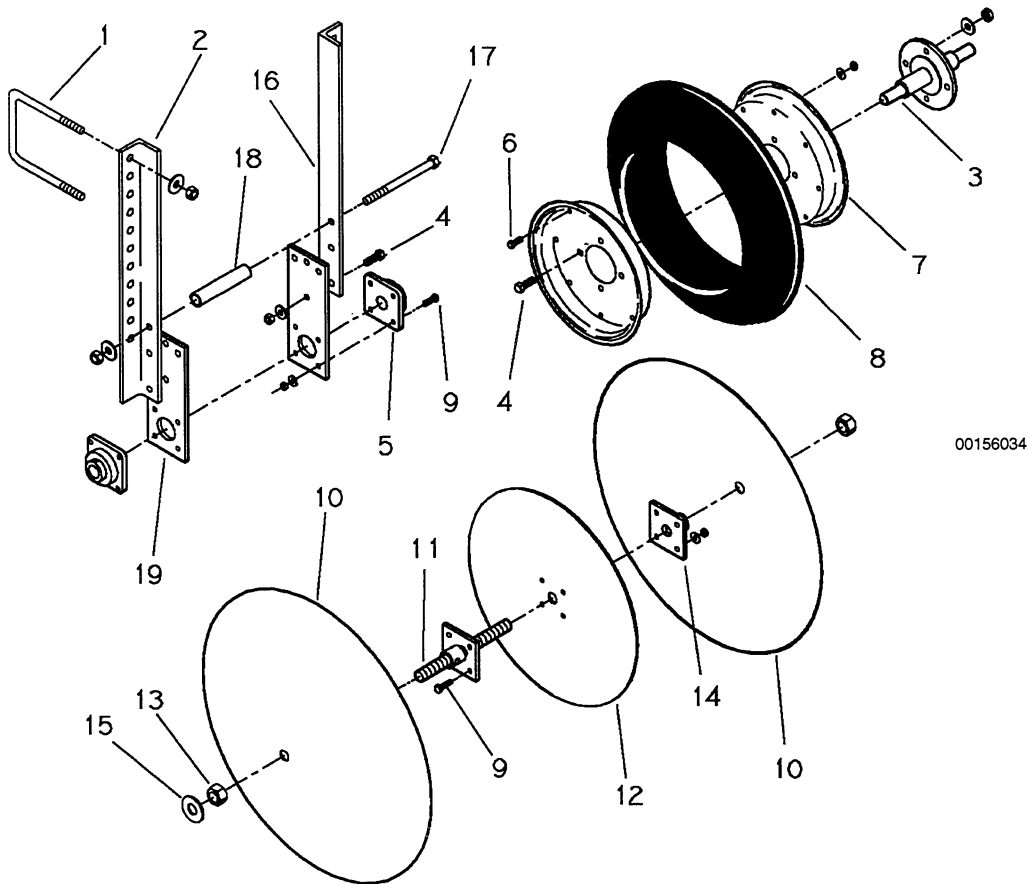


00156041

ADJUSTABLE GUIDE WHEELS

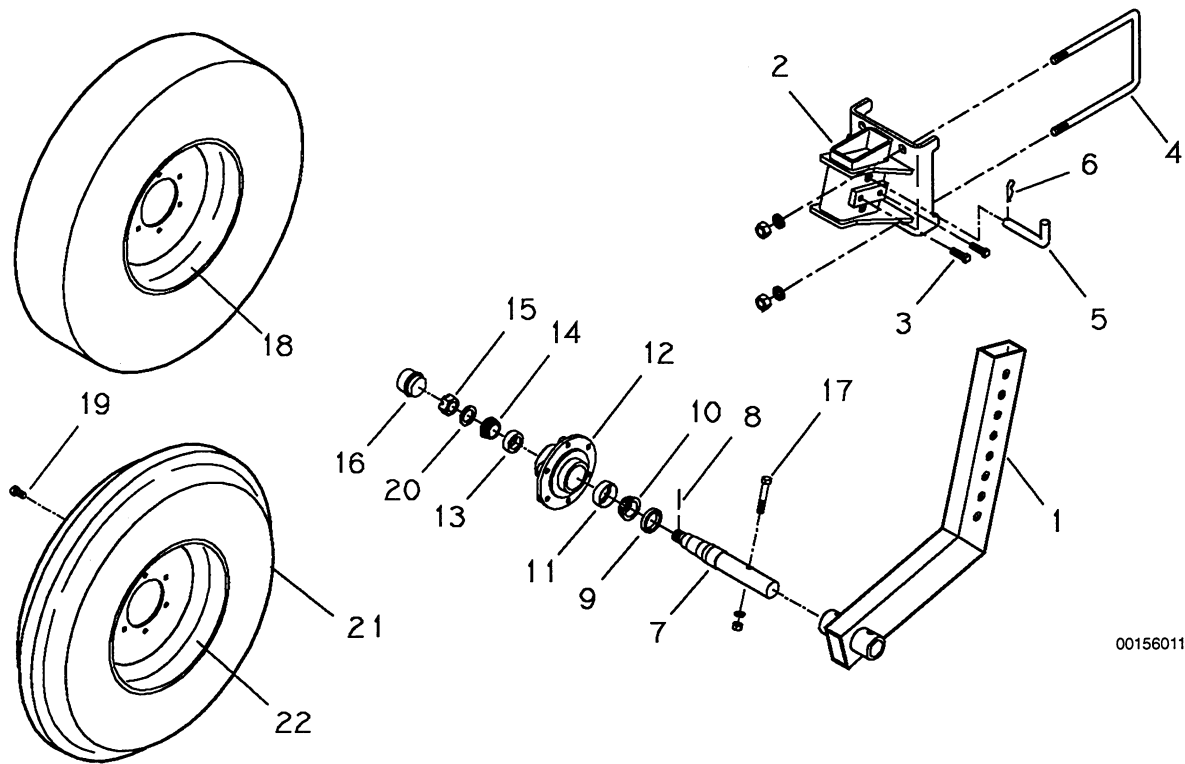
REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0535	Mounting Bracket, 7 x 7	1
2	200-3-0345	3/4 U-Bolt, 7" Inside, 9.125 Long	2
3	200-3-0896	Pin, 1-1/4 x 10-7/8"	1
4	200-2-0534	Adjustable Strut	1
5	905-23009	Screw Jack	1
6	200-3-1784	Spindle	1
7	901-09002	Seal for 1.750 Spindle Seal Area	1
	901-09209	Seal for 1.700 Spindle Seal Area	1
8	901-01025	Bearing Cone, Inner	1
9	901-01024	Bearing Cup, Inner	1
10	905-09004	6 Bolt Hub	1
11	905-09010	Wheel Bolt, 1/2 NF x 1-1/16	6
12	901-01016	Bearing Cup, Outer	1
13	901-01015	Bearing Cone, Outer	1
14	900-06062	1" NF Slotted Hex Nut	1
15	905-09068	1" Washer	1
16	900-23045	Cotter Pin, 3/16 x 2	1
17	905-09009	Dust Cap	1
18	905-09019	Tire, 5.50 x 16 Single Rib Imp.	1
19	905-09014	Rim, 16 x 6 LB, 6 Bolt	1
20	905-09054	V-Tire, 4.50 x 20	1
21	905-09077	Rim, 15" x 6" x 6 Hole	1
22	905-09070	Tire, 9.5L x 15"-8 Ply	1
23	200-3-0891	Half Rim, 4 x 20	2
24	905-09008	Dust Cap	1
25	900-23043	Cotter Pin, 3/16 x 1-1/2	1
26	900-01222	Hex Bolt, 1/2 NF x 1	4
27	900-06058	3/4" NF Slotted Hex Nut	1
28	905-09066	Washer, 3/4"	1
29	901-01026	Bearing Cone, Outer	1
30	901-01027	Bearing Cup, Outer	1
31	905-09002	Hub, 4 Bolt	1
32	901-09001	Seal for 1.500 Spindle Seal Area	1
	901-09208	Seal for 1.460 Spindle Seal Area	1
33	200-3-0892	Spindle	1
34	900-29204	Roll Pin, 5/16 x 1-5/8	2
35	900-01519	1" NC x 3 Hex Bolt	2
36	900-01237	1/2" NC x 3 Hex Bolt	1
37	900-01109	3/8 NC x 1 Hex Bolt	8
	200-2-0931	6 Bolt Hub Assembly (Ref. 7-13 and 17)	1
	200-2-0531	6 Bolt Hub & Spindle Assembly (Ref. 6-17)	1
	200-2-0930	4 Bolt Hub Assembly (Ref. 12,13,24,29-32)	1
	200-2-0530	4 Bolt Hub & Spindle Assembly (Ref. 12,13,24,29-33)	1
	200-2-0988	Wheel Assembly (Ref. 18, 19)	1
	200-2-0536	Wheel Assembly (Ref. 20, 23)	1

SEMI-PNEUMATIC GUIDE WHEEL & STEEL GUIDE WHEEL



REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-0344	5/8 U-bolt, 7" Inside, 8-1/2" Long	2
2	200-3-2760	Angle, Right	1
3	200-2-1315	Hub	1
4	900-01225	1/2 NC x 1-1/2 Hex Bolt	8
5	901-01004	1" 4-Bolt Bearing, 2-3/4 Bolt Spacing	2
6	900-01109	3/8 NC x 1 Hex Bolt	8
7	200-3-0891	Half Rim, 4 x 20	2
8	905-09054	V-Tire, 4.5 x 20	1
9	900-01113	3/8 NC x 1-1/2 Hex Bolt	8
10	200-3-0313	Disc	2
11	200-2-1497	Axle Weldment	1
12	200-3-0314	Center Blade	1
13	900-06020	1" NF Hex Nut	4
14	200-2-1496	Hub weldment	1
15	900-11073	1" Narrow Rim Machine Bushing	4
16	200-3-2759	Angle, Left	1
17	900-01377	5/8 NC x 8 Hex Bolt	1
18	200-3-2758	Spacer Tube	1
19	200-3-2815	Bearing Plate, 2-3/4 Bolt Spacing	2
	200-2-0536	Wheel & Tire Assembly (Ref. 6,7 and 8)	1
	200-2-1501	Steel Wheel Assembly (Ref. 9-15)	1

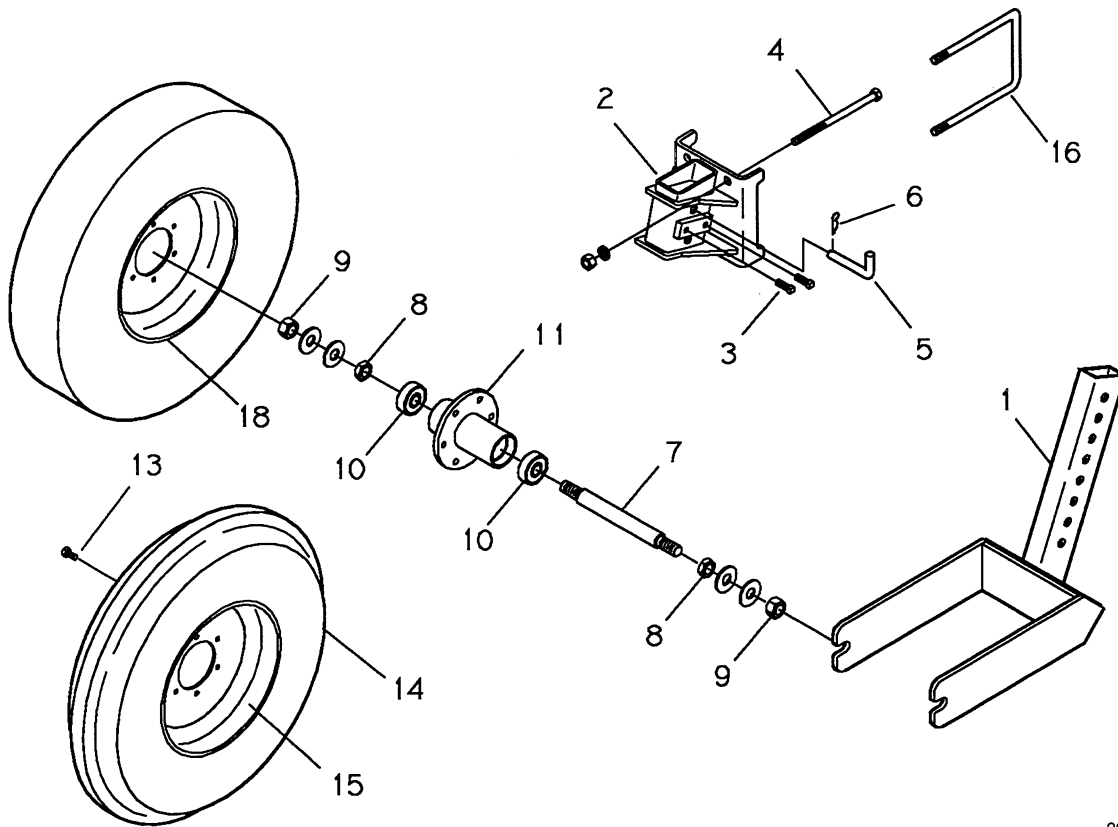
CURVED ARM SUPPORT WHEEL



00156011

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1407	Curved Arm	1
2	200-2-0434	Mounting Bracket, 8" Wide	1
3	900-16064	1/2 NC x 1-1/2 Sq. Head Set Screw	2
4	200-3-0609	3/4 U-Bolt, 7 x 7	2
5	200-3-0606	Pin	1
6	900-25005	5/32 Hair Pin Clip	1
7	200-3-1784	Spindle	1
8	900-23045	3/16 x 2 Cotter Pin	1
9	901-09002	Seal for 1.750 Spindle Seal Area	1
	901-09209	Seal for 1.700 Spindle Seal Area	1
10	901-01025	Bearing Cone	1
11	901-01024	Bearing Cup	1
12	905-09004	6 Bolt Hub (with Cups)	1
13	901-01016	Bearing Cup	1
14	901-01015	Bearing Cone	1
15	900-06062	1" NF Slotted Hex Nut	1
16	905-09009	Dust Cap	1
17	900-01237	1/2 NC x 3 Hex Bolt	1
18	905-09077	Rim, 15" x 6 x 6 Hole	1
19	905-09010	Wheel Bolt, 1/2 NF x 1-1/16	6
20	905-09068	Washer	1
21	905-09019	Tire, 5.50 x 16 Single Rib	1
22	905-09014	Rim, 16 x 6 LB, 6 Bolt	1
	200-2-0531	Hub & Spindle Assembly (Ref. 7-16 and 20)	1
	200-2-0931	Hub Assembly (Ref. 9,10,11,12,13,14, and 15)	1
	200-2-0988	Tire & Rim Assembly (Ref. 21 & 22)	1

