

HITCH TRIMMER LAWN MOWER

3PTRIM, 3PTTRIM-TRIMCORDKIT

191441, 191411



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!

GENERAL WARNINGS

READ and UNDERSTAND the manual completely before using 3-POINT HITCH TRIMMER/MOWER.

Become familiar with the operation and service recommendations to ensure the best performance from your machine.

DANGER

Your 3-POINT HITCH TRIMMER is driven by a PTO shaft that transfers power from your Tractor. The Tractor and PTO shaft are extremely dangerous and can cause serious injury or death if not used properly. Read and understand all of the Warnings and operating instructions that came with your Tractor and the PTO shaft to protect yourself from severe injury or death.

SAFETY FOR CHILDREN AND PETS

WARNING

Tragic accidents can occur if the operator is not alert to the presence of children and pets. Children are often attracted to the machine and the trimming activity. Never assume that children will remain where you last saw them. Always follow these precautions:

- Keep children and pets out of the working area and under the watchful care of a responsible adult.
- Be alert and turn the machine off if children or pets enter the work area.
- Never allow children to operate the 3-POINT HITCH TRIMMER/MOWER.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.

PROTECTING YOURSELF AND THOSE AROUND YOU

WARNING

This is a high-powered machine, with moving parts operating with high energy at high speeds. You must operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:

- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people, their property, and themselves.
- Always wear protective goggles or safety glasses with side shields while trimming to protect your eyes from possible thrown debris.
- Avoid wearing loose clothing or jewelry, which can catch on the machine's moving parts.
- We recommend wearing gloves while using this machine. Be sure your gloves fit properly and do not have loose cuffs or drawstrings.
Wear shoes with non-slip treads when using your 3PT Trimmer. Safety shoes are recommended. Do not use the machine while barefoot or wearing sandals with exposed toes or heels.
- Wear long pants while operating the 3PT Trimmer.
- Use ear protectors or ear plugs rated for at least 20 dba to protect your hearing.
- Always keep bystanders at least 100 feet away from your work area. The tips of the cutting cords on the 3PT Trimmer can throw sticks, small stones, gravel, and bits of debris over long

distances at great velocity. Do not travel over loose materials such as gravel or mulch with the trimmer head spinning. Doing so could cause injury or property damage from thrown objects. Disengage the PTO shaft to stop the spinning cords and shut off the Tractor engine when another person or pet approaches.

- Never tamper with safety devices. Check their proper operation regularly.
- Never operate the machine when under the influence of alcohol, drugs, or medication.

OPERATING THE TRIMMER/MOWER SAFETY



WARNING

This is a high-powered machine, with moving parts operating with high energy at high speeds. You must operate the machine safely. Unsafe operation can create a number of hazards for you, as well as anyone else in the nearby area. Always take the following precautions when using this machine:

- Do not have the Trimmer engaged or resting on the ground when backing up. The machine is designed to trim and roll on the Wheel in the forward direction only. Trimming or rolling on the Wheel in the reverse direction could damage the machine and is not covered by the Warranty.
- Know how to stop the Trimmer quickly by disengaging the PTO Shaft and shutting down the tractor.
- Never allow people who are unfamiliar with these instructions to use the 3PT Trimmer. Allow only responsible individuals who are familiar with these rules of safe operation to use your machine.
- Do not exceed 2 mph when trimming to allow proper cutting and discharge of material.
- Do not exceed 7 mph when transporting to prevent damage to the machine.
- Operating your 3point trimmer with the head misaligned with the ground can result in poor cut quality, pivoting problems, scalping during cutting, wear on your equipment, and damage to the cutting cord.
- Never place your hands, feet, or any part of your body on or under the mower deck in the path of the spinning cords, belt, pulleys, or near the discharge opening while the tractor is running. Keep area of discharge clear of people, animals, buildings, glass, or anything else that will obstruct clear discharge, cause injury, or damage.
- Your 3PT Trimmer is a powerful tool, not a plaything. Exercise extreme caution at all times. The design of your machine is for trimming and mowing grass, weeds, and other growth as specified in this manual. Do not use it for any other purpose.
- Whenever you leave the operating position to adjust, change cords or if you have to remove grass or debris from the underside of the deck, always disengage PTO, shut down the Tractor Engine, remove the key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft 5 from the Tractor, then wait five minutes before performing any maintenance procedure or inspection on the Trimmer.
- Be mindful of hazards, changes in terrain, slopes, or wet conditions. Use care when backing up.
- Stop the cutting cords when crossing gravel drives, walks, or roads.

- Never, under any conditions, remove, bend, cut, fit, weld, or otherwise alter standard parts on the 3PT Trimmer. This includes all shields and guards. Modifications to your machine could cause personal injuries and property damage and will void your warranty.
- If the cutting cords strike a foreign object or if your machine should start making an unusual noise or vibration, disengage PTO, shut down the Tractor Engine, remove the key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the Tractor, then wait five minutes before inspection. Vibration is generally a sign of trouble. Clean and repair and/or replace damaged parts.
- While using the 3PT Trimmer, do not hurry or take things for granted. When in doubt about the equipment or your surroundings, stop the machine and take the time to look things over. Make sure that you always have 100% control of the Trimmer.
- Watch for traffic when mowing near roadways.
- Use the machine only in daylight.
- Be cautious when using your 3PT Trimmer around fencing, wires, ropes, and hoses. It is possible that these and other debris can become wound around the Cord Head of the machine, potentially damaging the bearings, or injuring you.
- Do not operate the 3pT Trimmer on slopes greater than is recommended in you Tractor manual.
- Keep all nuts and bolts tight and keep the equipment in good operating condition.

A NOTE TO ALL USERS

No list of warnings and cautions can be all-inclusive. If situations occur that are not covered by this manual, the operator must apply common sense and operate this 3PT Trimmer in a safe manner.

