

ROTARY TILLER

OPERATIONS MANUAL



WARNINGS

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

BEFORE YOU START!!

Read the safety messages on the implement and shown in your manual. Observe the rules of safety and common sense!

THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY WARNING MESSAGES. CAREFULLY READ EACH WARNING MESSAGE THAT FOLLOWS. FAILURE TO UNDERSTAND AND OBEY A SAFETY WARNING, OR RECOGNIZE A SAFETY HAZARD, COULD RESULT IN AN INJURY OR DEATH TO YOU OR OTHERS AROUND YOU. THE OPERATOR IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF HIMSELF, AS WELL AS OTHERS, IN THE OPERATING AREA OF THE ROTARY TILLER. UNDERSTAND SIGNAL WORDS

DANGER and **WARNING** safety signs are located near the specific hazard. **CAUTION** safety signs list general precautions. The safety-alert symbol is also used in this manual to call attention to safety messages.

Important Safety Information!

Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembly or operating, to acquaint yourself with the machines. It is the implement owner's responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating:

1. Reads and understands the operator's manuals.
2. Is instructed in safe and proper use.
3. The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design.
4. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using. If there is something in this manual you do not understand, ask your supervisor, or your dealer, to explain it to you.



Most accidents occur because of neglect or carelessness. Keep all helpers and bystanders twenty-five feet (25') from an operating rotary tiller. Only properly trained people should operate this machine. It is recommended the tractor be equipped with a Rollover Protection System (ROPS) and a seat belt that is used. Always stop the tractor, set brake, shut off the tractor engine and remove the tractor key, and lower implement to the ground before dismounting tractor. Never leave equipment unattended with the tractor running.

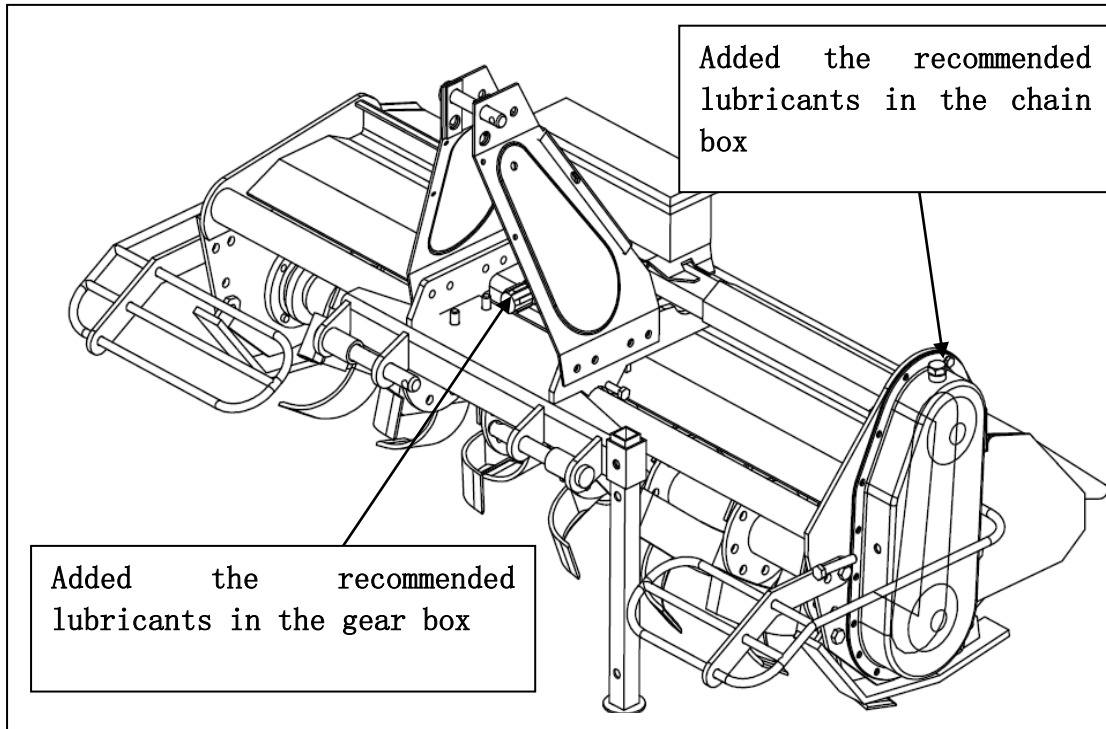
Please remember it is important that you read and heed the safety signs on the rotary tiller, and the safety rules set forth. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety as well as the safety of others. The safe use of this machine is strictly up to you, the operator.

