

HIGH PERFORMANCE SELF-PROPELLED AND PUSH CORDLESS MOWER OWNER'S MANUAL

QUESTIONS / NEED HELP? CALL TOLL FREE 1-866-857-1445

BEFORE USING YOUR MOWER

- Carefully read the owners manual.
- ✓ Save this manual for future use.
- ✓ Read and follow all warnings on the mower, batteries, charger, and in the Owner's Manual.

***IMPORTANT: Make sure to charge the batteries for 24 hrs before the first use.

For questions or to order parts or accessories contact Linamar Consumer Products Limited At 1-866-857-1445 (toll free) or visit our website at www.linamarconsumerproducts.com

Manual Part # 503067

MOWER SAFETY GUIDELINES

- The information this manual contains will alert you to potential hazards and prevent possible problems.
- It may not be practical or possible to warn about all the hazards associated with operating or maintaining your lawn mower in this manual and we would advise you to use your own good judgment.
- Familiarize yourself with your lawn mower, know all the lawn mower controls and how to operate them.
- Know how to quickly shut off your lawn mower in case of emergency. (See page 8)

User Safety

The symbols below may appear in this manual and on your mower. Learn and understand their meaning.



I. GENERAL OPERATION

- Read, understand, and follow all instructions on the machine and in the manual(s) before starting. Be thoroughly familiar
 with the controls and the proper use of the machine before starting.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Only allow responsible individuals, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, bones, sticks, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Do not operate the mower when barefoot or wearing open sandals. Always wear substantial foot wear.
- Do not pull mower backwards unless absolutely necessary. Always look down and behind before and while moving backwards.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blade when crossing gravel surfaces.
- Do not operate the mower without proper guards or other safety protective devices in place.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
- Stop the engine (motor) when crossing gravel drives, walks, or roads.
- Stop the engine (motor) whenever you leave the equipment, before cleaning the mower or unclogging the chute.
 Disengage key before cleaning.
- Shut the engine (motor) off and wait until the blade comes to complete stop before removing grass catcher.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Never operate machine in wet grass. Always be sure of your footing: keep a firm hold on the handle and walk; never run.
- Disengage the self-propelled mechanism on mowers so equipped before starting the engine (motor).
- If the equipment should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause.
- Vibration is generally a warning of trouble.
- Always wear safety goggles or safety glasses with side shields when operating mower.

II. SLOPE OPERATION

Slopes are a major factor related to slip and fall accidents which can result in severe injury. All slopes require extra caution. If you feel uneasy on a slope, do not mow it.

DO:

- Mow across the face of slopes: never up and down. Exercise extreme caution when changing direction on slopes.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Tall grass can hide obstacles.

DO NOT:

- Do not trim near drop-offs, ditches or embankments. The operator could lose footing or balance.
- Do not cut excessively steep slopes.
- Do not mow on wet grass. Reduced footing could cause slipping.

III. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.

- Keep children out of the trimming area and under the watchful care of another responsible adult.
- Remove and store the key out of the reach of children when not in use.
- Be alert and turn machine off if children enter the area.

- Before and while walking backwards, look behind and down for small children. Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
- The mower is not a toy. It can be very dangerous; small children should not use this mower. Only responsible adults who have read the manual and understood all instructions should operate this mower.

IV. GENERAL SERVICE

- Never run a machine inside a closed area.
- Never make adjustments or repairs with the engine (motor) running.
- Keep nuts and bolts, especially blade attachment bolts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never attempt to make wheel height adjustments while the engine (motor) is running.
- Grass catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts when necessary.
- Mower blade is sharp and can cut. Wrap the blade or wear gloves, and use extra caution when servicing it.
- Do not attempt to change the engine electronic settings or over speed the engine.
- Maintain or replace safety and instruction labels, as necessary.
- Only use accessories or parts approved by Linamar Consumer Products Limited. Non-approved parts or accessories can cause serious injury or damage and will void the warranty.
- This lawnmower is not to be used for commercial use; Use only on personal property. It should only be used on private lawns and should not be used to cut public parks, playing fields, farms, forests or a large number of lawns.

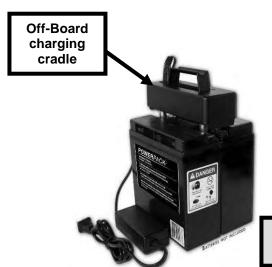
Battery & Charger Safety

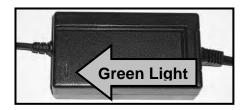
Before using batteries or charger please read all instructions. Serious injury, electrical shock or property damage may occur if all warnings and instructions are not understood and followed. Only use batteries provided or approved by Linamar Consumer Products.

- The batteries are sealed units and can not be opened or taken apart. When a battery is no longer holding a charge take it to a local recycling center. See the Battery Recycling section in this manual (Page 8).
- Be extra cautious to reduce risk of dropping a metal tool onto the battery. It might spark or short circuit the battery or other electrical parts and may cause an explosion. Keep the area around the charger and batteries clean.
- Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery.
- Do not touch un-insulated parts of the battery, contacts or terminals.
- Do not leave the batteries outside in the elements. Always store the batteries in a dry area where the temperature does not drop below 32° F or 0° C.
- The Charger station and batteries should be kept in a dry area away from children, pets, heat and moisture.
- Only Charge batteries with standard 110V household current.
- Do not attempt to rewire or otherwise short circuit the batteries.
- Use the charger only in a well ventilated area. Do not charge batteries in a sealed container.
- Use only Linamar approved charger to charge the lawnmower batteries.
- Charge only Linamar approved batteries with this charger. Charging other batteries or products may cause personal injury or property damage.
- If the cord or other parts are damaged replace them immediately before using the charger.
- To reduce risk of damage to electric plug and cord, unplug the charger by the plug and not by the cord when disconnecting charger.
- Use the charger in a location where it will not be stepped on, tripped over or otherwise subjected to damage or stress.
- Do not disassemble charger; take it to a qualified service agent or replace charger when service or repair is required.
- To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
- Never alter the charger or cord.

BATTERY CHARGING

On-Board and Off-Board Battery Charger





LIGHT MODE	BATTERY STATUS
Solid Red	Charging
	Fully Charged or the
Solid Green	charger is plugged in but
	there are no batteries in it.

*** For On-Board charging, detach the cable from the Off-Board charging cradle and plug directly on mower.



<u>OPERATION</u>

Before Mowing

- Charge batteries to capacity. (Charge for 24 hours prior to first use).
- Adjust the wheels to the desired cut height.
- Install the grass-catching bag if necessary.
- Install mulch adapter as needed (RWD Model Only).
- Move mower to a level surface near cut area before starting.

Starting the Mower

1. INSERT Batteries

Place the two batteries into the mower battery tray. **Note:** After 10 seconds the mower will start to beep continuously. This is to let you know that the batteries are connected and the mower is ready to use. The beeping will stop when the mower is engaged or the batteries or key are removed.

2. INSERT Safety Key

The key should be inserted into the mower in the ignition slot between the two batteries.

3. CLOSE Battery Cover

4. PULL Green 'Run' Bailer bar

This handle should be pulled towards you and held. The green 'Run' handle bar is located on the inner side of the handle. This handle bar must be held down to send power to the mower. **Note:** The blade will not turn yet.

5. PRESS and RELEASE the Green 'Start' switch

While still holding the green 'Run' handle bar, press and release the 'Start' switch on the left side of the handle bars. The blade will start turning.

THE BLADE WILL OPERATE AS LONG AS THE GREEN 'RUN' HANDLE BAR IS HELD.

6. PRESS the Black 'Drive' Handle bar (Self-Propelled Models Only)

To engage the self-propelled drive, press the black 'Drive' handle bar towards the handle; the powered wheels will start to drive.

