



MODELS:

TR-20H / TR-20B / TR-20K
TURF RAKE

TR-20MH / TR-20MB
TURF RAKE with MULTI-PURPOSE BLADE

TR-20RH / TR-20RB
TURF RAKE with SPRING TINE REEL

TS-20H / TS-20B / TS-20K
TURF SEEDER



MAN C100618
Rev. G



SCHILLER

GROUNDS
CARE

OPERATING & PARTS MANUAL

TURF RAKE/ SEEDER

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
www.p65warnings.ca.gov

AVERTISSEMENT

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.
www.p65warnings.ca.gov

ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos químicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.
www.p65warnings.ca.gov



CALIFORNIA Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
WASH HANDS AFTER HANDLING.
www.p65warnings.ca.gov

TURF RAKE/ SEEDER

IMPORTANT MESSAGE

Thank you for purchasing this Classen product. You have purchased a world class product, one of the best designed and built anywhere.

This product comes with a Parts/Operator's Manual. The useful life and good service you receive from this product depends to a large extent on how well you read and understand this manual. Treat this product properly and adjust it as instructed, and it will give you many years of reliable service.

See a Classen dealer for any service or parts needed. Classen service ensures that you continue to receive the best results possible from Classen products. You can trust Classen replacement parts because they are manufactured with the same high precision and quality as the original parts.

Classen designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this product only as directed in the manual, keep it in good repair and follow safety warnings and instructions. You'll always be glad you did.

CLASSEN®
SCHILLER GROUNDS CARE, INC.
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SOUTHAMPTON, PA 18966
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TURF RAKE/ SEEDER

SAFETY

NOTICE !!!

Unauthorized modifications may present **extreme** safety hazards to operators and bystanders and could also result in product damage.

Schiller Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Schiller Grounds Care, Inc. Engineering Department. Any Schiller Grounds Care, Inc. product that is altered, modified or changed in any manner not specifically authorized after original manufacture—including the addition of “after-market” accessories or component parts not specifically approved by Schiller Grounds Care, Inc.—will result in the Schiller Grounds Care, Inc. Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Schiller Grounds Care, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. Schiller Grounds Care, Inc. will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.



This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.



This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Schiller Grounds Care, Inc. machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage

Schiller Grounds Care, Inc.

1028 Street Road
Southampton, PA 18966 U.S.A
Phone: 215-357-5110
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MODEL NUMBER

SERIAL NUMBER

MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER: This number appears only on your unit. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

TURF RAKE/ SEEDER

SAFETY

Operator Preparation and Training

- Read the operation manual.
- Read the engine manufacturer's owner manual.
- Explain this material to any operator or mechanic who cannot read English.
- Contact your factory representative for clarification if any portion of this material is unclear.
- Adhere to the warnings and instructions depicted in the safety decals on the machines.
- Replace any missing or damaged labels.
- Keep warning labels and this operator's manual legible and intact.
- Become familiar with the safe operation of the equipment, operator controls and safety signs.
- Know how to stop the engine and attachments quickly in an emergency.
- Do not operate or allow another person to operate this machine if there are any questions about safety.
- Train all operators and mechanics; the owner is responsible for training the users and for accidents or injuries occurring to themselves, other people or property.
- Never attempt to use a machine that is damaged or has unauthorized modifications.
- Wear appropriate clothing, including long trousers and gloves.
- Do not operate barefoot or wearing open sandals.
- Do not operate with loose clothing, long hair or jewelry which may get tangled in moving parts.
- Wear hearing protection.
- Wear safety glasses with side shields.
- Wear a dust mask to avoid breathing dust.
- Never allow underage children (as defined by local regulations), unskilled or improperly trained people to operate this equipment.
- Do not operate machine while under the influence of drugs, alcohol, or any other condition of impairment.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

Site Preparation and Circumstances

- Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job.
- Only use accessories and attachments approved by the manufacturer.
- Remove all objects or debris from the area that may be picked up or thrown by the machine.
- Keep pets and people, especially young children, away from the area and immediately cease operation of the equipment if any enter the area.
- Operate only in daylight or in good artificial light.
- Evaluate the terrain to determine how to safely perform the job.

Machine Preparation

- Do not tamper with or defeat safety devices; they exist for your protection.
- Keep guards, shields and interlocked safety devices in place and in proper working condition.
- Keep all fasteners—nuts, bolts and pins—secured.
- Visually inspect blades, blade bolts and the aerating assembly for wear or damage and replace worn or damaged parts.
- Verify that the machine and any attachments are in good operating condition.
- Do not start machine until ready to use.

TURF RAKE/ SEEDER

SAFETY

OPERATION SAFETY

GENERAL

- Use extra care when loading or unloading the machine onto a trailer or truck. Do not use split ramps; use full width ramps.
- Watch out for traffic when near or crossing roadways.
- Do not run the engine in an enclosed area where dangerous carbon monoxide fumes can collect.
- Use extreme caution when reversing or pulling machine towards you.
- Never leave a machine unattended; stop engine.

STARTING

- Start only according to instructions in this manual or on the machine.

Before starting:

- Make sure the bail is released.
 - Make sure hands and feet are clear of the blades.
- Do not change engine governor settings or overspeed the engine. Operating the engine at excessive speed can increase the hazard of personal injury.

MANEUVERING SAFELY

GENERAL

- Slow down before turning.
- Do not rake/seed in reverse unless absolutely necessary; verify area is clear of pets and people.
- Be aware when approaching blind corners, shrubs, trees, tall grass or other objects that may obscure vision.
- Release the bail when crossing surfaces other than grass.

INTERRUPTING OPERATION

- Before leaving the operator's position for refueling, project end, or transport:
 - a. Park on level ground
 - b. Release bail
 - c. Reduce throttle setting
 - d. Shut off the engine
 - e. Wait until blades stop moving
- Before leaving the operator's position for clearing blockages, making blade adjustments, repairs, inspection, checking, cleaning or working on the machine:
 - a. Park on level ground
 - b. Release bail
 - c. Reduce throttle setting
 - d. Shut off the engine
 - e. Wait until blades stop moving
 - f. Disengage the master clutch, disconnect the spark plug wire(s) or remove the key

CAUTION

Some repairs or adjustments as specifically noted, such as for carburetor adjustment, require the engine to be running. Keep hands and feet clear of moving parts in these circumstances.

TURF RAKE/ SEEDER

SAFETY

OPERATING ON SLOPES

All slopes require extra caution. Loss-of-control and tip-over accidents can lead to severe injury or death.

WARNING



- Evaluate the risks involved before operating on slopes
- Do not operate on slopes if uneasy or uncertain. Ultimate responsibility for safe operation on slopes rests with the operator.
- Do not rake/seed steep slopes if:
 - The machine must be crabbed (turned partially sideways uphill) to drive across the slope.
 - The machine turns downhill going across the slope.
 - You are uneasy about being on the slope.
- Travel up and down slopes at a 45° angle to prevent unit from tipping over.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.
- Do not turn on slopes unless necessary, and then turn slowly and downhill when possible.
- Stay away from slopes if the ground is loose or wet.
- Use lower speeds on a slope to avoid stopping or shifting.
- Use extra care with attachments. These can change the stability of the machine.
- Avoid driving over ruts, holes, rocks and roots. Be alert to dips and rises. Uneven terrain can overturn a machine or cause it to slide.
- Do not rake/seed dropoffs, ditches or embankments. The machine could suddenly turn over if a wheel runs over the edge or an edge caves in.

MAINTENANCE SAFETY GENERAL

- Maintain machine according to manufacturer's schedule and instructions for maximum safety and best results.
- Park machine on level ground.
- Never allow untrained personnel to service machine.
- Do not adjust or repair until the engine is stopped and all parts have stopped moving.
- Replace parts if worn, damaged or faulty. For best results, always replace with parts recommended by the manufacturer.
- Disconnect spark plug wire(s) before making any repairs.
- Do not dismantle the machine without releasing or restraining forces which may cause parts to move suddenly.
- Provide adequate support for lifted machine or parts before working beneath them
- Do not put hands or feet near or under rotating parts.
- Clean up oil or fuel spillage thoroughly.
- Replace faulty mufflers.
- Keep the engine, muffler, battery compartment, and fuel storage area free of grass, leaves, debris buildup or grease to reduce fire hazards.
- Guards should only be removed by a qualified technician for maintenance or service. Replace when work is complete.

Blades

WARNING

- Use extra caution when handling the rake/seeder blades. Blades are sharp and can cut.
- Remove obstructions with care; wrap the blade or wear gloves.
- Replace the blade; do not repair, straighten or weld.
- Keep other persons away from blades.



TURF RAKE/ SEEDER

SAFETY

FUEL



WARNING



- Use extra care when handling gasoline and diesel fuels; they are flammable. Gasoline vapors are explosive.
- Store only in containers specifically designed for fuel.
- When refueling or checking fuel level:
 - Stop the engine and allow to cool
 - Do not smoke
 - Refuel outdoors only
 - Use a funnel
 - Do not overfill
 - Clean up all spills and wait for vapors to clear before starting the engine

To prevent static electricity sparks:

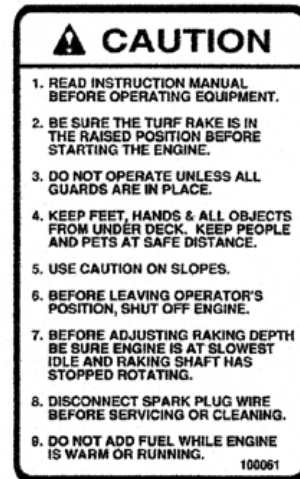
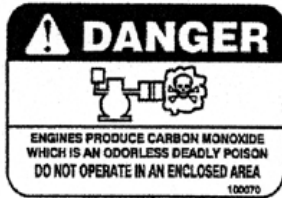
- Keep containers electrically grounded; flowing fuel can generate static electricity.
- Refill fuel containers on the ground away from the vehicle; do not fill containers in a vehicle or on a truck or trailer bed with a plastic liner.
- When practical, remove equipment from the truck or trailer and refuel it on the ground.
- If equipment must be refueled on the truck or trailer, refuel from a portable container rather than a dispenser nozzle.
- Keep the dispenser nozzle in contact with the rim of the fuel tank or container opening until fueling is complete.
- Do not use a nozzle lock-open device.
- Replace caps on fuel cans and tanks securely.
- Change clothing immediately if fuel is spilled on it.

