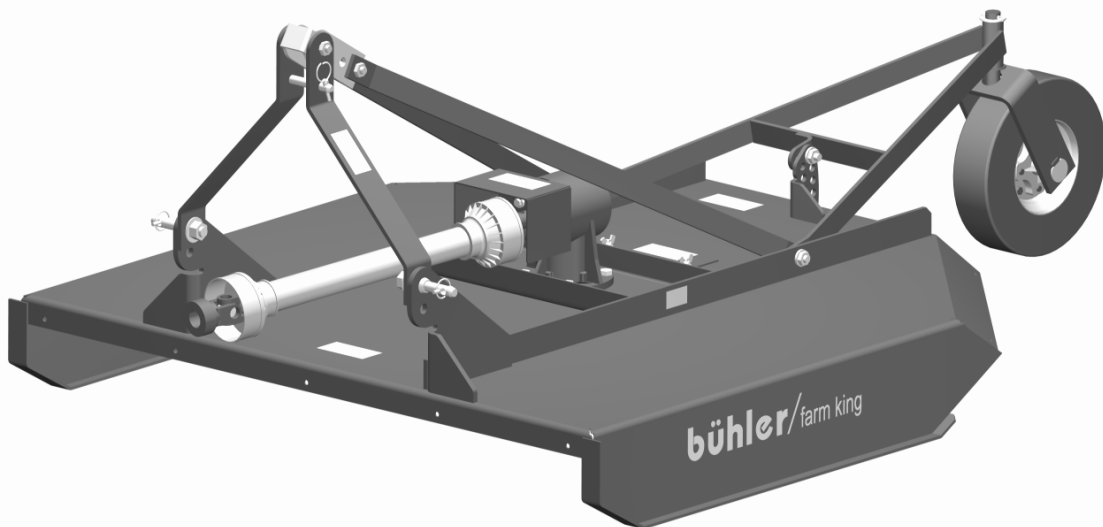


bühler

farm king



Series I Rotary Cutters

Operator's and Parts Manual
FK372

2008

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WARRANTY POLICY

Buhler Manufacturing products are warranted for a period of twelve (12) months (90 days for commercial application) from original date of purchase, by original purchaser, to be free from defects in material and workmanship under correct, normal agricultural use and proper applications.

Buhler Manufacturing's obligations under this warranty shall be limited to the repair or exchange, at Buhler Manufacturing's option, of any Buhler Manufacturing product or part which proves to be defective as provided. Buhler Manufacturing reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection.

The above warranty does not extend to goods damaged or subject to accident, abuse or misuse after shipment from Buhler Manufacturing's factory, nor to goods altered or repaired by anyone other than an authorized Buhler Manufacturing representative.

Buhler Manufacturing makes no Express Warranties other than those, which are specifically described. Any description of goods, including any references and specifications in catalogues, circulars and other written material published, is for the sole purpose of identifying goods and shall conform to such descriptions. Any sample or model is for illustrative purposes only and does not create an Express Warranty that the goods conform to sample or model shown.

The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Manufacturing will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

WARRANTY CLAIMS:

Warranty requests must be prepared on Buhler Manufacturing Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

WARRANTY LABOR:

Any labor subject to warranty **must** be authorized by Buhler Manufacturing. The labor rate for replacing defective parts, where applicable, will be credited at 100% of the dealer's posted shop rate. Defective parts will receive an extra 10% discount to assist with freight or other incidental costs.

GOVERNMENT LEGISLATION:

Warranty terms and conditions are subject to Provincial or State legislation.

IMPORTANT FACTS:

Buckets and Bucket Tines Carry No Warranty
Bent Spears Carry No Warranty
Snowblower Fan Shafts Carry No Warranty
Mower Blades Carry No Warranty
Portable Auger Parts Have Two (2) Year Warranty
Loader Parts Have Two (2) Year Warranty

IMPORTANT NOTE: This warranty does not apply to rentals

INTRODUCTION

The Buhler Farm King Series 1 Rotary cutter available in 48" and 60" and is equipped with a 3-point hitch. The 3-point hitch is Buhler Quick Hitch compatible so it is easy to attach and unhook. 3-point hitch models include a single solid rubber training wheel.

Buhler Farm King Rotary Cutters are built tough and made to last. The blades are heat-treated to enhance rigidity and the heavy-duty gearbox is designed to be rugged and durable. The access panel on the deck makes it easy to inspect or replace the blades. An optional chain kit minimizes the possibility of flying debris.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least annually thereafter. Contact your Buhler Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.buhler.com for a complete list of dealers in your area.

The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

SAFETY

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 operating this equipment is familiar with the recommended operating 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.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.



The safety alert symbol means...

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



CAUTION

The caution symbol 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.



WARNING

The Warning Symbol 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.



DANGER

The Danger Symbol 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 that, for functional purposes, cannot be guarded.

GENERAL SAFETY INSTRUCTIONS

Have a first-aid kit available for use and know how to use it. Have a fire extinguisher available, stored in a highly visible location, and know how to use it. Wear appropriate protective gear. This list may include but is not limited to:

- hard hat
- protective shoes with slip resistant soles
- protective glasses or goggles
- heavy gloves
- wet weather gear
- hearing protection
- respirator or filter mask

Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment. Do not attempt any unauthorized modifications to your Buhler product as this could affect function or safety, and could affect the life of the equipment. Inspect and clean the working area before operating. Ensure bystanders are clear of the area before operating.

START UP SAFETY

Do not let inexperienced operators or children run this equipment.
Place all tractor and machine controls in neutral before starting.
Operate only with ROPS and seatbelt equipped tractors.
Do not operate inside a building unless there is adequate ventilation.
Ensure all shields are in place and in good condition before operating.
Stay clear of PTO shaft and machine when engaging PTO.

OPERATION SAFETY

Do not permit riders.
Do not wear loose fitting clothing during operation.
Never operate over 540 rpm PTO speed.
Never operate the equipment in the raised position.