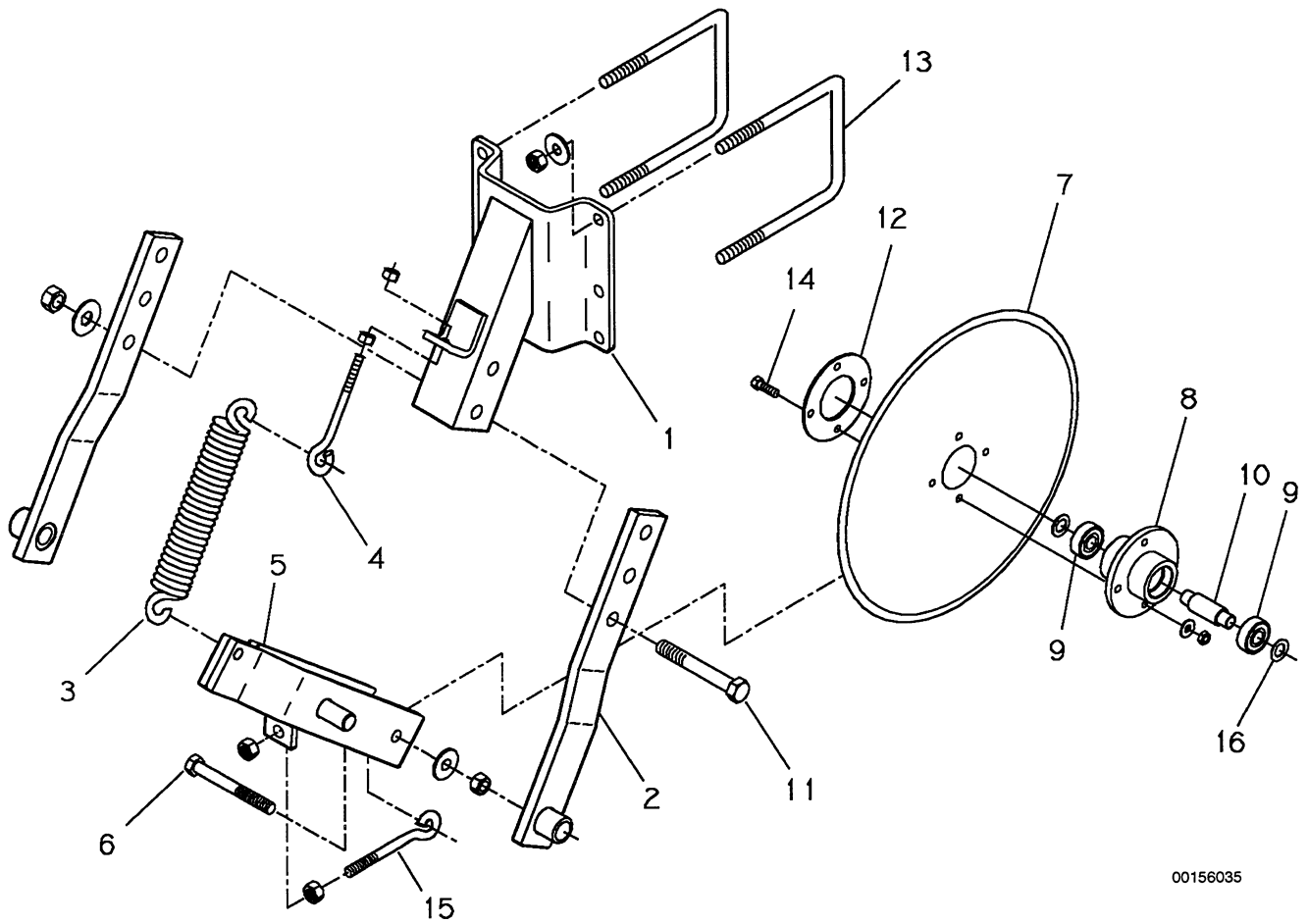
YOKE ARM SUPPORT WHEEL



20013479

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1801	Arm, Yoke	1
2	200-2-0434	Mounting Bracket, 8" Wide	1
3	900-16064	1/2 NC x 1-1/2 Sq. Head Set Screw	2
4	900-01385	5/8 NC x 10 Hex Bolt	4
5	200-3-0606	Pin	1
6	900-25005	5/32 Hair Pin Clip	1
7	200-3-0604	Spindle	1
8	900-06287	1" NC Jam Nut	2
9	900-06020	1" NC Hex Nut	2
10	901-01116	Bearing	1
11	200-2-1803	Yoke Hub	1
12	905-09077	Rim, 15" x 6 x 6 Hole	1
13	905-09010	Wheel Bolt, 1/2 NF x 1-1/16	6
14	905-09019	Tire, 5.50 x 16 Single Rib	1
15	905-09014	Rim, 16 x 6 LB, 6 Bolt	1
16	200-3-0609	3/4 U-Bolt, 7 x 7	2
	200-2-1804	Yoke Hub Assembly (Ref 7,10,11 and 13)	1

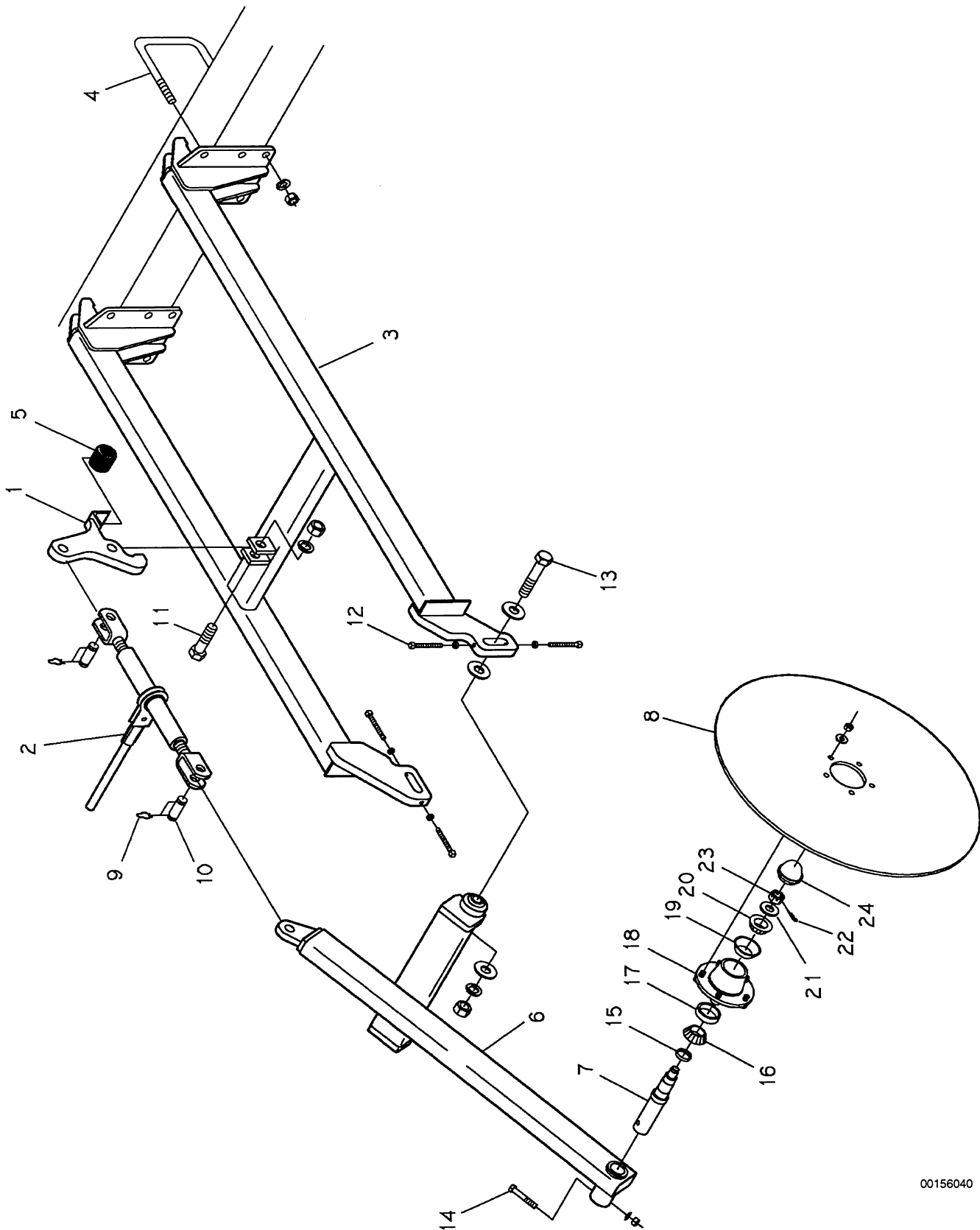
STABILIZER COULTER



00156035

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0424	Frame Weldment	1
2	200-2-0425	Side Arms	2
3	200-3-3010	Spring, Painted	1
4	100-3-0148	1/2 Eye Bolt	1
5	200-2-0426	Clevis Weldment	1
6	900-01367	5/8 NC x 5-1/2 Hex Bolt	1
7	905-10079	Disc Blade	1
8	200-2-1772	Hub	1
9	901-01278	Bearing	2
10	200-3-3351	Spacer Bushing	1
11	900-01425	3/4 NC x 5-1/2 Hex Bolt	2
12	200-3-0685	Back Plate	1
13	200-3-0344	5/8 U-Bolt, 7" Inside, 8.5" Long	2
14	900-01111	3/8 NC x 1-1/4 Hex Bolt	4
15	200-3-1285	5/8 NC Eye Bolt	1
16	900-11060	3/4 x 14 Ga. Nar. Rim Mach. Bushing	2
	200-2-1773	Hub Assembly (Ref. 8-10)	1

REAR STABILIZER COULTER

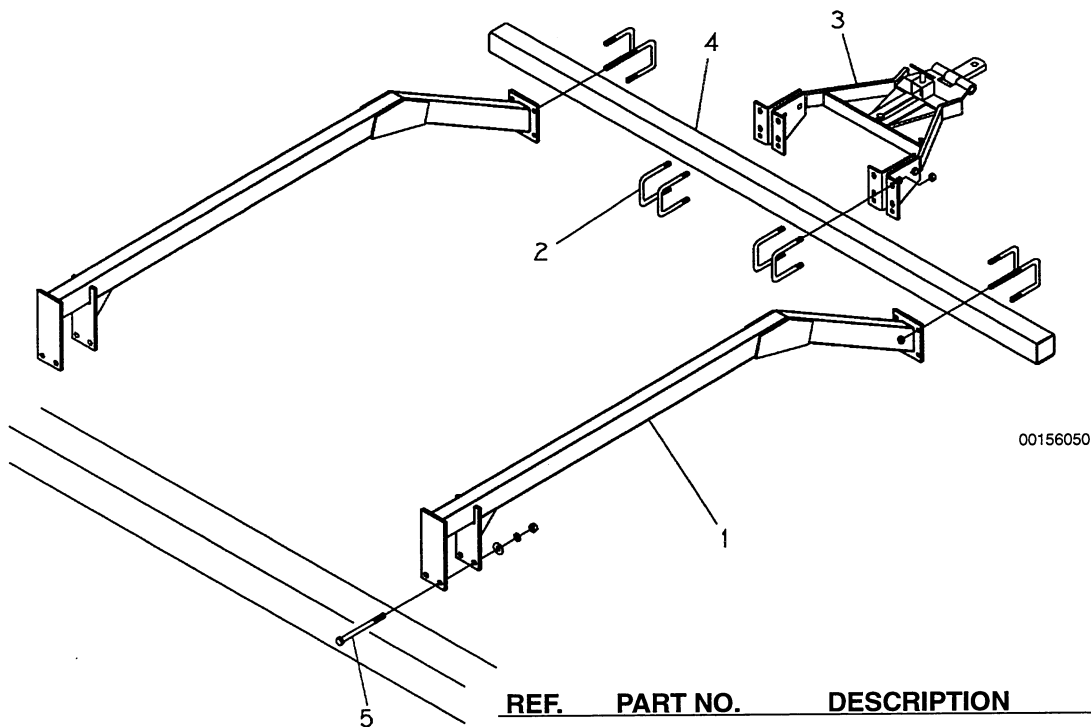


00156040

REAR STABILIZER COULTER

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0709	Arm Weldment	1
2	200-2-0705	Ratchet Jack	1
3	200-2-0706	Mounting Frame	1
4	200-3-0345	3/4 U-Bolt, 7" Inside, 9.125 Long	4
5	200-3-1313	Rubber Bushing	1
6	200-2-0708	Strut	1
	903-05035	1" Uni-ball (Welded in Strut)	1
7	200-3-1314	Spindle	1
8	200-2-0707	Disc Coulter	1
9	900-25018	3/4 Ext. Hair Pin Clip	4
10	900-42048	1 x 2-3/4 Clevis Pin	2
11	900-02914	1 NC x 3-1/2 Hex Bolt	1
12	900-16042	3/8 x 3-1/2 Sq. Head Set Screw	4
13	900-01531	1 NC x 5 Hex Bolt	2
14	900-01237	1/2 NC x 3 Hex Bolt	1
15	901-09002	Seal for 1.750 Spindle Seal Area	1
	901-09209	Seal for 1.700 Spindle Seal Area	1
16	901-01023	Bearing Cone	1
17	901-01022	Bearing Cup, Inner	1
18	905-09003	5 Bolt Hub, with Cups	1
19	901-01016	Bearing Cup, Outer	1
20	901-01015	Bearing Cone	1
21	905-09067	Washer, 7/8 x 2	1
22	900-23043	Cotter Pin, 3/16 x 1-1/2	1
23	900-06060	7/8 NF Slotted Hex Nut	1
24	905-09009	Dust Cap	1
	200-2-0710	Hub & Spindle (Ref. 7,15-24)	1
	100-2-1051	Hub Assembly (Ref. 15,16,17,18,19,20,24)	1