STORAGE SAFETY

- Stop the engine and allow to cool before storing.
- Drain the fuel tank outdoors only.
- Store fuel in an approved container in a cool, dry place.
- Keep the machine and fuel containers in a locked storage place to prevent tampering and to keep children from playing with them.
- Do not store the machine or fuel container near heating appliances with an open flame such as a water heater or an appliance with a pilot light.
- Keep gasoline storage area free of grass, leaves and excessive grease to reduce fire hazard.
- Clean grass and debris from unit, drives, mufflers and engine to help prevent fires.

TURF RAKE/ SEEDER

SAFETY DECALS



TURF RAKE/ SEEDER

SET-UP INSTRUCTIONS

ASSEMBLY / SET UP INSTRUCTIONS

NOTE: Units ship with no gas or oil.

1. READ THE OPERATOR'S MANUAL BEFORE ASSEMBLY.
2. Cut banding and roll rake off pallet.
3. Unfold by pulling up on handle.
4. Slide lock rings down.
5. Add oil to the engine with the engine resting in a level position. Refer to the engine manufacturer's Owners manual for the correct type and amount of oil.
6. Fill the fuel tank according to the engine manufacturer specifications.

SEED BOX INSTALLATION

For shipping purposes only, the seed box assembly is attached to the machine improperly.

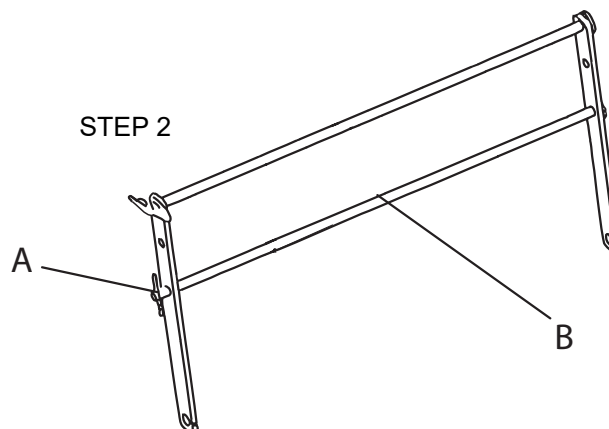
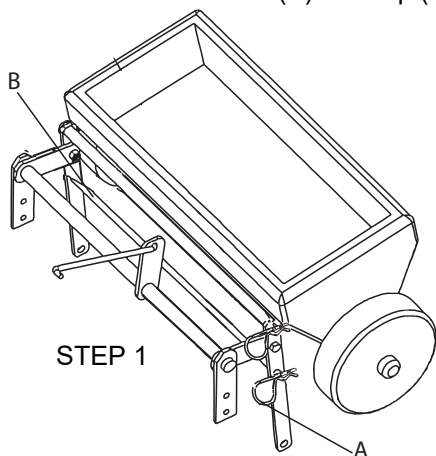
To set up your machine correctly for operation:

STEP 1:

1. Remove hairpin clip (A) from lower connecting rod (B).
2. Slide lower rod (B) out of stabilizing bracket on seed box.

STEP 2:

1. Mount seed box so that the wheels of the seed box are resting on the front wheels of the machine.
2. Reinstall lower rod (B) and clip (A).



PRE-OPERATION CHECK LIST (OWNER'S RESPONSIBILITY)

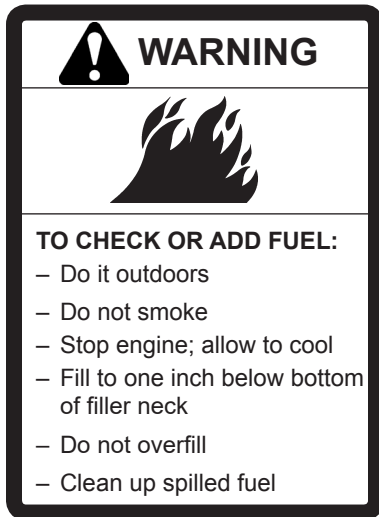
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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">___ Review and follow all safety rules and safety decal instructions.___ Check that all safety decals are installed and in good condition. Replace if damaged.___ Check to make sure all shields and guards are properly installed and in good condition.___ Check that all hardware is properly installed and secured.___ Check that equipment is properly and securely attached to power unit.___ Check to be sure engine is free of dirt and debris. Pay particular attention to the cooling fins, governor parts and muffler. Clean air intake screen. Check air cleaner; service if necessary. | <ul style="list-style-type: none">___ Never allow riders.___ Inspect area and remove stones, branches or other hard objects that might affect operation, cause injury or damage.___ Clean area around oil fill dipstick. Remove dipstick and check to be sure oil is in operating range (between marks on dipstick). Refer to the engine manufacturer's Owners manual for the correct type and amount of oil. Dipstick assembly must always be secured into fill tube when engine is running.___ Check all lubrication points and grease as instructed in engine manual.___ Perform a functional check of the safety interlock system each time you operate the unit. (If present) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

TURF RAKE/ SEEDER

OPERATION

FUELING

- Fill the fuel tank according to the engine manufacturer specifications.
- Use a funnel to avoid spillage.



BEFORE STARTING THE ENGINE

1. Be familiar with the controls, how each functions, and what each operates. Read operator's manual before using.
2. Check engine oil level while the machine is on level ground. Add oil if necessary, following the engine manufacturer's recommendations. Refer to engine manual supplied with machine.
3. Open the fuel valve.
4. Fill the fuel tank with the amount and type of fuel recommended by the engine manufacturer.
5. Check all moving parts, fasteners, and blades. Tighten or replace any if necessary.

STARTING THE ENGINE

Cold starts:

1. Set the throttle lever to the half-open position.
2. Move the choke to the ON position.

Warm starts:

1. Set the throttle to the half-open position.
2. Move the choke to the OFF position.
3. Turn fuel cock to the "open" position.
4. Turn ignition switch to "on".
5. Pull recoil starter rope until engine starts.
6. After engine is warm, move the choke to the OFF position.
7. Allow engine to run one minute before using.

OPERATING

1. Start the engine
2. Move Turf Rake/ Seeder to the area to be raked or seeded.
3. Move height adjustment lever to the appropriate setting for the shaft assembly being used. (see "optional shaft assemblies" section)
4. Engage the bail.
5. Release the bail to stop

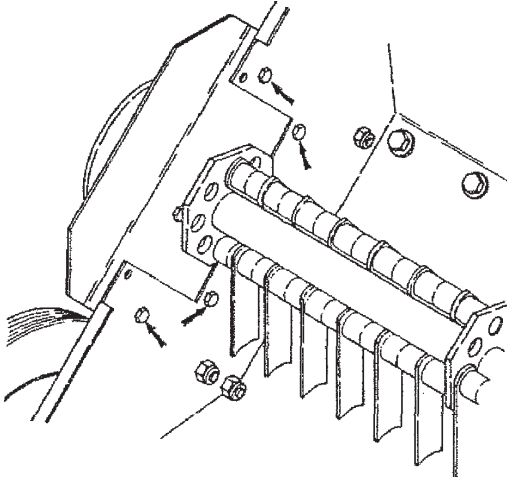
TURF RAKE/ SEEDER

OPERATION

OPTIONAL BLADE ASSEMBLIES

Changing Complete Blade Assemblies

Within minutes your machine can be converted to a turf rake, turf seeder or turf slicer by purchasing the optional blade assemblies available complete with the side plates, bearings and drive pulley.



1. Set unit up on block allowing enough distance beneath machine to change blade assembly.
2. After removing the belt shield, remove twelve bolts (six on the left and six on the right) which hold the blade assembly to the main body.
3. Remove the belt and remove the entire blade assembly. There is no need to loosen any set screws.
4. Next install the optional blade assembly and fasten with six 1/4" x 5/8" bolts on each side. Tighten all bolts on both shields. Center the shaft and tighten the two set screws in each bearing using medium-strength thread locker.
5. When changing back to the original shaft it will not be necessary to loosen any set screws. Only the bolts in the belt shields and the eight bolts holding the shaft will be to be removed.

⚠ CAUTION

BE CERTAIN THAT THE SET SCREWS ARE TIGHTENED PROPERLY IN BEARINGS AND PULLEY WHEN REASSEMBLING.

Changing Partial Blade Assemblies

1. Set unit up on block allowing enough distance beneath machine to change blade assembly.
2. After removing the belt shield, remove twelve bolts (six on the left and six on the right) which hold the blade assembly to the main body.
3. Remove the belt and remove the entire blade assembly.
4. Remove the drive pulley and bearing plates from the main shaft (one on each side). Replace with new shaft. Reinstall the bearing plates and drive pulley on the new shaft using a medium-strength thread locker on the bolt and set screws. The pulley will be positioned on the shaft by bolts, the 1/4" lock washer, and the pulley retainer washer.
5. Reinstall the blade assembly. Ensure the hardware is tightened on the end plates.
6. Route the belt behind the idler pulley and roll the belt onto the lower pulley, then reinstall the belt shield.

TURF RAKE/ SEEDER

CONTROLS

FUEL SHUT OFF (A) - Move to the “OFF” position to shut off the fuel whenever transporting the machine by trailer, truck or during storage. Move to the “ON” position before starting the engine.

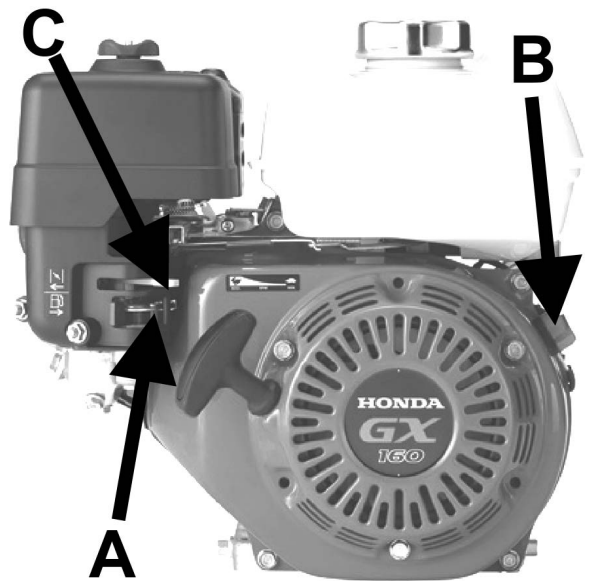
SWITCH (B) -

Move to the “OFF” position to stop the engine.
Move to the “ON” position before starting engine.