TRANSPORT SAFETY

Review Transport Safety instructions in tractor manual before moving.
Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.
Never have the equipment in operation during transport.
Always travel at a safe speed.
Inflate transport tires to recommended pressure.

SERVICE AND MAINTENANCE SAFETY

Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

Support the equipment with blocks or safety stands before working beneath it.

Follow good shop practices including:

- keep service area clean and dry
- be sure electrical outlets and tools are properly grounded
- use adequate light for the job

Use only tools, jacks, and hoists of sufficient capacity for the job.

Replace and secure all shields removed during serving before operating.

Use heavy leather gloves to handle sharp objects.

Check hydraulics regularly for leaks. Use cardboard to look for leaks, and use hand and eye protection.

Relieve pressure on hydraulic system before repairing or adjusting.

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion, which may result in serious injury or death.

STORAGE SAFETY

Store the unit in an area away from human activity.

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

Support the frame on stands and blocks to provide a secure base.

SAFETY SIGNS

The following illustration shows the approximate location and detail of safety signs.

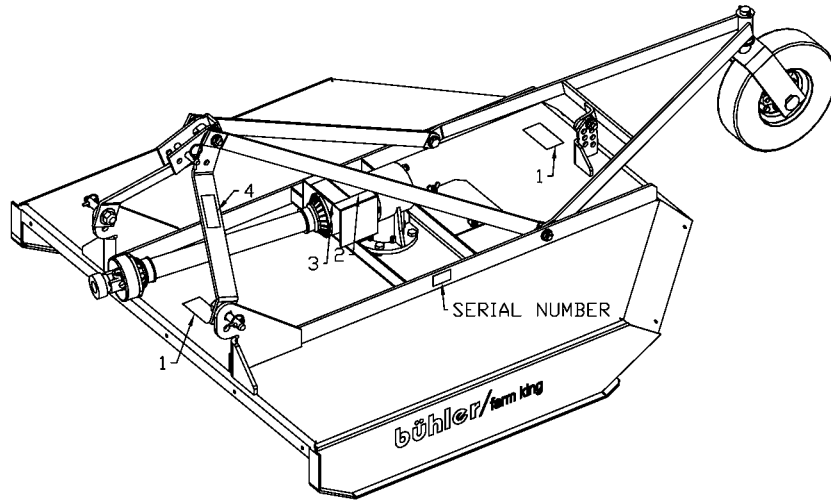
Keep all safety signs clean and legible and replace any that are damaged or missing.

When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer.

INSTALLATION

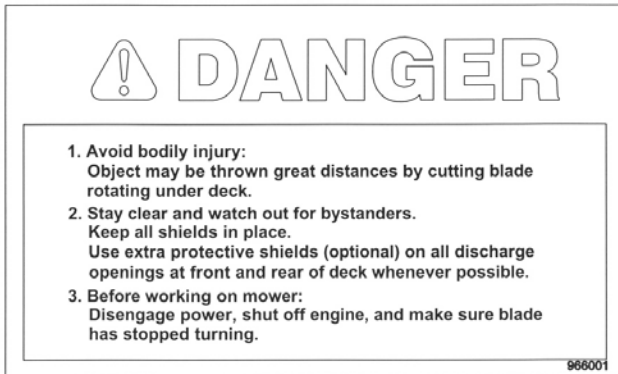
To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place. Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.

SERIES 1 ROTARY CUTTER SAFETY SIGNS

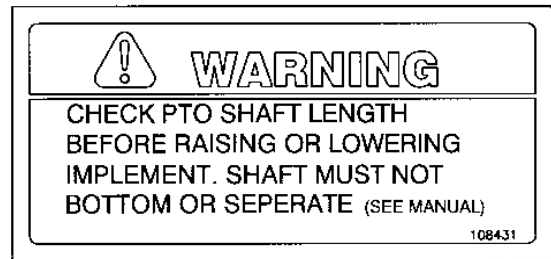


RC-03

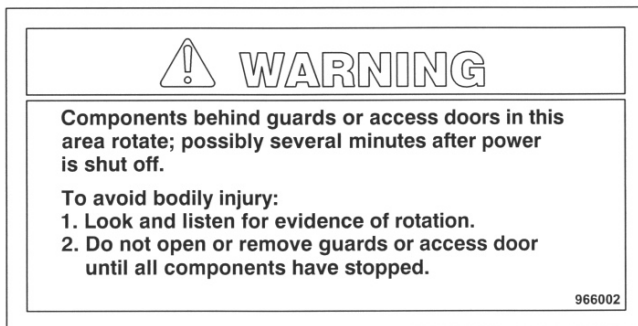
Replace safety sign immediately should it become damaged, torn or illegible. Obtain replacements from your authorized dealer using the part numbers shown.



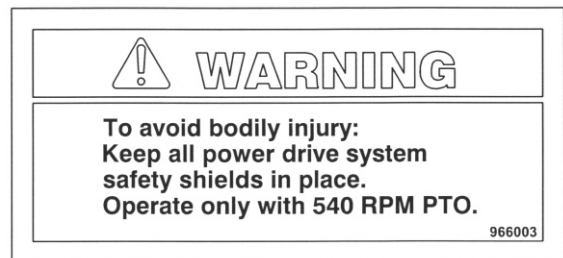
#1



#4



#2



#3

ASSEMBLY INSTRUCTIONS

1. Raise the hitch arms (#4) and the hitch supports (#5) from the deck. Remove the bolt holding on the top link (#6). Line up the end holes on the hitch supports with the holes on the outside of the hitch arms where you just removed the bolt. Bolt the hitch arms, hitch supports and top link together with the bolt you just removed using two flat washers and a lock nut.
2. Connect the PTO shaft to the gearbox. A snap ring holds on the PTO shaft with a shear pin. Make sure the PTO guard (#3) is bolted in place.
3. Re-check all the fasteners. There should be free movement of all pieces held together by a bolt and lock nut.


