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**Belco Resources Equipment**

Rocky Mount, North Carolina

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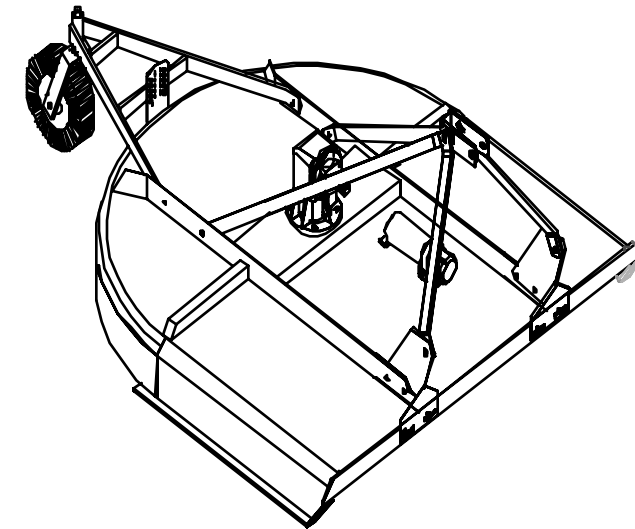
## **Operator's Manual**

**Rotary Cutter**

**BRC-048**

**BRC-060**

**BRC-072**



**Belco Resources Equipment**

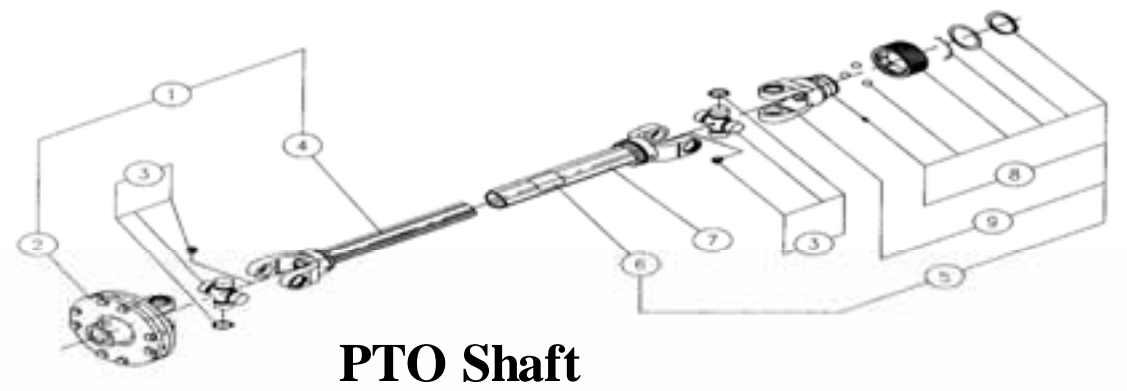
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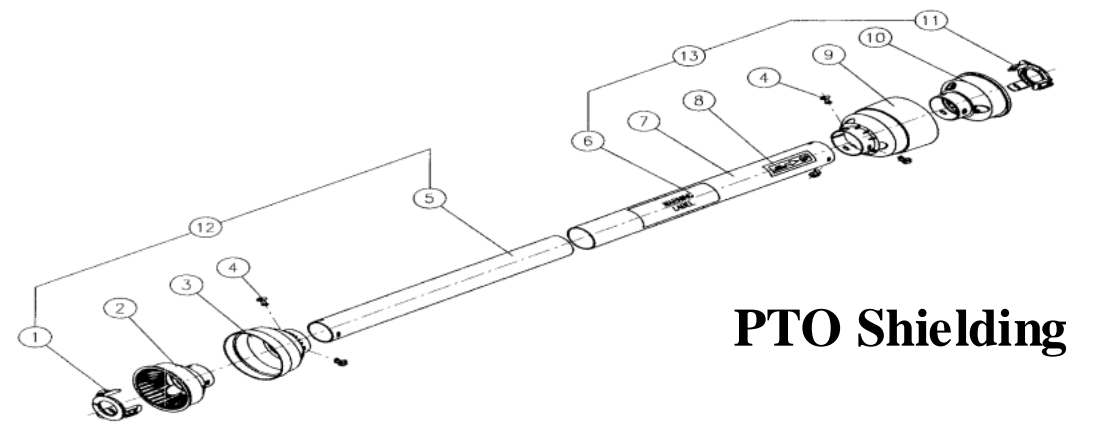
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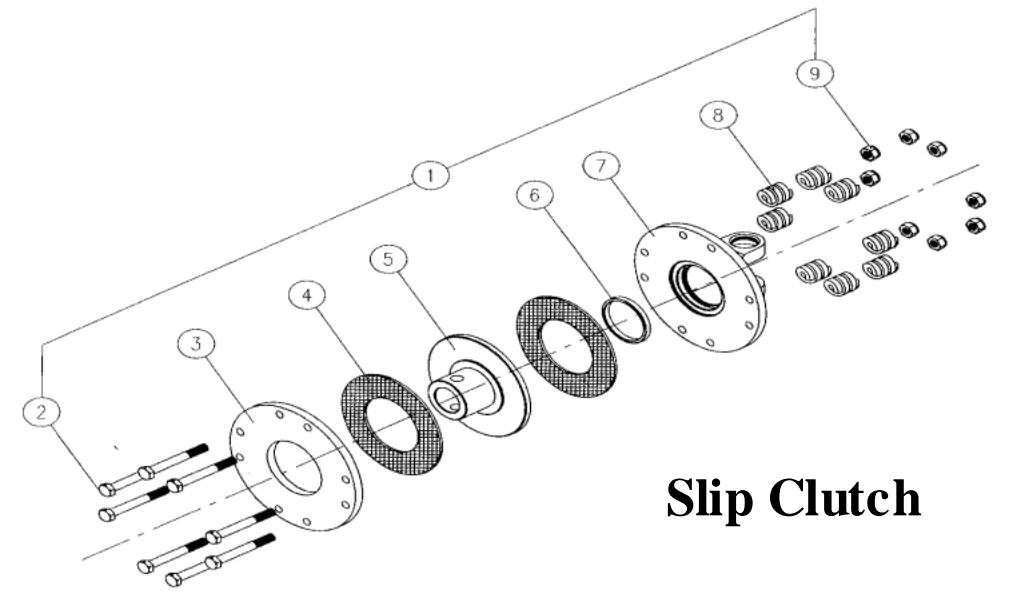
Belco Resources Rotary Cutter  
BRC-060, BRC-072  
PTO Shaft, PTO Shielding, Slip Clutch (Smooth)



**PTO Shaft**



**PTO Shielding**



**Slip Clutch**

**Belco Resources Rotary Cutter  
BRC-060, BRC-072  
PTO Shaft, Slip Clutch, PTO Shielding (Smooth)**

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6	IT04-093	Bushing 56.5 x 64 x 7	1
7	IT23-094	Clutch Flange Yoke	1
8	IT19-091	Clutch Spring 1 3/8"	8
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4	IT12-014	Locking Pin	6
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7	IT25-037	Outer Shield Tube	1
8	IT13-044	Tractor End Label	1
9	IT24-015	Outer Soft Cone (Outer Tube)	1
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# INTRODUCTION

Thank you for purchasing your Belco Resources Rotary Cutter. Your Rotary Cutter is designed to be used on Cat. 1 tractors with ratings up to 40 HP. This machine is designed to for field and brush cutting work. It has been engineered to cut vegetation up to 1" in diameter. It is important to properly maintain in keep in place all safety guards and shields that came with your cutter.

## SAFETY

Read and understand this manual and all safety signs before operating and maintaining. Review the safety instructions and precautions annually.

