

FORESTRY DRUM MULCHER

60MULCHERv2, 72MULCHERv2

191619, 191620



Operator's Manual

Read the Operator's Manual entirely. When you see this symbol, the subsequent instructions and warnings are serious follow without exception. Your life and the lives of others depend on it!

SAFETY INSTRUCTIONS

BEFORE USING THE MULCHER, PLEASE READ THE MANUAL IN ITS ENTIRETY!

A. OPERATIONAL HAZARDS:

WARNING

PREVENT SERIOUS INJURY OR DEATH

Read and understand this manual before operating mulcher.
Always stop engine and remove key before leaving operator's seat.
Never allow anyone near mulcher during operation.
Operating unit must be equipped with a forestry guard to protect the operator
Rotor will free wheel to a stop after hydraulics are disengaged
Stay away from mulcher until rotor has stopped and operating unit has been locked out
Verify mulcher is locked to quick attach hitch before operation or transportation

TRAVEL AT A SAFE SPEED

Keep clear of moving components
Lockout operating unit before performing maintenance
Disconnect and lockout power source before adjusting or performing maintenance.
Use mulcher grinder only for the designed applications
Any other use may result in personal injury, damage to equipment and may void the warranty

PROTECT FROM FLYING DEBRIS

Wear proper safety glasses, goggles, or face shield to protect from flying debris
Safely operate equipment
Allow only properly trained and qualified personnel to operate this equipment

CRUSHING HAZARD

Raised, unsupported mulcher can fall, resulting in death or serious injury
Never enter the area under a raised mulcher
Keep clear of moving components
Wear proper protective equipment appropriate for the job

FLUID HAZARD

Pressurized fluids can penetrate the skin
Hydraulic hoses can fall from age, damage, and expose.
Use body and face protection while searching for leaks. A tiny, almost invisible leak can penetrate the skin, thereby requiring immediate medical attention.
Use wood or cardboard to detect hydraulic leaks, never use your hands

BURN HAZARD

Hot and high-pressure hydraulic oil
Allow oil to cool before servicing

DANGER

Prevent electrocution

Death or serious injury can result if equipment comes near or contacts power lines

Electrocution can occur without direct contact

B. Do Not Allow Riders

- Never lift or carry anyone on the mulcher.
- Never use mulcher as lift platform or to carry passengers.

C. Drive Slow and Avoid Rollover

- When traveling forward, keep mulcher low to ground on rough and uneven terrain.
- Avoid sharp turns.
- Use caution when operating on any slope.
- Do not exceed load capacity of your skid steer.

D. Avoid Power Lines

- Always check for clearance and working area before raising mulcher.
- Do NOT leave operator's seat if any part of the equipment contacts electric lines or cables.

E. Detach Mulcher Safely

- Detach on a firm and flat surface to prevent mulcher from rolling or falling over.

F. Raised Attachment









- A raised mulcher can lower unexpectedly, NEVER enter area under raised implement.
- Before servicing, lower mulcher to ground, engage parking brake in machine, shut off engine and remove key.

G. Avoid High Pressure Fluids

- Escaping fluid under pressure can penetrate skin and cause serious injury.
- Relieve pressure before connecting or disconnecting hydraulic lines.
- Verify hydraulic lines are connected properly before engaging pressure. Search for leaks with a piece of cardboard or wood.
- Wear protective clothing to prevent hand and body from high pressure fluids. Seek medical help immediately if accident occurs.

H. Do Not Modify Equipment

MULCHER OPERATIONS

-  Quick-Attach must always be fully engaged and in the locked position.
-  Keep bystanders away from equipment while in use.
-  Always wear face or eye protection, safety shoes, and other protective equipment appropriate for the job.
-  Do not operate, work on or around this machine while under the influence of alcohol, drugs or if feeling ill.
-  Keep clear of moving machinery at all times.
-  Turn off machine before exiting operator station.
-  It is your responsibility to operate this equipment safely. You must be familiar with the equipment and all safety practices before use.
-  Do not allow untrained or unqualified people to operate this equipment.

PRE-OPERATION CHECKLIST

It is the operator's responsibility to perform the following checks prior to operations of mulcher:

1. Verify all hardware is tightened.
2. Inspect hoses and fittings for wear, damage, and leaks. Replace damaged or leaking hoses before use.
3. Refer to operating machine user's manual for prestart instructions.
4. Review and understand this manual and operating machine manual.
5. Inspect planned working area for local utilities, power lines, or other potential dangers.
6. Before first use, ensure gear oil has been added to port (85W/90GL-5) to appropriate level. See "Grease/Oil Points" section on Pages 5-7 for more details.
7. Before first use, ensure belt tension pulley has been greased. See "Grease/Oil Points" section on Pages 5-7 for more details.

ATTACH AND DETACH MULCHER:

1. Follow all safety instructions.
2. Attach mulcher to skid steer mount plate, verify pins are secure in correct position.
3. Connect hydraulic hoses. Verify hoses are clear of moving parts.
4. Mulcher requires a case drain port on skid steer to operate.

