



# Technical Manual

## Eclipse<sup>®</sup> 2

### InCommand<sup>™</sup>

- 63334 – Eclipse 2 118, 18" 11 Blade Reel, Gen-Set
- 63343 – Eclipse 2 118, 18" 11 Blade Reel, Battery Pack
- 63335 – Eclipse 2 118, 18" 15 Blade Reel, Gen-Set
- 63344 – Eclipse 2 118, 18" 15 Blade Reel, Battery Pack
- 63336 – Eclipse 2 118F, Floating 18" 11 Blade Reel, Gen-Set
- 63345 – Eclipse 2 118F, Floating 18" 11 Blade Reel, Battery Pack
- 63337 – Eclipse 2 118F, Floating 18" 15 Blade Reel, Gen-Set
- 63346 – Eclipse 2 118F, Floating 18" 15 Blade Reel, Battery Pack
- 63338 – Eclipse 2 122, 22" 11 Blade Reel, Gen-Set
- 63347 – Eclipse 2 122, 22" 11 Blade Reel, Battery Pack
- 63339 – Eclipse 2 122, 22" 15 Blade Reel, Gen-Set
- 63348 – Eclipse 2 122, 22" 15 Blade Reel, Battery Pack
- 63340 – Eclipse 2 122F, Floating 22" 11 Blade Reel, Gen-Set
- 63349 – Eclipse 2 122F, Floating 22" 11 Blade Reel, Battery Pack
- 63341 – Eclipse 2 122F, Floating 22" 15 Blade Reel, Gen-Set
- 63350 – Eclipse 2 122F, Floating 22" 15 Blade Reel, Battery Pack
- 63342 – Eclipse 2 126, 26" 7 Blade Reel, Gen-Set
- 63351 – Eclipse 2 126, 26" 7 Blade Reel, Battery Pack

#### WARNING

WARNING: If incorrectly used this machine can cause severe injury. Those who use and maintain this machine should be trained in its proper use, warned of its dangers and should read the entire manual before attempting to set up, operate, adjust or service the machine.



**When Performance Matters.™**



RJL 100 August 2014

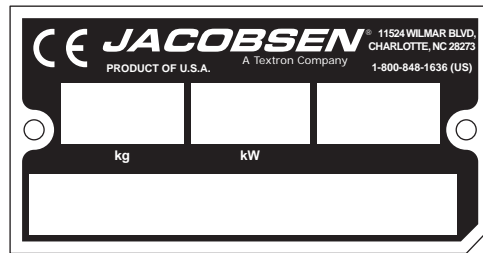
## FOREWORD

This manual contains safety, operating, adjustment, maintenance, troubleshooting instructions and parts list for your new Jacobsen machine. This manual should be stored with the equipment for reference during operation.

Before you operate your machine, you and each operator you employ should read the manual carefully in its entirety. By following the safety, operating and maintenance instructions, you will prolong the life of your equipment and maintain its maximum efficiency.

If additional information is needed, contact your Jacobsen Dealer.

The serial plate is located on the rear crossbar of the frame. Jacobsen recommends you record these numbers below for easy reference.



## Suggested Stocking Guide

To Keep your Equipment fully operational and productive, Jacobsen suggests you maintain a stock of the more commonly used maintenance items. We have included part numbers for additional support materials and training aids.

To order any of the following material:

1. Write your full name and complete address on your order form.
2. Explain where and how to make shipment:
  - UPS
  - Regular Mail
  - Overnight
  - 2nd Day

3. Order by the quantity desired, the part number, and the description of the part.
4. Send or bring the order to your authorized Jacobsen Dealer.

## Service Parts

Qty.	Part No.	Description	Qty.	Part No.	Description
	4102780	50 Amp Fuse		2811106	Motor to Pulley Belt
	4262910	30 Amp Fuse		2811070	Pulley to Traction Drum Belt
	4131618	Ignition Key			

## Service Support Material

Qty.	Part No.	Description
	4260472	Technical Manual
	4260475	Operator Training Video

Qty.	Part No.	Description
	4262930	Floating Head Service Manual
	4262932	Fixed Head Service Manual

These are the original instructions verified by Jacobsen, A Textron Company.

© 2012, Jacobsen, A Textron Company/Textron Innovations Inc.  
 "All rights reserved, including the right to reproduce this material or portions thereof in any form."

