

YCT Rotary Tillers

Operator's Manual Parts Breakdown



TABLE OF CONTENTS

INTRODUCTION	1
SAFETY.....	1
SAFETY SIGNAL WORDS	2
GENERAL SAFETY GUIDELINES.....	2
SAFETY DECAL CARE	3
BEFORE OPERATION.....	3
DURING OPERATION	4
HIGHWAY AND TRANSPORT OPERATIONS	5
OPERATION	7
MAINTENANCE	9
PARTS BREAKDOWN DIAGRAM	10
PARTS BREAKDOWN CHART	11
PTO BREAKDOWN	16
LIMITED WARRANTY.....	17

INTRODUCTION

Thank you for purchasing your Belco Resources Equipment YCT Series Tiller. Your rotary tiller is design to be used on Cat. 1 540 rpm tractors. It is important to properly maintain in keep in place all safety guards and shields that came with your spreader.

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!**



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.
- Assure that all 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.

- 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.



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.
- 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



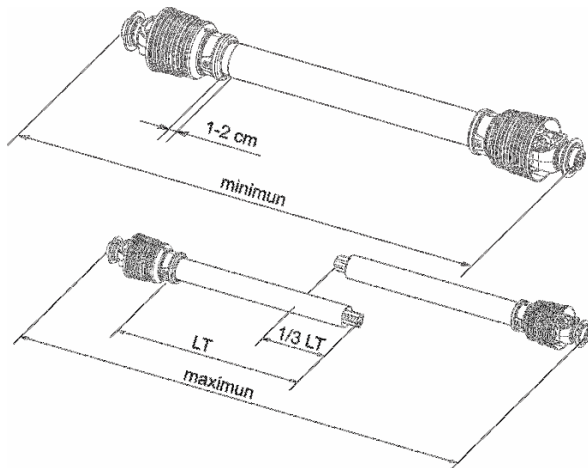
Before attaching the rotary tiller to the tractor, check the unit to ensure there is oil in the top and side gearbox. See Maintenance section for lubricant specifications.

Attaching to the tractor

1. With the Rotary Tiller on a level surface, back the Cat. 1 tractor so the tractor lift arms are even with the unit's lower hitch pins. Lower or raise the tractor hitch arms until the 7/8" bushing in the arm is inside the clevis of lower hitch points. **Be sure nothing is between the tractor and the tiller before backing up.**
2. Insert the lower hitch pin through the lower hitch blocks and the tractor arm. The YCT series tillers have adjustable lower hitch blocks that can be slide to facilitate usage on larger tractors.
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.
6. Connect the tractor top link to the upper hitch point of the rotary tiller.
7. Start the tractor and slowly raise the tiller. Check for drawbar interference. Be sure that the PTO driveline does not bottom out when lifting the machine 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. 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.

Working Depth Adjustment

The working depth is controlled by raising or lowering the side skids. If the skids are raised, the working depth increases. By lowering the skids, the tilling depth will decrease.

Tailgate adjustment

The tailgate can be adjusted to help smooth and compact the tilled ground. Release the chain and secure to the desired height.

Start up

After making the necessary adjustments, lower the rotary tiller until the blades are a couple of inches from the ground. Engage the PTO and slowly lower the tiller to begin working.



Removal and Storage

After finishing, remove the rotary tiller from the tractor.

1. Put the PTO driveline in a safe location so it will not become damaged.
2. Clean and dry the equipment.
3. Replace any damaged or worn parts.
4. Check all bolts and nuts for tightness.
5. Lubricate and protect the machine from the elements.



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 towing 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.

