MechMaxx
RELIABLE EFFICIENT VALUE

MCH70 70" 3-POINT HITCH BRUSH MULCHER



OPERATOR'S MANUAL

This manual contains important safety precautions. Read and understand this manual carefully before using the product. Failure to follow these instructions may result in serious injury.

The specifications, descriptions, and illustrations in this manual are as accurate as possible at the time of publication, but are subject to change without notice.

Keep this manual with the product for future reference.

INTRODUCTION

Before operating the machine, please read this manual carefully and make sure you understand all safety warnings, assembly instructions, operating procedures, maintenance requirements, and troubleshooting information. Proper assembly, safe operation, and regular maintenance will help ensure reliable performance, extend the service life of the machine, and reduce the risk of personal injury or equipment damage.

The illustrations and specifications in this manual are for reference only. The actual product may vary slightly due to model configuration, production updates, or technical improvements. If you have any questions during assembly, operation, or maintenance, stop using the machine and contact your dealer or service representative for assistance.

This machine is designed for specific applications only. We strongly recommend that this machine not be modified or used for any application other than its intended purpose. If you have any questions regarding a particular application, DO NOT use the machine until you have contacted us to determine whether the application can or should be performed with this product.

Ordering Parts

Use only genuine MechMaxx parts when servicing or repairing this machine. Replacement parts manufactured by other companies may fit this machine, but they may present potential safety hazards. Replacement parts can be purchased from your authorized MechMaxx dealer.

- The serial number of your machine
- The part number
- The part description
- The quantity needed

SCAN THE QR CODE TO CONTACT US



MechMaxx
RELIABLE EFFICIENT VALUE

3- POINT HITCH
BRUSH MULCHER

Model:		Working Width:	
Net Weight:		Year:	
Serial No.:			

www.mechmaxx.com

Safety Definitions

⚠ DANGER!

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

⚠ WARNING!

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

⚠ CAUTION!

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.

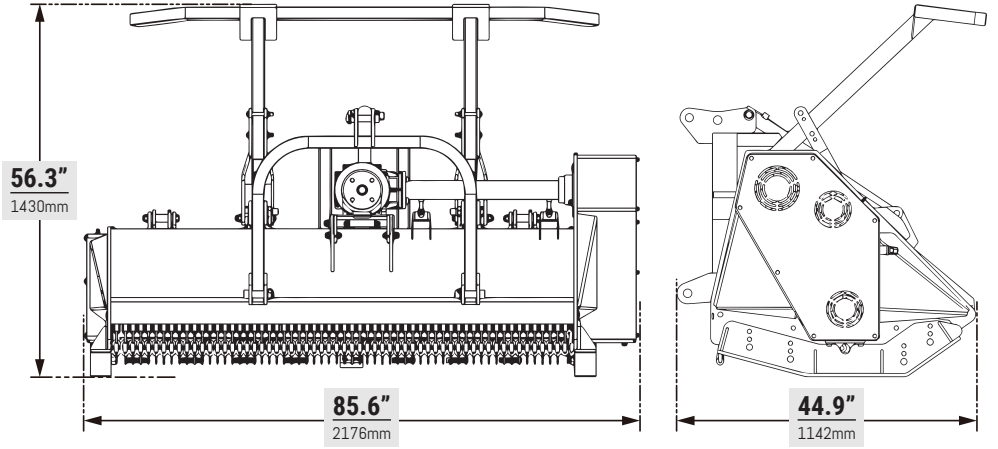
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SPECIFICATIONS

Model	MCH70
Recommended PTO HP	70-110 HP
Working Width	70 in
PTO Speed	540 RPM
Number Of Blades	32 pcs
3-Point Hitch	CAT 2
Weight	1984 lbs
Gearbox Oil Type	85W-90

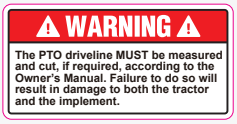
Overall Dimensions



SAFETY SIGNS

The SAFETY SYMBOL indicates there is a potential hazard to personal safety involved and extra safety precaution must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to 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.

LABEL	MEANING
	**ENGINE OIL WARNING LABEL** This label reminds users to add the correct engine oil before first use to prevent engine damage.
	**OPERATOR'S MANUAL WARNING LABEL** This label reminds users to read and understand the operator's manual before using the machine.
	**PTO SPEED CAUTION LABEL** This label warns users to operate the machine only with a 540 RPM PTO to avoid injury or machine damage.
	**REVERSE MOWING WARNING LABEL** This label warns users not to mow in reverse, as doing so may cause damage to the mower.
	**STAY BACK DANGER LABEL** This label warns all bystanders to stay at least 150 ft away from the machine during operation.
	**ROTATING KNIVES DANGER LABEL** This label warns users to keep away from rotating knives. Do not go under the frame while the rotor or engine is running. Disconnect and lock out the power source before adjustment or service.
	**GUARD MISSING DANGER LABEL** This label warns users not to operate the machine if the guard is missing or removed, as this creates an entanglement hazard.