OPERATION PROCEDURES:

1. Test functions in clear, open area with skid steer in idle. Understand controls of machine before using at full speed on brush/trees.

STARTING MULCHER:

1. Lower the mulcher so skid plates are grounded.
2. Slowly engage mulcher at low idle and increase mulcher drum to approximately half speed (1000 RPM). Verify the drum and host machine are working properly before increasing to full speed.
3. Increase the drum to full speed and slowly proceed forward into brush. Optimal drum speed is 1700-2000 RPM.

STOPPING MULCHER:

1. Set engine speed to low idle, lower the mulcher to ground, disengage hydraulics until rotor stops.
2. Stop skid steer engine and remove key.

INSTRUCTIONS FOR DEBRIS TYPES:

1. Brush: When clearing brush, set the skid plates on ground level and travel forward at a pace that does not decrease rotor RPM.
2. Once the pass is complete, angle the mulcher slightly forward and reverse back through the trail. This will produce a more finished surface.
3. Trees: Start at trunk with the mulcher tilted back at a slight angle. When you are 75% through the tree, tilt forward so the push bar is helping pushing the tree down. Once fallen, position the mulcher on top of the tree to grind off the limbs. Then grind down the remainder of the trunk slowly. This can take many passes depending on tree type and diameter.
4. Ground Mulching: Mulcher is capable of mulching about 3" below ground level. However, note engaging the ground will wear teeth much faster than brush.

IF MULCHER IS STALLING:

Stop forward movement, raise mulcher, and allow rotor to regain full speed. Also recommended to slow your forward ground speed to help prevent stalling.

IF MULCHER COMPLETELY JAMS:

Disengage hydraulics, lower to ground, and stop skid steer engine. Remove key from operating unit to prevent accidental starting. Then remove debris from rotor.

IMPORTANT INFORMATION:

1. Pressure Gauge: Gauge should be visible from operator's seat and shows system pressure. If gauge reaches maximum pressure, raise mulcher away from brush/tree, and let it return to full RPMs. Avoid operating at maximum pressure for extended periods; this can shorten component life.
2. Push Bar: Used to push over brush and small trees. Not for pushing large standing trees.

MAINTENANCE:

1. Routine Inspections:
 - a. Check hoses and fittings daily for leaks.
 - b. Inspect unit for any contamination build up and keep unit clean.
 - c. Check teeth every 2 hours of use; unit life will last longer if teeth are kept in good condition and replaced as needed.

CHECK BELT TENSION:

2. Inspect belt for wear, damage and proper tension.
3. Adjust idler to set belt tension.
4. Replace damaged/worn teeth.

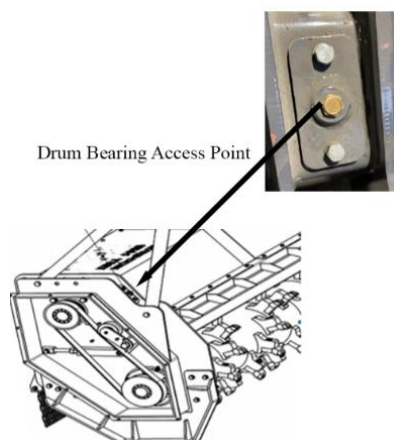
5. Grease and oil points: Replace oil every 40 hours.
 - a. Add grease to Belt Pulley Grease Point
 - b. Add oil to Drum Bearing Access Point
 - c. Add oil to Motor Access Point.

6. BELT PULLEY GREASE POINT

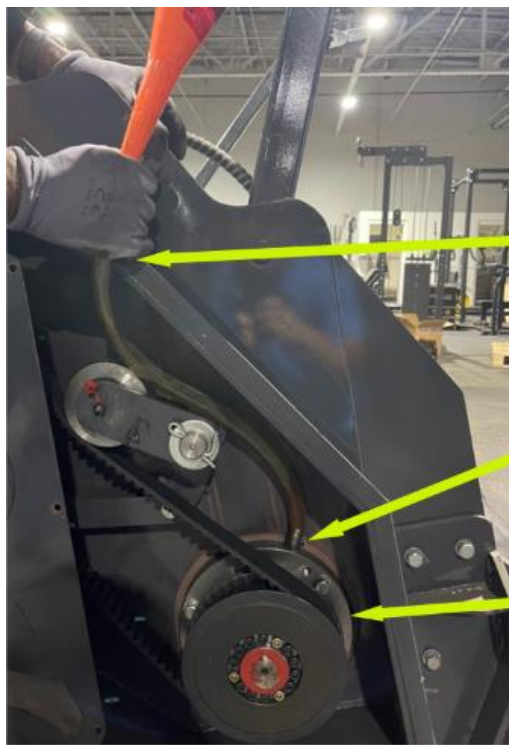
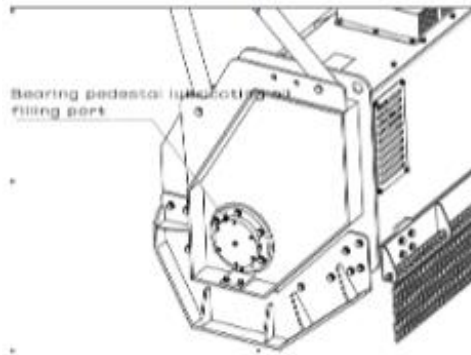