### Proposition 65 Warning

This product contains or emits chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

<b>1 SAFETY</b>			
1.1	How to Operate Safely	4	
1.2	Important Safety Notes	7	
<b>2 SPECIFICATIONS</b>			
2.1	Product Identification	8	
2.2	Mower	9	
2.3	Traction and Differential	9	
2.4	Weights	9	
2.5	Gen-Set Power Module	9	
2.6	Battery Power Module	10	
2.7	Accessories & Support Literature	11	
2.8	Declaration of Conformity	12	
<b>3 DECALS</b>			
3.1	Decals	15	
<b>4 CONTROLS</b>			
4.1	Icons	18	
4.2	Handle Controls	18	
4.3	LCD Display	19	
4.4	Frequency of Cut	24	
4.5	Gas Power Module Controls	29	
4.6	Battery Power Module Controls	29	
<b>5 OPERATION</b>			
5.1	Daily Inspection	30	
5.2	Interlock System (O.P.C.)	30	
5.3	Operating Procedures	31	
5.4	Starting/Stopping	32	
5.5	Mowing	33	
5.6	Transport Wheels (Optional)	34	
5.7	Kickstand	34	
5.8	Grass Catcher	35	
5.9	Daily Maintenance	35	
<b>6 ADJUSTMENTS (ALL UNITS)</b>			
6.1	General	36	
6.2	Brake	36	
6.3	Speed Paddle Stops	36	
6.4	Handle	37	
6.5	Traction Belts	37	
6.6	Front Roller Weight	38	
6.7	Torque Specification	39	
<b>7 FIXED HEAD REEL ADJUSTMENTS</b>			
7.1	General	40	
7.2	Reel To Bedknife	40	
7.3	Bedknife Adjustment	41	
7.4	Cutting Height	41	
<b>8 CLASSIC FLOATING HEAD REEL ADJUSTMENTS</b>			
8.1	General	42	
8.2	Bedknife-To-Reel	42	
8.3	Bedknife Adjustment	43	
8.4	Reel Bearing	43	
8.5	Cutting Height	44	
8.6	Reel Assembly Removal	44	
<b>9 TRUESET FLOATING HEAD REEL ADJUSTMENTS</b>			
9.1	General	45	
9.2	Bedknife-To-Reel	45	
9.3	Bedknife Adjustment	46	
9.4	Cutting Height	46	
9.5	Reel Bearing	47	
9.6	Bedknife Adjuster Spring	47	
9.7	Bedknife Adjuster Tension	47	
9.8	Grinding Bedknife	47	
9.9	Reel Assembly Removal	48	
<b>10 BATTERY POWER MODULE</b>			
10.1	Safety	49	
10.2	General	49	
10.3	Maintenance	50	
10.4	Cleaning Batteries	50	
10.5	Battery Charger	51	
10.6	Battery Installation	52	
10.7	Replacing Battery Pack	53	
<b>11 GEN-SET POWER MODULE</b>			
11.1	Engine	54	
11.2	Engine Oil	54	
11.3	Engine Oil Change	55	
11.4	Engine Speed	55	
11.5	Fuel	56	
<b>12 MAINTENANCE</b>			
12.1	General	57	
12.2	Tires (Option)	57	
12.3	Wheel Bearing	57	
12.4	Backlapping and Grinding	58	
12.5	Storage	59	
<b>13 TROUBLESHOOTING</b>			
13.1	General	60	
<b>14 MAINTENANCE &amp; LUBRICATION CHARTS</b>			
14.1	General	61	
14.2	Maintenance Chart	61	
14.3	Lubrication Chart	62	
<b>15 PARTS CATALOG</b>			
15.1	How To Use The Parts Catalog	63	
15.2	To Order Parts	63	
15.3	Parts Catalog Table of Contents	63	

# 1 SAFETY

## 1.1 HOW TO OPERATE SAFELY



### WARNING

#### **EQUIPMENT OPERATED INCORRECTLY OR WITHOUT TRAINING CAN BE DANGEROUS.**

Know the location and correct operation of controls. Operators without experience must receive instruction from another person that knows the correct operation of the equipment before you operate the mower.

Only use parts, accessories and attachments approved by Jacobsen.

#### **SAFE OPERATION**

- a Read the Operator's Manual and other training material. If the operator or technician can not read this manual, the owner is responsible to describe this material to the operators and technicians. Manuals in additional languages may be available on the Jacobsen or RansomesJacobsen website.
- a Read all of the instructions for this mower carefully. Know the controls and the correct operation of the equipment.
- b Children or persons who do not understand these instructions must not use the mower. The local regulations can limit the age of the operator.
- c Never use a mower near persons, including children or animals.
- d Remember that the operator or owner is responsible for accidents or hazards that occur to other persons or their property.
- e Never carry passengers.
- f Never allow persons to operate or service the mower or its attachments without correct instructions.
- g Do not operate equipment while tired, sick or after you use alcohol or drugs.

#### **PREPARATION**

- a When you operate the mower, wear correct clothing, slip resistant work shoes or boots, work gloves, hard hat, safety glasses and hearing protection. Long hair, loose clothing or jewelry can be caught in moving parts.
- b Do not operate the equipment with the Interlock System disconnected or the system does not operate correctly. Do not disconnect or prevent the operation of any switch.
- c Never operate equipment that is not in correct order or without decals, guards, shields, deflectors or other protective devices fastened.