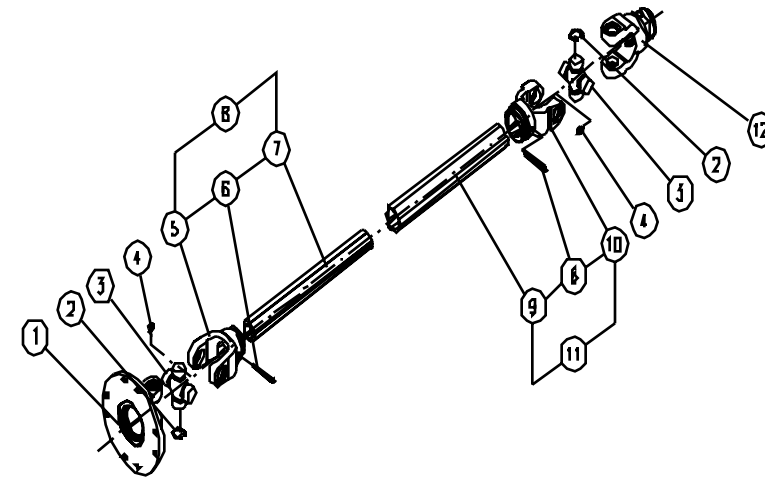
**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**



**THIS SYMBOL MEANS**

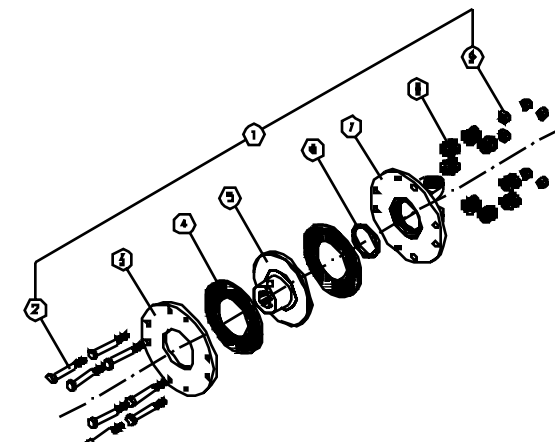
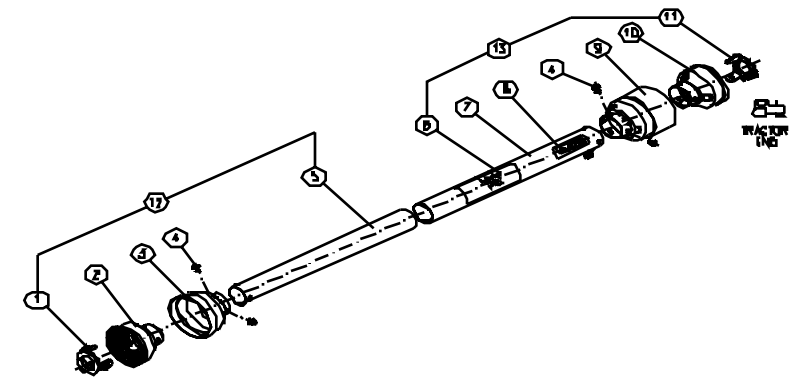
- **ATTENTION!**
- **BECOME ALERT!**
- **YOUR SAFETY IS INVOLVED!**

## Belco Resources Rotary Cutter BRC-060, BRC-072 PTO Shaft, PTO Shielding, Slip Clutch (Spline)



**PTO Shaft**

**PTO Shielding**



**Slip Clutch**

**Belco Resources Rotary Cutter  
BRC-060, BRC-072  
PTO Shaft, Slip Clutch, PTO Shielding (Spline)**

**PTO Shaft**

Position	Part #	Description	Qty
1	IT16-001	Cross Journal Set	2
2	IT09-016	Grease Zerk	2
3	IT23-042	Inner Tube Yoke	1
4	IT12-002	Roll Pin 8x 65	2
5	IT22-070	Inner Tube	1
6	IT28-047	Inner Tube Assy	1
7	IT22-066	Outer Tube	1
8	IT23-043	Outer Tube Yoke	1
9	IT28-049	Outer Tube Assy	1
12	IT23-044	Yoke	1

**SLIP Clutch**

Position	Part #	Description	Qty
1	IT16-177	Spline 1 3/8"	1
2	IT06-023	Hex Head Bolt 10 x 1.5 x 80	8
3	IT19-212	Clutch Pressure Plate	1
4	IT19-210	Clutch Disk 142x 78x 3	2
5	IT19-352	Support Hub 1 3/8" - 6 Spline	1
6	IT04-093	Bushing 56.5 x 64 x 7	1
7	IT23-094	Clutch Flange Yoke	1
8	IT19-091	Clutch Spring 1 3/8"	8
9	IT11-014	Nylon Insert Locknut 10 x 1.5	8

**PTO Shielding**

Position	Part #	Description	Qty
1	IT04-042	Inner Tube Bearing	1
2	IT24-011	Inner Rigid Cone (Inner Tube)	1
3	IT24-039	Outer Soft Cone (Inner Tube)	1
4	IT12-014	Locking Pin	6
5	IT25-038	Inner Shield Tube	1
6	IT13-002	Warning Label on Driveline Shield	1
7	IT25-037	Outer Shield Tube	1
8	IT13-044	Tractor End Label	1
9	IT24-015	Outer Soft Cone (Outer Tube)	1
10	IT24-014	Inner Rigid Cone (Outer Tube)	1
11	IT04-043	Outer Tube Bearing	1
12	IT27-115	Inner Half Shield Assy	1
13	IT27-111	Outer Half Shield Assy	1



**SAFETY SIGNAL WORDS**

Note the use of the 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 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.



**GENERAL SAFETY GUIDELINES**

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

Replace any CAUTION, WARNING, DANGER or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**

To prevent injury or death, use a tractor equipped with a Roll Over Protective System (ROPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

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.**



## SAFETY DECAL CARE

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your Distributor or Dealer Parts Department or the factory.

### How to Install Safety Signs:

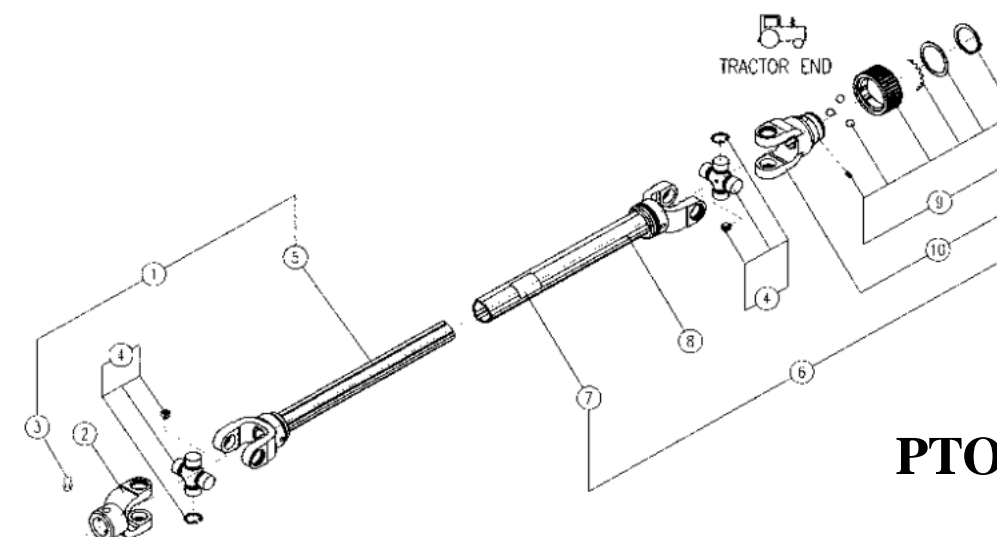
- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.



