

## **OPERATOR'S AND PARTS** MANUAL

## BC60, BC72 & BC78 **ROTARY CUTTERS**



The Power of Combined Excellence



SERIAL NUMBER:

Part Number: 75536

MODEL NUMBER:

Rev. 6

#### READ ENTIRE OPERATOR'S & PARTS MANUAL BEFORE OPERATING!

#### DANGER! **ROTATING BLADE HAZARD! STAY BACK!**



**OBJECTS CAN BE THROWN!** 

DO NOT operate near bystanders.

DO NOT place hands or feet under deck while in operation or with engine running.

DO NOT operate without a shatterproof door (or front shield) installed on loader.



WARNING! Before leaving the operator's seat: Lower the lift arms against frame and place unit on the ground. Disengage auxiliary hydraulics. Stop Engine. Engage parking brake. Remove the key.



WARNING! Operating the standard flow rotary cutter on a high flow hydraulic system may cause severe injury or death to the operator or bystanders due to the increased RPM. Do NOT operate the standard flow rotary cutters on high flow hydraulic systems.

WARNING! Lift limiting chain must be properly installed before operation.





WARNING! AVOID STALLING ROTARY CUTTER. During operation, continuous blade rotation is required to prevent overheating of the hydraulic system. To monitor the blade rotation, there is a window in the motor cover shield so the operator can monitor the blade rotation indicator disk. This disk should always be rotating during operation to prevent overheating of the hydraulic system.

#### **SERVICE**

When servicing your rotary cutter, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering, record the model and serial number of your unit on the cover or in the space provided on this page. This information may be obtained from the identification plate located on the right front of the mounting plate.

MODEL	
SERIAL NUMBER_	
DATE PURCHASED	

The parts department needs this information to ensure that you receive the correct parts for your specific model.

## TABLE OF CONTENTS

TO THE OWNERA
SAFETY PRECAUTIONS B General Information To The Operator Before You Start Working With The Rotary Cutter Transporting the Rotary Cutter Maintenance
INTERNATIONAL SYMBOLSC
PREOPERATION D General Information Before Operation Skid-Steer Major Component Nomenclature
ROTARY CUTTER ASSEMBLIES  60" & 72" Standard Flow Cutter Assemblies 72" & 78" High Flow Cutter Assemblies High Flow Drive Assembly High Flow Hydraulic Assemblies Wheel Kit Assembly
INSTALLATION INSTRUCTIONSF
OPERATING INSTRUCTIONS
LUBRICATION H
MAINTENANCE  Daily Every 40 Hours Operation Replacing Blades Replacing Hydraulic Motor Replacing Gearbox/Motor Coupler Replacing Gearbox
STORAGEM
TROUBLESHOOTINGN
BOLT TORQUEO
SPECIFICATIONSP
DECALSQ
PREDELIVERY CHECK LISTR
LIMITED WARRANTYS

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#### **GENERAL COMMENTS**

Congratulations on the purchase of your new rotary cutter! Your cutter was carefully designed and manufactured to give you years of dependable service. Your cutter will require some minor maintenance (such as cleaning) to keep it in top working condition. Be sure to observe all safety precautions and maintenance procedures as described in this manual.

#### **ABOUT THIS MANUAL**

This manual has been designed to help you do a better, safer job. Read this manual carefully and become familiar with it's contents. Remember, never let anyone operate this unit without reading the "Safety Precautions" and "Operating Instructions" sections of this manual. (See Sections B and G respectively.)

Unless noted otherwise, right and left sides are determined from the position of the skid-steer operator sitting in the seat facing forward.

#### SAFETY ALERT SYMBOL



This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and for the safety of others working with you.

#### **SERVICE**

When servicing your rotary cutter, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering, record the model and serial number of your unit in the space provided on this page. This information may be obtained from the identification plate located on the right front of the mounting plate.

MODEL	
SERIAL NUMBER	
DATE PURCHASED	

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TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLV-ING YOUR PERSONAL SAFETY OR OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



#### THIS SYMBOL MEANS:

## **ATTENTION!**

#### **BECOME ALERT!**

#### YOUR SAFETY IS INVOLVED!

**SIGNAL WORDS:** Note the use of signal words DANGER, WARNING, and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

DANGER:

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

## SAFETY PRECAUTIONS-

ROTARY CUTTER

#### **GENERAL INFORMATION**

This section is composed of various warnings and safety tips. Read and learn all the information in this section before you attempt to use your rotary cutter. Also read your vehicle owner's manual before using your equipment. This knowledge will help you operate your unit safely. Do not take this information lightly, it is presented for your benefit and for the benefit of others working around you.

The "Safety Alert Symbol" (as described in Section A and at the beginning of Section B) will be used throughout this manual. It will appear with the word **DANGER**, **WARNING**, or **CAUTION** above it, and a safety message pertaining to the specific topic being covered. Take the time to read these messages as you come across them.

#### TO THE OPERATOR

The primary responsibility for safety with the equipment falls to the operator. Make sure that the equipment is operated only by responsible & competent individuals with the proper instruction. It is the skill, care, common sense, and good judgment of the operator that will determine how efficiently and safely the job is performed. Know your equipment before you start. Know its capabilities, dimensions, and how to operate all the controls. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order.

#### **BEFORE YOU START**

- 1. **Read the entire loader and rotary cutter operator's manuals** before ever attempting to use the loader. This knowledge is necessary for safe operation.
- 2. <u>Do NOT operate the standard flow rotary cutter on high flow hydraulic systems. Severe injury or death could occur due to the increased RPM.</u>
- 3. <u>Do not operate without a shatterproof (demolition) cab door or front shield on loader.</u>
- 4. Always wear safety goggles and hearing protection during operation, and make sure ALL safety shields and chains are properly installed.
- 5. **Follow all safety decals.** Keep them clean and replace them if they become worn, damaged, or illegible.
- 6. **Do not paint over,** remove, or deface any safety signs or warning decals on your equipment.
- 7. Know your equipment inside and out. Know how to operate all controls and know emergency shut down procedures.
- 8. <u>Keep all stepping surfaces, pedals, and controls free from dirt, grease and oil.</u> Keep equipment clean to help avoid injury from a fall when getting on or off equipment.

## **SAFETY PRECAUTIONS-**

#### ROTARYCUTTER

- 9. <u>Use handholds and step plates when getting on/off</u>. Failure to do so could cause a fall.
- 10. Never operate the unit near bystanders, traffic, pets, livestock, or buildings. Be sure others know when and where you will be working. Make sure no one is behind equipment or for several hyndred feet in any direction around the cutter when in operation. Never allow anyone to approach the cutter when in operation.
- 11. **Never take passengers on your equipment.** There is no safe place for a passenger.
- 12. Never try to board equipment while it is running.
- 13. Turn off engine, remove the key and disconnect hydraulic couplers before performing maintenance. If unit must be left raised for maintenance or any other reason, block the unit securely to prevent accidental release of the lifting mechanism. Serious damage or personal injury could result.
- 14. Never leave the unit unattended when in a raised position. Always make sure both skids are on the ground, and keys removed before leaving the unit unattended.
- 15. <u>Test all controls before you begin.</u>
- 16. **Do not smoke when refueling.** Allow room in the gas tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.

#### **WORKING WITH THE ROTARY CUTTER**

- 1. Never operate the unit without first reading and understanding the operator's manual.
- 2. Never operate the rotary cutter without the lift limiting chain(s) properly installed. Refer to Section F.
- 3. Operate the unit only in daylight, or sufficient artificial light.
- 4. **Do not carry load with arms in the raised position.** Always carry loads as close as possible to the ground.
- 5. Check your work area, and know where all utility lines are. Avoid hitting underground electrical wires, cables, pipes, fence posts, gas lines, uneven sidewalk edges, large rocks, etc.
- 6. Never operate equipment while under the influence of alcohol, prescription drugs, nonprescription drugs, or illegal drugs which could inhibit physical and/or mental capacity.
- 7. <u>Do not exceed rated operating capacity, as machine may become</u> unstable which may result in loss of control.
- 8. Do not operate the unit without covers and chains installed.

## SAFETY PRECAUTIONS-

#### ROTARYCUTTER

- 9 Do not place hands or feet under deck while in operation or with engine running.
- 10. Do not raise the deck when blades are rotating.
- 11. ALWAYS LOWER THE LOADER ARMS TO THE GROUND, SHUT OFF THE ENGINE AND REMOVE THE KEY BEFORE GETTING OFF THE UNIT.

#### TRANSPORTING THE ROTARY CUTTER

- 1. Follow all federal, state and local regulations when transporting the unit on public roads.
- 2. Use extra care when loading or unloading the machine onto a truck or trailer. Disconnect hydraulic couplers during transportation.

#### **MAINTENANCE**

- 1. Never work on equipment while it is running. Always lower the loader arms **to the ground,** shut off the engine, remove the key, and disconnect hydraulic couplers before performing maintenance on the unit.
- 2. Never make hydraulic repairs while the system is under pressure. Injury or death could result.
- 3. Observe proper maintenance schedules and repairs to keep the unit in safe working order.
- 4 Always wear safety goggles or glasses when working on equipment.
- 5. Use only manufacturer recommended replacement parts. Other parts may be substandard in fit and quality.



