Assembly Manual



MCFARLANE QUADRA-TILL

SIZES, SHATTERS, MIXES, & LEVELS







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Introduction

Thank you for purchasing the McFarlane Quadra-Till Primary Vertical Tillage System. We know that you will get many years of dependable service because McFarlane has been manufacturing quality agricultural equipment since 1936.

A single pass in the fall with the Quadra-Till will leave the soil and residue in a condition that requires only a light pass with a Reel Disk. Using both implements will create the perfect seedbed, saving time, expense, and preparing your fields for spring more quickly.

The Quadra-Till incorporates field residue up to a ten inch depth for quick breakdown and nutrient deposit. It also prepares the soil so spring field preparation and planting can be done quicker and easier. The Quadra-Till also prepares the ground to promote strong root growth for higher yields.

Quadra-Till provides four tillage functions in a single field pass.

- Size Residue Cuts residue into small pieces for faster breakdown
- 2. Shatters Soil Full width fracture of the soil to eliminate compaction layers
- Mixes Residue Spreads residue uniformly throughout the profile, ensuring thorough break down of residue.
- Levels the Seedbed Eliminating the need for multiple field finishing passes

Contact Information

If you have questions not answered in this manual, require additional copies, or the manual is damaged, please contact your local dealer or:

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Safety

General

Safety of the operator and bystanders is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment.

Most work related accidents are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. As you assemble, operate, tow, or maintain the Quadra-Till (unit), you must be alert to potential hazards. You should also have the necessary training, skills, and tools to perform any assembly procedure.

Improper operation and maintenance of this unit could result in a dangerous situation that could cause injury or death.

Do not use or tow the unit until you read and understand the information contained in this manual.



Safety precautions and warnings are provided in this manual and on the unit. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

McFarlane cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this manual and on the product are, therefore, not all-inclusive. If a method of operation not specifically recommended by us is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that the unit will not be damaged or be made unsafe by the methods that you choose.

The information, specifications, and illustrations in this manual are based on the information that was available at the time this material was written and can change at any time.

Safety Alert Symbols



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

This manual contains DANGERS, WARNINGS, CAUTIONS, IMPORTANT NOTICES, and NOTES which must be followed to prevent the possibility of improper service, damage to the equipment, personal injury, or death. The following key words call the readers attention to potential hazards.

Hazards are identified by the "Safety Alert Symbol" and followed by a signal word such as "DANGER", "WARNING", or "CAUTION".

A DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

AWARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

ACAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

Indicates that equipment or property damage can result if instructions are not followed.

SAFETY INSTRUCTIONS

Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

Note: Contains additional information important to a procedure and will be found within the regular text body of this manual.

Safety Icons Nomenclature

This manual and the equipment has numerous safety icons. These safety icons provide important operating instructions which alert you to potential personal injury hazards.



Read the manual



Maintenance procedure



Eye protection



Hand protection



Hearing protection



Inspect equipment



Do not weld



Use proper tools



Warning decal alert



Block wheels



Crushing hazard



Falling hazard



Safety alert symbol



Sharp object hazard



Slipping injury



Tripping injury

AWARNING

To prevent personal injury or even death, be sure you read and understand all of the instructions in this manual and other related OEM equipment manuals! This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and how it works.

This unit was designed for a specific application; DO NOT modify or use this unit for any application other than which it was designed.

Units operated improperly or by untrained personnel can be dangerous!







When disconnecting the unit or leaving the operator's seat:

- 1. Stop the tractor or towing vehicle.
- 2. Shut off the engine and remove the ignition key.
- 3. Set the brakes.
- Make sure wheel cylinder transport locks are attached.
- 5. Relieve hydraulic fluid pressure.
- 6. If parking the unit, make sure jack stand is lowered and retaining pin is installed.



Do not permit children to play on or around the stored unit.

When working around or operating this equipment, wear appropriate personal protective equipment. This list includes but is not limited to:



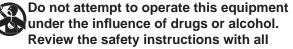






- A hard hat
- Protective shoes with slip resistant soles
- Protective goggles, glasses, or face shield
- Heavy gloves and protective clothing

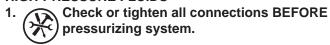




users annually.

AWARNING

HIGH-PRESSURE FLUIDS





Release all pressure before removing hoses and/or valves by:

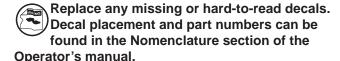
- a. Stopping engine.
- b. Holding hydraulic control levers in float or neutral position.



DO NOT use your bare hand to check for potential leaks. Always use a board or cardboard when checking for a leak.

Escaping hydraulic fluid under pressure, even a pinhole size leak, can penetrate body tissue, causing serious injury and possible death. If fluid is injected into your skin, it must be treated immediately by a doctor familiar with this type of injury.

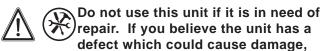
SAFETY INSTRUCTIONS



To prevent injury, use a tractor equipped with a Roll Over Protective System (ROPS).

Visually inspect the unit for any loose bolts, worn parts, or cracked welds, and make necessary repairs.

ACAUTION



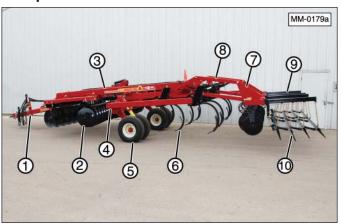
injury, or death, you should immediately stop using the unit.