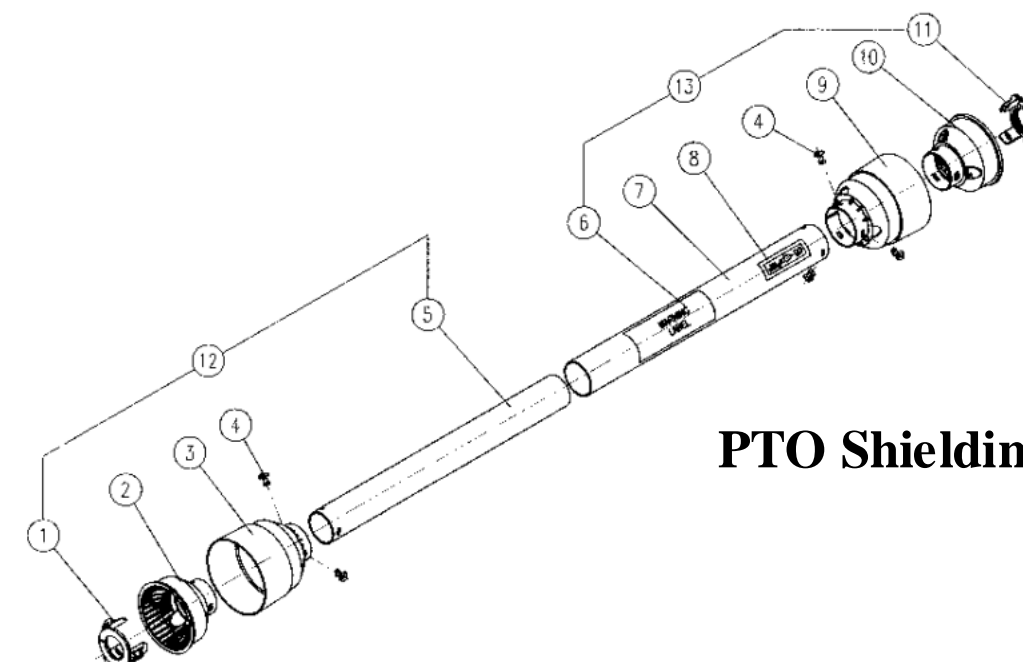
## BEFORE OPERATION

- Carefully study and understand this manual.
- Do not wear loose-fitting clothing, which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- Keep wheel lug nuts or bolts tightened to specified torque.
- Assure that agricultural implement tires are inflated evenly.
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
- Be sure that there are no tools lying on or in the equipment.
- Do not use the unit until you are sure that the area is clear, especially children and animals.

## Belco Resources Rotary Cutter BRC-048 PTO Shaft, PTO Shielding



**PTO Shaft**



**PTO Shielding**

**Belco Resources Rotary Cutter  
BRC-048  
PTO Shaft, Slip Clutch**

**PTO Shaft**

Position	Part #	Description	Qty
1	IT28-092	Inner Shaft & Shield Assy	1
2	IT23-004	Sheer Bolt Yoke	1
3	IT09-017	Gr ease Zerk	1
4	IT26-001	Cr oss & Bearing Assy Kit	2
5	IT28-047	Inner Tube Assy	1
6	IT28-047 -	Outer Shaft & Shiel dAssy	1
7	IT13-001	Inner Tube	1
8	IT28-049	Inner Tube Assy	1
9	IT26-021	Outer Tube	1
10	IT26-015	Outer Tube Yoke	1

**PTO Shielding**

1	IT04-042	Inner Tube Bearing	1
2	IT24-011	Inner Rigi d Cone (Inner Tube)	1
3	IT24-012	Outer Rigi dCone (Inner Tube)	1
4	IT12-014	Locking Pin	6
5	IT25-038	Inner Shield Tube	1
6	IT13-002	Warning Label on Driveline Shield	1
7	IT25-037	Outer Shiel d Tube	1
8	IT13-044	Tr actor End Label	1
9	IT24-015	Outer Soft Cone (Outer Tube)	1
10	IT24-014	Inner Rigi d Cone (Outer Tube)	1
11	IT04-043	Outer Tube Bearing	1
12	IT27-063	Inner Half Shiel dAssy	1
13	IT27-111	Outer Half Shiel dAssy	1

- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.
- Use a tractor equipped with a Roll Over Protective System (ROPS) and fasten your seat belt prior to starting the engine.
- The manufacturer does not recommend usage of tractor with ROPS removed.
- Move tractor wheels to the widest recommended settings to increase stability.
- Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach safety chain.
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the equipment.



**DURING OPERATION**

- Children should not be allowed on the product.
- Clear the area of small children and bystanders before moving the feeder.
- If using a towing unit, securely attach feeder by using a hardened 3/4" pin, a metal retainer, and safety chains if required. Shift towing unit to a lower gear before going down steep downgrades, thus using the engine as a retarding force. Keep towing vehicle in gear at all times. Slow down for corners and rough terrain.
- Make sure you are in compliance with all local and state regulations regarding transporting equipment on public roads and highways. Lights and slow moving signs must be clean and visible by overtaking or oncoming traffic when feeder is transported.
- Beware of bystanders, **particularly children!** Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED** - Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operation.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate or adjust your equipment while it is moving.
- When halting operation, even periodically, set the tractor or towing vehicle brakes, disengage the PTO, shut off the engine and **remove the ignition key.**

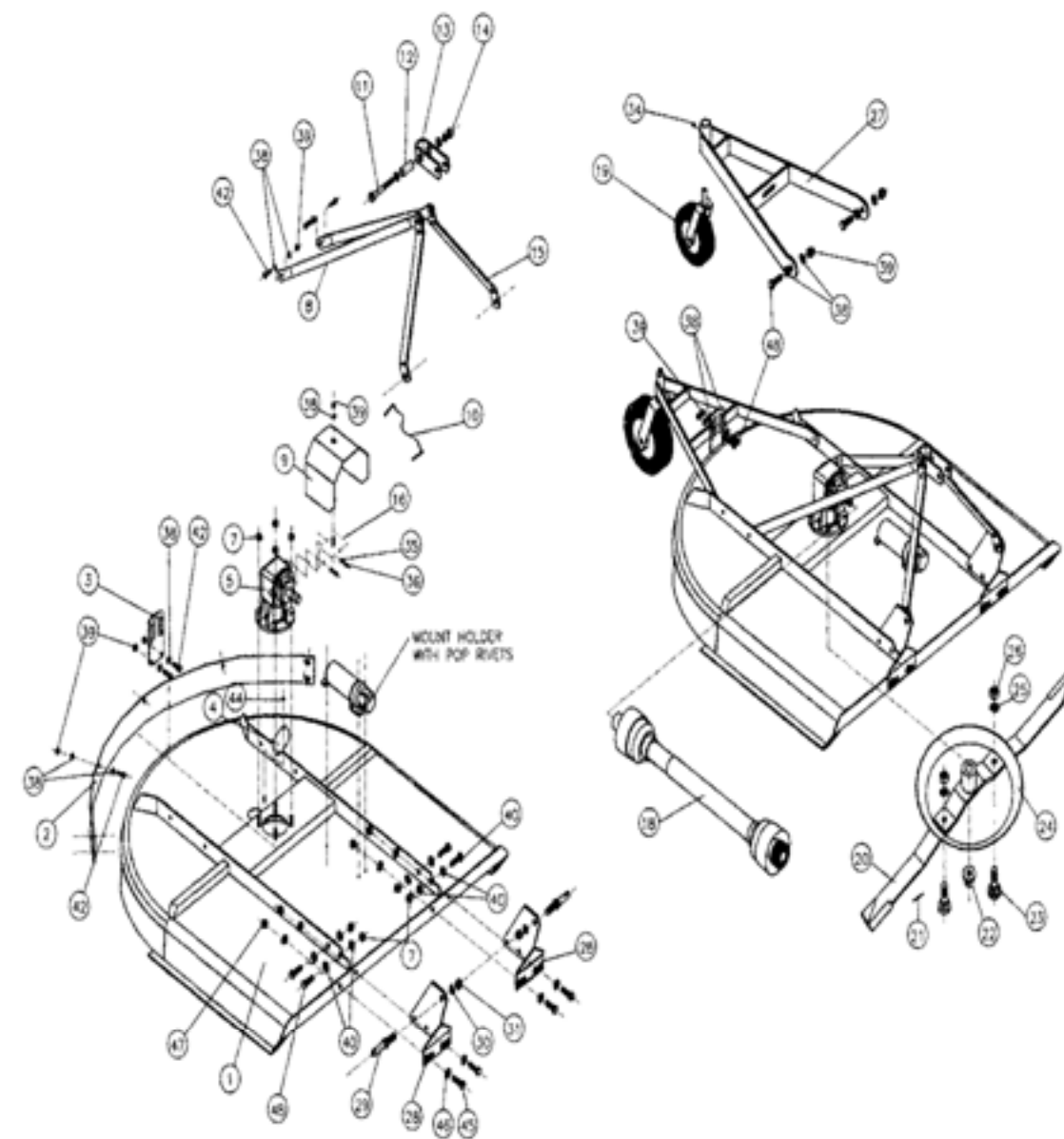
- Be especially observant of the operating area and terrain - watch for holes, rocks or other hidden hazards. Always inspect the area prior to operation.
  - **DO NOT** operate near the edge of drop-offs or banks.
  - **DO NOT** operate on steep slopes as overturn may result.
  - Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.