7. DRUM BEARING ACCESS POINT

- a. Remove plug and breather.
- b. Drain old oil before filling with 0.2 L or until oil is coming from the fill level hole (85W/90GL-5).
- c. Replace plug and breather



- d. Drain bearing on opposite end of mulcher and fill with 0.15 L or until oil is coming from fill level hole.
- e. Replace plug and breather.



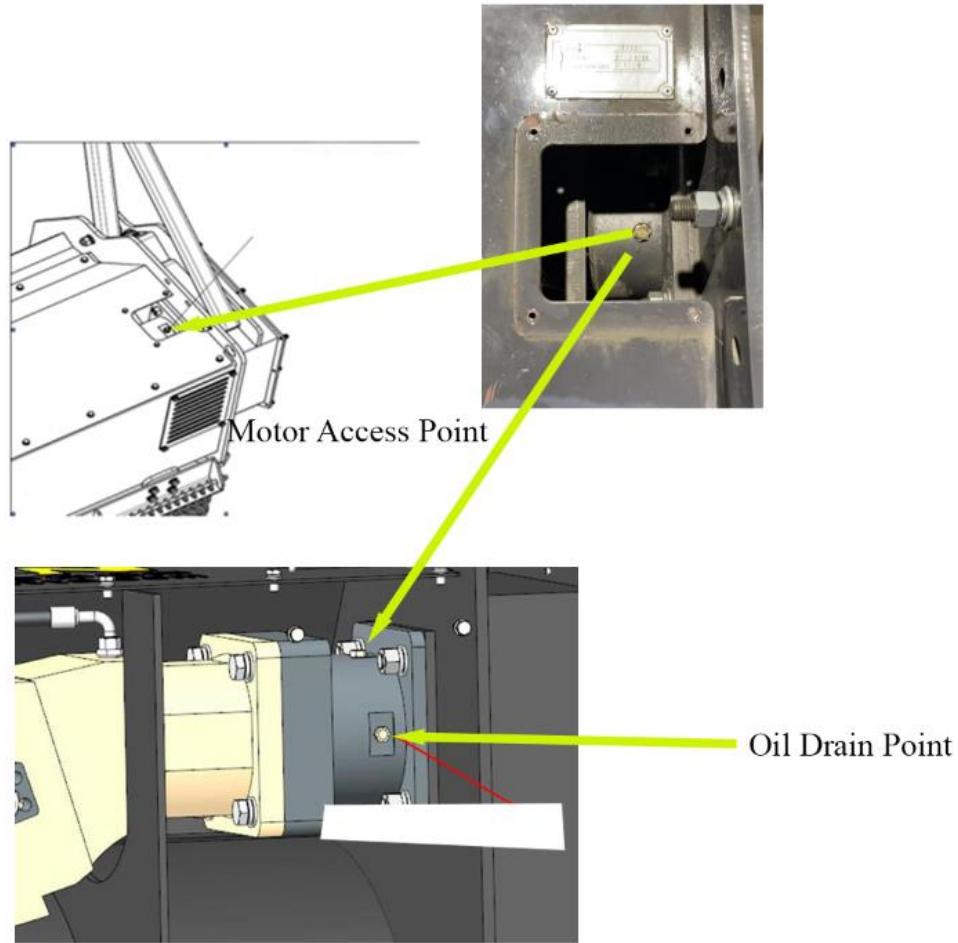
Drum Bearing Access Point

Oil Hose/Entry

Oil Drain

8. MOTOR ACCESS POINT

- a. Remove plug and breather
- b. Drain old oil before filling with 0.2 L of oil or until oil is coming from fill level hole (85W/90GL-5).
- c. Replace plug and breather