Do not use the unit as a platform. Do not stand on top of the unit at any time. Do not ride on the unit or allow others to ride on it.

General Information

Component Locations



(1) Hitch Frame.
(2) Disk Frame with Disk Gangs.
(3) Main Frame with Disk Hitch.
(4) Chisel Shank
Frame with Axle.
(5) Tires and Rims.
(6) Chisel Shank
Assemblies.
(7) Leveler Disk Assembly.
(8) Leveler disk
Mounting Arms.
(9) Harrow Lift Arms.
(10) Harrow Sections.

Shipping Configuration

The unit is shipped in the following configuration.

Item	Description
1	Hitch Frame
2	Disk Frame With Disk Gangs
3	Main Frame with Disk Hitch
4	Chisel Shank Frame With Axle
5	Tires and Rims
6	Chisel Shank Assemblies
7	Leveler Disk Assembly
8	Harrow Sections
9	Hardware Crate

1. Hitch Frame



Note: The hitch frame assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107 – QT-113	1362	740

2. Disk Frame with Disk Gangs



Note: The disk gang assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	3278	1478
QT-109	3565	1617
QT-111	4702	2133
QT-113	5162	2341

3. Main Frame with Disk Hitch



Note: The main frame assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107 – QT-113	2282	1035

4. Chisel Shank Frame with Axle



Note: The chisel shank frame assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	1879	852
QT-109	2101	953
QT-111	2199	997
QT-113	2219	1007

5. Tires and Rim Assemblies with Hub Assemblies



Note: The wheels, tires, and hubs weigh:

Model	Weight in Pounds	Weight in Kilograms
QT-107	454	206
QT-109 – QT-113	536	243

6. Chisel Shank Assemblies



Note: The chisel shank assemblies weigh:

Model	Weight in Pounds	Weight in Kilograms
QT-107	1160	526
QT-109	1480	671
QT-111	1800	816
QT-113	2120	962

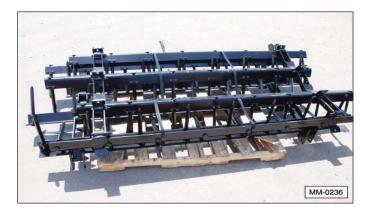
7. Leveler Disk Assembly



Note: The leveler disk assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	1041	472
QT-109	1221	554
QT-111	1434	650
QT-113	1606	728

8. Harrow Sections



Note: The harrow assemblies weigh:

Model	Weight in Pounds	Weight in Kilograms
QT-107	422	191
QT-109	512	232
QT-111	563	255
QT-113	612	278

9. Hardware Crate



Note: The hardware crate containing the harrow lift arms, hub assemblies, and other hardware weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	1370	621
QT-109	1370	621
QT-111	1484	672
QT-113	1484	672

Bolt Torque Chart

Bolt Head Markings	No Mi	arking	3 Radia	al Lines	6 Radia	al Lines
Bolt Diameter "A"		rade 2 ft-lbs)		Frade 5 ft-lbs)		rade 8 ft-lbs)
1/4"	8	(6)	12	(9)	17	(12)
5/16"	13	(10)	25	(19)	36	(27)
3/8"	27	(20)	45	(33)	63	(45)
7/16"	41	(30)	72	(53)	100	(75)
1/2"	61	(45)	110	(80)	155	(115)
9/16"	95	(70)	155	(115)	220	(165)
5/8"	128	(95)	215	(160)	305	(220)
3/4"	225	(165)	390	(290)	540	(400)
7/8"	230	(170)	570	(420)	880	(650)
1"	345	(225)	850	(630)	1320	(970)

Assembly Procedure

- 1. Follow all safety instructions in this and/or other related manuals.
- 2. Make sure all the required parts have been received.

AWARNING



TIPPING HAZARD

Before lifting any component, make sure the lifting capacity of the forklift or overhead lifting device exceeds the weight of that component.

3. Using a suitable lifting device, place the disk gang frame assembly on flat, level ground.

Note: The disk gang assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	3278	1478
QT-109	3565	1617
QT-111	4702	2133
QT-113	5162	2341



AWARNING

CUTTING HAZARD
The disks are sharp and will cause serious injury. Prevent movement of the disk gang, during assembly, using wooden blocks or another suitable restraining method. Stand clear of the disk gang assembly whenever moving around components.

4. Place wooden blocks on both sides, front and back, of the disks to prevent accidental movement, as shown.



5. Remove the plastic cable ties securing the hydraulic hoses and wiring harness to the main frame.







6. Attach a sling or other suitable lifting device to the main frame. Position the sling, forward, 11" (28 cm) from the center tube of the frame, as shown.

Note: The main frame assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107 – QT-113	2282	1035



AWARNING



CRUSH HAZARD

Do not work under suspended components. The weight of these components will cause serious crushing injury or death if trapped underneath.

7. Lift the main frame assembly and position it over the disk gang assembly. Align the four mounting bushings in the main frame and the disk frame.

Note: Attaching the main frame to the disk frame requires four mounting pins, four bolts, and four lock nuts.



8. Lubricate and insert the four mounting pins. Do not force these pins into the holes; adjust the frame members to align the holes until the pins slip into the hole.



9. Install the four 3/8 x 2-1/2" bolts and lock nuts. Tighten the lock nuts completely.



10. Place marks on the chisel shank frame to indicate the correct position of the chisel shanks before installing the frame. Refer to the Chisel Shank Location Diagram in this manual for exact placement.