Belco Resources Rotary Cutter  
BRC-060, BRC-072  
Mainframe (Smooth)



## HIGHWAY AND TRANSPORT OPERATIONS

- Adopt safe driving practices:
  - Keep the brake pedals latched together at all times. **NEVER USE INDEPENDENT BRAKING WITH MACHINE IN TOW AS LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT.**
  - Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum. Reduce speed prior to turns to avoid the risk of overturning.
  - Avoid sudden uphill turns on steep slopes.
  - Always keep the tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.
  - Do not drink and drive!
- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport. Various safety lights and devices are available from your dealer.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- When driving the tractor and equipment on the road or highway under 40 kph (20 mph) at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.
- Plan your route to avoid heavy traffic.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.



**Mainframe**

**Belco Resources Rotary Cutter  
BRC-060, BRC-072  
Mainframe (Smooth)**

**Mainframe**

Position	Part #	Description	Qty
1	IT16-125	Deck Weldment 5'	1
1	IT16-132	Deck Weldment 6'	1
2	IT36-015	Deflector Shield, Center 5'	1
2	IT36-018	Deflector Shield, Center 6'	1
3	IT19-349	Gauge Wheel Adjustment Bracket	1
4	IT36-016	Blade Bolt Cover	1
5	IT01-298	Gear Box	1
6	IT21-035	Driveline Safety Reataing line	1
7	IT11-058	Nut, Lock M16x 1.5	10
8	IT19-260	Rear Brace	2
9	IT36-017	Pto Shield	1
10	IT16-127	Shield Cable & pin Assembly	1
11	IT06-082	Bolt M20 x 1.5 x 140 Hex Head	1
12	IT10-079	Top Hitch Bushing	1
13	IT19-184	Top Hitch Bracket	1
14	IT11-059	Nut, Lock M20 x 1.5	1
15	IT19-261	"A" Frame	2
16	IT16-128	Pto Shield Mount Bracket	1
17	IT01-315	Manual Holder	1
18	IT35-119	Driveshaft or (35-145 W / Clutch Optional	1
19	IT16-097	Tailwheel Assembly	1
20	IT30-053	Blade, 5'	2
20	IT30-054	Blade, 6'	2
21	IT12-003	Cotter Pin	1
22	IT11-008	Nut 1" - 14 Slotted Flange Hex	1
23	IT06-083	Bolt, Blade 1 1/8" - 12UNF	2
24	IT16-110	Blade Pan	1
25	IT07-068	Lockwasher 1 1/8" (Blade Bolt)	2
26	IT11-060	Nut, Blade Lock 1 1/8" - 12UNF	2
27	IT16-171	Tailwheel "A" Frame (STTC-406)	1
28	IT16-130	Hitch Plate Bracket	2
29	IT12-047	Hitch Pin Cat.1	2
30	IT07-069	Lockwasher 7/8" Split Type	2
31	IT11-061	Nut 7/8" - 14UNC Hex	2
32I	IT06-084	Shear Bolt 1/2" -13UNC 3 1/2"	1
33	IT11-062	Nut UNC 1/2" -13	1
34	IT09-017	Grease Zerk M6	1
35	IT07-025	Lockwasher M8	2
36	IT06-033	Bolt M8 x 1.25 x 20 Hex Head	2
38	IT07-039	Washer M12 Flat	36
39	IT11-063	Lock nut M12 x 1.25	18
40	IT07-014	Washer M16 Flat	12
42	IT06-087	Bolt M12 x 1.25 x 30 Hex Head	18
43	IT06-088	Bolt M16 x 1.5 x 45 Hex Head	4
44	IT11-046	Lock nut M8 x 1.25	2
45	IT06-089	Bolt M14 x 1.5 x 40 Hex Head	48
46	IT07-070	Washer, M14 Flat	8
47	IT11-064	Lock nut M14 x 1.5	8
48	IT06-106	Bolt, M12 X 1.25 X50 Hex Head	4
	DJ493-27	Blade Bolt, Lockwasher and Nut	

- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight as which you are operating.
- Watch for obstructions overhead and to the side while transporting.
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping the unit, etc.
- Pick the levellest possible route when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.
- Be extra careful when working on inclines.
- Maneuver the tractor or towing vehicle at safe speeds.
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
- Avoid loose fill, rocks and holes; they can be dangerous for equipment operation or movement.
- Allow for unit length when making turns.
- Operate the towing vehicle from the operator's seat only.
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
- Never leave running equipment attachments unattended.
- As a precaution, always recheck the hardware on equipment following every 100 hours of operation. Correct all problems. Follow the maintenance safety procedures.

# Operation

## Belco Resources Rotary Cutter BRC-060, BRC-072 Mainframe (Spline)

### Attaching to the tractor

1. With the rotary cutter on a level surface, back the Cat. 1 tractor so the tractor lift arms are even with the rotary cutter lower hitch pins. Lower or raise the tractor hitch arms until the 7/8" bushing in the arm is level with the hitch pins. **Be sure nothing is between the tractor and the cutter before backing up.**
2. Insert the lower link hitch hole of the tractor's lift arm over the implement's hitch pin.
3. Secure the lift arm in place by using a 7/16" Lynch pin or other fastener.
4. Repeat with the other arm.
5. Connect the driveline to the tractor's PTO output shaft. Secure it in place with the bolt supplied with the driveline.
6. Connect the tractor top link to the upper pivot hitch of the rotary cutter.
7. Start the tractor and slowly raise the rotary cutter. Check for drawbar interference. Be sure that the PTO driveline does not bottom out when lifting the rotary cutter to its maximum height. If it does appear that it could bottom out, it is necessary to shorten the PTO driveline. (See Shortening a PTO Driveline section). Ensure that in the working position there is an overlap of a minimum of 1/3 the length of each profile.