**WARNING!** Escaping fluid under pressure can have sufficient force to penetrate the skin causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather that hands to search for suspected leaks.

> Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

> If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.

**CARDBOARD** MAGNIFYING GLASS HYDRAULIC HOSE OR FITTING

## INTERNATIONAL SYMBOLS-

As a guide to the operation of your equipment, various international symbols have been utilized on the instruments and controls. The symbols are shown below with an indication of their meaning.



Engine speed



Hours recorded



Engine water temperature



Lights



Horn



Engine oil pressure



Hazard warning



Axle connect



Axle disconnect



Continuously variable



Increase



Decrease



Diesel fuel



Creeper range



High range



Low range



Alternator charge



Power take-off (on)



Power take-off (off)



"Tortoise," slow or minimum setting



"Hare," fast or maximum setting



Caution



Control lever operating direction



Rock shaft (raised)



Rock shaft (lowered)



Remote cylinder (extended)



Remote cylinder (retracted)



Remote cylinder (FLOAT)



Differential lock



Read operators manual



Neutral



Forward



Reverse

## **PREOPERATION**

#### ROTARY CUTTER

#### **GENERAL INFORMATION**

The **BRADCO** Rotary Cutters were designed to be easy to use and maintain. They are operated by the skid-steer auxiliary hydraulics. The cutters mount to the toolbar / quick attach mechanism for easy mounting.

Unless noted otherwise, right and left are determined from the position of the skid-steer operator sitting in the operator's seat facing forward.

Remember to read the "Safety Precautions" and "Operating Instructions" sections of the manual **BEFORE** you attempt to install or use the rotary cutter.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the rotary cutters as may be necessary without notification.

#### **BEFORE OPERATION**

The primary responsibility for safety with this equipment falls to the operator. Make sure that the equipment is operated only by trained individuals that have read and understand this manual. Don't hurry the learning process or take the unit for granted. Practice the operation of your new equipment and become familiar with the controls and the way it handles on your machine.

If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

#### DANGER!



TO AVOID SERIOUS PERSONAL INJURY OR DEATH THE BRAD-CO ROTARY CUTTER MUST NOT BE ATTACHED TO ANY POWER UNIT THAT DOES NOT HAVE A SHATTERPROOF DOOR (OR FRONT SHIELD) INSTALLED.

#### WARNING!



OPERATING THE STANDARD FLOW ROTARY CUTTER ON A HIGH FLOW HYDRAULIC SYSTEM MAY CAUSE SEVERE INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS DUE TO THE INCREASED RPM. DO NOT OPERATE THE STANDARD FLOW ROTARY CUTTERS ON HIGH FLOW HYDRAULIC SYSTEMS.

#### **SKID-STEER**

BRADCO has designed both standard flow and high flow rotary cutters. The standard flow rotary cutters are NOT designed for use on high flow skid-steers. Operating the standard flow on a high flow system will void the rotary cutter warranty. For maximum operation, see the recommended GPM for the rotary cutter you have received.

Your skid-steer must have an auxiliary hydraulic system and a shatterproof door or front shield to run the rotary cutter.

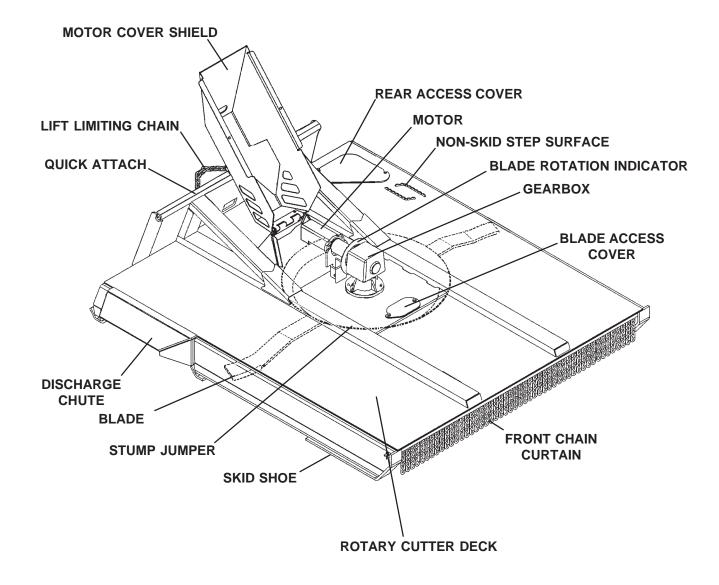
Standard SAE flat face hydraulic quick couplers are supplied with your rotary cutter. If you require an alternate set of couplers, you will need to purchase these from your dealer. These couplers must fit a #12MBo end and connect to your skidsteer auxiliary hydraulic system.

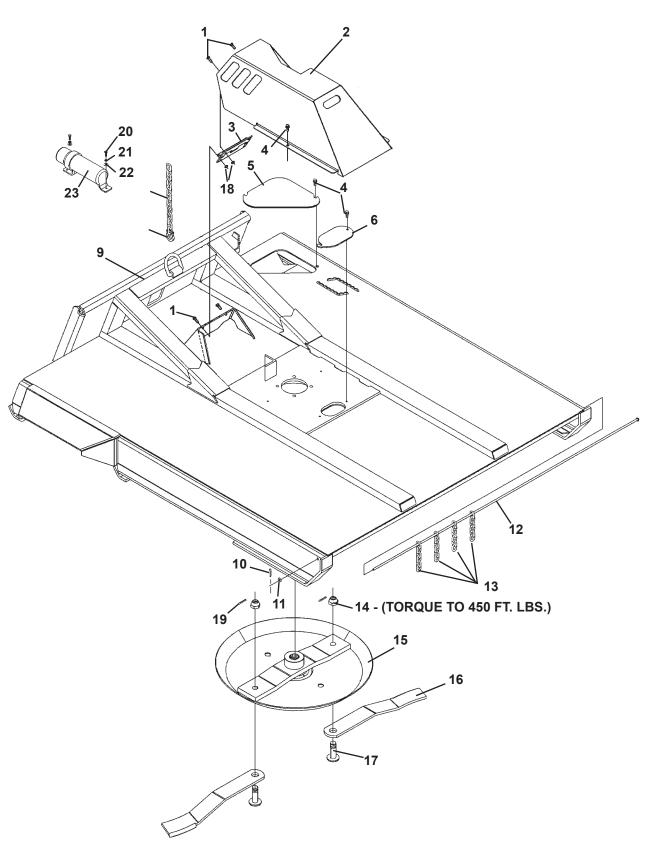
## PREOPERATION-

#### **ROTARY CUTTER**

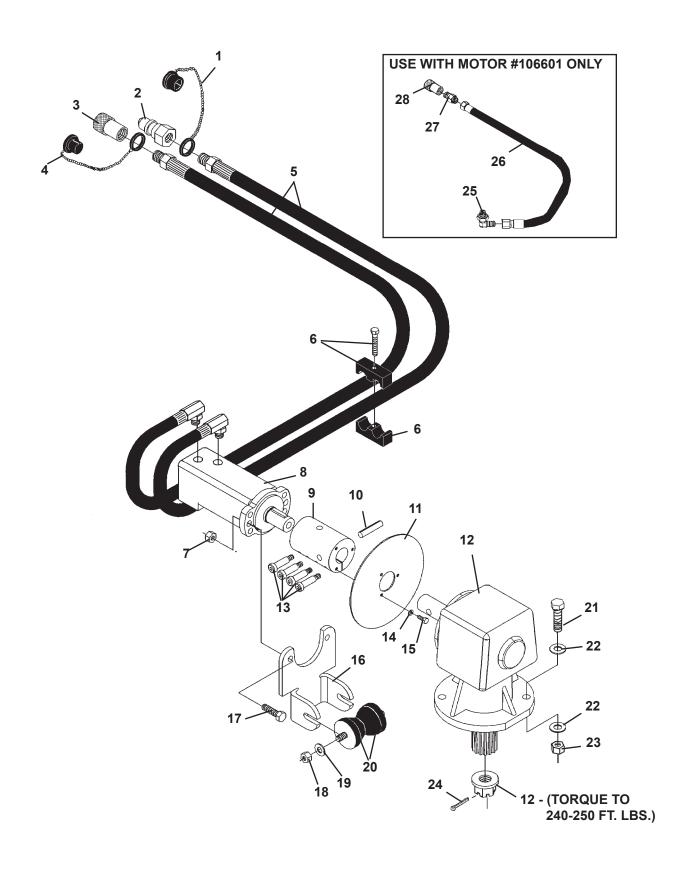
#### **NOMENCLATURE**

Throughout this manual, reference is made to various rotary cutter components. The purpose of this page is to acquaint you with the various names of these components. This knowledge will be helpful when reading through this manual or when ordering service parts.



