

VL-WCX5 Chipper

Value Leader

est.1995



OPERATION & PARTS MANUAL

Please read these instructions before using. Always grease all fittings and be sure to always check and fill with oil before operating! Retain this manual for future use.

BETSTCO

www.Betstco.com

541-895-3083 M-F 7am-4pm PST

RUGGED LABOR SAVING EQUIPMENT SINCE 1995

83371 Melton Rd, Creswell OR 97426

Value Leader
est.1995



Specifications subject to change without notice

ASSEMBLY INSTRUCTION



BX42R Assembly Instructions

Step # 0: Removing Unit from Shipping Frame

Tools Needed



Angle Grinder or Metal cutting tool



WCH5 Assembly Instructions

Step # 1: Installing Blade Guard

Tools Needed



18mm wrench & 19mm socket



WCH5 Assembly Instructions

Step # 1: Installing Blade Guard

Parts Needed



Blade Guard



ASSEMBLY INSTRUCTION



WCX5 Assembly Instructions

Step # 2: Installing Blade Guard

Tools Needed



18mm wrench & 19mm socket for top
17mm wrench & socket for bottom



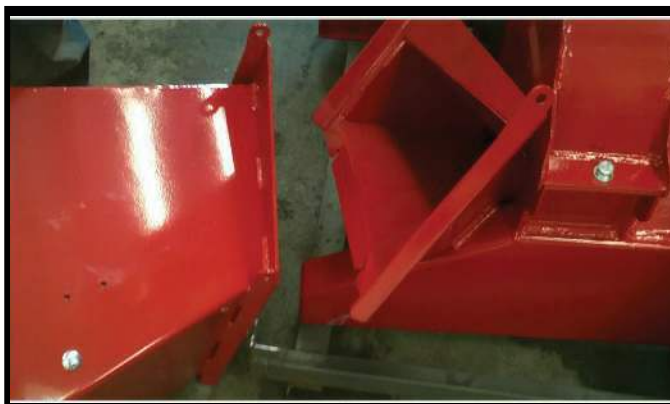
WCX5 Assembly Instructions

Step # 2: Installing Blade Guard

Parts Needed



Feed Chute



WCX5 Assembly Instructions

Step # 3: Assembling exit chute

Tools Needed



17mm Wrench or socket



WCX5 Assembly Instructions

Step # 3: Assembling exit chute

Parts Needed



Exit Chute, cover, and chute rings.



ASSEMBLY INSTRUCTION



WCX5 Assembly Instructions

Step # 4: Lube exit chute

Tools Needed



Grease Gun



WCX5 Assembly Instructions

Step # 5: Installing exit chute

Tools Needed



13mm wrench & socket



WCX5 Assembly Instructions

Step # 5: Installing exit chute

Parts Needed



Exit chute and Chute rings.



ASSEMBLY INSTRUCTION



WCX5 Assembly Instructions

Step # 6: Installing lower lift pins

Tools Needed



34mm wrench



WCX5 Assembly Instructions

Step # 6: Installing lower lift pins

Parts Needed



Lower Lift Pins



WCX5 Assembly Instructions

Step # 7: Filling Grease Zerks

Tools Needed



Grease Gun



ASSEMBLY INSTRUCTION



WCX5 Assembly Instructions

Step # 8: Lube PTO Shaft

Tools Needed



Grease Gun



WCX5 Assembly Instructions

Step # 8: Lube PTO Shaft

Tools Needed



PTO Shaft



Contact our support desk for any questions or concerns at
(541)895-3083

1 INTRODUCTION

Congratulations on your choice of a VALUE-LEADER 3 Point Hitch Wood Chipper to compliment your operation. This equipment has been designed and manufactured to meet the needs of a discerning timber or landscaping industry.

Safe, efficient and trouble free operation of your VALUE-LEADER Wood Chipper requires that you and anyone else who will be using or maintaining the chipper, read and understand the Safety, Operation, Maintenance Trouble Shooting information contained within the Operator's Manual.



This manual covers the VALUE-LEADER 3 Point Hitch Wood Chipper WCX5 (Formerly BX42) Use the Table of Contents or Index as a guide to locate required information.

Keep this manual handy for frequent reference and to pass on to new operators or owners.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout this manual, are determined when sitting in the tractor driver's seat and facing in the direction of travel.

2 SAFETY

SAFETY ALERT SYMBOL

This Safety Alert symbol means
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!



The Safety Alert symbol identifies important safety messages on the VALUE-LEADER 3 Point Hitch Wood Chipper and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

DANGER - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

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

SAFETY

YOU are responsible for the SAFE operation and maintenance of your VALUE-LEADER 3 Point Hitch Wood Chipper. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the 3 Point Hitch Wood Chipper be familiar with the using and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used while using the 3 Point Hitch Wood Chipper.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** using this equipment is familiar with the recommended using and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- 3 Point Hitch Wood Chipper owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter.
- The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Most accidents can be avoided.
- A person who has not read and understood all using and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

2.1 GENERAL SAFETY

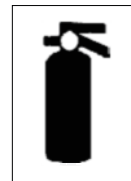
1. Read and understand the Operator's Manual and all safety signs before using, maintaining, adjusting or cleaning the 3 Point Hitch Wood Chipper.



2. Have a first-aid kit available for use should the need arise and know how to use it.



3. Have a fire extinguisher available for use should the need arise and know how to use it.



4. Do not allow riders.

5. Wear appropriate protective gear. This list includes but is not limited to:

- A hard hat -
- Protective shoes with slip resistant soles
- Protective glasses, goggles or face shield -
- Heavy gloves
- Wet weather gear
- Hearing Protection
- Respirator or filter mask



6. Install and secure all guards before starting.

7. Wear suitable ear protection for prolonged exposure to excessive noise.



8. Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.


9. Clear the area of people, especially small children, before using the unit.

10. Review safety related items annually with all personnel who will operating or maintaining the 3 Point Hitch Wood Chipper.

2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing equipment. 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. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.
2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be used in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
3. Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
4. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this equipment. Consult your doctor about using this machine while taking prescription medications.
5. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.
6. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
7. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON T TRY IT.**
8. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.
9. In addition to the design and configuration of this implement, including Safety Signs and Safety 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 the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the tractor and machine manuals. Pay close attention to the Safety Signs affixed to the tractor and the machine.

2.3 SAFETY TRAINING

1. 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 or bystander.
2. 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 this equipment.
3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Using instructions in the manual and to follow these. Accidents can be avoided.
4. **Working with unfamiliar equipment can lead to careless injuries. Read this manual before assembly or using, to acquaint yourself with the machine. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to using:**
 - a. **Reads and understands the operator's manuals.**
 - b. **Is instructed in safe and proper use.**
5. Know your controls and how to stop tractor and machine quickly in an emergency. Read this manual and the one provided with tractor.
6. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will use the machinery. A person who has not read and understood all using and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.

2.4 SAFETY SIGNS

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs displayed in Section 3 each have a part number in the lower right hand corner. Use this part number when ordering replacement parts.
5. Safety signs are available from Betst Products.

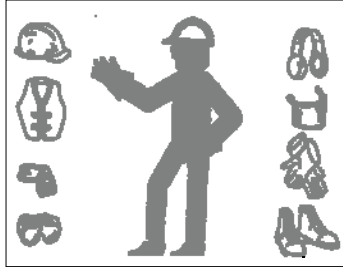
How to Install Safety Signs:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign 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 sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.

2.5 PREPARATION

1. Never use the machine until you have read and completely understand this manual, the tractor Operator's Manual and each of the Safety Messages found on the safety signs on the tractor and machine.

2. Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly,



installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewelry to be around equipment.

3. **PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!**

Power equipment with or without equipment attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80db. Noise over 85db on a long-term basis can cause severe hearing loss. Noise over 90db adjacent to the Operator over a long-term basis may cause permanent, total hearing loss. **NOTE:** Hearing loss from loud noise (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.