LABEL	MEANING
	**ROTATING DRIVELINE DANGER LABEL** This label warns users to keep away from the rotating driveline. Do not operate the machine unless all driveline guards, tractor shields, and equipment shields are installed and the driveline is securely attached.
	**BELT DRIVE WARNING LABEL** This label warns users of hand and arm entanglement hazards from the belt drive. Do not open or remove safety shields while the engine is running.
	**ROTATING BLADES DANGER LABEL** This label warns users to keep hands away from rotating blades. Contact with the blades can cause serious injury or amputation.
	**PTO DRIVELINE WARNING LABEL** This label warns users to measure and cut the PTO driveline according to the owner's manual before operation. Incorrect driveline length may damage both the tractor and the implement.
	**PTO STARTUP WARNING LABEL** This label warns users to engage the tractor clutch slowly during startup to prevent damage. Keep the PTO shaft within 25° of level during operation.
	**HIGH PRESSURE FLUID DANGER LABEL** This label warns users that high-pressure fluid leaks can pierce the skin and cause serious injury or death. Release system pressure before service, use wood or cardboard to check for leaks, and never use fingers.
	**GENERAL SAFETY WARNING LABEL** This label reminds users to read the manual, keep guards in place, stay away from moving parts, keep children away, clear debris, and stop the engine before service or dismounting.

They were designed to help you safely operate your implement. Read and follow their directions.

1. Keep all safety labels clean and legible.
2. Replace all damaged or missing labels. mechmaxx.com
3. Some replacement components installed during repair require safety labels to be affixed as specified by MechMaxx. When ordering new components make sure the correct safety labels are included in the request.

SAFETY

General Safety

⚠WARNING!

Read and understand this manual and all safety labels attached to the machine before operation. Become familiar with the machine's **controls, limitations, proper operation, and potential hazards.**



With any piece of equipment, new or used, the most important part of its operation is safety! We encourages you and your employees to familiarize yourselves with your new equipment and to stress safe operation!!

⚠WARNING!

If this machine is loaned, rented, sold, or used by someone other than the original purchaser, always provide this manual and proper safety training before operation.

Personal Safety

⚠DANGER!

Never allow children to operate this machine.

⚠WARNING!

Keep children, pets, and bystanders away from the work area. Stop the machine immediately if anyone enters the operating area.



Do not operate the machine while under the influence of **alcohol, drugs, or medication** that may affect your ability to operate it safely.

⚠WARNING!

Always wear proper personal protective equipment during operation, including **safety glasses with side shields, hearing protection, gloves, heavy long pants, and protective footwear.**



Do not wear **loose clothing, shorts, sandals, or jewelry**. Tie back long hair so that it is above shoulder level.

Prior to Operation

- Read the owner's manual in its entirety and follow all safety procedures.
- Check all grease points per the owner's manual.
- Inspect all fasteners for tightness with power off.
- Manually turn rotor to inspect tool bolts with engine off.
- Check the gearbox oil (PTO models) for the proper level per the owner's manual.
- Obey all safety labels on the forestry mulcher. They are provided for your protection. If any labels are removed, damaged, or made unreadable in any way, call your dealer for a replacement.

Description and Applications

The hitch brush mulcher is built for demanding brush shredding, land clearing, trail maintenance, and stump grinding applications. Its heavy-duty fixed tools are designed to cut through dense vegetation and reduce material into fine mulch.

By making repeated passes over the material, the mulcher helps achieve the desired particle size and finish. The shredded mulch can be left on the ground to help retain moisture, improve soil condition, and provide temporary erosion control on slopes.

Operational Safety – Work Area

For the purpose of this manual, the front of the mulcher refers to the side where the rotor is exposed. The rear of the mulcher refers to the side equipped with deflection chains.

For crawler or rubber-tire carrier machines, if the mulcher is mounted on the front of the machine, the front of the mulcher faces the same forward direction as the carrier. If the mulcher is mounted on the rear of the machine, the front of the mulcher faces away from the rear of the carrier.

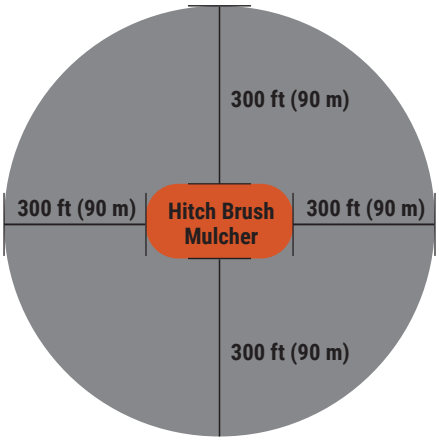
Mounting positions may vary for excavators and other boom-type machines. However, all references to the front and rear of the mulcher in this manual remain based on the rotor side and deflection-chain side.

The Hazard Zone

Flying debris, thrown objects, and falling objects can cause serious injury or death. Improper operation or failure to follow safety precautions may also result in serious injury or death.

All personnel must stay clear of the hazard zone while the mulcher is operating. The shaded area in the figure must be considered off limits to all individuals.

The operator must follow the precautions below before and during mulcher operation.



Hazard Zone Precautions

It is the operator's responsibility to make sure that no one enters the hazard zone.

Warn all persons in the area about the hazard zone before starting operation.

Stay alert for bystanders or unauthorized persons entering the work area who may not be aware of the hazard.

Land clearing operations often involve other machines, vehicles, and workers on the jobsite. Always be aware of surrounding traffic and activity.

Maintain a safe clearance of at least 150 ft (45 m) on each side of the mulcher and 300 ft (90 m) in front of and behind the mulcher during operation.

Dangerous Locations

Flying debris, thrown objects, and falling objects can cause serious injury or death. Improper operation or failure to follow safety precautions may also result in serious injury or death.

All personnel must stay clear of the hazard zone while the mulcher is operating. The most dangerous areas are directly in front of and behind the mulcher.