11. Remove the retaining strap (arrow) used to keep the cylinders retracted during shipping.



12. Secure the chisel shank frame to a lifting device. Position and raise the frame under the main frame.

Do not work under the frame.



Note: The chisel shank frame assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	1879	852
QT-109	2101	953
QT-111	2199	997
QT-113	2219	1007

Note: Attaching the chisel shank frame to the main frame requires sixteen bolts, lock washers, and nuts.

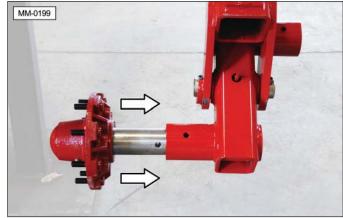
13. Align the mounting pads of the chisel shank frame with the mounting pads on the main frame. Install sixteen 7/8 x 3" bolts, lock washers, and nuts. Tighten the nuts completely.



14. Raise the frame assembly and allow the wheel cylinders to completely extend. Slide the outer two hub and spindle assemblies into the rock shaft pivot arm. Do not install the inner hubs at this time.







Note: The hub assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	57	26
QT-109 – QT-113	47	24

15. Install the 1/2 x 4-1/2" bolt and lock nut on both outer hub and spindle assemblies. Tighten the lock nuts completely.



Note: Make sure the tire is inflated to:

Model		kPa
QT-107, 36-16-17.5, 10-ply	75	515
QT-109 – QT-111, 12.5L-15, 12-ply	52	355
QT-113, 12.5L-15, 18-ply	72	495



16. Mount the rim and tire assembly to the hub using eight lug nuts for each wheel. Make sure the valve stem is facing outward away from the rock shaft pivot arm. Mount both outside wheels. Tighten the lug nuts completely.



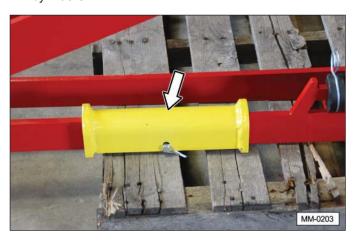
Note: The wheel and tire assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	170	77
QT-109 – QT-113	87	40

Tire and Lug Torque Specifications

Tire Size	Ply Rating	Tire Pressure	Lug Size	Lu Tighte Torque	ening
				Max.	Min.
QT107					
36-16-17.5	10 ply	75 psi	5/8	85	100
QT109 and QT111					
12.5L-15	12 ply	52 psi	9/16	80	90
QT113					
12.5L-15	18 ply	72 psi	5/8	85	100

17. Remove the transport locks from the leveler disk mounting arms and install them onto both wheel cylinders.





18. Install the remaining two inner hubs and tires.



19. Install the hitch frame assembly.



Do not remove the lifting device until the hitch frame is attached and the jack stand is installed.

Note: The hitch frame assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107 – QT-113	1632	740

Note: Attaching the hitch frame to the main frame requires three mounting pins, bolt s, and lock nuts. There is also a Category 3 and Category 4 adapter for the hitch.

- a. Secure the hitch frame to the lifting device.
- b. Position the frame assembly and install the lower two retaining pins.





c. Raise the turn buckle and install the retaining pin.



d. Install a 1/2 x 2-3/4" Grade 8 bolt and lock nut in the turnbuckle retaining pin. Install the 9/16 x 3-1/2" Grade 8 bolts and lock nuts in the frame retaining pins. Tighten all three lock nuts completely.



20. Remove the jack stand from its storage position and install it, as shown.





21. Install the appropriate Category 3 or Category 4 insert in the hitch.





22. Install the chisel shank assemblies in the proper locations (quantities vary according to size of unit). Refer to the Chisel Shank Location Diagram in this manual for exact placement.

Note: The chisel shank assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107 – QT-113	164	74

Note: Attaching the chisel shank assembly requires one mounting plate and four bolts, lock washers, and nuts.



 Securely attach a lifting device to the chisel shank assembly.



Do not remove the lifting device until the assembly is securely attached to the frame.

- b. Align the chisel shank assembly with the mark previously placed on the frame. The chisel shank assemblies are right and left-handed and must be installed properly. Left-hand shanks have shovels that twist towards the left side of the unit while right-hand shanks twist to the right. Refer to layout diagrams in this manual for exact placement.
- c. Install the four 3/4 x 2-1/2" Grade 8 bolts, lock washers, and nuts. Tighten the nuts completely.
- d. Once the assembly is attached to the frame, remove the lifting device.
- 23. Install the leveler disk mounting arms.

Note: The leveler disk mounting arm weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107 – QT-113	300	136

Note: Attaching the leveler disk mounting arms requires eight bolts, lock washers, and nuts. When installing the arms, the transport lock and stop collar storage should be positioned towards the outside of the unit.



a. Securely attach a lifting device to the leveler disk mounting arms.



Do not remove the lifting device until the assembly is securely attached to the frame.

- Align the bolt holes in the leveler disk mounting arms with the mounting plates on the frame. The mounting arms are right and left-handed and must be installed properly.
- c. Install the eight 5/8 x 8-1/2" bolts, lock washers, and nuts. Tighten the nuts completely.



d. Once the assembly is attached to the frame, remove the lifting device.

16

24. Attach and completely tighten the hydraulic hoses to the transport cylinders and the leveler disk cylinders.





- 25. Route and connect the hydraulic hoses.
 - a. Connect the hose with the hydraulic fitting (A) on the main frame to the shut off valve on the hitch frame.