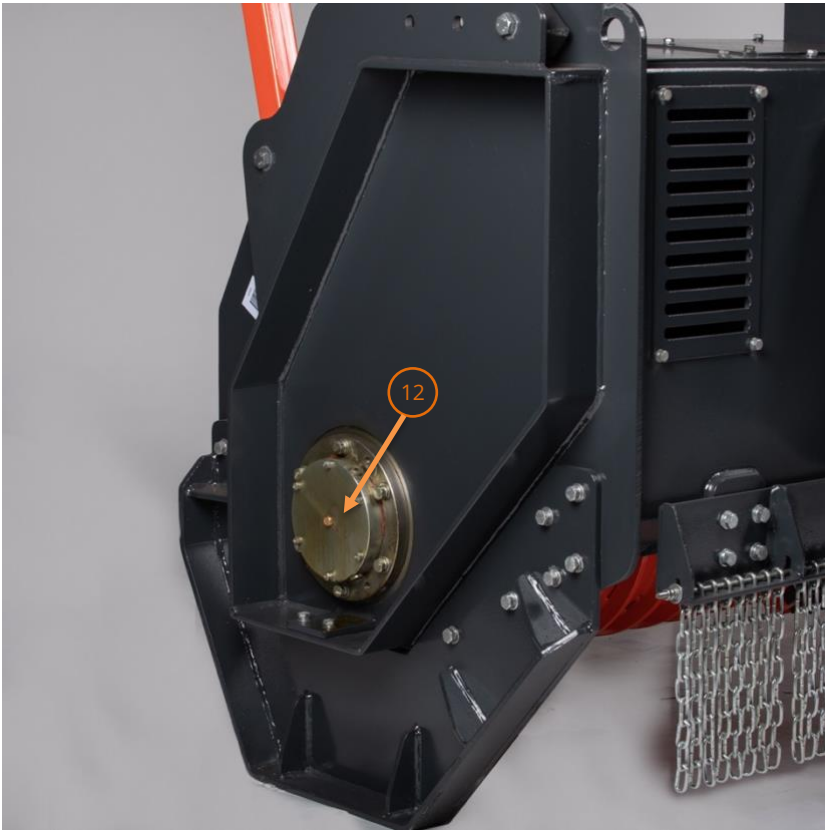
TROUBLESHOOTING TABLE

Problem	Probable Cause	Solution
Rotor does not spin	Rotor jammed	Remove material from rotor
	Low oil	Check oil level in skid steer. Add if necessary.
	Not enough oil flow	Check flow control on skid steer. Check Skid Steer Manual.
	Bad hydraulic connection	Check Hydraulic Hose connection.
	Damaged motor shaft or seized motor.	Contact Titan Customer Service Team.
	Faulty hydraulic coupler	Replace hydraulic coupler
	Hydraulics not engaged	Engage hydraulics. Check Skid Steer Manual.
Rotor rotates slow or sluggish	Broken belt	Replace belt.
	Low oil	Check oil level in skid steer. Add if necessary.
	Skid steer oil filter plugged	Replace skid steer oil filter.
	Not enough oil flow	Check flow control on skid steer. Check Skid Steer Manual.
Excessive Vibration	Drive belt loose	Tighten drive belt.
	Cutting teeth worn or missing	Replace worn, broken, or missing teeth.
	Debris jamming rotor.	Remove debris.
Noisy Drive Compartment	Faulty drum bearing.	Replace bearing
	Belt and sprockets worn.	Replace belt and sprockets.
Hydraulic Oil too Thick	Belt tension not properly adjusted.	Adjust belt tension.
	Occurs when hydraulic oil cannot reach operating temperature and the drum speed is increased too rapidly.	Allow oil to heat up to optimal temperature before use.
Drain Line Restriction	Oil flow restriction in hydraulic lines from quick coupler	Remove the quick coupler from the drain line to lower case pressure

MULCHER OVERVIEW

1. PUSH BAR
2. UPPER COVER PLATE
3. WEAR SKID PLATES
4. CUTTING DRUM
5. CUTTING TOOTH
- 6-8. HYDRAULIC HOSES
9. PRESSURE GAUGE
10. SKID STEER MOUNT PLATE
11. CHAIN GUARD
12. BEARING