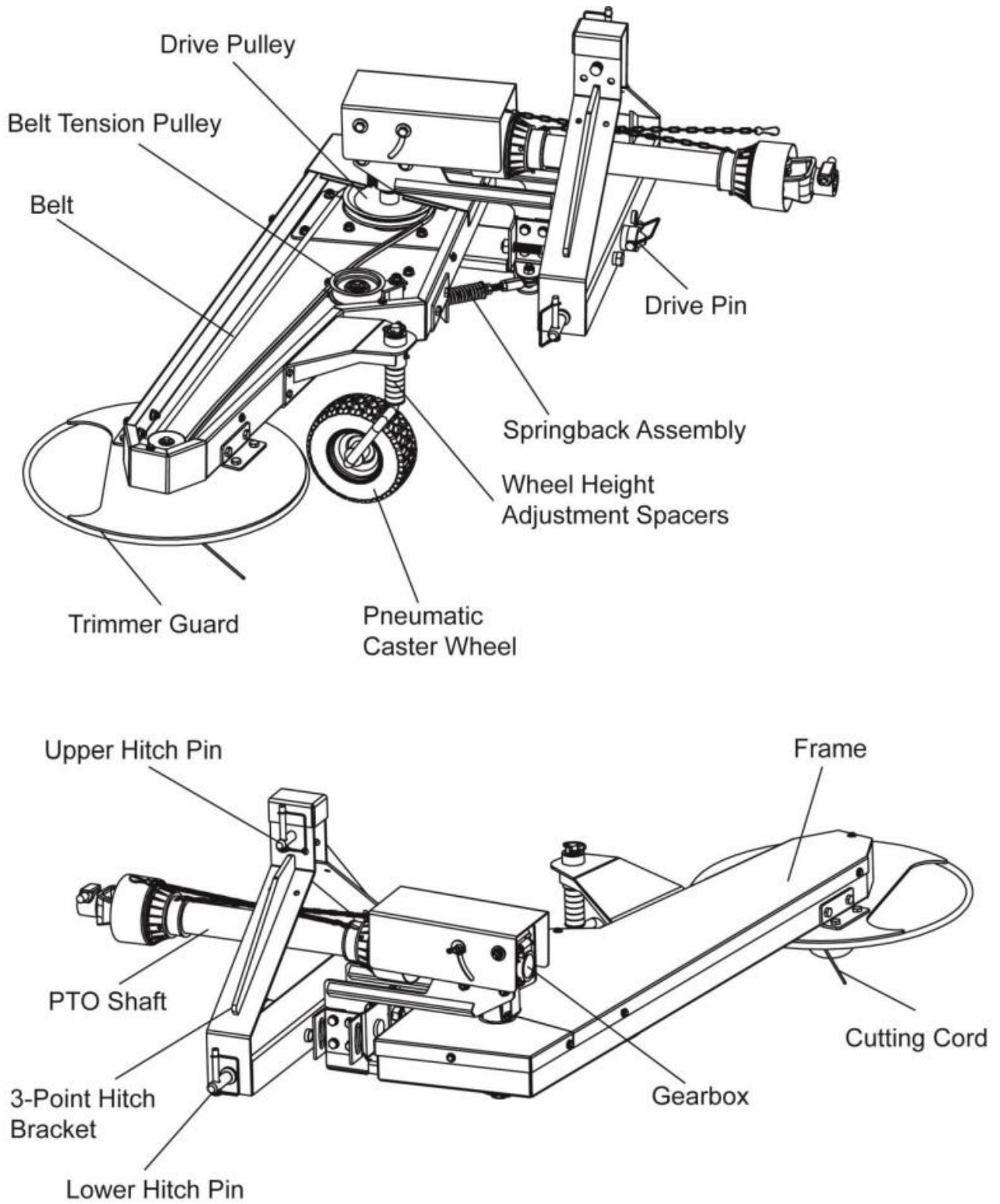
GREASE RECOMMENDATION



It's advised to use lithium grease with a weight of approximately 0.3kg; no oil is required.

CONTROLS AND FEATURES IDENTIFICATION

It may be helpful to familiarize yourself with the controls and features of your 3-POINT HITCH TRIMMER/MOWER as shown in Figure 1 before beginning these procedures.



SPECIFICATIONS

TRACTOR REQUIREMENTS	CATEGORY 1, 25 TO 45 HP MAX.
DRIVE	TRACTOR PTO
PTO SPEED	540 PRM
NUMBER OF TRIMMER CORDS	2
BELT	A-2565 V-BELT
BELT ADJUSTMENT	SPRING LOADED IDLER PULLEY
MAX. WHEELBASE (DISTANCE FROM OUTSIDE TO OUTSIDE OF REAR WHEELS)	80"
CUTTING HEIGHT	5 HEIGHTS, 1.5" TO 3.5"
CUTTING WIDTH	22"
MACHINE WEIGHT	220LB

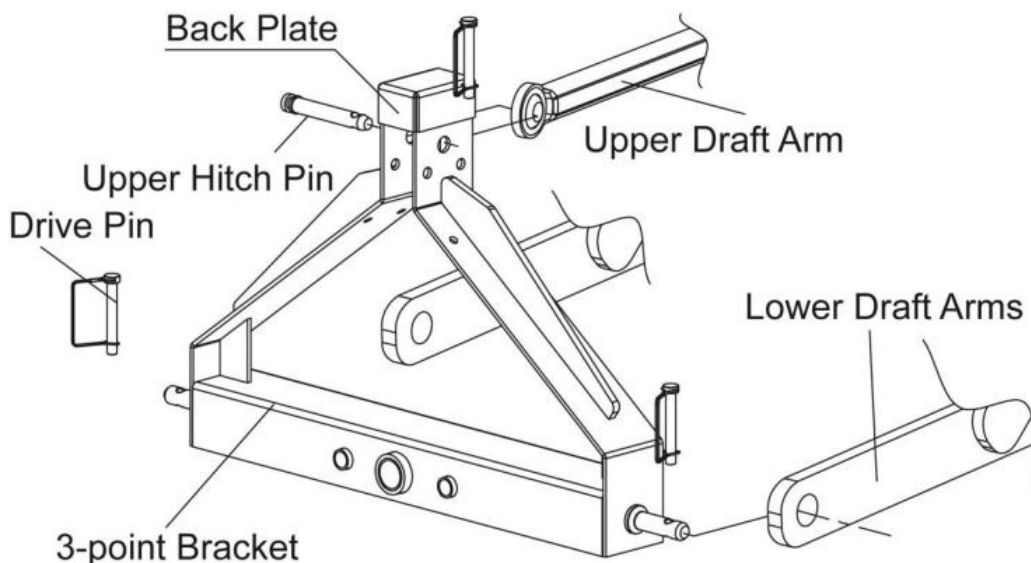
ASSEMBLY INSTRUCTIONS

WARNING

Before performing the following procedure, be sure your tractor engine is off, brake is set, and the key removed for safety.