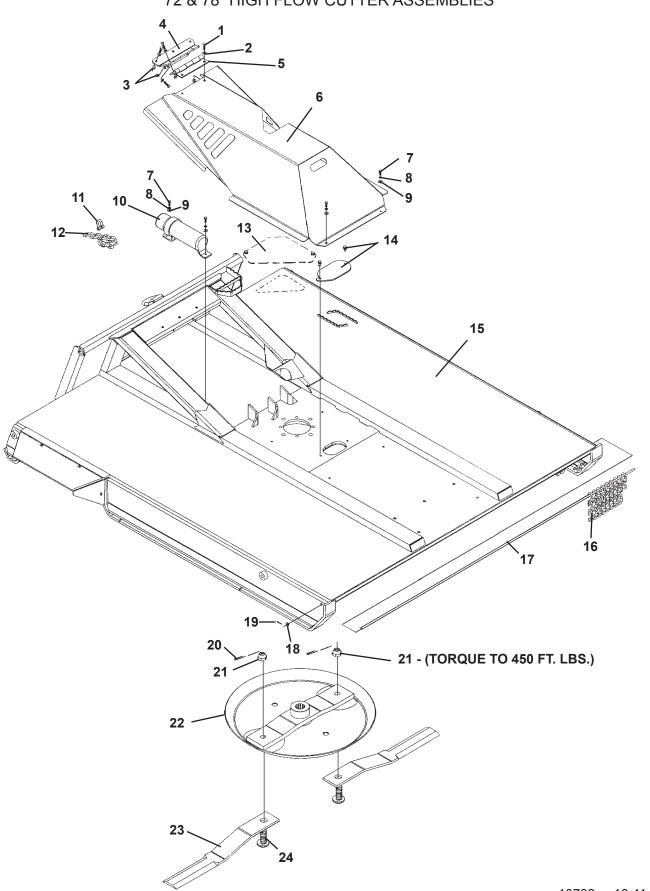


<u>NO</u>	REQ'D	PART NO.	DESCRIPTION
1	4	1044	.38" UNC x 1.25" Hex Capscrew
2	1	18059	Replacement Cover with Decals
3	1	17941	Hinge
4	6	1953	.38" UNC X .75" Flange Hex Capscrew
5	1	17846	Rear Access Cover
6	1	15321	Blade Access Cover
7	1	18169	Lift Limiting Chain
8	2	89968	Shackle
9	1	17879	60" Cutter
	1	15329	72" Cutter
10	1	1611	Cotter Pin
11	1	1514	.38" Flat Washer
12	1	17902	60" Front Chain Retainer
	1	17348	72" Front Chain Retainer
13	47	15326	Front Chain
	59	15326	Front Chain
14	2	17390	Special Nut (Torque to 450 ft. lbs.)
15	1	17896	60" Stump Jumper Hub
	1	15324	72" Stump Jumper Hub
16	2	18514	Double Edged Blade (60" Rotary Cutter)
	-	17903	Optional Banana Blade (60" Rotary Cutter)
	2	18515	Double Edged Blade (72" Rotary Cutter)
	-	17847	Optional Banana Blade (72" Rotary Cutter)
17	2	17389	Blade Mounting Bolt
18	4	2005510	.38" UNC Flange Lock Nut
19	2	1793	Cotter Pin
20	2	1022	.31" UNC X 1.00 Hex Capscrew
21	2	1502	.31" Lock Washer
22	2	1513	.31" Flat Washer
23	1	25453	Manual Tube



<u>NO</u>	REQ'D	PART NO.	DESCRIPTION
1	1	17921	Dust Cap
2	1	22519	Male Coupler
3	1	22518	Female Coupler
4	1	17922	Dust Cap
5	2	38081	Hose Assembly .62" x 104" 12MBo-10MBo 90°
6	-	17143	Replacement Hose Clamp
7	2	1841	.50" UNC Deformed Lock Nut
8	1	17938	60" Cutter Hydraulic Motor (6.8 Cu. In.)
	1	17787	72" Cutter Hydraulic Motor (10 Cu. In.)
	1	106601	60" Cutter Hydraulic Motor (25-30 GPM ONLY)
0		5661	Replacement Key
9	1	17808	Coupler
10	1	22277	Roll Pin
11	1	17843	Blade Rotation Indicator
12	1	15302	Right Angle Gearbox Assembly
	-	19701	Replacement Castle Nut
			(Torque Castle Nut to 240-250 ft. lbs.)
	-	19702	Replacement Input Seal
	-	19703	Replacement Output Seal
4.0	-	19704	Replacement Vent
13	4	1799	.38" UNC X 1.50" Sockethead Capscrew
14	3	1501	.25" Lock Washer
15	3	1001	.25" UNC X .50" Hex Capscrew
16	1	17844	Motor Mounting Plate
17	2	1091	.50" UNC X 1.75" Hex Capscrew
18	2	1841	.50" UNC Deformed Lock Nut
19	2	1646	.50" Hard Flat Washer
20	2	6886	Rubber Bumper
21	4	10071	.62" UNC X 2.25" Hex Capscrew - Grade 8
22	8	1627	.62" Hard Flat Washer
23	4	1839	.62" UNC Deformed Lock Nut
24	1	1793	Cotter Pin
Use Ite	m 25 throu	igh 28 with Mo	otor #106601 ONLY
25	1	3417	90° Elbow 4MBo-6MJ
26	1	37754	Hose Assembly .25" x 116" 6FJX-6FJX
27	1	3269	Straight Connector 8MBo-6MJ
28	1	84928	Female Coupler

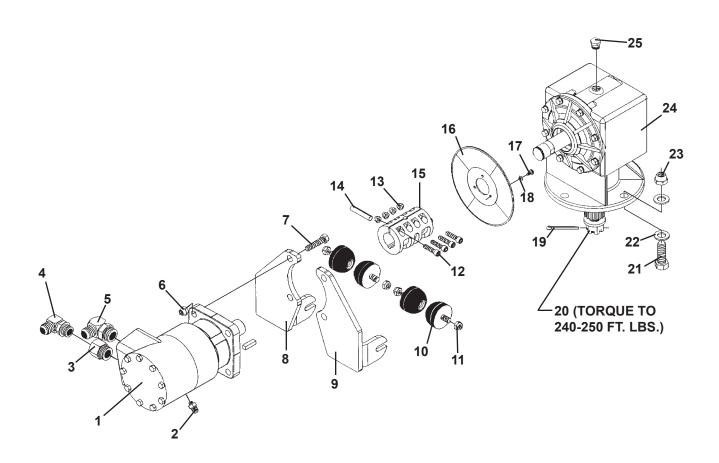
72 & 78" HIGH FLOW CUTTER ASSEMBLIES



72 & 78" HIGH FLOW CUTTER ASSEMBLIES

<u>NO</u>	REQ'D	PART NO.	DESCRIPTION
1 2 3 4 5	9 9 9 1 1	1044 1800 2005510 104420 17941	.38" UNC x 1.25" Hex Capscrew .38" Hard Flat Washer .38" UNC Flange Lock Nut Hinge Mounting Cover Hinge
6 7 8 9 10	1 4 4 4 1	108547 1021 1502 1513 25453	Replacement Cover with Decals .31" UNC X .75" Hex Capscrew .31" Lock Washer .31" Flat Washer Manual Tube
11 12 13	1 1 1 2	89968 18169 17846 1953	Shackle Lift Limiting Chain Rear Access Cover (72" Cutter ONLY) .38" UNC X .75" Flange Hex Capscrew
14	1 2	15321 1953	Blade Access Cover .38" UNC X .75" Flange Hex Capscrew
15	1 1	15329 106299	72" Cutter 78" Cutter
16	59 63	15326 15326	Front Chain (72" Cutter) Front Chain (78" Cutter)
17	1	17348 106342	72" Front Chain Retainer 78" Front Chain Retainer
18 19	1 1	1514 1611	.38" Flat Washer Cotter Pin
20	2	1793	Cotter Pin
21 22 23	2 1 2	17390 15324 18515 17847	Special Nut (Torque to 450 ft. lbs.) Stump Jumper Hub Double Edged Blade (72" Rotary Cutter) Optional Banana Blade (72" Rotary Cutter)
24	2 2	106312 17389	Double Edged Blade (78" Rotary Cutter) Blade Mounting Bolt

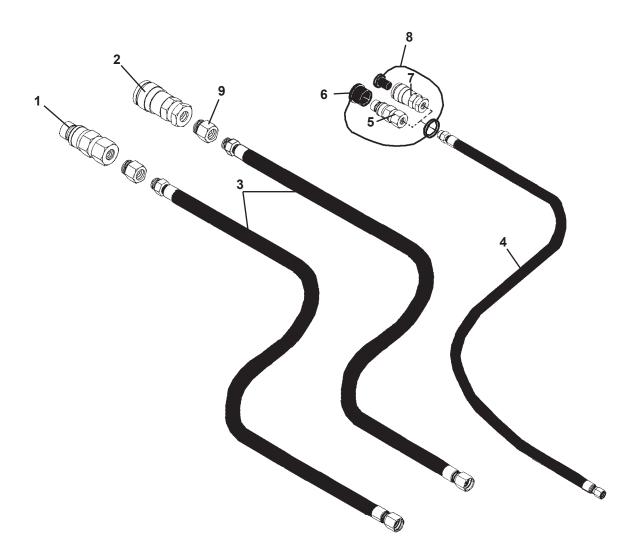
72 & 78" HIGH FLOW DRIVE ASSEMBLY #104740