Note: the Kohler engine switch is built into the Fuel Shut Off (A).

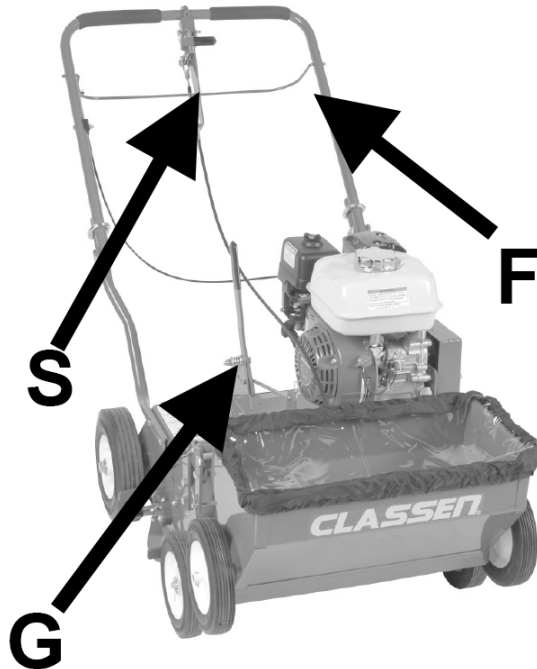
CHOKE (C) -

Move to the “CHOKE” position to apply the choke.
Move to the “RUN” position to remove the choke.

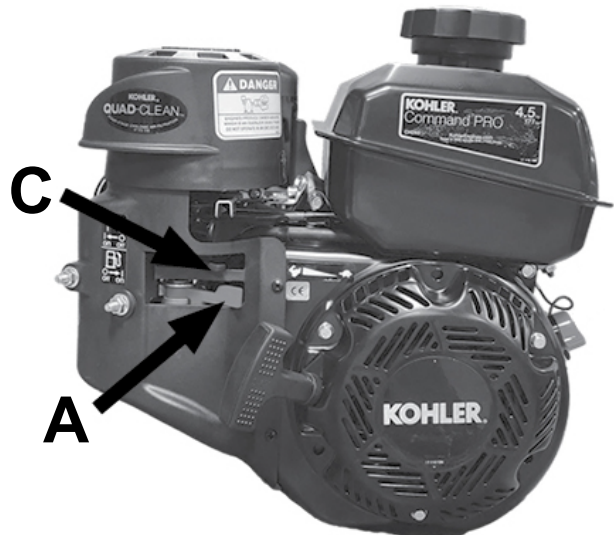
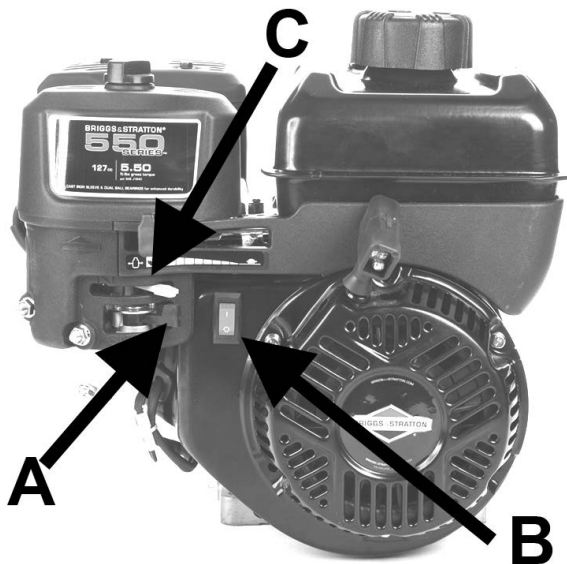


RAKE BAIL (F) - Pull up on bottom bail to engage the main shaft. Release bail to disengage.

HEIGHT ADJUSTMENT (G) - Place on lawn surface and adjust the wheel height up to lower the blades. Adjust wheel height down to raise blades.



SEED FLOW CONTROL (S) - Pull up on bottom bail to engage the main shaft. Release bail to disengage. (SEEDER ONLY)



TURF RAKE/ SEEDER

ADJUSTMENTS

Recommended Height Adjustments

Raking Assembly Height

When using the Turf Rake with its raking (flail) blade assembly adjust the raking height as follows.

Normal height is set by placing the Turf Rake on a hard surface making sure one satellite shaft is at dead bottom. Adjust the wheels so the raking fingers on the bottom shaft just touch the ground. DO NOT set the fingers so that they will penetrate the ground as this will counteract the centrifugal force of the fingers and prevent them from raking properly.

With repeated use, raking side of the fingers will begin to wear. To give the fingers a new square raking edge, remove the end plates and turn the entire main shaft assembly 180° and replace it on the Turf Rake. NOTE: Use Pro-Lock (retaining 1, medium strength) on the 7" pulley on the main shaft.

To prolong the life of the main shaft, extra holes are provided. If the circular holes holding the satellite shafts become distorted, rotate all four satellite shafts to the next set of holes.

When using the Turf Rake with its raking (spring tine) assembly, adjust the raking height as follows:

Normal height is set by placing the Turf rake on a hard surface. Adjust the wheels so the spring blades just barely touch or are slightly above the ground. DO NOT set the spring blades so that they penetrate the ground. Doing this will cause premature damage to the spring blades.

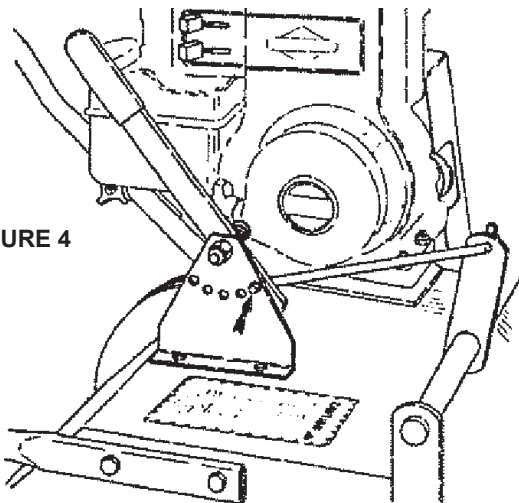


FIGURE 4

Seeding / Multipurpose Blade Assembly Height

The seeding/multipurpose blades are used for cutting grooves for over-seeding and can also be used for verticutting grasses. To set the height properly place unit on the lawn surface and adjust the wheel height up (see Fig. 4). Adjusting the wheel height up lowers the blades.

Seeding:

The proper height setting for over-seeding is approximately 1/4" into the ground. Adjust the wheel height up approximately one notch. If set deeper, grass seed being applied may not germinate.

For best results, over-seed in two passes of 1/2 application rate at right angles or in a criss-cross pattern. Water heavily immediately after seeding then lightly for 10-14 days keeping soil moist.

Slicing

The proper height setting for slicing or aerating is 1/2" to 3/4" into the ground. Adjust the wheel height up one or two notches.

For crawling grasses such as Zoysia, Bermuda, Bahia, etc. raise the wheels only one notch. Crawling grasses should not be sliced too deeply.

For single strand grasses like Bluegrass or Rye, rake/seed in perpendicular directions for more even slicing. For example, slice in a North-South direction on the first pass, switching to an East-West direction on the second pass.

As the seeder/multipurpose blades wear they may be rotated to provide a new cutting edge. The wheels may be raised to allow the blades to penetrate deeper into the ground.

TURF RAKE/ SEEDER

ADJUSTMENTS

Slicer Blade Assembly Height

The slicer blade assembly is recommended for slicing, verticutting or aerating when a thinner blade is preferred. This is the recommended blade for use on golf course greens. To set the height properly place unit on the lawn surface and adjust the wheel height up (see Fig. 4). Adjusting the wheel height up lowers the blades.

The proper height setting for slicing or aerating is 1/2" to 3/4" into the ground. Adjust the wheel height up one or two notches.

For crawling grasses such as Zoysia, Bermuda, Bahia, etc. Raise the wheels only one notch.

Crawling grasses should not be sliced too deeply.

For single strand grasses like Bluegrass or Rye, rake/seed in perpendicular directions for more even slicing. For example, slice in a North-South direction on the first pass, switching to an East-West direction on the second pass.

As the slicer blades wear they may be rotated to provide a new cutting edge. The wheels may be raised to allow the blades to penetrate deeper into the ground.

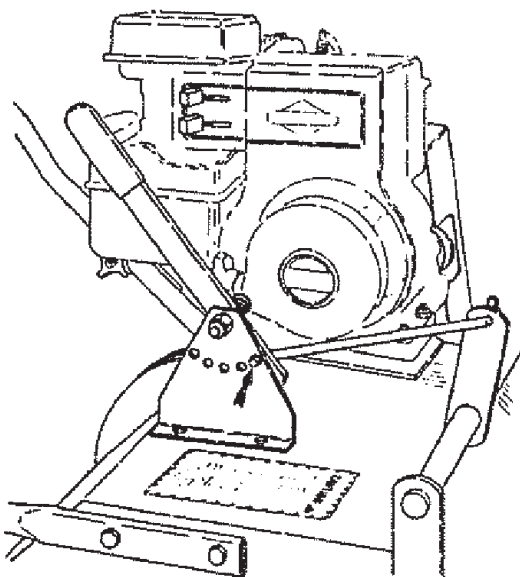


FIGURE 4

TURF RAKE/ SEEDER

MAINTENANCE / STORAGE

DAILY

- Perform daily maintenance checks to keep the turf rake/seeder in good operating condition.
- Use genuine Classen parts or parts with equivalent characteristics including type, strength, and material when replacement parts are required to avoid product malfunction and injury to the operator and/or bystanders.
- Keep all safety decals legible, remove grease, dirt and debris; replace illegible decals immediately.
- Do not operate equipment without shield(s) in place.
- Do not make any adjustments or perform any maintenance while the engine is running.
- Check engine mounting bolts frequently to maintain proper tightness.
- Clean off blades when application is completed and apply a light coat of oil to prevent rust on blades.
- Lubricate the rake each time it is put into service.
- Keep belt free of oil and dirt.
- Check for worn or deteriorating components that could create a hazard.