Caution: The mower is equipped with a variable speed mechanism. Make sure the area around the mower is clear before using the drive. Do not hold this handle down and try to pull the mower backward. The mower will only move backwards when the black 'Drive' handle bar is released.

TO STOP THE MOWER, JUST RELEASE THE GREEN 'RUN' HANDLE BAR.

General Lawn Cutting Tips

WHETHER USING A GAS OR ELECTRIC MOWER, RUN TIMES AND LAWN AREA CUT ON ONE FILL/CHARGE ARE AFFECTED BY:

- **CUTTING HEIGHT:** 3 inches is the optimal grass length to promote a healthy lawn and is better for the environment (Less watering, better root structure, etc.). Grass cut too low can result in significantly less tolerance to insects, drought and disease.
- The AREA OF CUT depends on lawn conditions, grass density, moisture content, grass length and height of cut. Bagging, side discharge or mulching will also have different effects on run times.

- FREQUENT CUTTING improves the quality of your lawn and helps reduce the amount of power (gas or electricity) required per cut.
- EXTRA RUN TIME: Extra batteries for cordless electric mowers can be purchased to extend run time; just as more gas can be purchased for gas mowers.
- BATTERY CARE: The batteries perform best on a full charge; partially charged or improperly stored batteries will reduce cutting time.

Cutting Long, Heavy or Wet Grass



Long, heavy wet grass can slow the motor down and clog the deck.

- Cutting grass that is too long can damage the mower. If the grass is too long set the wheels to a higher cut setting and cut the area, then lower the wheels and cut it again.
- If the grass is wet do not cut; wait until the grass is dryer.
- Cutting heavy grass and weeds will use more power and decrease the run time per charge. This will require that you cut more often or purchase an extra set of batteries.

Battery Handling

The batteries are sealed Lead Acid batteries. Never try to open or remove any part of the battery as serious injury or damage could occur. Be careful not to drop the batteries. If the battery is dropped, cracked or damaged do not use it! Call Linamar Consumer Products Limited to order replacement batteries.

Battery Storage

- Batteries should not be stored in temperatures below 32° F or 0° C and should be stored fully charged. If you have more than one set of batteries we recommend switching the batteries on the charger once a month.
- Never leave a discharged battery off the charger for any period of time.
- Always keep batteries in sets. If a second set of batteries is used always keep them together. Mixing pairs of batteries may reduce performance and run time.

Battery Recycling

Please recycle used batteries!

Batteries contain harmful chemicals which will damage the environment if they are not properly disposed of; dispose of batteries in accordance with local hazardous material laws.

Contact your local waste management office or visit this website for a battery recycling depot near you: http://earth911.com



Never throw out used batteries in household trash. Never dispose of batteries in a fire as they can explode.

Environmental Benefits

A lead-acid battery gains its environmental edge from its closed-loop life cycle. The typical new lead-acid battery contains 60 to 80 percent recycled lead and plastic. When a spent battery is collected, it is sent to a permitted recycler where, under strict environmental regulations, the lead and plastic are reclaimed and sent to battery manufacturer. The recycling cycle goes on indefinitely. That means the lead and plastic in the lead-acid batteries in your lawnmower have been - and will continue to be -- recycled many, many times. This makes lead-acid battery disposal extremely successful from both environmental and cost perspectives.

For more information about Sealed Lead Acid batteries visit this website; www.batterycouncil.org

To order batteries contact Linamar Consumer Products limited at 1-866-857-1445 (toll free) or visit our website at www.linamarconsumerproducts.com



Make sure the blade is completely stopped and the batteries are removed before performing any maintenance on the mower.

General servicing as stated below can be performed on the mower. All other service not listed below should be done by an authorized service repair agent. For an agent near you contact Linamar Consumer Products Limited.

Caution: Wear protective gloves and glasses when servicing or working on the mower.

Use only approved parts and accessories. To order parts, accessories or for service contact Linamar Consumer Products Ltd. at 1-866-857-1445.

The motor housing is a sealed unit and can not be opened; doing so will damage the motor and void the warranty. If the motor requires servicing contact Linamar Consumer Products Limited.

Before each cut check the following;

- Make sure the batteries are fully charged.
- Before installing the batteries and key check that the deck is clean and free from any cuttings or debris hanging from the blade or mower.
- Make sure all parts of the mower are tight and correctly installed.
- Once the batteries are connected look and listen for any vibration or odd sounds. Shut off the mower, remove
 the batteries and check the mower blade and deck area for debris or blockage. Do not continue if the problem
 persists; contact Linamar Consumer Products Limited for an authorized service repair agent near you.

General Maintenance



Remove batteries and safety Key before undertaking any maintenance.

Cleaning the mower;

- It is important to keep the mower clean to allow all parts to move freely and avoid damage.
- Wash the mower with water. Do not spray water directly at the motor or battery area. Always remove the batteries before cleaning the mower.
- Never use a pressure washer or solvents to clean the mower.

Contacts and Connections

Keep battery, battery charger and mower contacts clean and free of corrosion. Use some dielectric grease to keep the contacts clean. Do not use metal objects to clean contacts! Make sure the charger is unplugged when cleaning.

STORAGE

- The mower should be stored only after the batteries have been removed.
- The handle can be folded to save space; be careful not to damage the cables or wires.
- The mower can be hung by the handle, be careful around the 'Run' lever and 'Drive' lever. Ensure that the handle is properly locked into position prior to hanging the mower. Make sure the mower is hung with proper holders and in a safe place.
- Batteries should be kept on the charger and plugged in or stored fully charged in a ventilated and dry area.
- Do not store the batteries where the temperature will drop below 32° F or 0° C.

MOWER STATUS / TROUBLESHOOTING

Mower Status Codes

The mower is equipped with an indicator on the start switch which will show a series of LEDs when the batteries are connected. The following chart will identify the status of the mower based on the appearance of these lights.

LIGH	T CODES
LED LIGHTS	CONDITION
ANY SOLID LIGHT(S) ON	READY TO START
SEQUENCING UP/DOWN	PUSH START BUTTON
ALL LIGHTS OFF	ENGAGE BATTERIES - START
RED FLASHING	LOW BATTERY SIGNAL - CHARGE
ORANGE FLASHING	START SEQUENCE ERROR - TRY AGAIN
GREEN FLASHING (TOP)	TEMP. OVERHEATED - WAIT 10 MIN.
GREEN FLASHING (MIDDLE)	FAULT - CONTACT MANUFACTURER