72 & 78" HIGH FLOW DRIVE ASSEMBLY #104740

<u>NO</u>	REQ'D	PART NO.	DESCRIPTION
1	1	100928	High Flow Hydraulic Motor (17.9 Cu. In.)
	-	5661	Replacement Key
2	1	3269	Straght Connector 8MBo-6MJ
3	1	30292	Straght Adapter 16MBo-12FB
4	1	22600	90° Elbow 12MBo-12MJ
5	1	30051	90° Elbow 16MBo-12MJ
6	4	1839	.62" UNC Deformed Lock Nut
7	4	10071	.62" UNC X 2.25" Hex Capscrew
8	1	104561	Left Motor Mount
9	1	104562	Right Motor Mount
10	4	6886	Bumper
11	4	1841	.50" UNC Deformed Lock Nut
12	4	1799	.38" UNC X 1.50" Socket Head Capscrew
13	4	1837	.38" UNC Deformed Lock Nut
14	1	22277	.50" X 2.50" Roll Pin
15	1	100917	Coupler
16	1	17843	Blade Rotation Indicator
17	3	1001	.25" UNC X .50" Hex Capcrew
18	3	1501	.25" Lock Washer
19	1	1793	Cotter Pin
20	-	19701	Replacement Castle Nut
21	4	1141	.75" UNC X 2.50" Hex Capscrew
22	8	1649	.75" Hard Flat Washer
23	4	1936	.75" UNC Lock Nut
24	1	101509	Right Angle Gearbox Assembly
25	1	7781	Breather Plug

## HYDRAULIC ASSEMBLIES FOR HIGH FLOW DRIVES



## —— HYDRAULIC ASSEMBLY——

## HYDRAULIC ASSEMBLIES FOR HIGH FLOW DRIVES

#### **HYDRAULIC KIT #105779**

<u>NO</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	19638	Male Coupler .75" Body 12FBo
2	1	22520	Female Coupler .75" Body 12FBo
3	2	37060	Hose Assembly .75" X 88" 12MBo-12FJX
4	1	38151	Hose Assembly .38" X 94" 6FJX-8MBo
5	1	84923	Male Coupler .38" Body 8FBo
6	1	32549	Dust Cap

#### **HYDRAULIC KIT #105780**

<u>NO</u>	REQ'D	PART NO.	<u>DESCRIPTION</u>
1	1	84922	Male Coupler .62" Body 12FBo
2	1	84921	Female Coupler .62" Body 12FBo
3	2	37769	Hose Assembly .75" X 108" 12MBo-12FJX
4	1	38162	Hose Assembly .38" X 112" 6FJX-8MBo
5	1	84923	Male Coupler .38" Body 8FBo
6	1	32549	Dust Cap

#### **HYDRAULIC KIT #105781**

<u>NO</u>	REQ'D	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	22519	Male Coupler .50" Body 12FBo
2	1	22518	Female Coupler .50" Body 12FBo
3	2	37060	Hose Assembly 75" X 88" 12MBo-12FJX
4	1	38151	Hose Assembly .38" X 94" 6FJX-8MBo
5	1	84923	Male Coupler .38" Body 8FBo
6	1	32549	Dust Cap

#### **HYDRAULIC KIT #105782**

<u>NO</u>	REQ'D	PART NO.	<u>DESCRIPTION</u>
1	1	19638	Male Coupler .75" Body 12FBo
2	1	22520	Female Coupler .75" Body 12FBo
3	2	37060	Hose Assembly .75" X 88" 12MBo-12FJX
4	1	38151	Hose Assembly .38" X 94" 6FJX-8MBo
7	1	84928	Female Coupler .38" Body 8FBo
8	1	32548	Dust Plug

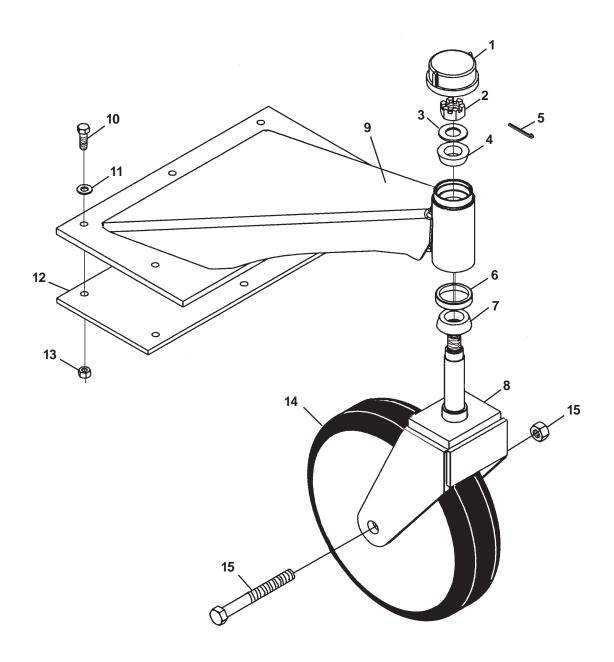
#### **HYDRAULIC KIT #105783**

<u>NO</u>	REQ'D	PART NO.	<u>DESCRIPTION</u>
1	1	16434	Male Coupler 1.00" Body 16FBo
2	1	16433	Female Coupler 1.00" Body 16FBo
3	2	37060	Hose Assembly .75" X 88" 12MBo-12FJX
4	1	38151	Hose Assembly .38" X 94" 6FJX-8MBo
5	1	14176	Male Coupler 50" Body 8FBo
6	1	17921	Dust Cap
9	2	30292	Straight Adapter 12FBo-16MBo

10804 10-12-06

## -MOUNTING KIT INSTALLATION-

WHEEL KIT ASSEMBLY #24518



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## Ε

## -MOUNTING KIT INSTALLATION—

WHEEL KIT ASSEMBLY #24518

NO	REQ'D	PART NO.	DESCRIPTION
1	1	101414	Spindle Dust Cap
2	1	10047	1.00" UNC Castle Nut
3	1	1706	1.00" Hard Flat Washer
4	1	33715	Tapered Roller Bearing
5	1	1614	Cotter Pin
c	4	22744	Tonovad Dollar Dooring
6	1	33714	Tapered Roller Bearing
7	1	15511	Seal
8	1	101115	WheelYoke
9	1	24513	Support Arm
10	5	1091	.50" UNC x 1.75 Hex Capscrew, Grade 8
11	10	1516	.50" Hard Flat Washer
12	1	24530	.38" x 9.00" x 21.00 Plate
13	5	1841	.50" UNC Locknut, Grade 8
14	1	101195	Foam Filled Wheel & Tire Assembly
	1	6616	Replacement Zerk
15	1	10105	Wheel Shaft/Nut Assembly

## INSTALLATION INSTRUCTIONS-

#### **GENERAL INFORMATION**

The following instructions will help you to mount your rotary cutter onto your skid-steer loader. The rotary cutter uses the quick-attach system for ease of installation. Therefore, if you know how to attach your loader bucket, attaching the rotary cutter should prove no problem.

Remember to read all safety warnings, decals and operating instructions before operating the attachment. If there is any portion of this manual that you do not understand, contact your dealer.

#### DANGER!



TO AVOID SERIOUS PERSONAL INJURY OR DEATH THE BRAD-CO ROTARY CUTTER MUST NOT BE ATTACHED TO ANY POWER UNIT THAT DOES NOT HAVE A SHATTERPROOF DOOR (OR FRONT SHIELD) INSTALLED.



WARNING! OPERATING THE STANDARD FLOW ROTARY CUTTER ON A HIGH FLOW HYDRAULIC SYSTEM MAY CAUSE SEVERE INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS DUE TO THE INCREASED RPM. DO NOT OPERATE THE STANDARD FLOW ROTARY CUTTERS ON HIGH FLOW HYDRAULIC SYSTEMS.

#### INSTALLATION INSTRUCTIONS

NOTE: Before attaching the rotary cutter to your skid-steer loader, make sure a shatterproof door (or front shield) has been installed onto the front of your skid-steer loader. This is required to protect the operator from possible thrown objects.

- 1. Remove the shipping banding from around the rotary cutter and skid.
- Remove any attachments from the front of the loader. 2.
- Following all standard safety practices and the instructions for installing an attachment 3. in your skid-steer operator's manual, install the rotary cutter onto your skid-steer.

NOTE: It is important to make sure the locking mechanism on your quick attach is engaged, therefore locking the attachment onto the skid-steer.

- 4. Connect the Lift Limiting Chain to your skid-steer. The back of the rotary cutter should never be more than 1 foot off the ground for proper and safe cutting. (Raise the unit to 1 foot above ground level. Route the end of the Lift Limiting Chain through the "D" ring on the back of the rotary cutter and then through the tie down mechanism(s) on the front of your skid-steer loader. Tie the chain securely back to itself with the shackle provided, to limit the lifting capabilities of the cutter to 1 foot maximum.)
- Lower the unit to the ground and remove the key. 5.
- After making sure that there is not any foreign matter on the hydraulic couplers, 6. connect the couplers to the auxiliary hydraulic system of your skid-steer loader.

IMPORTANT: Do not operate the BRADCO standard flow rotary cutter on High Flow Hydraulic systems. Doing so will void the standard flow rotary cutter warranty.

## OPERATING INSTRUCTIONS

#### **ROTARY CUTTER**

#### **GENERAL INFORMATION**

The BRADCO rotary cutter is perfect for cutting tall grass and brush up to 4" in diameter.