Engine Maintenance

- Refer to engine manufacturer's Owner's Manual.
- Check engine oil level with engine resting in a level position.
- Inspect air filter element and replace if necessary.
- If carburetor adjustment is necessary, stand to one side and keep feet and hands clear while making adjustments.

STORAGE INSTRUCTIONS

Before the rake is put into storage for any period exceeding 30 days, do the following:

1. Follow the storage instructions included in the engine manufacturer's owner's manual.
2. Lubricate all lubrication fittings.

REMOVE FROM STORAGE

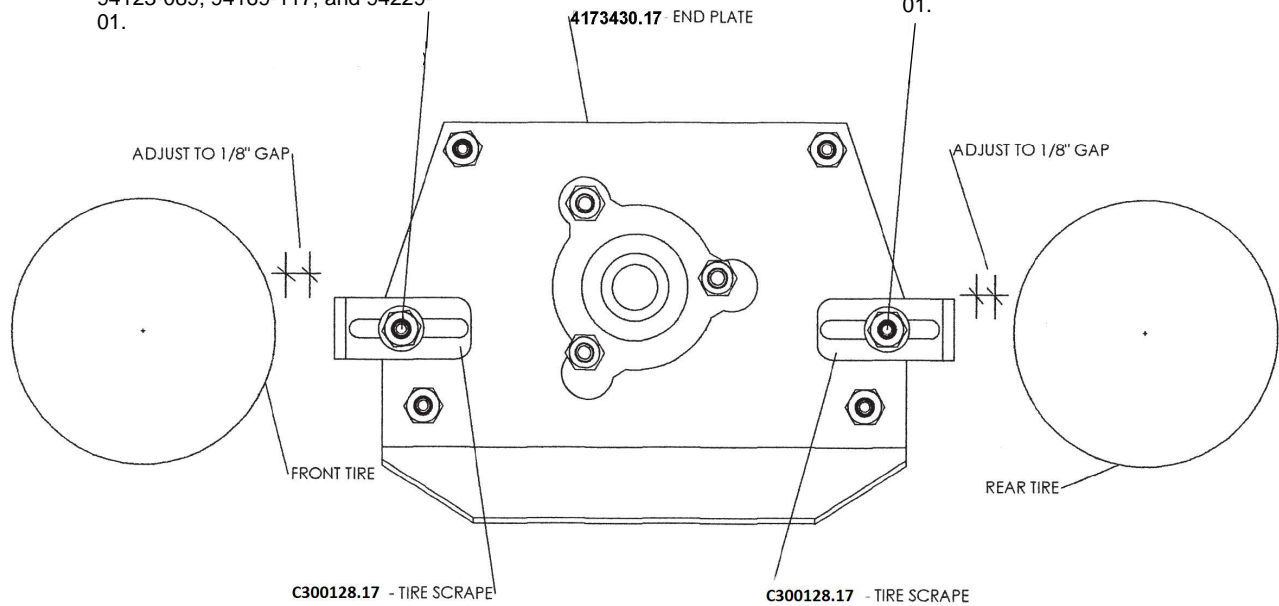
1. Check for loose parts and tighten if necessary.
2. Check for cracked or broken blades and replace.
3. Fill fuel tank.
4. Check oil levels with engine on a flat surface. (refer to Engine Manufacturer's Owner's Manual)
5. Start engine.
6. Check for fuel leaks.
7. Check operation of control handle(s) to make sure unit stops when lever is released.
8. Rake is equipped with fuel shut-off valve, close valve before transporting.

TURF RAKE/ SEEDER
TIRE SCRAPER

TIRE SCRAPER INSTALLATION:

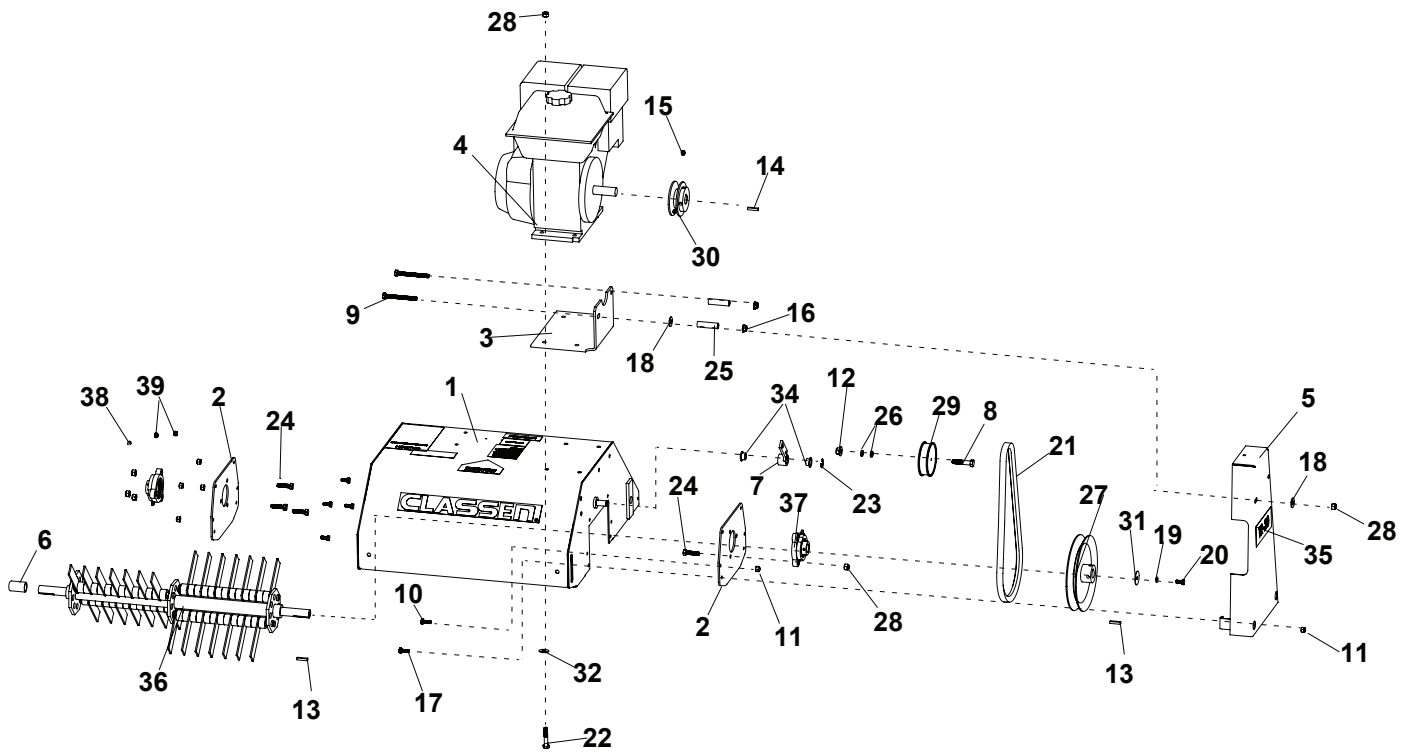
Replace existing bolt and nut with
94123-089, 94169-117, and 94229-
01.

Replace existing bolt and nut with
94123-089, 94169-117, and 94229-
01.