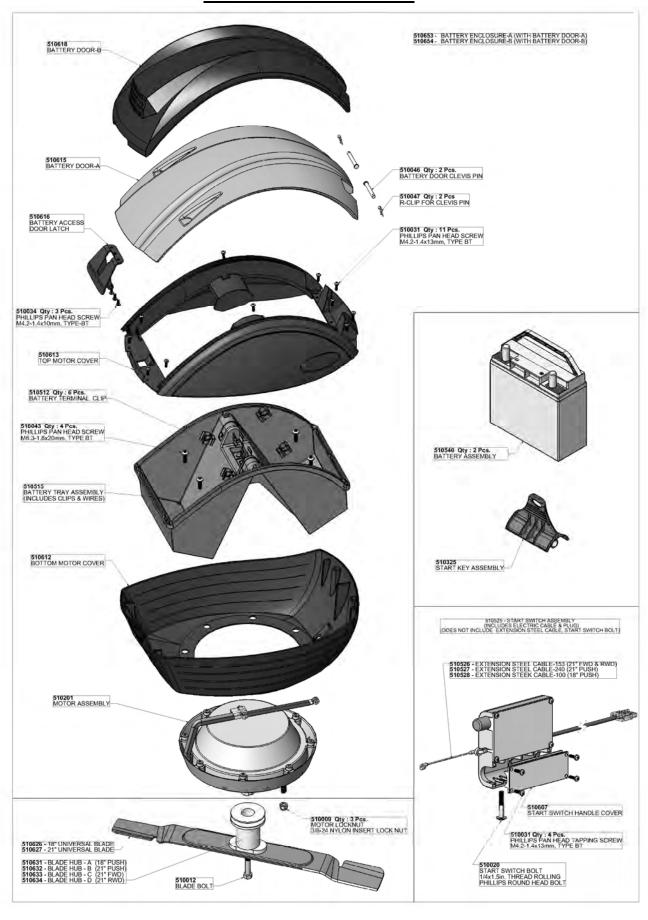


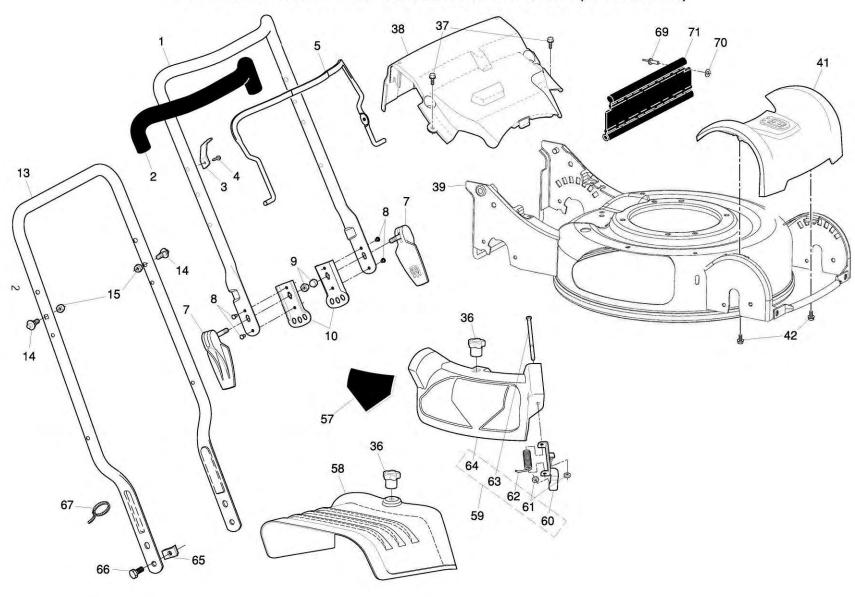
Make sure the blade is completely stopped and the batteries are removed if the Light Code does not give a Normal status alarm.

Trouble Symptoms

Symptom	Possible cause	Correction
The start lever and run bar do not return.	 The control cable is broken or kinked. The control cable spring or switch is broken or unhooked. The control cable clamp is loose. The run bar is bent or sticking. 	Replace the Cable, spring or slider.Tighten / adjust the clamp.Adjust the run bar.
Motor will not start; No lights on indicator.	Battery power is not reaching the motor A battery is not fully installed The Key is not installed Motor internal fault.	Check battery contact connections.Fully insert the batteries.Fully insert key.Call manufacturer.
Motor makes a noise but won't start.	- Material on the blade, belt, or pulley is preventing the blade from turning.	-Remove Key and batteries; clean out the material.
Motor runs only briefly; Red LED flashing.	- Batteries may not be fully charged.	- Re-try. If it happens again recharge the batteries.
Motor runs only briefly; stops and starts.	- Intermittent battery contact.	- Re-position or replace the batteries. Make sure that the connector terminals are engaged and clean.
Motor won't stop.	- The control cable or its spring is damaged The start switch is faulty.	Remove Key to stop mower. Replace the control cable or spring. Replace start switch.
Unusual noise when motor is running.	-The blade bolt may be loose.	- Apply lock-tight and tighten to 40 ft. lbs.
Unusual vibration.	- Material on blade The blade is damaged and out of balance.	- Remove material Replace the blade.
Unusual noise when motor starts and stops.	- Motor mounting bolts may be loose.	- Tighten to 16 to 18 ft. lbs.
Self propel won't work.	Material in the belt and or pulley.The belt may be off.The control cable is damaged.	Clean out the material and check the belt.Replace the control cable.
Charger light will not stop blinking.	A battery is defective.The charger may be defective.	 Test by qualified battery representative and replace. Unplug the charger and try again; replace if problem continues.
Motor stops or will not start; Top green LED is flashing.	- Battery voltage is too high.	- Unplug the battery, wait 30 minutes, and retry. If the problem persists, call manufacturer.
Motor stops or will not start; Centre or Bottom green LED flashing.	- Internal motor fault.	 Unplug the battery, wait 30 minutes, retry again with fully charged batteries. If the problem persists, call manufacturer.
Uneven cut.	Worn, bent or loose blade.Wheel height uneven.Debris under deck.	Replace/tighten blade.Adjust wheel heights.Clean underside of mower.
Grass catcher not filling.	- Cutting height too low Catcher not venting air.	- Raise cutting height Clean catcher.
Loss of drive or slowing of drive speed.	Belt wear.Belt off pulley.Drive cable loose or broken.	- Replace belt Check/reinstall belt Adjust/replace cable.
Mower hard to push.	Grass too high or wheel height too low.Grass catcher too full.Walking speed too fast.	Adjust wheel heights.Empty grass bag.Adjust walking speed to mower and grass thickness.