Wood pieces, rocks, and other debris may be thrown from the mulcher, especially when the mulcher is raised high enough for material to escape

Precautions

1. Never allow anyone to enter the safety zone while the mulcher is operating.
2. Inspect the carrier and mulcher daily for damaged or missing deflection chains, guards, and flaps.

Use extra caution in the following situations:

- When the mulcher is being raised out of the material being processed.
- When the mulcher is being lowered into new material.
- When working near rocks, wood debris, or uneven ground.

If equipped, close the hydraulic trap door during pull-working to help contain material and produce a finer shredded result.

Urban Precautions

Additional safety procedures and precautions are required when operating the mulcher in or near populated areas, including:

- Streets or highways
- Parks, golf courses, or other public areas
- Residential, commercial, or occupied areas
- Buildings, fences, utilities, or other structures

Before operation, establish safety controls suitable for the jobsite. Secure the work area with colored warning tape, cones, signs, or barriers as needed.

When working near highways or roads, place warning signs at least 1,000 ft (300 m) before the edge of the hazard zone. Use a traffic director whenever the hazard zone may affect pedestrian or vehicle traffic.

Keep all pedestrians, vehicles, and unauthorized persons outside the hazard zone at all times.

Avoid Power Lines

Contact with overhead power lines can cause serious injury or death. Never allow any part of the equipment, attachment, or carried material to come close to an electric line.

Maintain a minimum clearance of 3 m (10 ft) plus twice the length of the line insulator from all power lines. Use a signal person to guide the operator when working near overhead lines. Use approved protective covers, shrouds, or insulators when required.

Always be aware of the direction in which trees may fall. Direct falling trees away from power lines at all times.

Operator Protection

Flying debris, thrown objects, and falling objects can cause serious injury or death. The operator must be properly protected before operating the mulcher.

Replace any damaged, missing, or weakened polycarbonate windows, guards, or falling object protection components before operation.

Improper operation or failure to follow safety precautions may result in serious injury or death. All personnel must stay clear of the hazard zone while the mulcher is operating.

Carrier Cab Protection

For PTO Carriers

Install 1/2 in. (1.25 cm) thick polycarbonate, or equivalent material, in place of or outside the cab glass between the operator and the mulcher.

A steel mesh screen with a maximum opening size of 2 in. (5 cm) and a wire diameter of 1/4 in. (0.6 cm) is recommended outside the cab, between the mulcher and the operator, to help protect the polycarbonate from scratches and damage.

For Forestry Prime Movers with Enclosed Cabs

Install 1/2 in. (1.25 cm) thick polycarbonate, or equivalent material, in place of or outside the cab glass between the operator and the mulcher.

A steel mesh screen with a maximum opening size of 2 in. (5 cm) and a wire diameter of 1/4 in. (0.6 cm) is recommended outside the cab, between the mulcher and the operator.

For Excavators and Boom-Type Carriers with Enclosed Cabs

The front cab window facing the boom should be protected with 1/2 in. (1.25 cm) thick polycarbonate, or equivalent material, installed in place of or outside the cab glass between the operator and the mulcher.

A steel mesh screen with a maximum opening size of 2 in. (5 cm) and a wire diameter of 1/4 in. (0.6 cm) is recommended outside the cab, between the mulcher and the operator, to help protect the polycarbonate from scratches and damage.

Stopping the Rotor Before Exiting the Carrier

Contact with a moving rotor can cause serious injury or death. Never exit the carrier until the rotor has completely stopped.

To stop the rotor:

1. Lower the engine speed to idle.
2. Shut off the mulcher hydraulic circuit or PTO drive.
3. If safe to do so, lower the mulcher and allow the rotor to contact the ground or debris until it stops.

If there is no safe place to stop the rotor, remain in the cab and wait until the rotor has come to a complete stop before exiting.

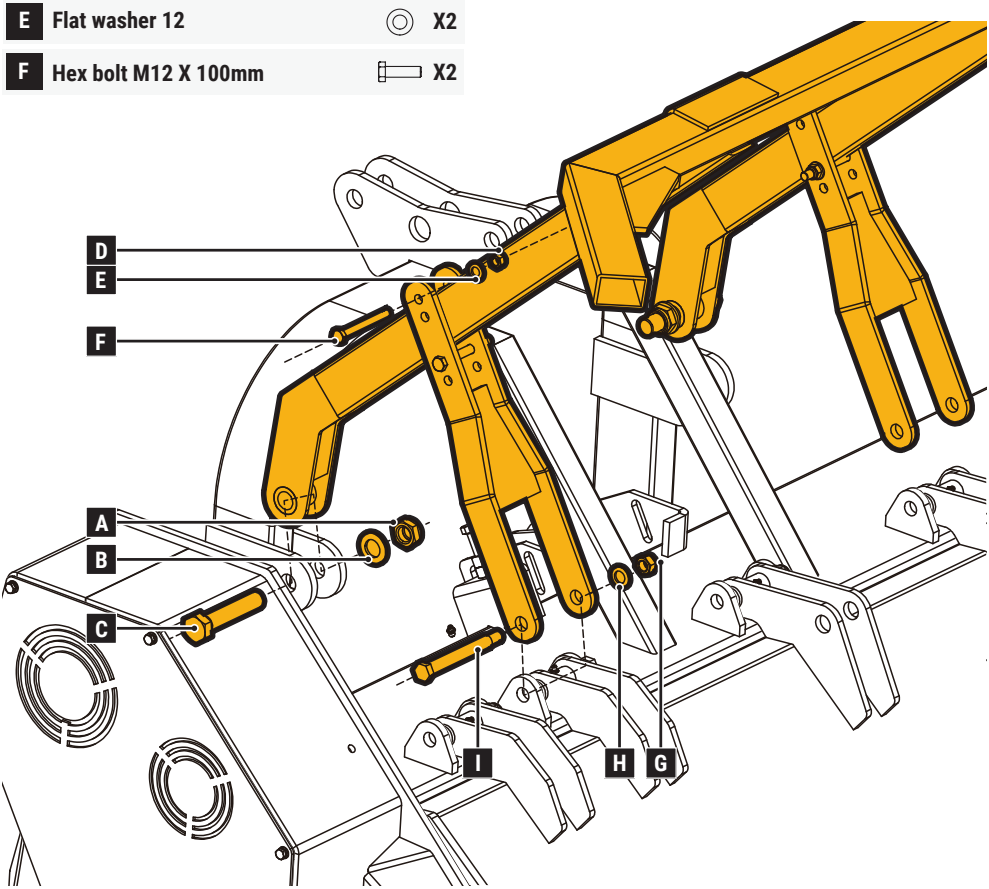
Even if certain safety precautions are not specifically mentioned above, always remain alert, follow safe operating practices, and operate the machine properly according to this manual and the engine manual.