The rotary cutter attaches to the toolbar/quick-attach mechanism of your skid-steer loader. Due to this arrangement, thorough knowledge of the skid-steer controls is necessary for machine operation. Read and understand your skidsteer operator's manual for information regarding skid-steer operation before attempting to use the rotary cutter.

Follow all installation instructions in Section F for the proper installation of the unit onto your skid-steer before attempting to operate your rotary cutter.

#### **OPERATING TIPS**

- Increase the life of your bi-directional blades by cutting brush in one direction and cutting grass and smaller vegetation in the other. (This will keep the blades sharp for cutting grass.)
- If your preferred direction of blade rotation is not set up correctly for your skid-steers "detent", the hydraulic hoses may be reversed at the motor end.
- Continuous rotation of the blades is required during operation to prevent overheating of the hydraulic system. The rotary cutter is equipped with a blade rotation indicator disk to assist in monitoring blade rotation. If the rotary cutter stalls, disengage auxiliary hydraulics, and remove cutter from debris before restarting.
- Engage and disengage the hydraulic system with the skid-steer at idle.



WARNING! Before leaving the operator's seat: Lower the lift arms against frame and place unit on the ground. Disengage auxiliary hydraulics. Stop Engine. Engage parking brake. Remove the key.

#### DANGER!

**ROTATING BLADE HAZARD! STAY BACK!** 



**OBJECTS CAN BE THROWN!** 

DO NOT operate near bystanders.

DO NOT place hands or feet under deck while in operation or with engine running.

DO NOT operate without a shatterproof door (or front shield) installed on loader.

#### WARNING!



Operating the standard flow rotary cutter on a high flow hydraulic system may cause severe injury or death to the operator or bystanders due to the increased RPM. Do NOT operate the standard flow rotary cutters on high flow hydraulic systems.

Lift limiting chain must be properly installed before operation.



## **OPERATING INSTRUCTIONS**

#### ROTARY CUTTER

#### **CUTTING OPERATION**

- 1. Raise the back of the unit off of the ground approximately 4" to allow the material to clear from under the cutting deck as you travel forward.
- 2. Place the front skid shoes 1-2 inches off the ground. This is the preferred position for cutting grass and heavy vegetation.
- Never drive your skid-steer with the front of the rotary cutter tilted to the point your view is obstructed. Always make sure you can see what you are cutting.
- Check the work area. Never operate the rotary cutter in populated areas where thrown objects could injure persons or damage property.
- Never raise the unit and expose yourself or anyone else to the rotating blades. If you can see the blades then the back of the unit is raised too high.
- 3. Activate the auxiliary hydraulics with the engine at idle. Increase engine speed.
- 4. Be sure the rotary cutter is operating smoothly and at full speed, and then start forward travel while monitoring blade rotation.

NOTE: The rotary cutter has a window in the motor cover shield so the operator can see the blade rotation indicator disk. This disk should always be rotating during operation to prevent a drop in hydraulic pressure or overheating of the hydraulic system.

#### **CUTTING LARGE BRUSH UP TO 3-4" IN DIAMETER:**

When cutting large brush, roll the front of the rotary cutter up 1-2 feet. DO NOT LIFT THE BACK OF THE CUTTER! Slowly drive into the tree and use the hydraulic tilt function on the skid-steer to bend or push the tree over. As the tree bends, the blades will cut it off. The tree can now be mulched by rotating the front up, drive forward several feet, roll the front down onto the tree and backdrag. Repeat, if necessary. Remember do not lift the back of the cutter.

**AVOID STALLING ROTARY CUTTER:** Continuous rotation is required to prevent overheating of the hydraulic system. The rotary cutter is equipped with a blade rotation indicator disk to assist in monitoring blade rotation. If the rotary cutter stalls, see "TO RESTART BLADE ROTATION".

**TO RESTART BLADE ROTATION:** Return engine speed to idle and disengage auxiliary hydraulics. Remove rotary cutter from debris. Engage auxiliary hydraulics to start blade rotation. (Be sure the rotary cutter is operating smoothly and at full speed, and then start forward travel while monitoring blade rotation.)

## **OPERATING INSTRUCTIONS**

#### ROTARY CUTTER

**REPEATED STALLING OF ROTATING BLADES:** Return engine speed to idle and disengage auxiliary hydraulics. Remove rotary cutter from debris. Review operating conditions and the size/density of material being cut. Make necessary corrections. Engage auxiliary hydraulics to start blade rotation. (Be sure the rotary cutter is operating smoothly and at full speed, and then start forward travel while monitoring blade rotation.)

#### TROUBLESHOOTING OPERATING CONDITIONS:

Below are listed a few operating conditions that may cause repeated stalling of your rotary cutter, and suggestions on how to correct them.

**GRASS TOO LONG OR THICK:** If cutting heavy vegetation, you may need to slow travel speed or make smaller passes (less than full cut) to prevent overloading and stalling the unit.

**BRUSH TOO BIG IN DIAMETER:** The rotary cutter is NOT designed to cut trees larger than 3-4" in diameter. If brush is smaller than 3-4" in diameter and the cutter is stalling, check sharpness of the blades (see "Maintenance" Section L) and cut using the procedure described earlier in this section for "Cutting Large Brush".

**BRUSH TOO THICK OR HEAVY:** If cutting heavy or thick brush, you may need to slow travel speed or make smaller passes (less than full cut), to prevent overloading. If the blades seem to be unable to handle the volume of brush, slow down the travel speed until the unit reaches full speed before proceeding.

**SCALPING THE GROUND or BOTTOMING OUT:** Be aware of changes in the terrain. Stay alert for drop-off and holes. Check the terrain and the deck position before restarting and continuing cutting.

**STRIKING FOREIGN OBJECTS:** Stay alert for rocks, fencing, abandoned wells, septic tanks or other foreign objects. If the rotary cutter comes into contact with a foreign object, stop the unit, shut off the engine and disconnect the hydraulic couplers from the skid-steer. Inspect the unit and repair any damage before restarting and continuing cutting. (Never try to weld or straighten damaged blades.) Inspect the work area for any other items, and if they are too large to be removed from the area, they should be flagged clearly.

#### **GENERAL INFORMATION**

Economical and efficient operation of any machine is dependent upon regular and proper lubrication of all moving parts with a quality lubricant. Neglect leads to reduced efficiency, wear, breakdown, and needless replacement of parts.

#### **WEEKLY**

The oil level in the gear box should be checked once a week. Fill as necessary with 80-90 weight gear lubricant.

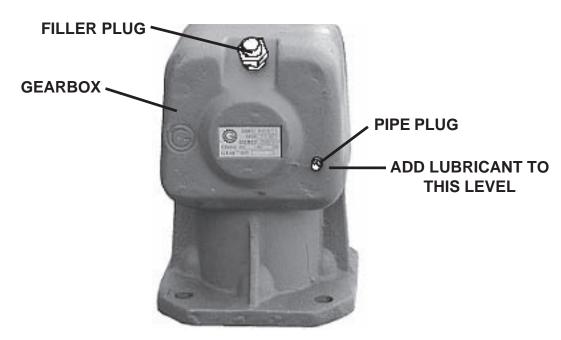
#### TO CHECK:

Remove pipe plug from end of gearbox. Lubricant should be at the same level as the plug.

#### TO ADD:

Remove pipe plug from end of gearbox. Remove filler plug from top end of gearbox and add 80-90 weight gear lubricant up to the same level as the pipe plug. Replace pipe plug and filler plug.

IMPORTANT: DO NOT OVERFILL, AS TOO MUCH LUBRICANT MAY RUPTURE THE GEAR BOX SEALS.



## MAINTENANCE

ROTARYCUTTERS

#### **GENERAL INFORMATION**

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to an absolute minimum. However, it is very important that these maintenance functions be performed as described below.



WARNING! Avoid serious injury. Lower the rotary cutter to the ground, set the parking brake, stop the skid-steer engine, and remove the key before leaving the operator's seat. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

#### DAILY

- Check skid-steer loader hydraulic system to ensure an adequate level of hydraulic oil.
- Check gearbox castle nut and torque to min. 250 max 350 ft. lbs.
- Check mounting hardware on blades and torque to 450 ft. lbs.
- Check all other hardware and tighten, if necessary. See Section O.
- Check hydraulic system for hydraulic oil leaks.
- Check gearbox power shaft for foreign material wrapped around the shaft and remove, if necessary.
- Check blades for damage and replace or sharpen as needed.
- Check all safety guards and ensure that all devices are installed correctly.
- Check for missing or illegible Safety / Warning Decals.

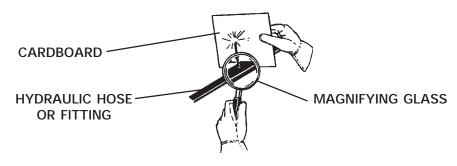
#### WARNING!



Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks.

Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.

If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.



#### **EVERY 40 HOURS**

Check oil level in gearbox and add if necessary. (See Section H)



WARNING! Avoid serious injury. Lower the rotary cutter to the ground, set the parking brake, stop the skid-steer engine, and remove the key before leaving the operator's seat. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

#### REPLACING BLADES

When replacing, changing, or sharpening the blades, the unit must be blocked securely off the ground to gain access to the blades.