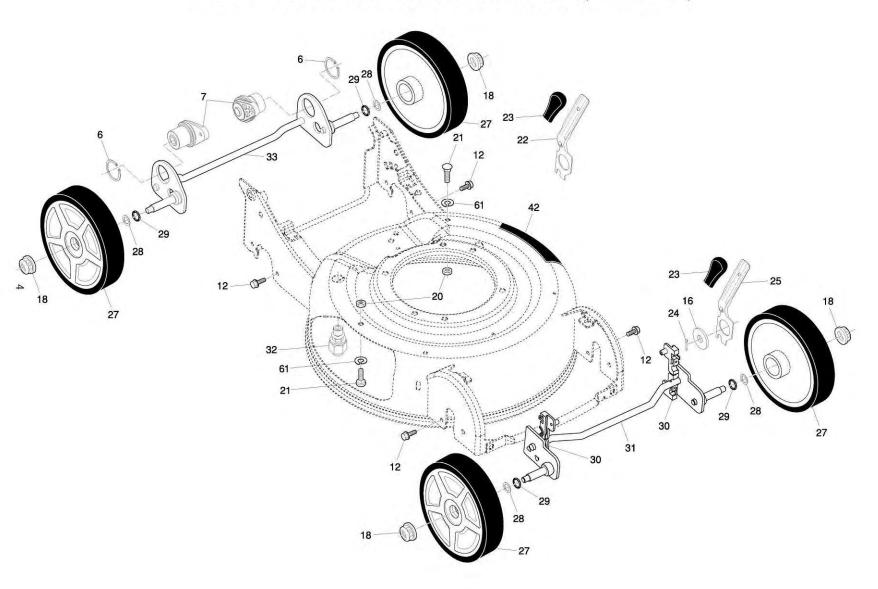
Motor Shroud Overview





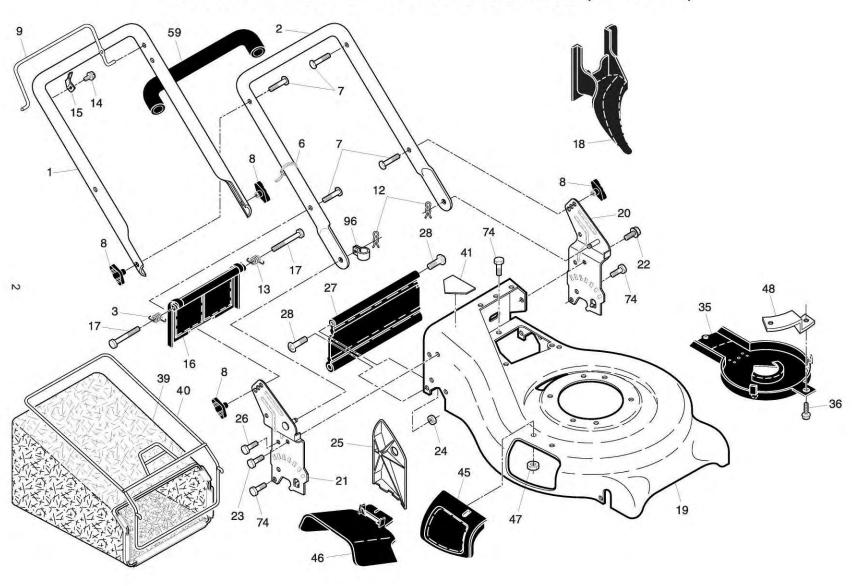
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	420883	Upper Handle (Includes Foam Grip)	41	199774X428	Front Cover
2	186362	Foam Grip	42	194189	Screw, Hex Washer Head 1/8-16 x 5/8
3	86899X004	Upstop Bracket	57	404763	Decal, Danger
4	750634	Screw, Threaded, Rolled #10-24 x 1/2	58	418046X428	Discharge Guard
5	426031	Control Bar	59	420888	Mulcher Door Assembly
7	425783X428	Quick Release Assembly	60	199268	Hinge Bracket Assembly
8	19 96-97	Rivet	61	191730	Nut, Hex, Flangelock 1/4-20
9	400413	Nut, Acorn	62	183446	Spring, Mulcher Door
10	199258X479	Bracket, Quick Release	63	183445	Rod, Hinge
13	420882	Lower Handle	64	409310X428	Mulcher Door
14	199255	Stud, Adjustment	65	404008	Speed Nut
15	751153	Nut, Hex 5/16-18	66	850999	Bolt, Hex Head 3/8-16 x 1-1/4
36	183447	Knob	67	66426	Wire Tie
37	199422	Screw, Hex Washer Head 1/4-20 x 1/2	69	191995	Rivet
38	199267X428	Drive Cover	70	53847	Washer
39	420887	Lawn Mower Housing	71	400514	Rear Skirt

NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm. **IMPORTANT:** Use only Original Equipment Manufacturer (O.E.M.) replacement parts. Failure to do so could be hazardous, damage your lawn mower and void your warranty.

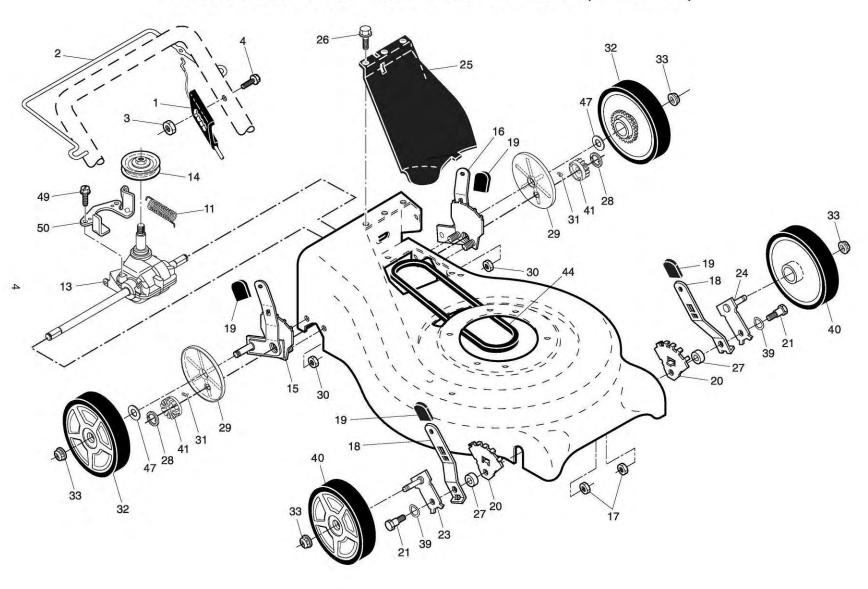


KEY NO.	PART NO.	DESCRIPTION
6	12000012	Ring, Retaining
7	199245	Bearing, Drive
12	163409	Screw, Hi-Lo Thread 1/8 x 5/8
18	409148	Nut, Hex
20	400100	Locknut 1/4-20
21	72110407	Bolt, Carriage 1/4-20 x 1/2
22	199246X004	Height Adjustment Lever, Rear
23	167653	Knob, Height Adjustment Lever
24	169675	Retainer Spring
25	199234X004	Height Adjustment Lever, Front
27	197972X460	Wheel & Tire Assembly
28	88348	Washer, Flat
29	197480	O-Ring
30	199235X428	Bearing Assembly, Front Axle
31	199227X004	Axle Assembly, Front
32	400094	Fitting, Quick Release
33	4 3727	Axle Assembly, Rear
42	402786	Decal, Warning
61	850263	Lock Washer 3/8 Helical Spring

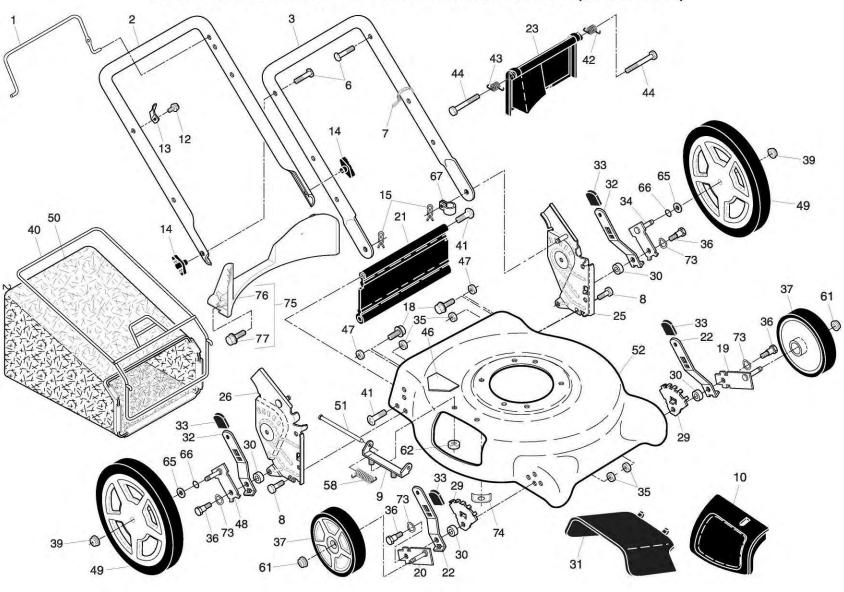
NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm. **IMPORTANT:** Use only Original Equipment Manufacturer (O.E.M.) replacement parts. Failure to do so could be hazardous, damage your lawn mower and void your warranty.



KEY NO.		DESCRIPTION	KEY NO.		DESCRIPTION
1	403196	Upper Handle Assembly (Includes Foam Grip)	24	73800500	Nut, Hex, with Lockwasher Insert 5/16-18
2	193664X479	Handle, Lower	25	161333	Baffle, Side
3	405416	Spring, Rear Door, RH	26	163409	Screw, Hi-Lo Thread #12 x 5/8
6	66426	Wire, Tie	27	192876	Skirt, Rear
7	191574	Bolt, Handle 5/16-18 x 2-5/8	28	88652	Screw, Hinge 1/4-20 x 1.25
8	189713X428	Knob, Handle	35	405843	Debris Shield
9	422982X662	Control Bar	36	192325	Bolt
12	51793	Cotter, Hairpin	39	410468	Grassbag
13	405415	Spring, Rear Door, LH	40	411951	Frame, Grassbag
14	750634	Screw	41	404763	Danger Decal
15	86899X004	Upstop Bracket	42	54583	Screw
16	401815X428	Rear Door Assembly	45	183058X428	Mulcher Door Assembly
17	184193	Bolt, Rear Door	46	169699X428	Discharge Guard
18	198170	Plug, Mulcher	47	88349	Nut, Hex
19	426162	Kit, Housing	48	188839X004	Mounting Bracket, Debris Shield
20	192980X479	Handle Bracket Asembly, LH	59	186362	Grip, Foam
21	192979X479	Handle Bracket Assembly, RH	74	17060410	Screw 1/4-20 x 5/8
22	17000512	Screw, Hex Washer Head	96	197991	Clip, Cable
23	163183	Bolt, Hex Head 5/16-18 x 5/8		404764	Warning Decal (not shown)