CHAIN KIT - ASSEMBLY INSTRUCTIONS

All cutters have the required holes for mounting the chain kit. The use of this chain kit will help reduce the possibility of injury to persons or property by stopping many thrown objects.

1. Bolt the front chain holder (#1) to the front of the cutter using 3/8" x 1" hex bolts, lock washers, flat washers and hex nuts.
2. Use 1/4" x 5 link chains (#8) at the front. A chain is pushed through each slot from underneath and a 3/8" rod is threaded through the top link of each chain. Hold rods in place using the cotter pins supplied. See parts list for correct length of rods.
3. Bolt the rear center (#3) and rear side (#4 & #5) chain holders to the rear of the cutter. Use 1/4" x 5 link chains (#8) along all rear edges. Thread rods as in front using lengths as shown in parts list.

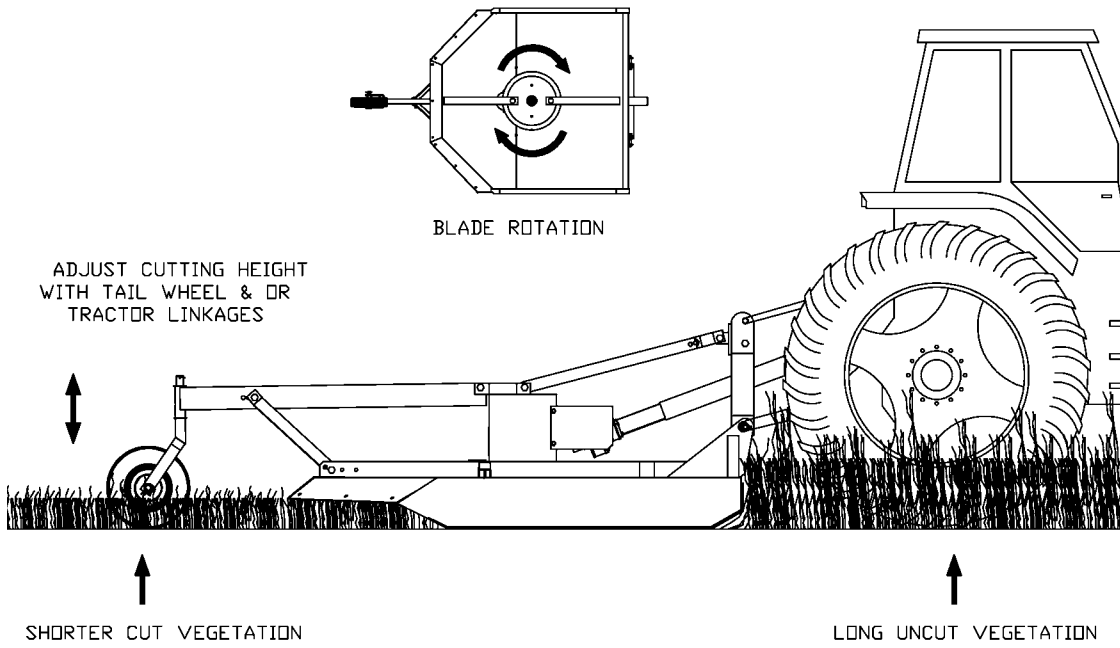
OPERATING INSTRUCTIONS

- Connecting to tractor: All cutters are supplied with a standard 1 3/8" 6-spline yoke on the PTO shaft.

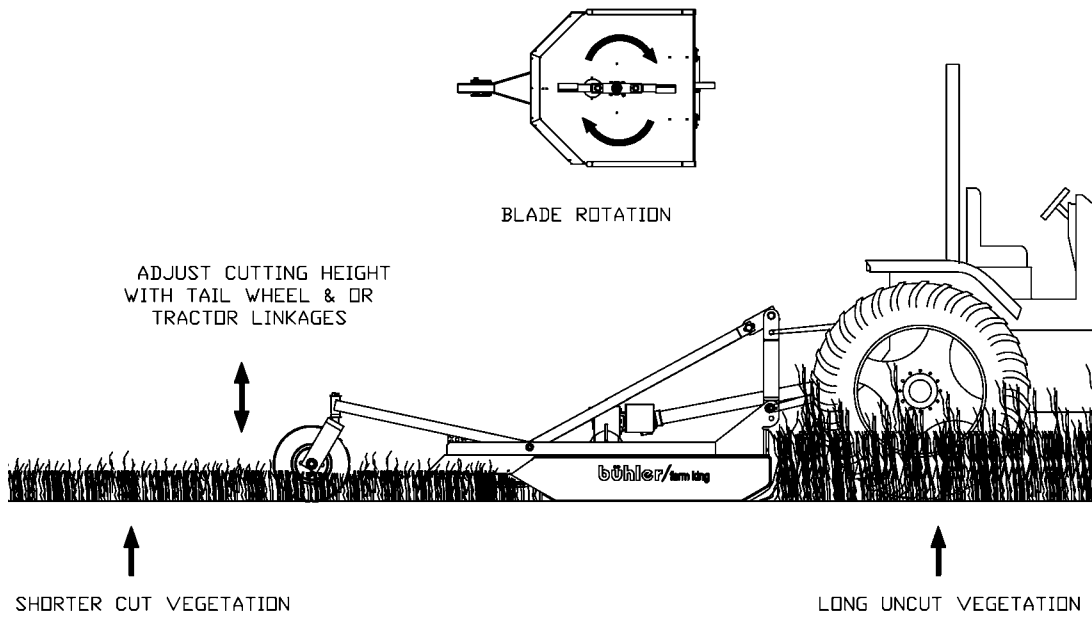
 Warning: This cutter is designed to operate only with a 540 rpm PTO. After connecting cutter to tractor and before doing any cutting, check to see that the PTO shaft is not touching anywhere on the cutter when raising and lowering or when cornering.
- PTO Shafts: Make sure the length of the PTO shaft is compatible with different working positions of the cutter. Carefully follow the lubrication chart supplied with the PTO shaft. When cutting, avoid joint angles over 35°. PTO shafts should be disengaged when turning sharp corners. Using tape or a bright colored marking pen, mark on the outer shields the position where the shaft is completely pushed together and the position where you have a 4" overlap. Watch these marks when moving the cutter through all possible operating angles to see that the PTO shaft stays within this range.