MAINTENANCE

8 hours	Grease the Rotor support (<i>GP grease</i>) Grease PTO shaft cross & bearings (<i>GP grease</i>) Check Hardware for tightness
16 hours	Check oil level in center gearbox (<i>90wt</i>) Check oil level in side gearbox (<i>140wt</i>) Check Hardware for tightness
200 hours	Replace oil in center gearbox (<i>90wt</i>) Replace oil in side gearbox (<i>140wt</i>) Change chain tensioner spring (DLT model only) Check Hardware for tightness

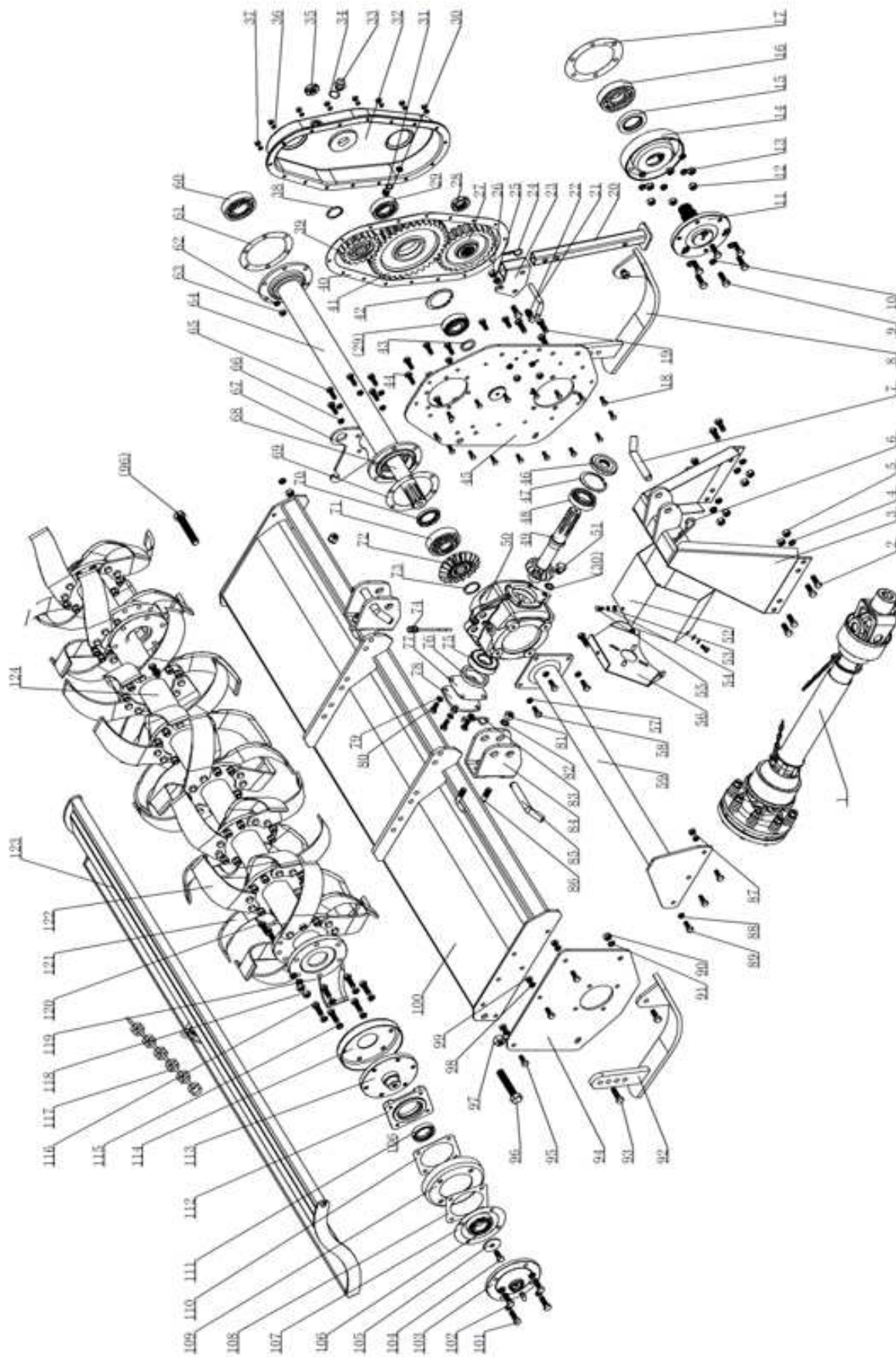
Replacing Blades

In order for the tiller to perform optimally, make sure the tiller blades are in good working condition and their bolts and nuts tight. Always replace the blades with the bolt head against the blade and the washer and nut on the flange side to help prevent the blades from loosening.

