

# SLASHER OPERATIONS MANUAL







SPECIFICATIONS	TM120	TM140	TM160	TM180
Suited to:	35-45hp Tractors	45-75hp Tractors	45-75hp Tractors	75-100hp Tractors
3-Point Linkage	Cat. I	Cat. I	Cat. I	Cat. I or II
Length (excl.wheels):	1620mm	1820mm	2020mm	2220mm
Width:	1310mm	1510mm	1710mm	1910mm
Height:	970mm	970mm	1260mm	1330mm
Weight:	290kgs	340kgs	396kgs	535kgs
Cutting Width:	930mm	1360mm	1560mm	1760mm
Cutting Height:	30,70&105mm	30,70&105mm	30,70&105mm	30,70&105mm
Wheel Kits:	Optional Extra-single	Optional Extra-single	Optional Extra-single	Optional Extra-Dual
Gearbox:	40hp	40hp	60hp	60hp

The Standard Slasher are PTO powered with seven available model sizes, in category I three point linkage, from 3ft6 to 6ft6 with gearbox for up to 75 hp.

#### Uses:

Perfect around open grassy area ~ slashing a variety of grasses, small trees and light scrub ~ clearing roadsides ~ creating firebreaks.

#### Features:

Easy to use general purpose slasher ~ solid hitch ~ adjustable skids ~ multiple cutting heights ~ stone guard ~ 40 or 75hp gearbox models ~ optional rear wheel ~ clean top deck to prevent fire through debris build-up ~and reduce corrosion ~ off-settable options ~ simple to attach PTO with breakaway clutch.

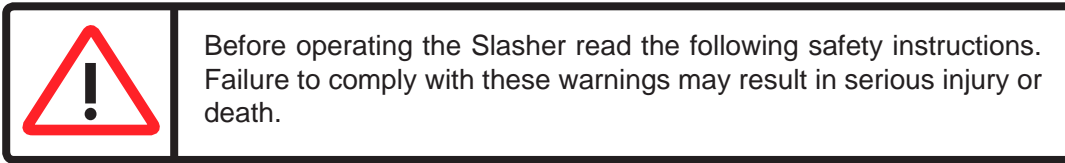
The Deluxe Slasher are PTO powered with six available model sizes, in category I and II, three point linkage, from 3ft6 to 7 ft with gearbox for up to 100 hp.

#### Uses:

Perfect for hobby farms ~ fence-line and wall edge slashing ~ slashing grasses, small trees and light scrub ~ perfect is rough terrain ~ clearing roadsides ~ creating firebreaks.

#### Features:

Built to last medium duty slasher with re-enforced frame ~ quick-release off-set options ~ strength & reliability ~ collapsible hitch ~ adjustable skids ~ large range of cutting heights ~ stone guard ~ height adjustable rear wheel allows for tighter turning areas with less stress on both your tractor and the slasher itself ~ thick clean top deck to prevent fire through debris build-up ~and reduce corrosion ~ simple to attach PTO with breakaway clutch.



**CONGRATULATIONS!** On the purchase of your new Slasher. This information is to assist you in preparing, operating and maintaining your Slasher. Please read and understand the information completely before operating your slasher, paying special attention to all the safety details. Keep this manual handy for a ready reference.

## **Safety First**

YOU are responsible for the SAFE operation and maintenance of your Slasher. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Slasher is familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alert you to all good safety practices that should be adhered to while operating the Slasher.

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 of death by ignoring good safety practices.

- 1 Slasher owners must give operating instructions to operators or employees before allowing them to operate the machine.
- 2 The most important safety feature on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
- 3 A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator jeopardise himself and bystanders to possible serious injury or death.
- 4 Do not modify the equipment in any way. Unauthorized modification may weaken the function and/or safety and could affect the life of the equipment.
- 5 Think SAFETY! Work SAFELY!

## **General Safety**

1. The Slashers are designed and manufactured only for the purpose of grass or brush cutting. Under no circumstances should they be used for any other purpose.
2. Before using the Slasher, read and ensure you understand the contents of this Safety and Operator's Manual for the associated implement. Note all the safety instructions.
3. Never allow an improperly trained person, children or anyone who is not familiar with the safety rules and operating instructions to attach or operate the slasher.
4. Before operating the slasher, check all pins, bolts and connections to be sure they are securely in place. Replace any damaged or worn parts immediately.
5. Do not allow unrestrained long hair, loose clothing, or jewelry to be around moving parts.
6. Operate only in daylight or good artificial light.