PTO shafts with shear pin - Loosen the outer shield on the implement end of the PTO and push the gearbox shaft through the end yoke. Using snap ring pliers, put the snap ring on the end of the gearbox shaft. This is what keeps the PTO shaft on if the shear pin breaks and the cutter should not be used without it. Insert a 1/2" x 3 1/2" Grade 2 bolt with a lock nut to act as shear pin and replace all shields.
- Operating tractor engine: Operate the tractor PTO at 540 rpm when doing normal cutting. If the forward speed is too high, a lower gear can be used.
- Cutting: The cutter should be run with the front end a little low or just level for normal light cutting. For brush or dense tall weeds, running front end high may give a better shredding job. On rough ground, the front end will also tend to dig in less. The cutter can also be used to shred stubble or top vegetables prior to harvest.

THEORY OF OPERATIONS



RB-20



RC-21

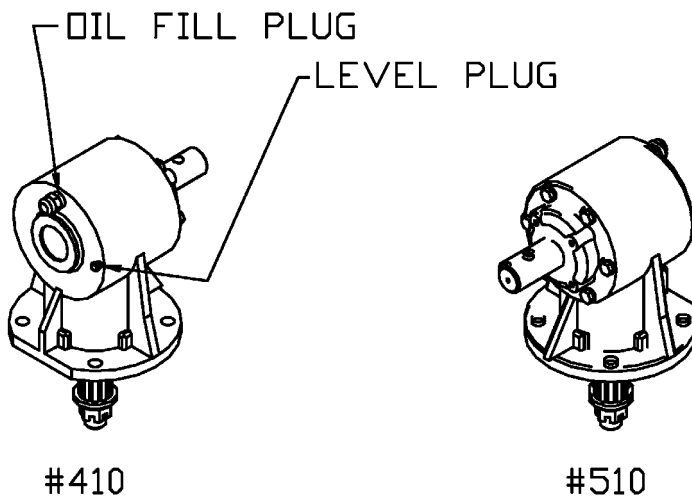
MAINTENANCE

SERVICING INSTRUCTIONS

LUBRICATION

1. Gearbox: The gearbox should be filled with SAE90 oil to the bottom edge of the lower oil plug when shipped. Check this before using the cutter and at regular intervals to see that this oil level is maintained.

GEARBOXES



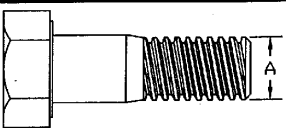
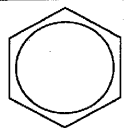