SAFETY PRECAUTIONS
MOST ACCIDENTS OCCUR BECAUSE OF NEGLIGENCE OR
CARELESSNESS. AVOID NEEDLESS ACCIDENTS BY FOLLOWING ALL
OF THE SAFETY PRECAUTIONS LISTED BELOW.

- Machinery should be operated only by those who are responsible and are authorized to do so. Stop the engine, lower all equipment, lock the brakes, and remove the ignition key before dis-mounting from the tractor.
- Never stand between tractor and implement while tractor is being backed to hitch. Loose fitting clothing should not be worn, to avoid catching on various parts.
- Detach implement in area where children normally do not play.
- When performing adjustments or maintenance on an implement, first lower it to the ground or block it securely at a workable height. Only a qualified operator should be permitted on tractor when in operation; no riders allowed. Make certain everyone is in the clear before starting tractor or raising or lowering equipment. Operate the tractor and implement only while seated in the driver's seat. Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.
- A heavy load can cause instability of the tractor.
- Use extreme care during road travel. Slow down on turns and watch out for bumps. Tractor may need front counter-weights to counter-balance the weight of the implement.
- Reduce speed on hillsides or curves so there is no danger of tipping.
- Avoid driving too close to the edge of ditches or creeks.
- Do not transport implement on public roads without reflectors and slow moving vehicle emblem in daylight and with approved warning lights at night and other periods of poor visibility.
- Due to the width of some implements, use extra caution on highways, farm roads, and when approaching gates.
- Always be sure the implement is in the proper position for transport.
- Keep alert and watch the front as well as the rear when working with the implement.

Table of recommended lubricants

		AGIP	ESSO	IP	SHELL
	Gearbox and side transmission oil	BLASIA 460	GEAR OIL EP320	OIL 460	OIL 460
	Grease	GRMU3	E. P. 3	GR3	R3



WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

1. PART NUMBER
2. PART DESCRIPTION
3. MODEL NUMBER
4. NAME OF ITEM

Safety Information

- All equipment is potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices.
- When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintaining, repairing, removal, or moving the implement, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.
- Personal protection equipment including safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the rotary tiller.
- Always use two people to handle heavy, unwieldy components during assembly, installation, removal, or moving the rotary tiller.
- Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintaining, repairing, removal, or moving the implement.
- Never place yourself between the tractor and implement while implement

is in operation.

- Do not work under a raised implement unless it is securely blocked or held in position. Do not depend on the tractor hydraulic system to hold the implement in place.
- A heavy load can cause instability of the tractor. Use extreme care during travel. Slow down on turns and watch out for bumps. The tractor may need front counter-weights to counter-balance the weight of the implement.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Do not allow others to ride on the tractor with an operator. Riders are subject to injury such as being struck by foreign objects or being thrown off. Riders obstruct the operator's view resulting in unsafe operation. Never allow anyone to ride on the implement!
- Before you operate the rotary tiller, check over all pins, bolts and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.
- Do not allow anyone who is not familiar with the safety rules and operation instructions to use this rotary tiller. Never allow children to operate or be around equipment.
- Use stabilizer bars, adjustable sway chains, or sway blocks on your tractor lift arms to keep the rotary tiller from swinging side to side. Adjust as tightly as practical for best performance.
- Keep alert and watch the front as well as the rear when working with the implement.
- When maneuvering close to buildings or passing through narrow areas, be sure to allow sufficient clearance for the implement.
- Do not operate close to ditches or creeks. Slow down when operating over rough ground.
- Always be sure the implement is in the fully raised position when in transport.
- When adjusting the assembly, be sure that your feet are never under the rotary tiller.
- Use extreme caution when backfilling deep holes or trenches.
- Be careful to avoid catching the rotary tiller on stumps or other immovable objects.
- Use care when working on slopes.
- Avoid excessive speed during operation.
- Make adjustments only when the implement is attached to the tractor.
- Do not use the rotary tiller in a reverse position, use extra care. Do not ram rotary tiller into piles of dirt. Tractor lift arms and the rotary tiller are not built to take high impact loads in this position. Ramming backwards can also dislodge operator from seat and/or tractor controls, resulting in possible serious injury or death.