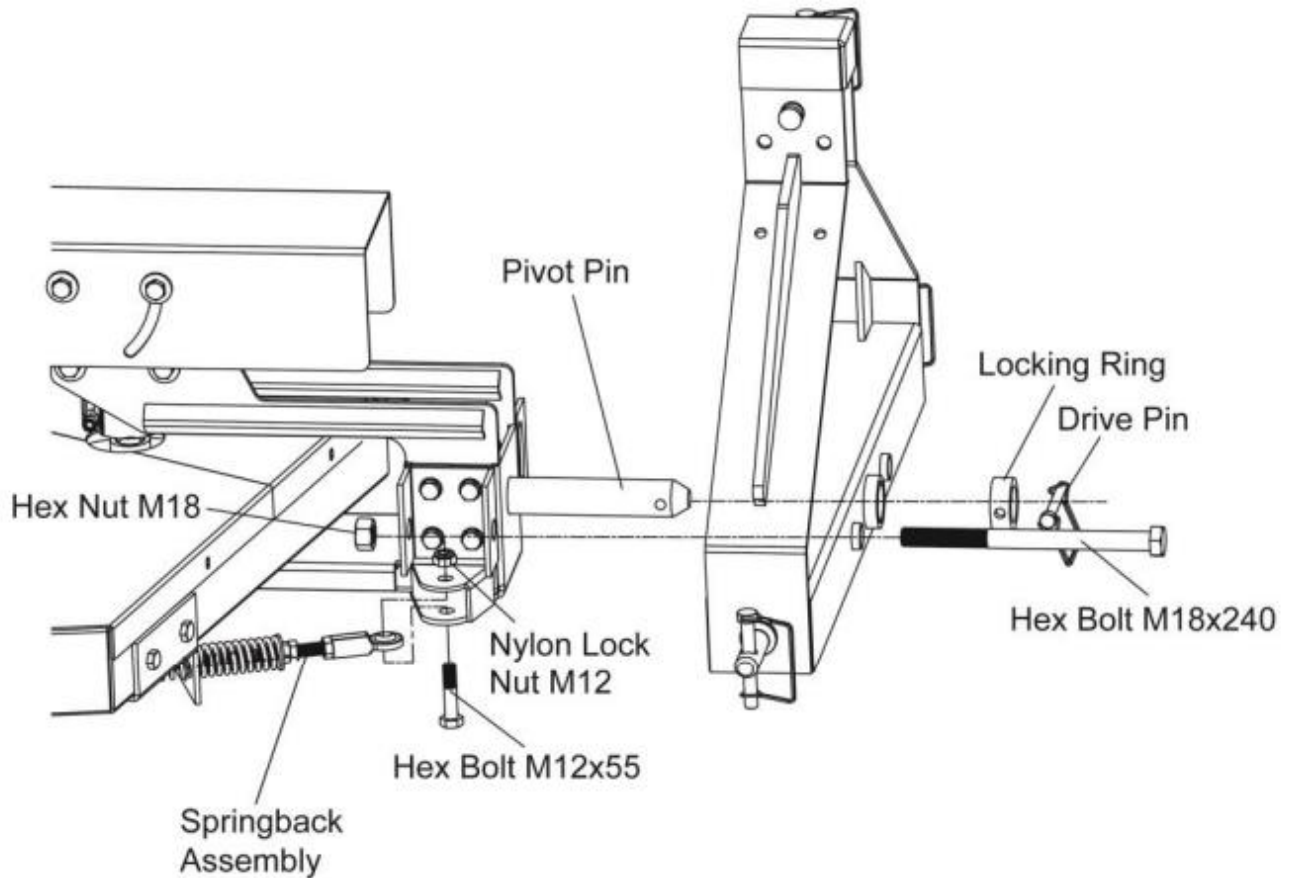
STEP 1: Attach the 3-point Bracket to the Tractor

1. Position the 3-point bracket at the rear of the tractor with the back plate facing away from the back of the tractor. The opposite side of the 3-point bracket facing the upper draft arm is open.
2. Attach the 3-point bracket to the tractor and secure with drive pin.