TURF RAKE/ SEEDER

ENGINE & RAKE ASSEMBLY



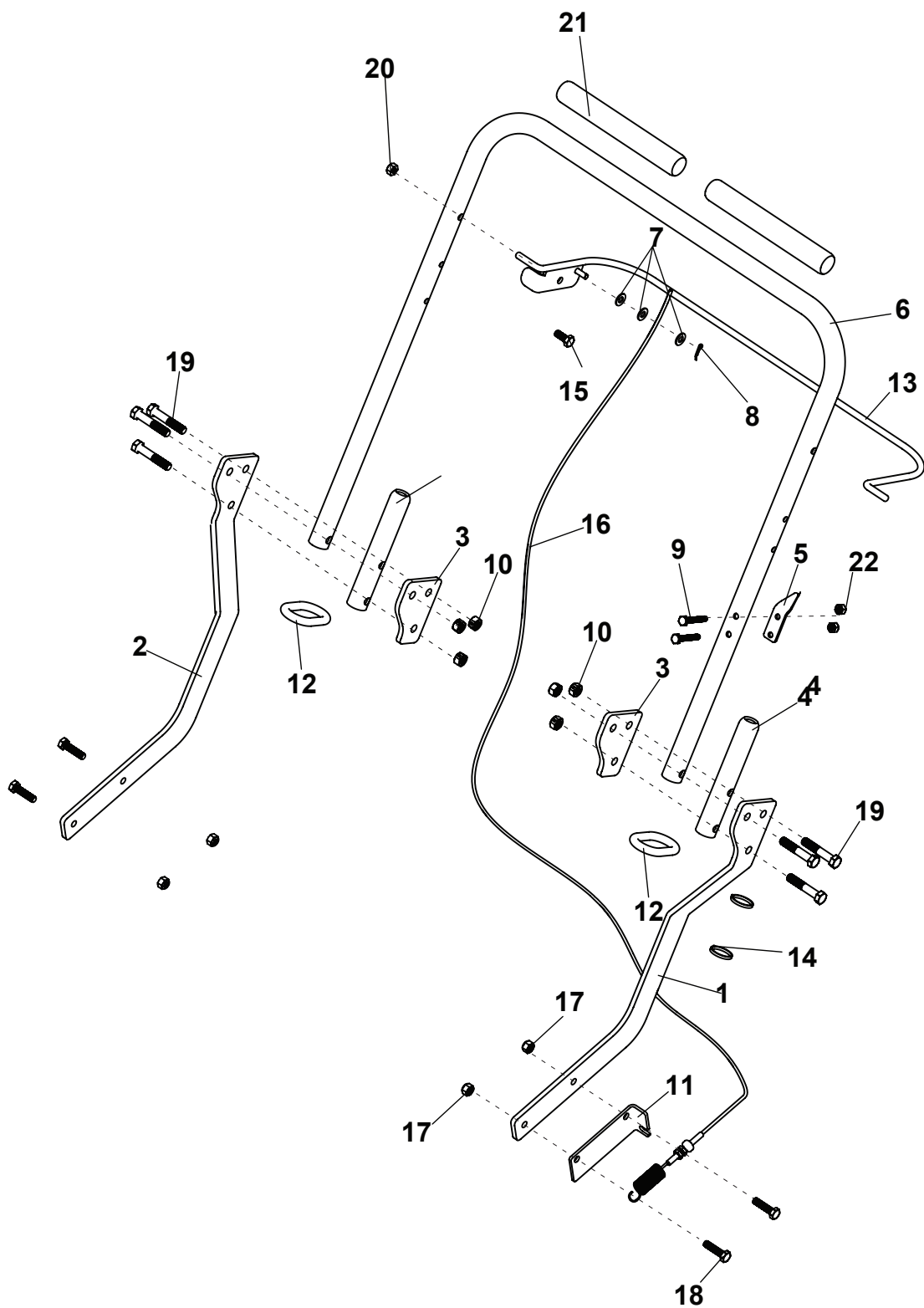
TURF RAKE/ SEEDER

ENGINE & RAKE ASSEMBLY

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4179011	S - RAKE DECK	1				
	4179012	S - SEEDER DECK					
2	4173430.17	PLATE, END TR/TS	2				
3	C300012.17	PAD, ENGINE	1				
4	C100137	HONDA GX160 ENGINE	1				
	C100051	B & S 550 SERIES ENGINE	1				
	102-0004-00	KOHLER CH245 ENGINE	1				
5	4179013	S-GUARD, BELT	1				
6	C100067	GUARD, SHAFT	1				
7	C400035.17	ARM W/ STEEL	1				
8	C500079	BOLT, 3/8-16 X 1-3/4 BOLT,	1				
9	C500086	5/16-18 X 3 TAP BOLT,	2				
10	C500069	1/4-20 X 5/8	8				
11	C500068	NUT, 1/4-20 NYLOC	10				
12	C500081	NUT, 3/8-16 WHIZ LOCK	1				
13	C500011	KEY, 3/16 SQUARE X 1	2				
14	C500240	KEY, 3/16 SQUARE X 1 1/2	1				
15	C500064	SET SCREW, 5/16-18 X	2				
16	C500085	3/8 NUT,5/16-18 WHIZ	2				
17	C500029	LOCK BOLT, 1/4-20 x 3/4	2				
18	C500083	WASHER, 5/16 FLAT	2				
19	C500070	WASHER, 1/4 SPRING LOCK	1				
20	C500071	BOLT, 1/4-28 X 5/8	1				
21	C100065	BELT, RAKE	1				
22	C500074	BOLT, 5/16-18 X 1-3/4	4				
23	C500078	E-RING, 1/2"	1				
24	C500073	BOLT, 5/16-18 X 1-1/4	6				
25	C300029	SPACER, 5/16 X 2	2				
26	C300030	BUSHING, STRUT	2				
27	C100058	PULLEY, DRIVE	1				
28	C500072	NUT, 5/16-18 NYLOC	16				
29	C100072	IDLER W/ FLANGES, FLAT	1				
30	C100038	SHEAVE W/OUT KEY,0	1				
31	C300025	"WASHER, PULLEY RETAINER	1				
32	C500115	WASHER, 5/16 LOCK	4				
34	C100052	BEARING, CONTROL	2				
35	C100075	DECAL, TR-20	1				
36	C600014	SUB-ASSY RAKE	1				
37	C100050	BEARING, FLANGE	2				
38	C500001	FITTING, GREASE	2				
39	C500063	SET SCREW, 1/4-28 X 1/4	4				
40*	C100096	DECAL - ROTATING PARTS	1				

*** NOT ILLUSTRATED**

TURF RAKE/ SEEDER
HANDLE ASSEMBLY



TURF RAKE/ SEEDER

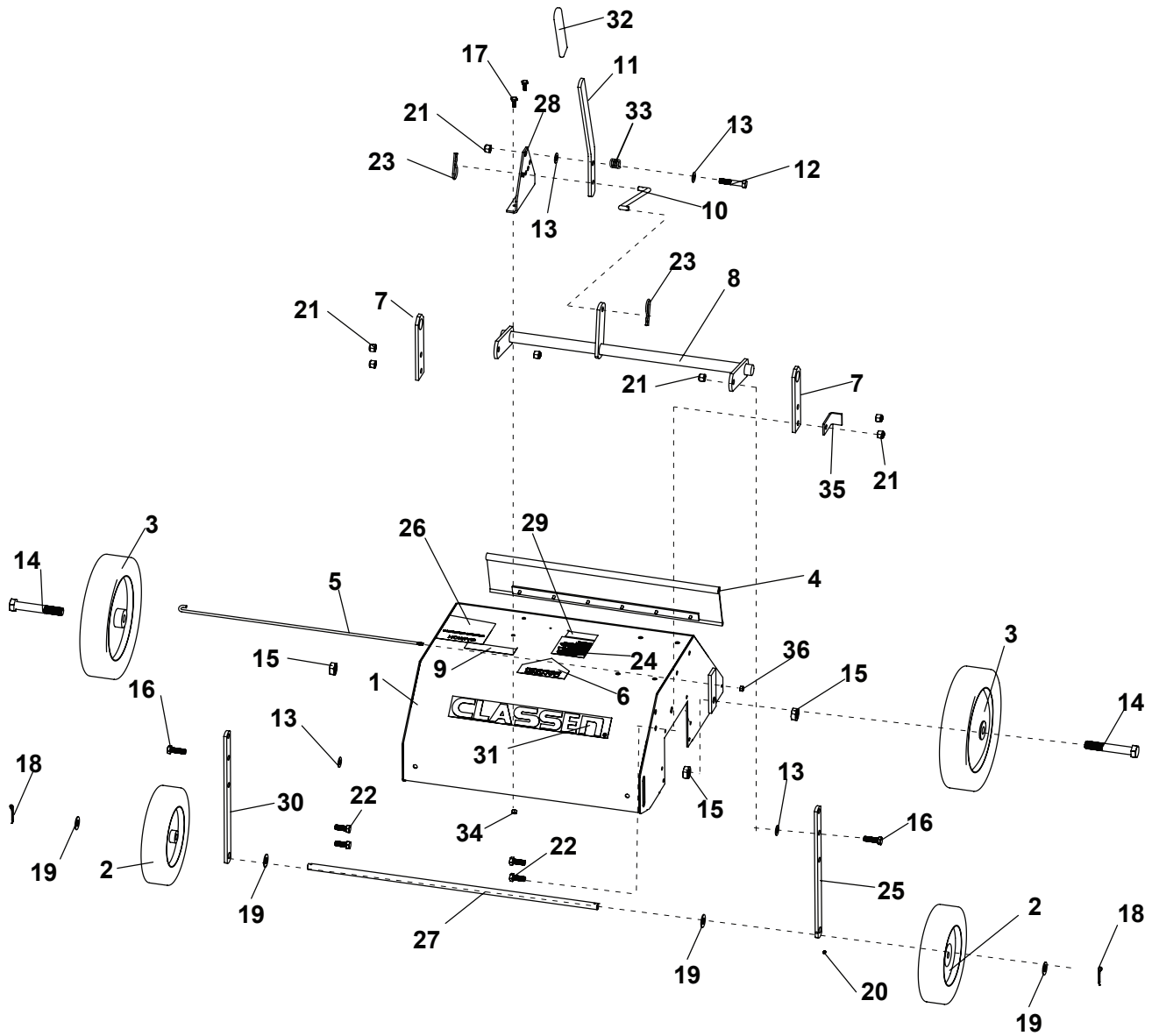
HANDLE ASSEMBLY

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4173268.17	LOWER HANDLE BRACE, LH	1				
2	4173269.17	LOWER HANDLE BRACE,RH	1				
3	4173278.17	HANDLE SUPPORT BRACKET	2				
4	4171952.17	HANDLE ATTACHMENT BAR	2				
5	4172558.17	HANDLE HOOK	1				
6	4173270.17	MAIN HANDLE	1				
7	C500088	WASHER, 1/4" FLAT	3				
8	C500087	PIN, 3/32 X 1/2 COTTER	1				
9	C500118	BOLT, 1/4-20 X 1-3/4	2				
10	C500041	NUT, 3/8-16 LOCK	6				
11	C300024.17	BRACKET, CLUTCH CABLE	1				
12	C100251	RING, HANDLE LOCK	2				
13	C400034.17	HANDLE, BAIL	1				
14	C100020	PLASTIC TIE	2				
15	C500140	BOLT, 5/16-18 x 3/4	1				
16	C100053	CABLE ASSEMBLY	1				
17	C500072	NUT, 5/16-18 NYLOC	4				
18	C500073	BOLT, 5/16-18 X 1-1/4	4				
19	C500091	BOLT, 3/8-16 x 2	6				
20	C500101	NUT, 5/16-18	1				
21	C100261	GRIP, 1 X 7-3/4 HANDLE	2				
22	C500068	NUT, 1/4-20 NYLOC	2				