- Always ease the tractor into the load. It may be necessary to reposition and take less "bite" on the material to move it safely.
- Watch for and avoid hidden obstructions, i.e., buried pipes, rocks, concrete piers, uneven concrete slabs, stumps, etc., when operating.

INSTRUCTIONS

TRACTOR REQUIREMENTS AND PREPARATION

The Rotary tiller will fit most Category 0 tractors equipped with a standard 3-point hitch. The pins need to be installed to the inside of the 3-point frame for use with Category 0 tractors.

The Rotary tiller is an economy tiller for use on Category 0 tractors up to 25 horsepower in size. For use on larger tractors, extra care is required and it is strongly suggested that purchasing a heavier rotary tiller be considered.

1. Check the tractor's 3-point hydraulic lift system.
2. It should operate up and down smoothly and hold its position when set.
3. Refer to your tractor owner's manual or dealer for any adjustments necessary to put the 3-point hydraulic lift system in good working order.
4. I&T shop manuals will list most specifications and adjustment instructions - available from most farm equipment dealers.
5. Tractor should be equipped with stabilizer bars, adjustable sway chains, or sway blocks to keep the implement from swinging side to side.
6. Smaller size tractors may need front counter weights to counter-balance the weight of the implement.
7. It is recommended that the tractor be equipped with a Rollover Protection System (ROPS) and a seat belt that is used.