ASSEMBLY

Safety Frame Assembly

1. Secure the safety frame to the headstock using Hex Bolt M24 × 120, Flat Washer 24, and Hex Nut M24.
2. Install the brackets onto the safety frame using Flat Washer 12, Hex Bolt M12 × 100, and Hex Nut M12.
3. Secure the safety frame using the fixing shaft, Flat Washer 16, and Hex Nut M16.

A	Hex lock nut M24	X2
B	Flat washer 24	X2
C	Hex bolt M24 X 120mm	X2
D	Hex lock nut M12	X2
E	Flat washer 12	X2
F	Hex bolt M12 X 100mm	X2
G	Hex lock nut M16	X2
H	Flat washer 16	X2
I	Fixing Shaft	X2



ATTACH MULCHER TO TRACTOR

The following instructions will help you attach the brush mulcher to your tractor.

The brush mulcher uses a 3-point hitch system for easy installation. If you have installed 3-point hitch equipment before, attaching the brush mulcher should be straightforward.

IMPORTANT: A front counterweight may be required for safe transportation and operation of the tractor and brush mulcher. At least 20% of the gross vehicle weight must remain on the tractor's front axle.

Mounting Instructions

1.Park the tractor and brush mulcher on firm, level ground.

2.Stop the tractor engine, set the parking brake, and remove the ignition key before installation.

3.Make sure the tractor horsepower and hitch category are within the required range for the brush mulcher.

4.Slowly back the tractor toward the brush mulcher until the lower 3-point hitch arms are aligned with the lower hitch pins on the brush mulcher.

5.Attach the lower hitch arms to the lower hitch pins and secure them with locking pins or linchpins.

6.Attach the tractor top link to the upper hitch point of the brush mulcher and secure it with the proper pin.

7.Adjust the top link until the brush mulcher is level and properly positioned.

8.Stabilize the lower 3-point hitch arms to prevent excessive side-to-side movement.

9.Connect the PTO shaft to the tractor PTO output shaft and the brush mulcher gearbox input shaft. Make sure the locking devices are fully engaged.

10.Check that the PTO shaft length is suitable and that the shaft can telescope freely throughout the full lifting range.

11.Attach the PTO shaft safety chains to prevent the guards from rotating.

12.Slowly raise and lower the brush mulcher with the tractor 3-point hitch to check for proper clearance. Make sure the PTO shaft does not bind or contact the tractor or brush mulcher.

13.Check all pins, bolts, guards, and shields before operation. Make sure everything is securely installed.

14.Start the tractor at low idle, engage the PTO slowly, and check that the brush mulcher operates smoothly before beginning work.

Note: To disconnect the brush mulcher from the tractor, follow the above steps in reverse order.

When connecting the brush mulcher to the tractor, route the hydraulic hoses as far away from the operator as possible. Keep the hoses away from sharp edges and prevent them from dragging on the ground.

Hydraulic Hose Connection

1.Stop the tractor engine, set the parking brake, and relieve all hydraulic pressure before connecting the hydraulic hoses.

2.Clean the hydraulic couplers on both the tractor and the brush mulcher to prevent dirt or contaminants from entering the hydraulic system.

3.Connect the brush mulcher hydraulic hoses to the tractor auxiliary hydraulic outlets. Make sure each quick coupler is fully seated and locked.

4.Route the hydraulic hoses away from the operator, PTO shaft, sharp edges, moving parts, and hot surfaces. Do not allow the hoses to drag on the ground.

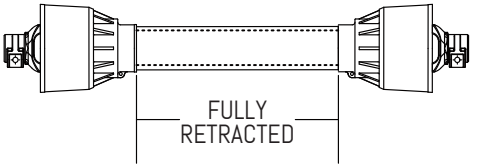
5.Slowly operate the tractor hydraulic control lever to check that the brush mulcher hydraulic functions work properly.