 Route five hoses with colored handles through the retaining bracket on the hitch frame. Also, route the wiring harness through "Main Lift" opening in the bracket.



26. Connect the six hydraulic hoses to a suitable tractor.



Note: The most commonly used function of the unit is the "main lift" cylinders, which raise and lower the transport wheels. Connect the hydraulic hoses for this function into the port used most commonly to operate hydraulic functions of tillage equipment.

- 27. Remove trapped air from the hoses and cylinders.
 - a. Extend the leveler disk cylinders completely and hold for 30 seconds. This procedure will sequence the cylinders so they both raise and lower at the same time. Repeat this process at least twice or until the cylinders extend simultaneously.
 - b. Remove the transport locks. Raise and lower the transport wheel cylinders three times.
 - c. Raise and lower the disk gang cylinder three times.
- 28. Close the hydraulic circuit shut off valve to prevent movement of the transport cylinders.



29. Attach the leveler disk to the leveler disk mounting arms. Do not attach the leveler disk assembly until the cylinders have been sequenced. Refer to the previous steps.

Note: The leveler disk assembly weighs:

Model	Weight in Pounds	Weight in Kilograms
QT-107	1041	472
QT-109	1221	554
QT-111	1434	650
QT-113	1606	728

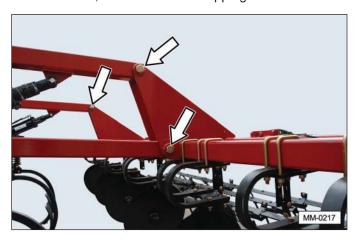
Note: Attaching the leveler disk mounting arm requires four bolts and lock nuts.

a. Connect the lifting device to the leveler disk.

Use care when positioning the leveler disk. Sharp objects can cause severe injury.



 b. Lift the frame into position and install the four 1-1/4 x 8" Grade 8 bolts and lock nuts. Once installed, remove the two shipping stands.



30. Assemble the harrows.

Note: The harrow assemblies weigh:

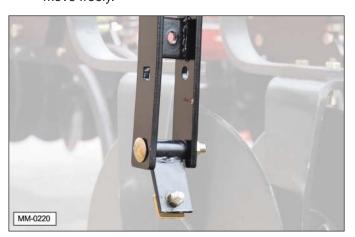
Model	Weight in Pounds	Weight in Kilograms
QT-107	422	191
QT-109	512	232
QT-111	563	255
QT-113	612	278



- a. Remove the harrow lift arms from the hardware crate.
- b. Bolt the two outer lift arms to the leveler disk along with the taillights with four 5/8 x 2" bolts, lock washers, and hex nuts. Then, attach the inner lift arms. Tighten the nuts completely.



c. Attach the four pivot brackets to the pull arms using a 5/8 x 4" carriage bolt and lock nut. Do not overtighten the locknut. The pivot bracket must move freely.



d. Attach both ends of the short and long chains, as shown, using a 1/2 x 1-3/4" bolt, square washer, and lock nut. Tighten the nuts completely.







31. Attach the Slow Moving Vehicle (SMV) sign to the leveler disk. The sign should be placed on the left side of the unit, between the two outer lift arms.

Note: Attaching the SMV sign requires a 1/2 x 4 x 5" U-bolt, two lock washers, and two hex nuts.

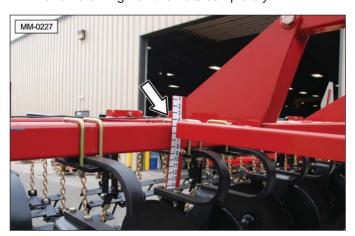


32. Attach the depth adjustment indicator gauge and the indicator arm.

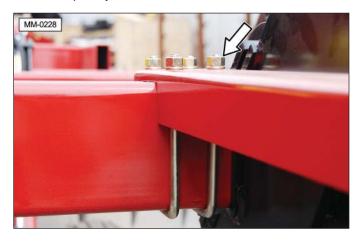


Note: Attaching the depth adjustment indicator arm and gauge requires three U-bolts, lock washers, and nuts.

a. Attach the depth adjustment indicator gauge to the leveler disk with a 1/2 x 4 x 5" U-bolt, lock washers, and nuts. Tighten the nuts completely.



 b. Attach the depth adjustment indicator arm to the chisel shank frame with two 1/2 x 4 x 7-1/4" U-bolts, lock washers, and nuts. Tighten the nuts completely.



33. Attach the front disk gang indicator arm to the disk frame (indicator is shipped in the hardware crate). Use a 1/2 x 1-1/4" bolt and lock nut. Tighten the nut completely.



34. Plug the wiring harness into the rear taillights on each side. Connect the cable to the frame with a cable clamp, a 1/4 x 1-1/4" bolt, lock washer, and nut. Connect the clamp through the drilled hole in the frame. Tighten the nut completely.





35. Add grease to the locations shown in the photo on the following page. Refer to the Operator's Manual for additional information on periodically greasing the unit.