#410

#510

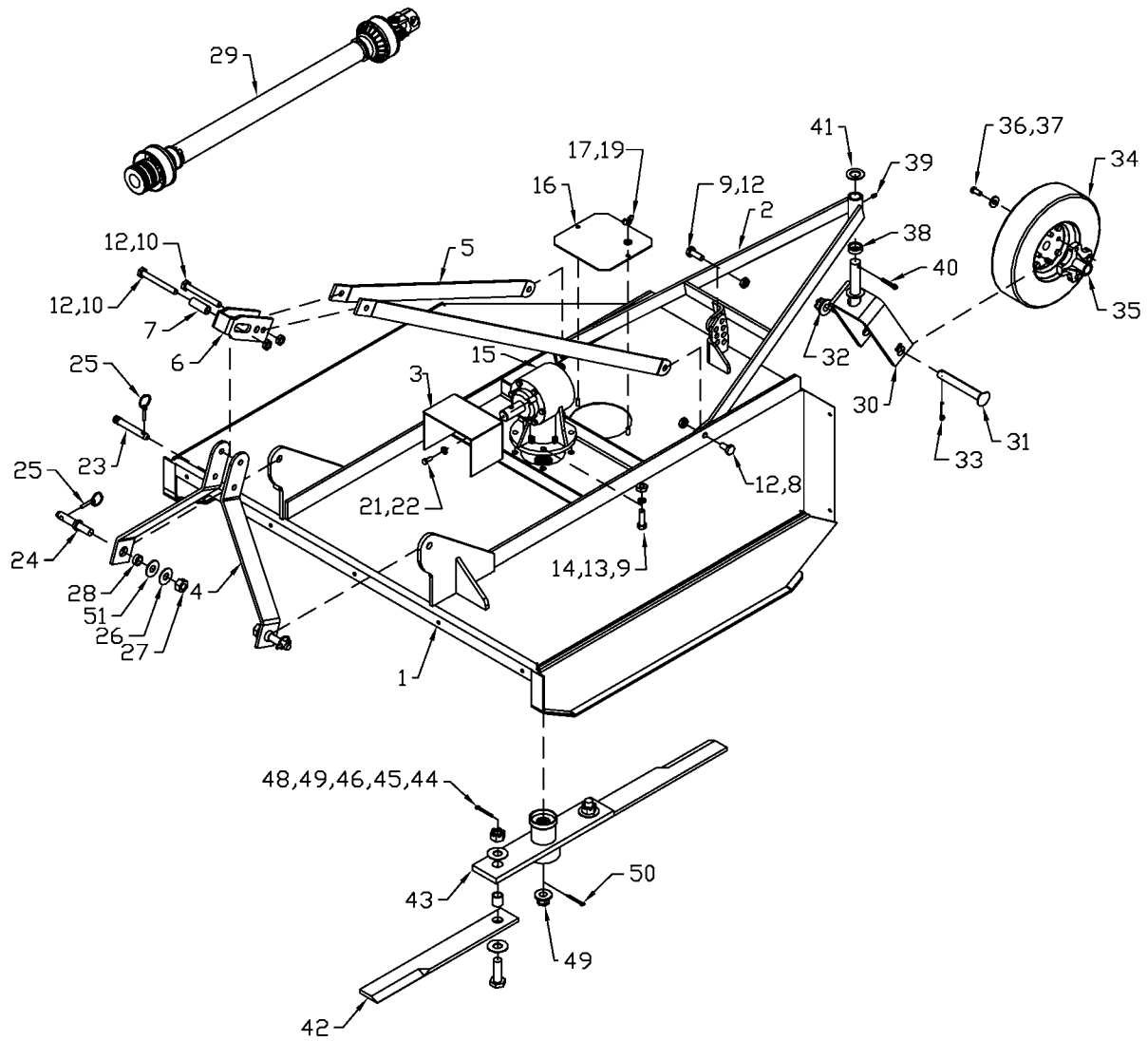
RC-04

2. Grease wheels, tail wheel spindle sleeve, universal joints and shield bushings on the PTO shaft after every eight hours of use. Lubricate the telescoping PTO tube and the PTO quick release about every twenty hours of use.
3. Shielding: Always keep all shielding in place and repair or replace if damaged.
4. Blades: When replacing or grinding the cutting blades, both blades must be replaced or reground at the same time to maintain the proper balance in the cutting unit.

⚠ IMPORTANT: Use Buhler replacement blades only. Using substitute blades may be dangerous. When changing blades, open the access door on the deck and take the screws out of the blades. Replacing the new or sharpened blades is done with the back of the mower raised and securely blocked so it will not fall. Bolt on the blades and close the access door.

Bolt Torque						
						
Bolt Diameter	SAE2		SAE5		SAE8	
"A"	N.m	lb-ft	N.m	lb-ft	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	70	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970

4' & 5' SERIES 1 ROTARY CUTTER



RC-01

WHEN ORDERING PARTS

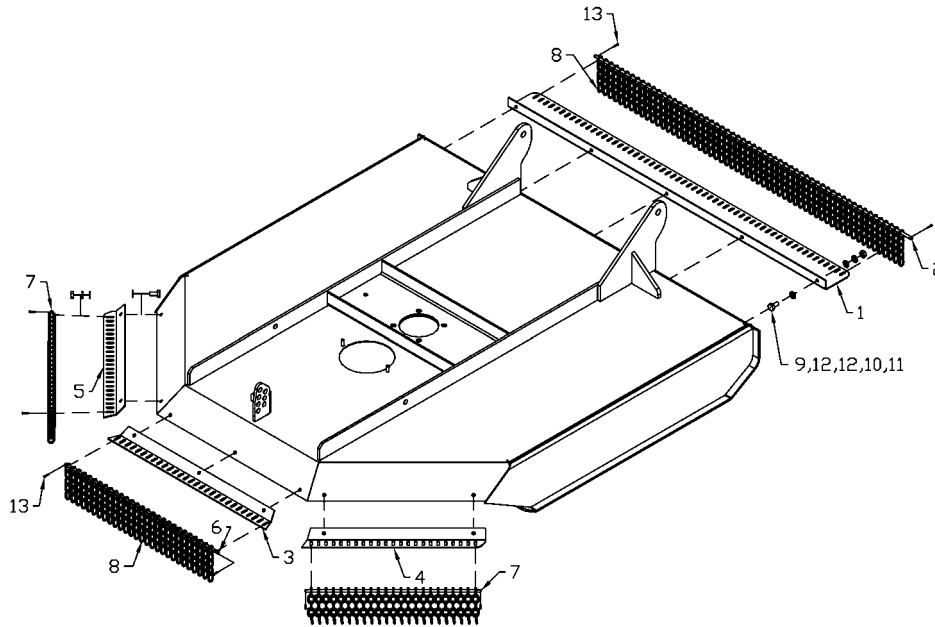
Always give your dealer the Model, Color and Serial Number of your machine to assist him in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

4' & 5' SER 1 ROTARY CUTTER

ITEM	PART #	DESCRIPTION
1	25312	Deck Weldment - 4'
	25311	Deck Weldment - 5'
	25315	Tail Wheel Bracket Weldment - 4' & 5'
3	117213	PTO Guard - 4' & 5'
4	116783	Hitch Arm 4' & 5'
5	116831	Hitch Support 4'
	116794	Hitch Support 5'
6	116784	Top Link 4' & 5'
7	116777	Hitch Spacer 4' & 5'
8	84299	5/8" x 2" Hex Bolt
9	84270	5/8" x 1 3/4" Hex Bolt
10	81672	5/8" x 4 1/2" Hex Bolt
12	812482	5/8" Lock Nut
13	81677	5/8" Lock Washer
14	81676	5/8" Hex Nut
15	814425	Gearbox Assembly (Shear Pin) 4'
	966108	Gearbox Assembly (Shear Pin) 5'
16	966534	Access Door
17	84217	3/8" Wing Nut
19	81593	3/8" Lock Washer
21	81569	5/16" Lock Washer
22	81549	5/16" x 3/4" Hex Bolt
23	965807	Top Link Pin (Category 1)
24	965809	Lift Arm Pin w/ Nut & Washer (Category 1)
25	965911	7/16" Linch Pin
26	81723	7/8" Lock Washer
27	81722	7/8" Hex Nut
28	906416	Hitch Bushing (1 1/4"OD x 1"ID x 7/16")
29	F0879	PTO Shaft (Shear Pin) 4' & 5'
30	909767	Wheel Yoke
31	909768	M24 x 2 x 186 Spindle Bolt
32	909769	M24 x 2 Spindle Nut
33	909770	Spindle Cotter Pin
34	909771	15" Wheel w/ Rim
35	909772	4 Bolt Hub w/ Bushing