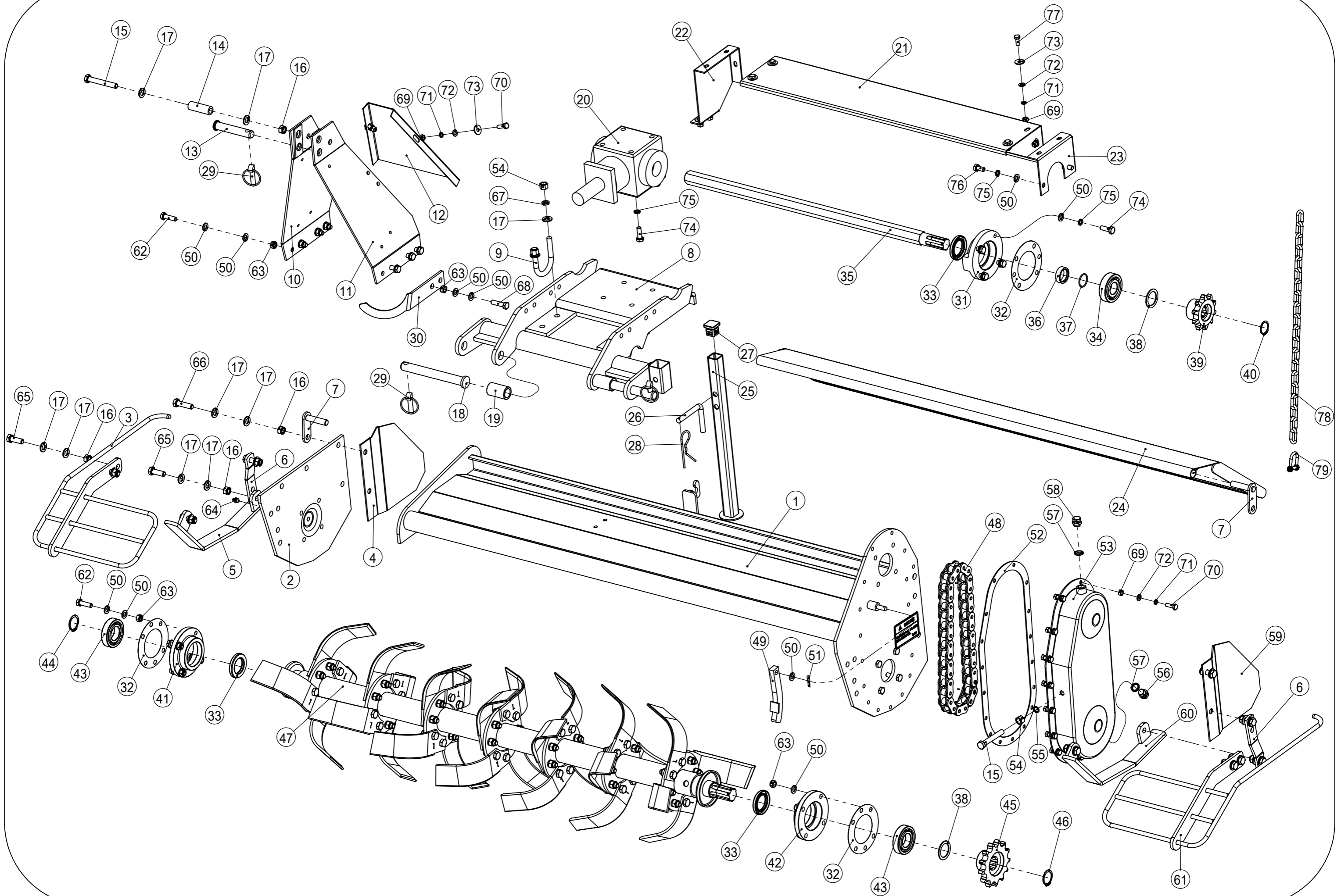
ASSEMBLY AND MOUNTING

1. Attach the upper 3-point A-frame members, to the 3-point hitch lugs as shown on page 7, with hardware as indicated.
2. **DO NOT** tighten hardware.
3. Align the A-frame top link and lower hitch holes in order to allow your hitch pins to pass through them.
4. A-frame should be positioned square to the frame when tightening hardware.
5. Attach rotary tiller hitch frame to tractor 3-point hitch using a 3A lynch (Cat 0) top link pin and lynch pins furnished by customer.
6. Your Rear Mounted tiller is now assembled and mounted on your tractor. It is ready to go to work for you.

NOTE: Always use the tractor anti-sway bars, blocks, or chains to prevent tiller side-sway.

CAUTION!

Be sure your tractor is in good condition. Read all the safety precautions and make sure all tractor operators are familiar with the safety rules of operation. Please work, drive, play, and live each day with care and concern for your safety and that of your family and fellow citizens.



POS.	COD.	Specification	Description	135	125	085	095	105	115
1	2020001069	TL135-018A	Panel hood	1	-	-	-	-	-
1	2020001068	TL125-018A	Panel hood	-	1	-	-	-	-
1	2020001064	TL85-018A	Panel hood	-	-	1	-	-	-
1	2020001065	TL95-018A	Panel hood	-	-	-	1	-	-
1	2020001066	TL105-018A	Panel hood	-	-	-	-	1	-
1	2020001067	TL115-018A	Panel hood	-	-	-	-	-	1
2	2020001076	TL135-020	Side plate-R	1	1	1	1	1	1
3	2020001078	TL135-022	Guard rail-R	1	1	1	1	1	1
4	2000000504	TL135-111	Supporting plate-R	1	1	1	1	1	1
5	2020001057	TL135-016	Skid-R	1	1	1	1	1	1
6	2000000503	TL135-110	Connecting plate	2	2	2	2	2	2
7	2020001056	TL135-015	Baffle plate shaft	2	2	2	2	2	2
8	2020001054	TL135-013A	Gearbox seat	1	1	1	1	1	1
9	2010000379	TL135-112	U bolt	2	2	2	2	2	2
10	2020001053	TL135-012	Hitch bracket-R	1	1	1	1	1	1
11	2020001079	TL135-023	Hitch bracket-L	1	1	1	1	1	1
12	2000000501	TL135-106	Rear Panel	1	1	1	1	1	1
13	3120500009	EF175-119	Hitch pin-Upper	1	1	1	1	1	1
14	2010000380	TL135-116	Sleeve	1	1	1	1	1	1
15	3040100080	GB/T 5783-2000	Hexagon head bolt-Full thread M12×85	2	2	2	2	2	2
16	3050500007	GB/T 889.1-2000	Locknut M12	13	13	13	13	13	13
17	3080100007	GB/T 95-2002	Plain washer 12×2.5	30	30	30	30	30	30
18	3120500010	EF175-120	Hitch pin-Lower	2	2	2	2	2	2
19	2010000049	EF175-114	Sleeve	2	2	2	2	2	2
20	3160100063	XH23.146J.12W	Gear box	1	1	1	1	1	1
21	2000000513	TL135-119	Cover	1	-	-	-	-	-
21	2000000512	TL125-119	Cover	-	1	-	-	-	-
21	2000000508	TL85-119	Cover	-	-	1	-	-	-
21	2000000509	TL95-119	Cover	-	-	-	1	-	-
21	2000000510	TL105-119	Cover	-	-	-	-	1	-
21	2000000511	TL115-119	Cover	-	-	-	-	-	1
22	2000000507	TL135-120	Cover	1	1	1	1	1	1

