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Turf Revitalizer 6 - 14hp

Owner's Manual

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Safety

- Do not start and/or run engine indoors. Engine produces carbon monoxide and can cause severe bodily harm, including death.
- Read entire owner's manual before operation.
- Do not refuel engine until engine has cooled off.
- The exhaust becomes very hot during operation. Never touch the muffler as this will cause severe burns.
- Never operate unit without all safety guards in place. This includes, but is not limited to the belt, and blade cutter reel covers.
- Make sure that you and any bystanders are wearing personnel protection equipment. Including eye and hearing protection along with long pants.
 Do not wear loose fitting clothes or jewelry as this may become caught in rotating parts. (Children should never operate machinery.)
- Never bypass kill switches.
- Do not leave unit while engine is running, or while parts are still in motion.
- Check for buried cables, wires, and irrigation pipes before seeding, dethatching or power raking.
- Remove all debris from area to be seeded, as debris may become flying projectiles.
- Use extreme caution on slopes. Wear shoes with an aggressive pattern to reduce chances of slipping and/or falling.
- Avoid running over manhole covers, concrete, asphalt, rocks, etc...while seeding. This may cause damage to the unit. If abnormal vibration occurs discontinue use of machine until service can be performed.
- Always disconnect sparkplug before servicing.

Unpacking and Initial Setup

Unpacking

Step1. Cut away crate.

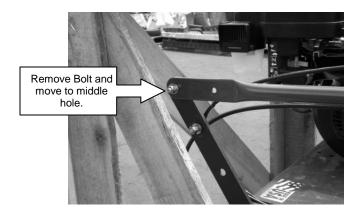
o Use a reciprocating saw to cut away wooden crate.

Step2. Fold Handles up. (Note: On the 13-14HP units this task takes two people.)

 Units are shipped with the handle folded in the down position. Handle bolts must be removed to correctly position the handle (see figure 1). Secure the handle with all four bolts.

Step3. Remove unit from pallet.

- Pull the "transmission engagement T-handle" out, this puts the unit into neutral/freewheel (see figure 1b).
- Pull the unit off of the pallet. This may be difficult as the transmission has not been "broken in".





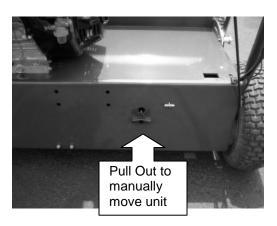


Figure 1b

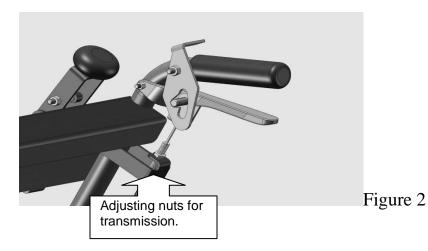
• Initial Setup

Step1. Top the engine off with oil.

 Units are shipped with some oil. Engine should be topped off with the correct oil viscosity. See engine manual for the correct oil viscosity.

Step2. Adjust the transmission cable. (Note: On the 13-14HP units the blade engagement cable will need to be installed at handle; See page 13 for proper adjustment procedures.)

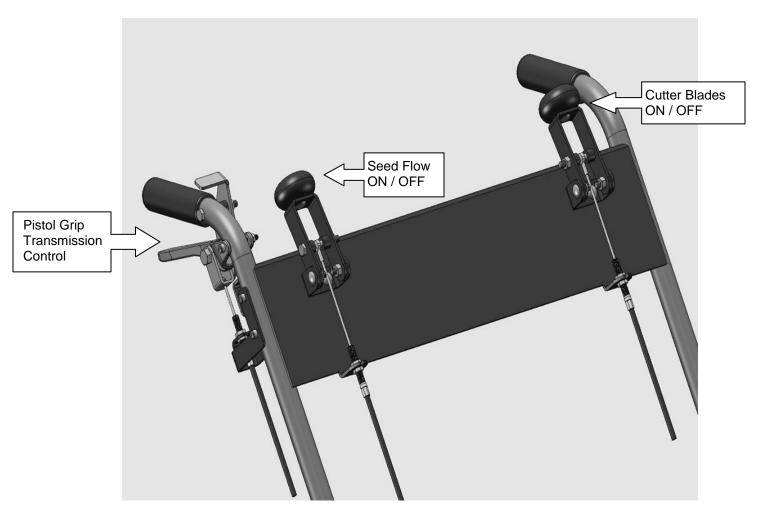
 Start the engine. If the transmission is "creeping" in the "Park" position (see figure 2) adjust the cable. Moving the cable down will stop forward creep. Moving the cable up will prevent reverse creep.



NOTE:

The transmission and cutter belt will stretch during the first 5 hours of use. They must be adjusted to prevent the belts from slipping, causing premature belt wear. See page 13-14 for the correct procedure on adjusting the belts.

Controls



Note: Seed Flow – the seed flow is turned on/off with the seed flow control. The unit is designed so seed flow slows or almost stops completely when the front wheels are off the ground while making turns. There is no need to turn the seed flow on & off for each turn. Once the front wheels start turning, the seed flow will instandly go back to the calibrated seed rate.

• **Pistol Grip Control-** the unit is operated (forward and backward) using a pistol grip control, like those found on a commercial walk behind mower. Disengage the lever, with your thumb, from the "park" position and release slowly to move forward (Note: 9-14 HP units have two forward cruising speeds). To stop, squeeze the control half way. To go backward, squeeze the control fully. See figure 4.



Figure 4.

• Transmission engagement T-handle- This must be inserted into the frame for the transmission to operate. If you want to manually push the unit, pull the t-handle out of the frame and down to lock into neutral/freewheel. See figure 5.



Figure 5.