KE'		DESCRIPTION	KE'NO.		DESCRIPTION
1	404846	Drive Control Assembly	23	401175X004	Axle Arm Assembly, RH
		(Includes Cable)	24	401174X004	Axle Arm Assembly, LH
2	194185X662	Lever, Drive Control	25	199775X428	Cover Drive
3	191730	Nut, Hex	26	750634	Screw, Threaded, Rolled
4	199687	Screw			#10-25 x 1/2
11	406558	Spring, Return	27	401629	Spacer
13	419214	Gear Case Assembly, Complete	28	12000058	E-Ring 7/16
14	193443	Pulley, Drive	29	189403	Cover, Dust, Wheel
15	409073	Kit, Wheel Adjuster Assembly, RH	30	73800400	Nut, Hex
		(Includes Knob and Bearing)	31	404845	Pawl, Drive
16	409074	Kit, Wheel Adjuster Assembly, LH	32	193912X460	Wheel & Tire Assembly, Rear 8 x 1-3/4
		(Includes Knob and Bearing)	33	409148	Nut, Flangelock 3/8-16
17	166785	Nut, Hex	39	401630	Washer, Curved, Cylindrical
18	401621X004	Spring, Selector	40	193909X460	Wheel & Tire Assembly, Front 8 x 1-3/4
19	701037	Knob, Selector Spring	41	404835	Pinion
20	407494X005	Bracket, Wheel Adjusting	44	406580	V-Belt
21	401638	Bolt, Shoulder, Hex Head	47	67725	Washer
22	191039	Bearing, Ball	49	163409	Screw, Hi-Lo Thread #12 x 5/8
			50	404832X004	Belt Keeper

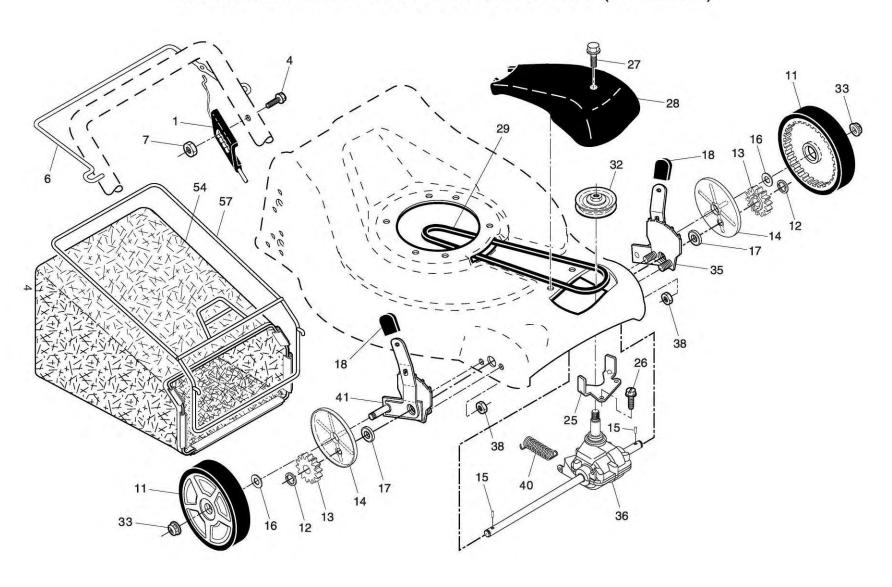


KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	194177X662	Control Bar	37	193905X460	Wheel & Tire Assembly, Front
2	194179X479	Upper Handle	39	409149	Flanged Locknut, Hex
3	169708X479	Lower Handle	40	411949	Frame, Grassbag
6	191574	Handle Bolt	41	88652	Hinge Screw
7	66426	Wire Tie	42	405421	Spring, Rear Door, LH
8	74780512	Bolt, Hex Head 5/16-18 x 3/4	43	405423	Spring, Rear Door, RH
9	154132	Hinge Bracket	44	184193	Bolt, Rear Door
10	165754	Mulcher Door	46	404763	Danger Decal
12	750635-4	Screw	47	751153	Nut, Hex
13	86899X004	Upstop Bracket	48	401177X004	Axle Arm Assembly, Rear, RH
14	189713X428	Handle Knob	49	193926X460	Wheel & Tire Assembly, Rear
15	51793	Hairpin Cotter	50	410938	Grassbag
18	17600406	Screw 1/4-20 x 3/8	51	147286	Hinge Rod
19	401174X004	Axle Arm Assembly, Front, LH	52	420881	Kit, Lawn Mower Housing
20	401175X004	Axle Arm Assembly, Front, RH			(Includes Key Number 46)
21	418655	Kit, Rear Skirt	58	152124	Hinge Spring
22	401621X004	Selector Spring, Front	61	409148	Nut, Hex
23	401814X428	Rear Door Assembly	62	73800400	Locknut, Hex 1/4-20
25	410385X479	Handle Bracket Assembly, LH	65	88348	Washer, Flat
26	410386X479	Handle Bracket Assembly, RH	66	197480	O-Ring
29	407494X005	Wheel Adjusting Bracket	67	197991	Clip, Cable
30	401629	Spacer	73	401630	Washer, Curved
31	165760	Discharge Deflector	74	851201X004	Washer, Special, Engine
32	401624X004	Selector Spring, Rear	75	413693	Kit, Rear Baffle
33	701037	Selector Knob, Front			(Includes 3 Screws)
34	401176X004	Axle Arm Assembly, Rear, LH	76	410589	Baffle, Rear
35	166785	Locknut, Hex 5/16-18	77	17411312	Screw, Rear Baffle
36	401638	Shoulder Bolt 5/16-18		404764	Warning Decal (not shown)

NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm. **IMPORTANT:** Use only Original Equipment Manufacturer (O.E.M.) replacement parts. Failure to do so could be hazardous, damage your lawn mower and void your warranty.

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	403196	Upper Handle Assembly	32	401626X004	Selector Spring
		(Includes Foam Grip)	33	73800500	Nut, Hex 5/16-18
2	151721X479	Lower Handle	34	401630	Washer, Curved, Cylindrical
3	422982X662	Control Bar	36	184193	Bolt
5	191574	Handle Bolt	37	74780512	Thread Cutting Screw w/Sems 5/16-18 x 3/4
6	189713X428	Handle Knob	38	401629	Spacer
7	51793	Hairpin Cotter	39	155377	Nut, Hex
8	66426	Wire Tie	40	420474X004	Belt Keeper
9	401812X428	Rear Door	44	416562	Kit, Lawn Mower Housing
10	128415	Pop Rivet			(Includes Key Numbers 10, 11, 12 and 45)
11	406573X479	Support Bracket, LH	45	404763	Danger Decal
12	406574X479	Support Bracket, RH	57	86899X004	Upstop Bracket
13	17060410	Screw 1/4-20 x 5/8	58	750634	Screw
14	175576X479	Handle Bracket Assembly, LH	59	175071	Discharge Deflector
15	175577X479	Handle Bracket Assembly, RH	60	175735	Hinge Bracket
16	405417	Spring, Rear Door, LH	61	193000	Spring, Hinge
17	405418	Spring, Rear Door, RH	62	175650	Hinge Rod
20	413159	Rear Skirt	63	73800400	Nut, Hex
21	88652	Screw, Tapping 1/4-20 x 1/2	64	175066	Mulcher Door
26	409149	Hex Flange Nut	65	197480	O-Ring
27	193906X460	Wheel & Tire Assembly, Rear, 12"	66	88348	Washer, Flat 1/2
28	401638	Shoulder Bolt 5/16-18 x .33	69	186362	Grip, Foam
30	401181X004	Axle Arm Assembly, Rear	96	197991	Clip, Cable
31	701037	Selector Knob	99.	404764	Decal, Warning (not shown)
				421569	Illustrated Parts List

NOTE: All component dimensions given in U.S. inches. 1 inch = 25.4 mm. **IMPORTANT:** Use only Original Equipment Manufacturer (O.E.M.) replacement parts. Failure to do so could be hazardous, damage your lawn mower and void your warranty.