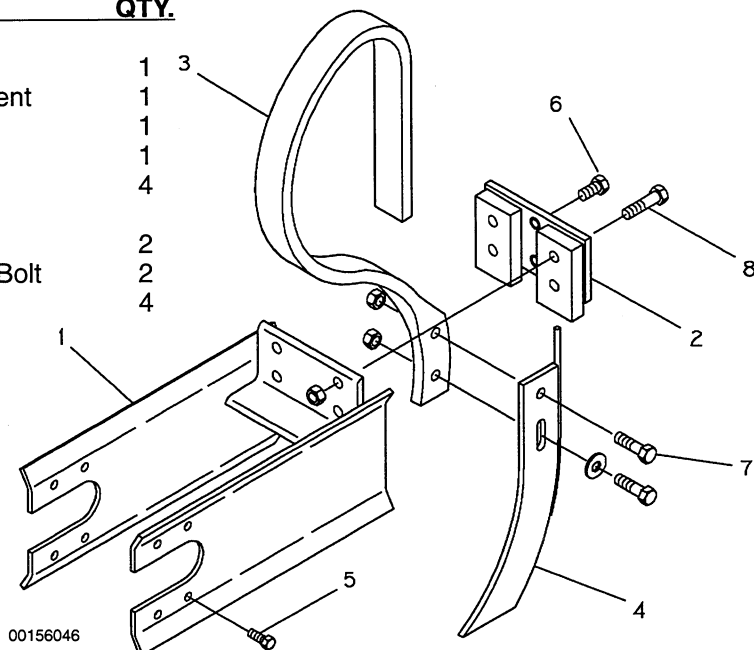
ANHYDROUS HITCH



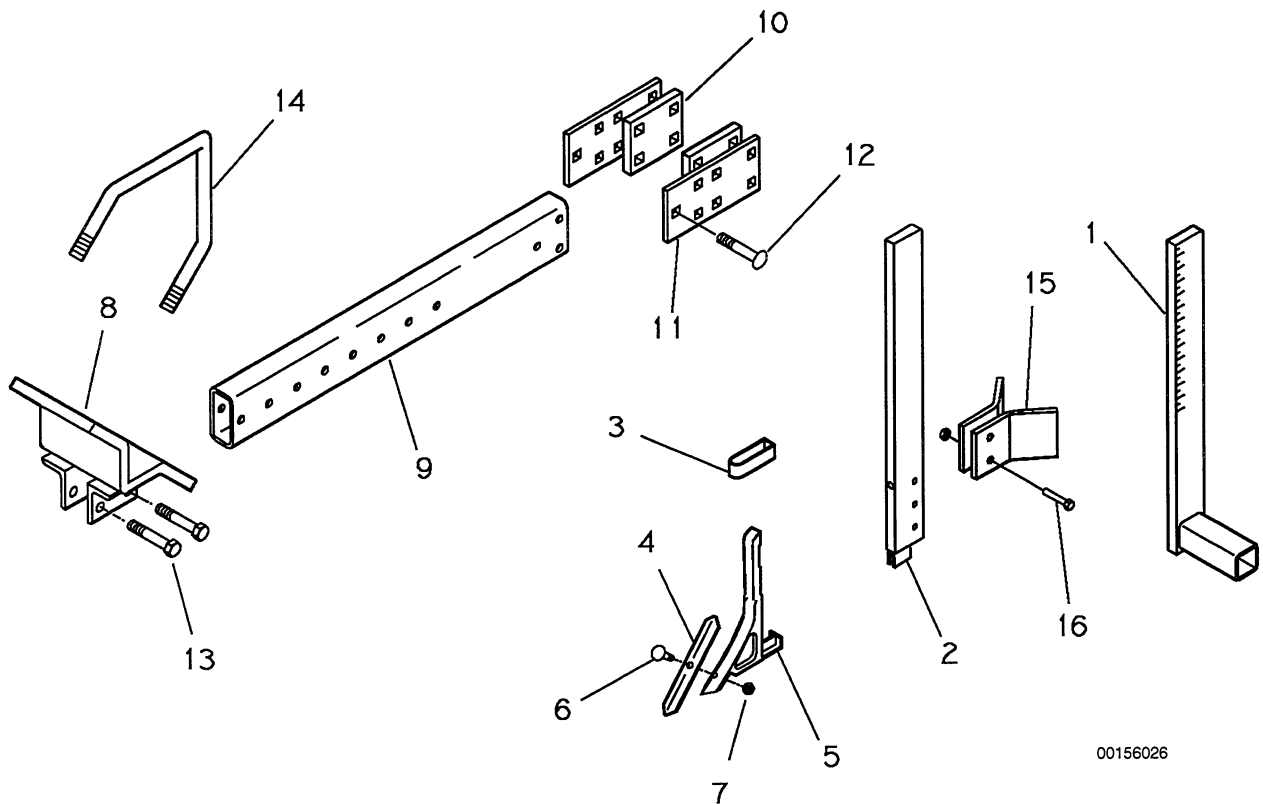
REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1863	Mount Weldment	2
2	200-3-1438	U-Bolt, 5/8 NC x 4 x 5-1/2 Long	8
3	200-2-1181	Hitch Asm.	1
4	200-3-3554	Cross Tube	1
5	900-01441	3/4 NC x 9-1/2 Hex Bolt	4

ANHYDROUS ATTACHMENT

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1848	Setback Weldment,	1
2	200-2-1849	Guide Block Weldment	1
3	200-3-3512	Heavy Duty Tine	1
4	200-3-3517	Anhydrous knife	1
5	900-01109	3/8 NC x 1 Hex Bolt	4
6	900-01221	1/2 NC x 1 Hex Bolt	2
7	900-01227	1/2 NC x 1-3/4 Hex Bolt	2
8	900-01229	1/2 NC x 2 Hex Bolt	4



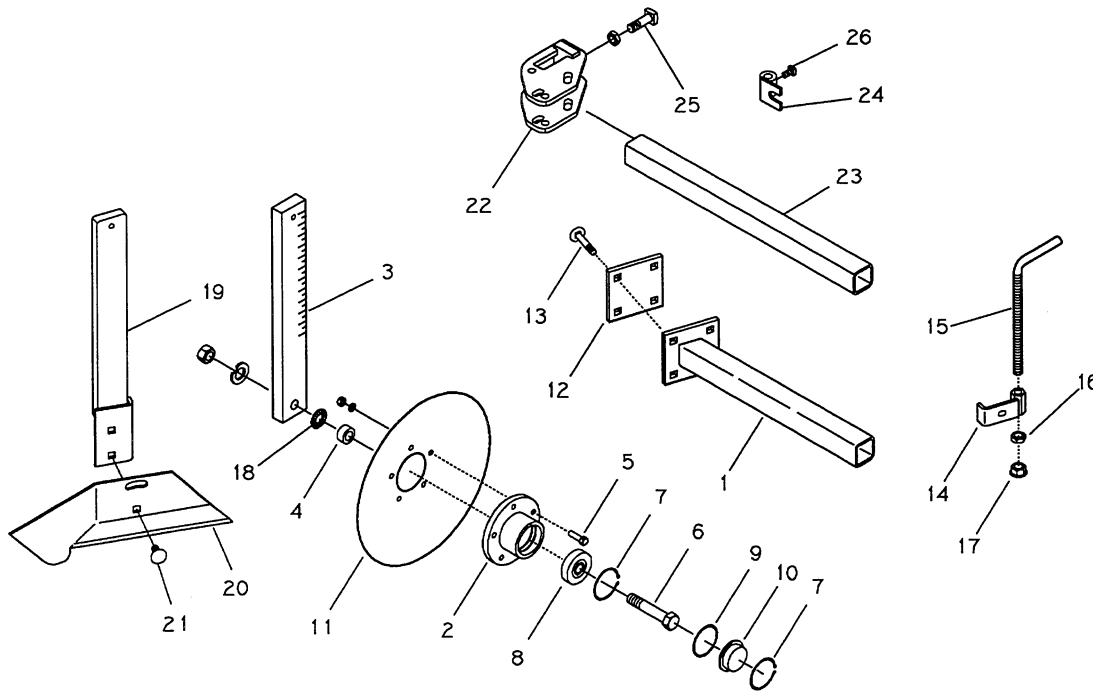
ROW GUIDE MARKERS



00156026

REF.	PART NO.	DESCRIPTION	QTY.
1	205-2-0003	Shank, Spring Tine Marker	1
2	200-2-0608	Shank, Row Guide, 3/4 x 2-1/2 x 24 Long	1
	200-2-1061	Shank, Row Guide, 3/4 x 2-1/2 x 32 Long	1
3	200-2-0607	Attaching Bracket	1
4	905-10088	Spike Point	1
5	200-3-1826	Row Guide Point, Replaceable Point	1
6	900-01841	3/8 NC x 1-1/2 Plow Bolt	1
7	900-06005	3/8 NC Hex Nut	1
8	200-2-1690	Mount Weldment, Setback	1
9	200-3-3128	Tube	1
10	200-3-3127	Spacer, Plate	2
11	200-3-3126	Plate, Shank Mount	2
12	900-01792	5/8 NC x 3-1/2 Carriage Bolt	7
13	900-01357	5/8 NC x 3-1/2 Hex Bolt	2
14	200-3-1443	A-Bolt, 7/8 NC x 7 x 7	2
15	200-3-3294	Cleanout Wing	2
16	900-01117	3/8 NC x 2 Hex Bolt	2
	200-2-0987	Row Guide Chisel and Point (Ref. 4-7)	1
	200-2-0902	24" Row Guide Assembly (Ref. 2-7)	1
	200-2-0903	32" Row Guide Assembly (Ref. 2-7)	1