### Shortening a PTO Driveline

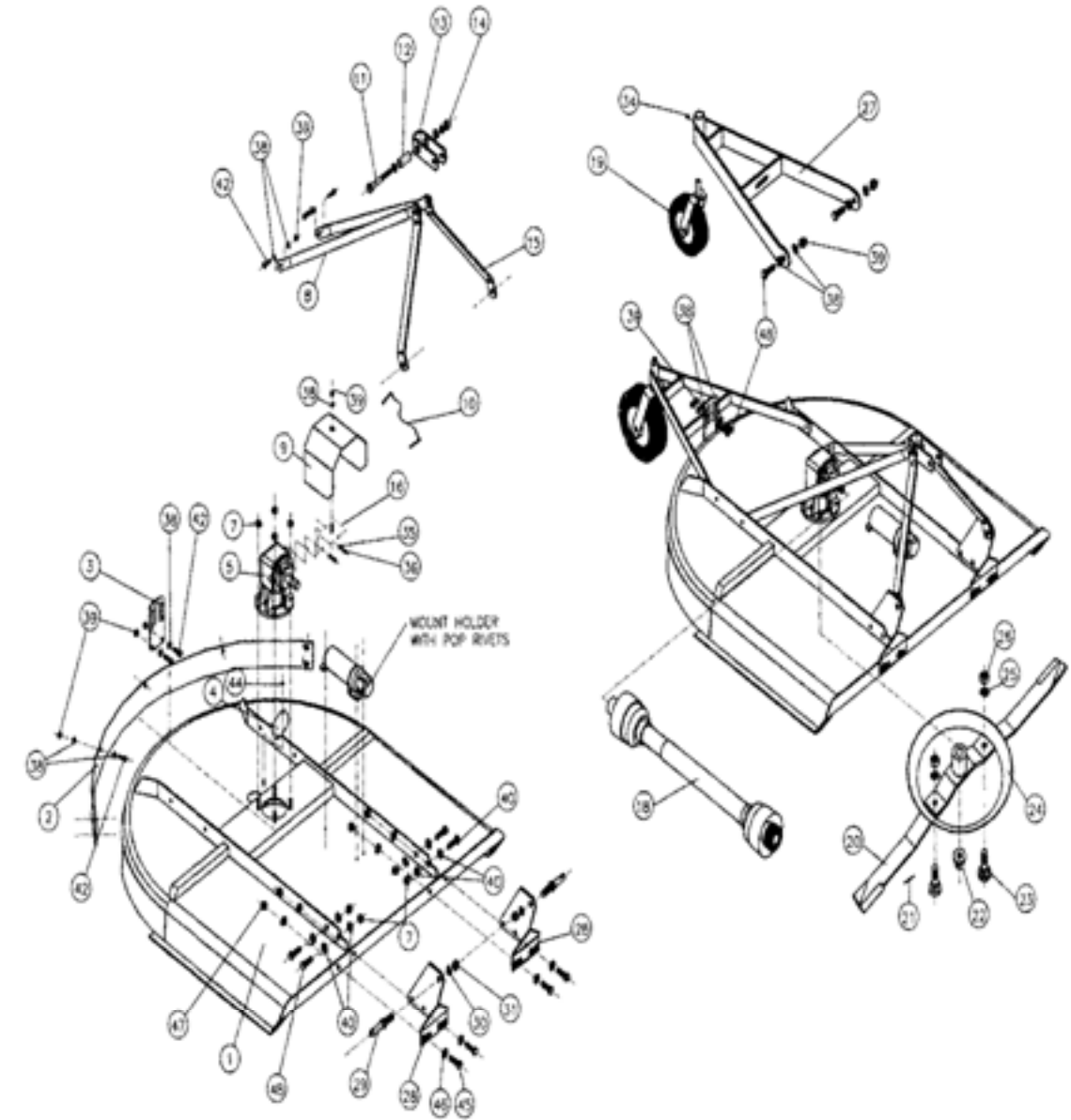
1. With the implement attached to the tractor's three point hitch, and the PTO driveline not installed, separate the PTO driveline. Attach the implement end to the implement and the other end to the tractor PTO input shaft.
2. Raise the implement by using the tractor's hydraulic 3-point hitch to its maximum lift height.
3. Hold the half shafts next to each other and mark them so each end is approximately 1/2" from hitting the end of the telescopic profiles.
4. Shorten the inner and out guard tubes equally.
5. Shorten the inner and outer profiles by the same length as the guard tubes.
6. Using a rattail file, round off all sharp edges and burrs. Grease the telescopic profile generously before reassembling.



**Do not shorten too much, the proper overlap is a minimum of 1/3 the length of each profile.**

### Adjusting the Cutting Height

1. With the tail wheel on the ground and the rotary cutter level left to right, lower the front of the cutter so the front is approximately 3/4" lower than the rear. This tilt is the optimal cutting position. Measure the distance from the ground to the cutting edge of the front blade. This is the cutting height.
2. To raise or lower the cutting height, raise the cutter by using the tractor's hydraulic 3-point hitch until the tail wheel clears the ground. Remove the two adjustment bolts from the tail wheel bracket and the adjustment bracket.
3. Raise or lower the tail wheel bracket to the desired cutting height.
4. Insert the two adjustment bolts through the tail wheel bracket and the adjustment bracket. Secure in place with the nuts.



**Mainframe**

**Belco Resources Rotary Cutter  
BRC-060, BRC-072  
Mainframe (Spline)**

**Mainframe**

Position	Part #	Description	Qty
1	IT16-125	Deck Weldment 5'	1
1	IT16-132	Deck Weldment 6'	1
2	IT36-015	Deflector Shield, Center 5'	1
2	IT36-018	Deflector Shield, Center 6'	1
3	IT19-349	Gauge Wheel Adjustment Bracket	1
4	IT36-016	Blade Bolt Cover	1
5	IT01-298	Gear Box	1
7	IT11-058	Nut, Lock M16 x 1.5	10
8	IT19-260	Rear Brace 5'	2
8	IT19-262	Rear Brace 6'	1
9	IT36-017	Pto Shield	1
10	IT16-127	Shield Cable & pin Assembly	1
11	IT06-082	Bolt M20 x 1.5 x 140 Hex Head	1
12	IT10-079	Top Hitch Bushing	1
13	IT19-184	Top Hitch Bracket	1
14	IT11-059	Nut, Lock M20 x 1.5	1
15	IT19-261	"A" Frame	2
16	IT16-128	Pto Shield Mount Bracket	1
17	IT01-315	Manual Holder	1
18	IT35-119	Driveshaft or (35-145 W / Clutch Optional)	1
19	IT16-097	Tailwheel Assembly	1
20	IT30-053	Blade, 5'	2
20	IT30-054	Blade, 6'	2
21	IT12-003	Cotter Pin	1
22	IT11-008	Nut 1" - 14 Slotted Flange Hex	1
23	IT06-083	Bolt, Blade 1 1/8" - 12UNF	2
24	IT16-110	Blade Pan	1
25	IT07-068	Lockwasher 1 1/8" (Blade Bolt)	2
26	IT11-060	Nut, Blade Lock 1 1/8" - 12UNF	2
27	IT16-171	Tailwheel "A" Frame (STTC-406)	1
28	IT16-130	Hitch Plate Bracket	2
29	IT12-047	Hitch Pin Cat. 1	2
30	IT07-069	Lockwasher 7/8" Split Type	2
31	IT11-061	Nut 7/8" - 14UNF Hex	2
34	IT09-017	Grease Zerk M6	1
35	IT07-025	Lockwasher M8	2
36	IT06-033	Bolt M8 x 1.25 x 20 Hex Head	2
38	IT07-039	Washer M12 Flat	36
39	IT11-063	Lock nut M12 x 1.25	18
40	IT07-014	Washer M16 Flat	12
42	IT06-087	Bolt M12 x 1.25 x 30 Hex Head	18
43	IT06-086	Bolt M16 x 1.5 x 45 Hex Head	10
44	IT11-046	Lock nut M8 x 1.25	2
45	IT06-089	Bolt M14 x 1.5 x 40 Hex Head	48
46	IT07-070	Washer, M14 Flat	8
47	IT11-064	Lock nut M14 x 1.5	8
48	IT11-065	Bolt, M6 x 20 Hex Head	3
49	IT07-066	Washer, M6 Flat	3
50	IT01-065	Gear Box	3
	DJ493-27	Blade Bolt Lockwasher and Nut	

**Cutting Operation**



Rotary cutters have the ability to discharge objects at a high rate of speed. Never cut or engage the cutter along highways, roads or whenever persons or animals may be present.

Your cutter is designed with two free-swinging. The unit is designed to cut vegetation only up to 1" in diameter. It is intended for pasture cutting, weed control and light brush.