• Depth Control Lever – The "Depth Control Lever" is used to raise and lower the blades. This allows a maximum range of blade heights. Pull on the spring plunger knob to release the lever and then lower and raise the blades to the desired position. See figure 6. Do not force handle from side to side, it is made to move forward and backwards only.

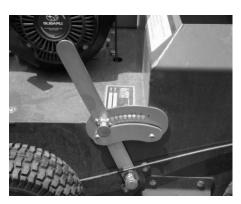


Figure 6.

• **Seed Meter Gauge** – The "Seed Meter Gauge" is used to adjust the seed flow to a set flow rate. It is calibrated so that you receive the correct amount of seed at any cruising speed. (i.e. – the seed flow is proportional to the ground speed)See figure 7.



Figure 7.

• Operator Kill Switch (Lanyard type) – The "Operator Kill Switch" is to be used at all times when the engine is running. Place the lanyard around your wrist or connect securely to your clothing. If the operator should lose control of the machine, the lanyard will be released from the kill switch stopping the unit. See figure 8.



Figure 8.

• Operator Kill Switch (Operator handle kill switch type) – The handle needs to be held down when starting the engine and must continue to be held during operation. If the operator should lose control of the machine, release your hand from this switch and the engine will stop running. See figure 9.



Figure 9.

Operation

- Before each day of use.
 - o Check engine oil level and air filter.
 - o Check for loose or damaged parts.
 - Clean dirt and debris from seed gate by turning seed flow setting (seed meter gauge) to #10, then turn the seed flow on. Then go to the front of the unit and move the seed gate back and forth 4-5 times to remove any dirt and debris.
 NOTE: The seed gate is designed to clean itself when it

NOTE: The seed gate is designed to clean itself when it is allowed to move through the full range of motion.

See figure 3 on next page.

• Operation

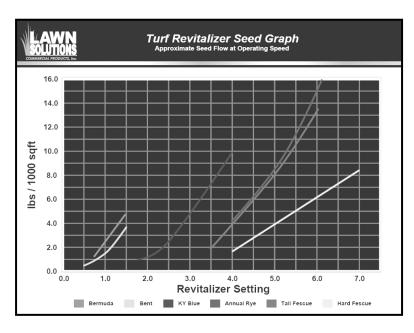
- 1. Set the seed flow to the recommended seed rate.
- 2. Move the depth control lever to the recommended height.
- 3. Attach the lanyard to operator. If not equipped with a lanyard, hold down the operator's presence handle.
- 4. Make sure that the "pistol grip control" is in the parked position.
- 5. Turn on/off switch on engine to on.
- 6. Turn fuel on.
- 7. If engine is cold turn choke on. If engine is warm leave choke off.
- 8. Start the engine and turn off the choke.
- 9. Move the "transmission engagement T handle" into the frame if it is pulled out.
- 10. Tilt back on the unit and turn the cutter reel on. Slowly lower the unit to the ground.
- 11. Turn seed flow on.
- 12. Move "pistol grip control" into desired direction of travel.

13. After use be sure to set the engine switch to off, shut off fuel, and return the blades to the highest position.



Figure 3.

For Best Results



The Turf Revitalizer is a 3 in 1 machine that will power seed, dethatch, and power rake.

Power Seeding – When over seeding, set the blades to cut slits in the soil $\frac{1}{4}$ " – $\frac{1}{2}$ " deep. For basic over seeding, only 1 pass is required. If there are a few bare areas due to fungus or dog urine, seed the entire property with one pass, on the bad areas, go forward then backward and forward again to

add extra seed. This method will save time and seed while giving a nicer finished product.

Dethacthing – Because of the Turf Revitalizer's aggressive blade design, you can use the same machine for dethaching. Simply turn off the seed flow and do a single or double pass as desired. It is recommended to dethatch even a newly seeded lawn the following spring or fall to allow the grass to thicken properly which reduces the chance of fungus.

Power Raking / Renovation – The Turf Revitalizer is the most compact yet powerful power rake on the market. For breaking new ground, leveling, or renovating a lawn, drop the blades down to 1"-1 ½" deep. Use the hydrostatic drive to do the work for you. Go forward and backward with the machine to till the ground in very uneven areas, or simply make a double pass in two directions to break up and level the ground in moderate areas. Hard, dry ground works the best. The unit is much more aggressive when breaking up hard dry ground while going backward because the blades are reverses tilling the soil. Multiple passes may be needed if the ground is too soft and engine bogs down. In which case make a couple of shallow passes then increase the cutting depth.

Note: The Turf Revitalizer will seed at the same rate going forward and backwards.

Note: If there is excessive thatch, it may be necessary to remove the thatch prior to seeding. This will prevent the new grass from suffocating under the thatch.

Note: With the Turf Revitalizer, it is very easy to put more grass seed down then is recommended because of the thinking that "more is better". Grass that is too thick is very susceptible to fungus during summer months. Seed at the recommended seed rate, most seed rates can be located on the seed bag, or can be obtained from your supplier.

Note: Unit performs best when ground is dry.

Servicing your Turf Revitalizer

The Turf Revitalizer is designed to be relatively maintenance free. For long life and to reduce down time some routine service should be performed.

Note: Always disconnect the sparkplug before servicing.

After each day of use:

- Units should be tipped forward. Let the seed hopper rest on a piece of wood i.e. 2x4. Note: For the 13-14HP units it takes two people to tip unit forward.
- Check the underside for excessive build up of dirt. Scrape excessive build up off with a PLASTIC putty knife. PRESSURE WASHING WILL CAUSE EXCESSIVE RUST! This will shorten the life of the bearing.
- Check for rope, plastic netting, wire...etc. that is wrapped around the cutting shaft and remove the foreign material.
- Look at blades and check for damage.
- Hold shaft and move in and out to check for excessive movement. If there is excessive movement have unit serviced.
- Check belts for wear and proper tension.
- Flip unit back over and check the air filter and engine oil level.