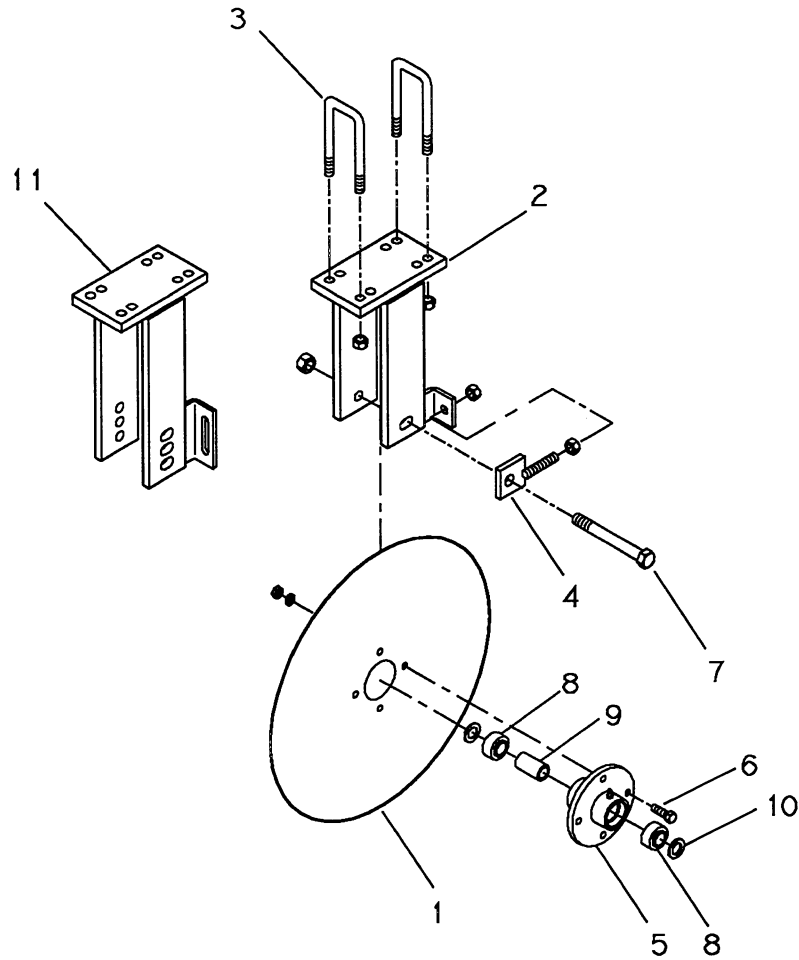
ROW WEEDER DISCS



00156020

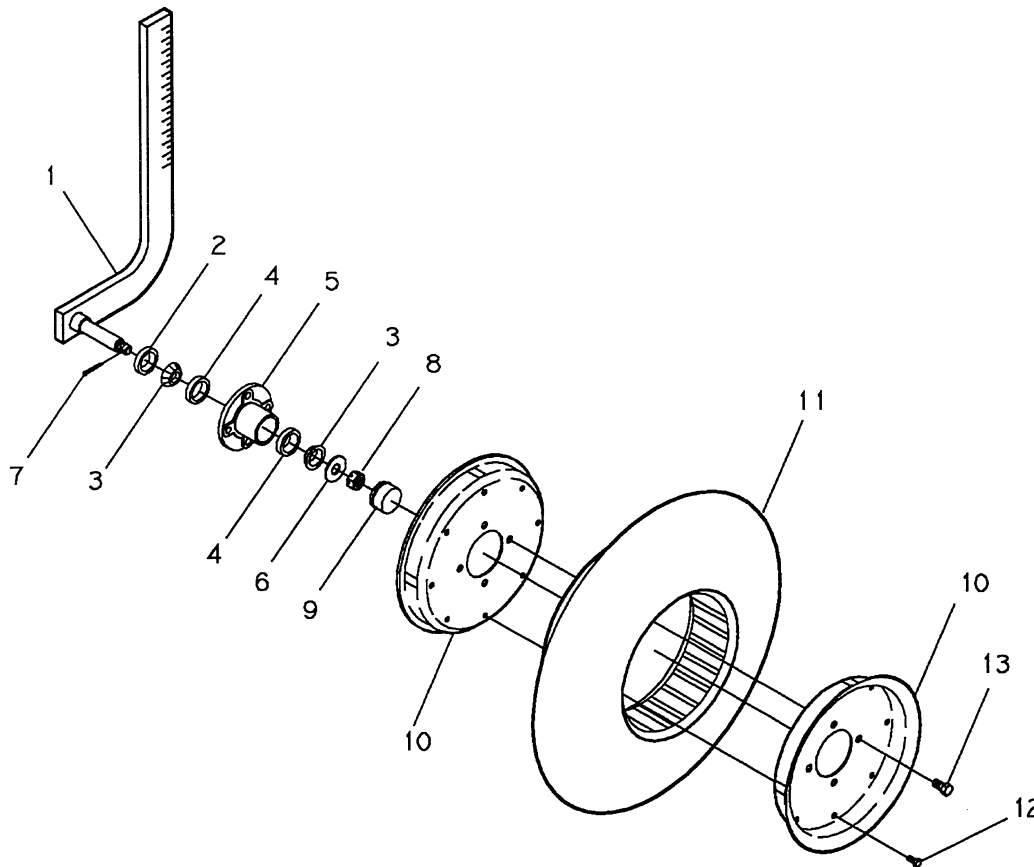
REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1465	Tube Weldment, 30" Rows, 16-1/2 long	2
	200-2-1464	Tube Weldment, 36"-40" Rows, 20-1/2 long	2
2	200-2-1466	Hub	2
3	200-3-2704	Shank	2
4	200-3-2705	Spacer	2
5	900-01111	3/8 NC x 1-1/4 Hex Bolt	10
6	900-01411	3/4 NC x 3 Hex Bolt	2
7	900-39046	Snap Ring	2
8	901-01254	Bearing	2
9	901-09206	O-Ring	2
10	905-09118	Dust Cap	2
11	905-10080	Disc	2
12	200-3-2152	Cap, Tube	2
13	900-01755	1/2 NC x 2-1/2 Carriage Bolt	8
14	200-2-1418	Adjustment Nut	2
15	200-3-2767	Crank	2
16	900-06280	5/8 NC Jam Nut	2
17	900-06145	5/8 NC Whiz Nut	2
18	900-11190	3/4 Internal Star Washer	1
19	200-2-1788	Clean Sweep Shank (LH) Shown	1
	200-2-1787	Clean Sweep Shank (RH)	1
20	905-10118	Shannon Clean Sweep (LH) Shown	1
	905-10119	Shannon Clean Sweep (RH)	1
21	900-01749	1/2 NC x 1 Carriage Bolt	2
22	200-2-1876	Clamp Weldment	1
23	200-3-3576	Tube	1
24	200-2-1877	Bracket Weldment	1
25	900-16095	5/8 NC x 2 Sq. Hd. Set Screw	1
26	900-16031	5/8 NC x 3/4 Sq. Hd Set Screw	1
	200-2-1813	Disk and Hub Assy.	1
	200-2-1468	Shank, Disk, and Hub Assy.	1

COULTER DISC COMPONENTS



REF.	PART NO.	DESCRIPTION	QTY.
1	905-10079	Disc	1
2	200-2-1368	Disc Mount	1
3	200-3-1447	U-Bolt, 1/2 NC x 2 x 4	2
4	200-2-0699	Adjustable Tab	1
5	200-2-1772	Hub, Machined	1
	200-2-1773	Hub Assembly (Ref. 5, 8, 9, 10)	1
6	900-01111	3/8 NC x 1-1/4 Hex Bolt	4
7	900-01367	5/8 NC x 5-1/2 Hex Bolt	1
8	901-01278	Bearing	2
9	200-3-3351	Spacer	1
10	900-11060	3/4 X 14 Ga. Narrow Rim Mach. Bushing	2
11	200-2-1843	Disc Mount Weld (Adjustable)	1

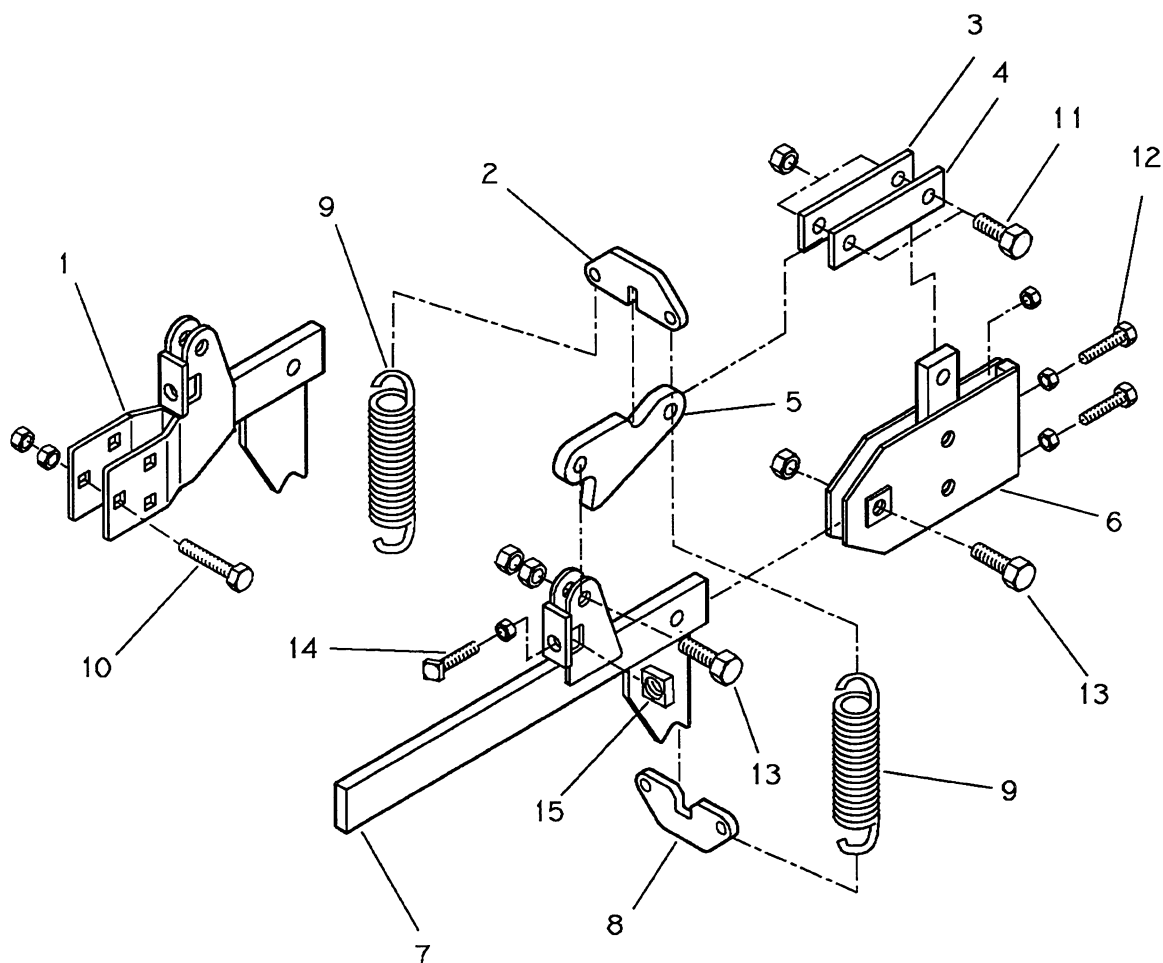
GUIDE WHEEL, J-SHANK



00208054

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1010	Strut (Left) 3/4 x 2-1/2	1
	200-2-0894	Strut & Hub Assembly (Left)	1
	200-2-1009	Strut (Right) 3/4 x 2-1/2 (Shown)	1
	200-2-0893	Strut & Hub Assembly (Right)	1
	200-2-1092	Strut, Hub & Wheel Assembly (Right)	1
2	901-09063	Seal for 1.250 Spindle Seal Area	1
	901-09207	Seal for 1.210 Spindle Seal Area	1
3	901-01018	Bearing Cone	2
4	901-01017	Bearing Cup	2
5	905-09084	Hub	1
	200-2-0932	Hub Assembly (Ref. 2-5, 9)	1
6	905-09066	Washer, 3/4 ID x 1-3/4 OD	1
7	900-23043	Cotter Pin, 3/16 x 1-1/2	1
8	900-06058	Nut, 3/4 NF Slotted	1
9	905-09033	Dust Cap	1
10	200-3-1821	Rim Half	2
11	905-09089	V-Tire, 4 x 16	1
	200-2-1002	V-Tire Assembly	1
12	900-01055	5/16 NC x 3/4 Hex Bolt	4
13	900-01222	1/2 NF x 1 Hex Bolt	4

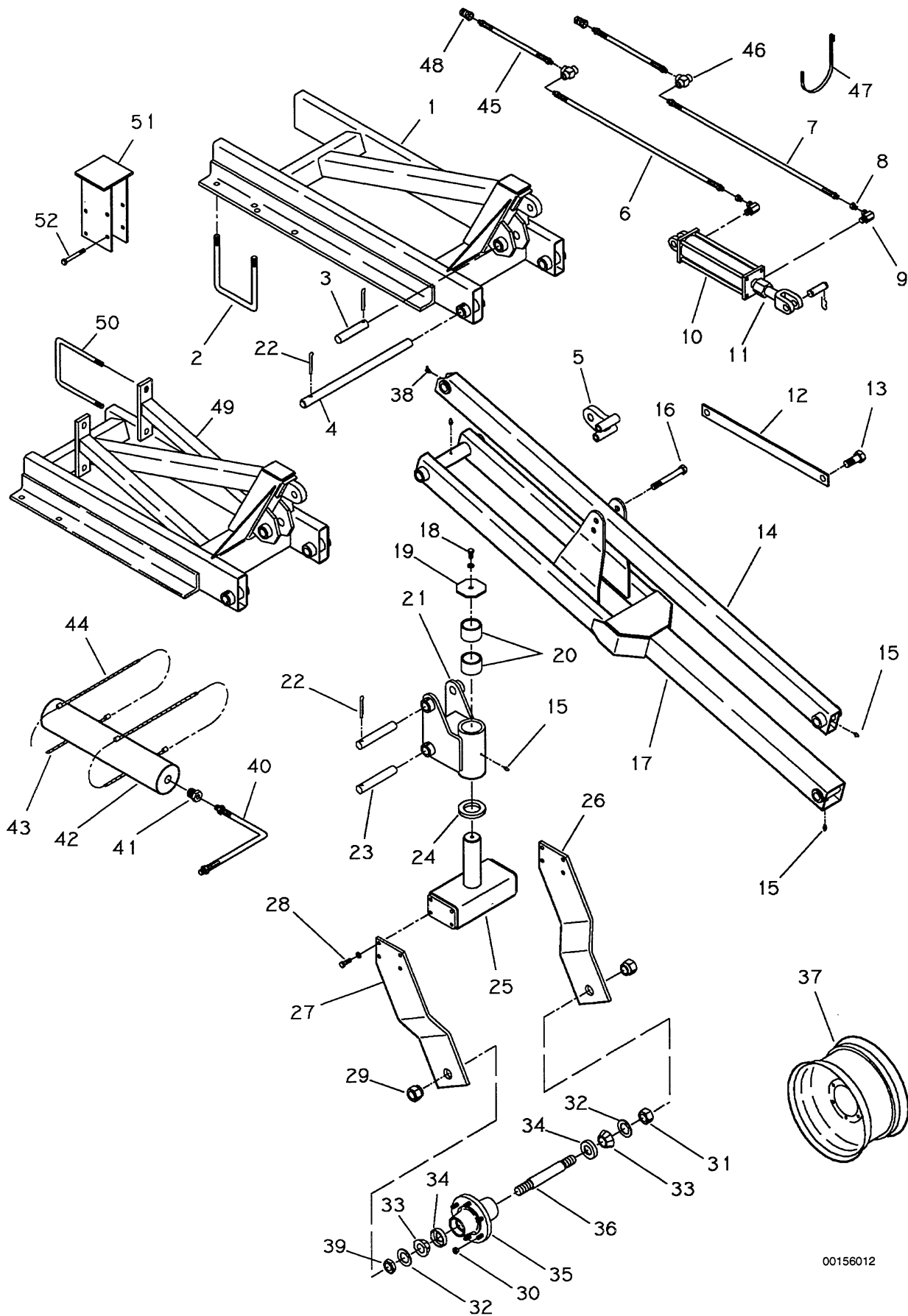
TOGGLE TRIP



00156031

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-0592	Toggle Trip, Tree Shank	1
2	200-3-1038	Plate, Spring Attachment	1
3	200-3-1034	Bar, Toggle Trip, No Threads	1
4	200-3-1033	Bar, Toggle Trip	1
5	200-3-1040	Ear	1
6	200-2-0591	Toggle Trip Pivot, 3/4" Shank	1
7	200-2-0593	Shank Weldment, Toggle Trip	1
8	200-3-1036	Plate, Spring Attachment	1
9	200-3-1745	Spring (Painted)	2
10	900-01792	Carriage Bolt, 5/8 x 3-1/2	3
11	900-01403	3/4 NC x 2 Hex Bolt	2
12	900-16068	1/2 NC x 2-1/2 Sq. Head Set Screw	2
13	900-01407	3/4 NC x 2-1/2 Hex Bolt	2
14	900-16118	3/4 NC x 3-1/2 Sq. Head Set Screw	1
15	900-06619	3/4 NC Square Nut	1
	200-2-0590	Toggle Trip Assembly (Shank Mount)	1
	200-2-0589	Toggle Trip Assembly (Tree Mount)	1