*** NOT ILLUSTRATED**

TURF RAKE/ SEEDER

MAIN FRAME & WHEELS ASSEMBLY



TURF RAKE/ SEEDER

MAIN FRAME & WHEELS ASSEMBLY

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4179011	S - RAKE DECK	1				
	4179012	S - SEEDER DECK					
2	C100064	WHEEL ASSY, 8" FRONT	2				
3	C100063	WHEEL ASSY, 10" REAR	2				
4	C300015	DRAG SHIELD	1				
5	C300028	ROD, #10-24 THREADED	1				
6	C100069	DECAL, DANGER	1				
7	C300018.17	MOUNT, HEIGHT ADJUST	2				
8	C400033.17	SHAFT, CRANK ASSEMBLY	1				
9	C100504	DECAL-SPARK ARRESTOR	1				
10	C300026.17	ROD, HEIGHT ADJUSTMENT	1				
11	C300142.17	HEIGHT ADJ. LEVER	1				
12	C500091	BOLT, 3/8-16 x 2	1				
13	C500042	WASHER, 3/8" FLAT	4				
14	C500080	BOLT, 5/8-18 X 4	2				
15	C500077	.625-18 JAM NUT	4				
16	C500134	BOLT, 3/8-16 x 1-1/4	2				
17	C500069	BOLT, 1/4-20 X 5/8	2				
18	C500062	PIN, 1/8 X 1-1/4 COTTER	2				
19	C500034	WASHER, 1/2 FLAT	4				
20	C500066	SET SCREW, 10-32 X 1/4	1				
21	C500076	NUT, 3/8-16 NYLOC	7				
22	C500043	BOLT, 3/8-16 X 1	4				
23	C500092	PIN, HAIR PIN COTTER	2				
24	C100504	SPARK ARRESTOR DECAL	1				
25	C300035.17	SUPPORT, R.H. SEED BOX	1				
26	C100061	DECAL, TURF RAKE OP	1				
27	C300027.17	AXLE, FRONT	1				
28	C300017.17	PLATE, HEIGHT ADJUSTMENT	1				
29	C100071	DECAL, BAIL ENGAGEMENT	1				
30	C300034.17	SUPPORT, L.H. SEED BOX	1				
31	4170316	DECAL, CLASSEN	2				
32	C100007	GRIP, RUBBER	1				
33	C500065	SPRING, COMPRESSION	1				
34	C500068	NUT-1/4-20 NYLOC	2				
35	C300036.17	STOP, ENGAGEMENT ARM	1				
36	C500082	NUT-10-24 NYLOC					

* NOT ILLUSTRATED

TURF RAKE/ SEEDER

LABELS



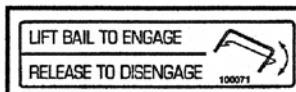
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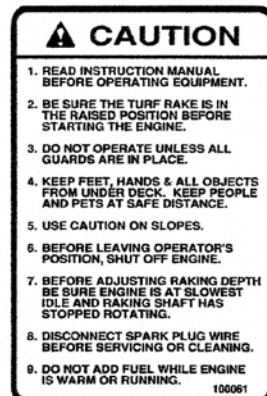
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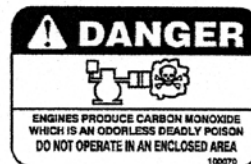
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8

SEED APPLICATION CHART				LAWN PREPARATION:			
THESE SETTINGS ARE APPROXIMATE GUIDELINES. SEEDING RATES ARE SPEED DEPENDENT. FASTER SPEED DELIVERS LESS SEED.				MOW LAWN TO 1 TO 2 INCH HEIGHT. DO NOT MOW PRIOR TO SEEDING. POWER RAKE TO DETHATCH LAWN AND REMOVE THATCH IN COICES OF 1/2 INCH. AERATE LAWN WITH CORE TYPIC AERATOR. ROLL LAWN WITH BROADCAST SPREADER.			
SEED TYPE	1000 SQ. FT.	SETTING	SEED TYPE	1000 SQ. FT.	SETTING		
BENT GRASS	0.5	30	PERCUC (DAI)	0.5	30		
	1.0	35		0.5	30		
	1.5	34		0.5	30		
BERMUDA	2.0	17	RYEGRASS	1.0	16		
	2.5	16		0.5	30		
BLUEGRASS	2.0	16		0.5	30		
	4.0	16		0.5	30		
PERCUC (CREEPING)	0.5	30		0.5	30		
	0.5	30		0.5	30		
	0.5	30		0.5	30		
	0.5	30		0.5	30		

9



10

WARNING
Operation of This Equipment May Create Sparks That Can Start Fires Around Dry Vegetation. A Spark Arrestor May be Required. The Operator Should Contact Local Fire Agencies For Laws or Regulations Relating to Fire Prevention Requirements.
--This label meets California 4442.6

100504



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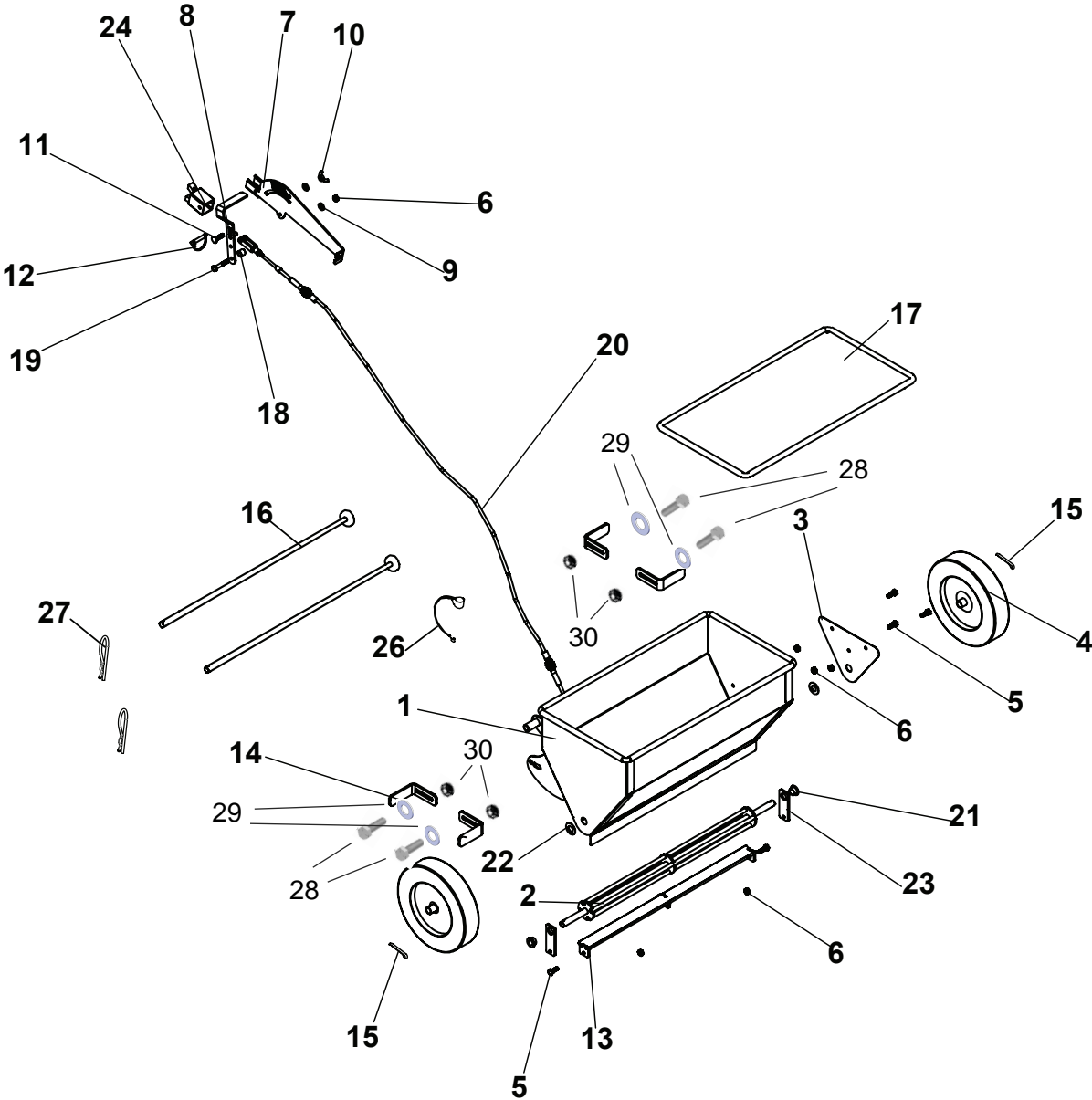
TURF RAKE/ SEEDER

LABELS

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	4170316	DECAL, CLASSEN	2				
2	C100060	DECAL, CAUTION - MUFFLER/ SHIELDS	1				
3	C100075	DECAL, TR-20 (TURF RAKE ONLY)	1				
4	C100071	DECAL,-BAIL ENGAGEMENT	1				
5	C100061	DECAL, CAUTION - OPERATING INST.	1				
6	C100077	DECAL, TS-20 (TURF SEEDER ONLY)	1				
7	C100069	DECAL, DANGER, HANDS/FEET WAY	1				
8	C100070	DECAL, DANGER - CARBON MONOXIDE	1				
9	C100138	DECAL, SEED APPLICATION CHART (TURF SEEDER ONLY)	1				
10	C100096	DECAL, ROTATING PARTS	1				
11	C100504	DECAL, SPARK ARRESTOR	1				
12	430231	DECAL, PROPOSITION 65	1				