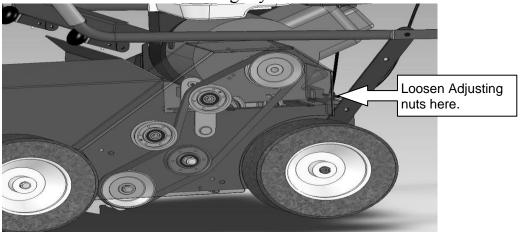
After Five hours of usage:

Adjust the belt tension! If this step is skipped premature belt failure will occur. If belt failure occurs the cutter belt can be replaced by a standard off the shelf belt found at most auto parts stores when needed. However we recommend using the appropriate replacement belt from your local dealer.

NOTE: The drive belt to the transmission is a specially designed belt that must come from your dealer. **OFF THE SHELF BELTS WILL NOT WORK!**

o Procedure for adjusting "cutter reel" belt tension.

- 1. Remove the belt cover.
- 2. Turn on Cutter Reel.
- 3. With the engine off and the blades in the up position, press forward on the belt tensioner. The belt should be tight and the "cutter cable" should be slightly loose.



4. Turn the blades to the off position, and the tensioner should deflect the belt ass shown causing the belt to release from the drive pulley allowing the blades to free wheel.



- 5. Note: It is normal for the cutter reel to spin when disengaged for the first 5 hrs of operation or until belt is broken-in (stretches).
- 6. Replace belt cover.

o Procedure for adjusting transmission belt tension.

- 1. Remove the belt cover.
- 2. Loosen all four nuts shown in figure 11.
- 3. Slide idler bracket away from engine to increase tension. If movement cannot be obtained insert four c-washers in between the idler bracket and the frame, see figure 12.
- 4. Retighten all four nuts and replace belt cover.



Figure 11.

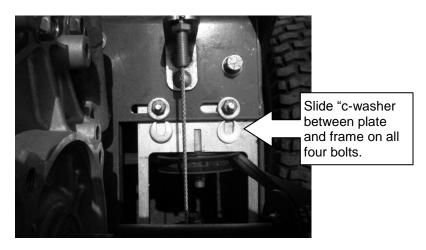


Figure 12.

- Change engine oil at the recommend intervals. Refer to your engine manual for these intervals and correct viscosities.
- There is no maintenance to the hydrostatic drive system. It is designed to be completely sealed to prevent contamination.
- The blades are designed to be "unbreakable". When replacing worn blades, it is also recommended to change the cutter bearings while they are off the unit as preventative maintenance.

Procedure on replacing blades and bearings.

- 1. Units should be tipped forward. Let the seed hopper rest on a piece of wood i.e. 2x4. Note: For the 13-14HP units it takes two people to tip unit forward.
- 2. Remove the belt cover and cutter belt.
- 3. Lower the blades to allow easier access to bolts.
- 4. Remove cutter reel.
- 5. Note: If removing blades only it is not necessary to remove pulley or bearing from the drive pulley side. Loosen the jam nut enough to remove tension from the external snap on the opposite end of the shaft.
- 6. Replace blades and spacers. **Note: Be sure to stagger blades as they are put on.**
- 7. Note: if doing annual service, it is recommended to replace the cutter reel bearings at this time.
- 8. Note: Also make sure that thread lock is used on all set screws and the jamb nut. Also use anti-seize on all bearings and pulleys (any metal to metal surface) as you slide them on the shaft. See figure 13.
- 9. Reinstall in unit and check for smooth operation.
- 10. Adjust cutter belt if needed.

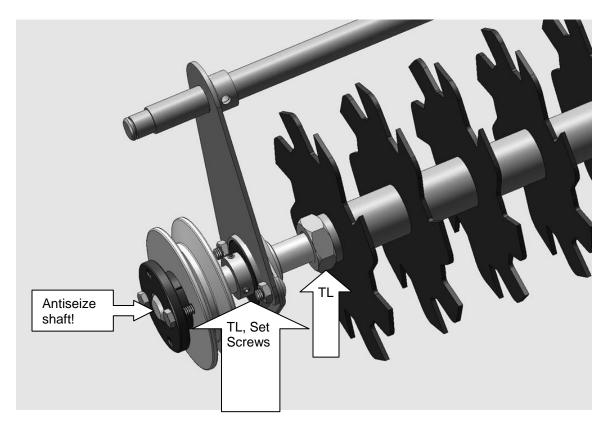


Figure 13. "TL"-Thread Lock.

• Seed gate cable adjustment.

- 1. Set seed flow to off position.
- 2. Check for any gaps in between the seed gate and frame.
- **3.** Make any needed adjustments to the seed gate cable if needed. Do not adjust the cable where there is excessive tension placed on the cable due to pulling the seed gate past the limit of travel.

Storage and Troubleshooting

Storage

- Follow the "after each use" section on page 12.
- Drip a couple of drops of oil down each cable to prevent rust from forming on the cables.
- Drain fuel from engine and carburetor bowl, or add a fuel stabilizer.

Troubleshooting

Problem	Possible Cause	Correction
Engine will not start.	Out of gas. Low Oil. Kill switch.	Fill gas. Top off oil. Hold down OP handle or attach lanyard.
Engine shutting off on hills or when turning.	Engine is low on oil. Oil switch is detecting low oil.	Top engine off with oil. Remove orange wire from the front off the engine if hill is excessive (> 30 deg.)
Engine is stalling.	Blades are set to deep in the ground or ground is too wet.	Set blades to a higher setting or wait for ground to dry.
Transmission won't engage.	Transmission T-handle not inserted into frame.	Insert T-handle, see page 7.
Unit lacks power going up hills.	Transmission belt is slipping due to belt stretch.	Follow adjusting procedure on page 14.
Seed hopper gate will not open.	Dirt is building up between the seed gate and frame.	See page 9, for cleaning procedure.
Excessive vibration	Broken blade. Worn bearing.	Replace all blades. Replace both bearings.