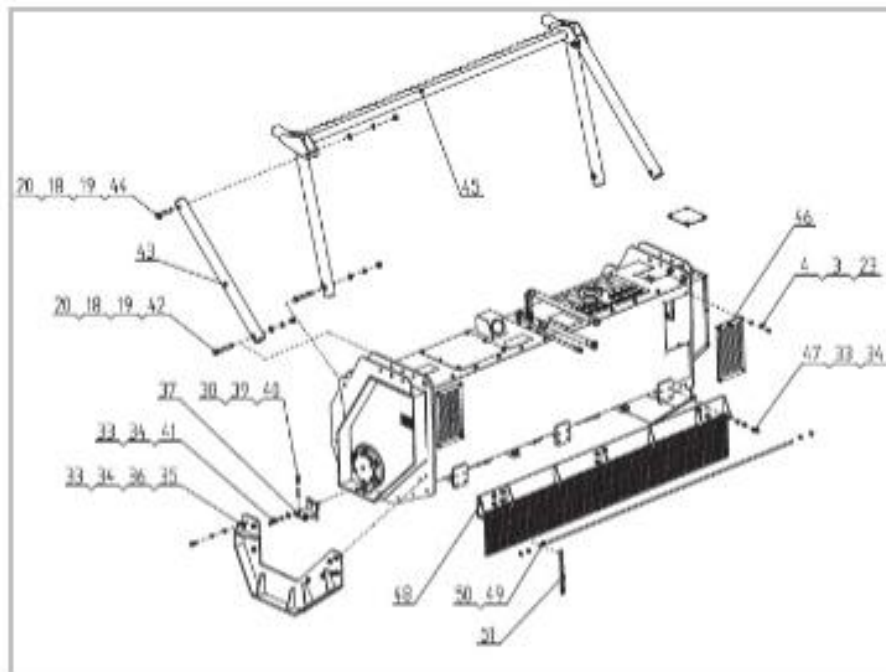
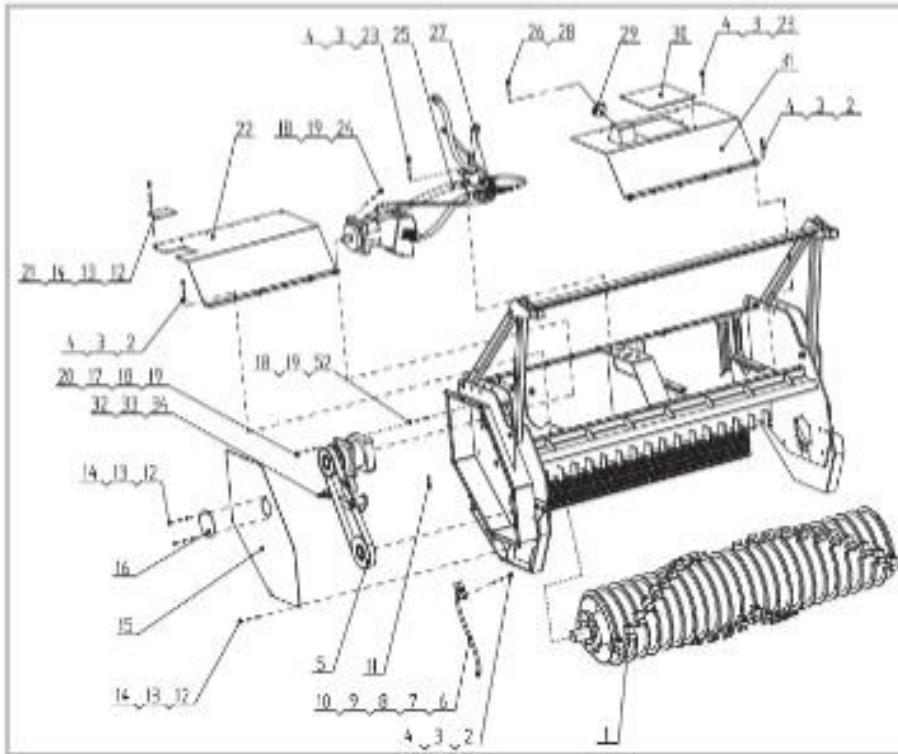


MULCHER SPECIFICATIONS

MPN	60MULCHER	72MULCHER
Length	35.4"	35.4"
Width	73.2"	85"
Height	66.2"	66.2"
Transport Height	42.6"	42.6"
Working Width	61"	72.8"
Weight	2072 LB	2249 LB
Optimal Flow Range	21.1-39.6 GPM	21.1-39.6 GPM
Pressure	2756-3046 psi	2756-3046 psi
Host Machine Lifting Capacity	>2000 LB	>2200 LB
Maximum Ground Depth	3.9"	3.9"
Number of Cutting Blades	45	55
Required Host Machine Horsepower	>85 HP	>85 HP
Optimal Motor Output Speed	1700-2000 RPM	1700-2000 RPM
Maximum Motor Output Speed	3000 RPM	3000 RPM
Cutting Capacity	7.75"	7.75"
Maximum Machine Pressure	5000 psi	5000 psi