TURF RAKE/ SEEDER

SEEDER ASSEMBLY



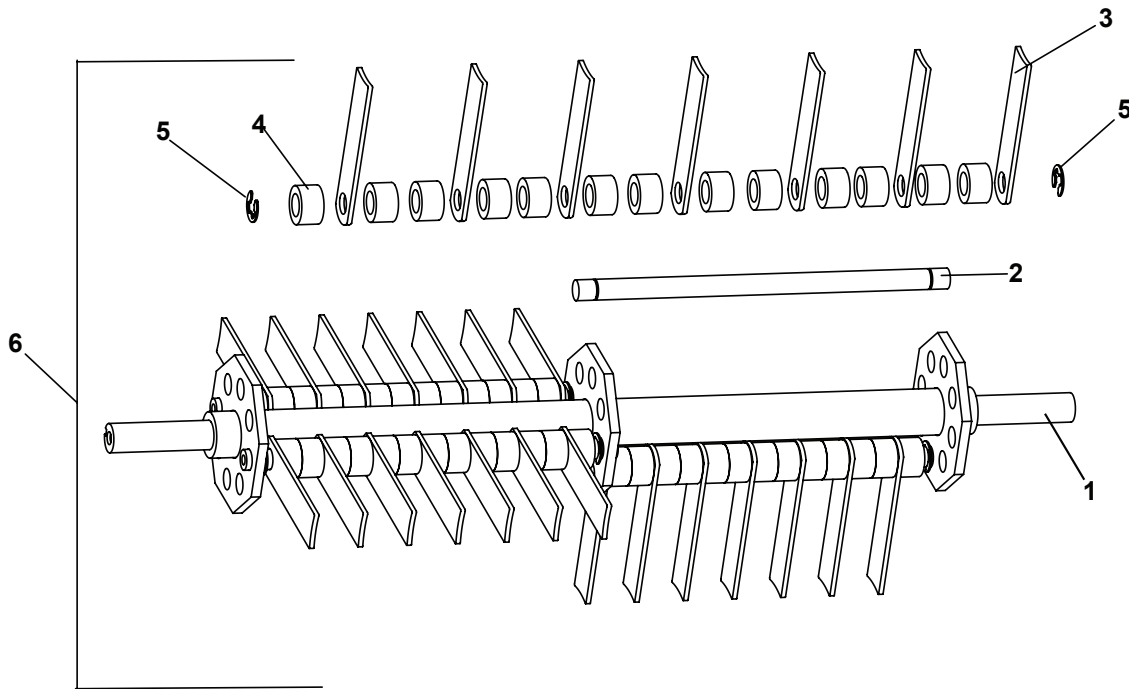
TURF RAKE/ SEEDER

SEEDER ASSEMBLY

ITM	PART NO.	DESCRIPTION	QTY	ITM	PART NO.	DESCRIPTION	QTY
1	C400399.17	HOPPER WELDMENT	1				
2	C400400.17	SPREADER DRUM WELDMENT	1				
3	C400404.17	MAIN BODY LH CLOSURE PLATE	1				
4	C100355	WHEEL, 8" SEED BOX DRIVE	2				
5	C500029	BOLT, 1/4-20 x 3/4	5				
6	C500136	NUT, 1/4-20	6				
7	C400401.17	FLOW CONTROL	1				
8	C400406.17	FLOW CONTROL HANDLE WLDMNT	1				
9	C500088	WASHER, 1/4 FLAT	2				
10	C500119	NUT, 1/4-20 WING	1				
11	C500117	BOLT, 1/4-20 X 1 CARRIAGE	1				
12	C500201	PIN, 1/3 X 1-3/4 CLEVIS	1				
13	C400407.17	SEED GATE WELDMENT	1				
14	C300128.17	WHEEL SCRAPES	4				
15	C500016	PIN, 5/32" x 1-1/4" COTTER	2				
16	C400040	ROD, CONNECTING	2				
17	C100078	COVER, VINYL SEED BOX	1				
18	C400402.17	FLOW CONTROL HANDLE SPACER	1				
19	C500089	BOLT, 1/4-20 X 1-1/2	1				
20	C100624	SEEDER BOX ASSEMBLY	1				
21	250-0002	BEARING, FLANGED, 0.5" ID, 0.5" LG	2				
22	C500034	WASHER, 1/2 FLAT	2				
23	C400408.17	SEED GATE FLAT	2				
24	C400405.17	FLOW CONTROL BRACKET	1				
25	C100074	DECAL, CLASSEN	1				
26	C100308	LANYARD. NYLON	1				
27	C500096	HAIRPIN, 5/32" X 3"	2				
28	94123-089	BLT, HEX HD 1/4-20 X 3/4	4				
29	94163-117	WASHER, 1/4 SAE	4				
30	94229-01	NUT, HEX LOCK 1/4-20	4				
31	C900055	COMPLETE SEEDER BOX ASSY (INCLUDES ITEMS 1-31)					

TURF RAKE/ SEEDER

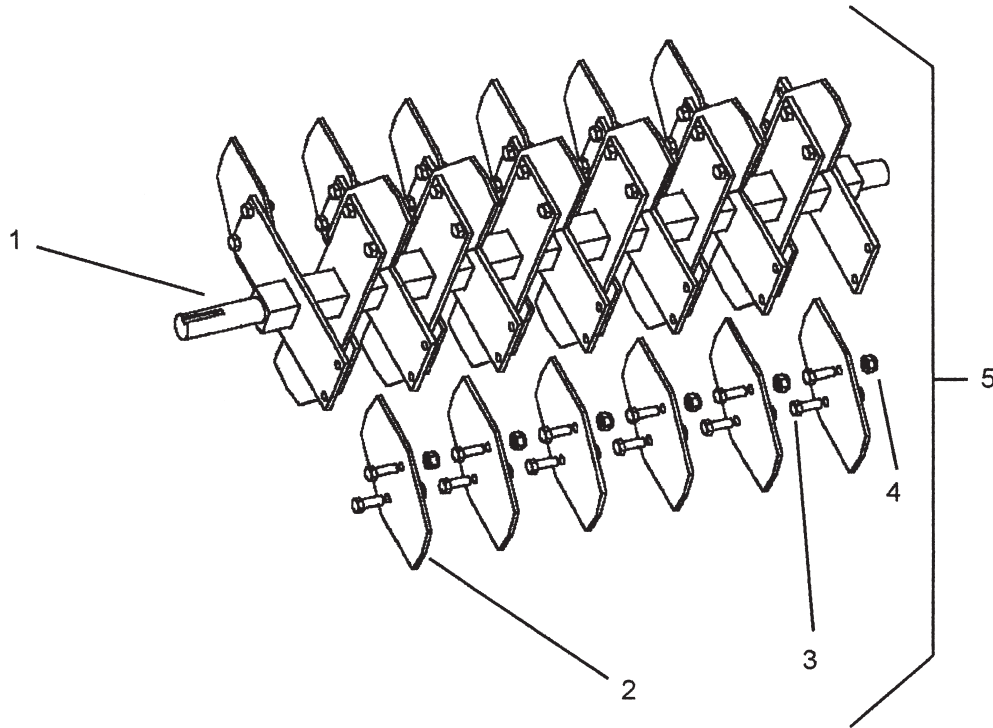
RAKE BLADE ASSEMBLY



ITM	PART NO.	DESCRIPTION	QTY
1	C700008	SHAFT, RAKE MAIN	1
2	C300014	SHAFT, SATELLITE	4
3	C300019	BLADE (FINGER), RAKE	28
4	C100056	SPACER, FINGER	52
5	C500078	E-CLIP, 1/2"	8
6	C600014	MAIN SHAFT ASSEMBLY	1
7	C900003	COMPLETE MAIN SHAFT ASSEMBLY	1
INCLUDES: END PLATES, BEARINGS, PULLEY, KEY & FASTENERS (NOT SHOWN)			

TURF RAKE/ SEEDER

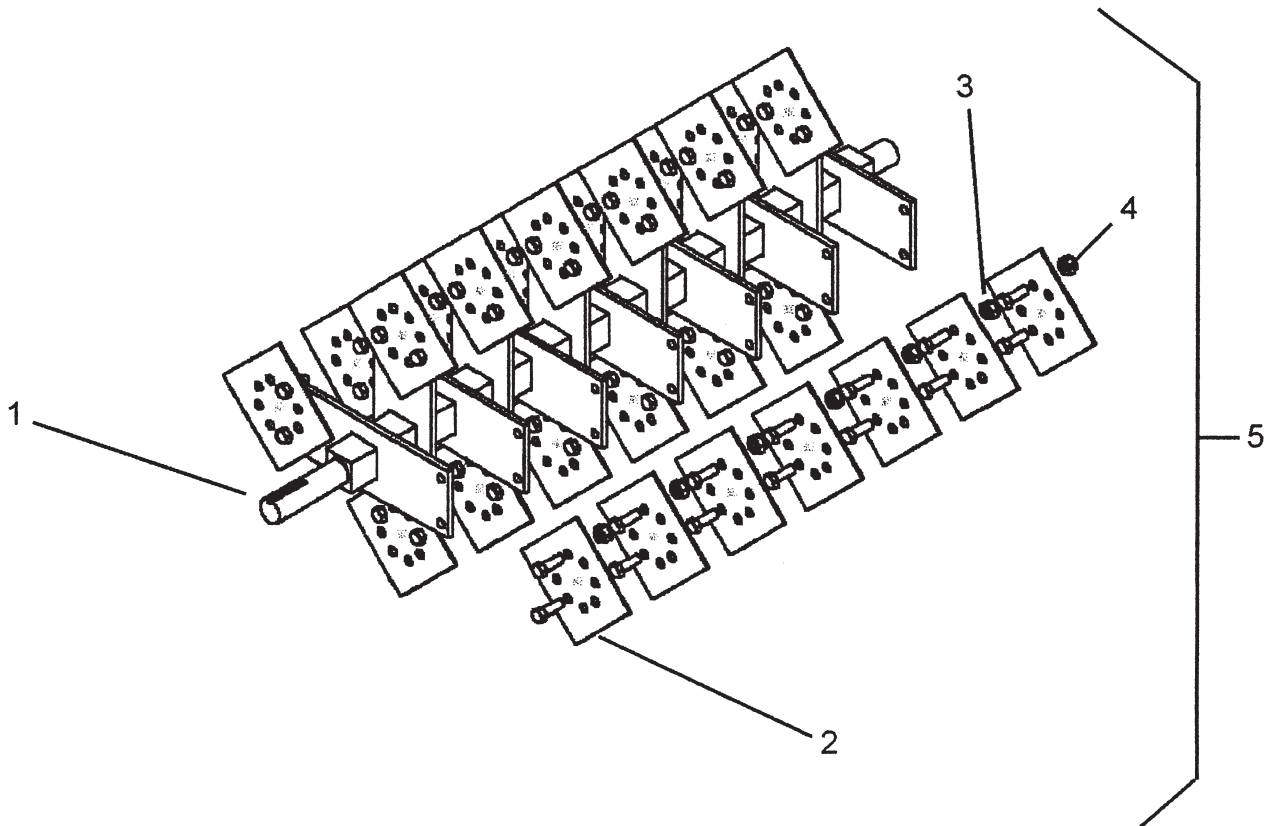
MULTI-PURPOSE BLADE ASSEMBLY OPTIONAL



ITM	PART NO.	DESCRIPTION	QTY
1	C700025	SHAFT W/ BLADE HOLDERS,	1
2	C100310	BLADE W/ 5/16" HOLES,	26
3	C500216	BOLT, 5/16-18 X 3/4 GRADE 8	2
4	C500217	NUT, 5/16-18 TOP LOCK	52
5	C600030	SHAFT/BLADES SUB ASSY	1
6	C900026	COMPLETE MULTIPURPOSE ASSY	1
INCLUDES: END PLATES, BEARINGS, PULLEY, KEY & FASTENERS (NOT SHOWN)			