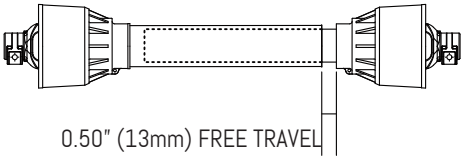
6.Check all hydraulic connections for leaks. Use cardboard or wood to check for leaks; never use your hands.

7.If any leak, abnormal movement, or hose interference is found, stop the tractor, relieve hydraulic pressure, and correct the problem before operation.

PTO Shaft Adjustment

The PTO shaft assembly may need to be shortened to fit your tractor properly. This helps prevent the driveline from bottoming out, which could cause serious damage to the tractor PTO drive system, gearbox, or driveline components.





The PTO shaft assembly is at its shortest length when the brush mulcher is lowered and the PTO shaft is straight and aligned with the brush mulcher gearbox. There must be at least 0.50 in. of free travel before the shaft is fully retracted.

To check:

a. Lower the brush mulcher until the PTO shaft is parallel to the ground and aligned straight with the brush mulcher gearbox.

b. Check that there is at least 0.50 in. of free travel before the shaft is fully retracted.

If there is not at least 0.50 in. of free travel, the PTO shaft must be shortened before operation.

⚠ CAUTION!

Failure to maintain the required clearance may damage the tractor PTO.

MULCHER OPERATION

The following instructions are intended to help ensure safe and effective operation of the brush mulcher. Read this section carefully and use extreme caution at all times.

⚠WARNING!

Flying debris, thrown objects, and falling objects can cause serious injury or death. Before operating the mulcher, make sure all personnel are outside the hazard zone as described in the Safety section of this manual.

Push Working

Raise the mulcher head above the material to be processed, or as high as practical. Retract the hydraulic top link on three-point hitch carriers, or retract the tilt cylinders on loader-arm carriers, to rotate the mulcher and trap door upward. This exposes more of the rotor area to the material.

Move the carrier forward slowly to engage the material.

If the mulcher is equipped with a trap door, place the trap door in the open position to allow maximum exposure of the mulching tools.

Fully engage the material and lower the mulcher head as the work allows. If engine RPM begins to drop, slowly move the carrier backward while continuing to lower the head.

As the head approaches the ground, rotate the head downward carefully. Do not rotate the head too quickly.

Control carrier speed and cutting depth by monitoring engine RPM. Do not allow the engine speed to drop below its proper torque range, or below the point where the engine can quickly recover after the load is reduced.

Pull Working

⚠WARNING!

Flying debris, thrown objects, and falling objects can cause serious injury or death. Before changing direction, make sure all personnel are outside the hazard zone.

After the material has been knocked down, position the mulcher for pull-working. This mode is used to complete the shredding and finishing work.

Begin pull-back shredding when the deflection chains are slightly off the ground and the front corner of the mulcher shoes contacts the ground. For a finer grind, raise the head slightly after ground contact.

Move the carrier slowly backward so the material is repeatedly ground against the counter combs inside the mulcher body.

If equipped, close the trap door to retain as much material as possible inside the mulcher shroud. This improves shredding performance and helps contain debris.

Operate in low gear. Raise and lower the mulcher head slightly as needed according to engine RPM and cutting load.

Loose Stumps

For loose stumps, tilt the cutter head back, raise it above the stump, and slowly lower it to remove a layer from the stump. Repeat this process as needed.

As a general rule, do not rotate the cutter head forward. The rotor may catch the loose stump and throw it toward the carrier.

In some cases, it may be better to use the rotor to create a small hole and roll the stump into it. This helps hold the stump in place during grinding.

Lower the mulcher to keep the stump engaged and pinned to the ground. Continue grinding downward as the tools climb up and over the stump.

Repeat the process, removing the stump gradually. Work only an inch or two at a time and use extreme caution to avoid ejecting the stump under or toward the carrier.

Fixed Stumps

For stumps still fixed in the ground, move the carrier back and forth while gradually lowering the cutter head.

Stump grinding is most effective in the forward direction. This allows the rotor to move over the stump while using the added force of gravity and forward motion.

NOTICE: Moving the rotor back and forth changes the angle of attack, changes the cutting arc of the tools, reduces continuous friction, tears the fibers laterally, and helps split tree fibers horizontally.

Finishing the Work

After material has been knocked down, shredded, and stumps have been removed, perform the final finishing grind.

Final grinding should be done while moving backward. Raise the head clear of the material and move forward to begin each finishing pass.

Begin pull-back shredding when the deflection chains are slightly off the ground and the front corner of the mulcher shoes contacts the ground.

The slower the carrier speed, the finer the finished mulch.

Trap Door

The trap door has two main functions:

1. It opens to maximize exposure of the mulching tools during take-down operation.
2. It closes to contain brush and debris inside the mulcher shroud for improved shredding during pull-working and finishing operation.

NOTICE: The trap door must be open when taking down trees and heavy brush. The door may be damaged if it is rammed into heavy material while closed.

MAINTENANCE

Proper preventive maintenance helps ensure that the mulcher performs at its full capability and reduces unnecessary breakdowns caused by neglect.

The manufacturer's warranty is conditional upon following all recommended maintenance procedures.

Safety First

Before performing maintenance, follow these safety precautions:

- Service the machine only on flat, firm, and stable ground.
- Disconnect the PTO driveline and place it in the holding chain. This applies to PTO-driven machines only.
- To raise the rotor above ground level, adjust the depth shoes downward or place the depth shoes securely on firm blocks.
- Raising the rotor allows it to be rotated for cleaning, belt replacement, or tool replacement. During maintenance, rotate the rotor by hand only.
- Always check that the mulcher is stable before reaching under or into the machine.
- Use only original replacement parts for repairs.