PARTS DIAGRAM/EXPLODED VIEW

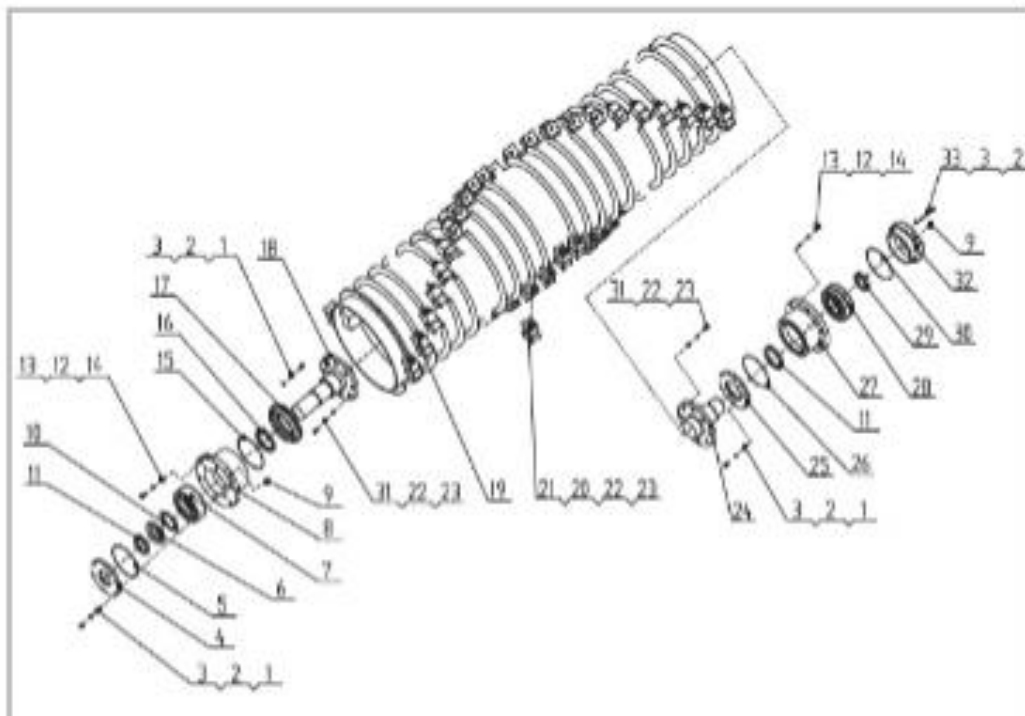
MAIN MULCHER ASSEMBLY



No.	S/N NUMBER	PART DESCRIPTION	QTYS	NOTE
1	0513-01	Total cutting roll	1	
2	0513-02	Bolt M8X16	32	
3	0513-03	Spring washers D8	45	
4	0513-04	Flat mat D8	45	
5	0513-05	Tensioning device	1	
6	0513-06	Transparent tube	1	
7	0513-07	The pagoda joint	2	
8	0513-08	Clamps ϕ 16	2	
9	0513-09	Purge plug G1/4	4	
10	0513-10	Oil filling port	1	
11	0513-11	Split pin D8x60	1	
12	0513-12	Hexagon bolt M6x16	17	
13	0513-13	Spring washer D6	17	
14	0513-14	Flat washer D6	17	
15	0513-15	Side seal plate	1	
16	0513-16	Cover plate	1	
17	0513-17	Hexagon bolt M16x60	4	
18	0513-18	Spring washer D16	8	
19	0513-19	Flat pad D16	8	
20	0513-20	Nut M16	4	
21	0513-21	Upper refueling board	1	
22	0513-22	Upper cover plate —	1	
23	0513-23	Hexagon headed bolt M8x20	18	
24	0513-24	Hexagon bolt M16x50	4	
25	0513-25	Hydraulic system	1	
26	0513-26	Hexagon bolt M4x12	2	
27	0513-27	Radiator support plate	2	
28	0513-28	Rubber sheet	2	
29	0513-29	Pressure gauge	1	
30	0513-30	Dust cover	1	
31	0513-31	Upper cover plate 2	1	
32	0513-32	Hexagon bolt M12x80	1	
33	0513-33	Spring washer D12	19	
34	0513-34	Flat pad D12	19	
35	0513-35	Backing plate	2	
36	0513-36	Hexagon bolt M12x30	18	
37	0513-37	Reinforcing plate	1	