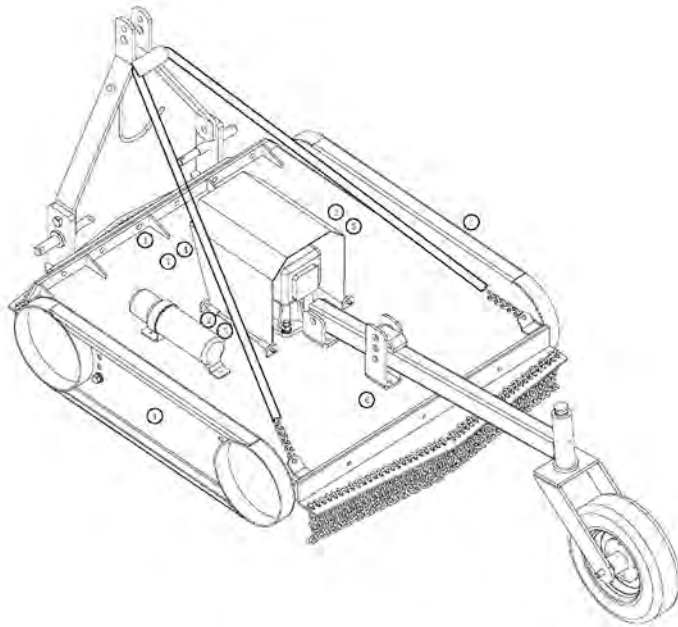
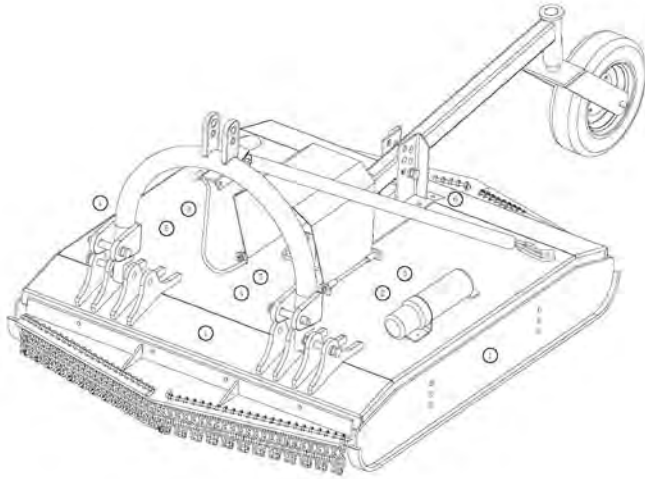
7. Wear ear protection when operating the slasher.
8. Ensure the P.T.O horse power and three point linkage lifting capacity of the tractor matches the requirements of the slasher, refer to the tractor operators manual for safe working loads, including any counter-weighting that may be required to balance the weight of the slasher.
9. Do not operate the slasher without all the tractor and slasher safety shields in place.
10. Never operate the tractor and slasher until you have read and completely understand the Safety and Operator's Manual, and each of the Safety Decals attached to the tractor and slasher.
11. Check the gearbox oil level and safety clutch adjustment before using the slasher.
12. Before slashing, clear the area to be cut, of stones, branches or other debris that might be thrown by the slasher, causing injury or damage.
13. Before operating the slasher inspect the area to be cut to ensure that you are familiar with the ground conditions and in particular any obstacles that may be partially hidden.
14. Keep all people and animals at a safe distance from moving parts and blade thrown debris.
15. Use caution when changing direction on hills. Avoid high speed, steep slopes, sharp turns, sudden braking and rough terrain.
16. If working under rough conditions with a linkage slasher fitted with a rigid tower, a chain or other flexible top link can be used to allow the slasher to follow the terrain independently of the tractor.
17. Before dismounting from the tractor, or allowing any person to approach the slasher, disengage the P.T.O, switch off the engine, apply the parking brake and ensure the slasher blades have stopped rotating.
18. Never allow any person to ride on the slasher when the machine is operating.
19. Always operate the slasher from the tractor seat.
20. Never clear grass or earth away from the slasher while it is operating.
21. **Ensure the tractor engine is switched off and the parking brake is applied before performing** any inspection or maintenance on the slasher.
22. 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.
23. Review the safety instructions with all users annually.
24. Ensure maintenance is carried out regularly by a qualified person. Pay particular attention to the P.T.O shaft, safety guards, cutter bar and blades.

## **Storage Safety**

1. Store the machine in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store the machine in a dry, level area.
4. Clean grease and oil as required and protect it from the elements.

## **Maintenance Safety**

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
2. Follow good shop practices.
3. Keep service area clean and dry.
4. Be sure electrical outlets and tools are properly grounded.
5. Use adequate light for the job at hand.
6. Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
7. Before working on this machine, shut off the engine, set the brakes, and remove the ignition key.
8. Never work under equipment unless it is secured by a mechanical stand.
9. Use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling blades.
10. Only use genuine parts for service and maintenance.
11. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
12. Periodically tighten all bolts, nuts and screws and check that all pins are properly installed to ensure unit is in a safe condition.
13. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing machine in service.



1. Logo 2.



3.



4.