- d Inspect the mower before you operate the mower. Check the tire pressure, engine oil level, the radiator coolant level and the air cleaner indicator. Fuel is flammable. Use caution when you add the fuel to the mower.
- e Operate the mower in daylight or in good artificial light. Use caution when you operate the mower during bad weather. Never operate the mower with lightning in the area.
- f Inspect the area to select the accessories and attachments that are needed to correctly and safely do the job. Only use parts, accessories and attachments approved by Jacobsen.
- g Be careful of holes in the terrain and other hazards that are not visible.
- h Inspect the area where the equipment is operated. Remove all objects you can find before you operate. Be careful of obstructions above the ground (low tree limbs, electrical wires) and also underground obstacles (sprinklers, pipes, tree roots). Enter a new area carefully. Look for possible hazards.
- i Inspect the cutting system before you start the mower. Make sure the blades are free to rotate. When you rotate one blade, other blades can rotate.

#### **OPERATION**

- a Never operate the engine without enough ventilation or in an enclosed area. The carbon monoxide in the exhaust fumes can increase to dangerous levels.
- b Never carry passengers. Keep other persons or animals away from the mower.
- c Disengage all drives and engage the parking brake before you start the engine. Only start the engine with the operator in the seat. Never start the engine with persons near the mower.

- d Keep your legs, arms and body inside the operator compartment while the mower is in operation. Keep your hands and feet away from the cutting units.
- e Do not use on the slopes greater than the safe slope limit for the equipment.
- f To guard against over turning or loss of control:
  - Operate the mower across the face (horizontally), but not up and down on the face of slopes (vertically).
  - Do not start or stop suddenly on slopes.
  - Decrease the speed when you operate on slopes or when you must turn. Use caution when you change direction. Turf condition can change the mower stability.
  - Use caution when you operate the mower near drop-offs, ditches or embankments.
  - Be careful of holes in the terrain and other hazards that are not visible.
- g Always operate at speeds that allow you to have complete control of the machine. Make sure of your footing keep a tight grip the handle and walk. Never run when you operate the mower.
- h Use caution when you go near corners, trees or other objects that can prevent a clear view.
- i Equipment must meet the current regulations to be driven on the public roads.
- j Before you move across or operate on the paths or roads, turn off the PTO switch, lift the mowers and travel at decreased speed. Look for traffic.
- k Stop the blades when the mower is on any surface that is not grass.
- l Do not release the cut grass in the direction of persons or allow persons near the mower while in operation.
- m Do not operate the mower with damaged guards or without safety devices in position.
- n Do not change the engine governor setting or over-speed the engine. Never change or tamper with adjusters that are closed with a seal for the engine speed control.
- o Before you leave the operator compartment, for any reason:
  - Disengage all the drives and lower attachments to the ground.
  - Engage the parking brake.
- Stop the engine and remove the key.
- p When you hit an object or mower starts to cause the vibration that is not normal, inspect the mower for damage and make repairs.
- q Decrease the throttle setting before you stop the engine.
- r Do not use this equipment for uses that the mower was not made for.

## SAFE HANDLING OF FUELS

- a The fuel and the fuel vapors are flammable. Use caution when you add the fuel to the mower. The fuel vapors can cause an explosion.
- b Never use the containers that are not approved to keep or transfer fuel.
- c Never keep the mower or fuel containers near an open flame or any device that can cause the ignition of fuel or fuel vapors.
- d Never fill the fuel containers inside a vehicle or on a truck or trailer with a plastic liner. Always put the fuel container on the ground away from your vehicle before you fill the container.
- e Refuel the mower before you start the engine. When the engine is in operation or while the engine is hot, never remove the fuel cap or add fuel to the mower.
- f Refuel outdoors only and do not smoke when you add fuel. Extinguish all types of ignition.
- g The fuel nozzle must touch the rim of the fuel tank when you add fuel to the mower. Do not use a device to lock the fuel nozzle in the open position.
- h Do not over fill the fuel tank. Leave at least 1 inch (25 mm) below the filler neck.
- i Always tighten the fuel tank cap and container cap after you add fuel.
- j If the fuel spills on your clothing, change your clothing immediately.

## MAINTENANCE AND STORAGE

- a Before you clean, adjust or repair this equipment, stop the engine and disconnect the spark plug wire. Keep the wire away from the plug to prevent the engine to start. Disconnect the power connector
- b Make sure the mower is parked on a solid and level surface.
- c Never work on a mower that is lifted only by the jack. Always use the jack stands.