When several blades are to be replaced, replace them one blade at a time in order maintain the scroll pattern on the rotor.

Belco Resources Equipment

YCT-060 - YCT-066 - YCT-074



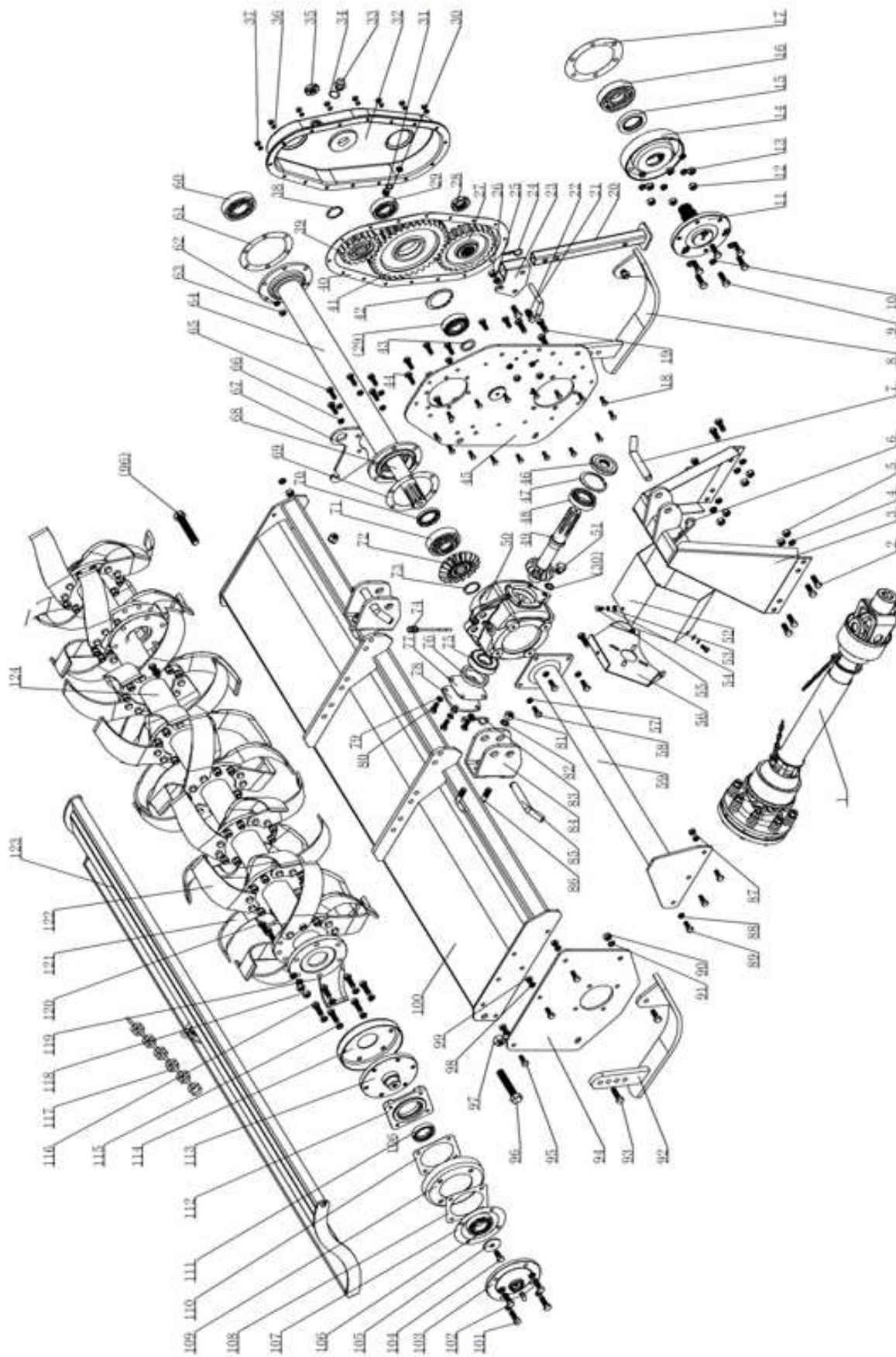
Belco Resources Equipment

YCT-060 - YCT-066 - YCT-074

Position	Part #	Description	Qty
1	147-122	PTO Shaft Complete	1
2	BM1217535	Bolt 12 x 1.75 x 35	8
3	YT106601030100	A Frame	1
4	LW12000	Lock Washer M12	8
5	NM12000	Nut Hex M12	8
6	RC400000	"R" Clip 4mm	3
7	YT1066010202	Top Hitch Pin	1
8	YT10660600	Skid Weldment - Left	1
9	BM101535	Bolt 10 x 1.5 x 35 mm	4
10	LW12000	Lock Washer 12mm	6
11	YT10660807	Rotor Shaft Support	1
12	NM12000	Nut Hex M12	23
13	LW12000	Lock Washer 12mm	3
14	YT10660805	Rotor Support - Side Drive	1
15	OS805012	Oil Seal 80/50/12	1
16	B6309000	Bearing 6309	1
17	T10660808	Gasket	1
18	BM812525	Bolt 8 x 1.25 x 25 mm	15
19	BM1217535	Bolt 12 x 1.75 x 35	6
20	YT1066050100	Stand Leg	1
21	YT10660501	Pin - Stand	1
22	BM101525	Bolt 10 x 1.5 x 25	2
23	YT1066050200	Stand Bracket	1
24	RC300000	R-Clip 3mm	1
25	LW10000	Lock Washer M10	
26	HNM10000	Hex Nut 10mm	6
27	YT10660804	Gear - Rotor	1
28	LNM3515	Lock nut 35mm x 1.5	1
29	B3030600	Bearing 30306	2
30	FW16000	16mm Washer	2
31	OP1415000	Oil Plug 14 x 1.5 mm	1
32	YT1066080100	Side Gear Cover	1
33	OP221500	Plug 22 x 1.5 mm	1
34	FW16000	16mm Washer	1
35	LNM2400	Lock Nut 24mm	1
36	NHM80000	Lock Washer 8mm	16
37	HNM8000	Hex Nut 8mm	16
38	SRD4000	Snap Ring Dia 40	1
39	YT10660209	Gear Drive 17-T	1
40	YT10660802	Gasket - Side Gear Cover	1
41	YT10660801	Middle Gear - Side Drive	1
42	SRD7200	Snap Ring Dia. 72 - Internal	
43	YT10660803	Idle Gear Spacer	1
44	BM101530	Bolt 10 x 1.5 x 30 mm	6
45	YT1066010400	Side Board - Left	1
46	OS357210	Oil Seal 35x72x10PP	1