Warranty

Limited Warranty for Turf Revitalizer (6hp and 14hp models)

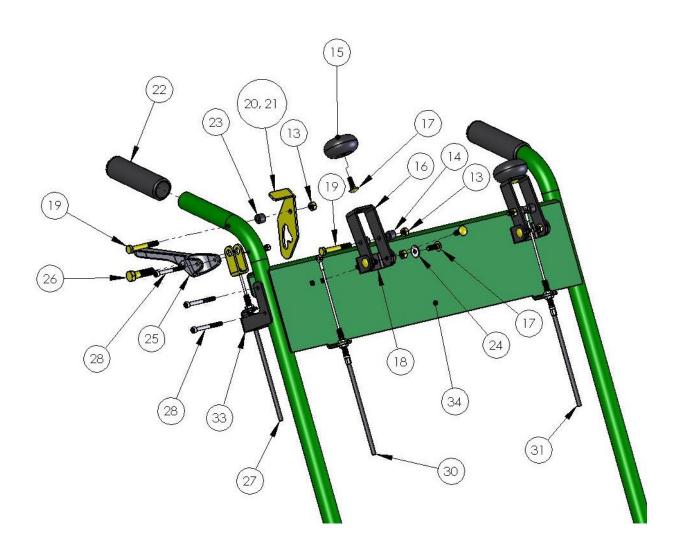
The product carries a 2-year limited warranty from the date of purchase for the original purchaser. Lawn Solutions will replace for the original purchaser free of charge any part or parts found to be defective in material or workmanship. Lawn Solutions may require the defective parts to be returned for further examination. Due to the ease of maintenance on the product, this is a parts only warranty.

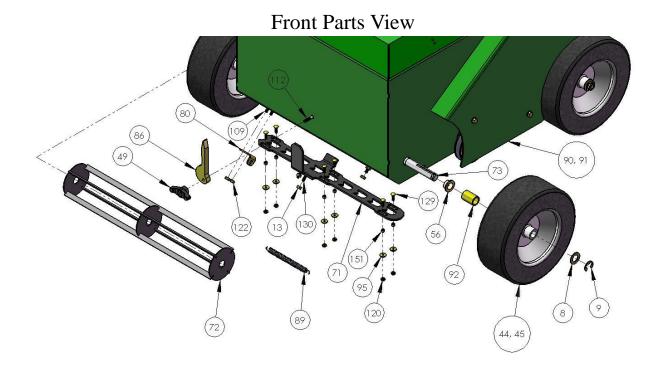
This is a limited warranty and does not cover damage from abuse to include failure to transport the product correctly. The warrant does not cover standard service items like belts, blades, bushings and bearings.

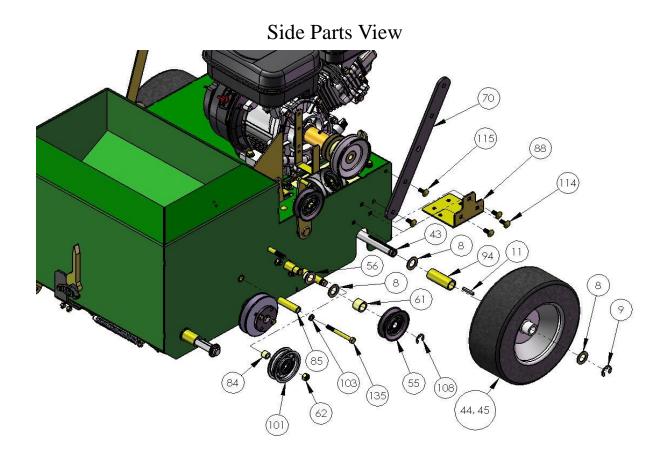
On 3rd party items like an engine and transmission, Lawn Solutions may provide replacement parts, but it will be up to the OEM to refund any warranty work or part costs.

Lawn Solutions will overnight parts if requested and at the cost of the requester, otherwise Lawn Solutions will pay standard shipping charges except for 3rd party items (engine and transmission).