STEP 2: ATTACH THE TRIMMER/MOWER TO THE 3-POINT BRACKET

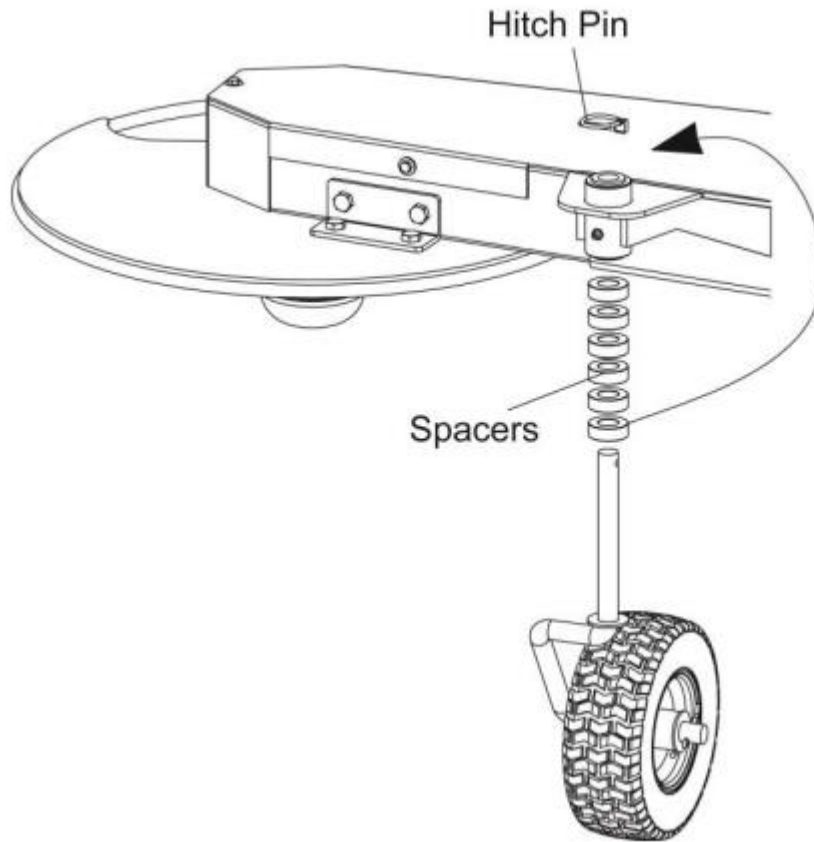
1. Slide the pivot pin into the mounting hole of the 3-point bracket, then fixed with locking ring and drive pin.
2. Insert the hex bolt M18x240 to the 3-point bracket and fixed with hex nut M18.
3. Attach the spring-back assembly to the frame using hex bolt M12x55 and nylon lock nut M12.



STEP 3: INSTALLING THE WHEEL ASSEMBLY

1. Insert the wheel shaft into the wheel support from underneath, install the spacers on top and secure with the hitch pin.

Note: The wheel height can be adjusted as needed.



STEP 4: CALCULATING LENGTH OF PTO SHAFT NEEDED

The PTO Shaft provided with your Trimmer is 32" overall compressed length and will work "as is" for most applications. Before you install the PTO shaft it is good practice to calculate optimum PTO shaft length according to your tractor and usage needs to determine if modifications are needed.

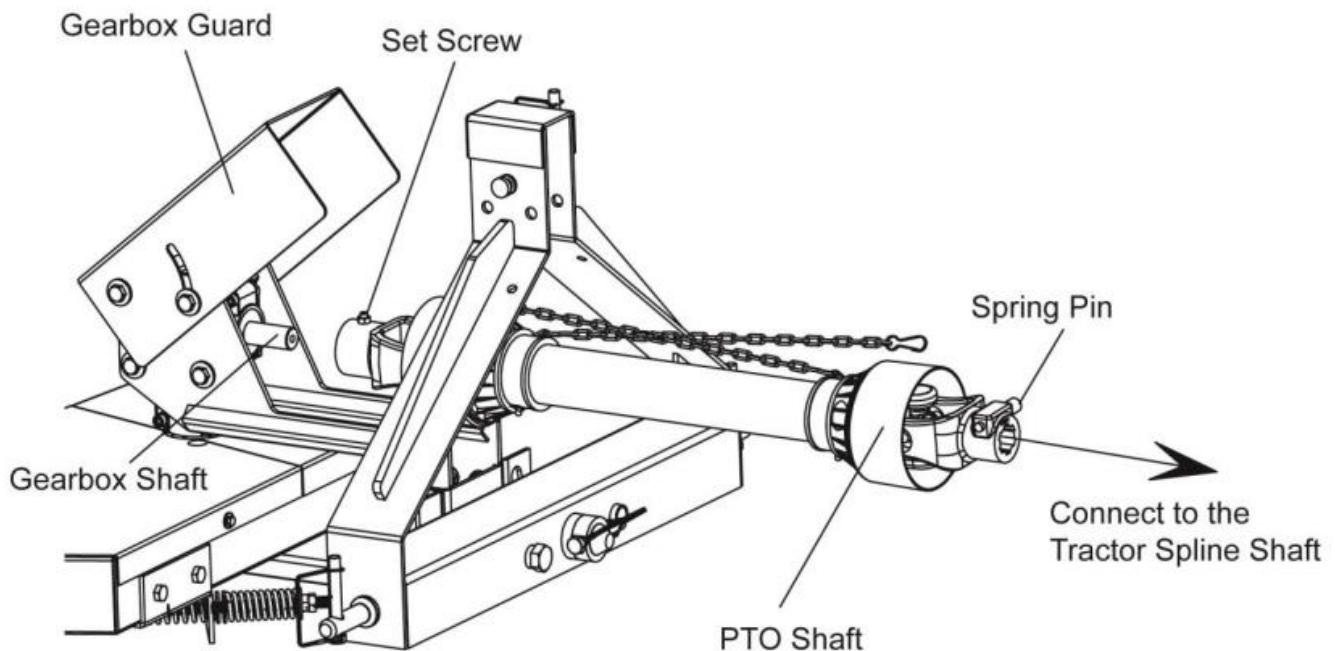
WARNING

The minimum recommended overlap of the tubes at the center of the PTO shaft should be 6". Using a PTO shaft with less than 6" overlap may fail and cause machine damage or personal injury.

TOOLS NEEDED:

- 13mm Wrench
- 4mm Allen Wrench

1. Slightly loosen the wing nut, rotate the gearbox guard up away from the gearbox shaft.
2. Attach the PTO shaft to the gearbox, put flat key in the middle of PTO shaft and gearbox, then tighten set screw.
3. Press PTO spring pin and connect PTO shaft to the tractor spline shaft, then check whether the assembly is in place. (The installation is complete when the spring pin will automatically rebound.)
4. Check the PTO both ends of the assembly in place, cover the gearbox guard. Note: One side of PTO and gearbox sealing ring to keep 5MM distance, so as not to lead to a collision with gearbox sealing ring.