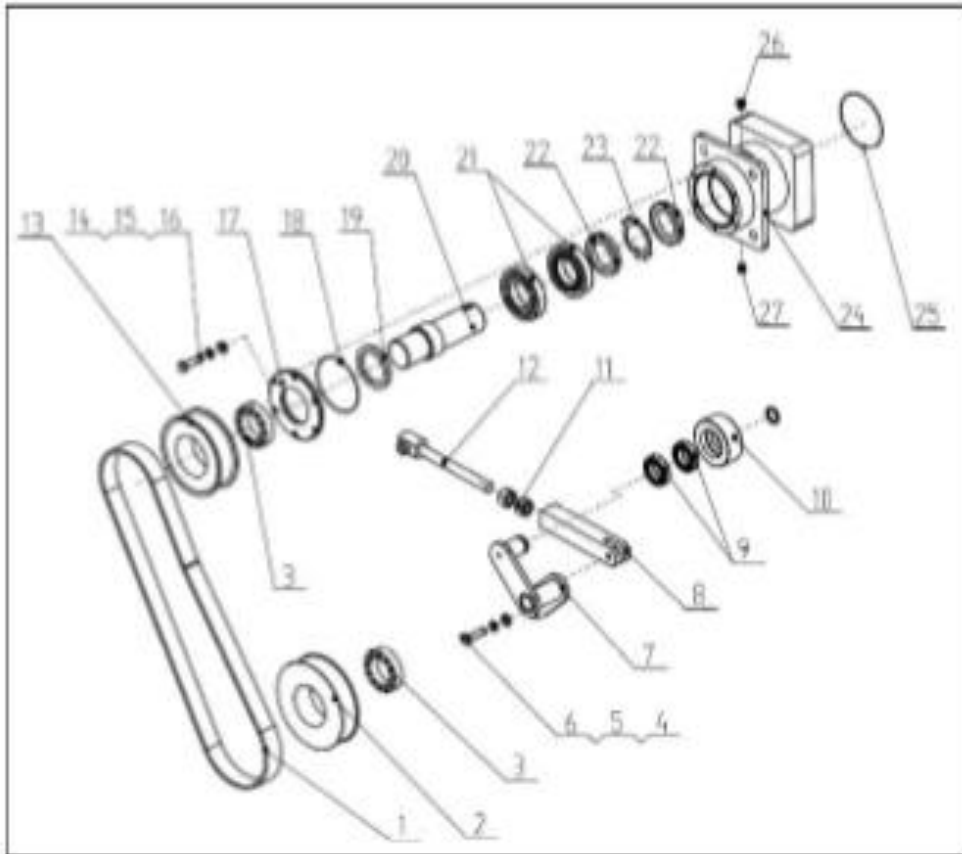
38	0513-38	Hexagon bolt M10x30	2	
39	0513-39	Spring washer D10	2	
40	0513-40	Flat pad D10	2	
41	0513-41	Hexagon bolt M12x40	1	
42	0513-42	Hexagon bolt M16x120	4	
43	0513-43	Pull rod	2	
44	0513-44	Hexagon bolt M16x90	2	
45	0513-45	Front push bar	1	
46	0513-46	Rear cover plate	2	
47	0513-47	Hexagon bolt M12x25	12	
48	0513-48	Chain mount	1	
49	0513-49	Hanger rod	1	
50	0513-50	Hexagon bolt M10	4	
51	0513-51	Chain	60	
52	0513-52	Hexagon M16x50	4	

CUTTING DRUM ASSEMBLY



No.	S/N NUMBER	PART DESCRIPTION	QTYS	NOTE
1	0513-01-01	Hexagon bolt M6x25	6	GB/T 5783-2000
2	0513-01-02	Spring washer D6	6	GB93
3	0513-01-03	Flat pad D6	6	GB97.1
4	0513-01-04	Seal end cap A	1	
5	0513-01-05	O-ring 147x1.8	1	
6	0513-01-06	Round nut M65x2	1	
7	0513-01-07	Roller bearing	1	
8	0513-01-08	Bearing block	1	
9	0513-01-09	Purge Plug M12x1	1	
10	0513-01-10	Lock washer D65	1	
11	0513-01-11	Skeleton seal 80x100-10	2	
12	0513-01-12	Hexagon bolt M12x60	6	
13	0513-01-13	Spring washer D12	6	
14	0513-01-14	Flat pad D12	6	
15	0513-01-15	O-ring133x1.8	1	
16	0513-01-16	Skeleton seal 60x80-10	1	
17	0513-01-17	Right cover plate	1	
18	0513-01-18	Drive shaft	1	
19	0513-01-19	Cutting cylinder	1	
20	0513-01-20	cutter	39/47	
21	0513-01-21	Outer hexagon bolt M12x60	39/47	GB/T 5783-2000
22	0513-01-22	Flat pad D12	53	
23	0513-01-23	Spring washer D12	53	
24	0513-01-24	Right connecting shaft	1	
25	0513-01-25	Sealing cover	1	
26	0513-01-26	O-ring%C132X1.8	1	
27	0513-01-27	Bearing block	1	
28	0513-01-28	Bearing	1	
29	0513-01-29	End cap	1	
30	0513-01-30	O-ring	1	
31	0513-01-31	Bolt M16x50	12	
32	0513-01-32	Bearing chock cover	1	
33	0513-01-33	Bolt M6x40	6	