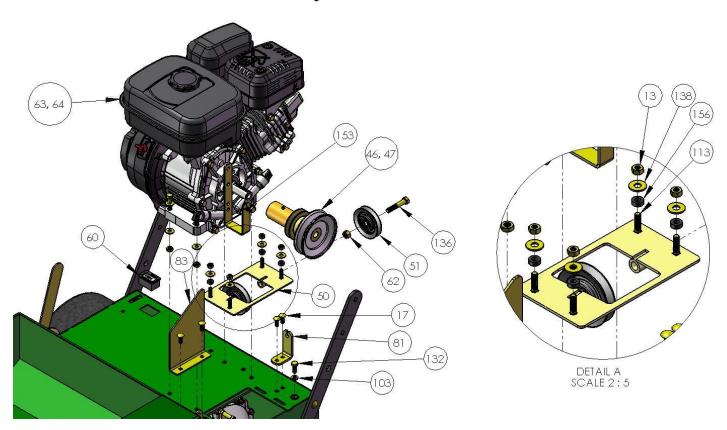
Control Panel ASM

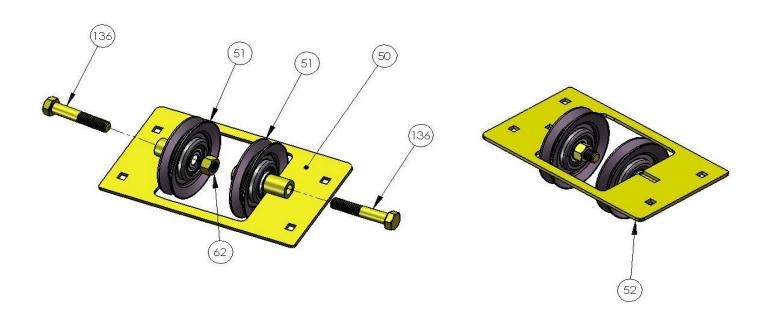


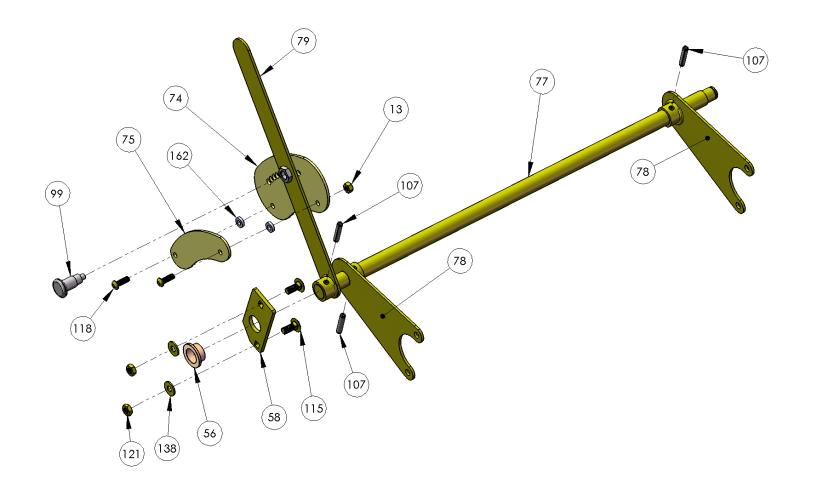


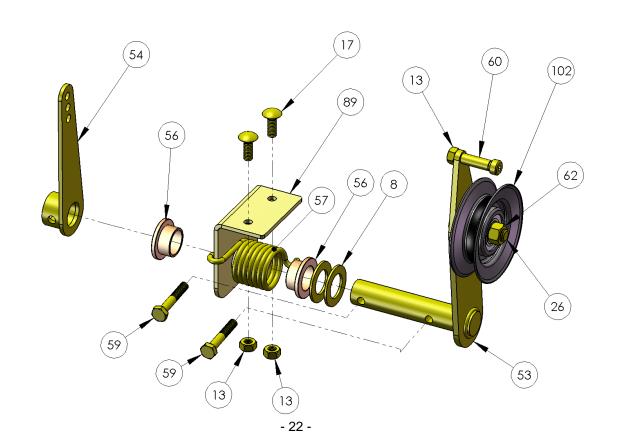


Top Parts View

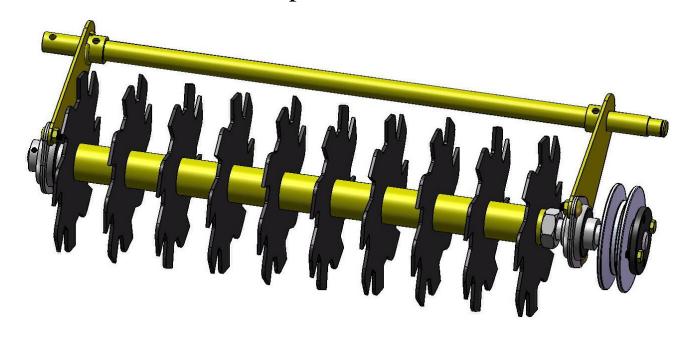


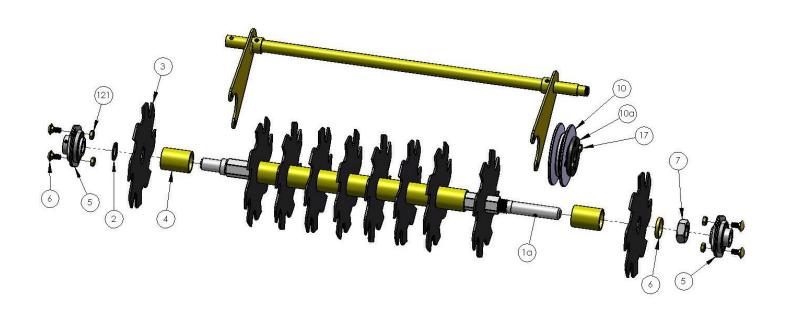




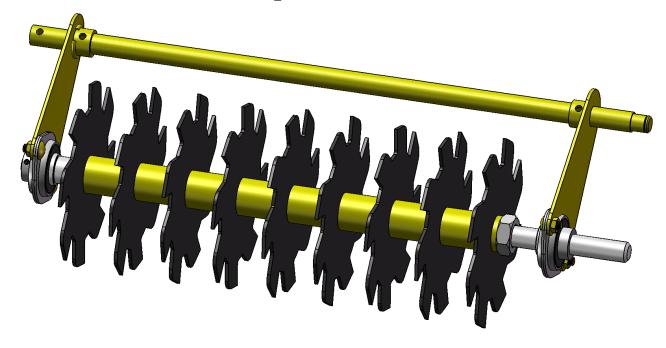


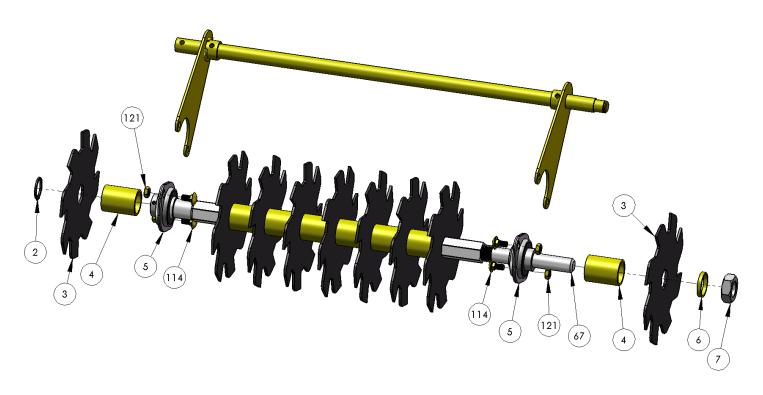
9-hp Reel ASM





6-hp Reel ASM





Parts Not Shown in Diagrams

Part		
Number	Item	Descriptions
LS0039	39	Belt - Transmission (6-hp) TR2060
LS0040	40	Belt - Transmission (9-hp) TR2090 & TR2085
LS0040b	40b	Belt – Transmission TR24
LS0040c	40c	Belt – Transmission TR30
LS0041	41	Belt - Cutter Blades (6-hp) TR2060
LS0042	42	Belt - Cutter Blades (9-hp) TR2090 & TR2085
LS0042b	42b	Belt – Cutter Blades TR24 & TR30
LS0035	35	OP Handle Kill Switch ASM (For use with models that use a Red Plastic OP Handle)
LS0143	143	OP Kill Switch - terminal connector only (For use with models that use a Red Plastic OP Handle)
LS0144	144	OP Kill Switch - Switch only (For use with models that use a Red Plastic OP Handle) If unit has Red Metal OP Handle use LS0157.
LS0036	36	Lanyard Kill Switch
LS0037	37	Lanyard
LS0125	125	Scotchlok Moisture Resitant Splice
LS0126	126	Ring Terminal 22-18ga wire w/ 5/16" Stud
LS0127	127	Butt Splice 22018ga wire
LS0128	128	Small Black Wire Ties
LS0038	38	Decal Set - Turf Revitalizer
LS0038B	38B	Decal Seed Flow Graph - TR
LS0097	97	Toe Guard - 6hp
LS0098	98	Toe Guard - 9hp
LS0148	148	Hopper Cover Latch
LS0150	150	Sendec Hr Meter
LS0154	154	Seed Hopper Cover 20"

Service Parts List

Number N	Part	_	<u> </u>
LS0001a 1a Cutter Shaft 20" Fits Model (TR2090xxx1) LS0001b 1b Cutter Shaft 24" Fits Model (TR2414xxx1) LS0001c 1c Cutter Shaft 30" Fits Model (TR3014xxx1) LS0002 2 Retaining Ring - 1" Heavy Duty LS0003 3 Cutter Blade (.120") LS0004 4 Cutter Spacer (1 3/8" x 1.825) LS0005a 5a 3/4" Bearing NOTE: (Carrier bearing for transmission on TR24 and TR30) Cutter Shaft Bearing is LS0005 LS0005 5 3/4" Shielded Bearing (Cutter Shaft Bearing on all models) LS0006 6 Cutter Spacer (1 3/8" x 0.200) LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever		Item	Descriptions
LS0001b 1b Cutter Shaft 24" Fits Model (TR2414xxx1) LS0001c 1c Cutter Shaft 30" Fits Model (TR3014xxx1) LS0002 2 Retaining Ring - 1" Heavy Duty LS0003 3 Cutter Blade (.120") LS0004 4 Cutter Spacer (1 3/8" x 1.825) LS0005 5a 3/4" Bearing NOTE: (Carrier bearing for transmission on TR24 and TR30) Cutter Shaft Bearing is LS0005 LS0005 5 3/4" Shielded Bearing (Cutter Shaft Bearing on all models) LS0006 6 Cutter Spacer (1 3/8" x 0.200) LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0010 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0001	1	Cutter Shaft 18" Fits Model (TR2060xxx1)
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LS0002 2 Retaining Ring - 1" Heavy Duty LS0003 3 Cutter Blade (.120") LS0004 4 Cutter Spacer (1 3/8" x 1.825) LS0005a 5a 3/4" Bearing NOTE: (Carrier bearing for transmission on TR24 and TR30) Cutter Shaft Bearing is LS0005 LS0005 5 3/4" Shielded Bearing (Cutter Shaft Bearing on all models) LS0006 6 Cutter Spacer (1 3/8" x 0.200) LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0001b	1b	Cutter Shaft 24" Fits Model (TR2414xxx1)