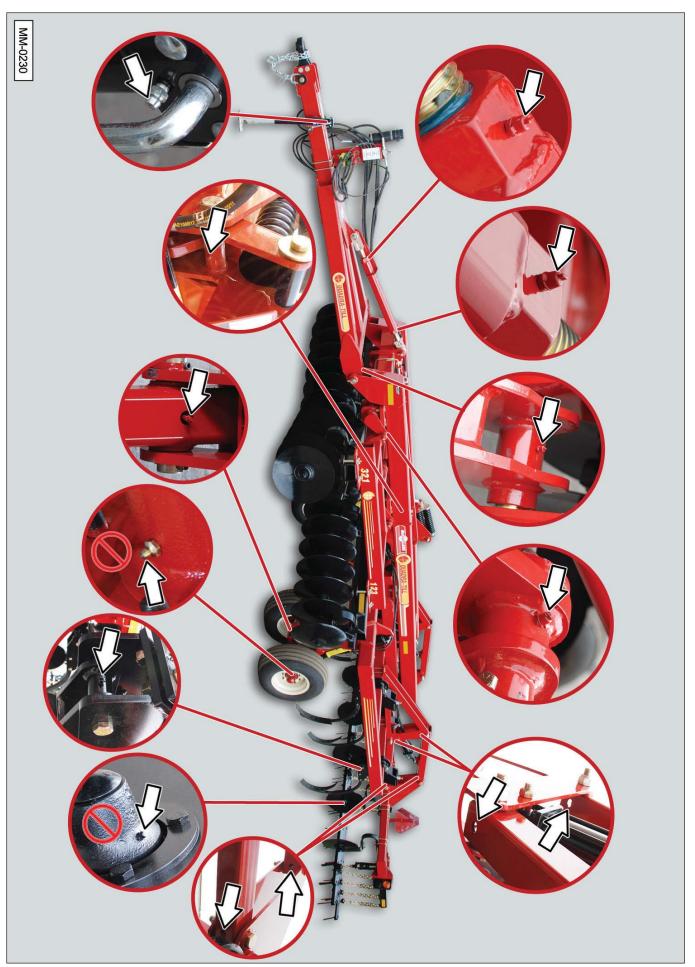
When greasing a pin and bushing, add grease until it is visibly forced out of the joint.

Clean, repack, and adjust the wheel bearings and leveller disk bearings annually. Use only wheel bearing grease when repacking these units.

NOTICE

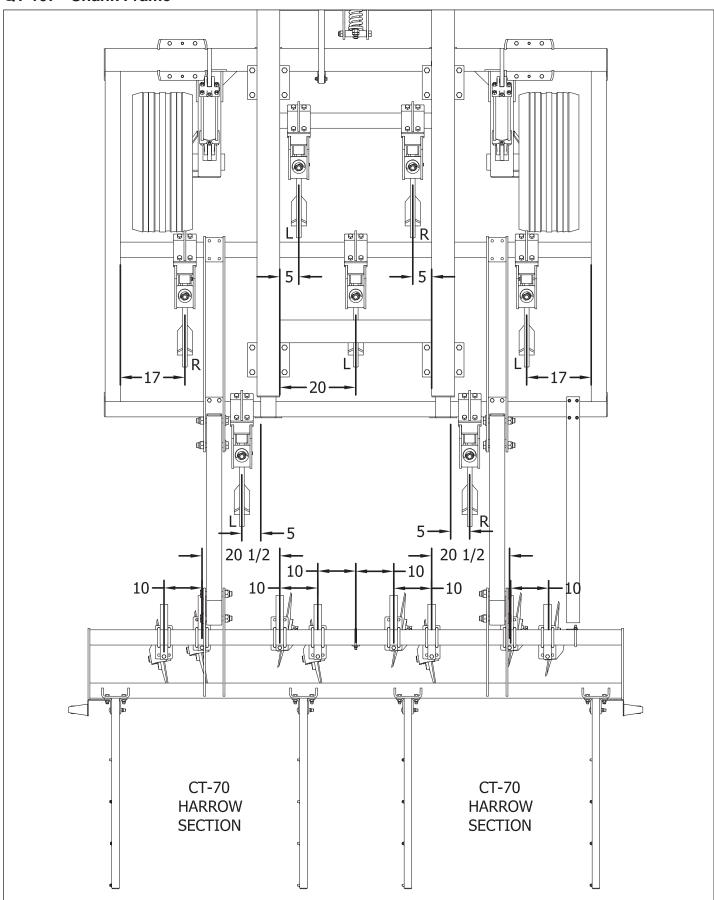
Wheel bearings and leveler disk bearings do not require lubrication during the initial assembly of the unit. These bearings should be greased sparingly every 50 hours of service. Check for end play in the bearings, prior to adding grease.