5

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	407816	Drive Control Assembly	26	163409	Screw
		(Includes Cable)	27	175262	Pan Head Tapping Screw
4	199687	Hex Washer Head Screw			#10-24 x 2-3/4
		1/4-20 x 2-1/8	28	194406X428	Drive Cover
6	194185X662	Control Bar, Drive	29	194149	V-Belt
7	191730	Locknut, Hex #10-24	32	194018	Drive Pulley
11	193912X460	Wheel & Tire Assembly	33	409148	Locknut, Hex
12	12000058	E-Ring	35	408862	Kit, Wheel Adjuster, LH
13	403849	Pinion			(Includes Knob and Bearing)
14	189403	Dust Cover	36	404833	Gearcase Assembly, Complete
15	404845	Pawl, Drive	38	73800400	Locknut, Hex 1/4-20
16	67725	Washer 1/2 x 1-1/2 x .134	40	406558	Spring
17	191039	Bearing, Wheel Adjuster	41	408861	Kit, Wheel Adjuster, RH
18	701037	Selector Knob			(Includes Knob and Bearing)
25	404843X004	Belt Keeper	54	423072	Grassbag Assembly
			57	411950	Frame, Grassbag

BLADE SHARPENING (all models)

NOTE: We do not recommend sharpening blade - but if you do, be sure the blade is balanced. An unbalanced blade will cause eventual damage to lawn mower or motor.

- The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen while on the mower.
- To check blade balance, drive a nail into a beam or wall. Leave about one inch of the straight nail exposed. Place center hole of blade over the head of the nail. If blade is balanced, it should remain in a horizontal position. If either end of the blade moves downward, sharpen the heavy end until the blade is balanced.

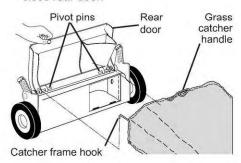
CONVERSION - S21HB

TO CONVERT MOWER

Your lawn mower was shipped ready to be used as a mulcher. To convert to bagging or discharging:

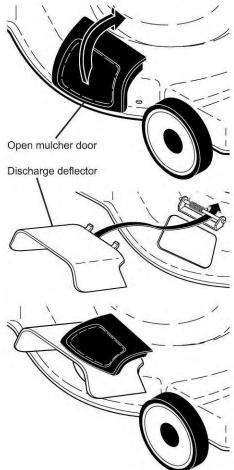
REAR BAGGING

- Lift rear door of the lawn mower and place the grass catcher frame hooks onto the door pivot pins.
- To convert to mulching or discharging operation, remove grass catcher and close rear door.



SIDE DISCHARGING

- · Rear door must be closed.
- Open mulcher door and install discharge deflector under door as shown.
- Mower is now ready for discharging operation.
- To convert to mulching or bagging operation, discharge deflector must be removed and mulcher door must be closed.



SIMPLE STEPS TO REMEMBER WHEN CONVERTING YOUR LAWN MOWER

FOR MULCHING -

- 1. Rear door closed.
- 2. Mulcher door closed.

FOR REAR BAGGING -

- 1. Grass catcher installed.
- Mulcher door closed.
- FOR SIDE DISCHARGING -
- 1. Rear door closed.
- 2. Discharge deflector installed.

ACAUTION: Do not run your lawn mower without rear door closed or approved grass catcher in place. Never attempt to operate the lawn mower with the rear door removed or propped open.

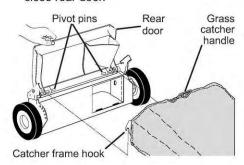
CONVERSION - SP21HB

TO CONVERT MOWER

Your lawn mower was shipped ready to be used as a mulcher. To convert to bagging or discharging:

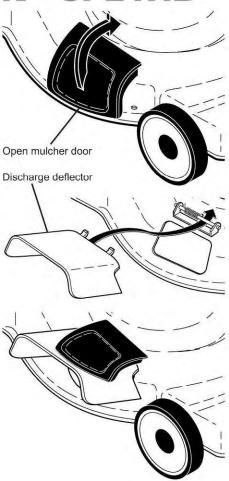
REAR BAGGING

- Lift rear door of the lawn mower and place the grass catcher frame hooks onto the door pivot pins.
- To convert to mulching or discharging operation, remove grass catcher and close rear door.



SIDE DISCHARGING

- · Rear door must be closed.
- Open mulcher door and install discharge deflector under door as shown.
- Mower is now ready for discharging operation.
- To convert to mulching or bagging operation, discharge deflector must be removed and mulcher door must be closed.



SIMPLE STEPS TO REMEMBER WHEN CONVERTING YOUR LAWN MOWER

FOR MULCHING -

- 1. Rear door closed.
- 2. Mulcher door closed.

FOR REAR BAGGING -

- 1. Grass catcher installed.
- Mulcher door closed.

FOR SIDE DISCHARGING -

- 1. Rear door closed.
- Discharge deflector installed.

ACAUTION: Do not run your lawn mower without rear door closed or approved grass catcher in place. Never attempt to operate the lawn mower with the rear door removed or propped open.

CONVERSION - E18H

Your lawn mower was shipped ready to be used as a mulcher. To convert to side discharging:

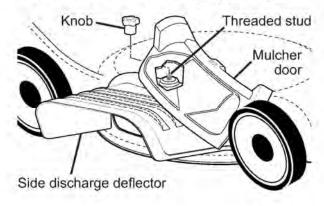
Discharge chute must be removed.

Open mulcher door and install side discharge deflector beneath it as shown.

Secure rear of side discharge deflector to lawn mower housing with knob.

Mower is now ready for side discharging operation.

ACAUTION: Do not run your lawn mower without mulcher door closed or side discharge deflector installed. Never attempt to operate the lawn mower with mulcher door removed or propped open.



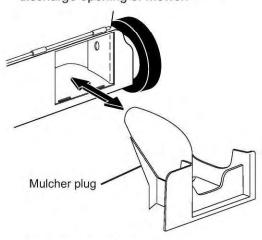
CONVERSION - EP21H

TO CONVERT MOWER

Your lawn mower was shipped ready to be used as a mulcher. To convert to bagging or discharging:

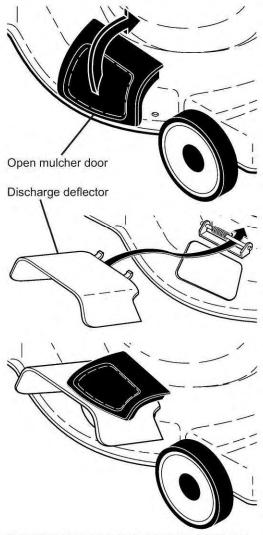
REAR BAGGING

- Open rear door and remove mulcher plug. Store mulcher plug in a safe place.
- You can now install the grass catcher or optional clipping deflector.
- To convert to mulching or discharging operation, install mulcher plug into rear discharge opening of mower.



SIDE DISCHARGING

- Mulcher plug must be installed into rear discharge opening of mower.
- Open mulcher door and install discharge deflector under door as shown.
- Mower is now ready for discharging operation.
- To convert to mulching or bagging operation, discharge deflector must be removed and mulcher door closed.