# 1 SAFETY

---

- d Do not remove battery pack without unit on kickstand.
- e Never allow persons to service the mower or its attachments without correct instructions.
- f When the mower is parked, put into storage or left without an operator, lower the cutting device unless a positive mechanical lock is used.
- g When you put the mower on a trailer or put the mower in storage, close the fuel valve. Do not keep fuel near flames or drain the fuel inside a building.
- h Disconnect the battery before you service the mower. Always disconnect the negative battery cable before the positive battery cable. Always connect the positive battery cable before the negative battery cable.
- i Charge the battery in an area with good airflow. The battery can release hydrogen gas that is explosive. To prevent an explosion, keep any device that can cause sparks or flames away from the battery.
- j Disconnect the battery charger from the power supply before you connect or disconnect the battery charger to the battery. Wear protective clothing and use insulated tools when you service the battery.
- k Be careful and wear gloves when you check or service the cutting unit blades. Replace any damaged blades, do not try to correct a damaged blade.
- l Keep your hands and feet away from parts that move. Do not adjust the mower with the engine in operation, unless the adjustment needs the engine in operation.
- m Carefully release the pressure from components with stored energy.
- n Keep the mower and the engine clean.
- o Allow the engine to become cool before storage and always remove the ignition key.
- p Keep all nuts, bolts and screws tight to make sure the equipment is in safe condition.
- q Replace worn or damaged parts for safety. Replace damaged or worn decals. Only use parts, accessories and attachments approved by Jacobsen.
- r To decrease the fire hazard, remove materials that burn from the engine, muffler, battery tray and fuel tank area.

- s Disconnect the battery and controller connectors before you weld on this mower.

## **WHEN YOU PUT THE MOWER ON A TRAILER**

- a Be careful when you load or unload the mower on a trailer. Trailer must be wider than the mower and can carry the weight of the mower.
- b Use a full-width ramp to load or unload the mower on a trailer.
- c Use straps, chains, cables or ropes to fasten the mower to the trailer. Both front and rear straps must be sent down and toward sides of trailer.
- d Make sure that all latches are correctly fastened.

## 1.2 IMPORTANT SAFETY NOTES



*This safety alert symbol is used to alert you to potential hazards.*

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

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

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

**NOTICE** - Indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage. It may also be used to alert against unsafe practices.

*For pictorial clarity, some illustrations in this manual may show shields, guards or plates open or removed. Under no circumstances should this equipment be operated without these devices securely fastened in place.*



### WARNING

The Interlock System on this machine will shut off the reel and traction drive if the operator releases the O.P.C. (Operator Presence Control) bail.

To protect the operator and others from injury, never operate equipment with the Interlock System disconnected or malfunctioning.



### WARNING

1. Before leaving the operator's position for any reason:
  - a. Disengage all drives.
  - b. Engage parking brake.
  - c. Disconnect power connector.
2. Keep hands, feet, and clothing away from moving parts. Wait for all movement to stop before you clean, adjust, or service the machine.
3. Keep the area of operation clear of all bystanders and pets.
4. Chock or block the wheels if the machine is left on an incline.
5. Never operate mowing equipment without the discharge deflector securely fastened in place.

By following all instructions in this manual, you will prolong the life of your machine and maintain its maximum efficiency. Adjustments and maintenance should always be performed by a qualified technician.

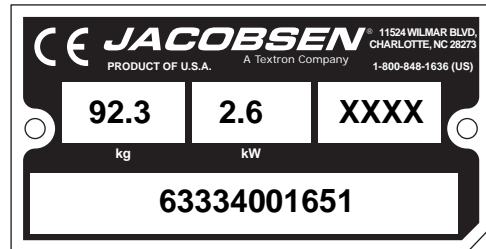
If additional information or service is needed, contact your Authorized Jacobsen Dealer who is kept informed of the latest methods to service this equipment and can provide prompt and efficient service.

## 2 SPECIFICATIONS

### 2.1 PRODUCT IDENTIFICATION

- 63334..... Eclipse® 2 118 base unit with 18 in. (457 mm) 11 blade reel and InCommand™ control system. Gen-Set power module. floating 22 in. (457 mm) 11 blade reel and InCommand™ control system. Battery power module.
- 63343..... Eclipse® 2 118 base unit with 18 in. (457 mm) 11 blade reel and InCommand™ control system. Battery power module.
- 63335..... Eclipse® 2 118 base unit with 18 in. (457 mm) 15 blade reel and InCommand™ control system. Gen-Set power module.
- 63344..... Eclipse® 2 118 base unit with 18 in. (457 mm) 15 blade reel and InCommand™ control system. Battery power module.
- 63336..... Eclipse® 2 118F base unit with floating 18 in. (457 mm) 11 blade reel and InCommand™ control system. Gen-Set power module.
- 63345..... Eclipse® 2 118F base unit with floating 18 in. (457 mm) 11 blade reel and InCommand™ control system. Battery power module.
- 63337..... Eclipse® 2 118F base unit with floating 18 in. (457 mm) 15 blade reel and InCommand™ control system. Gen-Set power module.
- 63346..... Eclipse® 2 118F base unit with floating 18 in. (457 mm) 15 blade reel and InCommand™ control system. Battery power module.
- 63338..... Eclipse® 2 122 base unit with 22 in. (559 mm) 11 blade reel and InCommand™ control system. Gen-Set power module.
- 63347..... Eclipse® 2 122 base unit with 22 in. (559 mm) 11 blade reel and InCommand™ control system. Battery power module.
- 63339..... Eclipse® 2 122 base unit with 22 in. (559 mm) 15 blade reel and InCommand™ control system. Gen-Set power module.
- 63348..... Eclipse® 2 122 base unit with 22 in. (559 mm) 15 blade reel and InCommand™ control system. Battery power module.
- 63340..... Eclipse® 2 122F base unit with floating 22 in. (457 mm) 11 blade reel and InCommand™ control system. Gen-Set power module.
- 63349..... Eclipse® 2 122F base unit with