36. Refer to Operator's manual for an initial setup procedure.

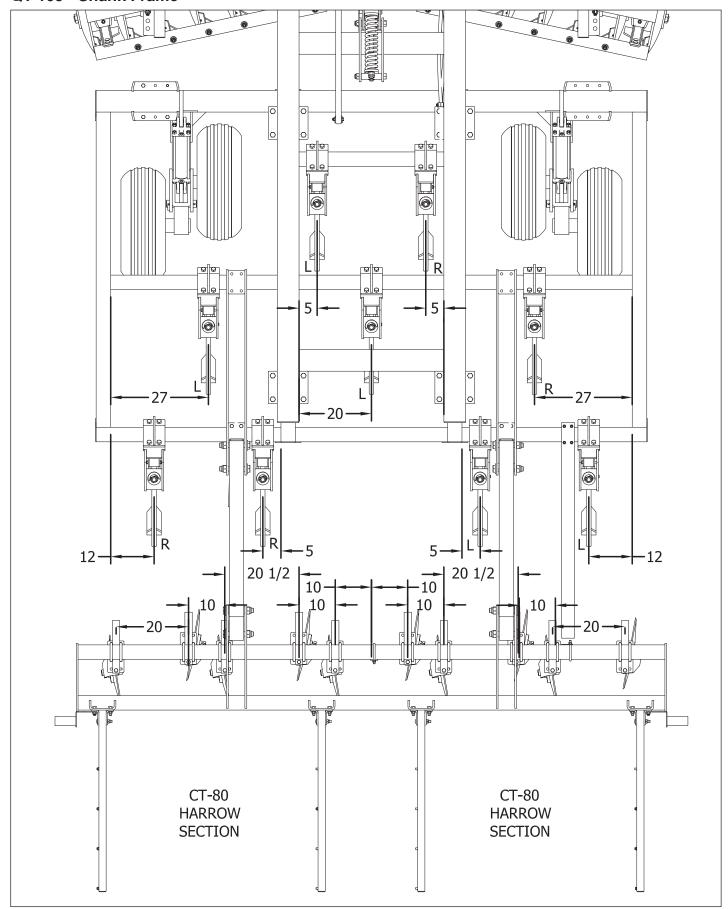


Chisel Shank Location Diagram

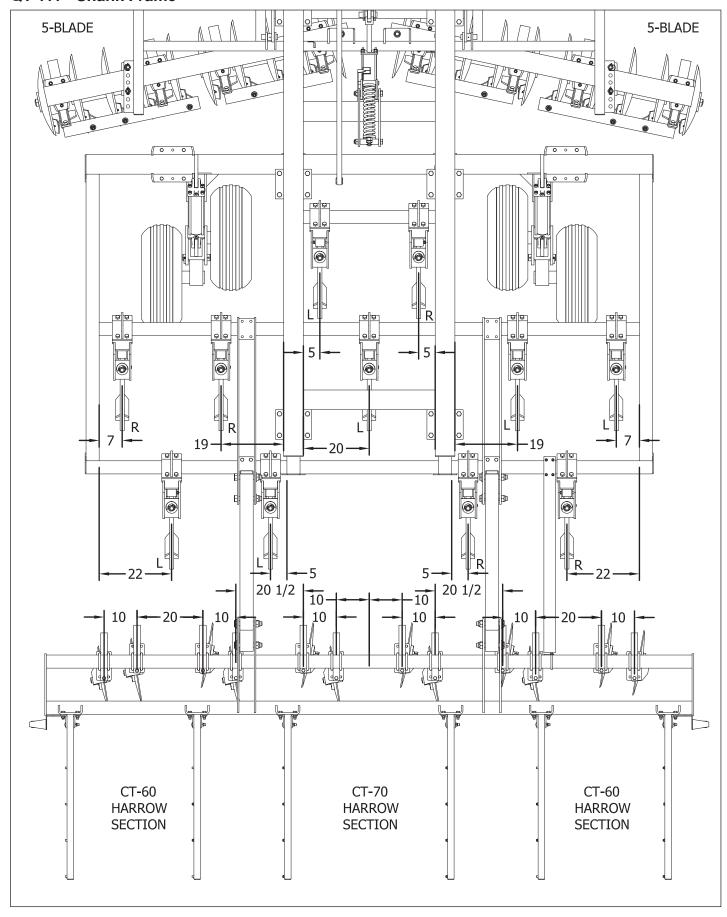
QT-107 - Shank Frame



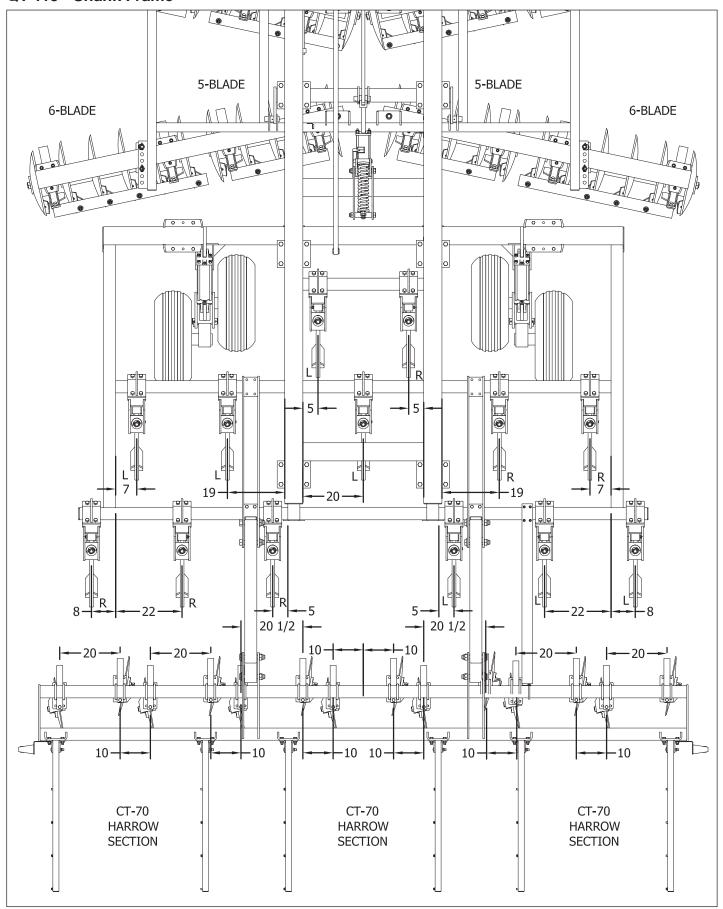
QT-109 - Shank Frame



QT-111 - Shank Frame



QT-113 - Shank Frame



Parts List

Main Frame

Item	Part Number	Description	Qty.
1	QT-1007	MAIN FRAME WITH DECALS	1
2	QT-1118	DISK SPRING BRACKET ASSY	1
3	QT-1120	SPRING SYSTEM MOUNT ASSY	1
4	QT-1121	SPRING SYSTEM ADJUSTMENT ASSY	1
5	QT-1001	SPRING, 3-1/2 X 16	2
6	QT-1047	DISK DEPTH GAUGE W/DECAL	1
7	QT-1022	HYD STOP TUBE ASSEMBLED W/DECAL	1
8	QT-1139	HYD STOP AXLE BRACKET	1
9	QT-1017	DISK HITCH LINKAGE	1
10	QT-1019	DISK HITCH PIVOT	1
11	QT-1020	DISK HITCH PIVOT REAR	1
12	RT-2115	TURNBUCKLE WRENCH, 3"	1
13	LB-1440	LIGHT HARNESS, WISHBONE, 20' (40')	1
14	LB-1330	LIGHT HARNESS, STRAIGHT, 30'	1
15	HYO-3021	HYD STOP VALVE, RESTRICTED	1
16	HYF-0150	1/2" STRAIGHT THREAD O-RING PLUG	1
17	HYF-1222	1/2" BULKHEAD UNION TEE W/NUT	2
18	HYF-2022	1/2" 90 DEGREE ELBOW-SWIVEL NUT	5
19	HYF-2220	90 DEGREE 1/2" MJIC-1/2" MOR	3
20	HYF-3220	1/2" STRAIGHT THREAD O RING CONNECTOR	9
21	HYH-2050	HM1T 08 x 608 x 50"	1
22	HYH-2066	HM1T 08 x 608 x 66"	1
23	HYH-2072	HM1T 08 x 608 x 72"	1
24	HYH-2085	HM1T 08 x 608 x 85"	1
25	HYH-2090	HM1T 08 x 608 x 90"	2
26	HYH-2107	HM1T 08 x 608 x 107"	1
27	HYH-2136	HM1T08 x 608 x 136"	1
28	HYH-2213	HM1T 08 x 608 x 213"	1
29	HYH-2255	HM1T 08 x 608 x 255"	1
30	HYH-2101	HM1T 08 x 608 x 101"	1
31	HYH-5168	HM1T 08 x 608 x 108R x 168" W/571-4 & HYF-5221 W/HYDRA GRIP RED	2
32	HYH-3265	HM1T 08 x 608 x 108 x 265" W/571-4 W/HYDRA GRIP YELLOW	1
33	HYH-3168	HM1T 08 x 608 x 108 x 168" W/571-4 W/HYDRA GRIP GREEN	2