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LS0004 4 Cutter Spacer (1 3/8" x 1.825) LS0005a 5a 3/4" Bearing NOTE: (Carrier bearing for transmission on TR24 and TR30) Cutter Shaft Bearing is LS0005 LS0005 5 3/4" Shielded Bearing (Cutter Shaft Bearing on all models) LS0006 6 Cutter Spacer (1 3/8" x 0.200) LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12c 30" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0002	2	Retaining Ring - 1" Heavy Duty
LS0005a 5a 3/4" Bearing NOTE: (Carrier bearing for transmission on TR24 and TR30) Cutter Shaft Bearing is LS0005 LS0005 5 3/4" Shielded Bearing (Cutter Shaft Bearing on all models) LS0006 6 Cutter Spacer (1 3/8" x 0.200) LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0003	3	Cutter Blade (.120")
LS0005	LS0004	4	Cutter Spacer (1 3/8" x 1.825)
LS0006 6 Cutter Spacer (1 3/8" x 0.200) LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0005a		
LS0007 7 Nut - 7/8-14 Jam LS0008 8 Washer Flat (1.25 - 0.76) LS0009 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0005	5	3/4" Shielded Bearing (Cutter Shaft Bearing on all models)
LS0008	LS0006	6	Cutter Spacer (1 3/8" x 0.200)
LS0010 9 E-Clip - 3/4" LS0010 10 Pulley - 4" Cast LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0007	7	Nut - 7/8-14 Jam
LS0010 10 Pulley - 4" Cast LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0008	8	Washer Flat (1.25 - 0.76)
LS0010a 10a Pulley - Split Taper Bushing (3/4" Bore) LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0009	9	E-Clip - 3/4"
LS0011 11 Key Stock 3/16" x 3/16" x 1.25" (undersized) LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0010	10	Pulley - 4" Cast
LS0012 12 9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only) LS0012a 12a 6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0010a	10a	Pulley - Split Taper Bushing (3/4" Bore)
LS0012	LS0011	11	Key Stock 3/16" x 3/16" x 1.25" (undersized)
LS0012a 12a for reference only) LS0012b 12b 24" Cutter Reel ASM (Fits Model TR2414xxx1) LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0012		9-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 23; shown for reference only)
LS0012c 12c 30" Cutter Reel ASM (Fits Model TR3014xxx1) LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0012a	12a	6-hp Cutter Reel ASM (Does not include Pivot ASM shown on pg 24; shown for reference only)
LS0013 13 Nut - 1/4-20 Locking LS0014 14 Nylon Spacers 1/2" Long LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0012b	12b	24" Cutter Reel ASM (Fits Model TR2414xxx1)
LS0014	LS0012c	12c	30" Cutter Reel ASM (Fits Model TR3014xxx1)
LS0015 15 Ball Knob 1/4" - 20 LS0016 16 Control Pivot Lever	LS0013	13	Nut - 1/4-20 Locking
LS0016 16 Control Pivot Lever	LS0014	14	Nylon Spacers 1/2" Long
	LS0015	15	Ball Knob 1/4" - 20
LS0017 17 Carriage Bolt 1/4-20 x 3/4"	LS0016	16	Control Pivot Lever
	LS0017	17	Carriage Bolt 1/4-20 x 3/4"