When the mulcher is attached to the carrier, the weight of the mulcher may reduce weight on the carrier's front axle. During transport, at least 20% of the carrier's unladen weight must remain on the front axle to ensure reliable steering and reduce the risk of tipping backward. Add front ballast to the carrier if necessary.

Rotor Drive Belts

The mulching rotor is driven by power drive belts.

Before inspecting, adjusting, or replacing the rotor drive belts:

- Shut off the engine.
- Depressurize the carrier hydraulic system.
- Wait until all machine components have completely stopped before touching them.
- Use lockout/tagout procedures in accordance with 29 CFR 1910.147 during inspection or maintenance when required.
- Secure lifting cylinders with approved locking devices before entering any hazardous area.
- Install safety locks and support devices before working under or near raised components.

Refer to the Safety section of this manual for additional information.

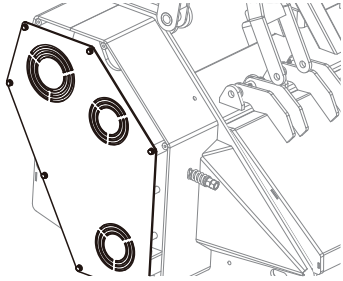
Adjusting Rotor Drive Belt Tension

After the first 8 hours of operation, re-tension the belts.

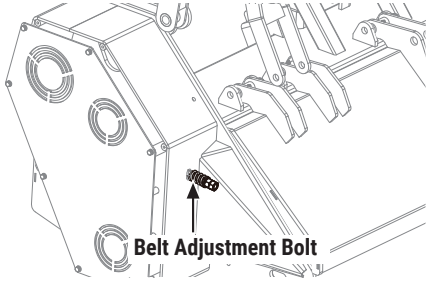
Check belt tension every 10–20 working hours, and check more frequently during the first 24 to 48 hours of operation.

To check and adjust belt tension:

1.Remove the inspection plates from the side access panels to check belt tension.



2.Loosen the fixing screws until the bearing housing can be moved with the adjustment bolt.



The ideal belt tension is the lowest tension at which the belt will not slip under peak load.

Do not over-tension the belts. Excessive belt tension will shorten belt and bearing life.

Keep belts clean and free from foreign material that may cause slipping.

Never apply belt dressing. Belt dressing may damage the belt and cause premature failure.

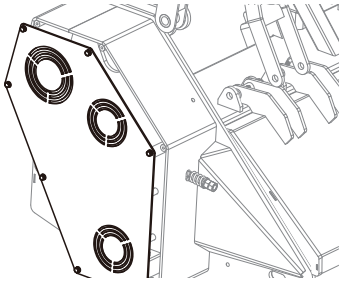
When proper belt tension is achieved:

1. Lock the adjustment bolt.

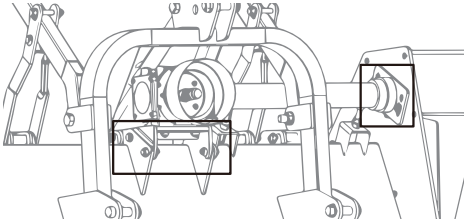
2. Tighten the fixing screws securely.

Replacing Drive Belts

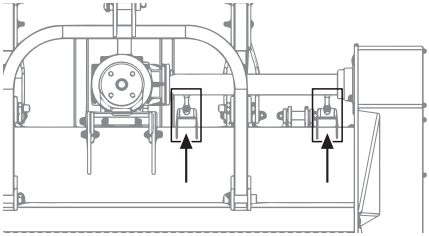
1.Remove the inspection plates from the side access panels to check belt tension.



2.Before removing the belt, loosen the bolts shown in the figure first.



3.Then adjust the two belt tensioning bolts to release belt tension.



4. Use a thin rod-like tool to carefully separate the belt from the pulley.

5.Remove the old belt and install the new belt onto the pulleys.

6.After adjusting the belt to the proper tension, reinstall the inspection plate securely.

Lubrication Points

Before lubrication or maintenance:

- Shut off the engine.
- Depressurize the carrier hydraulic system.
- Wait until all machine components have completely stopped before touching them.

Check Gearbox oil

Type of Lubrication: SAE 85W-90 Gear Lube.

⚠WARNING!

The hitch brush mulcher must be level when checking the gearbox oil level. Do not overfill.

Rotor Bearings

Grease the rotor bearings daily.

Use 1 pump of grease for each hour of operation. For best results and longer component life, apply 4 pumps of grease after every 4 hours of operation.

If grease is found inside the belt housing, reduce the frequency of lubrication.

Drive Shaft Bearing Housing

Grease the drive shaft bearing housing every 50 hours. Apply 1–2 pumps maximum.

Open the front access panels on each side and use a hand grease pump only.

Excess lubrication may increase the operating temperature of the bearing housing.

⚠CAUTION!

Over-lubricating sealed drive bearings may cause premature seal failure, bearing failure, premature shaft wear, or hydraulic motor shaft failure.

Tighten All Bolts

The mulcher is assembled with high-grade fasteners and locking nuts where applicable. All fasteners are tightened to the proper torque range during assembly.

However, the forces generated during mulcher operation may cause bolts to loosen.

Check all bolts and fasteners for tightness after the first 10 hours of operation. After that, check all bolts daily before operation.