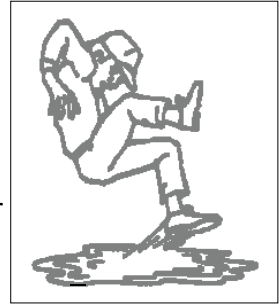
4. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
5. Use only in daylight or good artificial light.
6. Be sure machine is properly mounted, adjusted and in good operating condition.
7. Ensure that all safety shielding and safety signs are properly installed and in good condition.

2.6 MAINTENANCE SAFETY

Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

1. Follow good shop practices.

- Keep service area clean and dry.
- Be sure electrical outlets and tools are properly grounded.
- Use adequate light for the job at hand.



3. Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
4. Before working on this machine, shut off the engine, set the brake, and turn fuel valve off.
5. Never work under equipment unless it is blocked securely.
6. Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy or leather gloves when handling blades.
7. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
8. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



9. Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.
10. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

2.7 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the 3 Point Hitch Wood Chipper. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
2. All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. The manufacturer has designed this 3 Point Hitch Wood Chipper to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.
3. Close and secure rotor cover before operating.
4. Close and secure all guards, deflectors and shields before starting and operating.
5. Read and understand operator's manual before starting. Review safety instructions annually.
6. Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving. Do not allow long hair, loose-fitting clothing, or jewelry to be around moving parts.
7. Keep hydraulic lines and fittings tight, in good condition and free of leaks.
8. Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintenance, repairing, unplugging or moving.
9. Turn machine off, stop and disable engine, remove ignition key and place in your pocket, set park brake and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
10. Do not run machine inside a closed building to prevent asphyxiation from engine exhaust.
11. Use care when feeding material into chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into wood chipper. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.
12. Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
13. Do not allow riders on this machine at any time. There is no safe place for any riders.
14. Never allow children or unauthorized people to operate or be around this machine.
15. Do not reach into rotor or feed hopper openings when the engine is running. Install and secure access covers before starting engine.
16. Keep the working area clean and free of debris to prevent tripping. Operate only on level ground.
17. Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.
18. Do not move or transport chipper when the rotor is turning.
19. Do not exceed a safe travel speed when Transporting.
20. Check and tighten all nuts and bolts prior to each use.
21. Lubricate all moving parts prior to each use.

2.8 STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the frame with planks if required.

2.9 TRANSPORT SAFETY

1. Comply with state and local laws governing safety and transporting of machinery on public roads.
2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
4. Fold up and secure feed hopper before moving or transporting.
5. Be sure the machine is hitched positively to the tractor and a retainer is used through the mounting pins.
6. Do not drink and drive.
7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
8. Never allow riders on the machine.

The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the type of warning and the area, or particular function related to that area, that requires your **SAFETY AWARENESS**.



E



F



REMEMBER - If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

3. Emergency Stopping:

Stop tractor engine if an emergency occurs. Correct emergency situation before starting engine and resuming work.

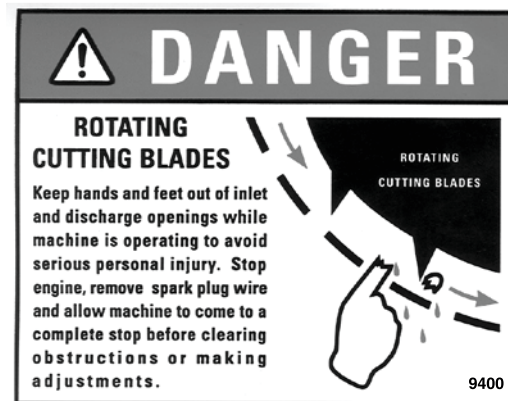
4. Feeding:

a. Manual Feed:

- Slowly slide the wooden material into the feed hopper and move it into the rotor.
 - Do not push the material with a lot of force into the rotor.
 - Do not push the material too fast into the rotor. Stop and slow down if the engine starts to slow down.
 - Do not reach into the feed hopper further than the curtain to be sure not to contact the blades on the rotor.
 - Use a stick or branch to push any does not move on its own and stops in the hopper. Do not take a chance with getting your hand caught in the rotor.
5. Always wear personal protective equipment (PPE) whenever operating the machine. This includes but is not limited to protective shoes with slip resistant soles, protective goggles or face shield, heavy gloves, hearing protection and protective clothing.
6. Do not place metal, bottles, cans, rocks, glass or other solid material into the wood chipper. If something like this gets into the machine, stop the machine immediately for a detailed inspection. Stop engine, remove ignition key and place in your pocket and wait for all moving parts to stop before inspecting or unplugging. Inspect machine for damaged or loosened parts before resuming work.



Fig. 20 OPERATING



7. Blades:

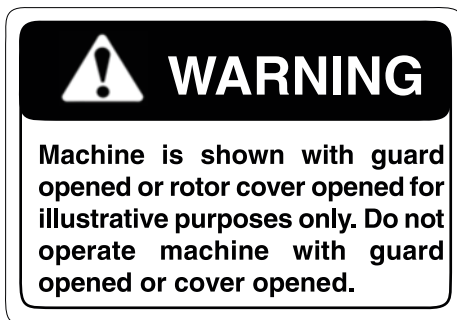
There are 2 types of blades used on the Wood Chipper. They work together to cut, shear and shred the wood as it moves through the machine.

a. Rotor blades:

The rotor is equipped with 4 blades placed at 90° to each other to keep the rotor in balance. If one needs to be changed, the one opposite should be changed.

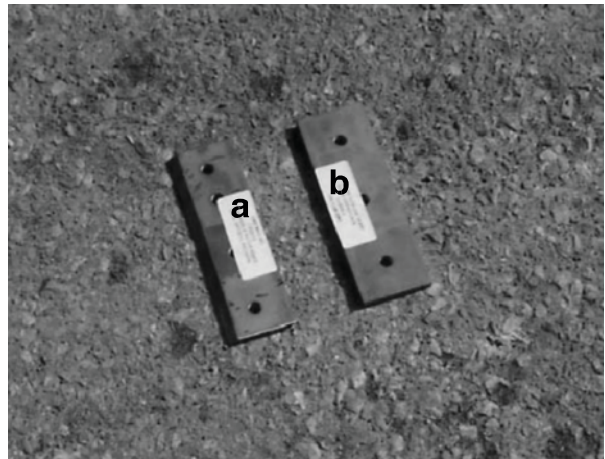
b. Stationary blade:

Each machine is equipped with a stationary blade that acts as a stop for the moving rotor blades.



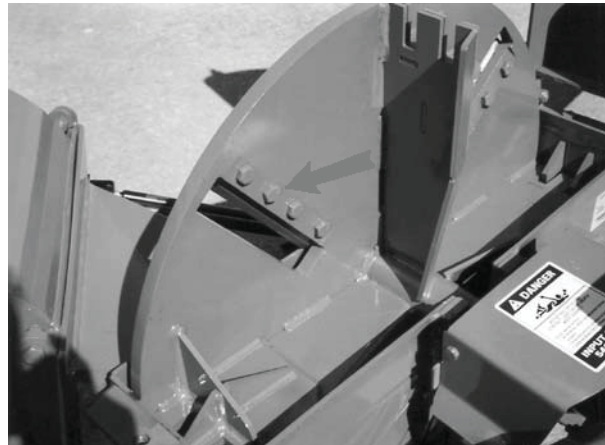
8. Clearance:

It is recommended that the clearance between the rotor and stationary blades be set and maintained at 1/32 inch to obtain the best performance. Use the stationary blade mounting bolts to set the clearance as



a. Rotor

b. Stationary



Rotor



Stationary

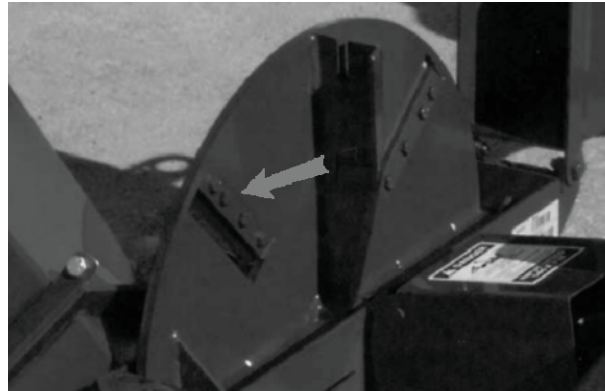
Fig. 21 BLADES

14. Sharpening Blades:

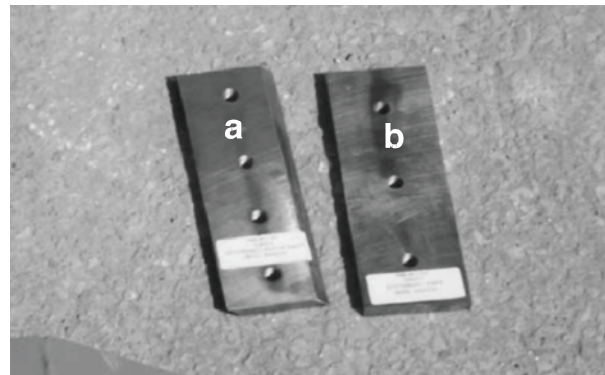
The rotor and stationary blades need to be sharp for the chipper to perform as expected. It is recommended that the rotor blades be removed from the rotor when sharpening.

Always sharpen the blades at a 45° angle to provide the best cutting effect as it meets the stationary blade. Be sure to tighten the blade mounting bolts to their specified torque when reinstalling the blades to the rotor.

The stationary blade is designed with 4 sharp corners that can be utilized. When the corner facing the rotor blade rounds over, remove the blade and re-install with a different corner facing the rotor blade. Use the stationary blade to set the clearance to the rotor blade when reinstalling. Be sure to tighten mounting bolts to their specified torque.



WCX5



a. Rotor

b. Stationary

Fig. 32 BLADES

15 . Personal Protective Equipment (PPE):

Each person must wear appropriate personal protective equipment whenever operating the chipper or working in the vicinity. This equipment is designed to prevent injury to any personnel in the area. This list includes but is not limited to:

- Safety shoes with slip resistant soles.
- Safety goggles or face shield.
- Hearing protection.
- Heavy or leather gloves.



Fig. 2 6 PERSONAL PROTECTIVE EQUIPMENT

16. Operating Hints:

- Keep the working area clean and free of debris to prevent slipping or tripping. Operate only on level ground.
- Do not place hands or any body parts into the feed hopper during operation. Use a stick or branch to push material into the rotor when it goes past the curtain in the feed hopper.
- Do not point discharge at people, animals or buildings. Rotor can expel wood chips fast enough to cause injury.
- Use care when feeding material into the chipper. Do not send metal, bottles, cans, rocks, glass or other foreign material into the wood chipper. If foreign material enters chipper, stop machine, turn engine off and place ignition key in your pocket and wait for all moving parts to stop before removing material and/or unplugging. Inspect machine for damaged or loose parts before resuming work.



Fig. 2 7 WORKING

5.9 TRANSPORTING



TRANSPORT SAFETY

1. Comply with state and local laws governing safety and transporting of machinery on public roads.
2. Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
3. Do not exceed a safe travel speed. Slow down for rough terrain and cornering.
4. Fold up and secure feed hopper before moving or transporting.
5. Be sure the trailer is hitched positively to the towing vehicle and a retainer is used through the mounting pins.
6. Do not drink and drive.
7. Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.
8. Never allow riders on the machine.

When transporting the machine, review and follow these instructions:

1. Clear the area of bystanders, especially small children.
2. Check that all the lights and reflectors required by the highway authorities are in place, clean and working.
3. Insure that the machine is securely attached to the tractor with a retainer through the mounting pins.
4. Do not allow riders.
5. Never exceed a safe travel speed. Slow down when encountering rough road conditions and cornering.
6. Do not drink and drive.
7. Raise and secure the feed hopper before transporting.
8. Turn the discharge hood and point toward the rotor to reduce the width of the machine.



Fig. 2 9 TRANSPORT CONFIGURATION

5.10 STORAGE



OPERATING SAFETY

- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Store the unit in a dry, level area. Support the frame with planks if required.

5.10.1 PLACING IN STORAGE

After the season's use or when the machine will not be used for a period of time, completely inspect all major systems of the 3 Point Hitch Wood Chipper. Replace or repair any worn or damaged components to prevent any unnecessary down time at the beginning of the next season.

Follow this procedure before storing:

1. Remove all material from the machine.
2. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud or debris.

3. Inspect all rotating parts for entangled material. Remove all entangled material.
4. Run the machine a few minutes to dry the moisture from inside the machine.
5. Move the feed hopper up and lock.
6. Touch up all paint nicks and scratches to prevent rusting.
7. It is best to store the machine inside. If that is not possible, cover with a waterproof tarpaulin and tie down securely.
8. Store in an area away from human activity.
9. Do not allow children to play around the stored unit.

5.10.2 REMOVING FROM STORAGE

When removing this machine from storage, follow this procedure:

1. Remove the tarpaulin if covered.
2. Review and follow the pre-operation checklist.



Figure 5-10.1

6.1 SERVICING INTERVALS

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

Hours or Daily

1. Grease PTO driveline.

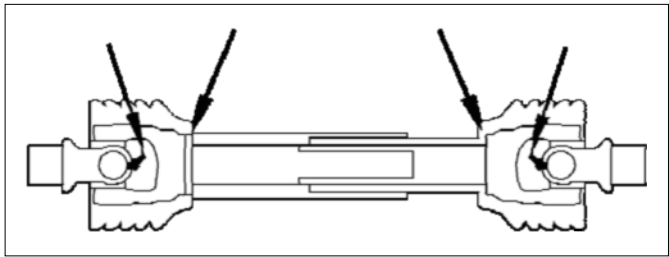


Fig. 30 PTO driveline

40 Hours or Weekly

1. Grease the telescoping section of the PTO shaft.



2. Check sharpness of blades:

- a. Rotor
- b. Stationary

Remove, sharpen or switch edge as required.



Fig. 32 Rotor

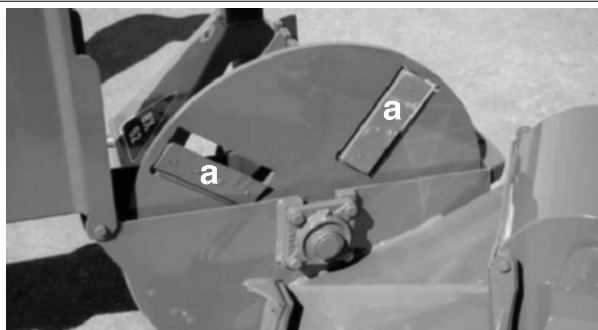
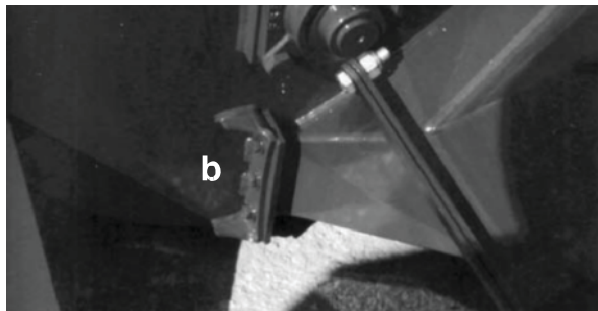