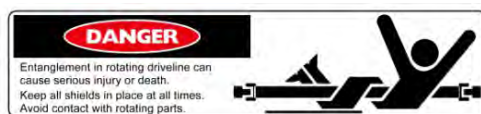
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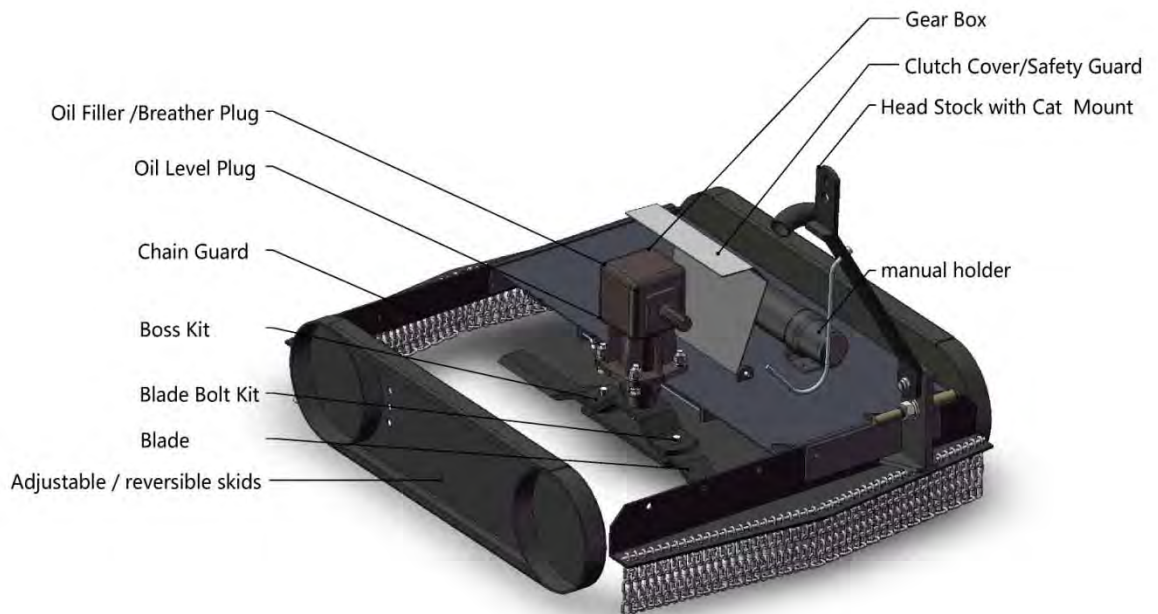
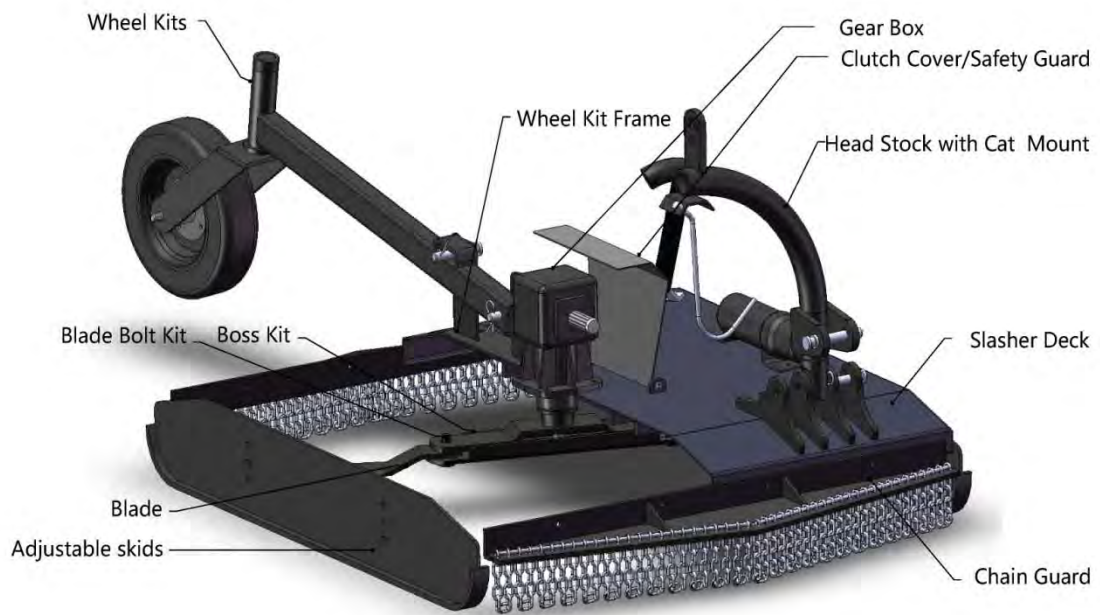
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7.







## Installation

Line up the lower linkage arms with the linkage pins of the slasher, slide the linkage arms onto the pins and secure with a lynch pin. Attach the top link to the slasher. Raise the slasher from the ground and adjust the stabilizer bars or chains to allow minimal sideways movement.