- 63341..... Eclipse® 2 122F base unit with floating 22 in. (457 mm) 15 blade reel and InCommand™ control system. Gen-Set power module.
- 63350..... Eclipse® 2 122F base unit with floating 22 in. (457 mm) 15 blade reel and InCommand™ control system. Battery power module.
- 63342..... Eclipse® 2 126 base unit with 26 in. (660 mm) 7 blade reel and InCommand™ control system. Gen-Set power module.
- 63351..... Eclipse® 2 126 base unit with 26 in. (660 mm) 7 blade reel and InCommand™ control system. Battery power module.
- Serial Number ..... An identification plate, like the one shown, listing the serial number, is attached to the rear crossbar.



Product	Vibration M/S <sup>2</sup>
	Arms
Fixed Head	1.79 ± 1.3
Floating Head	2.03 ± 1.3

## 2.2 MOWER

Reel.....7, 9, 11, or 15 blades, hardened high manganese carbon steel. Reel Diameter .....5 in. (127 mm) Cutting Width .....18, 22 or 26 in. (457, 559 or 660 mm) Height of cut.....1/16 to 7/16 in. (1.6 to 11 mm) Bedknives .....Hardened carbon steel High Profile .....5/32" - 7/16" (4 - 11 mm) cut	Low Profile ..... 1/8" - 7/32" (3.2 - 5.6 mm) cut Tournament..... 3/32" - 5/32" (2.4 - 4 mm) cut Super Tournament ..... 5/64" - 7/64" (2.1 - 2.8 mm) cut Championship..... 1/16" - 7/64" (1.6 - 2.8 mm) cut Frequency of Cut 15 Blade Reel ..... 0.064 - 0.133 in. (1.6 - 3.4 mm) 11 Blade Reel ..... 0.087 - 0.178 in. (2.2 - 4.5 mm) 9 Blade Reel ..... 0.106 - 0.217 in. (2.7 - 5.5 mm)
---	---

## 2.3 TRACTION AND DIFFERENTIAL

Transport Tires (Option) ...11 x 4 pneumatic bidirectional. Reel Drive .....Independent direct drive motor. Traction Drive.....Independent drive motor with two synchronous polyurethane belts. Traction Reduction Ratio..15.15:1	Mowing speed..... 0 - 3.4 m.p.h. (5.31 km/h) Differential..... Full automotive type, housed in traction drum Rear Drive Drum.....Machined aluminum alloy 2 Section, 7-3/4 (O.D.) x 10-31/32
--	--

## 2.4 WEIGHTS

### Gen Set Mowers

<b>Weights: Without Grass Catcher</b>	<b>Lbs.</b>	<b>(kg)</b>
63334 – Eclipse 2 118 11 Blade s .....	214	(97.1)
63335 – Eclipse 2 118 15 Blade s .....	217	(98.4)
63336 – Eclipse 2 118F 11 Blade s .....	254	(115.2)
63337 – Eclipse 2 118F 15 Blade s .....	257	(116.6)
63338 – Eclipse 2 122 11 Blade l.....	221	(100.2)
63339 – Eclipse 2 122 15 Blade l .....	224	(101.6)
63340 – Eclipse 2 122F 11 Blade l .....	265	(120.2)
63341 – Eclipse 2 122F 15 Blade l .....	268	(121.6)
63342 – Eclipse 2 126 n.....	243	(110.2)

### Battery Pack Mowers

<b>Weights: Without Grass Catcher</b>	<b>Lbs.</b>	<b>(kg)</b>
63343 – Eclipse 2 118 11 Blade s .....	234	(106.1)
63344 – Eclipse 2 118 15 Blade s .....	237	(107.5)
63345 – Eclipse 2 118F 11 Blade s .....	274	(124.3)
63346 – Eclipse 2 118F 15 Blade s .....	277	(125.6)
63347 – Eclipse 2 122 11 Blade l .....	241	(109.3)
63348 – Eclipse 2 122 15 Blade l .....	244	(110.7)
63349 – Eclipse 2 122F 11 Blade l .....	285	(129.3)
63350 – Eclipse 2 122F 15 Blade l .....	288	(130.6)
63351 – Eclipse 2 126 l .....	263	(119.3)
s With Steel Grooved Roller 68618		
l With Machined Aluminum Grooved Roller 68614		
n With Machined Aluminum Grooved Roller 68617		

## 2.5 GEN-SET POWER MODULE

Engine.....Honda GX-120 K1Q JG2 4-Cycle, 4HP (2.98 kW) at 4000 RPM Speed.....Engine speed set at factory for generator to produce 59.8 volts with no load. (2750 to 3250 rpm) Fuel .....Regular Grade (Unleaded) Fuel Tank .....0.66 Gallon (2.5 liter) Use clean, fresh, regular unleaded gasoline, 85 octane minimum. Refer to the engine's operator manual for fuel recommendations when using blended fuel.
---

## 2 SPECIFICATIONS

### 2.6 BATTERY POWER MODULE

To ensure the longest battery life possible, the batteries are not shipped with the power module and must be ordered separately. For optimum range and performance use batteries that equal or exceed the Amp-hour rating listed.