Belco Resources Equipment

YCT-060 - YCT-066 - YCT-074



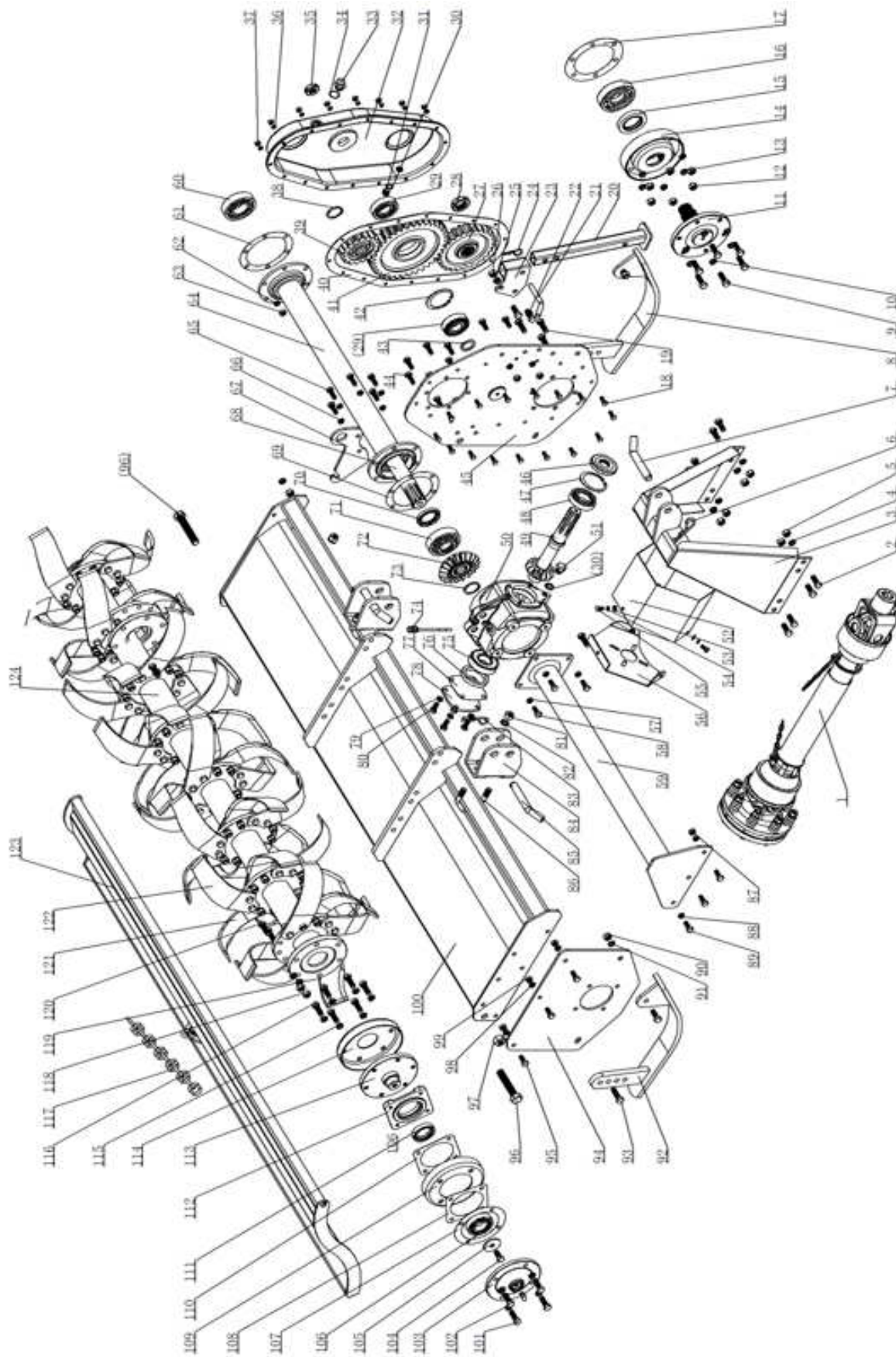
Belco Resources Equipment

YCT-060 - YCT-066 - YCT-074

Position	Part #	Description	Qty
47	SRI72000	Inner Snap Ring Dia. 72	1
48	B6207000	Bearing 6207	1
49	YT10660205	Bevel Pinion Gear Shaft Z=13	1
50	YT10660201	Gearbox Housing	1
51	DP141500	Drain Plug M14 x 1.5	1
52	YT1066020201	PTO Shield	1
53	NHM80000	Hex Nut 8mm	3
53	FW80000	Flat Washer 8 mm	3
54	FL80000	Flat Washer 8mm	3
54	LW80000	Lock Washer 8 mm	4
55	BM816000	Bolt 8 x 16 mm	3
56	YT106602020100	Shield Support	1
57	LW10000	Lock Washer M10	4
58	BM101525	Bolt 10 x 1.5 x 25	4
59	YT10580400	Gearbox Support Tube 58"	1
59	YT10660400	Gearbox Support Tube 66"	1
59	YT10740400	Gearbox Support Tube 74"	1
60	B6308000	Bearing 6308	1
61	YT10660207	Gasket Driveshaft	2
62	LW10000	Lock Washer M10	6
63	HNM10000	Hex Nut 10mm	6