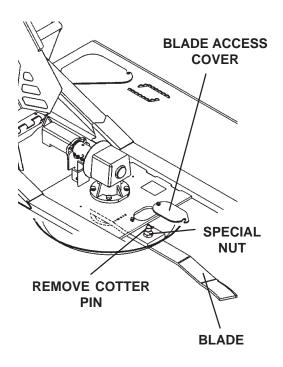
The blades should be inspected regularly (every 8 hours) to ensure they are sharp, tightened correctly, and intact. Always replace both blades at the same time and NEVER try to weld or straighten damaged blades, as loss of blade integrity may result.

#### Removing Blades:

- With unit securely blocked off the ground and hydraulic couplers disconnected, loosen the capscrews on the blade access cover and swing cover open.
- 2. Position one of the blades under the access panel and remove the cotter pin and special nut. You can now remove the blade mounting bolt and the blade.
- 3. Repeat step #2 for the remaining blade.

#### Installing Blades:

- With unit securely blocked off the 1. ground and hydraulic couplers disconnected, loosen the capscrews on the blade access cover and swing cover open.
- 2. Position the blade with the key of the mounting bolt in alignment with the key way, and either prop up in place or have an assistant hold in place while the special nut is installed onto the bolt through the blade access panel. Torque nut to 450 ft. lbs. and install cotter pin.
- 3. Repeat step #1 for the second blade.





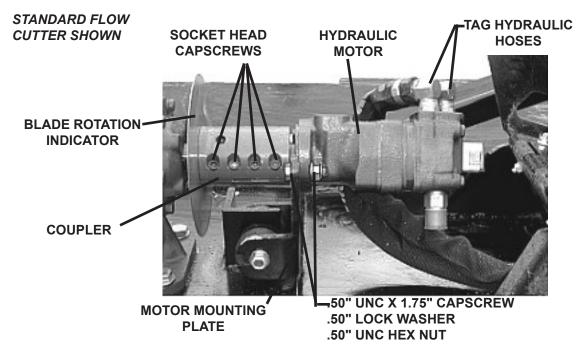
WARNING! Avoid serious injury. Lower the rotary cutter to the ground, set the parking brake, stop the skid-steer engine, and remove the key before leaving the operator's seat. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

#### REPLACING HYDRAULIC MOTOR

When replacing the hydraulic motor the unit should be setting on the ground with the hydraulic couplers disconnected.

#### NOTE: Field replacement of the internal motor seals voids warranty.

- 1. With unit setting on the ground and hydraulic couplers disconnected, tag and disconnect the hydraulic hoses and fittings from the hydraulic motor. Note the hose routing for re-installation.
- 2. Loosen the four sockethead capscrews on the coupler and slide the motor out of the coupler.
- 3. Remove the capscrews holding the motor to the motor mounting plate(s), and remove the motor.
- 4. Install the new motor onto the mounting plate(s) using the existing hardware.
- 5. Slide the motor with the mounting plate(s) into the coupler and retighten the sockethead capscrews. Torque all hardware to specification. See Section O.
- 6. Re-connect the hydraulic hoses and fittings to the new motor.



## **MAINTENANCE**

#### ROTARYCUTTERS

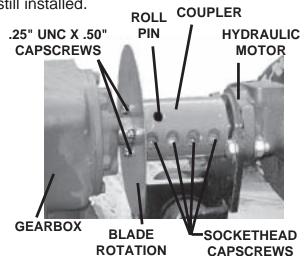


WARNING! Avoid serious injury. Lower the rotary cutter to the ground, set the parking brake, stop the skid-steer engine and remove the key before leaving the operator's seat. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

#### REPLACING GEARBOX/MOTOR COUPLER

When replacing the coupler the unit should be setting on the ground with the hydraulic couplers disconnected.

- 1. With unit setting on the ground and hydraulic couplers disconnected, loosen the four sockethead capscrews on the coupler and remove the motor with the motor mounting plate still installed.
- 2. Remove the roll pin holding the coupler to the gearbox, and the three capscrews holding the blade rotation indicator to coupler.
- 3. Replace the coupler on the gearbox shaft, and reinstall the roll pin and the blade rotation indicator using the existing hardware.
- 4. Reinstall the motor into the coupler, and retighten the sockethead capscrews. Torque to specification. See Section O.



**INDICATOR** 



WARNING! Avoid serious injury. Lower the rotary cutter to the ground, set the parking brake, stop the skid-steer engine, and remove the key before leaving the operator's seat. If unit must be left raised for maintenance, block the unit securely to prevent accidental release of the lifting mechanism. Disconnect the hydraulic couplers.

### REPLACING GEARBOX

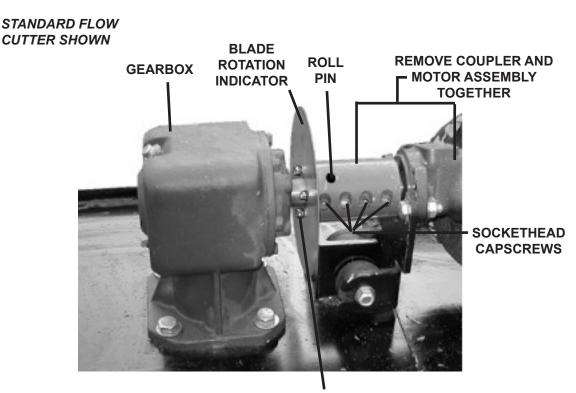
When replacing the gearbox, the unit must be blocked securely off the ground to gain access to the castle nut holding the stump jumper to the lower end of the gearbox.

1. With unit securely blocked off the ground and hydraulic couplers disconnected, remove the cotter pin and castle nut holding the stump jumper to the lower end of the gearbox. NOTE: Be prepared for the weight of the stump jumper with the blades attached to fall when the castle nut is removed.

## MAINTENANCE -

#### **ROTARY CUTTERS**

- 2. Remove the roll pin holding the coupler to the gearbox and the three capscrews holding the blade rotation indicator to coupler.
- 3. Loosen the four socket head capscrews on the coupler and slide the coupler along with the motor assembly off of the gearbox drive shaft.
- 4. Remove the four capscrews securing the gearbox to the rotary cutter deck, and lift the gearbox off the cutter.
- 5. Install the new gearbox with the existing hardware removed in Step #4.
- 6. Position the stump jumper onto the lower end of the gearbox and reinstall the castle nut. Torque nut to 230 ft. lbs. Continue to tighten until the next nut castellation aligns with cross pin hole in the output shaft. Final torque range must be between 240 250 lt. lbs. Reinstall cotter pin.
- 7. Install the blade rotation indicator onto the gearbox followed by the coupler/motor assembly.
- 8. Reinstall the .25" capscrews securing the blade rotation indicator to the coupler, reinstall the roll pin, and tighten the four sockethead capscrews specification. See Section O.
- 9. Check lubrication level in the gearbox and add as needed. See Section H.



.25" UNC X .50" CAPSCREWS .25" LOCK WASHERS

## STORAGE

#### ROTARY CUTTER

#### **GENERAL INFORMATION**

The following storage procedure will help you to keep your rotary cutter in top condition. It will also help you get off to a good start the next time your cutter is needed. We therefore strongly recommend that you take the extra time to follow these procedures whenever your unit will not be used for an extended period of time.

#### PREPARATION FOR STORAGE

- 1. Clean the unit thoroughly, removing all mud, dirt, and grease.
- 2. Sharpen or replace blades. Replace all blades at the same time and do not try to weld or straighten damaged blades; loss of integrity may result.
- 3. Inspect for visible signs of wear, breakage, or damage. Order any parts required, and make the necessary repairs to avoid delays when starting next season. NOTE: Purchase only approved replacement parts from your authorized BRADCO dealer.
- 4. Tighten all loose nuts, capscrews, and hydraulic connections.
- 5. Check the gear box for proper lubricant level.
- 6. Connect the hydraulic couplers together to protect the hydraulic system from contaminates.
- 7. Touch up all unpainted and exposed areas with paint, to prevent rust.
- 8. Replace decals if damaged, or in unreadable condition.
- Apply a rust-preventive spray to all moving parts and to the bottom of the deck.
- 10. Store the unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

#### REMOVING FROM STORAGE

- 1. Remove all protective coverings.
- 2. Check hydraulic hoses for deterioration, and replace if necessary.
- 3. Check all nuts and bolts for proper tightness, especially those securing the motor, gearbox and blades.