LIFT ASSIST

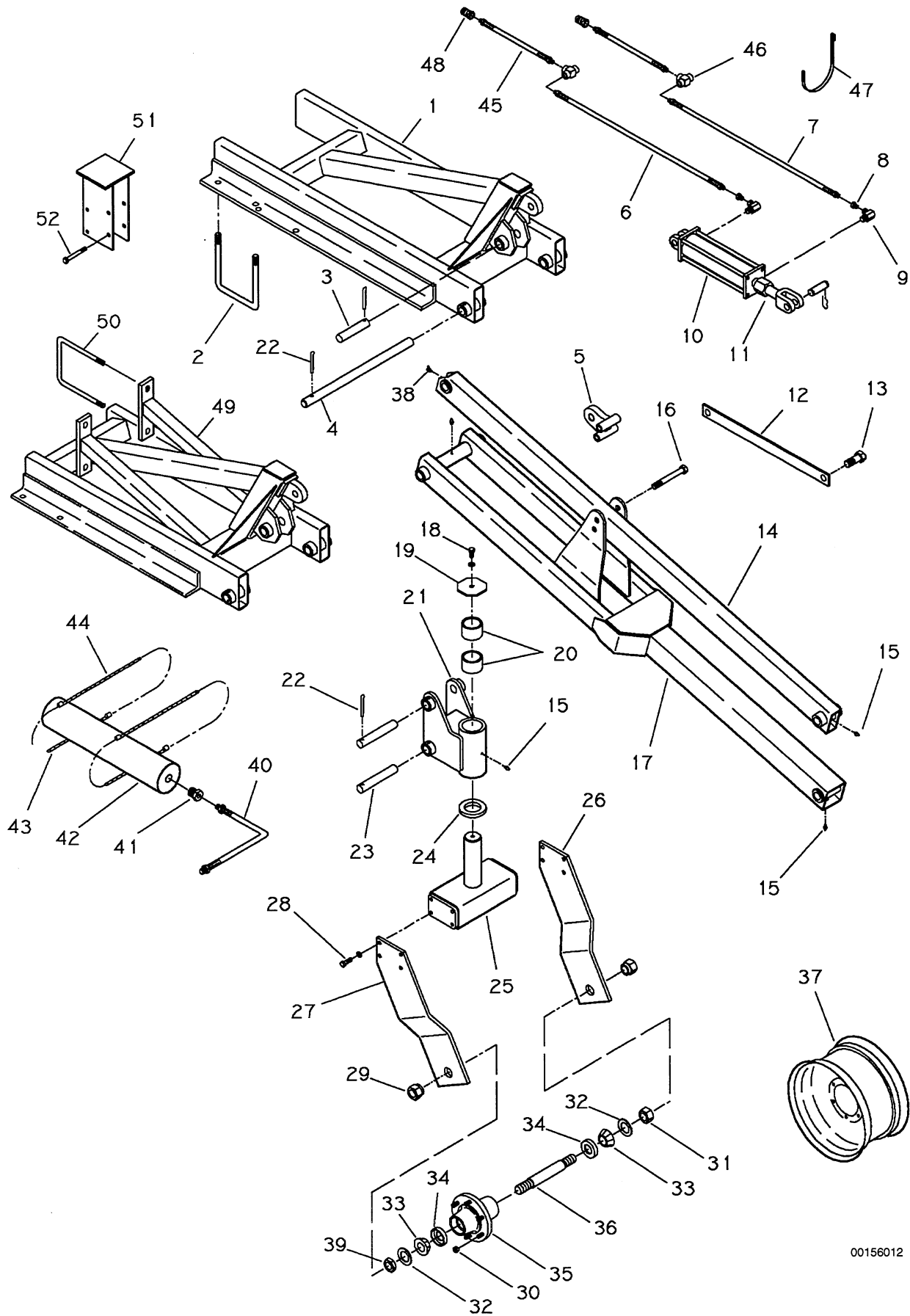


00156012

LIFT ASSIST

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1396	Frame Weldment	1
2	200-3-0345	U-Bolt, 3/4 NC x 7" Inside x 9-1/8" Long	4
3	200-3-1220	Pin, 1-1/4" OD x 5-3/4" Long	1
4	200-3-1218	Pin, 1-1/4" OD x 21-1/2" Long	1
	200-3-3069	Pin, 1-1/4" OD x 27-1/2" Long (1991 and 1992)	1
5	200-2-0685	Ear Weldment	1
6	210-2-0180	3/8 Hose, 1/2 MP x 1/2 MP x 111 (Single Lift Assist)	1
	210-2-0172	3/8 Hose, 1/2 MP x 1/2 MP x 134 (Double Lift Assist)	2
7	210-2-0192	3/8 Hose, 1/2 MP x 1/2 MP x 96 (Single Lift Assist)	1
	210-2-0181	3/8 Hose, 1/2 MP x 1/2 MP x 122 (Double Lift Assist)	2
8	905-01531	Restrictor, 1/2" Swivel, 1/16"	2
9	905-01528	Elbow, 3/4-16 MORB, 1/2 FPT x 90 Deg.	2
10	905-21391	Hydraulic, Cylinder, 3 x 10 Stroke	1
		Seal Kit, Hydraulic Cylinder,	1
11	905-21305	Depth Stop Nut	1
12	200-3-2687	Strap, Cylinder	1
13	900-01511	1 NC x 2 Hex Bolt	2
14	200-2-1553	Upper Tube Weldment	1
	200-2-0687	Upper Tube Weldment (Prior 1991)	1
15	905-15024	Zerk, Straight, 1/4-28 UNF	5
16	900-01427	3/4 NC x 6 Hex Bolt	2
17	200-2-1798	Tube Weldment	1
18	900-01221	1/2 NC x 1 Hex Bolt	1
19	200-3-1219	Retainer Plate	1
20	200-3-1766	Bushing	2
21	200-2-0968	Pivot Weldment (Replacement Parts Order Pivot Assembly)	1
	200-2-0900	Pivot Assembly with Bushings	1
22	900-23084	3/8 x 3-1/2 Cotter Pin	4
23	200-3-1241	Pin, 1-1/4" OD x 7-3/4" Long	2
24	200-3-1233	Thrust Bearing	1
25	200-2-0689	Caster Pivot Weldment	1
26	200-3-2622	Plate, Side (Right)	1
27	200-3-2621	Plate, Side (Left)	1
28	900-01225	1/2 NC x 1-1/2 Hex Bolt	8
29	200-3-1847	1-1/4 NF Shoulder Nut	2
30	905-09011	Wheel Nuts, 1/2 NF	6
31	900-06024	1-1/4 NF Hex Nut	2
32	901-09127	Seal	2
33	901-01149	Bearing Cone	2
34	901-01148	Bearing Cup	2
35	905-09082	Hub with Cups	1
36	200-3-1240	Spindle Fork	1
37	905-09077	Rim, 15" x 6 x 6 Hole	1
38	905-15026	Zerk, 1/4-28 UNF x 45 Deg.	1
39	200-3-2726	Nut, Short, 1-1/4 NF	1
40	210-2-0251	1/2 Hose, 1/2 MP/MPX x 24	1
41	905-01145	Bushing, 1x 1/2 NPT	1
42	200-2-1200	Accumulator	1
43	900-31043	Hose Clamp, Worm #28	2

LIFT ASSIST

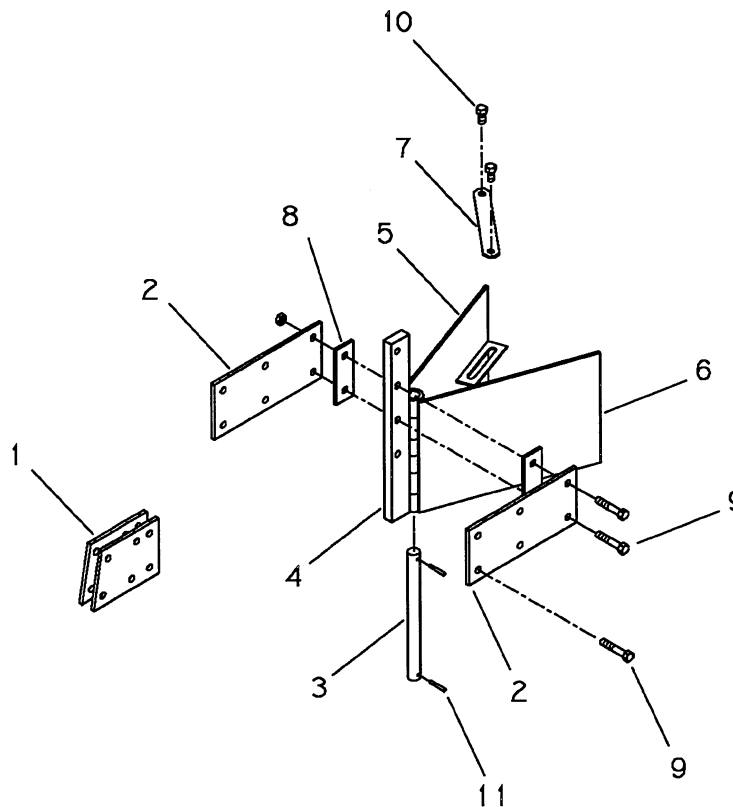


00156012

LIFT ASSIST

REF.	PART NO.	DESCRIPTION	QTY.
44	900-31039	Hose Clamp, Worm #88	2
45	210-2-0183	3/8 Hose, 1/2 MP x 1/2 MP x 60 (Double Lift Assist)	2
46	905-01358	Tee, 1/2 NPT (Steel)	2
47	905-07086	32" Cable Tie	6
48	905-19003	Quick Coupler, Male Tip	2
49	200-2-1792	Frame Weldment (TRF)	1
50	200-3-0344	U-Bolt, 5/8 NC x 7 x 8.5 Long	2
51	200-2-1807	Standoff, Linkage (3030)	1
52	900-01245	1/2 NC x 4 Hex Bolt	3
	200-2-0928	Hub & Spindle Assembly (Ref. 29-36, 39)	1
	905-09077	Tire, 9.5L X 15	1

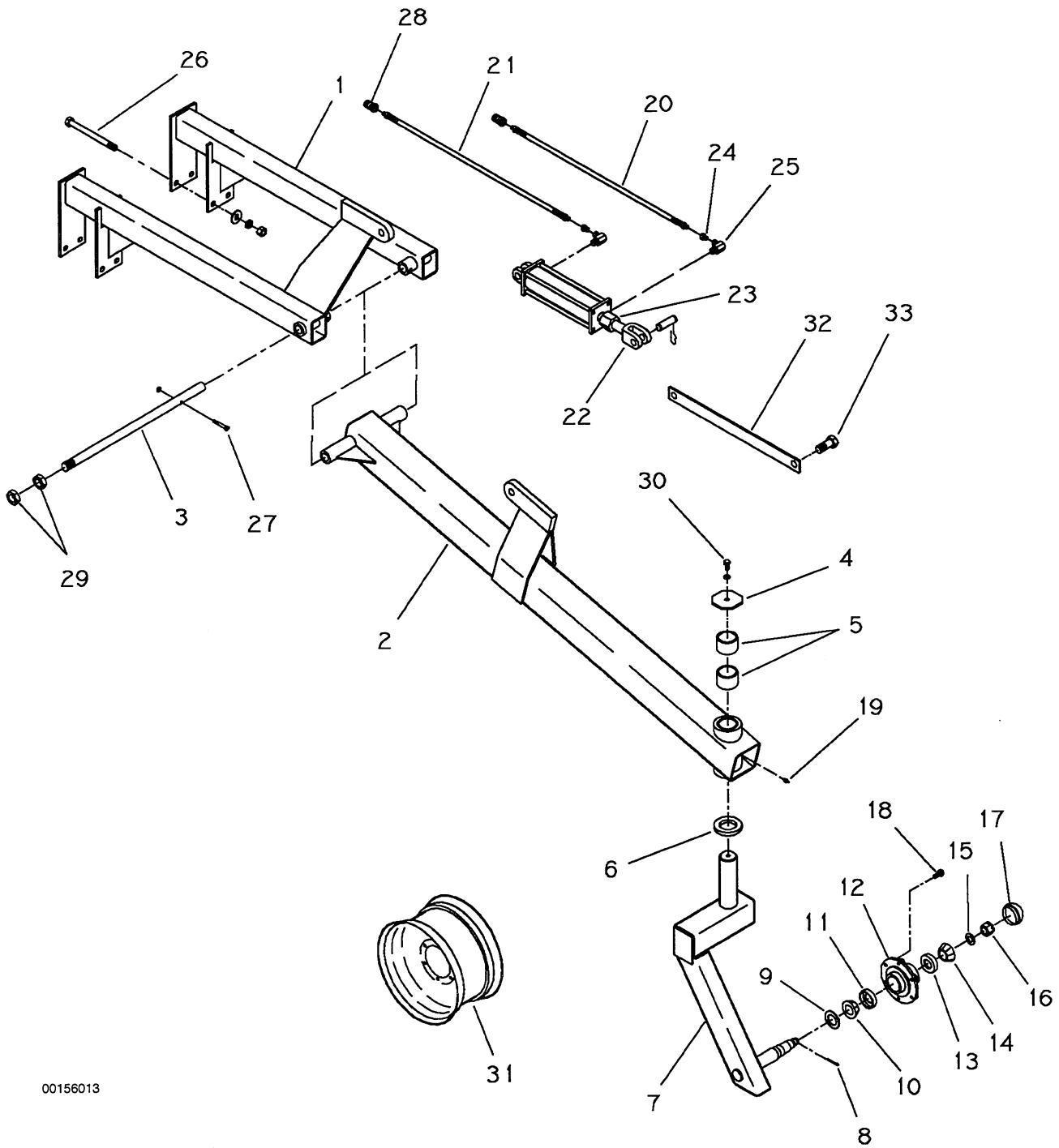
HILLER ATTACHMENT



00156045

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-3058	Side Plate (Straight Edge Tine)	2
2	200-3-3073	Side Plate (Shank)	2
3	200-3-3072	Pin, Hinge	1
4	200-2-1643	Hinge Weldment	1
5	200-2-1644	Wing Weldment R.H.	1
6	200-2-1645	Wing Weldment L.H.	1
7	200-3-3057	Strap	1
8	200-3-3074	Spacer Plate (Shank)	2
9	900-01117	3/8 NC x 2 Hex Bolt (Shank)	6
	900-01113	3/8 NC x 1-1/2 Hex Bolt (Straight Edge Tine)	6
10	900-01105	3/8 NC x 3/4 Hex Bolt	2
11	900-29132	3/16 x 1-1/4 Roll Pin	2