STEP 5: INSTALLING TRIMMER CORDS

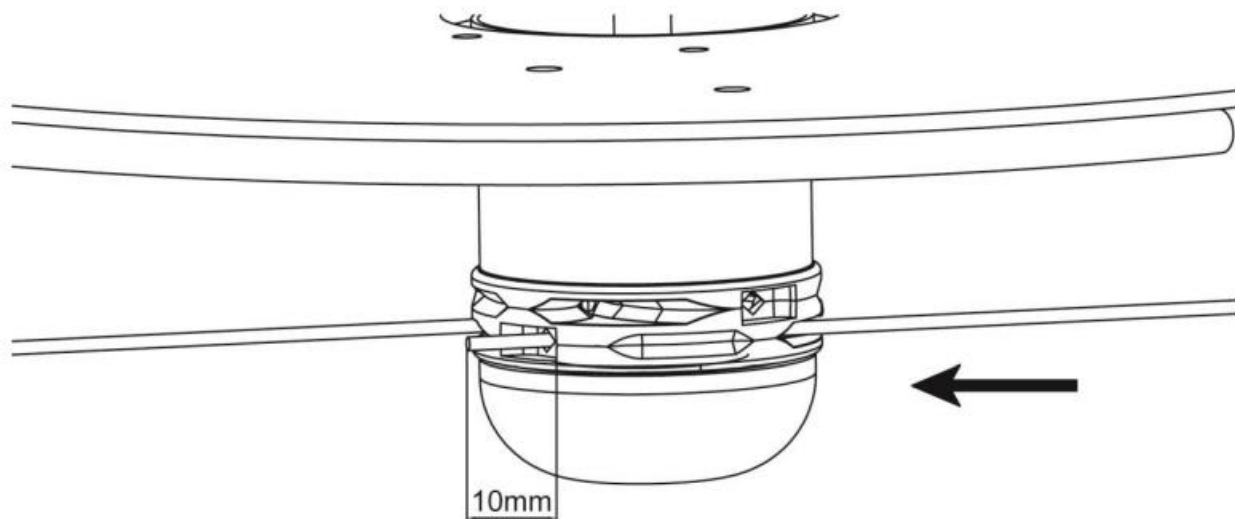
Always make sure to install all four trimmer cords and ensure they are the same length. Not having all four 10 cords installed and/or at the same length will cause excessive vibration and could damage the machine.

1. Insert the end of a trimmer cord into the inlet hole (large, slotted cutout) push it in until the end protrudes out the other side approximately 10mm.
2. Turn the cord head 90 degrees and repeat the installation until all cords are installed.

Note: The cord can only move through the cord head in one direction. To remove it you must pull it from the other side of the Holder (where the 10mm end is).

NOTICE

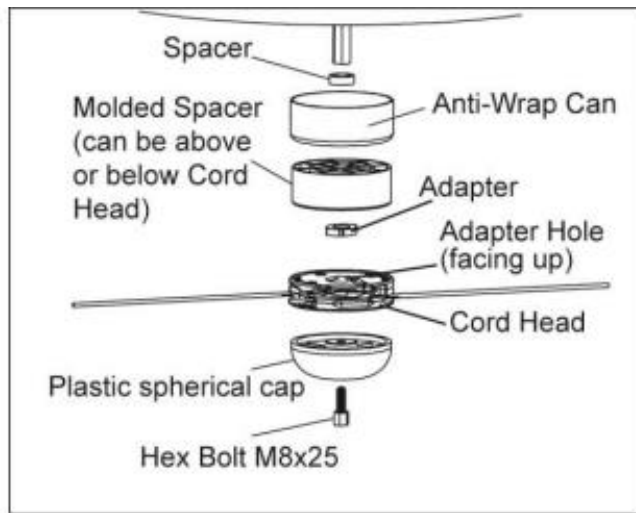
Running the trimmer without all four cords installed or cords of unequal length can cause excessive vibration and may damage the machine.



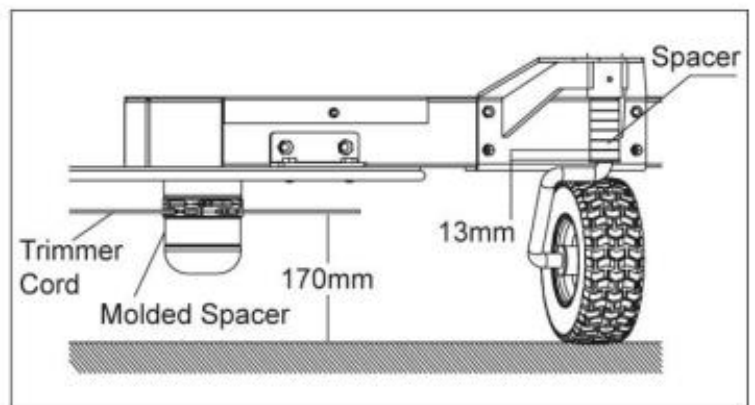
STEP 6: CORD HEAD ADJUSTMENT

Note: The cord head can be located above or below the molded spacer giving you a 1-1/2" range in trimming height. The following steps show moving the cord head from below the molded spacer to on top of the molded spacer.

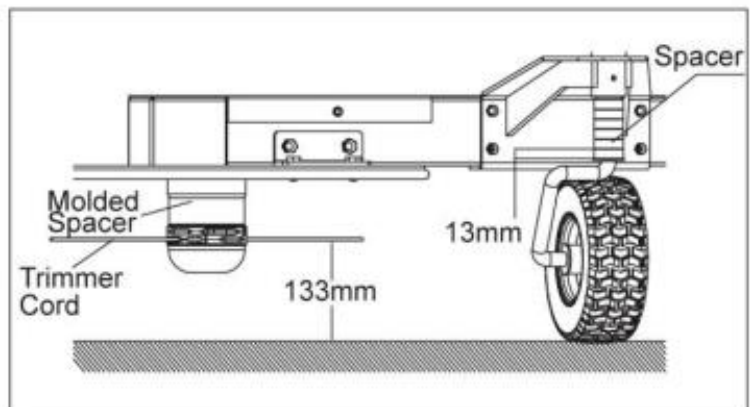
1. Align the hole in the anti-wrap canister with the internal housing at the location shown.
2. Insert a Philips head screwdriver into the hole in the anti-wrap canister and the hole in the internal housing.
3. Rotate the plastic spherical cap until the screwdriver slides into a hole in the shaft, locking it into place. 4. Looking down at the top of the Frame, turn the plastic spherical cap clockwise until it unscrews completely from the bearing housing. Note: If the plastic spherical cap continues to turn, but does not come off, check that you locked the screwdriver into the shaft. If the plastic spherical cap will not turn by hand a 9/16" Socket can be used on the belt (inside the bottom of the plastic spherical cap) to loosen it. You may need to clean grass or debris out of the recess first.