Fig. 32 BLADES



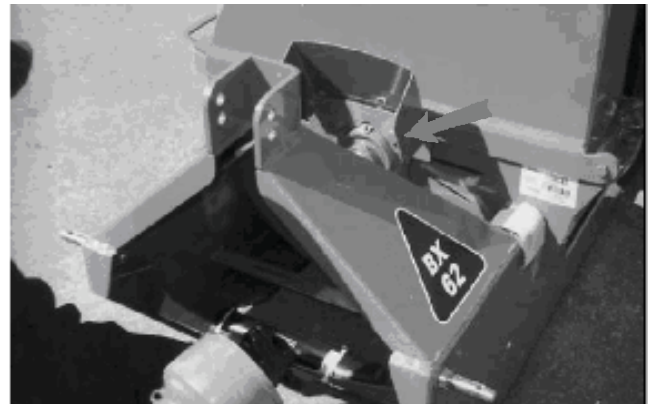
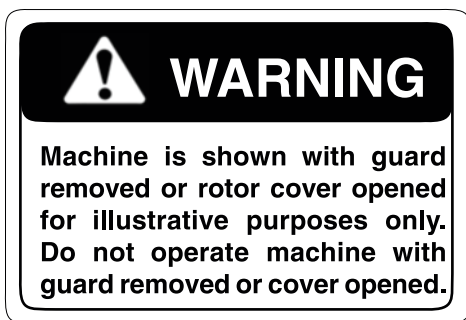
Stationary

100 Hours

2. Grease rotor bearings on WCX5 / WCX5

IMPORTANT

Do not over grease.



Front



Rear

Fig. 33 BEARINGS

Annually

1. Clean machine.



Fig. 34 BX42/WCX5

6.2 MAINTENANCE

By following a careful service and maintenance program for your machine, you will enjoy many years or trouble-free operation.

6.2.1 DRIVELINE MAINTENANCE

The PTO driveline is designed to telescope to allow for dimensional changes as the machine goes through its operational range. A tubular guard encloses the driving components and is designed to turn relative to the driving components.

1. Remove the driveline from the machine.
2. Pull driveline apart.
3. Use a screwdriver to turn lock studs on each end. There are 2 studs per guard.
4. Pull the shaft out of the plastic tubular guard.
5. Use a solvent to clean the male and female portions of the telescoping ends.
6. Apply a light coat of grease to each end.
7. Use a solvent to wash the grooves on each end where the studs are located. Clean each end also.
8. Apply a light coat of grease to each groove.
9. Insert the shaft into its respective guard and align the studs with the holes.
10. Insert the studs through the holes and seat in the groove.
11. Turn each stud to secure guard to shaft.
12. Check that each guard turns freely on the shaft.
13. Assemble the driveline.
14. Check that the driveline telescopes easily.
15. Replace any components that are damaged or worn.
16. Install the driveline on the machine.

The driveline should telescope easily and the guard turn freely on the shaft at all times. Annual disassembly, cleaning and lubrication is recommended to insure that all components function as intended. To maintain the driveline, follow this procedure:



Guard Removal Fig 35



Disassembled Fig. 36 DRIVELINE COMPONENTS

7 SPECIFICATIONS

7.1 MECHANICAL

Value Leader WCX5 Wood Chipper Specifications	
SPECIFICATIONS	WCX5
Max Capacity Diameter	5" Diameter Material
Min. Tractor HP Req.	18 HP
Feed Design	Continuous Blade Drawn Feed (PINCH&PULL)
Feed Opening	(10" x 4") 50 Sq. In.
Feed Hopper	20" x 20" Hinged
Flywheel Diameter	25" Diameter
Flywheel Weight	115 lbs. - 1/2" Thick w/Extrator-Wings
Cutting Blades	4 Reversible
Bed Blades	1 Reversible
Discharge Chute	300 Degree Rotation
Discharge Height	57" without stand
Drive	Direct
PTO Drive Line	04 Series 30" Included w/Shear Bolt
Hitch Type	Standard Cat.1
PTO Operating Speed	540 RPM
Net Weight	465 lbs
Shipping Weight	480 lbs

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

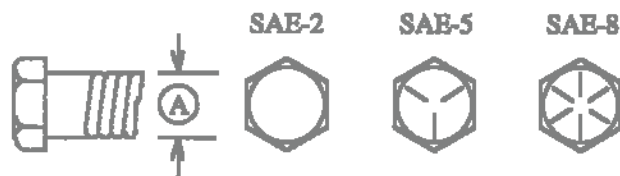
7.2 BOLT TORQUE

CHECKING BOLT TORQUE

The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

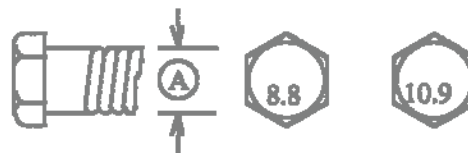
ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m) (lb-ft)		SAE (N.m) (lb-ft)		SAE (N.m) (lb-ft)	
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	60	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



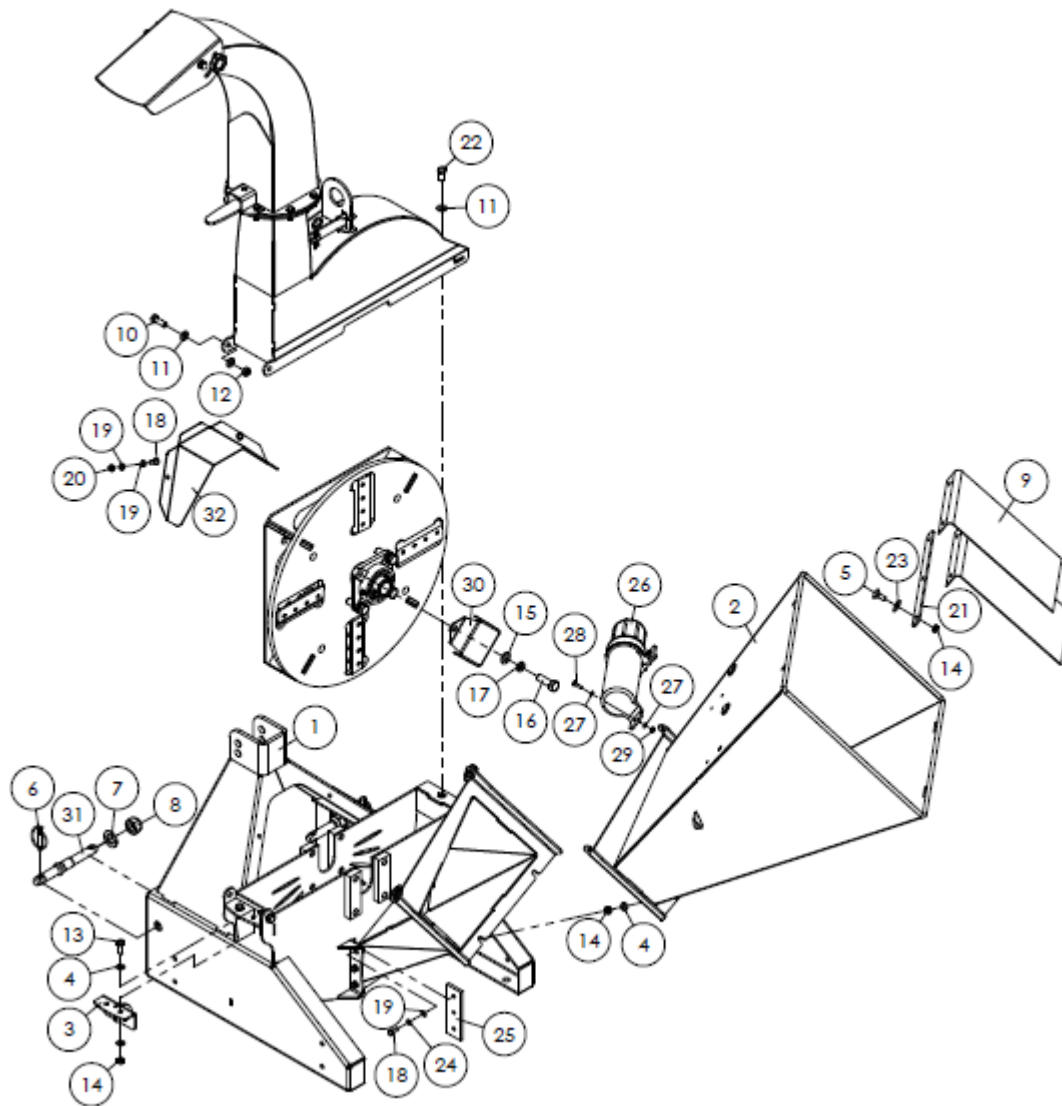
METRIC TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*			
	(N.m) (lb-ft)		0.9 (N.m) (lb-ft)	
M3	.5	.4 3	1.8	1.3
M4		2.2	4.5	3.3
M5	6	4	9	7 15
M6	10	7	11	35
M8	25	18	26	70
M10	50	37	52	
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