TURF RAKE/ SEEDER

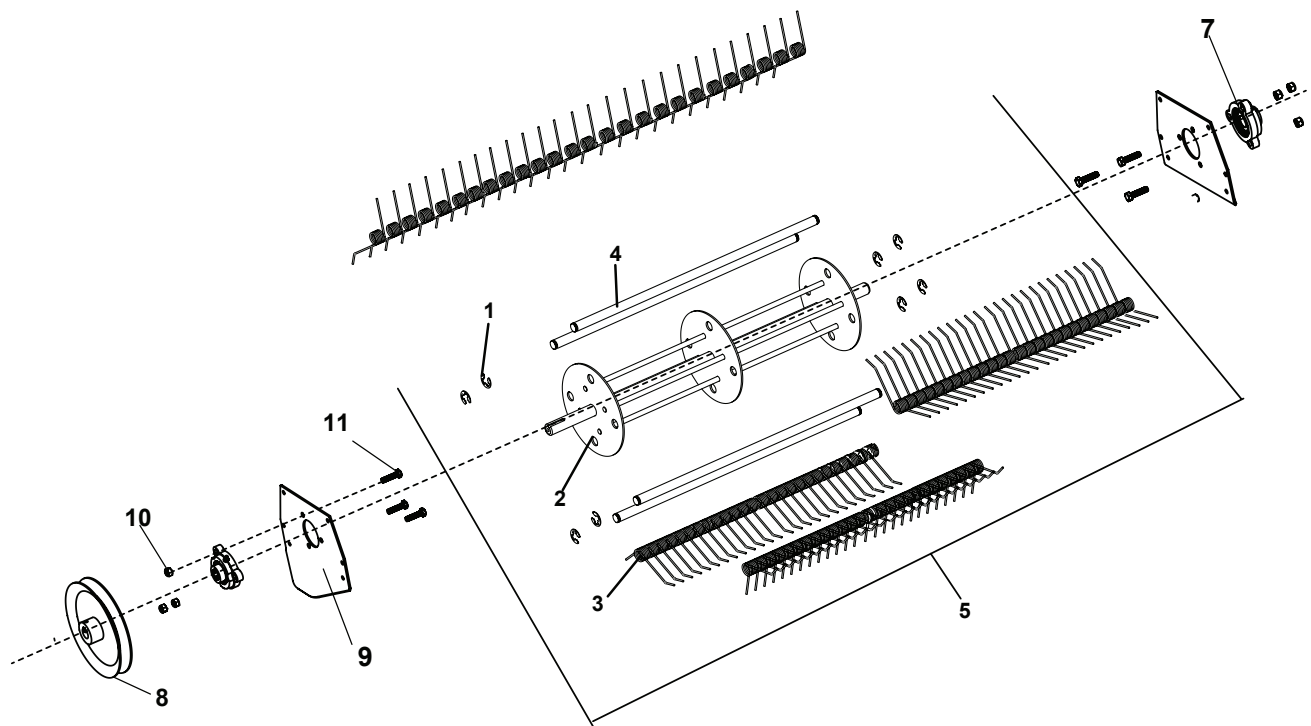
SLICER BLADE ASSEMBLY OPTIONAL



ITM	PART NO.	DESCRIPTION	QTY
1	C700025	SHAFT MULTIPURPOSE	1
2	C100427	BLADE, SLICER SQUARE	26
3	C500216	BOLT, 5/16-18 X 3/4 GRADE 8	52
4	C500217	NUT, 5/16-18 TOP LOCK	52
5	C600040	SHAFT/BLADES SUB-ASSEMBLY	1
6	C900027	COMPLETE MULTIPURPOSE ASSY	1
INCLUDES SHAFT, BLADES, END PLATES, BEARINGS, PULLEY, KEY & FASTENERS (NOT SHOWN)			

TURF RAKE/ SEEDER

SPRING TINE REEL ASSEMBLY OPTIONAL



ITM	PART NO.	DESCRIPTION	QTY
1	C100620	E-CLIP	8
2	4171066	SPRING MNTNG ROD & REEL	1
3	C100623	SPRING	104
4	4170956	ROD-SPRING MOUNTING	4
5	C600064	SPRING TINE REEL ASSY (INCLUDES ITEMS 1-4)	1
6	C900045	COMPLETE TINE REEL ASSEMBLY (INCLUDES ITEMS 5, 7-11)	1
7	C100050	BEARING, FLANGE	2
8	C100058	PULLEY, DRIVE	1
9	4173430.17	PLATE, END	2
10	C500072	NUT, 5/16-18 NYLOC	6
11	C500073	BOLT, 5/16 18 X 1-1/4	6

Classen Warranty Statement

2-Year Limited Warranty

This Classen Product is warranted against defects in materials and workmanship for a period of two (2) years from the date of purchase from an authorized dealer under the following terms and conditions. Schiller Grounds Care's responsibility under this limited warranty is restricted to repairing or replacing, at its option, any covered part found to be defective in material or workmanship during the warranty period. All parts replaced under warranty will be considered as part of the original product and any warranty on the replaced parts will expire coincidentally with the original product warranty.

SCHILLER GROUNDS CARE, INC. MAKES NO EXPRESS OR IMPLIED WARRANTIES, REPRESENTATIONS, OR PROMISES EXCEPT THOSE CONTAINED HEREIN. THERE ARE NO OTHER WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ALL WARRANTIES OTHER THAN THE EXPRESS WARRANTY SET FORTH ABOVE ARE SPECIFICALLY DISCLAIMED. THE DURATION OF ANY IMPLIED WARRANTY, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN LIMITED WARRANTY.

To Obtain Warranty Service - Warranty service must be performed by an authorized Classen dealer. To locate a dealer, please visit: www.classenturfcare.com and click on FIND A DEALER. For further assistance, write or email the Technical Services Department of Schiller Grounds Care

Schiller Grounds Care, Inc.
1028 Street Road
Southampton, PA 18966
techservicesupport@schillergc.com

ABOUT YOUR WARRANTY

The warranty period begins on the date of purchase by the original retail or commercial customer from an authorized Classen dealer and is not transferable. Warranty service must be performed by an authorized Classen dealer. If a warranty replacement becomes necessary, the authorized dealer must be prepared to provide the physical component for verification (freight prepaid) upon request from Schiller Grounds Care. Warranty service will be performed without charge to the original purchaser for parts and labor. The original purchaser is responsible for the expense of delivering the equipment, part, or accessory to and from an authorized dealer's service center. The purchaser is responsible for any premium charged for overtime labor requested by the purchaser and for any service and/or maintenance not directly related to any defect covered under this limited warranty. Proof of purchase will be required to substantiate any warranty claim. Without proof of the initial purchase date from an authorized dealer, the manufacturing date of the product will be used to establish the warranty period.

EXCLUSIONS

This warranty only covers defects in materials or workmanship.

Engines and Other Manufacturers - Schiller Grounds Care makes no warranty with respect to engines or engine parts such as spark plugs, lubricants, starters, and carburetors. The engine warranty is covered by the engine manufacturer. Consult the Operator's Manual for the engine provided with your product or ask an authorized dealer for the terms and conditions of these warranties. Schiller Grounds Care makes no warranty with respect to other parts not of its manufacture such as tires, batteries, gearboxes, or similar. These other parts may be covered by the warranties of their respective manufacturers.

Wear Items - This limited warranty does not cover damages or defects from normal wear and tear. This limited warranty does not include routine maintenance and normal maintenance parts, including but not limited to tires, batteries, transmissions, clutches, filters, gearboxes, blades, tines, belts, chains, cables, or bearings.

Negligence and Improper Maintenance or Repair - This limited warranty does not cover any equipment that has been subject to lack of reasonable and proper maintenance, misuse, lack of proper storage, or accidents. This limited warranty does not cover any damage to the equipment that is caused by a freight carrier or is the result of failure to follow the operating instructions within the Owner's Manual. This limited warranty does not cover any defects due to repairs, modifications, or alternations made to the product by anyone other than Schiller Grounds Care or its authorized dealers. In addition, this limited warranty does not cover repairs made necessary due to a lack of proper protection during storage. This limited warranty does not cover damage caused by the use of parts, supplies, or accessories, including, without limitation, filters, spark plugs, carburetors, ignition, drive belts, brakes, gasoline, fuel, oil, or lubricants, which in the reasonable judgment of Schiller Grounds Care, are either incompatible with the product, adversely affect its operation, performance, durability or are other than as recommended in the Operator's Manual or other operational instructions provided by Schiller Grounds Care.

Classen Warranty Statement

Improper Use - This limited warranty does not cover any Classen Product, part, or accessory that (i) has been subject to misuse, abuse, neglect, negligence, or accident, or that has not been assembled, operated, or maintained in accordance with the operating or maintenance instructions specified in the Operator's Manual; or (ii) has been altered or modified so as to adversely affect its operation, performance or durability, or that has been altered or modified in ways not approved by Schiller Grounds Care. To the extent permitted by law, neither Schiller Grounds Care nor any company affiliated with it makes any warranties, representations, or promises as to the quality, performance, or freedom from defect of the Classen Product, part, or accessory covered by this limited warranty. The authorized dealer makes no warranty of its own and such dealer has no authority to make any representation, warranty, or promise on behalf of Schiller Ground Care or to modify the terms or limitations of this limited warranty in any way.

Other Exclusions - This limited warranty does not include reconditioned, refurbished, used, or demonstration equipment. This limited warranty excludes failures due to acts of nature beyond the manufacturer's control.

Extended Warranty - Schiller Grounds Care disclaims responsibility for any separately purchased extended warranty. ALL WARRANTIES OTHER THAN THE EXPRESS WARRANTY SET FORTH ABOVE ARE SPECIFICALLY DISCLAIMED. THE DURATION OF ANY IMPLIED WARRANTY, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS LIMITED TO THE DURATION OF THIS WRITTEN LIMITED WARRANTY.

Disclaimer of Consequential Damage - Schiller Grounds Care disclaims any responsibility for incidental or consequential damages including, but not limited to, the expense for gasoline, the expense of delivering the product to an authorized service dealer, the expense of returning the product to the purchaser, mechanic's travel time, telephone charges, rental of a like product during the repair timeframe, travel, loss of revenue, loss of time, or inconvenience. SCHILLER GROUNDS CARE, INC. DISCLAIMS ALL LIABILITY FOR INDIRECT, INCIDENTAL, AND/OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE CLASSEN PRODUCTS COVERED BY THIS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.