Tightening Torque

Please follow the table below to identify the torque value as required.

TORQUE VALUES CHART FOR COMMON BOLT SIZES

Bolt Size (Inches) in-tpi[1]	Bolt Head Identification					
	 Grade 2		 Grade 5		 Grade 8	
	N.m[2]	ft-lb[3]	N.m	ft-lb	N.m	ft-lb
1/4"-20	7.4	5.6	11	8	16	12
1/4"-28	8.5	6	13	10	18	14
5/16"-18	15	11	24	17	33	25
5/16"-24	17	13	26	19	37	27
3/8" -16	27	20	42	31	59	44
3/8" -24	31	22	47	35	67	49
7/16" -14	43	32	67	49	95	70
7/16"-20	49	36	75	55	105	78
1/2" -13	66	49	105	76	145	105
1/2" -20	75	55	115	85	165	120
9/16"-12	95	70	150	110	210	155
9/16"-18	105	79	165	120	235	170
5/8" - 11	130	97	205	150	285	210
5/8" -18	150	110	230	170	325	240
3/4" -10	235	170	360	265	510	375
3/4" -16	260	190	405	295	570	420
7/8" -9	225	165	585	430	820	605
7/8" -14	250	185	640	475	905	670
1"-8	340	250	875	645	1230	910
1"-12	370	275	955	705	1350	995
1-1/8"-7	480	355	1080	795	1750	1290
1-1/8" -12	540	395	1210	890	1960	1440
1-1/4"-7	680	500	1520	1120	2460	1820
1-1/4" -12	750	555	1680	1240	2730	2010
1-3/8"-6	890	655	1990	1470	3230	2380
1-3/8" -12	1010	745	2270	1670	3680	2710
1-1/2" -6	1180	870	2640	1950	4290	3160
1-1/2" -12	1330	980	2970	2190	4820	3560

Bolt Size (Inches) mm x pitch[4]	Bolt Head Identification					
	 Class 5.8		 Class 8.8		 Class 10.9	
	N.m	ft-lb	N.m	ft-lb	N.m	ft-lb
M5X0.8	4	3	6	5	9	7
M6X1	7	5	11	8	15	11
M8X 1.25	17	12	26	19	36	27
M8X1	18	13	28	21	39	29
M10X 1.5	33	25	52	39	72	53
M10X0.75	39	29	61	45	85	62
M12X 1.75	58	42	91	67	125	93
M12X 1.5	60	44	95	70	130	97
M12X1	90	66	105	77	145	105
M14 X2	92	68	145	105	200	150
M14 X 1.5	99	73	155	115	215	160
M16X2	145	105	225	165	315	230
M16X 1.5	155	115	240	180	335	245
M18 X 2.5	195	145	310	230	405	300
M18 X 1.5	220	165	350	260	485	355
M20 X 2.5	280	205	440	325	610	450
M20 X 1.5	310	230	650	480	900	665
M24X3	480	355	760	560	1050	780
M24 X2	525	390	830	610	1150	845
M30 X 3.5	960	705	1510	1120	2100	1550
M30×2	1060	785	1680	1240	2320	1710
M36 X3.5	1730	1270	2650	1950	3660	2700
M36X2	1880	1380	2960	2190	4100	3220

[1] in-tpi = nominal thread diameter in inches-threads per inch

[2] N.m= newton-meters

[3] ft-lb= foot pounds

[4] mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance +0%,-15% of torquing values. Unless otherwise specified use torque values listed above.

Visual Inspection

Check the tools daily for the following:

- Lateral clearance
- Bolt tightness
- Condition of carbide tips
- Cracks, wear, or missing components

Refer to the model-specific parts manual for the correct torque values.

After the first 20 to 40 hours of operation, check all tools for proper torque. Failure to check tool torque after the initial break-in period may result in tool or tool holder failure.