POS.	COD.	Specification	Description	135	125	085	095	105	115
23	2000000506	TL135-118	Cover	1	1	1	1	1	1
24	2020001075	TL135-019	Baffle plate	1	-	-	-	-	-
24	2020001074	TL125-019	Baffle plate	-	1	-	-	-	-
24	2020001070	TL85-019	Baffle plate	-	-	1	-	-	-
24	2020001071	TL95-019	Baffle plate	-	-	-	1	-	-
24	2020001072	TL105-019	Baffle plate	-	-	-	-	1	-
24	2020001073	TL115-019	Baffle plate	-	-	-	-	-	1
25	2020001055	TL135-014	Raker	1	1	1	1	1	1
26	2010000017	EF175-116	Raker pin	1	1	1	1	1	1
27	3210200006	EF175-121	Square pipe plug 24*24	1	1	1	1	1	1
28	3120400008	3.5	R pin 3.5	1	1	1	1	1	1
29	3120400007	11*45	Safety pin 11*45	3	3	3	3	3	3
30	2000000505	TL135-115	Shaft placing plate	1	1	1	1	1	1
31	3150100015	TL135-103	Bearing seat	1	1	1	1	1	1
32	3170500028	TL135-113	Paper pad	3	3	3	3	3	3
33	3170100018	GB/T 13871.1-2007	TC Oil seal 40X62X8	3	3	3	3	3	3
34	3100100048	GB/T 276-94	Deep groove ball bearing 6306 D=72 d=30 B=19	1	1	1	1	1	1
35	3150200018	TL135-104	Extension shaft	1	-	-	-	-	-
35	3150200017	TL125-104	Extension shaft	-	1	-	-	-	-
35	3150200013	TL85-104	Extension shaft	-	-	1	-	-	-
35	3150200014	TL95-104	Extension shaft	-	-	-	1	-	-
35	3150200015	TL105-104	Extension shaft	-	-	-	-	1	-
35	3150200016	TL115-104	Extension shaft	-	-	-	-	-	1
36	2010000377	TL135-109	Sleeve	1	1	1	1	1	1
37	3170200015	GB 3452.1-92	O-ring 30×2.4	1	1	1	1	1	1
38	2000000502	TL135-107	Sheet	2	2	2	2	2	2
39	3160700013	TL135-102	Drive sprocket wheel	1	1	1	1	1	1
40	3080700020	GB 894.1-86	Circlip for shaft-type A 30	1	1	1	1	1	1
41	3150100016	TL135-105A	Bearing Seat	1	1	1	1	1	1
42	3150100017	TL135-105B	Bearing Seat	1	1	1	1	1	1
43	3100100037	GB/T 276-94	Deep groove ball bearing 6207 D=72 d=35 B=17	2	2	2	2	2	2
44	3080700023	GB 894.1-86	Circlip for shaft-type A 35	1	1	1	1	1	1