To disconnect the slasher, lower the slasher to the ground and reverse the above procedure

Check the length of the PTO shaft before connecting it to the tractor by raising the slasher to a position where the shaft would be horizontal when connected. If the shaft is too long it will need to be cut before it is connected. Make sure there is sufficient clearance to allow fitment of the slasher PTO shaft to the tractor PTO stub.

### PTO Telescoping Shaft Measurements

**PTO clearance:** Attach the slasher to the tractor leaving the PTO shaft detached. Raise the slasher so that the gear box input shaft is level with the tractors PTO output stub. This gives the shortest distance between the tractor PTO output stub and slasher input stub. The telescoping PTO shaft needs to be able to close shorter than this distance by at least 30 – 50mm measured between the PTO lock out pin and lock out pin groove on the tractors output stub. This ensures the PTO shaft can not 'bottom out' causing damage to the tractor or implement.

**PTO drive overlap:** Lower the slasher to the ground in an operating position. Slide the PTO telescoping shaft apart and attach the coupling ends to the appropriate input and output stub. Ensure the lockout pins are engaged. Hold the unattached shaft ends parallel together. Ensure there is at least 100 – 150mm overlap (the more the better) of the two metal shafts. Clean and grease the shafts and slide them back together. If you are in any doubt as to any of the above, call your place of purchase.

**Connecting the PTO Shaft:** Before attaching the PTO shaft to the tractor, ensure it is the correct length; not too long or too short. Clean and grease the splines on the tractor and slasher PTO stub shafts and install the PTO shaft making sure that the spring loaded locking pins engage in the interference grooves of the stub shafts. Ensure that the PTO shaft guards are secure and operable.

**Caution:** Depending upon the model it may be possible to raise the slasher too high which will cause the PTO shaft to contact the slasher body. Raise the slasher very slowly to check whether this happens and if so set the upper lift limit of the tractor hydraulics to avoid contact. Contact may cause the PTO shaft to bend and require replacement. Do not rely upon your memory to avoid lifting the slasher too high and damaging the PTO shaft.

The PTO shaft can be removed from the slasher. The clutch end of the PTO shaft is fixed at the groove on the slasher input shaft with a bolt and nylock nut. The PTO shaft can be removed or fitted to the tractor, by depressing the quick release pin.

All slashers are fitted with an adjustable clutch in the PTO driveline. This allows the rotor to slip under heavy load. The clutch is factory set and should not need adjustment under normal use. After prolonged disuse or weathering the slip clutch should be inspected, maintained and adjusted to ensure its correct operation.

With the slasher on the ground, adjust the chain top link so the front of the slasher will lift slightly above the rear. Then raise the slasher very slowly, making sure that the PTO drive shaft shield does not hit the front of the slasher. If it does, damage will be done to the drive shaft shield and, if it hits hard enough, it will also damage the drive shaft itself, making replacement necessary.

## **General Operation**

**The Cutting Height Adjustment:** The cutting height can be set by lifting the slasher, undoing the bolts and nuts attaching the adjustable skids and repositioning the skid plates to the required height. When adjusting the skids, ensure the whole wear surface touches the ground to avoid uneven wear. Achieve this by adjusting the slasher attitude with the top link of the tractor. After adjusting the skids retighten the attaching bolts and nuts securely.

**Caution:** Disengage the PTO, stop the tractor engine and support the slasher on stands before adjusting the skid height.

Under heavy cutting conditions it is advantageous to set the rear of the slasher about 25mm higher than the front. This ensures that the material will only be cut once. If the slasher is lower at the rear the material will be cut a second time by the rear arc of the blades and will require considerably more power.

**The Slasher Operation:** Before starting to slash, check the area to be cleared to ensure that you are familiar with the ground conditions and that there are no dangerous hazards. This is especially important on land that has not been cut by you before, such as vacant blocks, sides of roads, channels and drains that can hold hazardous surprises.

**Dual Clutch:** Once all the safety procedures have been followed, start the tractor and raise the slasher approximately 200mm (6 inches) above the ground and engage the PTO at low engine speed. Slowly build up engine revs to give 540 rpm at the PTO and edge slowly forward while lowering the slasher. To minimize wear and tear on both tractor and slasher, the PTO speed should be maintained at 540 rpm. Lower speeds cause excessive wear, especially to blades and bolts, as the lower centrifugal force allows the blades to move on the bolts continuously.

**Single Clutch:** Tractors fitted with a single stage clutch will need an over-run clutch fitted in the PTO drive train. The slasher and tractor will begin moving at the same time. Once all safety procedures have been followed, start the tractor and raise the slasher approximately 200mm (6 inches) above the ground. Select the appropriate transmission gear and engage the 540 rpm PTO speed. Release the clutch and increase the engine revs to achieve 540 rpm at the PTO. Lower the slasher onto its skids to begin slashing. To minimize wear and tear on both tractor and slasher, the PTO speed should be maintained at 540 rpm. Lower speeds cause excessive wear, especially to blades and bolts, as the lower centrifugal force allows the blades to move on the bolts continuously.