System Voltage..... 48 Volt DC  
 Batteries ..... (4) 12 volt, valve regulated, non-spillable sealed lead acid batteries.  
 Charger..... 5 Amp, 48 Volt DC, dual input voltage 115/230 Volt AC, 50/60 Hz.

**Recommended Battery:**

CSB battery is the Jacobsen recommended battery for use in the Eclipse mower.

Battery Brand				Battery Part Number		
CSB				EVX12200		
Length in. (mm)	Width in. (mm)	Height in. (mm)	Weight lbs. (kg)	Rating Amp-Hr	Volts	Qty Req'd
7-1/8 (181)	3 (76)	6-9/16 (167)	14.7 (6.7)	20	12	4

CSB batteries can be ordered from these CSB distributors, or from any local battery dealer.

**Electronic Distributing**

920 Brookstown Ave  
 Winston Salem, NC 27101  
**Phone Number** - 800-777-1096  
**Fax Number** - 336-723-1098  
**E-Mail** - billedi@bellsouth.net (E-Mail)  
**Contact Name** - Bill Turner

**URS Electronics**

123 N.E. 7th  
 Portland, OR 97232  
**Phone Number** - 800-955-4877  
**Fax Number** - 503-232-3373  
**E-Mail** - mark.twietmeyer@ursele.com  
**Contact Name** - Mark Twietmeyer

**Alternate Batteries:**

These alternate batteries are also currently available. These batteries have the same dimensions and amp-hour ratings, but have not been tested by Jacobsen, and no recommendation is stated or should be implied. Contact your local battery dealer or the manufacturer for sourcing on these batteries.

Battery Brand	Battery Part Number
Yuasa	Energys NPX 80
Panasonic	LC-X1220AP
Panasonic	LC-X1220P
Discover	D12200
Power Sonic	PSH-12180
B.B. Battery	EB20-12

**(USE ONLY 12 VOLT SLA BATTERIES)**

## 2.7 ACCESSORIES & SUPPORT LITERATURE

Contact your area Jacobsen Dealer for a complete listing of accessories and attachments.



### CAUTION

Use of other than Jacobsen authorized parts and accessories may cause personal injury or damage to the equipment.

#### Accessories

Lapping Compound (180 grit) .....	554598
Orange Touch-up Paint (12 oz. spray) .....	554598
18 in. Fixed Head Grass Catcher.....	68122
18 in. Floating Head Grass Catcher.....	4174683
22 in. Fixed Head Grass Catcher.....	68123
22 in. Floating Head Grass Catcher.....	4114788
26 in. Fixed Head Grass Catcher.....	68124
22 in. Push Brush (Fixed Head Units).....	68611
22 in. Front Roller Brush (Fixed Head Units) .....	68610
22 in. Front Roller Brush (Floating Head Units) .....	68536
LED Light Kit.....	63307
Battery Charger.....	68661
Removable Battery Pack (u) .....	63316
Mower Caddy Battery Pack Mounting Kit .....	68660
Transport Tires.....	62293
Mower Caddy .....	63321
Eclipse 2 Mower Caddy Mounting Kit .....	63354
22 in. Turf Groomer® (H) .....	67966
Fixed Head Turf Groomer® Adapter Kit.....	67965

#### MAGKnife Kits

122F Super Tournament MAGKnife Kit.....	4188500
122F Tournament MAGKnife Kit .....	4158083
122 Super Tournament MAGKnife Kit.....	4158082

u Does not included batteries

H Fixed Head Units require 67965 to install Turf Groomer

#### Solid Rollers

18 in. with Scraper .....	68626
22 in. with Scraper .....	68530
26 in. with Scraper .....	68627

#### Grooved Rollers

18 in. Machined Steel .....	68616
22 in. Assembled Disc .....	68527
22 in. Machined Aluminum .....	68614
22 in. Machined Steel .....	68613
22 in. Segmented Roller .....	68673
26 in. Machined Aluminum .....	68617
26 in. Machined Steel .....	68628

#### Floating Head Reels

22 in. 11 Blade Reel.....	63308
22 in. 15 Blade Reel .....	63333
18 in. 11 Blade Reel.....	63309
18 in. 15 Blade Reel .....	62824
Right Hand Reel Conversion Kit.....	4172485
Left Hand Reel Conversion Kit .....	4172441