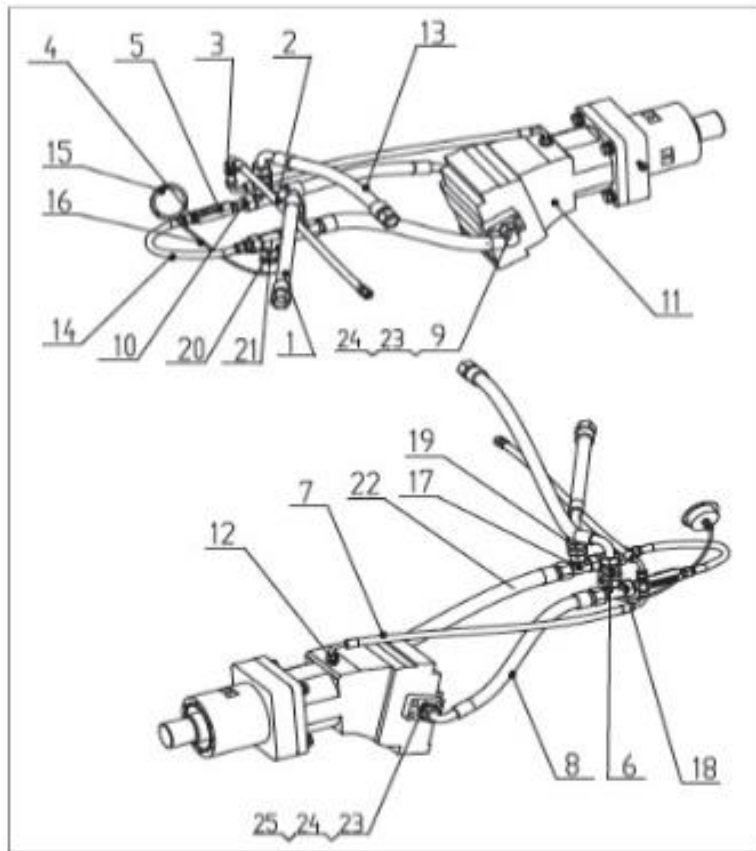
BELT DRIVE ASSEMBLY



No.	S/N NUMBER	PART DESCRIPTION	QTYS	NOTE
1	0513-05-01	Synchronous belt	1	
2	0513-05-02	Driven wheel	1	
3	0513-05-03	Tension sleeve Z2-60X90	2	
4	0513-05-04	Hexagon bolt M12x45	1	
5	0513-05-05	Spring washer D12	1	
6	0513-05-06	Flat pad D12	1	
7	0513-05-07	Rotating shaft	1	
8	0513-05-08	Square steel	1	
9	0513-05-09	Deep groove ball bearing	2	
10	0513-05-10	Tensioning wheel	1	
11	0513-05-11	Nut M20	2	
12	0513-05-12	Screw	1	
13	0513-05-13	Driving wheel	1	
14	0513-05-14	Bolt M6x25	6	
15	0513-05-15	Spring washer D6	6	
16	0513-05-16	Flat pad D20	6	
17	0513-05-17	Bearing end cover	1	
18	0513-05-18	O-ring	1	

19	0513-05-19	Skeleton seal	1	
20	0513-05-20	Output shaft	1	
21	0513-05-21	Cylindrical roller bearing	2	
22	0513-05-22	Lock nut	2	
23	0513-05-23	Stop gasket	1	
24	0513-05-24	Bearing chock	1	
25	0513-05-25	O-ring	1	
26	0513-05-26	Ventilating screen	2	
27	0513-05-27	Plug	1	

HYDRAULIC ASSEMBLY



No.	S/N NUMBER	PART DESCRIPTION	QTYS	NOTE
1	F462-22	Oil inlet pipe	1	
2	F381-10	Oil drain hose A	1	
3	IB10L	Drain hose A	1	
4	IE12LR1/2	End straight connector	2	
5	CIT-04	valve	1	
6	IB22L	Bulkhead adapter	1	
7	F381-10	Oil drain pipe B	1	
8	F381-22	Motor rubber hose A	1	
9	IE20SM22X1.5ED	End straight connector	1	
10	ZR22/12L	Straight reducing combination joint	1	
11	A6V	motor	1	
12	IE10LM18*1.5ED	End straight connector	1	
13	F381-22	Motor hose C	1	
14	F381-12	Connecting oil pipe	1	
15	40MPa	Pressure gauge	1	
16	RC2P04O04P40-1000	Piezometric tubing	1	
17	TZ20S	Tee combination connection joint	1	
18	TZ22L	Tee combination connection joint	1	
19	IB20S	Bulkhead adapter	1	
20	RED20/12L	Butt reducing combination joint	2	
21	YZ20S	Straight tee joint	1	
22	F462-20	Motor oil inlet pipe	1	
23	051372I.11-01	Flange seat	1	
24	GB/T 3452.1	O-ring	1	
25	IE22LM22X1.5ED	End straight connector	1	

ACKNOWLEDGEMENT OF RISK AND RELEASE OF LIABILITY

The use of any equipment, including this one, involves the potential risk of injury. Apart from any warranty claim that might be presented for a claimed defect in material or workmanship of the product, you accept and assume full responsibility for any and all injuries, damages (both economic and non-economic), and losses of any type, which may occur, and you fully and forever release and discharge Titan, its insurers, employees, officers, directors, associates, and agents from any and all claims, demands, damages, rights of action, or causes of action, present or future, whether the same be known or unknown, anticipated, or unanticipated, resulting from or arising out of the use of said equipment.

This equipment must be used with care by capable and competent individuals under supervision, if necessary.

WARNING



Do not overfill! Mower should be level when checking oil in gear box.



some activities might be able to cause electric shock



Sharp objects may be involved.
Use protective cover during maintenance.

TITAN LIMITED WARRANTY: TERMS, EXCLUSIONS AND LIMITATIONS OF REMEDIES

This product comes with a one (1) year limited warranty that can be found at www.palletforks.com/warranty.html. Please review the same for all details regarding the Titan Limited Warranty.

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