If the slashing is very heavy and the tractor has difficulty handling it, take a narrower cut, which requires less power.

**Stopping:** Slow engine speed to idle and disengage the PTO shaft. Lower the slasher, switch off the tractor engine and apply the parking brake.

## **Service**

### **FLUIDS AND LUBRICANTS**

1. Grease:  
Use multi-purpose lithium based grease.
2. Gear Box Oil:  
Use SAE 90 Gear oil.
3. Storing Lubricants:  
Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

### **GREASING**

1. Use a hand-held grease gun for all greasing.
2. Wipe grease nipple with a clean cloth before greasing, to avoid injecting dirt and grit.
3. Replace and repair broken nipples immediately.
4. If nipples will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace nipple if necessary.

## **Maintenance**

The recommended period is based on normal operating conditions. Severe or unusual conditions may require more frequent maintenance.

### **8 HOURS OR DAILY MAINTENANCE**

- 1 Check and screw all nuts and bolts in connection parts.
- 2 Check the oil in gearbox. Fill up to line if it's necessary.
- 3 Pump grease into each grease nipple three to five times.
- 4 Clean the implement; take away all grass and mud.

### **SEASON MAINTENANCE**

- 1 Check the machine as above for daily maintenance.
- 2 Check the oil in gearbox; replace it if it is contaminated.
- 3 Check the bearings of blade spindles for wear and tear. If worn, disassemble, clean and replace them if it is necessary, grease as required.
- 4 Check the distance between bearings and gears. Adjust them if it's necessary.

### **ANNUAL MAINTENANCE**

- 1 Thoroughly clean the Slasher of mud and grass.
- 2 Drain the gearbox and clean it thoroughly. Fill with new gear oil up to the dedicated oil level.
- 3 Check and clean blade axles. Replace oil seals and grease them.
- 4 Check all blades, replace them if they are worn out or damaged.
- 5 Repair the side skirts; return them to original technical condition. Replace damaged or broken protective devices.
- 6 Remove the drive shaft from the machine. Pull the PTO shaft apart. Check and replace any components that are damaged or worn. Install the PTO shaft on the machine. The PTO shaft should telescope easily and the guard turn freely on the shaft

	8hrs/ Daily			40hrs/Weekly			Annually		
Lubricate PTO Shaft	✓			✓			✓		
Lubricate Jockey Wheels	✓			✓			✓		
Lubricate Blade Spindle	✓			✓			✓		
Check Gear Box Oil Level				✓			✓		
Clean Machine							✓		
Lubricate and Clean PTO Shaft Cover							✓		

## PTO SHAFT MAINTENANCE

The PTO shaft is designed to telescope to allow for dimensional changes as the machine goes through its operating range. A tubular guard encloses the driving components and is designed to remain stationary on a turning shaft when required. The shaft should telescope easily and the guard turn freely on the shaft at all times. Annual disassembly, cleaning and lubrication is recommended to insure that all components function as intended. To maintain the shaft, follow this procedure:

1. Remove the shaft from the machine.
2. Pull shaft apart.
3. Use a screwdriver to pry the tabs out of the sleeves on each end. There are 3 tabs per guard.
4. Pull the shaft out of the plastic tubular guard.
5. Use a solvent to clean the male and female portions of the telescoping ends.
6. Apply a light coat of grease to each end.
7. Clean grooves on each end where the tabs are located. Clean each tab also.
8. Apply a light coat of grease to each groove.
9. Insert the shaft into its respective guard and align the slots with the groove.
10. Insert the tabs through the slots and seat in the groove.
11. Check that each guard turns freely on the shaft.
12. Assemble the shaft.
13. Check that the shaft telescopes easily.
14. Replace any components that are damaged or worn.
15. Install the shaft on the machine.

## GEARBOX MAINTENANCE

The gearbox used on the Slasher will give many years of trouble-free service with minimal maintenance requirements. Maintain the gearbox by following this procedure:

Oil level:

- Remove the level plug from the rear or side of the gearbox.
- Add oil through the filler plug located on top of gearbox until oil comes out of level plug.
- Add through the fill plug if required.
- If gearbox has a dipstick on filler plug, then fill to indicator mark.