64	YT1058020100	Driveshaft Tube Housing 58"	1
64	YT1066020100	Driveshaft Tube Housing 66"	1
64	YT1074020100	Driveshaft Tube Housing 74"	1
65	BM101530	Bolt 10 x 1.5 x 30	6
66	LW10000	Lock Washer M10	6
67	YT10660211	Lifting Hook	1
68	YT10580210	Drive Shaft 58"	1
68	YT10660210	Drive Shaft 66"	1
68	YT10740210	Drive Shaft 74"	1
69	YT10660207	Gasket Driveshaft	2
70	OS65408	Oil Seal 65 x 40 x 8	1
71	B63082RS	Bearing 6308 2RS	1
72	YT10660206	Output Gear	1
73	SRE40000	Snap Ring Dia. 40 - External	1
74	YT1066020300	Gearbox Oil Plug	1
75	B6307000	Bearing 6307	1
76	YT10660204	Spacer	1
77	YT10660203	Gasket Bearing Cover	1
78	YT10660202	Bearing Cover	1
79	LW100000	Lock Washer 10 mm	4
80	BM101525	Bolt 10 x 1.5 x 25	4
81	NHM14000	Hex Nut 14mm	4
82	LW140000	Lock Washer 14 mm	4
83	RC400000	"R" Clip 4mm	3
84	YT106601020100	Lower Hitch Bracket	2
85	YT1066010202	Hitch Pin	2
86	YT1066010201	U Bolt, Hitch	2