36	909773	M12 X 1.75 X 25 Hex Bolt
37	909774	Lug Bolt Flat Washer
38	116786	Spacer 1 1/4"ID x 1 3/4"OD x 1/2"
39	84583	1/8" Drive in Grease Fitting
40	81210	1/4" x 2" Cotter Pin
41	967110	1 1/4"ID x 14 Ga Narrow Rim Washer
42	814511	Blade (18") - 4' (standard)
	966519	Blade (24") - 5' (standard)
43	116901	Blade Bar Weldment - 4' & 5'
44	81249	3/16" x 2 1/2" Cotter Pin
45	814526	1" Slotted Hex Nut
46	116829	Blade Spacer 4' & 5'
47	814527	1.06 ID x 2.50 OD Flat Washer
48	116834	1" x 3 1/4" Hex Bolt
49	909786	1" Slotted Hex Nut - 4'
	967217	1" Slotted Hex Nut - 5'
50	909785	5 x 45 Cotter Pin - 4'
	966562	85mm x 50mm Cotter Pin - 5'
51	81972	7/8" Flat Washer

SER 1 ROTARY CUTTER CHAIN KIT

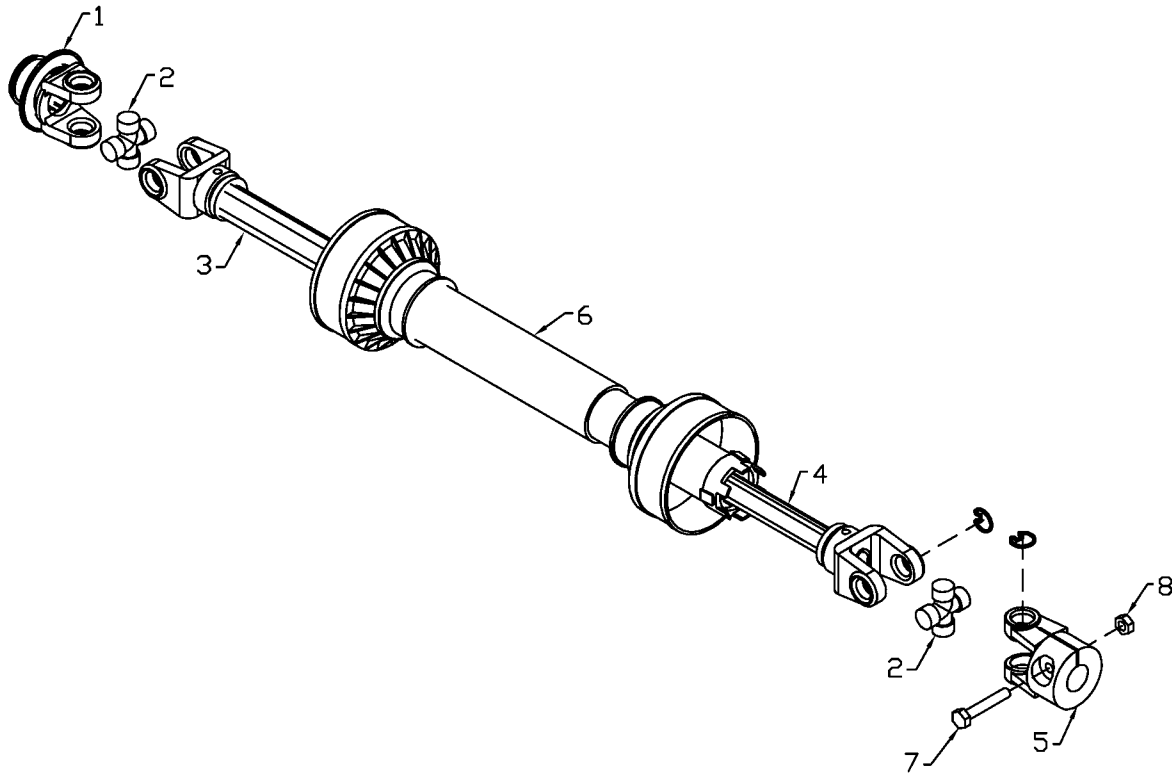


RC-02

SER 1 ROTARY CUTTER - CHAIN KIT

ITEM	PART #	DESCRIPTION
1	25331	Front Chain Holder, 4' (48" Long)
	25313	Front Chain Holder, 5' (60" Long)
2	116888	Front Chain Rod, 4' (3/8" x 48")
	116795	Front Chain Rod, 5' (3/8" x 60")
3	117021	Rear Center Chain Holder, 4' (24.23" Long)
	117024	Rear Center Chain Holder, 5' (29.86" Long)
4	117023	R.H. Rear Side Chain Holder, 4' (19.93" Long)
	117026	R.H. Rear Side Chain Holder, 5' (24.55" Long)
5	117022	L.H. Rear Side Chain Holder, 4' (19.93" Long)
	117025	L.H. Rear Side Chain Holder, 5' (24.55" Long)
6	116793	Rear Center Chain Rod, 4' (3/8" x 23 1/2")
	116792	Rear Center Chain Rod, 5' (3/8" x 29")
7	119889	Rear Side Chain Rods, 4' (3/8" x 19 1/2")
	116793	Rear Side Chain Rods, 5' (3/8" x 23 1/2")
8	966596	1/4" x 5 Link Plated Chain
9	86170	3/8" x 1" Hex Bolt
10	81593	3/8" Lock Washer
11	813507	3/8" Hex Nut
12	81570	3/8" Flat Washer
13	9812430	1/8" x 1" Cotter Pin