Hitch Frame with Decals

Item	Part Number	Description	Qty.
1	QT-1016	HITCH FRAME W/DECALS	1
2	RT-3146	HITCH TURNBUCKLE ASSEMBLY-30"	1
3	PPI-400	HITCH BASE, CAT IV	1
4	RT-2114	TURNBUCKLE LOCK, 3"	1
5	QT-1005	JACK, SQ-15", 5000#	1
6	RD-4306	MANUAL STORAGE TUBE	1
7	RD-4308	HYDRAULIC HOSE RACK	1
8	RD-4309	HYDRAULIC HOSE RACK CLAMP W/DECAL	1
9	LB-1110	LIGHT PLUG STORAGE	1
10	CH-1816	SAFETY CHAIN, 16,100 POUNDS	1
11	HYF-3220	1/2" STRAIGHT THREAD O-RING CONNECTOR	2
12	QT-1058	HYD LOCK VALVE	1
13	HYH-3080	HM1T 08 x 608 x 108 x 80" w/571-4 W/HYDRA GRIP YELLOW	1

Disk Frame with Decals

Item	Part Number	Description	Qty.
1	QT-1008	DISK FRAME 9 W/DECALS	1
2	QT-1102	DISK GANG, 7-BLADE, FRONT LT 9	1
3	QT-1103	DISK GANG, 7-BLADE, FRONT RT 9	1
4	QT-1104	DISK GANG, 8-BLADE, REAR LT 9	1
5	QT-1105	DISK GANG, 8-BLADE, REAR RT 9	1
6	QT-1048	DISK DEPTH GAUGE INDICATOR	1

Chisel Shank Frame with Decals

Item	Part Number	Description	Qty.
1	QT-1010	CHISEL FRAME 9 W/DECALS	1
2	QT-1014	MAIN AXLE	1
3	QT-1015	AXLE WALKER BEAM L & R	2
4	QT-1139	HYD STOP AXLE BRACKET	1
5	HYF-2220	90 DEGREE 1/2" MJIC-1/2" MOR	4
6	HYC-34012	HYD CYLINDER, 4 x 12	2

Leveler Disk Tool Bar and Mounting Frames

Item	Part Number	Description	Qty.
1	QT-1044	LEVELER TOOLBAR, 9	1
2	QT-1029	LEVELER DISK, LT W/SPRINGS & DISK	5
3	QT-1030	LEVELER DISK, RT W/SPRINGS & DISK	5
4	QT-1040	LEVELER FRAME MOUNT ASSY LH	1
6	QT-1042	LEVELER LINKAGE TUBE	1
7	QT-1043	LEVELER LINKAGE CYLINDER TUBE	1
8	HYF-2220	90 DEGREE 1/2" MJIC-1/2" MOR	2
9	HYS-1212	CYLINDER LOCK, 1-1/2 x 12	1
10	HYA-33008	HYD CYLINDER, ASAE 3-3/4 x 8	1
11	HYS-1316	CYL COLLAR, 1-3/8 to 1-1/2 HD SHORT SET	1
12	QT-1041	LEVELER FRAME MOUNT ASSY RH	1
13	HYA-4008	HYD CYLINDER, ASAE 4 x 8	1