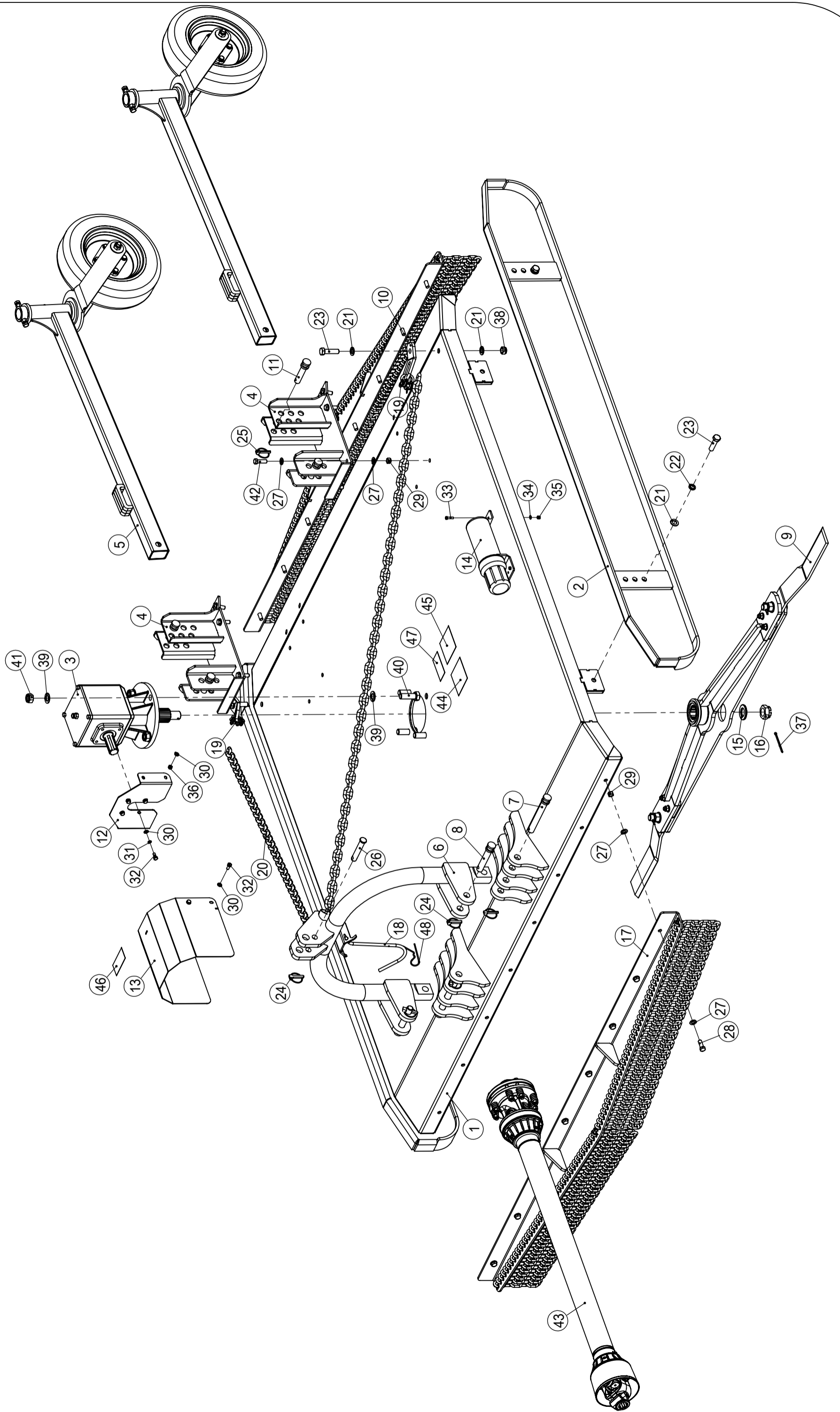
**IMPORTANT:** Check the oil level only when the unit is cold and the machine is on the level.

## STORAGE

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of next season. To insure a long, trouble free life, follow the procedure outlined below:

1. Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris and residue.
2. Inspect the blades and rotor for damage or entangled material. Repair or replace damaged parts. Remove all entangled material.
3. Lubricate all grease nipples. Make sure that all grease cavities have been filled with grease to remove any water residue from the inside.
4. Touch up all paint nicks and scratches to prevent rusting.
5. Move to storage area.
6. Select an area that is dry, level and free of debris.  
Unhook from tractor .
8. If the machine cannot be placed inside, cover with a waterproof tarpaulin and tie securely in place.

Store the machine in an area away from human activity. Do not allow children to play on or around the stored machine.