SIMPLE STEPS TO REMEMBER WHEN CONVERTING YOUR LAWN MOWER

FOR MULCHING -

- 1. Rear mulcher plug installed.
- 2. Mulcher door closed.

FOR REAR BAGGING -

- 1. Rear mulcher plug removed.
- 2. Grass catcher installed.
- Mulcher door closed.

FOR SIDE DISCHARGING -

- 1. Rear mulcher plug installed.
- 2. Discharge deflector installed.

ACAUTION: Do not run your lawn mower without mulcher plug, clipping deflector or approved grass catcher in place. Never attempt to operate the lawn mower with the rear door removed or propped open.

DRIVE BELT - SP21HB

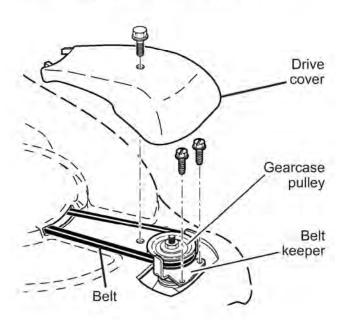
TO REMOVE DRIVE BELT

- 1. Remove drive cover and belt keeper.
- 2. Remove belt from gearcase pulley.
- 3. Turn lawn mower on its side.
- Remove blade and motor pulley.

TO REPLACE DRIVE BELT

- Place new drive belt on motor pulley, inside belt retainer.
- 2. Route the other end of the new drive belt through hole in housing.
- 3. Reinstall blade.
- 4. Return mower to upright position.
- 5. Install new belt on gearcase pulley.
- 6. Reinstall belt keeper and drive cover.

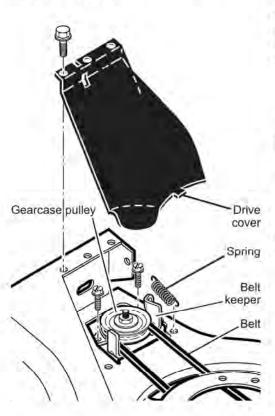
NOTE: Always use factory approved belt to assure proper fit and long life.



DRIVE BELT - EP21H

TO REMOVE DRIVE BELT

- 1. Remove drive cover.
- 2. Remove spring and belt keeper.
- 3. Remove belt from gearcase pulley.
- 4. Turn lawn mower on its side.
- Remove blade, motor pulley and debris shield.
- Remove motor pulley and belt from debris shield.

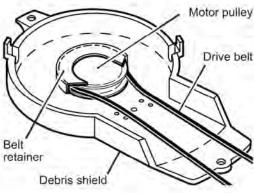


TO REPLACE DRIVE BELT

- Place new drive belt in motor pulley and belt retainer of debris shield.
- Route the other end of the new drive belt through hole in housing.
- Reinstall debris shield.
- 4. Return mower to upright position.
- Install new belt on gearcase pulley.
- 6. Reinstall belt keeper and spring.
- 7. Reinstall drive cover.

NOTE: Always use factory approved belt to assure proper fit and long life.

- 8. Turn lawn mower on its side.
- 9. Reinstall blade.

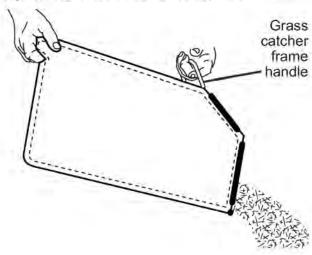


GRASS CATCHER (all models except E18H)

TO EMPTY GRASS CATCHER

- Lift up on grass catcher using the frame handle.
- 2. Remove grass catcher with clippings from under lawn mower handle.
- 3. Empty clippings from bag.

NOTE: Do not drag the bag when emptying; it will cause unnecessary wear.

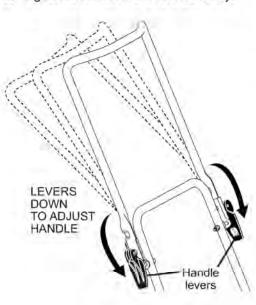


HANDLE ADJUSTMENT E18H only SP21HB only

TO ADJUST HANDLE

The upper handle may be adjusted to three (3) different height positions.

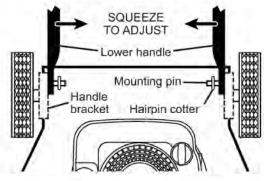
- Loosen both handle levers enough to allow the upper handle to pivot to the desired adjustment position.
- 2. Tighten both handle levers securely.

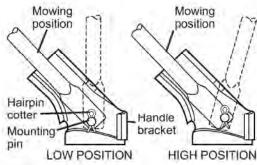


TO ADJUST HANDLE

The handle can be mounted in a high or low position. The mounting holes in the bottom of lower handle are off center for raising or lowering the handle.

- Remove upper handle and wire tie(s) securing cable(s) to lower handle.
- Remove hairpin cotters from lower handle bracket mounting pin.
- Squeeze lower handle in to remove it from mounting pins.
- Turn lower handle over to raise or lower handle.
- Squeeze lower handle in and position holes onto mounting pins on handle bracket.
- Reassemble upper handle and all parts removed from lower handle.



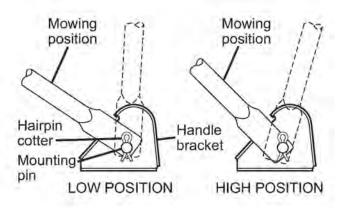


HANDLE ADJUSTMENT EP21H and S21HB only

TO ADJUST HANDLE

The handle can be mounted in a high or low position. The mounting holes in the bottom of lower handle are off center for raising or lowering the handle.

- Remove upper handle and wire tie(s) securing cable(s) to lower handle.
- Remove hairpin cotters from lower handle bracket mounting pin.
- Squeeze lower handle in to remove it from mounting pins.
- Turn lower handle over to raise or lower handle.
- Squeeze lower handle in and position holes onto mounting pins on handle bracket.
- Reassemble upper handle and all parts removed from lower handle.



WATER WASHOUT (E18H only)

WATER WASHOUT FEATURE

Your lawn mower is equipped with a quickconnect fitting that allows quick and easy cleaning of the underside of the housing. To use this feature, proceed as follows:

 Move lawn mower to an area of cut grass or another hard surface.

NOTE: Water, grass and other debris will drain from beneath the mower housing during the washout process.

- Remove grass catcher and discharge chute assembly from lawn mower.
- 3. Close mulcher door, secure with knob.
- Connect a garden hose to the quickrelease fitting where shown.

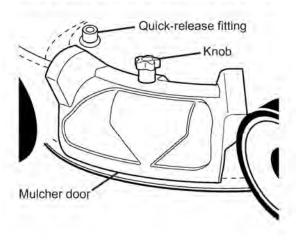
IMPORTANT: Be sure the garden hose is not routed under the lawn mower housing or entangled in the wheels.

 Turn on water supply and check for leaks at the quick-release fitting.
 If no leaks are present, start engine (as described in the Operation section of this manual) and let engine run until the underside of the lawn mower is clean.

A WARNING: Do not engage the drive system during the washout process.

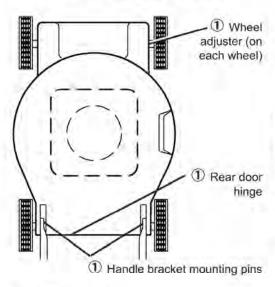
- Shut off the engine.
- Shut off water supply and remove hose from quick-release fitting.

CAUTION: Do not remove hose from fitting while engine is running. Water in engine can result in shortened engine life.



LUBRICATION E18H only all others

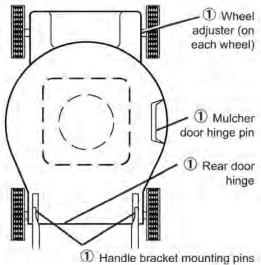
LUBRICATION CHART



1 Spray lubricant

IMPORTANT: Do not oil or grease plastic wheel bearings. Viscous lubricants will attract dust and dirt that will shorten the life of the self-lubricating bearings. If you feel they must be lubricated, use only a dry, powdered graphite type lubricant sparingly.