## -TROUBLESHOOTING -

## **ROTARY CUTTER**

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Loss of Power.	Skid-steer auxiliary valve not engaged.	Engage auxiliary valve.
	Relief valve setting adjusted too low.	Refer to skid-steer operator's manual.
	Inadequate hydraulic flow from skid-steer.	Check hydraulic flow to rotary cutter.
	Low oil supply.	Add oil.
	Couplers not engaged.	Engage couplers.
	Air in hydraulic lines.	Activate system until air is purged from system.
	Broken hose.	Replace damaged hose.
	Obstruction in hydraulic lines.	Remove obstruction and replace if necessary.
	Loose or damaged hydraulic connection.	Tighten or replace fittings.
	Broken gearbox pin.	Replace pin.
	Hydraulic motor damaged or seal blown.	Call Bradco service department for instructions.
DDODL EM	POSSIBLE CAUSE	POSSIBLE REMEDY
PROBLEM	PUSSIBLE CAUSE	POSSIBLE KEWIEDT
Excessive vibration.	Dull, broken or damaged blades.	Sharpen or replace.
	Dull, broken or damaged	
	Dull, broken or damaged blades.	Sharpen or replace.  Call Bradco service depart-
	Dull, broken or damaged blades. Bent gearbox shaft. Stump Jumper out of	Sharpen or replace.  Call Bradco service department for instructions.  Call Bradco service depart-
Excessive vibration.	Dull, broken or damaged blades. Bent gearbox shaft. Stump Jumper out of balance.	Sharpen or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.
Excessive vibration.  PROBLEM	Dull, broken or damaged blades. Bent gearbox shaft. Stump Jumper out of balance. POSSIBLE CAUSE Loose or damaged	Sharpen or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.  POSSIBLE REMEDY
Excessive vibration.  PROBLEM	Dull, broken or damaged blades. Bent gearbox shaft.  Stump Jumper out of balance.  POSSIBLE CAUSE  Loose or damaged hydraulic line.	Sharpen or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.  POSSIBLE REMEDY  Tighten or replace.  Call Bradco service depart-
Excessive vibration.  PROBLEM	Dull, broken or damaged blades. Bent gearbox shaft.  Stump Jumper out of balance.  POSSIBLE CAUSE  Loose or damaged hydraulic line.  Ruptured gearbox seal.	Sharpen or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.  POSSIBLE REMEDY  Tighten or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.  Call Bradco service department for instructions.
Excessive vibration.  PROBLEM	Dull, broken or damaged blades. Bent gearbox shaft.  Stump Jumper out of balance.  POSSIBLE CAUSE  Loose or damaged hydraulic line. Ruptured gearbox seal.  Bent gearbox shaft.  Loose or missing gear-	Sharpen or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.  POSSIBLE REMEDY  Tighten or replace.  Call Bradco service department for instructions.  Call Bradco service department for instructions.  Call Bradco service department for instructions.

**O** 

## BOLT TORQUE

#### **BOLT TORQUE SPECIFICATIONS**

#### **GENERAL TORQUE SPECIFICATION TABLE**

Use the following torques when special torques are not given. These values apply to fasteners as received from suppliers, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads. Remember to always use grade five or better when replacing bolts.

er grade.			2			5			8*				
Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary		$\bigcirc$				$\bigcirc$			<> ⟨*⟩		<b>⟨∵</b> ⟩	<b>₹</b>	
· · · · · · · · · · · · · · · · · · ·		TOR	QUE		TORQUE			TORQUE					
Bolt Size		Pounds Feet Newton-Meters		Pounds Feet Newton-Meters		Pounds Feet		Newton-Meters					
Millimeters	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	30.3	
7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3	
9.53	20	23	27.1	31.2	35	42	47.5	57.0	45	54	61.0	73.2	
11.11	30	25	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9	
12.70	45	52	61.0	70.5	80	96	108.5	130.2	110	132	149.2	179.0	
14.29	65	75	88.1	101.6	110	132	149.2	179.0	160	192	217.0	260.4	
15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	264	298.3	358.0	
19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3	
22.23	160	200	216.8	271.0	400	480	542.4	650.9	600	720	813.6	976.3	
25.40	250	300	338.8	406.5	580	696	786.5	943.8	900	1080	1220.4	1464.5	
25.58	-	-	-	-	800	880	1084.8	1193.3	1280	1440	1735.7	1952.6	
31.75	-	-	-	-	1120	1240	1518.7	1681.4	1820	2000	2467.9	2712.0	
34.93	-	-	-	-	1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3	
38.10	-	-	-	-	1940	2200	2630.6	2983.2	3160	3560	4285.0	4827.4	
S	Size Millimeters 6.35 7.94 9.53 11.11 12.70 14.29 15.88 19.05 22.23 25.40 25.58 31.75 34.93	Size Pounds Millimeters Min. 6.35 5 7.94 10 9.53 20 11.11 30 12.70 45 14.29 65 15.88 95 19.05 150 22.23 160 25.40 250 25.58 - 31.75 - 34.93 -	TOR   Pounds Feet   Min.   Max.   6.35   5   6   7.94   10   12   9.53   20   23   11.11   30   25   12.70   45   52   14.29   65   75   15.88   95   105   19.05   150   185   22.23   160   200   25.40   250   300   25.58   -	TORQUE    Pounds Feet   Newton	TORQUE   Pounds Feet   Newton-Meters   Min.   Max.   Min.   Min.   Max.   Min.   Min.   Min.   Max.   Min.   Min	TORQUE   Pounds Feet   Newton-Meters   Pounds   Millimeters   Min.   Max.   Min.   Max.   Min.   M	TORQUE    TORQUE   Newton-Meters   Pounds Feet	TORQUE   TORQUE   TORQUE   Size   Pounds Feet   Newton-Meters   Pounds Feet   Newton Millimeters   Min.   Max.   Min.   Max.   Min.   Max.   Min.   Max.   Min.   Max.   Min.   Max.   Min.   Min.   Max.   Min.   Max.   Min.   Min.   Max.   Min.   Min.	TORQUE   Pounds Feet   Newton-Meters   Pounds Feet   Newton-Meters   Min.   Max.   M	TORQUE   TORQUE   Pounds Feet   Newton-Meters   Pounds Feet   Pounds Feet   Pounds Feet   Newton-Meters   Pounds Feet   Pounds Feet	TORQUE   TORQUE   TORQUE   TORQUE   TORQUE   TORQUE   TORQUE   TORQUE   TORQUE   Pounds Feet   Newton-Meters   Pounds Feet   Pounds Feet   Newton-Meters   Pounds Feet   Newton-Meters   Pounds Feet   Pou	TORQUE   T	

5.6

8.8

1.5

1.5

177-199

202-231

132-150

206-242

246-289

#### METRIC BOLT TORQUE SPECIFICATIONS

2.0

2.5

8.8

10.9

5.6

8.8

10.9

M18

M20

Size of Screw	Grade No.	Ptich (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
	5.6		3.6-5.8	4.9-7.9		-	-
M6	8.8	1.0	5.8-9.4	7.9-12.7	-	-	-
	10.9	1	7.2-10	9.8-13.6		-	-
	5.6		7.2-14	9.8-19		12-17	16.3-23
M8	8.8	1.25	17-22	23-29.8	1.0	19-27	25.7-36.6
	10.9	1	20-26	27.1-35.2		22-31	29.8-42
	5.6		20-25	27.1-33.9		20-29	27.1-39.3
M10	8.8	1.5	34-40	46.1-54.2	1.25	35-47	47.4-63.7
	10.9	1	38-46	51.5-62.3		40-52	54.2-70.5
	5.6		28-34	37.9-46.1		31-41	42-55.6
M12	8.8	1.75	51-59	69.1-79.9	1.25	56-68	75.9-92.1
	10.9	1	57-66	77.2-89.4		62-75	84-101.6
	5.6		49-56	66.4-75.9		52-64	70.5-86.7
M14	8.8	2.0	81-93	109.8-126	1.5	90-106	122-143.6
	10.9	1	96-109	130.1-147.7		107-124	145-168
	5.6		67-77	90.8-104.3		69-83	93.5-112.5
M16	8.8	2.0	116-130	157.2-176.2	1.5	120-138	162.6-187
	10.9	1	129-145	174.8-196.5		140-158	189.7-214.1
	5.6	1	88-100	119.2-136		100-117	136-158.5

203.3-227.6

237.1-262.9

146.3-176.2

252-277.8

288.6-337.4

Coarse Thread

150-168

175-194

108-130

186-205

213-249

239.8-269.6

273.7-313

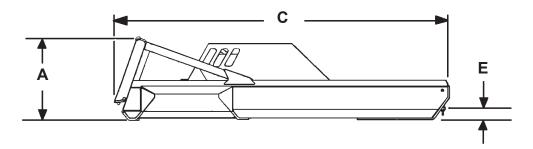
178.9-203.3

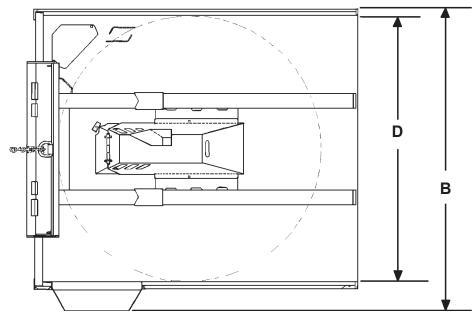
279.1-327.9

333.3-391.6

## **SPECIFICATIONS-**

**ROTARY CUTTERS** 





SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE AND WITHOUT LIABILITY THEREFOR.