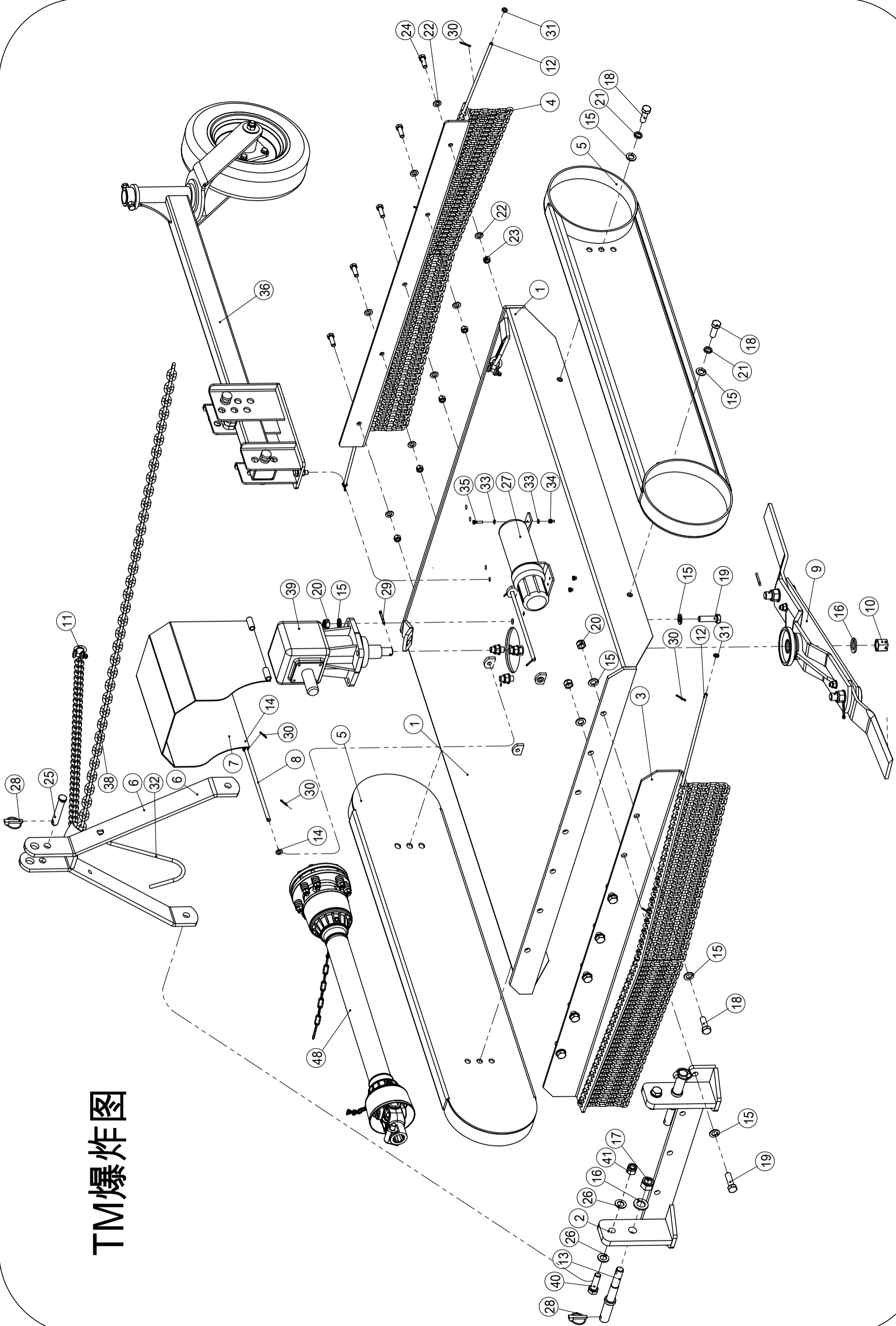




POS.	COD.	Specification	Description	Qty
1	2020000827	DS210N-020	Deck frame	1
2	2020000828	DS210N-019	Skid plate weldment	2
3	3160100022	XH60.193Z.01L	Gear box	1
4	2020000802	DS140N-014	Tail wheel frame connecting weldment	2
5	2090000354	DS140N-004	Tail wheel assembly	2
6	2020000806	DS140N-018	Hitch frame	1
7	2010000276	DS140N-111	Connection pin	2
8	2010000275	DS140N-112	Hitch pin-Lower	2
9	2090000359	DS210N-60HP-003	Cutter assembly	1
10	2000000398	DS140N-103	chains connection plate	2
11	2010000274	DS140N-113	Wheel connection pin	4
12	2000000397	DS140N-104	Connecting plate	1
13	2020000804	DS140N-016	Clutch cover	1
14	3210300013	桶体+盖+垫片（无LOGO） GO桶体+盖+垫片（无LOGO）	Manual canister	1
15	3080400006	XH60	Plain washer 60HP	1
16	3050800017	XH60	Slotted nut	1
17	2090000363	DS210N-002	Brush guard set	2
18	2010000273	DS140N-115	PTO hook	1
19	3130600001	SWG169\0.75T	shackle（8mm）	4
20	3130200004	10*30*35	Lifting chain（4.272M）	1
21	3080100009	GB/T 95-2002	Plain washer 16x3	8
22	3080500011	GB/T 93-1987	Spring washer 16	4
23	3040100110	GB/T 5783-2000	Hexagon head bolt-Full thread M16x	6
24	3120400007	11*45	Safety pin 11*45	3
25	3120400009	8	Safety pin 8	6
26	3120500009	EF175-119	Hitch pin-Upper	1
27	3080100007	GB/T 95-2002	Plain washer 12x2.5	56
28	3040100069	GB/T 5783-2000	Hexagon head bolt-Full thread M12x	20
29	3050500007	GB/T 889.1-2000	Locknut M12	28
30	3080100004	GB/T 95-2002	Plain washer 8x1.6	12
31	3080500007	GB/T 93-1987	Spring washer 8	4
32	3040100022	GB/T 5783-2000	Hexagon head bolt-Full thread M8x20	8
33	3040100008	GB/T 5783-2000	Hexagon head bolt-Full thread M6x25	3
34	3080100003	GB/T 95-2002	Plain washer 6x1.6	3
35	3050500002	GB/T 889.1-2000	Locknut M6	3
36	3050500003	GB/T 889.1-2000	Locknut M8	4
37	3120100113	GB/T 91-2000	Split pin 5*80	1
38	3050500009	GB/T 889.1-2000	Locknut M16	2
39	3080100011	GB/T 95-2002	Plain washer 20x3	8
40	3040100139	GB/T 5783-2000	Hexagon head bolt-Full thread M20x	4
41	3050500011	GB/T 889.1-2000	Locknut M20	4
42	3040100071	GB/T 5783-2000	Hexagon head bolt-Full thread M12x	8
43	3160200069	T5S-BS-07-FF1-1500	Drive shaft	1
44	3250100047	DANGER	100*100 Decal	1
45	3250100082	HEARING PROTECTION	100*100 Decal	1
46	3250100102	PTO 540	100*50 Decal	1
47	3250100117	WARNING	100*50 Decal	1
48	3120400008	3.5	R pin 3.5	1