LIFT ASSIST

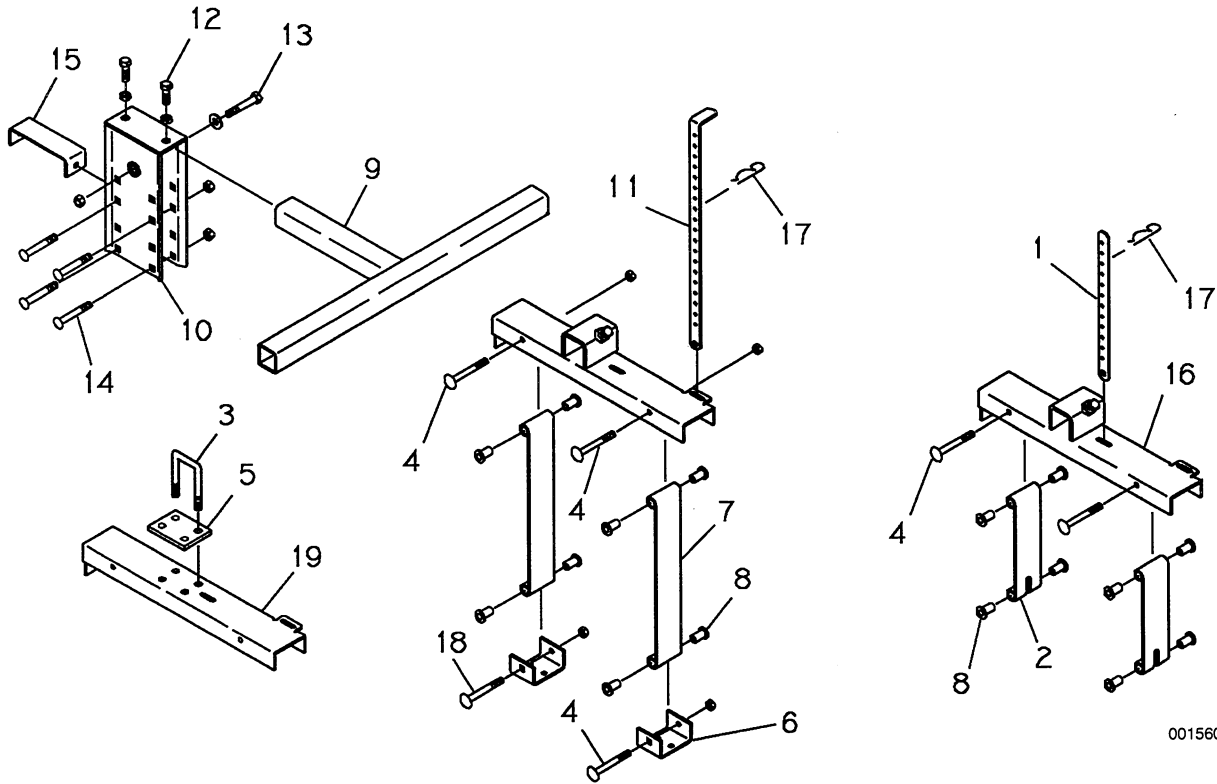


00156013

LIFT ASSIST

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1519	Mount Weldment	1
2	200-2-1518	Tube Weldment	1
3	200-3-2799	Axle	1
4	200-3-1219	Retainer Plate	1
5	200-3-1766	Bushing	2
6	200-3-1233	Thrust Bearing	2
7	200-2-1517	Castor Weldment	1
8	900-23045	3/16 x 2 Cotter Pin	1
9	901-09002	Seal	1
10	901-01025	Bearing Cone	1
11	901-01024	Bearing Cup	1
12	905-09004	6 Bolt Hub (with Cups)	1
13	901-01016	Bearing Cup	1
14	901-01015	Bearing Cone	1
15	905-09068	Washer	1
16	900-06062	1" NF Slotted Hex Nut	1
17	905-09009	Dust Cap	1
18	905-09010	Wheel Bolt, 1/2 NF x 1-1/16	6
19	905-15024	Zerk, Straight, 1/4-28 UNF	1
20	210-2-0180	3/8 Hose, 1/2 MP x 1/2 MP x 111	1
21	210-2-0192	3/8 Hose, 1/2 MP x 1/2 MP x 96	1
22	905-21391	Hydraulic Cylinder, 3 x 10 Stroke	1
23	905-21305	Mech. Depth Stop Nut	1
24	905-01531	1/2" Swivel Restrictor, 1/16	2
25	905-01528	Elbow, 3/4-16 MORB, 1/2 FPT x 90 Deg.	2
26	900-01441	3/4 NC x 9-1/2 Hex Bolt	4
27	900-01121	3/8 NC x 2-1/2 Hex Bolt	1
28	905-19003	Quick Coupler, Male Tip	2
29	900-06291	1-1/4 NF Hex Jam Nut	2
30	900-01221	1/2 NC x 1 Hex Bolt	1
31	905-09077	Rim, 15" x 6" x 6 Hole	1
32	200-3-2687	Strap, Cylinder	1
33	900-01515	1 NC x 2-1/2 Hex Bolt	2
	200-2-1549	Caster Assembly w/hubs (Ref. 7-18)	1

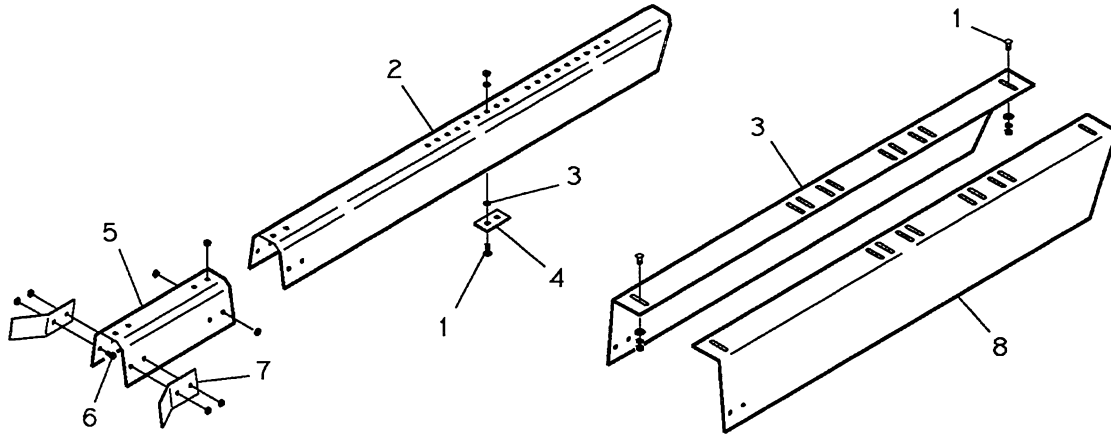
MOUNTS (SHIELDS)



00156024

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-0928	Adjustment Strap	1
2	200-3-3042	Pivot Strap (Center Mount)	2
	200-2-1640	Pivot Strap with Bushings (Center Mount)	2
3	200-3-2954	U-Bolt, 1/2 NC x 2 x 3-1/2 long	2
4	900-01736	7/16 NC x 4 Carriage Bolt	3
5	200-3-3356	Spacer	1
6	200-3-2723	Bracket, Tunnel	2
7	200-3-2912	Pivot Strap (Model 2130)	1
	200-2-1590	Pivot Strap with Bushings (Model 2130)	1
8	200-3-2913	Bushing	4
9	200-2-1558	Tee Weldment (22" Rows) 29" Tube	1
	200-2-1571	Tee Weldment (30" Rows) 35-1/2" Tube	1
	200-2-1778	Tee Weldment (30" Rows) 35-1/2" Tube (Short)	1
	200-2-1625	Tee Weldment (40" Rows) 45-1/2" Tube	1
10	200-2-1555	Slide Weldment	1
11	200-3-2910	Adjustment Strap (Model 2130)	1
12	900-01225	1/2 NC x 1-1/2 Hex Bolt	2
13	900-01241	1/2 NC x 3-1/2 Hex Bolt	1
14	900-01759	1/2 NC x 3-1/2 Carriage Bolt	4
15	200-3-3043	Space	1
16	200-2-1652	Center Mount Bracket	1
17	900-25007	Hair Pin Cotter, 3/16	2
18	900-01737	7/16 NC x 4 Carriage Bolt	1
19	200-3-3357	Tunnel Mount Bracket	1

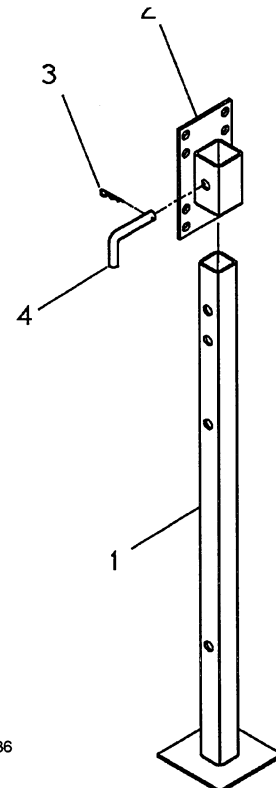
TUNNEL SHIELDS



00156014

REF.	PART NO.	DESCRIPTION	QTY.
1	900-01695	3/8 NC x 1 Carriage bolt	4
2	200-3-2722	Tunnel Shield, (STD) Adjustable	1
	200-3-2721	Tunnel Shield, (DEEP) Adjustable	1
3	200-3-2725	3/8 Clip	4
4	200-3-2724	Back Plate	2
5	200-3-2620	Tunnel Shield Extension (STD)	1
	200-3-2619	Tunnel Shield Extension (Deep)	1
6	900-01105	3/8 NC x 3/4 Hex Bolt	2
7	200-3-2880	Tunnel Sweep	2
8	200-3-2922	Split Tunnel, RH	1
9	200-3-2921	Split Tunnel, LH	1

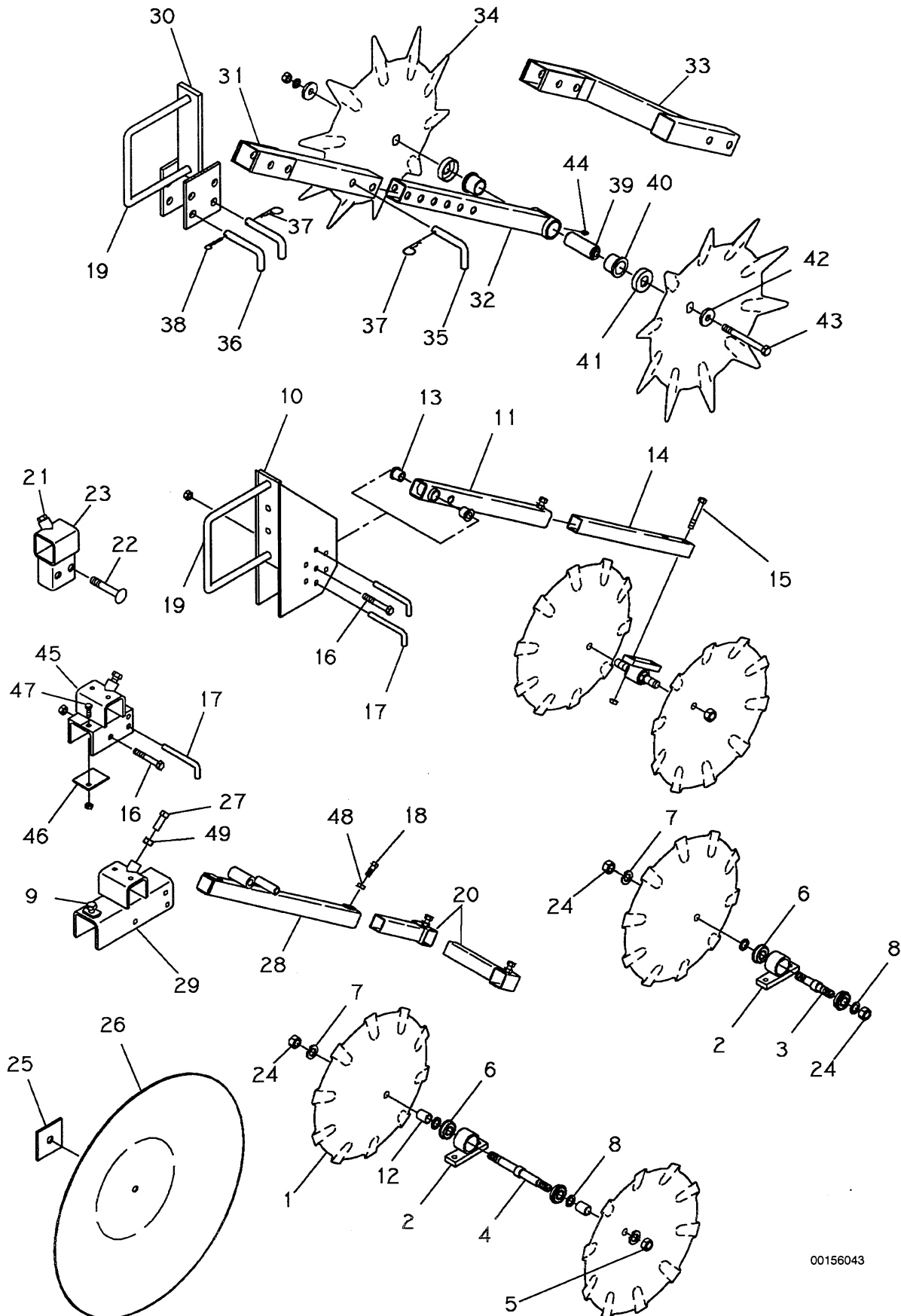
PARKING STAND



REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1885	Parking Stand Weld	1
2	200-2-1886	Mounting Plate Weld	1
3	900-25005	5/32 Hair Pin Cotter	1
4	505-3-0279	Pin	1
	200-2-1887	Parking Stand Assembly	1