#### Additional Power Modules

Gen-Set Power Module .....	63305
Battery Power Module (u) .....	63306

#### Support Literature

Technical Manual .....	4260472
Operator Training DVD Video .....	4260475
Fixed Head Repair Manual .....	4262932
Floating Head Repair Manual .....	4262930

## 2 SPECIFICATIONS

### 2.8 DECLARATION OF CONFORMITY

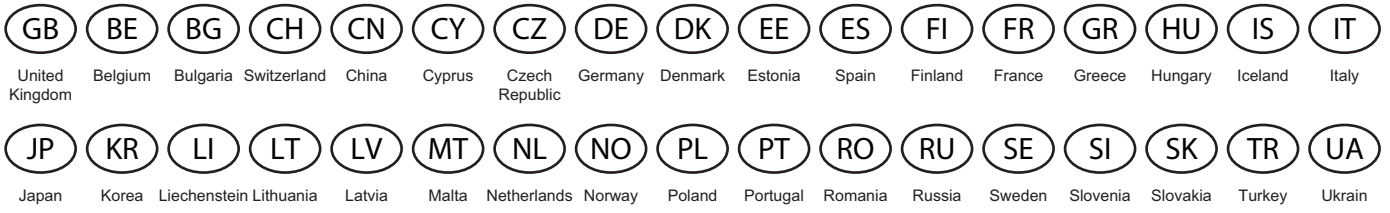
DECLARATION OF CONFORMITY • ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ • PROHLÁŠENÍ O SHODĚ •  
 OVERENSSTEMMELSESERKLÆRING • CONFORMITEITSVERKLARING • VASTAVUSDEKLARATSIOON •  
 VAATIMUSTENMUKAISUUSVAKUUTUS • DECLARATION DE CONFORMITE • KONFORMITÄTSEKTLÄRUNG •  
 ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ • MEGFELELŐSÉGI NYILATKOZAT • DICHIARAZIONE DI CONFORMITÀ • ATBILSTĪBAS  
 DEKLARĀCIJA • ATITIKTIES DEKLARACIJA • DIKJARAZZJONI TAL-KONFORMITÀ • DEKLARACJA ZGODNOŚCI •  
 DECLARAÇÃO DE CONFORMIDADE • DECLARAȚIE DE CONFORMITATE • VYHLÁSENIE O ZHODE • IZJAVA O  
 SKLADNOSTI • DECLARACIÓN DE CONFORMIDAD • DEKLARATION OM ÖVERENSSTÄMMELSE •  
 SAMRÆMISYFIRLÝSING • KONFORMITETSERKLÆRING • 符合性声明 • SAMRÆMISYFIRLÝSING • 適合宣言 •  
 적합성 선언서 • UYGUNLUK BEYANI • ДЕКЛАРАЦІЯ ПРО ВІДПОВІДНІСТЬ