# TM爆炸图



POS.	COD.	Specification	Description	Qty
1	2020000447	TM140-011	Bottom Plate Weldment	1
2	2020000454	TM140-012	Conector Plate Weldment	1
3	2000000221	TM140-102B	Front Chain Plate	1
4	2000000226	TM140-102A	Rear Chain Plate	1
5	2020000452	TM140-013	Slide Plate Weldment	2
6	2020000455	TM140-017	Suspension Weldment	1
7	2020000471	TM140-019	Gear Cover Weldment	1
8	2010000157	TM140-111	Connector Pin	2
9	2090000251	TM-006	TM140(40HP) blade assembly	1
10	3050800012	GB/T 9459-1988	Hexagon thin slotted nut M24x2	1
11	3130600001	SWG169\0.75T	shackle (8mm)	2
12	2010000154	TM140.273A	Chain Axle	4
13	2010000158	TM160-103	Low Pin	2
14	3080100006	GB/T 95-2002	Plain washer 10x2	4
15	3080100009	GB/T 95-2002	Plain washer 16x3	27
16	3080100013	GB/T 95-2002	Plain washer 24x4	3
17	3050500013	GB/T 889.1-2000	Locknut M24	2
18	3040100107	GB/T 5783-2000	Hexagon head bolt-Full thread M16x45	6
19	3040100109	GB/T 5783-2000	Hexagon head bolt-Full thread M16x55	9
20	3050500009	GB/T 889.1-2000	Locknut M16	11
21	3080500011	GB/T 93-1987	Spring washer 16	4
22	3080100007	GB/T 95-2002	Plain washer 12x2.5	9
23	3050500007	GB/T 889.1-2000	Locknut M12	5
24	3040100069	GB/T 5783-2000	Full-thread hexagon bolts M12x35	5
25	3120500009	EF175-119	Hitch pin-Upper	1
26	3080100010	GB/T 95-2002	Plain washer 18x3	4
27	3210300013	桶体+盖+垫片 (无LOGO) GO桶体+盖+垫片 (无LOGO)	Manual canister	1
28	3120400007	11*45	Safety pin 11*45	3
29	3120100107	GB/T 91-2000	Split pin 5*40	1
30	3120100075	GB/T 91-2000	Split pin 3.2*25	12
31	3080100004	GB/T 95-2002	Plain washer 8x1.6	8
32	2010000046	EF175-115	Hook	1
33	3080100003	GB/T 95-2002	Plain washer 6x1.6	6
34	3050500002	GB/T 889.1-2000	Locknut M6	3
35	3040100008	GB/T 5783-2000	Hexagon head bolt-Full thread M6x25	3
36	2090000246	TM-001	Tailing wheel assembly	1
37	3130100019	TM140.107	Galvanized chain(13.31M)	2
38	3130200007	TM140.106	Lifting chain	1
39	3160100013	XH40.192Z.01L	Gear box	1
40	3040100134	GB/T 5783-2000	Hexagon head bolt-Full thread M18x60	2
41	3050500010	GB/T 889.1-2000	Locknut M18	2
42	3250100047	DANGER	100*100 Decal	1
43	3250100048	DANGER	100*50 Decal	1
44	3250100049	DANGER	200*50 Decal	1
45	3250100082	HEARING PROTECTION	100*100 Decal	1
46	3250100102	PTO 540	100*50 Decal	1
47	3250100117	WARNING	100*50 Decal	1
48	3160200015	T4S-BS-07-FF1-1100	Drive shaft	1