POS.	COD.	Specification	Description	135	125	085	095	105	115
45	3160700012	TL135-101	Driven sprocket wheel	1	1	1	1	1	1
46	3080700022	GB 894.1-86	Circlip for shaft-type A 34	1	1	1	1	1	1
47	2090000439		TL135 Blade axle assembly	1	-	-	-	-	-
47	2090000438		TL125 Blade axle assembly	-	1	-	-	-	-
47	2090000434		TL85 Blade axle assembly	-	-	1	-	-	-
47	2090000435		TL95 Blade axle assembly	-	-	-	1	-	-
47	2090000436		TL105 Blade axle assembly	-	-	-	-	1	-
47	2090000437		TL115 Blade axle assembly	-	-	-	-	-	1
48	3160800008	GB/T 1243.1-97	Chain 16A-1×17	1	1	1	1	1	1
49	2020001051	TL135-108	Tension Plate	1	1	1	1	1	1
50	3080100006	GB/T 95-2002	Plain washer 10×2	35	35	35	35	35	35
51	3120100089	GB/T 91-2000	Split pin 4*20	1	1	1	1	1	1
52	3170500029	TL135-114	Cork Pad	1	1	1	1	1	1
53	2020001052	TL135-011	Sprocket wheel box cover	1	1	1	1	1	1
54	3050100007	GB/T 41-2000	Nut M12	5	5	5	5	5	5
55	3170300010	M12	Combined sealing gaskets M12	1	1	1	1	1	1
56	3040500006	JBZQ 4770-2006	Outer hexagonal plug M16×1.5	1	1	1	1	1	1
57	3170300012	M16	Combined sealing gaskets M16	2	2	2	2	2	2
58	3170400013	M16*1.5 (JYG-82)	Breather plug	1	1	1	1	1	1
59	2000000514	TL135-121	Supporting plate-L	1	1	1	1	1	1
60	2020001080	TL135-024	Skid-L	1	1	1	1	1	1
61	2020001077	TL135-021	Guard rail-L	1	1	1	1	1	1
62	3040100046	GB/T 5783-2000	Hexagon head bolt-Full thread M10×35	10	10	10	10	10	10
63	3050500004	GB/T 889.1-2000	Locknut M10	16	16	16	16	16	16
64	3170400004	JB/T 7940.1-1995	Grease nipple M10x1	1	1	1	1	1	1
65	3040100069	GB/T 5783-2000	Hexagon head bolt-Full thread M12×35	11	11	11	11	11	11
66	3040100072	GB/T 5783-2000	Hexagon head bolt-Full thread M12×45	1	1	1	1	1	1
67	3080500009	GB/T 93-1987	Spring washer 12	4	4	4	4	4	4
68	3040100047	GB/T 5783-2000	Hexagon head bolt-Full thread M10×40	2	2	2	2	2	2
69	3050100004	GB/T 41-2000	Nut M8	27	27	27	27	27	27
70	3040100024	GB/T 5783-2000	Hexagon head bolt-Full thread M8×25	19	19	19	19	19	19
71	3080500007	GB/T 93-1987	Spring washer 8	27	27	27	27	27	27

POS.	COD.	Specification	Description	135	125	085	095	105	115
72	3080100004	GB/T 95-2002	Plain washer 8×1.6	27	27	27	27	27	27
73	3080200008	GB/T 96.2-2002	Large plain washer 8×2	10	10	10	10	10	10
74	3040100045	GB/T 5783-2000	Hexagon head bolt-Full thread M10×30	8	8	8	8	8	8
75	3080500008	GB/T 93-1987	Spring washer 10	10	10	10	10	10	10
76	3040100041	GB/T 5783-2000	Hexagon head bolt-Full thread M10×20	2	2	2	2	2	2
77	3040100022	GB/T 5783-2000	Hexagon head bolt-Full thread M8×20	8	8	8	8	8	8
78	3130100016	LG180.130	Galvanized chain(0.616M)	1	1	1	1	1	1
79	3130600005	8	Type D shackle	1	1	1	1	1	1
80	3250100630	YB063	Decal	1	1	1	1	1	1