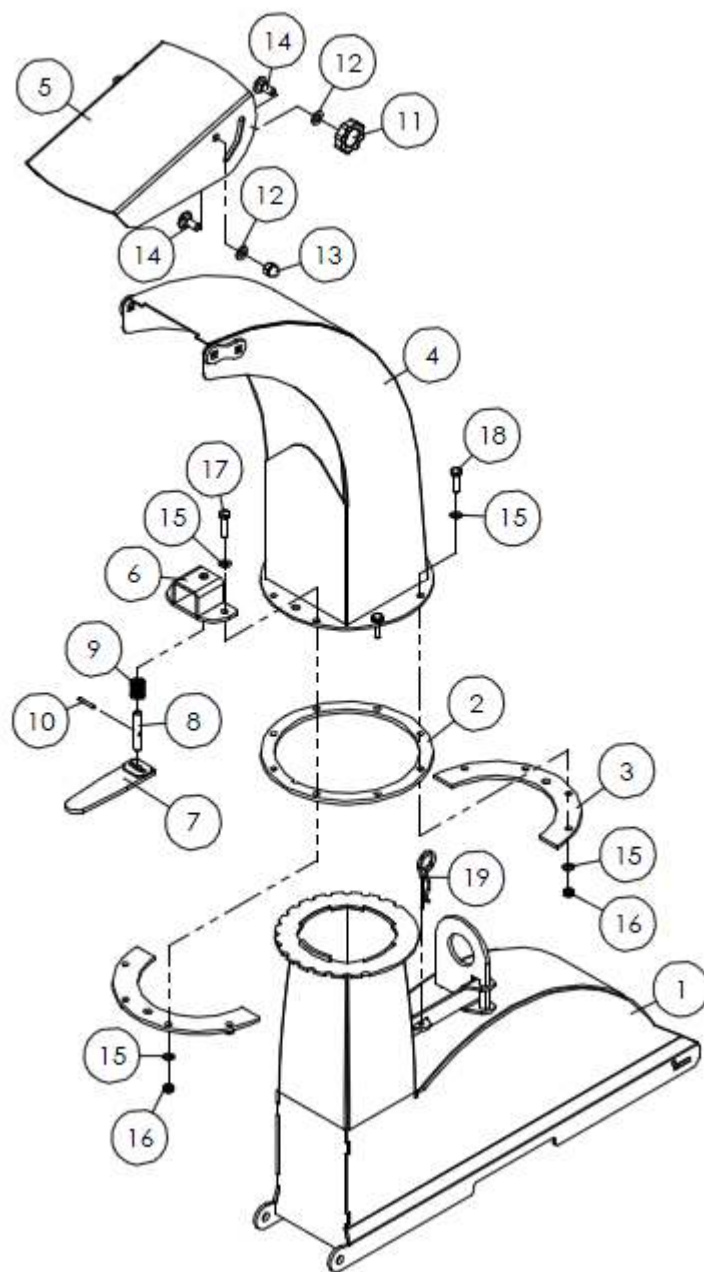
Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

* Torque value for bolts and capscrews are identified by their head markings.



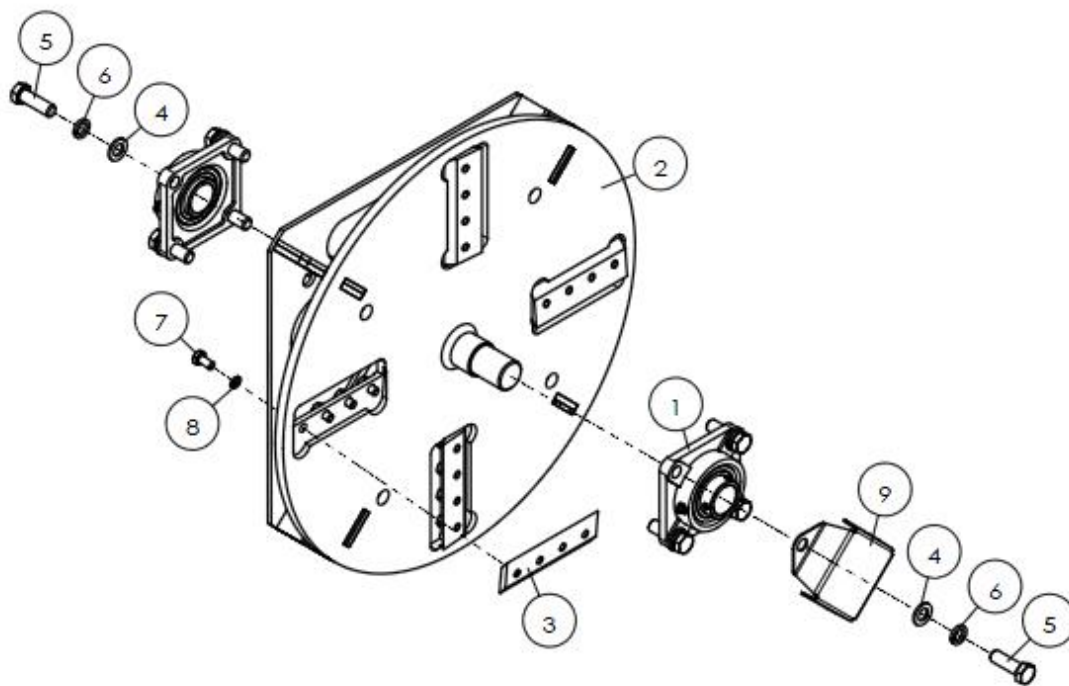
序号	品 号	代 号	名称& 规格	Name& Specification	数量
1	804090007	WCX5-0012	底座焊合件(新)	Base weldment	1
2	804090001	WCX5-0011	进料斗焊合件	Feeding bucket weldment	1
3	804090026	WCX5-0013	断料刀焊合件	Cutting knife weldment	1
4	506010056	GB97. 1-10	平垫	Plain washer	6
5	501040502	GB12-M10X25	半圆头方颈螺栓	Bolt	3
6	700080010	200. 56. 011	锁销组件	Combined lock pin	2
7	506010063	GB97. 1-24	平垫	Plain washer	2
8	503010769	DIN985-M24	六角防松薄螺母	Lock nut	2
9	704090052	WCX5-0107	夹布橡胶板	Rubber plate	2