Miscellaneous Hardware (A)

Item	Part Number	Description	Qty.
1	HB-0901	HARDWARE	1
2	LB-1103	WIRE HARNESS CLIP	2
3	RT-2124	LEVEL LIFT TUBE PIN, 1-1/4 x 7-1/2	1
4	RT-2107	HINGE PIN, 1-1/2 x 9-5/8	2
5	WN-0063	WHEEL NUT, 5/8"	32
6	QT-1057	DISK FRAME HITCH PIN, 1 x 5-3/8	4
7	BU-1247	U-BOLT, 1/2 x 4 x 7-1/4	2
8	BU-1245	U-BOLT, 1/2 x 4 x 5	2

Miscellaneous Hardware (B)

Item	Part Number	Description	Qty.
1	BB-0909	BOLT BAG, QT 109 SECTIONS & ARMS	1
2	CH-0805	CHAIN, 3/8 x 5-LINK	4
3	CH-0816	CHAIN, 3/8 x 16-LINK	16
4	BH-6320	BOLT, HEX, 5/8 X 2	32
5	BH-5018	BOLT, HEX, 1/2 X 1-3/4	40
6	HDD-016	SQUARE WASHER, 1/2"	40
7	FA-4105	PULL HOOK	4
8	BC-6340	BOLT CARRIAGE, 5/8 X 4	4
9	NH-6311	NUT, HEX, 5/8	32
10	LW-0063	WASHER, LOCK, 5/8	32
11	NLT-6311	NUT, TOP LOCK, 5/8	4
12	NLT-5013	NUT, TOP LOCK, 1/2	40

Miscellaneous Frame Hardware (C)

	Part Number	Description	Qty.
Item 1	BB-0901	BOLT BAG, QT-100 FRAME	1 1
2	BB-0901 BH-2513	BOLT, HEX, 1/4 X 1-1/4	10
3	BH-3823	BOLT, HEX, 3/8 X 2-1/4	4
4	BH-5015	BOLT, HEX, 1/2 X 2-3/4	1
5	BH-5045	BOLT, HEX, 1/2 X 4-1/2	4
6	BH-6385	BOLT, HEX, 5/8 X 8-1/2	16
7	BH-8830	BOLT, HEX, 7/8 X 3	16
8	BHY-1380	BOLT, HEX, 1-1/4 X 8, Grade 8	4
9	BHY-5635	BOLT, HEX, 9/16 X 3-1/2, Grade 8	2
10	BHY-7525	BOLT, HEX, 3/4 X 2-1/2, Grade 8	36
11	LW-0025	WASHER, LOCK, 1/4	10
12	LW-0050	WASHER, LOCK, 1/2	8
13	LW-0063	WASHER, LOCK, 5/8	16
14	LW-0075	WASHER, LOCK, 3/4	36
15	LW-0088	WASHER, LOCK, 7/8	16
16	NH-2520	NUT, HEX, 1/4	10
17	NH-5013	NUT, HEX, 1/2	8
18	NH-6311	NUT, HEX, 5/8	16
19	NH-7510	NUT, HEX, 3/4	36
20	NH-8809	NUT, HEX, 7/8	16
21	NLT-3816	NUT, TOP LOCK, 3/8	4
22	NLT-5013	NUT, TOP LOCK, 1/2	5
23	NLT-5612	NUT, TOP LOCK, 9/16	2
24	NY-1307	NUT, NYLON LOCK, 1-1/4	4

Harrow

Item	Part Number	Description	Qty.
1	CT-80	CT-80 4 BAR SECTION	2

Chisel Shank Assemblies

Item	Part Number	Description	Qty.
1	QT-1031 LH	CHISEL MOUNT W/SHANK AND POINT LH	5
2	QT-1031 RH	CHISEL MOUNT W/SHANK AND POINT RH	4

Miscellaneous Hardware (D)

Item	Part Number	Description	Qty.
1	CR-0909	CRATE, QT 109	
2	QT-1141	LIFT ARM, QT 4-BAR - 48" TWO W/ YELLOW REFLECTORS LH / RH	4
3	QT-1037	CHISEL CLAMP	9
4	RT-3185	HUB W/SPINDLE, 2-3/4 x 12-1/2, 8-BOLT HD	4
5	QT-1049	LEVELER DEPTH GAUGE INDICATOR	1
6	QT-1050	LEVELER DEPTH GAUGE W/DECAL	1
7	LB-1101	LIGHT, LEFT	1
8	LB-1102	LIGHT, RIGHT	1
9	QT-1135	LIGHT BRACKET, QT	2
10	QT-1134	SMV BRACKET, 4" W/ SIGN	1
11	HB-0901	HARDWARE, QT 100	1
12	BB-0901	BOLT BAG, QT-100 FRAME	1
13	BB-0909	BOLT BAG, QT 109 SECTIONS & ARMS	1
14	_	RED PAINT	1
15	_	BLACK PAINT	1
16	_	CABLE TIES	20

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