LUBRICATION CHART



1 Spray lubricant

IMPORTANT: Do not oil or grease plastic wheel bearings. Viscous lubricants will attract dust and dirt that will shorten the life of the self-lubricating bearings. If you feel they must be lubricated, use only a dry, powdered graphite type lubricant sparingly.

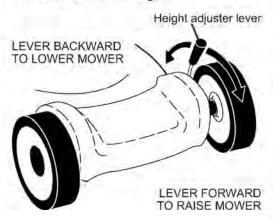
WHEEL HEIGHT ADJUST E18H only all others

TO ADJUST CUTTING HEIGHT

Both front wheels are adjusted by a single lever on the left front wheel. Likewise, both rear wheels are adjusted by a single lever on the left rear wheel.

 Pull adjuster lever toward wheel. To raise mower, move lever forward to desired position. To lower mower, move the lever toward the rear,

Be sure to adjust both front and rear wheels to the same height.

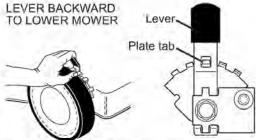


TO ADJUST CUTTING HEIGHT

Raise wheels for low cut and lower wheels for high cut, adjust cutting height to suit your requirements. Medium position is best for most lawns.

To change cutting height, squeeze adjuster lever toward wheel. Move wheel up or down to suit your requirements.
 Be sure all wheels are in the same setting.

NOTE: Adjuster is properly positioned when plate tab inserts into hole in lever. Also, 9-position adjusters (if so equipped) allow lever to be positioned between the plate tabs.



LEVER FORWARD TO RAISE MOWER

LINAMAR CONSUMER PRODUCTS LTD

Two Year Limited Warranty

LINAMAR CONSUMER PRODUCTS LTD. warrants that each MOWER operated by the original purchaser under normal use in the continental United States or Canada will be free from defects in materials and workmanship for two years following the original purchase, subject to the requirements, exclusions and limitations stated below. The obligation of this warranty shall be limited to repairing or replacing any part or parts, which in the opinion of the factory are defective in materials or workmanship under normal use and service during the warranty period commencing with the date of the first retail purchase. If the MOWER is rented or used for commercial purposes this Limited Warranty is null and void.

YOU MUST SEND US / RECORD YOUR PURCHASE

In order to validate this Limited Warranty, a warranty form has been provided to document your purchase and must be mailed to LINAMAR CONSUMER PRODUCTS LTD., no later than ten (10) days following the purchase of your MOWER. Federal law requires this purchaser record. Failure to fill out and return this warranty registration within the above period will automatically void the warranty.

TWO YEAR LIMITED WARRANTY

Subject to the requirements, exclusions and limitations stated below, the structure of your MOWER is warranted to the original retail purchaser against defects in materials and workmanship by LINAMAR CONSUMER PRODUCTS LTD. from normal use for two (2) years from the date of purchase, one (1) year on the batteries.

EXCLUSIONS NOT COVERED BY THIS LIMITED WARRANTY

This Limited Warranty covers only defects in original components which arise from normal use and does not apply if the MOWER has been subject to negligence, accident, abuse, misuse or has been repaired or altered without the prior written consent of LINAMAR CONSUMER PRODUCTS LTD. Damages caused by failure to provide proper maintenance and repair, loose nuts, bolts and screws (maintaining necessary tightness is the owners responsibility) are not covered by this Limited Warranty. In addition to the above exclusions, LINAMAR CONSUMER PRODUCTS LTD. expressly excludes from this Limited Warranty the following: replacement and work performed or options installed by others; deterioration of paint and appearance due to use and exposure; loss of time, inconvenience, loss of use of MOWER, rental of substitute equipment, loss of revenues, or other commercial loss. Normal customer maintenance items which become worn through normal regular use, including, but not limited to, batteries, belts, blades, bulbs, clutches, lubricants, and rewind springs are also excluded. LINAMAR CONSUMER PRODUCTS LTD. reserves the right to change or improve the design of the product without notice, and does not assume obligation to update previously manufactured products.

PRIOR WRITTEN CONSENT REQUIRED AND RETURN OF DEFECTIVE PARTS REQUIRED

No reimbursement will be made to any dealer or owner for repairs made without the prior written consent of LINAMAR CONSUMER PRODUCTS LTD. Any defective part(s) must be sent by prepaid freight to LINAMAR CONSUMER PRODUCTS LTD. in order to qualify for replacement or reimbursement under this Limited Warranty. Proof of purchase required.

LIMITATION

LINAMAR CONSUMER PRODUCTS LTD's responsibility under this limited warranty shall be limited to repair or replacement of parts at the LINAMAR CONSUMER PRODUCTS LTD. factory, or for a reasonable allowance, at another place approved in writing by LINAMAR CONSUMER PRODUCTS LTD. If such warranty fails because attempts at repair are not completed within a reasonable time, or it fails for any other reason, any damages are limited

to the lesser of either the cost of needed repairs or reduction in the market value of the mower caused by lack of repairs.

DISCLAIMERS

This warranty is expressly in lieu of any other warranty not expressly provided herein which but for this provision might arise by operation of law, including any express warranties made outside this limited warranty, implied warranties of merchantability, implied warranties of fitness for a particular purpose, and any remedy for breach of contract. These warranties are hereby expressly excluded and disclaimed. if they cannot be disclaimed, any implied warranties of merchantability and fitness for particular purpose are expressly limited to a term of one (1) year, unless any applicable state law provides otherwise. Under no circumstances shall LINAMAR CONSUMER PRODUCTS LTD. be liable to the purchaser or any other person for any special, incidental or consequential damages, whether arising out of breach of warranty, breach of contract, tort or otherwise, unless any state law provides otherwise. No one, including authorized LINAMAR CONSUMER PRODUCTS LTD. dealers, is authorized to make further or additional warranties on behalf of LINAMAR CONSUMER PRODUCTS LTD. Authorized repairs do not extend the term of this limited warranty.

THIS WARRANTY IS NON-TRANSFERABLE FROM THE ORIGINAL OWNER

LINAMAR CONSUMER PRODUCTS LTD., 94 Campbell Rd. Guelph, ONTARIO, CANADA N1H1C1

Serial #								

Note: the serial number is located on a plate on the top deck of the mower behind the motor.

QUESTIONS - NEED HELP? CALL TOLL FREE 1-866-857-1445

	Warranty Information Form
Name:	Purchase Date:
Address:	Store Purchased at:
City:	City:
State/ Province:	State/ Province:
Zip / Postal Code:	Lawnmower Model:
Phone #	Deck Size:
Email:	
How did you hear about	our mower? (Circle one)
How did you hear about Store Display	
Store Display	
Store Display	Magazine Website Friend Other:
Store Display What influenced you to	Magazine Website Friend Other:
Store Display What influenced you to Price Features	Magazine Website Friend Other: purchase this mower (Circle all that apply) Size Quality Deck Design Cordless Feature Other:
Store Display What influenced you to Price Features Environmental Concerns What size is your lawn?	Magazine Website Friend Other: purchase this mower (Circle all that apply) Size Quality Deck Design Cordless Feature Other:
Store Display What influenced you to Price Features Environmental Concerns What size is your lawn? 250 sq. ft 500 sq.	Magazine Website Friend Other: purchase this mower (Circle all that apply) Size Quality Deck Design Cordless Feature Other: (Circle One)

Serial #								

Return to address below or Fax toll free to 1-866-857-1314 or Scan & email to info@linamarconsumerproducts.com

Linamar Consumer Products Limited 94, Campbell Road, Guelph, Ontario Canada N1H 1C1