1. With your tractor at a low rpm, engage the tractor PTO.
2. Slowly increase the rpm until the PTO is running at 540.
3. From the tractor seat, feel for excessive vibrations.
4. When mowing ensure the tractor rpm is maintained at 540. A lower rpm can allow the blades to kick back resulting in an uneven cut.
5. Ground speed is determined by the tractor power available, ground conditions and amount of growth being cut. If the tractor is becoming bogged down by any of the above-mentioned conditions, it may be necessary to decrease the ground speed. The tractor rpm should stay at 540 whenever you are cutting.

**Removal and Storage**

1. After finishing, remove the cutter from the tractor.
2. Put the PTO driveline in a safe location so it will not become damaged.
3. Wash down the cutter, removing all debris.



**FOLLOWING OPERATION**

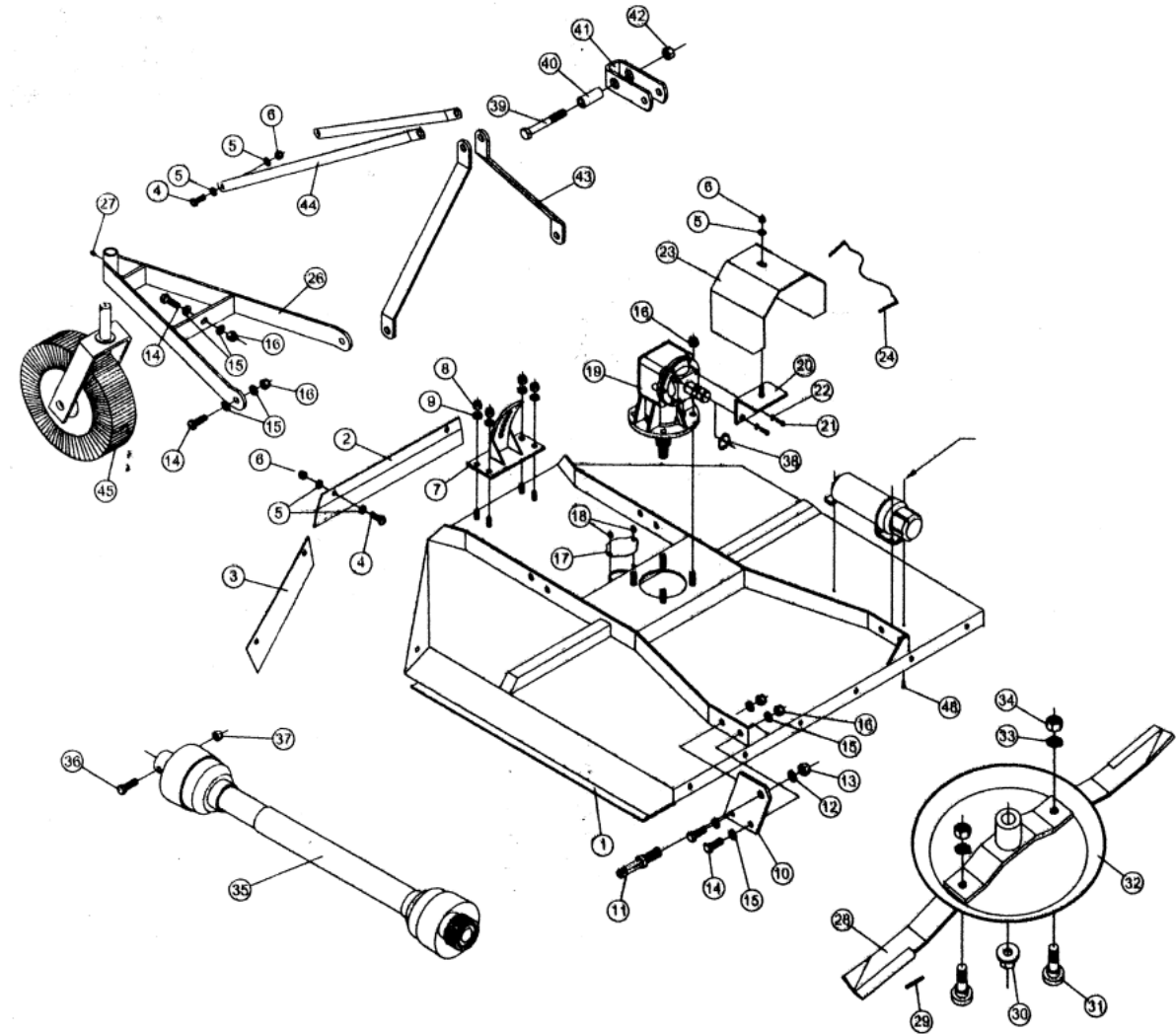
- Following operation, or when unhitching, stop the tractor or towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and **remove the ignition keys**.
- Store the unit in an area away from human activity.
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.
- Do not permit children to play on or around the stored unit.
- Make sure all parked machines are on a hard, level surface and engage all safety devices.
- Wheel chocks may be needed to prevent unit from rolling.



## PERFORMING MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate the engine of the tow ing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
- Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
- Always use the proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Never replace hex bolts with less than grade five bolts unless otherwise specified.
- After servicing, be sure all tools, parts and service equipment are removed.
- 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 claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.

## Belco Resources Rotary Cutter BRC-048 Mainframe



**Mainframe**

**Belco Resources Rotary Cutter  
BRC-048  
Mainframe**

**Mainframe**

Position	Part #	Description	Qty
1	IT16-142	Deck Weldment 4'	1
2	IT36-020	Deflector Shield, Center 4'	1
3	IT36-019	Deflector Shield, Side 4'	2
4	IT06-087	Bolt M12 x 1.25 x 30 Hex Head	8
5	IT07-039	Washer M12 Flat	17
6	IT11-063	Locknut M12 x 1.25	9
7	IT16-143	Gage Wheel Adjustment Bracket	1
8	IT11-064	Locknut M14 x 1.5	4
9	IT07-070	Washer M14 Flat	4
10	IT19-269	Bracket, Hitch Pin	2
11	IT12-047	Hitch Pin Cat 1	2
12	IT07-069	Lockwasher 7/8" Split Type	2
13	IT11-061	Nut 7/8" - 14UNF Hex	2
14	IT06-088	Bolt M16 x 1.5 x 45 Hex Head	7
15	IT07-014	Washer M16 Flat	14
16	IT11-058	Nut, Lock M16 x 1.5	11
17	IT36-016	Blade Bolt Cover	1
18	IT11-046	Locknut M8 x 1.25	2
19	IT01-003	Gearbox	1
20	IT16-128	PTO Shield Mount Bracket	1
21	IT06-033	Bolt M8 x 1.25 x 20 Hex Head	2
22	IT07-025	Lockwasher M8	2
23	IT36-017	PTO Shield	1
24	IT16-127	Shield Cable & Pin Assembly	1
25	IT01-315	Manual Holder	1
26	IT16-144	Tailwheel "A" Frame (STTC-404)	1
27	IT09-017	Grease Zerk M6	1
28	IT30-055	Blade, 4'	2
29	IT12-003	Cotter Pin	1
30	IT11-008	Nut 1" - 14 Slotted Flange	1
31	IT06-083	Bolt, Blade 1 1/8" - 12UNF	2
32	IT16-110	Blade Pan	1
33	IT07-068	Lockwasher 1 1/8" (Blade Bolt)	2
34	IT11-060	Nut, Blade Lock 1 1/8" - 12UNF	2
35	IT35-165	Driveshaft	1
36	IT06-084	Bolt 1/2" - 13UNCX3" Hex Head Gr.2	1
37	IT11-062	Nut 1/2" - 13UNC Hex	1
38	IT21-035	Driveline Safety Retaining Ring	1
39	IT06-082	Bolt M20 x 1.5 x 140 Hex Head	1
40	IT10-079	Top Hitch Bushing	1
41	IT19-184	Top Hitch Bracket	1
42	IT11-059	Nut, Lock M20 x 1.5	1
43	IT19-261	"A" Frame	2
44	IT19-268	Rear Brace (STTC-404)	2
45	IT16-097	Tailwheel Assembly	1

## MAINTENANCE

### Blades

It is very important for the life of the cutter to have both blades the same weight. Blades, which are not equal, will tend to create a vibration that can cause unsafe situations and greatly reduce the life of your cutter. Inspect the blades before each use to check for nicks, bends or excessive wear.