4. Slide the cord head, adapter, and molded spacer off the shaft.
5. The anti-wrap can, and spacer should remain on the shaft with the screwdriver.
6. Make sure the adapter is inserted into the top of the cord head as you install the cord head onto the shaft.
7. Install the molded spacer onto the shaft.
8. Place the head of the hex bolt M8x25 so it is sitting inside the hex cavity at the bottom of the plastic spherical cap.
9. Looking down at the top of the frame, hold the bolt head in place with your finger and turn the plastic spherical cap clockwise to start the bolt into the shaft.



10. Tighten the assembly securely by turning the plastic spherical cap counterclockwise when looking down on the top of the frame.
11. Remove the screwdriver.



STEP 7: GREASING THE WHEEL SUPPORT

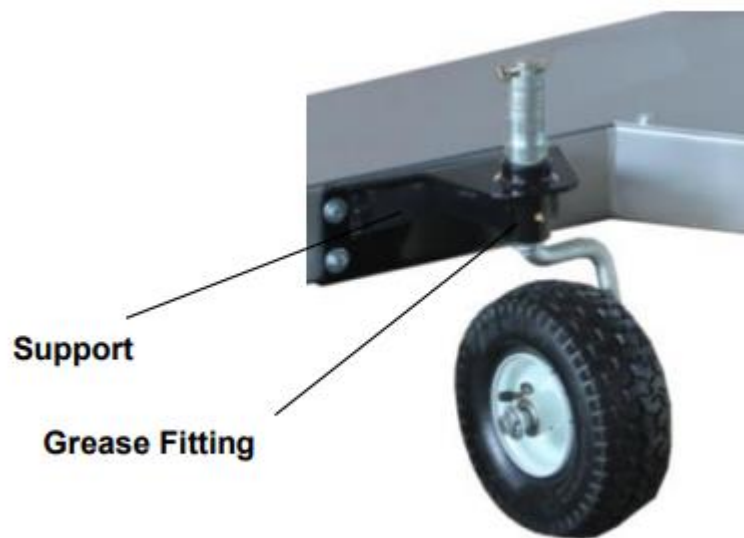


It's advised to use lithium grease with a weight of approximately 0.3kg; no oil is required.

TOOLS NEEDED:

- Flexible hose grease gun
- Lithium grease
- Clean cloth

Apply a quality general-purpose lithium grease with a hand-pumped grease gun to each of the support grease fitting.



OPERATION INSTRUCTIONS

WARNING

- This machine is designed to operate at 540 rpm PTO shaft speed only! Never operate at a faster speed; doing so can cause serious injury to the operator or bystanders and could cause damage to the machine that is not covered under warranty.
- Read and understand your tractor owner's manual and all tractor safety warnings for operating your tractor safely before operating this 3-Point Hitch Trimmer/Mower.

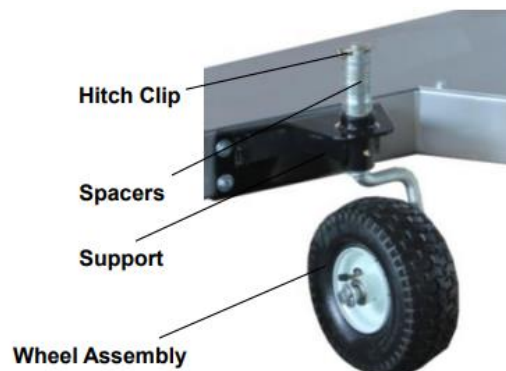
OPERATION NOTES

- See the Owner's manual that came with your tractor for all safety warnings and detailed information for operating your tractor properly.
- Always operate the tractor PTO at 540 RPM when trimming.
- Always disengage the PTO, lock the parking brake and shut off the tractor when leaving the tractor seat.
- Never transport the trimmer while the PTO is turning.
- Do not have the trimmer engaged or resting on the ground when backing up. The machine is designed to trim and roll on the wheel in the forward direction only, Trimming or rolling on the wheel in the reverse direction could damage the machine and is not covered by the warranty.
- Remove any debris buildup from the machine before every use of the trimmer.
- Always install the locking bolt and wing nut into the transport holes of the 3-Point bracket and trimmer when transporting the trimmer.

SETTING WHEEL HEIGHT

1. Remove the Hitch clip and remove the wheel assembly with spacers.
2. Adjust the spacers as desired with some under and some above the support on the shaft.
3. Reinstall wheel assembly, spacers, and hitch clip.

Note: More spacers under the support will lower the wheel and set the trimmer head higher. More spacers on top of the support will raise the wheel and set the trimmer head lower.



ENGAGING THE TRIMMER HEAD

1. Ensure that the trimmer is lowered to the ground and all guards are in place and properly secured before using.
2. Set tractor throttle at IDLE and engage the PTO.
3. Increase tractor throttle to the RPM's required to obtain 540 PTO speed.

Note: See your tractor manual for detailed information on tractor operation.

STOPPING THE CORDS FROM SPINNING

1. Reduce tractor throttle to IDLE.
2. Disengaging PTO to stop the trimmer.

MAINTENANCE AND STORAGE

Regular maintenance is the way to ensure the best performance and long life of your machine. Please refer to this manual for maintenance procedures.



WARNING

Disengage PTO, shut down the tractor engine, remove the key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the tractor, then wait five minutes before performing any maintenance procedure or inspection on the trimmer.