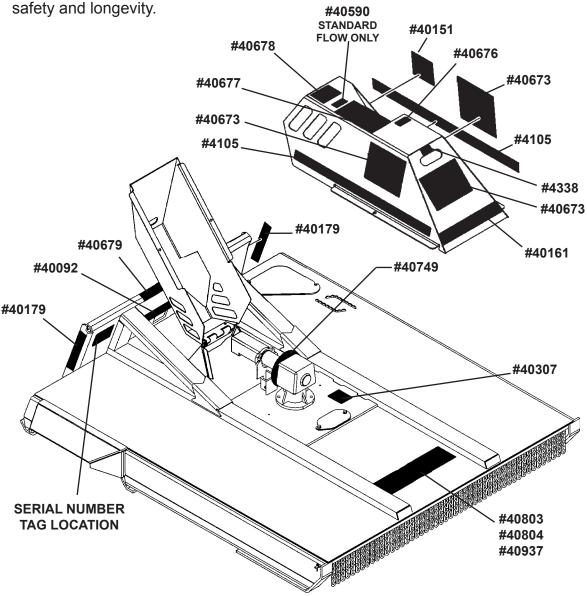
SPECIFICATIONS

		STANDARD	)	HIGH	FLOW
DESCRIPTION	BC60	BC72	BC60*	BC72	BC78
A. Overall Height	22.50"	22.50"	22.50"	22.50"	22.50"
B. Overall Width	72.00"	85.00"	72.00"	85.00"	91.00"
C. Overall Length	78.25"	90.25"	78.25"	90.25"	96.00"
D. Cutting Width	60.00"	72.00"	60.00"	72.00"	78.00"
E. Minimum Cutting Height 2.00"	2.00"	2.00	2.00"	2.00"	2.00"
(Skid Shoes on Ground)					
Cutting Capacity (Max. Cutting Diameter)	4.00"	4.00"	4.00"	4.00"	4.00"
Deck Thickness					
Recommended GPM	15-20	18-22	25-30	32-40	32-40
Required Skid-Steer Lift Capacity	1300#	1700#	1300#	1700#	1800#
Weight					
* (SPECIFICATIONS FOR BC60 WI	TH SPECIA	L MOTOR #1	06601 ONLY	)	

#### **DECAL PLACEMENT**

#### **GENERAL INFORMATION**

The diagrams on this page show the location of the decals used on the BRADCO Rotary Cutter. The decals are identified by their part numbers, with reductions of the actual decals located on the following pages. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the unit. They contain information you need to know for both



**IMPORTANT**: Keep all safety signs clean and legible. Replace all missing, illegible, or damaged safety signs. When replacing parts with safety signs attached, the safety signs must also be replaced unless otherwise noted.

**REPLACING SAFETY SIGNS**: Clean the area of application with nonflammable solvent, then wash the same area with soap and water. Allow the surface to fully dry. Remove the backing from the safety sign, exposing the adhesive surface. Apply the safety sign to the position shown in the diagram above, and smooth out any bubbles.



#### ROTATING BLADE HAZARD!

#### STAY BACK! OBJECTS CAN BE THROWN!

DO NOT operate near bystanders.

DO NOT place hands or feet under deck while in operation or with engine running.

DO NOT operate without a shatterproof cab door on loader.

Stop engine before leaving loader or servicing. Failure to comply will result in death or serious injury.

840673.

#40151

## DANGER! ROTATING BLADE PART #40673



WARNING! HIGH PRESSURE FLUID

Keep all components in good repair.



can cause Serious injury or Death

Si no entiende ingles, se prefiere que busque a alguien que interprete las

DANGER! GUARD MISSING PART #40307

instrucciones para usted.

#### SAFETY INSTRUCTIONS

#### AVOID STALLING ROTARY CUTTER

Continuous blade rotation is required to prevent overheating of hydraulic system.

#### TO RESTART BLADE ROTATION:

- Disengage auxiliary hydraulics.
- · Remove rotary cutter from debris.
- Engage auxiliary hydraulics to start blade rotation.

#### REPEATED STALLING OF ROTATING BLADE:

- Disengage auxiliary hydraulics.
- Remove rotary cutter from debris.
- Review operating conditions and size/density of material.
- Make necessary corrections to avoid future stalling.
- Engage auxiliary hydraulics to start blade rotation.

SEE OPERATOR'S MANUAL FOR MORE INSTRUCTIONS. #40877

SAFETY INSTRUCTIONS PART #40677

## **A** WARNING

#### BEFORE LEAVING OPERATOR'S SEAT:

- Lower lift arms against frame and place unit on the ground.
- Disengage auxiliary hydraulics.
- 3. Stop Engine and Remove Key.
- 4. Engage Parking Brake.

#40678

WARNING! BEFORE LEAVING OPERATOR'S SEAT PART #40678

## **A** WARNING

LIFT LIMITING CHAIN MUST BE PROPERLY INSTALLED DURING OPERATION OF ROTARY CUTTER. #40679

WARNING! LIFT LIMITING CHAIN PART #40679



DANGER STAND CLEAR PART #4105

## BLADE ROTATION INDICATOR WINDOW

#40676

BLADE ROTATION INDICATOR PART #40676

BC60

BC72 MODEL NUMBER PART #40803

**BC72** 

BC60 MODEL NUMBER PART #40804

**BC78** 

BC78 MODEL NUMBER PART #40937

## **STAND CLEAR**

STAND CLEAR PART #40161

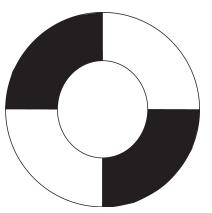
## **A** CAUTION

DO NOT OPERATE
USING HI-FLOW
HYDRAULIC SYSTEMS.
Maximum 25 GPM
#40590

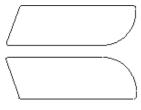
CAUTION! DO NOT OPERATE PART #40590



MADE IN USA PART #4338



ROTATION INDICATOR PART #40749



BRADCO LOGO PART #40092



BRADCO LOGO (VERTICAL)
PART #40179

#### **GENERAL INFORMATION**

The following is a list of areas that should be inspected by the dealer prior to delivery of the Rotary Cutter to the customer. The customer should check the list and make sure that the dealer has completed the inspection. Completion of this checklist will help insure that the customer receives the rotary cutter in complete working order, ready to install.

#### PREDELIVERY CHECKLIST - CHECK AND ADJUST AS NECESSARY

1	Visually inspect the unit for bent, loose, cracked, damaged or missing parts. Check for any other irregularities.
2	Check and lubricate, if necessary. See "Lubrication" Section H.
3	Check bolts for tightness. Retighten after the first four working hours, and after every eight working hour intervals thereafter. See "Bolt Torque", Section O.
4	Check all hydraulic connections for leaks and all hoses for proper positioning to reduce pinching, chafing and binding.
5	Make sure decals are not damaged or missing and are in their correct location. See "Decals" Section Q.
6	Make sure the customer has the necessary couplers to attach the unit to the skid-steer auxiliary hydraulic couplers.
7	Complete and return the manufacturer's "Warranty Validation Form" and sign your dealership predelivery checklist.

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## **Limited Warranty**

Except for the Excluded Products as described below, all new products are warranted to be free from defects in material and/or workmanship during the Warranty Period, in accordance with and subject to the terms and conditions of this Limited Warranty.

- 1. <u>Excluded Products</u>. The following products are <u>excluded</u> from this Limited Warranty:
- (a) Any cable, part that engages with the ground (i.e. sprockets), digging chain, bearing, teeth, tamping and/or demolition head, blade cutting edge, pilot bit, auger teeth and broom brush that either constitutes or is part of a product.
- (b) Any product, merchandise or component that, in the opinion of Paladin Light Construction<sup>1</sup>, has been (i) misused; (ii) modified in any unauthorized manner; (iii) altered; (iv) damaged; (v) involved in an accident; or (vi) repaired using parts not obtained through Paladin Light Construction.
- 2. <u>Warranty Period</u>. The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the <u>first to occur</u> of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six (6) months after the date of shipment by Paladin Light Construction as evidenced by the invoiced shipment date (the "<u>Commencement Date</u>") and ends on the date that is twelve (12) months after the Commencement Date.
- 3. <u>Terms and Conditions of Limited Warranty</u>. The following terms and conditions apply to the Limited Warranty hereby provided:
- (a) Option to Repair or Replace. Paladin Light Construction shall have the option to repair or replace the product.
- (b) <u>Timely Repair and Notice</u>. In order to obtain the Limited Warranty, (i) the product must be repaired within thirty (30) days from the date of failure, and (ii) a claim under the warranty must be submitted to Paladin Light Construction in writing within thirty (30) days from the date of repair.
- (c) <u>Return of Defective Part or Product</u>. If requested by Paladin Light Construction, the alleged defective part or product shall be shipped to Paladin Light Construction at its manufacturing facility or other location specified by Paladin Light Construction, with freight PRE-PAID by the claimant, to allow Paladin Light Construction to inspect the part or product.

Claims that fail to comply with any of the above terms and conditions shall be denied.

#### LIMITATIONS AND EXCLUSIONS.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING OR USAGE OF TRADE.

IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.

IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR ANY LOSS OR CLAIM IN AN AMOUNT IN EXCESS OF THE PURCHASE PRICE, OR, AT THE OPTION OF PALADIN LIGHT CONSTRUCTION, THE REPAIR OR REPLACEMENT, OF THE PARTICULAR PRODUCT ON WHICH ANY CLAIM OF LOSS OR DAMAGE IS BASED. THIS LIMITATION OF LIABILITY APPLIES IRRESPECTIVE OF WHETHER THE CLAIM IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHER CAUSE AND WHETHER THE ALLEGED DEFECT IS DISCOVERABLE OR LATENT.

<sup>1</sup>Attachment Technologies Inc., a subsidiary of Paladin Brands Holding, Inc. (PBHI) is referred to herein as Paladin Light Construction.