**Replace worn or damaged blades and blade bolts only with original Belco replacement blades. Non-original blades or blade bolts may not meet material or design specifications and could pose a danger to the operator or others.**



**Replace bent blades. Never attempt to use straightened or weld repaired blades. Once bent or welded, blades can lose their material properties and become hazardous during use.**

### Removing Blades

Remove access blade cover located on the top of the cutter deck. Remove lock nut from the blade bolt.

### Sharpening Blades

Sharpen both blades at the same time, retaining the original cutting edge. Do not attempt to straighten bent blades.

### Replacing blades:

Inspect blade bolts and locknut carefully. Replace blade bolt if excessive wear is apparent. Always replace locknut when using a new blade bolt. Install new or sharpen blades and tighten locknut to 250 ft/lbs. Replace blade access cover.

### PTO Shaft and slip clutch

If your rotary cutter came supplied with a slip clutch protection, it is important to properly maintain it so it functions when needed.

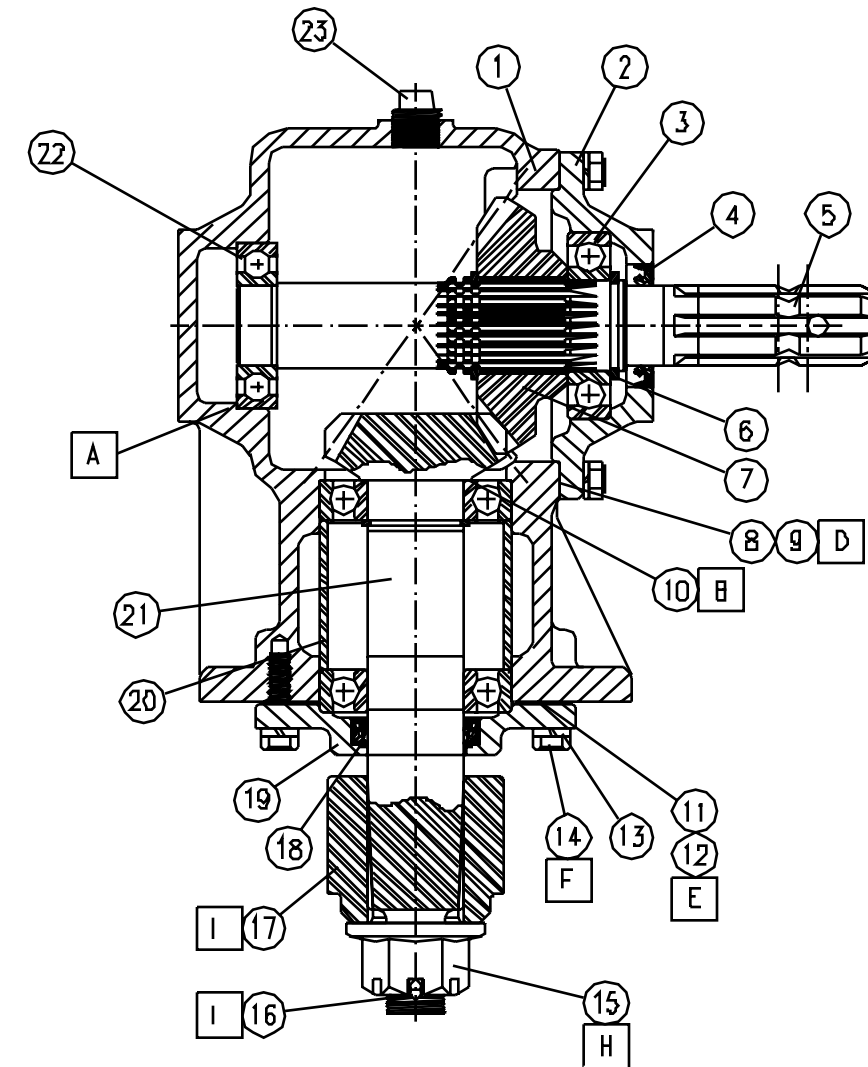
Over extended periods of non-use, the disc material may tend to bind together. At the beginning of each new season, or if the cutter has not been used for a period of longer than one month it is important to perform the following operation:

1. Draw a straight line across the sides of the discs.
2. Loosen each nut holding the springs exactly 2 full turns.
3. Slowly engage the tractor PTO and allow the unit to run for a couple of seconds before disengaging the PTO.
4. Allow all moving parts to stop and engage the PTO once again for 2 or 3 seconds.
5. Disengage the PTO and allow all moving parts to come to a halt.
6. Remove key and get down from the tractor.
7. Inspect the lines drawn on the sides of the discs, and confirm that they are no longer in line indicating they have slipped.
8. If the discs have not slipped, the clutch will need to be disassembled.
9. If they have slipped, retighten the nuts back to their original position.

# MAINTENANCE CHART

Item	Interval
PTO shaft grease zirks	Grease weekly
PTO shaft telescopic tubing	Grease every 40 hours
Tail Wheel Hub Spindle	Grease every 8 hours
Gearbox Oil Level	Check level daily
Tail Wheel Hub	Grease weekly
Clean cutter deck	As needed.

Belco Resources Rotary Cutter  
BRC-060, BRC-072 (Spline & Smooth)  
Gearbox



**Gearbox**

**Belco Resources Rotary Cutter  
BRC-060, BRC-072  
Gearbox**

**Gearbox**

Position	Part #	Description	Qty
1	IT18-072	Housing	1
2	IT20-007	Input Cap	1
3	IT04-003	Ball Bearing 208	3
4	IT05-002	Input Seal	1
5	IT02-164	Input Shaft (Spline)	1
5	IT02-155	Input Shaft (Smooth)	1
6	IT21-012	Retaining Ring	3
7	IT03-001	Tooth Input Gear	1
8	IT08-004A	Input Cap Gasket (0.30)	var
9	IT08-004B	Input Cap Gasket (0.13)	var
10	IT17-004	Steel Shim (0.20)	1
11	IT08-005A	Output Gasket (0.30)	var
12	IT08-005B	Output Gasket (0.13)	var
13	IT07-001	Lockwasher	10
14	IT06-003	Hex Head Bolt M10 x 1.5 x 30	10
15	IT11-008	Slotted Flanged Hex Nut	1
16	IT12-003	Cotter Pin	1
17	IT15-001	Blade Hub	1
18	IT05-005	Output Seal	1
19	IT20-003	Output Cap	1
20	IT10-002	Output Bearing Spacer	1
21	IT03-002	15 Tooth Output Shaft & Pinion	1
22	IT04-004	Ball Bearing 207	1
23	IT09-002	Oil Fill Plug	2

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Shearbolt constantly shearing	Scalping the ground or hitting solid objects	Raise cutting height
	PTO engaging too fast	Engage PTO at lower rpm
	Cutting too fast	Reduce ground speed
Slip Clutch constantly slipping	Scalping the ground	Raise cutting height
	PTO engaging too fast	Engage PTO at lower rpm
	Cutting too fast	Reduce ground speed
Gearbox – Noisy	Worn Discs	Replace Discs
	Low lubricant	Adjust level
Gearbox – Leaking	Worn bearings	Replace bearings
	Oil level too high	Adjust level
	Damaged oil seal	Replace seal
	Bolts loose	Tighten or replace bolts
	Wrappings around shaft	Unwrap and Replace seals
Gearbox – Overheating	Gasket damaged	Replace gasket
	Low lubricant	Adjust level
	Excessive debris build up	Clean off debris
	Blades locked up	Unlock blades
Excessive Vibration	Build up under deck	Clean undercarriage
	Driveline bent	Replace or repair bent parts
	Blades loose	Tighten blade bolt nuts
	Blade Carrier bent	Replace blade bolts
	Hitting ground	Raise cutting height
Blades wearing prematurely	Sandy soil	Raise cutting height

# LIMITED WARRANTY

Belco Resources, Inc. warrants to the original purchaser of any new Belco Resources, Inc equipment, purchased from an authorized Belco Resources, Inc dealer, that the equipment be free from defects in material and workmanship for a period of one (1) year for non-commercial, state, and municipalities' use, ninety (90) days for commercial use from date of retail sale. Warranty for rental purposes is thirty (30) days. The obligation of Belco Resources, Inc. to the purchaser under this warranty is limited to the repair or replacement of defective parts.