REGULAR MAINTENANCE CHECKLIST

Note: Consider that the service intervals shown are the maximum under normal operating conditions. Increase frequencies under extremely dirty or dust conditions. See the owner's manual that came with the tractor and with the PTO shaft for specific tractor and PTO shaft maintenance.

PROCEDURE	BEFORE EACH USE	EVERY 8-10 HOURS	EVERY 18-20 HOURS	EVERY 50 HOURS	EVERY 100 HOURS
Check general equipment condition, e.g. nuts, bolts, welds, etc.	●				
Replace broken or frayed cutting cords.	●				
Check the plastic spherical cap and cord head for excessive wear.	●				
Lubricate PTO shaft and wheel support grease fittings		●			
Check belt tension and condition			●		
Lubricate PTO shaft spline ends and center overlap			●		
Replace the belt				●	
Grease pivot bearings and gearbox					●

MAINTENANCE POSITION

Many maintenance procedures can be performed easier by positioning the trimmer in an upright “maintenance” position. This position is for maintenance purposes only. Do not transport or operate the trimmer in the upright position.



WARNING

- Two people are required when setting the trimmer body to the maintenance position. One person must steady the trimmer as the other installs the bolt. Do not allow the trimmer body to go beyond vertical and fall in the opposite direction without the bolt in place as this could cause injury to you or damage the trimmer.
 - Never transport the trimmer in the “Maintenance” position. This could damage the machine and is not covered by the warranty.
1. Remove the bolt and wing nut that is holding the trimmer in the trimming operating positions.
 2. Lift the trimmer body up to a vertical position. With the head of the bolt facing the tractor, install the bolt all the way into the transport hole of the 3-point bracket.
 3. Let the trimmer mounting bracket rest against the bolt to hold it in the vertical (maintenance) position.

STORAGE

- Before storing make sure the trimmer is clean and dry for years of trouble-free service.
- Lightly lubricate all trimmer surfaces and moving parts to prevent rust.
- Store indoors or protected area during severe weather and winter months.

TROUBLESHOOTING

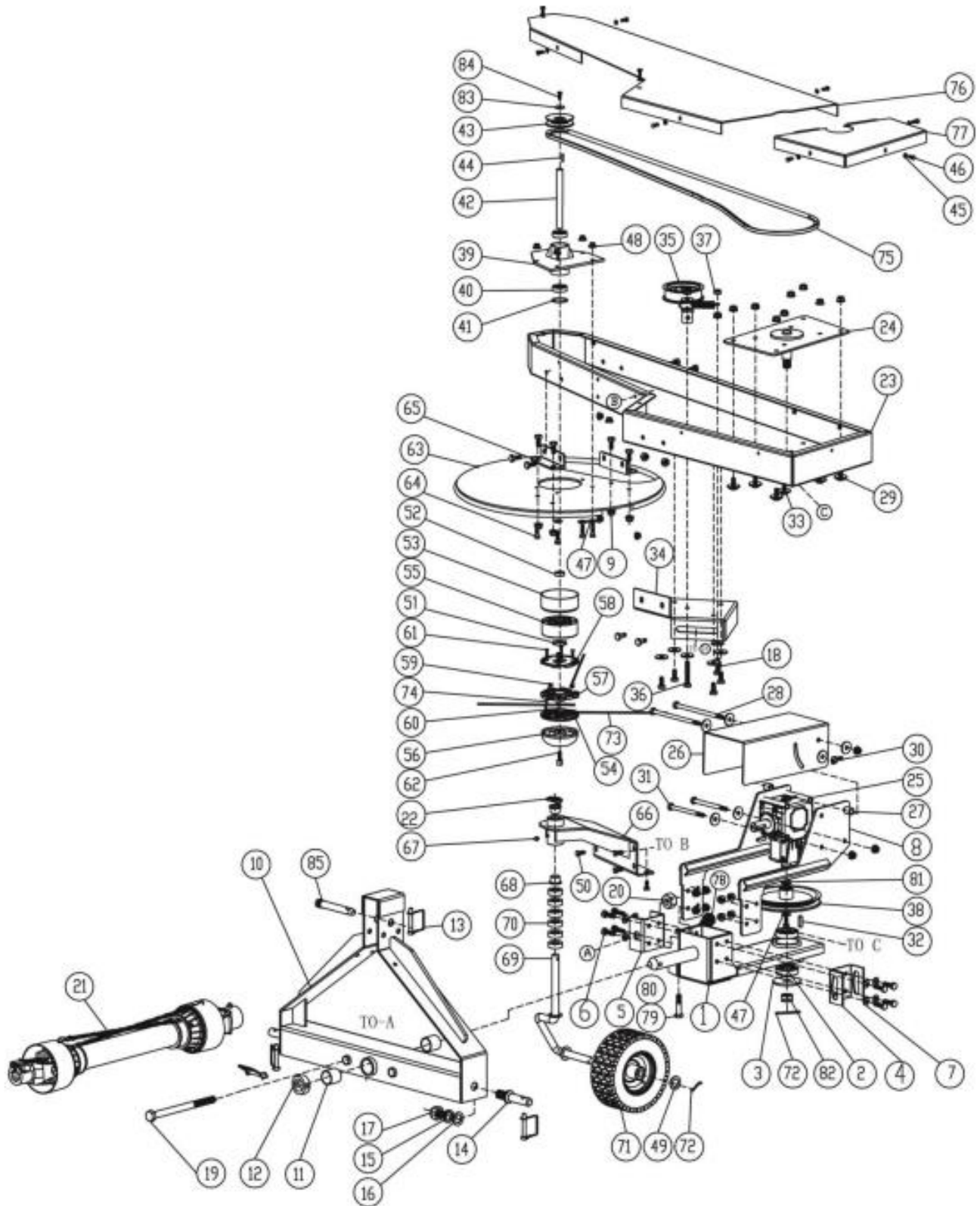
Most problems are easy to fix. Consult the troubleshooting table below for common problems and their solutions.

WARNING

Disengage PTO, shut down the tractor engine, remove the key, wait for all moving parts to come to a complete stop, disconnect the PTO shaft from the tractor, then wait five minutes before performing any maintenance procedure or inspection on the trimmer.