LS0018	18	Control Base Brkt
LS0019	19	Bolt - 1/4-20 x 2" Hex Head
LS0020	20	Neutral Lock (6hp)
LS0021	21	Neutral Lock (9hp-14hp)
LS0022	22	Rubber Grip - 1" Bar
LS0023	23	Nylon Spacer 3/8" Long
LS0024	24	Nylon Washer (White) .062 thick
LS0025	25	Handle - Aluminum Cast
LS0026	26	Bolt - 3/8-16 x 1-1/2" Hex Head
LS0027	27	Cable - Transmission
LS0028	28	Button Head Cap Screw 5mm8 x 55mm
LS0029	29	Lock Nut - 5mm0.8
LS0030	30	Cable - Seed Flow
LS0031	31	Cable - Cutter
LS0032	32	Washer - 1/4"
LS0033	33	Trans Cable Brkt (Handle)
LS0034	34	Handle ASM TR20xxxxA1-TR20xxxxB1 (Some earlier TR20xxxxC1 have this handle)
LS0034a	34a	Folding Handle ASM for TR20xxxxC1-TR20xxxxD1
LS0034b	34b	Handle ASM for TR24
LS0034c	34c	Handle ASM for TR30
LS0035	35	OP Handle Kill Switch ASM (For use with models that use a Red Plastic OP Handle)
LS0036	36	Lanyard Kill Switch
LS0037	37	Lanyard
LS0038	38	Decal Set - Turf Revitalizer
LS0038B	38B	Decal Seed Flow Graph - TR
LS0039	39	Belt - Transmission (6-hp)
LS0040	40	Belt - Transmission (9-hp)
LS0040b	40b	Belt – Transmission TR24

LS0040c	40c	Belt – Transmission TR30
LS0041	41	Belt - Cutter Blades (6-hp)
LS0042	42	Belt - Cutter Blades (9-hp)
LS0042a	42a	Belt – Cutter Blades TR24 & TR30
LS0043	43	Transmission
LS0043b	43b	Transmission TR24
LS0043c	43c	Transmission TR30
LS0044	44	Tire 4.10 / 3.50 - 4 (6hp)
LS0045	45	Tire 11/4.00-4 (9hp)
LS0045a	45a	Tire and Wheel ASM 13" TR24 & TR30
LS0046	46	Pulley - 6hp Engine
LS0047	47	Pulley - 9hp – 14hp Engine
LS0048	48	Cable - Trans Neutral Valve
LS0049	49	T-Knob 1/4" - 20
LS0050	50	Trans Idler Brkt
LS0051	51	Pulley - Trans Idler
LS0052	52	Complete Trans Idler ASM
LS0053	53	Idler Arm ASM
LS0054	54	Arm ASM (Cutter Cable)
LS0055	55	Pulley - V-Idler w/ .625 Bore
LS0056	56	Bushing Bronze
LS0057	57	Spring Torsion - 7.23 Coils
LS0058	58	Bushing Support Bracket
LS0059	59	Bolt - 1/4-20 x 1-3/8" Hex Head
LS0060	60	5/16" Shoulder Bolt (1/4-20 head)
LS0061	61	Spacer 1" x 0.75
LS0062	62	Nut - 3/8-16 Locking
LS0063	63	Engine - 6.0 HP
LS0064	64	Engine - 9.0 HP