10	501011127	GB5783-M12X35	全螺纹螺栓	bolt	4
11	506010057	GB97. 1-12	平垫	plain washer	9
12	503010763	DIN985-M12	六角防松薄螺母	Lock nut	4
13	501011113	GB5783-M10X30	全螺纹螺栓	bolt	2
14	503010762	DIN985-M10	六角防松薄螺母	locknut	7
15	506010059	GB97. 1-16	平垫	Plain washer	1
16	501011160	GB5783-M16X50	全螺纹螺栓	bolt	1
17	506030039	GB93-16	弹垫	Plain washer	1
18	501011099	GB5783-M8X20	全螺纹螺栓	bolt	5
19	506010055	GB97. 1-8	平垫	Plain washer	7
20	503010761	DIN985-M8	六角防松薄螺母	Lock nut	2
21	704090053	WCX5-0108	压条	Pressure strip	1
22	501011125	GB5783-M12X25	全螺纹螺栓	bolt	1
23	506010036	GB96. 1-10	加大平垫	Larger washer	3
24	506030035	GB93-8	弹垫	Spring washer	3
25	704090049	WCX5-0102	定刀	Stationary knife	1
26	702410043	BH-6. 07. 092	说明书筒	Manual tube	1
27	506010054	GB97. 1-6	平垫	Plain washer	6
28	501011089	GB5783-M6X20	全螺纹螺栓	bolt	3
29	503010759	DIN985-M6	六角防松薄螺母	locknut	3
30	704090066	WCX5-0109	轴端罩	Shaft cover	1
31	704090119	WCX5-0110	下拉杆销轴	Tie rod pin shaft	2
32	704090125	WCX5-0111	传动轴护罩	PTO shaft cover	1

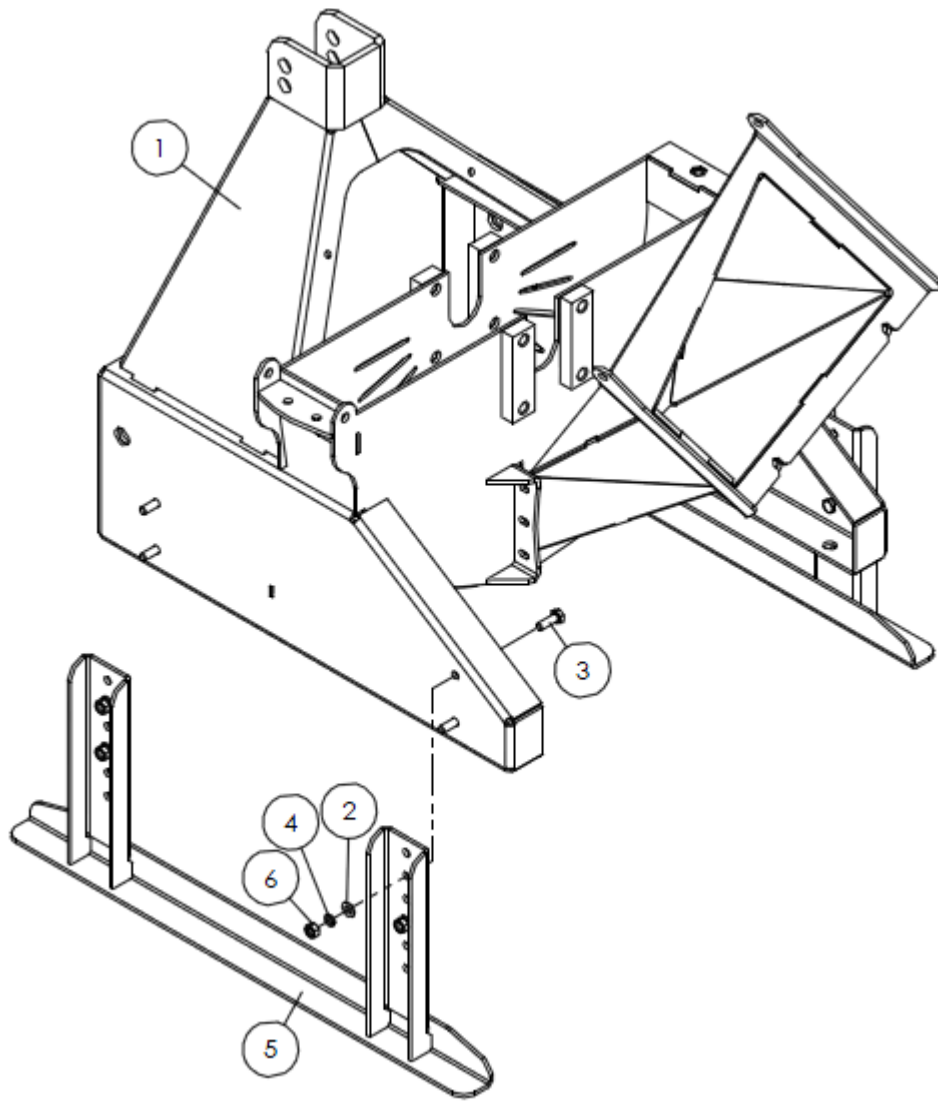


序号	品 号	代 号	名称&规格	Name& Specification	数量
1	804090035	WCX5-0015	上罩焊合件	Upper cover weldment	1
2	704070216	WCM8-10102	隔圈	Space ring	1
3	704070215	WCM8-10101	压板	Pressure plate	2
4	804090046	WCX5-0016	出料口焊合件	Discharge weldment	1

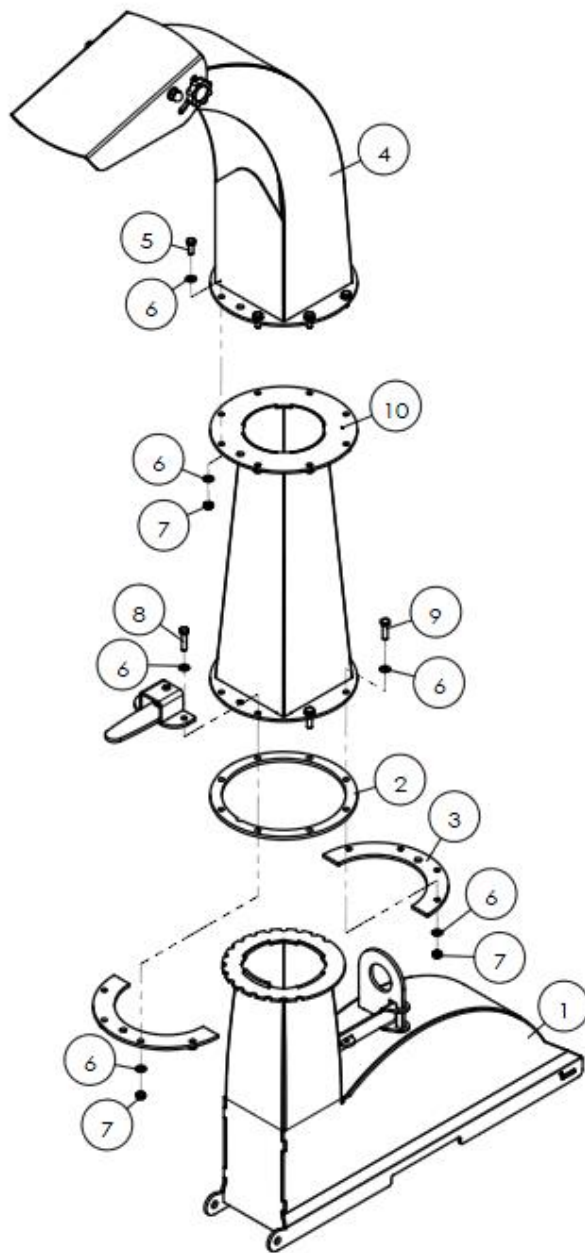
5	704070217	WCM8-10103	导排罩	Exhaust hood cover	1
6	804070152	WCM8-00041	锁销架	Lock pin bracket	1
7	804070149	WCM8-00038A	锁销手柄	Lock pin handle	1
8	704070218	WCM8-10104	锁销	Lock pin	1
9	702770011	AM60.01.110	回位弹簧	Return spring	1
10	508010071	GB119.1-B-4X28	B 型圆柱销	Pin	1
11	804070155	WCM8-00042	压紧螺母合件	Pressure nut	2
12	506010056	GB97.1-10	平垫	Plain washer	4
13	503020125	GB923-M10	盖帽式螺母	nut	2
14	501040502	GB12-M10X25	半圆头方颈螺栓	bolt	4
15	506010055	GB97.1-8	平垫	Plain washer	16
16	503010761	DIN985-M8	六角防松薄螺母	Lock nut	8
17	501011102	GB5783-M8X35	全螺纹螺栓	bolt	2
18	501011101	GB5783-M8X30	全螺纹螺栓	bolt	6
19	703340017	ZL-25.104	大 R 销	R pin	1