00156036

ROLLING SHIELDS

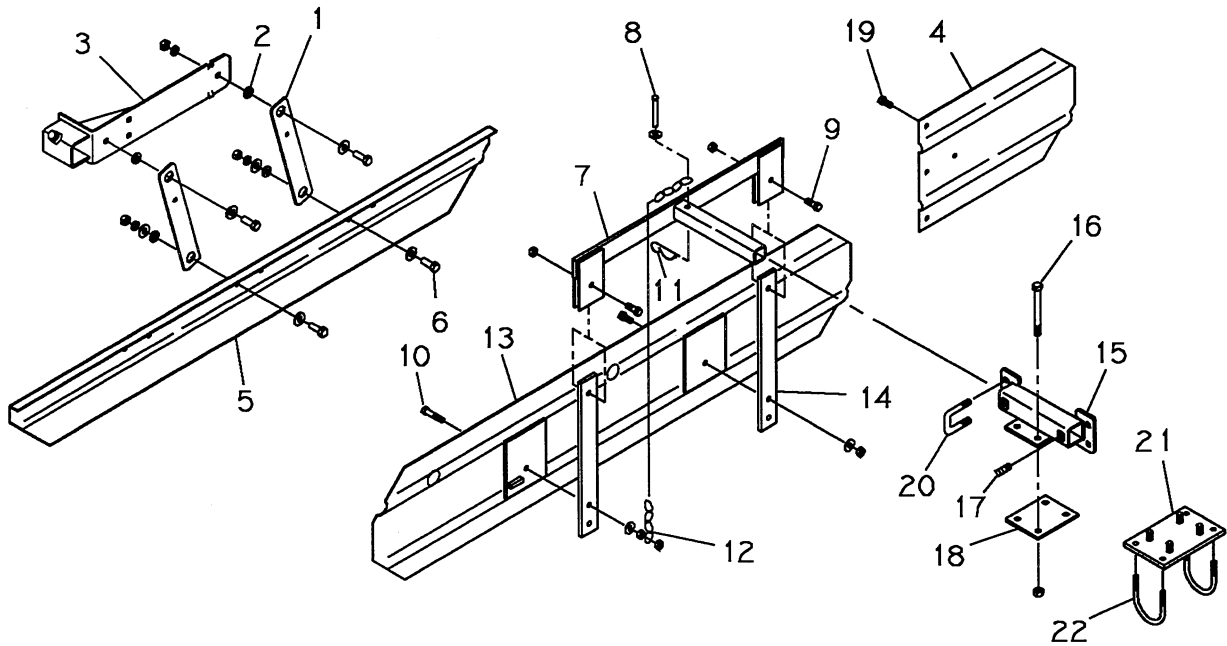


00156043

ROLLING SHIELDS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-3287	Rolling Shield, Painted	4
2	200-2-1714	Mount Weldment	3
3	200-3-3506	Axle, Single Shield	2
4	200-3-3505	Fork Type Axle	1
5	900-06706	5/8 NC Hex Nut, LH	1
6	901-01293	Bearing	4
7	900-11015	5/8 Lockwasher	2
8	200-3-3508	Washer	2
9	900-03454	1/2 NC x 3 Hex Bolt, Full Thread	1
10	200-2-1646	Mount Weldment	1
11	200-2-1647	Pivot Tube Weldment	1
12	200-3-3507	Spacer	2
13	200-3-2913	Bushing	2
14	200-3-3068	Tube, Rear 22" Long	1
	200-3-3558	Tube, Rear 18" Long	1
15	900-01121	3/8 NC x 2-1/2 Hex Bolt	2
16	900-01195	7/16 NC x 4 Hex Bolt	1
17	900-25024	7/16 x 3 Hitch Pin	2
18	900-16033	3/8 x 1 Sq. Head Set Screw	1
19	200-3-0344	U-Bolt, 5/8 NC x 7 x 8.6 Long	1
20	200-2-1648	Offset Tube Weldment	2
21	900-01227	1/2 NC x 1-3/4 Hex Bolt	1
22	900-01792	5/8 NC x 3-1/2 Carriage Bolt	2
23	200-2-1844	Shield Mount Weldment	1
24	900-06013	5/8 Hex Nut	1
25	200-3-3326	Plate, Spacer	2
26	200-3-3305	Disc, 24"	1
27	900-16064	1/2 NC x 1-1/2 Sq. Head Set Screw	2
28	200-2-1816	Pivot Tube Weldment	1
29	200-2-1815	Rolling Shield Bracket (3030)	1
30	200-2-1839	Mount Weldment	1
31	200-2-1823	Upper Tube Weldment	1
32	200-2-1827	Lower Tube Weldment	1
33	200-2-1838	Offset Bracket	1
34	355-2-1021	Rolling Shield	2
35	505-3-0279	Pin	1
36	100-3-4039	Pin	2
37	900-25005	5/32 Hair Pin Cotter	2
38	900-23034	5/32 x 1-1/4 Hair Pin Cotter	1
39	355-2-1005	Axle	1
40	355-2-1004	Bearing	2
41	355-2-1015	Dust Cap	2
42	355-2-1003	Washer	2
43	900-01249	1/2 NC x 9 Hex Bolt	1
44	905-15024	Zerk, Straight, 1/4 - 28 UNF	1
45	200-2-1759	Rolling Shield Bracket	1
46	200-3-3320	Shim	2
47	900-01059	5/16 NC x 1 Hex Bolt	1
48	900-06270	3/8 Jam Nut	1
49	900-06276	1/2 Jam Nut	1
	200-2-1846	Double Bearing Assembly (Ref. 2,4,5,6,7,8,12 and 24)	1
	200-2-1847	Single Bearing Assembly (Ref. 2,3,6,7,8 and 24)	1

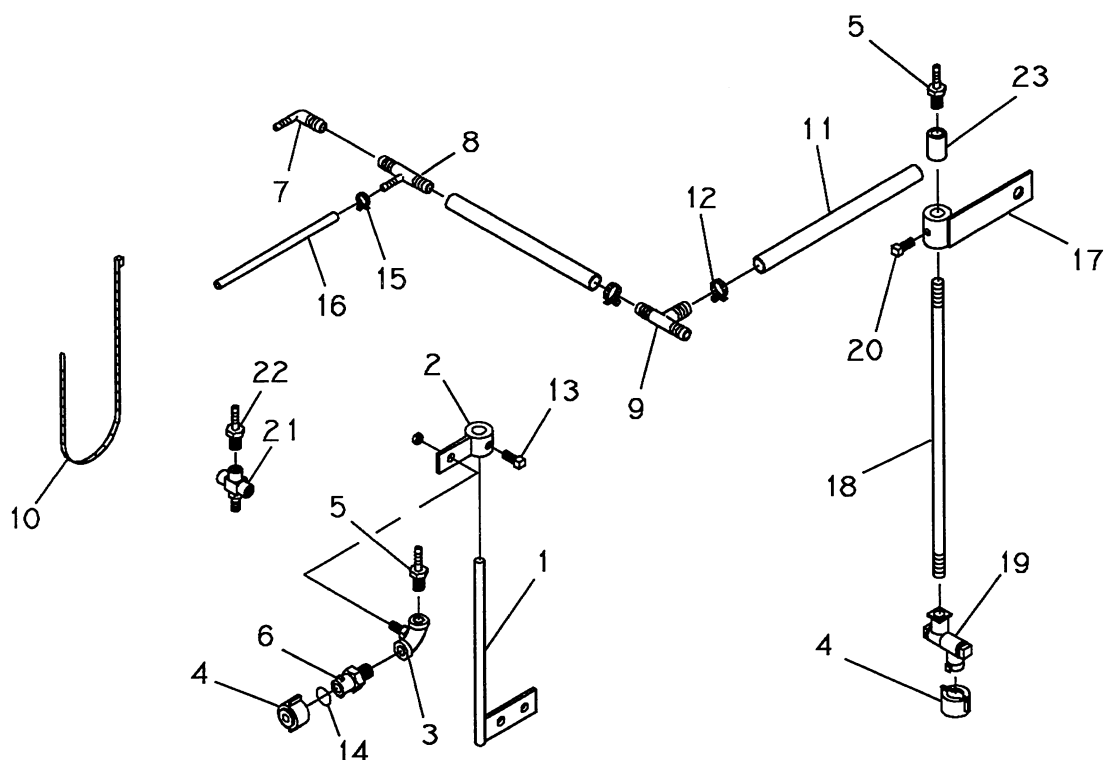
END SHIELDS & OPEN TOP SHIELDS



00156015

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-0979	Pivot Arm	2
2	200-3-3511	Spacer, Drilled	4
3	200-2-0557	Support Bracket	1
4	200-3-3238	Shield Extension	2
5	200-3-2717	End Shield	1
6	900-01223	1/2 NC x 1-1/4 Hex Bolt	4
7	200-2-1602	Bracket Weldment, 30" Rows	1
	200-2-1621	Bracket Weldment, 22" Rows	1
	200-2-1841	Bracket Weldment, 36" to 40" Rows	1
8	900-42026	3/8 x 2-3/4 Clevis Pin	1
9	900-01173	7/16 NC x 1-1/4 Hex Bolt	3
10	900-01179	7/16 NC x 2 Hex Bolt	1
11	900-25004	1/8 Hair Pin Cotter	1
12	200-3-2964	Chain	1
13	200-2-1599	Shield Weldment, LH (Shown)	1
	200-2-1600	Shield Weldment, RH (Not Shown)	1
14	200-3-2957	Parallel Arm	2
	200-3-3519	Parallel Arm (3030)	2
15	200-2-1620	Outer Tube Weldment, 22" Rows	1
	200-2-1601	Outer Tube Weldment, 30" Rows	1
	200-2-1842	Outer Tube Weldment, 36" to 40" Rows	1
	200-2-1822	Outer Tube Weldment, Open Top End Shield	1
16	900-01237	1/2 NC x 3 Hex Bolt (2 x 2 Trees)	4
	900-01249	1/2 NC x 5 Hex Bolt (2 x 4 Trees)	4
17	900-16064	1/2 NC x 1-1/2 Sq. Head Set Screw	2
18	200-3-2966	Back Plate	1
19	900-01109	3/8 NC x 1 Hex Bolt	4
20	200-3-3323	U-Bolt, 1/2 NC x 1-1/2 x 2-1/2 Long	2
21	200-2-1758	Plate Weldment, Spider Gang	1
22	100-3-2897	3/8 Round, U-Bolt 3" ID	2