Belco Resources Equipment

YCT-060 - YCT-066 - YCT-074

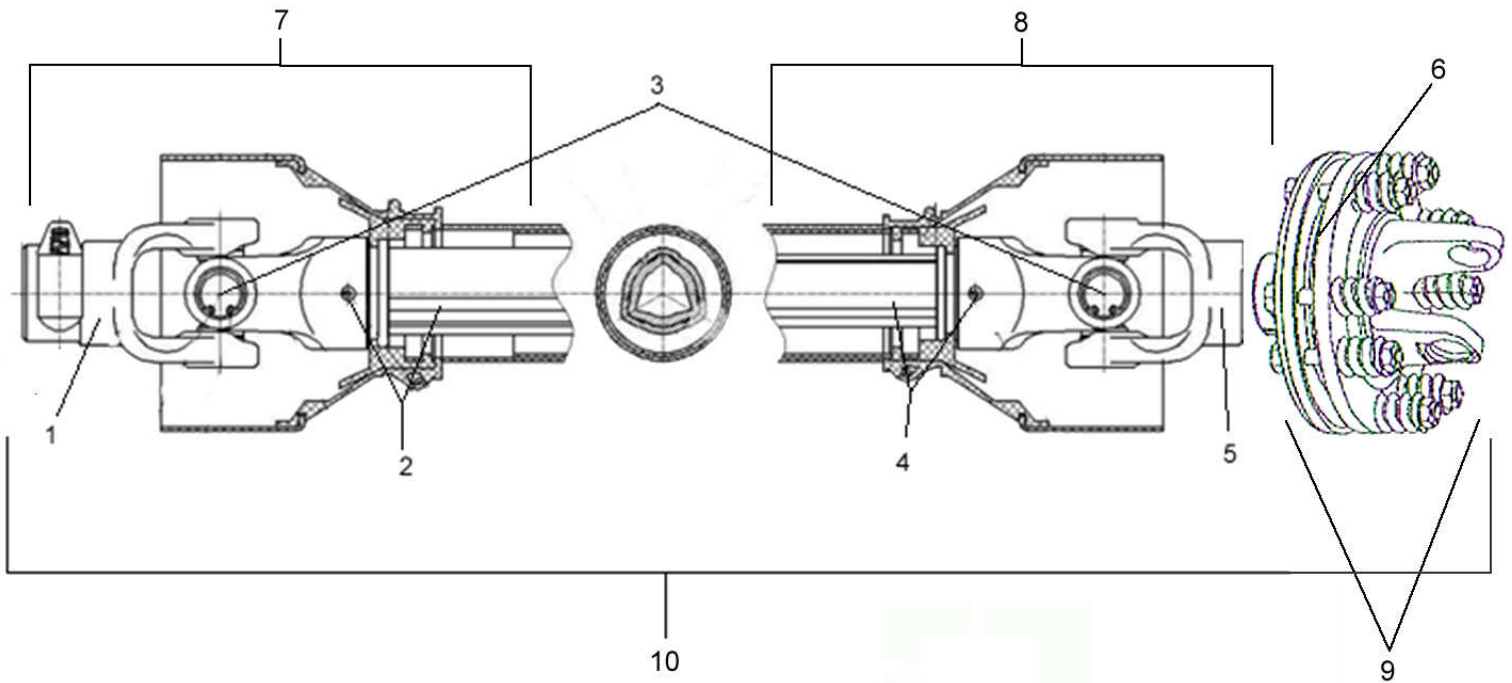


Belco Resources Equipment

YCT-060 - YCT-066 - YCT-074

Position	Part #	Description	Qty
87	HNM10000	Hex Nut 10mm	2
88	LW10000	Lock Washer M10	3
89	BM101525	Bolt 10 x 1.5 x 25	3
90	NM12000	Nut Hex M12	4
91	LW12000	Lock Washer M12	4
92	YT10660600	Skid Weldment - Right	1
93	BM1217540	Bolt 12 x 1.75 x 40	4
94	YT10660101	Side Plate - Right	1
95	BM101525	Bolt 10 x 1.5 x 25	7
96	BM16**90	Bolt 16 x *** x 90	2
97	NM16000	Nut Hex M16	2
98	LW10000	Lock Washer 10mm	7
99	NM12000	Nut Hex M10	6
100	YT1060010100	60" Main Frame	1
100	YT1066010100	66" Main Frame	1
100	YT1074010100	74" Main Frame	1
101	BM101535	Bolt 10 x 1.5 x 35 mm	4
102	GN101500	Lock Washer 10mm	4
103	YT10660907	End Cap	1
104	BM1217525	Bolt 12 x 1.75 x 25	1
105	FW12000	Fender Washer 12mm	1
106	B6207000	Bearing 6207	1
107	YT10660906	Rotor Gasket	1
108	YT10660905	Gasket (0.5mm)	2
109	YT10660902	Inner Cover - Rotor Shaft	1
110	YT10660905	Gasket (0.5mm)	2
111	OS456212	Oil Seal 45 x 62 x 12	1
112	YT10660904	Bearing Housing	1
113	YT10660903	Rotor Shaft Head - Right	1
114	YT10660901	Cover	1
115	LW10000	Lock Washer M10	6
116	BM1217535	Bolt 12 x 1.75 x 35	6
117	YT1066070200	Chain - Drag Board	1
118	NM120001	Hex Nut 12mm	84, 96, 108
119	LN12000	Lock Nut 12mm	84, 96, 108
120	BM1212535	Bolt 12 x 1.25 x 35	84, 96, 108
121	YT1066090101	Tiller Tine - Right	21, 24, 27
122	YT1066090102	Tiller Tine - Left	21, 24, 27