序号	品 号	代 号	名称&规格	Name& Specification	数量
1	511040045	UCF208	带座轴承	Bearing with housing	2
2	804090029	WCX5-0014	飞轮焊合件	Flywheel weldment	1
3	704090048	WCX5-0101	动刀	Moving knives	4
4	506010059	GB97.1-16	平垫	Plain washer	8
5	501011160	GB5783-M16X50	全螺纹螺栓	bolt	8
6	506030039	GB93-16	弹垫	Spring washer	8
7	501011111	GB5783-M10X20	全螺纹螺栓	bolt	16
8	506030036	GB93-10	弹垫	Spring washer	16
9	704090066	WCX5-0109	轴端罩	Shaft cover	1

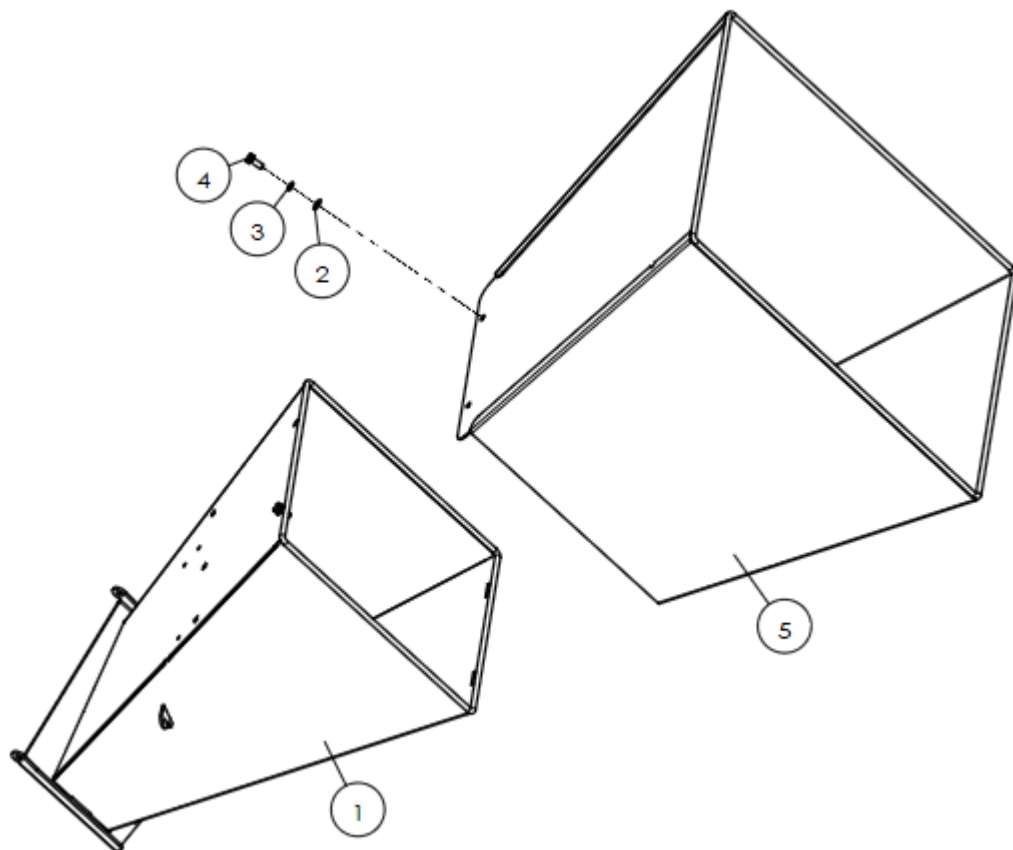


序号	品 号	代 号	名称& 规格	Name& Specification	数量
1	804090007	WCX5-0012	底座焊合件(新)	Base weldment (new)	1
2	506010056	GB97. 1-10	平垫	Plain washer	10
3	501011113	GB5783-M10X30	全螺纹螺栓	bolt	8
4	506030036	GB93-10	弹垫	Spring washer	8
5	804090067	WCX5-0024	加高撑脚	Heightening the brace	2
6	503010046	GB6170-M10	六角螺母	nut	8



序号	品 号	代 号	名称& 规格	Name& Specification	数量
1	804090035	WCX5-0015	上罩焊合件	Upper weldment	1
2	704070216	WCM8-10102	隔圈	Space ring	1
3	704070215	WCM8-10101	压板	Pressure plate	2
4	804090046	WCX5-0016	出料口焊合件	Discharge bucket weldment	1
5	501011099	GB5783-M8X20	全螺纹螺栓	bolt	8
6	506010055	GB97.1-8	平垫	Plain washer	32
7	503010761	DIN985-M8	六角防松薄螺母	Lock nut	16
8	501011102	GB5783-M8X35	全螺纹螺栓	bolt	2
9	501011101	GB5783-M8X30	全螺纹螺栓	bolt	6
10	804090063	WCX5-0023	出料口加高	Heightening discharge bucket	1

六、进料口



序号	品 号	代 号	名称&规格	Name& Specification	数量
1	804090001	WCX5-0011	进料斗焊合件	Feeding bucket weldment	1
2	506010056	GB97.1-10	平垫	Plain washer	2
3	506030036	GB93-10	弹垫	Spring washer	2
4	501011112	GB5783-M10X25	全螺纹螺栓	bolt	2
5	804090059	WCX5-0022	进料加长斗（超长）	feeding extended bucket	1

Value-Leader Brand 1 Year Warranty

Unless otherwise stated on purchase invoice, Betstco warrants to original Purchaser that Value-Leader products are free from major defects in material under normal use and service for a period of 1 Year from the date the product is purchased or shipped, whichever is later. Commercial use 180 days. Use at address that is not yours, is considered commercial use. Consumable, Expendable, Wear Items (Rubber plastic parts, hydraulic hoses, belts, tires, cables, blades, tines, wedges, teeth, tiups, chains, pins, brushes, filters, etc) and cracked hydraulic pumps, bent or broken cylinder rods are not covered under this warranty. Warranty does not cover items that have been modified, damaged by abuse or usage not in accordance with design or maintenance.

Betstco obligation under this warranty is to repair or replace defective upon approval by; Betstco, 83371 Melton Rd, Creswell OR 97426 that Warranty Claim is valid. Product shall be returned upon request of Betstco. Transportation charges to be prepaid by user.

Gasoline or diesel engines used to powered Value-Leader products are covered by the warranty of the appropriate engine manufacturean Purchaser must look to the engine manufacture for all issues relating to engine operation.

Betstco assumes no responsibility for outside labor.

PERMISSABLE BY APPLICABLE LAW, BETSTCO HEREBY DISCLAIMS ALL WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, ANY IMPLIED WARRANTIES WITH RESPECT TO THE PRODUCT PURCHASED, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, BETSTCO HEREBY EXPRESSLY DISCLAIMS ALL LIABILITY FOR PRODUCT DEFECT OR FAILURE, CLAIMS THAT ARE DUE TO NORMAL WEAR, PRODUCT MISUSE, ABUSE, PRODUCT MODIFICATION, IMPROPER PRODUCT SELECTION, NON-COMPLIANCE WITH ANY CODES, OR MISAPPROPRIATION. BETSTCO MAKES NO WARRANTIES TO THOSE DEFINED AS "CONSUMERS" IN THE MAGNUSON-MOSS WARRANTY FEDERAL TRADE COMMISSION IMPROVEMENTS ACT. THE FOREGOING EXCLUSION OF IMPLIED WARRANTIES DO NOT APPLY TO THE EXTENT PROHIBITED BY LAW. PLEASE REFER TO YOUR LOCAL LAWS FOR ANY SUCH PROHIBITIONS.