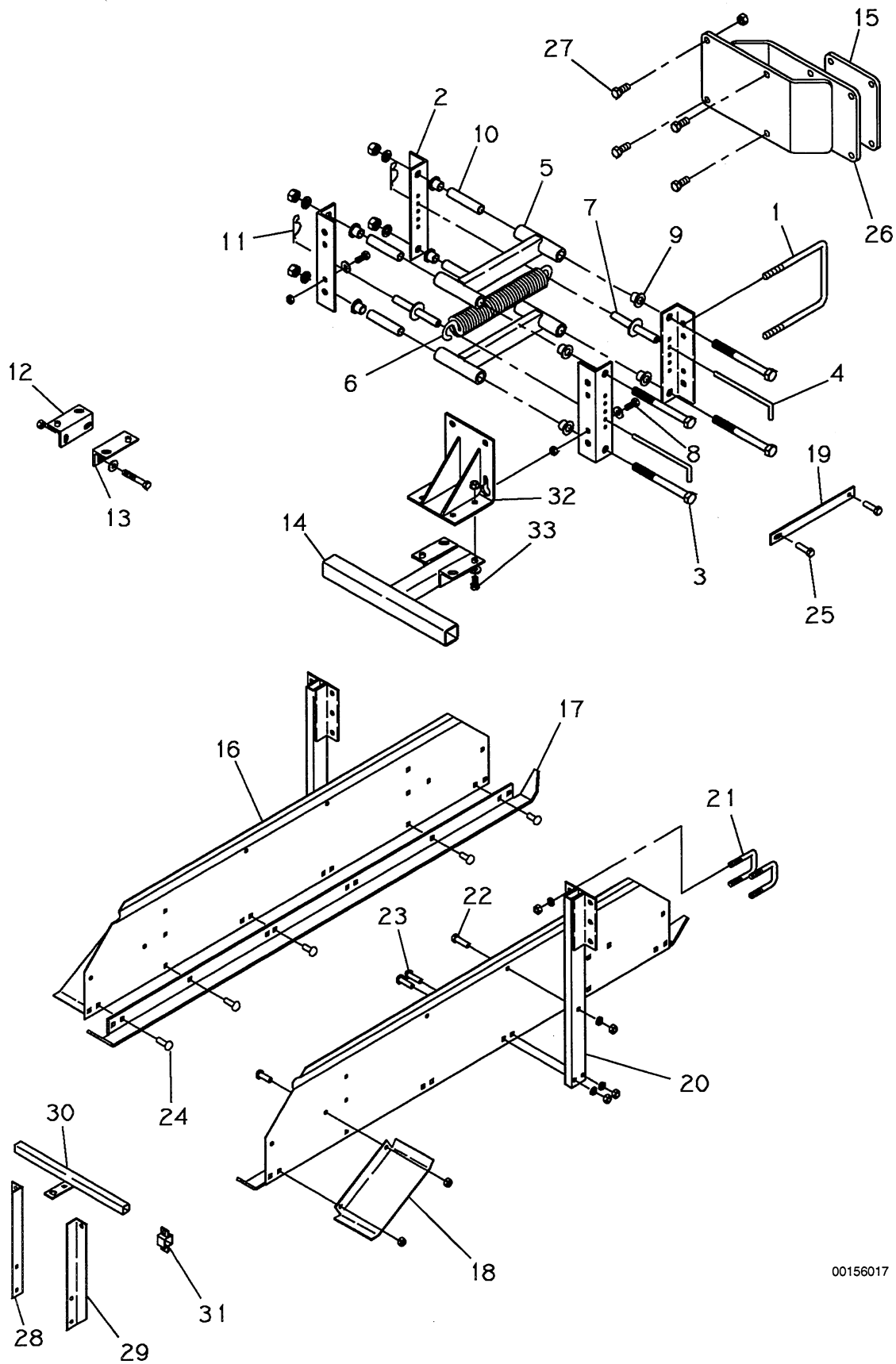
SPRAY FENDER SPRAY KIT



00156018

REF.	PART NO.	DESCRIPTION	QTY.
1	200-2-1545	Rear Mounting Bracket	2
2	200-2-1595	Mounting Bracket	2
3	200-2-1594	Elbow Weldment	2
4	905-27083	Q.J. Cap, Flat, Yellow	3
5	905-27385	I.M.A. 1/4 x 1/4 Hose Barb, Steel	2
6	905-27081	Q.J. Body, 1/4 MPT	2
7	905-27386	Elbow, 1/4 HB x 1/2 HB	1
8	905-27387	Tee, 1/4 x 1/2 x 1/2 Hose Barb	1
9	905-27032	Tee, 1/2 HB	1
10	905-07085	15" Plastic Cable Tie	1
	905-07086	32" Plastic Cable Tie	1
11	905-06020	Hose, 1/2 EPDM	A/R
12	900-31045	Hose Clamp, Wire, 1/2 EVA	1
13	900-01109	3/8 NC x 3/4 Hex Bolt	2
14	905-27082	O-Ring, Quick Jet	A/R
15	900-31063	Hose Clamp, 1/4"	.1
16	905-06019	Hose, 1/4" ,EPDM	A/R
17	200-2-1789	Bracket Weldment, Lay By Nozzle	1
18	200-3-3447	Tube	1
19	905-27119	Swivel Body, 1/4 FPT (Brass)	1
20	900-16031	3/8 NC x 3/4 Sq. Head Set Screw	1
21	200-2-1821	Tee Weldment, 1/4 NPT	1
22	905-27384	I.M.A. 1/4 x 1/4 Hose Barb, Plastic	3
23	905-01187	Coupling, 1/4 NPT	2

SPRAY FENDER COMPONENTS

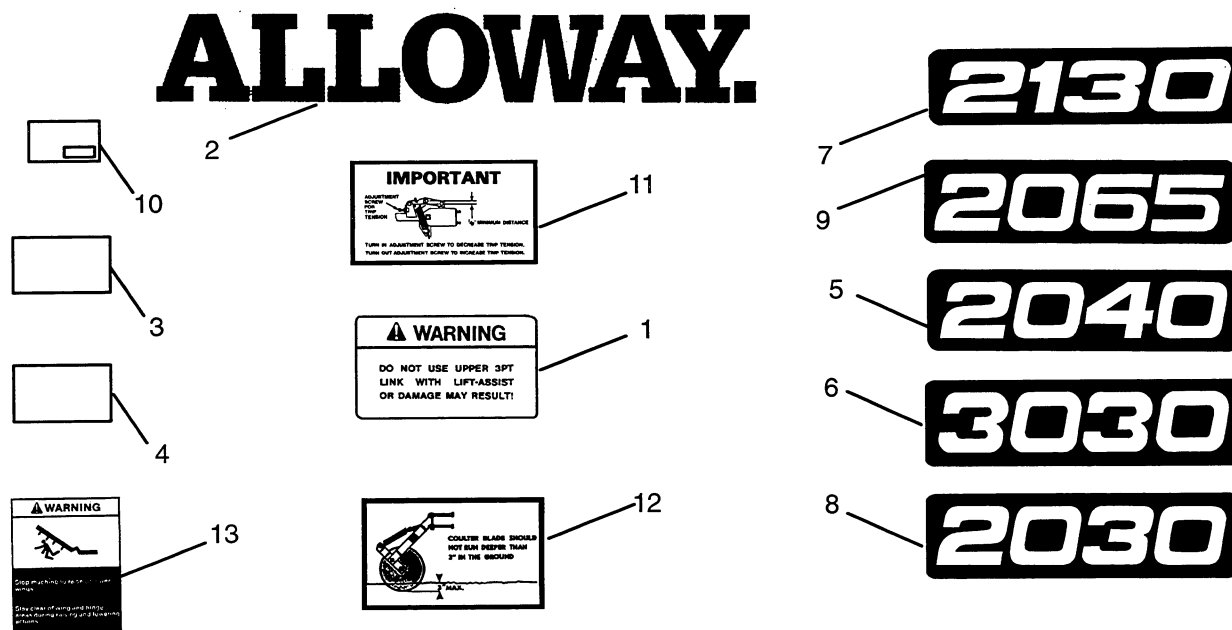


00156017

SPRAY FENDER COMPONENTS

REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-0344	U-Bolt, 5/8 NC x 7 x 8.5 Long	2
2	200-3-2841	Mounting Angle	4
3	900-01435	3/4 NC x 8 Hex Bolt	4
4	200-3-2931	Pin	2
5	200-2-1535	Parallel Tube Weldment	2
6	200-3-3010	Spring	1
7	200-2-1587	Anchor Tube Weldment	2
8	900-01223	1/2 NC x 1-1/4 Hex Bolt	4
9	200-3-0877	Bushing, Oilite	8
10	200-3-2832	Bushing	4
11	900-25005	Hair Pin Cotter, 5/32	2
12	200-3-3076	Angle, LH (Prior 1994)	1
13	200-3-3075	Angle, RH (Prior 1994)	1
14	200-2-1819	Tube Weldment	1
15	200-3-3151	Spacer Plate	1
16	200-3-2829	Fender Shield	2
17	200-3-2839	Skid	2
18	200-3-2840	Shoe	2
19	200-3-3327	Bar	1
20	200-2-1540	Tube Shield Mounting	2
21	200-3-0801	U-Bolt, 1/2 NC x 2 x 3 Long	4
22	900-01115	3/8 NC x 1-3/4 Hex Bolt	2
23	900-01698	3/8 NC x 1-3/4 Carriage Bolt	4
24	900-01695	3/8 NC x 1 Carriage Bolt	10
25	900-01109	3/8 NC x 1 Hex Bolt	4
26	200-2-1543	Offset Bracket	1
27	900-01341	5/8 NC x 1-1/2 Hex Bolt	4
28	200-3-2927	Mounting Angle, Rear Nozzle (Left)	1
29	200-3-2929	Mounting Angle, Rear Nozzle (Right)	1
30	200-2-1820	Tube Weldment, Rear Nozzle	1
31	905-27379	Clamp	2
32	200-2-1651	Bracket Weldment	1
33	900-01221	1/2 NC x 1 Hex Bolt	4
	200-2-1537	Linkage Assembly (Ref. 2,3,4,5,7,8,9,10 and 11)	1
	200-2-1539	Tree Assembly (Ref. 12,13,14,15,32,33)	1

DECALS



REF.	PART NO.	DESCRIPTION	QTY.
1	200-3-1359	Decal, Lift Assist	1
2	200-3-2290	Decal, Alloway	2
3	200-3-0142	Decal, Amber Reflector	2
4	200-3-0143	Decal, Red Reflector	2
5	200-3-2433	Decal, 2040	2
6	200-3-3277	Decal, 3030	1
7	200-3-2727	Decal, 2130	1
8	200-3-2431	Decal, 2030	1
9	200-3-2618	Decal, 2065	1
10	200-3-1366	Decal, Serial No Tag	1
11	200-3-1046	Decal, Toggle Trip	1
12	200-3-0193	Decal, Coulter	1
13	200-3-1358	Decal, Lower Wings	1
	906-01030	Yellow Paint, Aerosol	1
	906-01065	Yellow Paint, Quart	1
	906-01064	Yellow Paint, Gallon	1
	906-01015	Black Paint, Aerosol	1
	906-01043	Black Paint, Quart	1
	906-01063	Black Paint, Gallon	1

HARDWARE

NUTS

900-06194	3/16 NC Hex Nut
900-06001	1/4 NC Hex Nut
900-06003	5/16 NC Hex Nut
900-06005	3/8 NC Hex Nut
900-06007	7/16 NC Hex Nut
900-06009	1/2 NC Hex Nut
900-06010	1/2 NF Hex Nut
900-06011	9/16 NC Hex Nut
900-06013	5/8 NC Hex Nut
900-06015	3/4 NC Hex Nut
900-06017	7/8 NC Hex Nut
900-06019	1 NC Hex Nut
900-06023	1-1/4 NC Hex Nut
900-06025	1-3/8 NC Hex Nut
900-06027	1-1/2 NC Hex Nut
900-06056	5/8 NF Slotted Hex Nut
900-06058	3/4 NF Slotted Hex Nut
900-06060	7/8 NF Slotted Hex Nut
900-06062	1 NF Slotted Hex Nut
900-06065	1-1/4 NC Slotted Hex Nut
900-06066	1-1/4 NF Slotted Hex Nut
900-06070	1-1/2 NF Slotted Hex Nut
900-06135	1/4 NC Flanged Whiz Locknut
900-06137	5/16 NC Flanged Whiz Locknut
900-06139	3/8 NC Flanged Whiz Locknut
900-06141	7/16 NC Flanged Whiz Locknut
900-06143	1/2 NC Flanged Whiz Locknut
900-06145	5/8 NC Flanged Whiz Locknut
900-06270	3/8 NC Jam Nut
900-06276	1/2 NC Jam Nut
900-06280	5/8 NC Jam Nut
900-06282	3/4 NC Jam Nut
900-06284	7/8 NC Jam Nut
900-06286	1 NC Jam Nut
900-06288	1-1/8 NC Jam Nut
900-06292	1-3/8 NC Jam Nut
900-06496	1/4 NC Top Locknut
900-06498	5/16 NC Top Locknut
900-06500	3/8 NC Top Locknut
900-06502	7/16 NC Top Locknut
900-06504	1/2 NC Top Locknut
900-06508	5/8 NC Top Locknut
900-06510	3/4 NC Top Locknut
900-06512	7/8 NC Top Locknut
900-06514	1 NC Top Locknut
900-06518	1-1/4 NC Top Locknut

WASHERS

900-11007	3/16 Lockwasher
900-11009	1/4 Lockwasher
900-11010	5/16 Lockwasher
900-11011	3/8 Lockwasher
900-11012	7/16 Lockwasher
900-11013	1/2 Lockwasher
900-11014	9/16 Lockwasher
900-11015	5/8 Lockwasher
900-11017	3/4 Lockwasher
900-11019	7/8 Lockwasher
900-11021	1 Lockwasher
900-11023	1-1/8 Lockwasher
900-11025	1-1/4 Lockwasher
900-11029	1-1/2 Lockwasher
900-11030	3/16 Flat Washer
900-11031	1/4 Flat Washer
900-11032	5/16 Flat Washer
900-11033	3/8 Flat Washer
900-11034	7/16 Flat Washer
900-11035	1/2 Flat Washer
900-11036	9/16 Flat Washer
900-11037	5/8 Flat Washer
900-11038	3/4 Flat Washer
900-11039	7/8 Flat Washer
900-11040	1 Flat Washer
900-11041	1-1/8 Flat Washer
900-11042	1-1/4 Flat Washer
900-11044	1-1/2 Flat Washer

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WARRANTY

Please enter information below and **SAVE FOR FUTURE REFERENCE.**

Date Purchased: _____ From (Dealer): _____

Model Number: _____ Serial Number: _____

WOODS warrants each new WOODS product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the machine or components, not to exceed twelve consecutive months from the date of delivery of the new WOODS product to the original purchaser.

Genuine WOODS replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

Under no circumstances will it cover any merchandise or components thereof, which, in the opinion of the company, has been subjected to negligent handling, misuse, alteration, an accident, or if repairs have been made with parts other than those obtainable through WOODS.

The company in no way warrants engines, batteries, tires or other trade accessories since these items are warranted separately by their respective manufacturers.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that in our judgement shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to WOODS, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature to person or property. This warranty does not extend to loss of crops, loss because of delay in harvesting, or any expense or loss incurred for labor, supplies, substitute machinery, rental or for any other reason.

Except as set forth above, WOODS SHALL HAVE NO OBLIGATION OR LIABILITY OF ANY KIND ON ACCOUNT OF ANY OF ITS EQUIPMENT AND SHALL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES. WOODS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND, SPECIFICALLY, WOODS DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES OR PROVINCES DO NOT PERMIT LIMITATIONS OR EXCLUSIONS OF IMPLIED WARRANTIES OR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE LIMITATIONS OR EXCLUSIONS IN THIS WARRANTY MAY NOT APPLY.

This warranty is subject to any existing conditions of supply which may directly affect our ability to obtain materials or manufacture replacement parts.

WOODS reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify, or enlarge this warranty nor the exclusions, limitations and reservations.

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WOODS

**WOODS
DUAL
GANNON
ALLOWAY
GILL**

PART NUMBER

200-3-2546

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