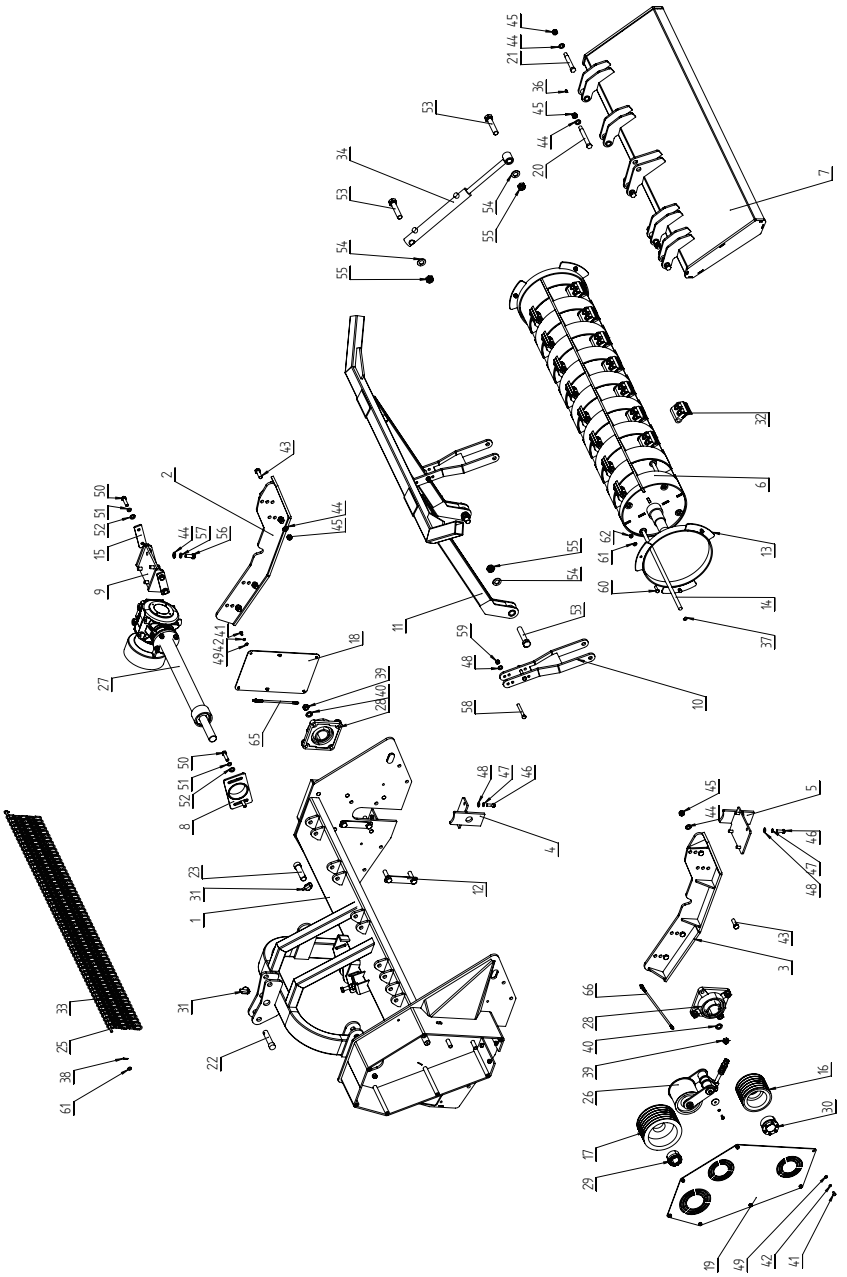
Tool Replacement

1. Remove the fixing bolts.
2. Remove the old tool and install the new tool.
3. Install new fixing bolts.
4. Tighten the bolts to the factory-specified torque value. Refer to the model-specific parts manual for the correct torque specification.

Use only factory-supplied high-strength bolts.

NOTICE: Always use new hardware when replacing tools to ensure proper torque and secure installation.

PARTS DIAGRAM



Parts List

NO.	DESCRIPTION	QTY.
1	Frame Weldment	1
2	Base Weldment 1	1
3	Base Weldment 2	1
4	Support Seat Weldment 1	1
5	Support Seat Weldment 2	1
6	Mulching Rotor Weldment	1
7	Guard Weldment	1
8	Adjustment Seat Weldment	1
9	Gearbox Seat Weldment	1
10	Support Bracket Weldment	2
11	Safety Frame Weldment	1
12	Fixing Bolt Weldment	4
13	Guard Weldment	2
14	Knife Shaft	4
15	Fixing Plate	2
16	Small Pulley	1
17	Large Pulley	1
18	Cover Plate 1	1
19	Cover Plate 2	1
20	Fixed Shaft 1	2
21	Fixed Shaft 2	3
22	Pin Shaft	1
23	Pin Shaft 2	2
24	Flat Washer	1
25	Drag Chain Shaft	1
26	Tensioner Pulley Assembly	1
27	Gearbox Assembly	1
28	Bearing with Square Housing UCF212	2
29	Taper Lock Bushing	1
30	Taper Lock Bushing	1
31	11 x 45 Ring-Type O Pin	3
32	Knife	32
33	Deflection Chain	60
34	Hydraulic Cylinder	1

NO.	DESCRIPTION	QTY.
35	Drive Shaft Dust Cover	1
36	Straight Pressure Grease Fitting M8 x 1	5
37	Internal Circlip 19	8
38	Cotter Pin 3 x 20	2
39	Non-Metallic Insert Hex Thin Lock Nut M18	8
40	Flat Washer 18	8
41	Hex Head Bolt, Full Thread M8 x 16	18
42	Spring Washer 8	18
43	Hex Head Bolt, Full Thread M16 x 50	8
44	Flat Washer 16	17
45	Non-Metallic Insert Hex Thin Lock Nut M16	13
46	Hex Head Bolt, Full Thread M12 x 35	6
47	Spring Washer 12	6
48	Flat Washer 12	10
49	Flat Washer 8	17
50	Hex Head Bolt, Full Thread M14 x 55	6
51	Spring Washer 14	6
52	Flat Washer 14	6
53	Hex Head Bolt, Half Thread M24 x 120	4
54	Flat Washer 24	4
55	Non-Metallic Insert Hex Thin Lock Nut M24	4
56	Hex Head Bolt, Full Thread M16 x 40	4
57	Spring Washer 16	4
58	Hex Head Bolt, Half Thread M12 x 100	4
59	Non-Metallic Insert Hex Thin Lock Nut M12	4
60	Hex Head Bolt, Full Thread M10 x 35	6
61	Flat Washer 10	8
62	Non-Metallic Insert Hex Thin Lock Nut M10	6
63	Hex Head Bolt, Full Thread M16 x 80	2
64	Hex Nut M16	2
65	Grease Hose Assembly 1	1
66	Grease Hose Assembly 2	1

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Our company is committed to continuous product improvement. The actual product may differ from the pictures or descriptions in this manual. Specifications and design are subject to change without prior notice.

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