Replacement or repair parts installed in the equipment covered by this limited warranty are warranted for ninety (90) days from the date of purchase of such part or to the expiration of the applicable new equipment warranty period, whichever occurs later. Warranted parts shall be provided at no cost to the user at an authorized Belco Resources, Inc. dealer during regular working hours. Belco Resources, Inc. reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This limited warranty does not apply to and excludes wear items such as shear pins, tires, tubes knives, blades or other wear items. Oil or grease is not covered by this warranty.

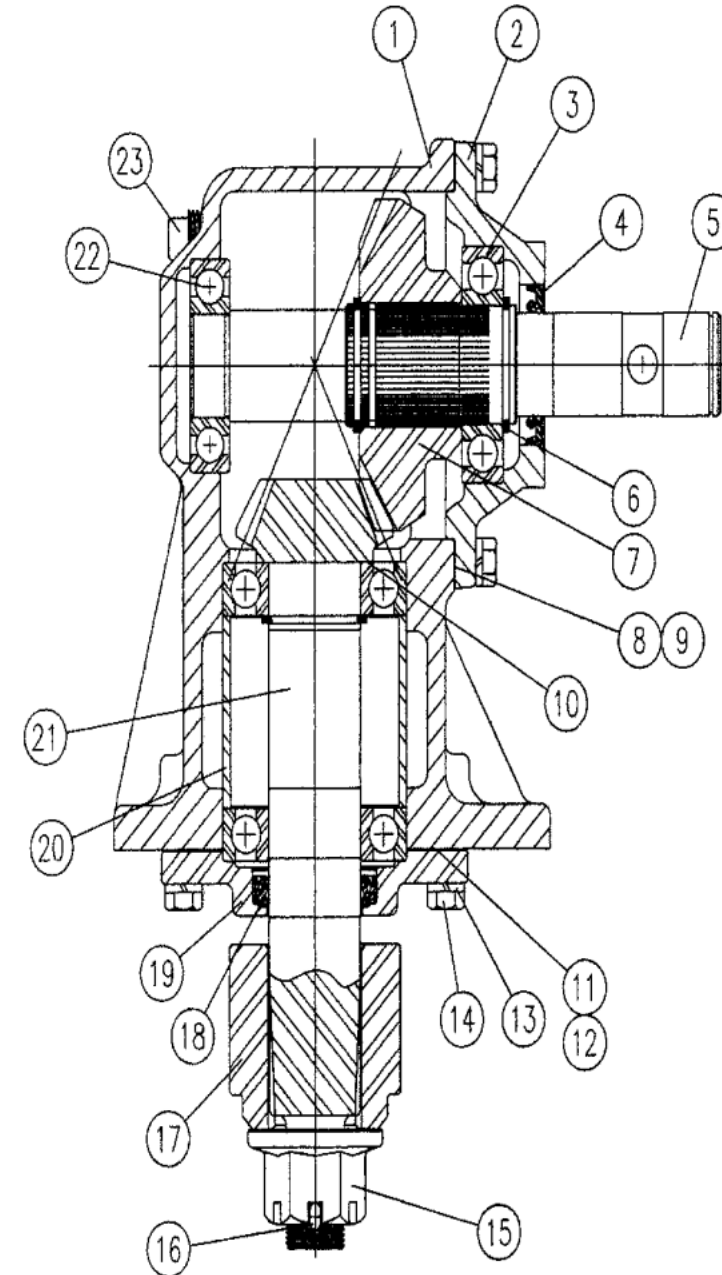
All obligations of Belco Resources, Inc under this limited warranty shall be terminated if:

- ◇ Proper service is not performed on the machine
- ◇ The machine is modified or altered in any way
- ◇ The machine is being used or has been used for purposes other than those for which the machine was intended

## DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES

Belco Resources, Inc. obligation under this limited warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, including implied warranties of merchantability and fitness for a particular purpose and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Belco Resources, Inc.; duty; taxes; charges for normal service or adjustment; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery.

Belco Resources Rotary Cutter  
BRC-048  
Gearbox



**Gearbox**

**Belco Resources Rotary Cutter**

**BRC-048**

**Gearbox**

**Gearbox**

Position	Part #	Description	Qty
1	IT18-010	Housing	1
2	IT20-007	Input Cap	1
3	IT04-003	Ball Bearing 208	3
4	IT05-002	Input Seal	1
5	IT02-010	Input Shaft	1
6	IT21-012	Retaining Ring	3
7	IT03-003	Tooth Input Gear	1
8	IT08-004A	Input Cap Gasket (0.30)	var
9	IT08-004B	Input Cap Gasket (0.13)	var
10	IT17-004	Steel Shim (0.20)	1
11	IT08-005A	Output Gasket (0.30)	var
12	IT08-005B	Output Gasket (0.13)	var
13	IT07-001	Lockwasher	10
14	IT06-008	Hex Head Bolt M10 x 1.5 x 30	10
15	IT11-008	Slotted Flanged Hex Nut	1
16	IT12-003	Cotter Pin	1
17	IT15-001	Blade Hub	1
18	IT05-005	Output Seal	1
19	IT20-003	Output Cap	1
20	IT10-002	Output Bearing Spacer	1
21	IT03-004	15 Tooth Output Shaft & Pinion	1
22	IT04-004	Ball Bearing 207	1
23	IT09-002	Oil Fill Plug	2



# Belco Resources Equipment

Rocky Mount, North Carolina

www.BR-Equipment.com

## WARRANTY REGISTRATION FORM & INSPECTION REPORT

### WARRANTY REGISTRATION

This form must be filled out by the dealer and signed by both dealer and customer at time of delivery.

Customer name \_\_\_\_\_ Dealer name \_\_\_\_\_

Address \_\_\_\_\_ Address \_\_\_\_\_

City, state, code \_\_\_\_\_ City, state, code \_\_\_\_\_

Phone number ( \_\_\_\_\_ ) \_\_\_\_\_

Model \_\_\_\_\_ Serial Number \_\_\_\_\_ Delivery date \_\_\_\_\_

### DEALER INSPECTION REPORT

### SAFETY

- \_\_\_\_\_ Farm level
- \_\_\_\_\_ Wheel bolt tight
- \_\_\_\_\_ Fasteners tight
- \_\_\_\_\_ Chains adjusted
- \_\_\_\_\_ Wiring harness connected
- \_\_\_\_\_ Check tire pressures
- \_\_\_\_\_ Lubricate machine

- \_\_\_\_\_ All decals installed
- \_\_\_\_\_ Reflectors, SMV clean
- \_\_\_\_\_ Guards and shields installed
- \_\_\_\_\_ Review operating and safety instructions

I have thoroughly instructed the buyer on the above-described equipment; review included the operator's manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date \_\_\_\_\_ Dealer's signature \_\_\_\_\_

The above equipment and operator's manual have been received by me, and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date \_\_\_\_\_ Owner's signature \_\_\_\_\_

-Detach here to register warranty-

Mail to: Belco Resources Equipment  
P.O. Box 8164  
Rocky Mount, NC 27804



## **Parts Manual**

### **Rotary Cutter**

**BRC-048**

**BRC-060**

**BRC-072**