SYMPTOM	POSSIBLE CAUSE
Poor cut quality	<ol style="list-style-type: none">1. Cord need to be replaced.2. Tractor speed too fast.
Scalping	<ol style="list-style-type: none">1. Arm or wheel adjustment is off. Check for frame level or height of hydraulic arms on tractor
Machine stops cutting	<ol style="list-style-type: none">1. Inspect cords.2. Check belt tension/wear.3. Check PTO rotation
The trimmer head won't spin or lacks power	<ol style="list-style-type: none">1. Check for proper alignment of the V-belt.2. The belt may be worn or frayed; if so, replace it.

PARTS DIAGRAM / EXPLODED VIEW



REF#	DRAWING NO.	DESCRIPTION	QTY
1	TS600-02000	BASE	1
2	9604-30305	SINGLE ROW TAPER ROLLER BEARING	2
3	TS600-00003	SPACER B	1
4	TS600-00004	ARTICULATING BRACKET A	1
5	TS600-00005	ARTICULATING BRACKET B	1
6	9101-10040-DX8.8	HEX BOLT M10X40	8
7	9301-1000-DX	FLAT WASHER Ø10	8
8	TS6000-03000	GEARBOX FIXED FRAME	2
9	9215-10000-DX8.8	HEX FLANGE LOCK NUT M10	35
10	TS600-01000	3-POINT BRACKET	1
11	TS600-00006	NYLON SLEEVE	2
12	TS600-00007	FIXING RING	1
13	T400-40000-DX	DRIVE PIN	4
14	N800-00003-DX	HITCH PIN	2
15	9306-22000-DX	LOCK WASHER Ø22	2
16	9301-22000-DX	FLAT WASHER Ø22	2
17	9206-22000-DC	HEX NUT M22	2
18	9101-10040-8.8Q	HEX BOLT M10X40	1
19	9101-18240-DX8.8	HEX BOLT M8X240	1
20	9201-18000-DX	HEX NUT M8	1
21	SMP700-06000	PTO SHAFT	1
22	TS600-06000	LINCH PIN	1
23	TS600-00009	FRAME	1
24	TS600-09000	PIVOT SUPPORT SHAFT	1
25	TS600-08000	GEARBOX	1
26	TS600-04000	GEARBOX GUARD	1
27	TS600-04002	BUSHING	2
28	9101-10180-DX8.8	HEX BOLT M10X180	2
29	9302-10000-DX	BIG FLAT WASHER Ø10	21
30	9208-10000-8.8DX	WING NUT M10	1
31	9101-10125-8.8DX	HEX BOLT M10X125	2
32		FLAT KEY 8X7X32	2
33	9101-10025-DX	HEX BOLT M10X25	22
34	TS600-00010	SPRING HOLDER BASE	1
35	TS600-13000	BELT ADJUSTMENT PLATE	1
36	9101-10065-8.8Q	HEX BOLT M10X65	1
37	9206-10000-DX8.8	HEX LOCK NUT M10	
38	TS600-00008	PULLEY Ø190	1
39	TS600-07000	ROTOR BEARING	1
40	9603-6203-2RS	DEEP GROOVE BALL BEARING 6203-2RS	2
41	9309-40000-FH	CIRCLIP FOR HOLE Ø40	1
42	TS600-00011	SHAFT	1
43	TS600-00002	PULLEY Ø77	1
44		FLAT KEY 5X5X20	1

45	9302-06000-DX	BIG FLAT WASHER Ø6	10
46	9101-01016-DX8.8	HEX BOLT M6X16	10
47	9302-08000-DX	BIG FLAT WASHER Ø8	4
48	6215-08000-DX8.8	HEX FLANGE LOCK NUT M8	10
49	TS600-12000-DX	WHEEL AXLE SPACER	1
50	9010-08020	HEX BOLT M8X20	6
51	TS600-00012	ADAPTER	1
52	TS600-00013	SPACER	1
53	TS600-00014	ANTI WRAP CAN	1
54	TS600-00015	BRIQUETTING A	1
55	TS600-00016	MOLDED SPACER	1
56	TS600-00017	PLASTIC SPHERICAL CAP	1
57	TS600-00018	BRIQUETTING B	1
58	TS600-00019	BRIQUETTING C	1
59	TS600-11000	BARB	4
60	TS600-00021	PRESSURE SPRING	4
61	9103-05024-DX8.8	HEX SOCKET COUNTERSUNK HEAD SCREW M5X24	4
62	TS600-00001	HEX BOLT M8X25	1
63	TS600-06000	DEFLECTOR GUARD	1
64	9101-08030-DX8.8	HEX BOLT M8X30	4
65	TS600-00022	CONNECTING PLATE	2
66	TS600-05000	WHEEL STAND	1
67	9701-06000	OIL CUP	1
68	TS600-00023	NYLON BUSHING	2
69	TS600-10000	WHEEL CASTER	1
70	TS600-00024	SPACER	6
71	TS600-14000	PNEUMATIC WHEEL	1
72	9404-04040-DX	COTTER PIN 4X40	2
73	TS600-00025	CUTTING CORD	2
74	TS600-00026	NYLON LOOP	2
75		V-BELT A-2565	1
76	TS600-00020	BELT COVER	1
77	TS600-12000	SMALL BELT COVER	1
78	TS600-15000	SPRINGBACK ASSEMBLY	1
79	9101-12055-DX8.8	HEX BOLT M12X55	1
80	9206-12000-DX	NYLON LOCK NUT M12	1
81	9312-25000-FH	WIRE SNAP RING FOR SHAFT Ø25	1
82	LSP25-00020-FH	HEX SLOTTED THIN NUT M20X1.5	1
83	939903-08000-DX	BIG FLAT WASHER Ø8	1
84	9010-08015	HEX BOLT M8X15	1
85	N800-00004-DX	HITCH PIN	2

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.

THE TITAN LIMITED WARRANTY FOUND AT WWW.PALLETFORKS.COM/WARRANTY.HTML IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY DISCLAIMED.



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