LS0065	65	Engine - 13.5 HP
LS0066	66	Carriage Bolt 5/16-18 x 5/8"
LS0069	69	Frame ASM - TR20"
LS0070	70	Handle Extensions - TR20xxxxA1-TR20xxxxB1 (Some earlier TR20xxxxC1 have this handle) (Flat Steel)
LS0070a	70a	Folding Handle Extensions TR20xxxxC1-TR20xxxxD1 (Round Tube)
LS0071	71	20" Seed Gate TR20
LS0071b	71b	24" Seed Gate TR24
LS0071c	71c	30" Seed Gate TR30
LS0072	72	20" Mixer TR20 See Note Below.
LS0072b	72b	24" Mixer TR24
LS0072c	72c	30" Mixer TR30
Note		LS0072 is Hex and Fits LS0073; Units Equipped with a round Axle must order both parts.
LS0073	73	20" Axle Hex Front Shaft TR20
LS0073b	73b	24" Axle Hex Front Shaft TR24
LS0073c	73c	30" Axle Hex Front Shaft TR30
LS0074	74	Depth Bracket Inner (w/ holes)
LS0075	75	Depth Bracket Outer
LS0076	76	Bearing Holder (47mm Flange)
LS0077	77	20" Cutter Pivot Shaft TR20
LS0077b	77b	24" Cutter Pivot Shaft TR24
LS0077c	77c	30" Cutter Pivot Shaft TR30
LS0078	78	Bearing Fork TR20
LS0078b	78b	Bearing Fork TR24 & TR30
LS0079	79	Depth Control Arm TR20
LS0079b	79b	Depth Control Arm TR24 & TR30
LS0080	80	Cable Bracket (Seed Gate Front)
LS0081	81	Cable Bracket (Cutter on Frame)
LS0082	82	Trans Cable Brkt (Bottom)

LS0083	83	Finger Guard TR20
LS0083b	83b	Finger Guard TR24 & TR30
LS0084	84	Spacer 5/8" x 0.480
LS0085	85	Spacer 5/8" x 2.25
LS0086	86	Seed Flow Dial
LS0088	88	Trans Mount Bracket
LS0088a	88a	Transmission Mount Frame Side TR24 & TR30
LS0088b	88b	Transmission Mount Center TR24 & TR30
LS0089	89	Idler Arm Support Bracket (Bottom)
LS0090	90	Belt Cover - 9hp
LS0090b	90b	Belt Cover TR24 & TR30
LS0091	91	Belt Cover - 6hp
LS0092	92	Spacer 1" x 1.47
LS0094	94	Spacer 1" x 2.54
LS0095	95	Washer Flat (0.625 - 0.190)
LS0096	96	Spring Extension (#96)
LS0097	97	Toe Guard - 6hp
LS0098	98	Toe Guard - 9hp
LS0098b	98b	Toe Guard – TR24 & TR30
LS0099	99	Plunger ASM
LS0101	101	Pulley - Flat Idler
LS0102	102	Pulley - V-Idler
LS0103	103	Washer Lock 5/16"
LS0104	104	5/16" - 20 Rivet Nut
LS0105	105	Adhesive Cord (wire) clip
LS0107	107	Spring Pin 1/4" x 1-1/4" (Order LS0312) "3/8" x 2" Spring Pin If your unit is
XREF.		equipped with 1/4" pins drill out to 3/8" an install.
LS0108	108	E-Clip - 5/8"
LS0109	109	Button Head Cap Screw 1/4-20 x 1/2"

LS0110	110	Spring Pin 1/4" x 1" Steel
LS0111	111	Cable Clip 1/4"
LS0112	112	Carriage Bolt 1/4-20 x 1 1/4""
LS0113	1113	Carriage Bolt 1/4-20 x 1"
LS0114	114	Carriage Bolt 5/16-18 x 3/4"
LS0115	115	Carriage Bot 5/16-18 x 1"
LS0118	118	Button Head Cap Screw 1/4-20 x 1"
LS0119	119	Nut - 3/8-16 Jam Locking
LS0120	120	Nut - #10-24 Locking
LS0121	121	Nut - 5/16-18 Locking
LS0122	122	Nut - 1/4-20 Jam Locking
LS0125	125	Scotchlok Moisture Resitant Splice
LS0126	126	Ring Terminal 22-18ga wire w/ 5/16" Stud
LS0127	127	Butt Splice 22018ga wire
LS0128	128	Small Black Wire Ties
LS0129	129	Button Head Cap Screw #10-24 x 3/4"
LS0130	130	Button Head Cap Screw 1/4-20 x 3/4"
LS0131	131	Bolt - 1/4-20 x 1" Hex Head
LS0132	132	Bolt - 5/16-18 x 3/4" Hex Head
LS0133	133	Bolt - 5/16-18 x 1-1/2" Hex Head
LS0134	134	Bolt - 5/16-18 x 2-1/2" Hex Head
LS0135	135	Bolt - 5/16-18 x 3" Hex Head
LS0136	136	Bolt - 3/8-16 x 2" Hex Head
LS0137	137	Washer - #10 (3/16")
LS0138	138	Washer - 5/16"
LS0140	140	OP Kill Switch Rubber Boot (For use with models that use a Red Plastic OP Handle)
LS0141	141	OP Kill Switch Handle Clamp (For use with models that use a Red Plastic OP Handle)
LS0142	142	OP Kill Switch - Clamp Screw (For use with models that use a Red Plastic

		OP Handle)
LS0143	143	OP Kill Switch – connector (For use with models that use a Red Plastic OP Handle)
LS0144	144	OP Kill Switch - Switch only (For use with models that use a Red Plastic OP Handle)
LS0148	148	Hopper Cover Latch
LS0149	149	Trans Torq Bracket
LS0150	150	Sendec Hr Meter
LS0151	151	Spacer 0.312 x 0.187 x 0.215 (Seed Gate)
LS0152	152	Bolt - 1/4-20 x 3/4" Hex Head
LS0153	153	Cable Support Bracket
LS0154	154	Seed Hopper Cover 20"
LS0156		OP Red Metal Handle (For use with units that have Red Metal OP Handle)
LS0156a		OP Linkage (For use with units that have Red Metal OP Handle)
LS0157		OP Switch Gray (For use with units that have Red Metal OP Handle)
LS0160		OP Spring Yellow Zinc (For use with units that have Red Metal OP Handle)