MODEL #410 & #510 SERIES 1 ROTARY CUTTER PTO SHAFT

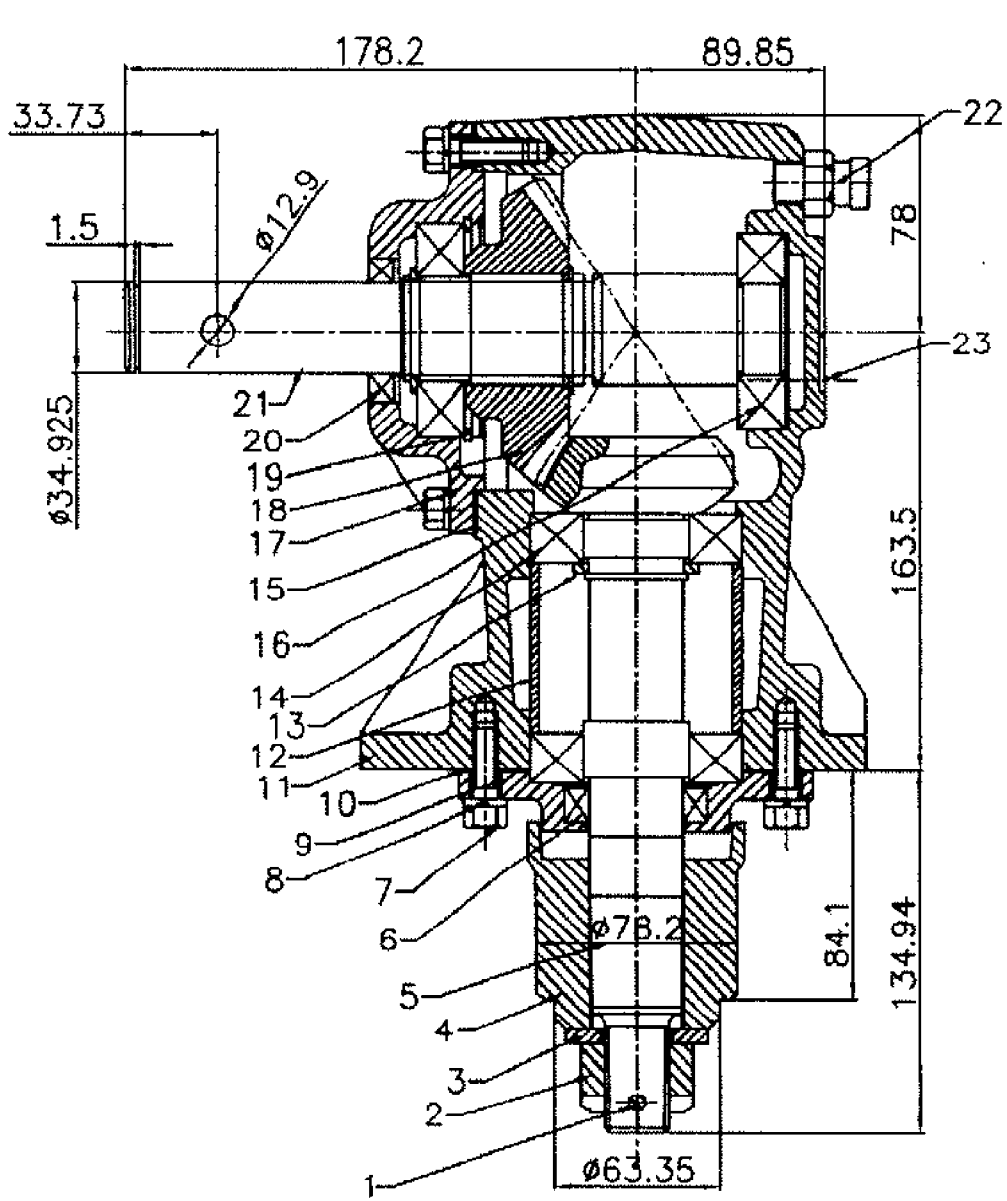


RC-07

MODEL #410 & #510 (SHEAR PIN) - SERIES 1

ITEM #	PART #	DESCRIPTION
	F0879	Shaft Complete
1	907186	Quick Disconnect Yoke (6 Spline) 540rpm
2	966211	Repair Kit
3	936344	Outer Tube W/ Yoke
4	936345	Inner Tube W/ Yoke
5	966216	Shear Yoke
6	909766	Shield Kit
7	9812034	Shear Bolt 1/2" x 3 1/2" Gr 2
8	812364	Nutlk (Steel) 1/2" Grb (pl)