THERE SHALL BE NO LIABILITY FOR PRODUCT LIABILITY OR LIABILITY ON THE PART OF BETSTCO FOR ANY GENERAL SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE SALE OR USE OF ANY PRODUCTS SOLD BY BETSTCO OR AN AGENT THEREOF, BETSTCO MAKES NO WARRANTIES, EXPRESS OR IMPLIED, (INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCTS FOR ANY PURPOSE) WITH RESPECT TO THE PRODUCTS COVERED BY THIS AGREEMENT EXCEPT AS IN THIS PARAGRAPH OTHERWISE EXPRESSLY PROVIDED.

THIS IS THE SOLE AND ONLY WARRANTY OF VALUE-LEADER PRODUCTS, NO OTHER WARRANTY IS APPLICABLE, EITHE EXPRESSED OR IMPLIED, IN FACT BY LAW.

This warranty shall not be interpreted to render Betstco, or any authorized agent liable for injury or damages of any kind or nature, direct, consequential, or contingent, to a person or property.

The sole and only remedy in regard to any defective product shall be the repair or replacement thereof as herein provided, Betstco, agent(s) of Betstco shall not be liable for any consequential, special, incidental or punitive damages resulting from or caused by any such defects

Betstco reserves the rights to make improvements in design or changes in specifacations at any time, without incurring any obligations to owners of the units previously sold.

WARRANTY VOID IF REGISTRATION IS NOT RECEIVED OR RECORDED ONLINE WITHIN 30 DAYS OF PURCHASE DATE OR SHIP DATE, WHICHEVER IS LATER.



ITEM: _____ MODEL# _____ PURCHASE DATE: ____/____/____

PURCHASED FROM: _____ GIFT INV# ORDER# _____

OWNER NAME: _____ SERIAL # _____

OWNER ADDRESS: _____

CITY: _____ COUNTY: _____ ST: _____ ZIP: _____

PHONE: _____ EMAIL: _____

ACCEPTANCE OF RESPONSIBILITY:

I (PURCHASER) HAVE READ OPERATORS MANUAL AND LIMITED WARRANTY OR SOMEONE HAS READ/AND EXPLAINED ALL INSTRUCTIONS TO ME. I UNDERSTAND THIS WARRANTY DOES NOT COVER ANY LABOR AND THAT ALL DISPUTES WILL BE SETTLED BY BINDING ARBITRATION. BINDING ARBITRATION IS CONDUCTED BY THE BETTER BUSINESS BUREAU (BBB) LOCATED AT 4004 SW KRUSE WAY PLACE ST 375 LAKE OSWEGO OR 97035 OR THE CURRENT BBB LOCATION CLOSEST TO BETSTCO. I ACKNOWLEDGE MY LIMITED WARRANTY IS VOID IF ANY ATTEMPT TO REPAIR OR REPLACE DEFECTIVE PARTS HAS BEEN MADE BY UNAUTHORIZED PERSONNEL. I ACKNOWLEDGE RECEIPT OF MY OPERATORS MANUAL AND HAVE READ THE SAFE OPERATION SECTION. I ACKNOWLEDGE UNDERSTANDING MAINTENANCE AND SAFE OPERATION REQUIREMENTS, ITEM SPECIFICATIONS, OPERATION, CONTROLS AND STORAGE REQUIREMENTS. **I UNDERSTAND THAT IS ALONE AM RESPONSIBLE FOR PROPER MAINTENANCE, CARE AND SAFE OPERATION OF THIS VALUE-LEADER ITEM**

I (PURCHASER) AGREE THAT PERSONS NOT FAMILIAR WITH THE OPERATION OF THIS ITEM SHOULD NOT BE ALLOWED TO USE IT. CHILDREN ESPECIALLY SHOULD NOT OPERATE OR BE NEAR POWER PRODUCTS WHEN IN USE. ANYONE OPERATING VALUE-LEADER PRODUCTS SHOULD HAVE READ OPERATIONS MANUALS AND SAFETY MANUALS.

OWNERS SIGNATURE: x _____ DATE: ____/____/____

YOU MUST SIGN THIS WARRANTY AND MAIL OR FAX A COPY TO BETSTCO, 83371 MELTON RD N. #3, CRESWELL OR. IF YOU PREFER YOU MAY COMPLETE YOUR REGISTRATION ONLINE AT WWW.VALUE-LEADER.COM. THIS WARRANTY IS NOT EFFECTIVE UNLESS PURCHASER COMPLETE REGISTRATION AND WARRANTY FOR WITHIN 30 DAYS OF PURCHASE OR SHIP DATE WHICHEVER IS LATER.

NOTE: WE MAY REFUSE WARRANTY OF ANY KIND UNLESS BETSTCO, RECEIVES A COMPLETED, LEGIBLE AND SIGNED WARRANTY REGISTRATION. IT IS THE RESPONSIBILITY OF THE PURCHASER TO ASSURE THAT REGISTRATION DOCUMENT IS RECEIVED BY BETSTCO.

1 YEAR EXTENDED WARRANTY & REGISTRATION
VALUE LEADER IMPLEMENTS
BRANDED PRODUCTS
1 YEAR EXTENDED WARRANTY

1 Year Extended Warranty amends to original Recorded Warranty Registration the time period of described coverage. Extended Warranty does not apply to consumable and Expendable Item as described in Product Warranty Registration.

This amendment does not affect any other part of recorded Warranty Registration or policy.

No one is authorized to alter, modify, or enlarge this Amendment to original recorded Warranty Registration

**EXTENDED REGISTRATION & PAYMENT MUST BE RECEIVED
WITHIN 30 DAYS OF PURCHASE DATE**

EXTENDED WARRANTY REGISTRATION

PRODUCT & MODEL # _____

SERIAL # _____

OWNER NAME : _____

BETSTCO INVOICE # _____

ACCEPTANCE OF RESPONSIBILITY:

I (PURCHASER) HAVE READ AND UNDERSTAND THE EXTENDED WARRANTY OR SOMEONE HAS READ AND EXPLAINED ALL THE ABOVE TO ME. I UNDERSTAND THIS EXTENDED WARRANTY DOES NOT COVER ANY LABOR. I HAVE FILED MY ORIGINAL WARRANTY REGISTRATION AND FULLY UNDERSTAND MY REQUIREMENTS. ***I UNDERSTAND THAT I ALONE AM RESPONSIBLE FOR PROPER MAINTENANCE, CARE AND SAFE OPERATION OF THIS TRACTOR IMPLEMENT.***

OWNERS SIGNATURE: x _____

DATE: ____/____/____

YOU MUST SIGN THIS WARRANTY AND MAIL OR FAX A COPY TO BETSTCO, 83371 MELTON RD, CRESWELL OR. IF YOU PREFER YOU MAY COMPLETE YOUR REGISTRATION ONLINE AT WWW.VALUE-LEADER.COM. THIS WARRANTY IS NOT EFFECTIVE UNLESS PURCHASER COMPLETE REGISTRATION AND WARRANTY FOR WITHIN 30 DAYS OF PURCHASE OR SHIP DATE WHICHEVER IS LATER.

NOTE: WE MAY REFUSE WARRANTY OF ANY KIND UNLESS BETSTCO, RECEIVES A COMPLETED, LEGIBLE AND SIGNED WARRANTY REGISTRATION. IT IS THE RESPONSIBILITY OF THE PURCHASER TO ASSURE THAT REGISTRATION DOCUMENT IS RECIEVED BY BETSTCO.