123	YT1060070100	60" Tail Gate	1
123	YT1066070100	66" Tail Gate	1
123	YT1074070100	74" Tail Gate	1
124	YT106009010100	60" Rotor Shaft	1
124	YT106609010100	66" Rotor Shaft	1
124	YT107409010100	74" Rotor Shaft	1

PTO Shaft



Position	Part #	Description	Qty
1	DP1075	PTO Yoke	1
2	DP1079	Female Yoke and Tube (tractor end)	1
3	DP1076	Cross and Bearings	2
4	DP1078	Male Yoke and Tube (implement end)	1
5	180-510	Friction Disc	2
6	DP1074F	Complete Female End (tractor end)	1
7	DP1074M	Complete Male End (implement end)	1
8	DP1098	Slip Clutch Complete	1
9	147-122	Complete PTO	1

LIMITED WARRANTY

Belco Resources Equipment warrants to the original purchaser of any new piece of machinery from Belco Resources Equipment, purchased from an authorized Belco Resources Equipment 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 Equipment 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 Equipment dealer during regular working hours. Belco Resources Equipment 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 Equipment under this limited warranty shall be terminated if:

Proper service is not preformed 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 Equipment 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 Equipment; 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.



Increasing agricultural productivity since 1974
Belco Resources Equipment

P.O. Box 8164
Rocky Mount, NC 27804
www.BR-Equipment.com



Tel: 252-442-0700
Fax: 252-442-0787
Sales@BRGlimited