MODEL #410 SERIES 1 ROTARY CUTTER GEARBOX

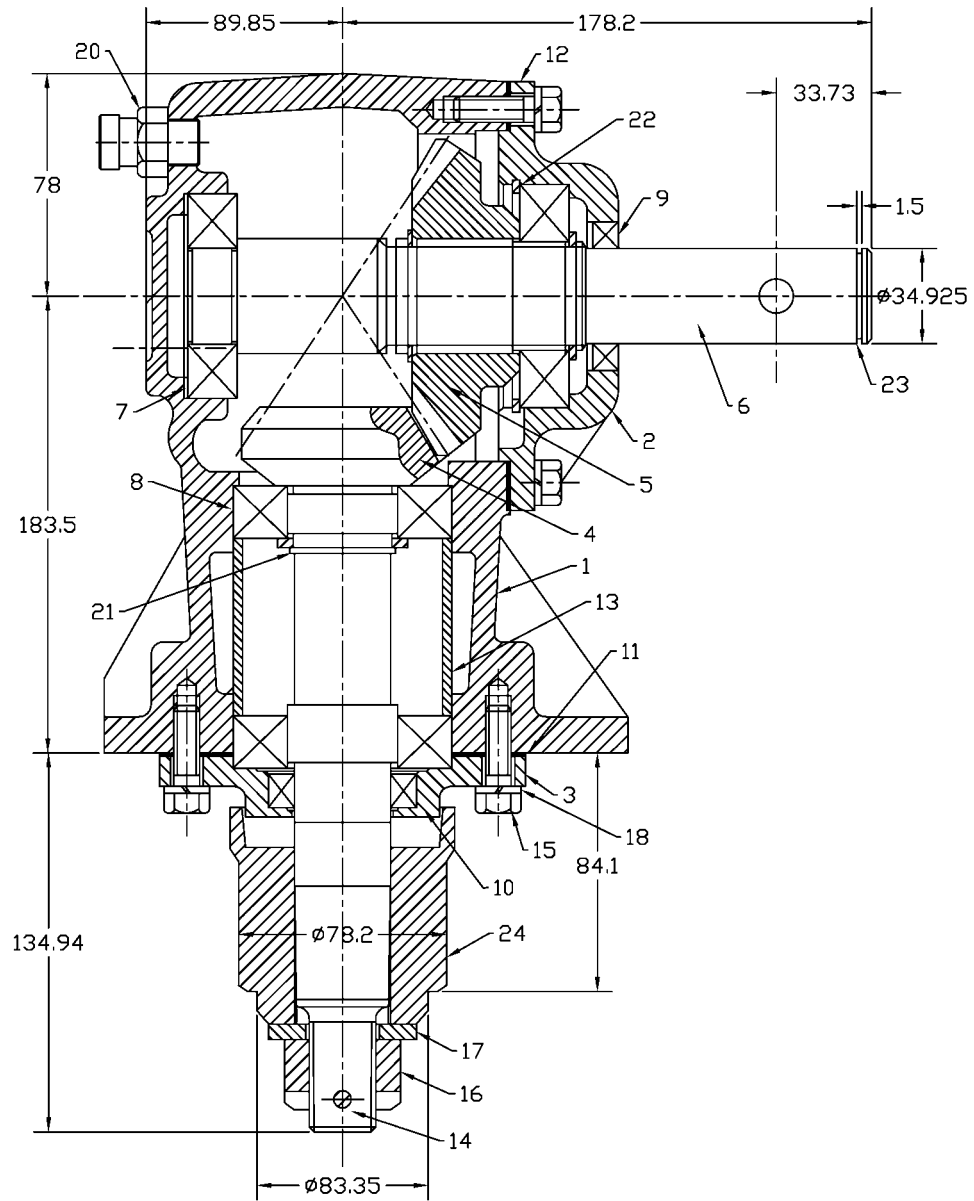


RC-05

MODEL #410 GEARBOX - SERIES 1

ITEM #	PART #	DESCRIPTION
	814425	Gearbox Assembly
1	909785	Cotter Pin 5 x 45
2	909786	Blade Nut
3	909787	Washer - Blade Hub
4	909788	Blade Hub
5	909789	Shaft - Output
6	909790	Oil Seal 1.56 x 2.215 x 0.375
7	909791	Bolt - Output Cap
8	909792	Spring Washer
9	909793	Output Cap
10	909794	Gasket - Output Cap
11	909795	Housing
12	909796	Spacer - Bearing
13	909797	Retaining Ring - Output Shaft
14	909798	Bearing 6208
15	909799	Gasket - Input Cap
16	909800	Bearing 6207
17	909801	Input Cap
18	909802	Input Gear
19	909803	Retaining Ring - Input Shaft
20	909804	Oil Seal 1.35 x 2.215 x 0.375
21	909805	Input Shaft
22	909806	Vent Plug
23	909807	Pipe Plug 1/8"

MODEL #510 ROTARY CUTTER GEARBOX



RC-06

MODEL #510 GEARBOX - SERIES 1 & 2

ITEM #	PART #	DESCRIPTION
	966108	Gearbox Assembly
1	914018	Housing
2	914006	Cap - Input
3	914015	Cap - Output
4	904022	Gear - Output, w/Shaft 15T
5	904021	Gear - Input 22T
6	966824	Shaft - Input 1 3/8"
7	966542	Bearing - Ball 207K
8	966555	Bearing - Ball 208K
9	914005	Seal - Input 3LIP
10	914013	Seal - Output 3LIP
11	914019	Gasket - Output Cap
12	914007	Gasket - Input Cap
13	914001	Spacer
14	966562	Cotter Pin 5 x 50
15	86171	3/8" x 1 1/4" Hex Bolt
16	967217	1" Slotted Hex Nut
17	904028	Washer - Blade Hub 1"
18	81593	3/8" Lockwasher
19	914016	1/8" Sq Head Pipe Plug
20	905429	1/2" Vent Plug
21	914008	Retaining Ring Eaton 916R
22	914003	Retaining Ring
23	966545	Snap Ring
24	904023	Blade Hub

SHIPPING KIT AND BUNDLE NUMBERS

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

QUANTITY BUNDLE NO. DESCRIPTION**Y410LS - MODEL #410 SERIES 1 ROTARY CUTTER (THREE POINT)**

1	F0869	Deck Assembly
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Y510LS - MODEL #510 SERIES 1 ROTARY CUTTER (THREE-POINT)

1	F0870	Deck Assembly
---	-------	---------------

OPTIONAL BUNDLE NUMBERS

The following is a list of options available for the Kits listed above.

Y424LS CHAIN KIT FOR Y410LS CUTTERS

1	F0878	Carton
1	F0877	Plates & Rods

Y524LS CHAIN KIT FOR Y510LS CUTTERS

1	F0876	Carton
1	F0875	Plates & Rods

NOTES

NOTES

DIVISION LOCATIONS

Farm King Division
301 Mountain Street S.
Morden, MB R6M 1X7
Ph.: (204) 822-4467
Fax: (204) 822-6348

Allied/Inland Division
1260 Clarence Avenue
Winnipeg, MB R3T 1T2
Ph.: (204) 284-6100
Fax: (204) 477-2325

B.I.I. Division
1330 43rd Street N.W.
Fargo, ND 58102
Ph: (701) 282-7014
Fax: (701) 282-5865

U.S. WAREHOUSES

AR, West Memphis
(870) 732-3132

GA, Stone Mountain
(770) 908-9439

ID, Meridian
(208) 887-6006

IN, Clarksville
(812) 284-3376

KS, Wichita
(316) 265-9577

MN, Lakeville
(952) 469-5267

MT, Billings
(406) 248-7771

ND, Bismarck
(701) 223-1886

ND, Fargo
(701) 282-7003

NE, Blair
(402) 426-8211

OH, Youngstown
(330) 793-0862

OR, Beaverton
(503) 641-1865

SD, Huron
(605) 352-8616

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