<p>Business name and full address of the manufacturer • Търговско име и пълен адрес на производителя • Obchodní jméno a plná adresa výrobce •          Producentens firmanavn og fulde adresse • Bedrijfsnaam en volledig adres van de fabrikant • Tootja ärinimi ja täielik aadress •          Valmistajan toiminimi ja täydellinen osoite • Nom commercial et adresse complète du fabricant • Firmenname und vollständige Adresse des Herstellers •          Επωνυμία και ταχυδρομική διεύθυνση κατασκευαστή • A gyártó üzleti neve és teljes címe • Ragione sociale e indirizzo completo del fabbricante •          Uzņēmuma nosaukums un pilna ražotāja adrese • Verslo pavadinimas ir pilnas gamintojo adresas • Isem kummerčjali u indirizzo shih tal-fabbrikant •          Nazwa firmy i pełny adres producenta • Nome da empresa e endereço completo do fabricante •          Denumirea comercială și adresa completă a producătorului • Obchodný názov a úplná adresa výrobcu • Naziv podjetja in polni naslov proizvajalca •          Nombre de la empresa y dirección completa del fabricante • Tillverkarens företagsnamn och kompletta adress •          Fyrirtækisheiti og fullt heimilisfang framleiðanda • Firmanavn og full adresse for produsenten • 制造商的商业名称和完整地址 •          Nafn fyrirtækis og fullt heimilisfang framleiðanda • 商号およびメーカーの正式住所 • 제조사의 상호명 및 주소 • Imalatçının ticari ünvanı ve açık adresi •          Фірмове найменування і повна адреса виробника</p>	<p>Jacobsen, A Textron Company          11524 Wilmar Blvd.          Charlotte, NC 28273, USA</p>
<p>Product Code • Код на продукта • Kód výrobku • Produktkode • Productcode • Toote kood • Tuotekoodi • Code produit • Produktcode •          Κωδικός προϊόντος • Termékkód • Codice prodotto • Produkta kods • Produktu kodus • Kodíci tal-Prodott • Kod produktu • Código do Produto •          Cod produs • Kód výrobku • Označka proizvoda • Código de producto • Produktkod • Vörunúmer • Produktkode • 产品代码 • Framleiðslunúmer •          製品コード • 제품 코드 • Ürün Kodu • Код виробу</p>	<p>63334          63335          63336          63337          63338          63339          63340          63341          63342          63343          63344          63345          63346          63347          63348          63349          63350          63351</p>
<p>Machine Name • Наименование на машината • Název stroje • Maskinnavn • Machinenaam • Masina nimi • Laitteen nimi • Nom de la machine •          Maschinenbezeichnung • Ονομασία μηχανήματος • Gégnév • Denominazione della macchina • Iekārtas nosaukums • Mašinos pavadinimas •          Isem tal-Magna • Nazwa urządzenia • Nome da Máquina • Numele echipamentului • Názov stroja • Naziv stroja • Nombre de la máquina •          Maskinens namn • Heiti tækis • Maskinnavn • 机器名称 • Nafn vélar • 機械名 • 기기 명칭 • Makine Adı • Назва машини</p>	<p>Eclipse® 2 118 Hybrid 11 Blade          Eclipse® 2 118 Hybrid 15 Blade          Eclipse® 2 118F Hybrid 11 Blade          Eclipse® 2 118F Hybrid 15 Blade          Eclipse® 2 122 Hybrid 11 Blade          Eclipse® 2 122 Hybrid 15 Blade          Eclipse® 2 122F Hybrid 11 Blade          Eclipse® 2 122F Hybrid 15 Blade          Eclipse® 2 126 Hybrid 7 Blade          Eclipse® 2 118 Battery 11 Blade          Eclipse® 2 118 Battery 15 Blade          Eclipse® 2 118F Battery 11 Blade          Eclipse® 2 118F Battery 15 Blade          Eclipse® 2 122 Battery 11 Blade          Eclipse® 2 122 Battery 15 Blade          Eclipse® 2 122F Battery 11 Blade          Eclipse® 2 122F Battery 15 Blade          Eclipse® 2 126 Battery 7 Blade</p>
<p>Designation • Предназначение • Označení • Betegnelse • Benaming • Nimetus • Tuuypimerkintä • Pažymėjimas • Bezeichnung • Χαρακτηρισμός •          Megnevezés • Funzione • Arzīmējums • Lithuanian • Denominazzjoni • Oznaczenie • Designação • Specificație • Označenie • Namen stroja •          Descripción • Beteckning • Merking • Konstruksjon • 名称 • Útnefning • 用途 • 지정 • Tanımı • Позначення</p>	<p>Lawnmower, Article 12, Item 32</p>
<p>Serial Number • Серийн номер • Sériové číslo • Seriennummer • Seriennummer • Seerianumber • Valmistusnumero • Numéro de série •          Seriennummer • Σειριακός αριθμός • Sorozatszám • Numero di serie • Sērijas numurs • Serijos numeris • Numru Serjali • Numer seryjny •          Número de Série • Număr de serie • Sériové číslo • Serijska številka • Número de serie • Seriennummer • Raðnúmer • Seriennummer • 序列号 •          Raðnúmer • シリアル番号 • 일련 번호 • Serî Numarasi • Серійний номер</p>	<p>6333401651-6333404500          6333501651-6330104500          6333601651-6330204500          6333701651-6330304500          6333801651-6330404500          6333901651-6331104500          6334001651-6331204500          6334101651-6334304500          6334201651-6331404500          6334301651-6331504500          6334401651-6332504500          6334501651-6332604500          6334601651-6333504500          6334701651-6332804500          6334801651-6332904500          6334901651-6333004500          6335001651-6333104500          6335101651-6333204500</p>
<p>Engine • Двигател • Motor • Motor • Motor • Mootor • Moottori • Moteur • Motor • Μηχανή • Modulnėv • Motore • Dzinējs • Variklis •          Saħna Netta Installata • Silnik • Motor • Motor • Motor • Motor • Motor • Motor • Vél • Motor • 发动机 • Afivél • エンジン • 엔진 • Motor • Двигун</p>	<p>Hybrid Models          Honda GX-120 Gas          Battery Models          Aspen Motor 48V Brushless DC</p>

<p>Net Installed Power • Нетна инсталлирана мощност • Čistý instalovaný výkon • Installeret nettoeffekt • Netto geïnstalleerd vermogen • Installeeritud netovõimsus • Annettettu nettoteho • Puissance nominale nette • Installierte Nettoleistung • Καθαρή εγκατεστημένη ισχύς • Nettó beépített teljesítmény • Potenza netta installata • Paredzētā tīkla jauda • Grynoji galia • Wisa' tal-Qtugh • Moc zainstalowana netto • Potência instalada • Puterea instalată netă • Čistý inštalovaný výkon • Neto vgrajena moč • Potencia instalada neta • Nettoeffekt • Nettóafí vélar • Netto installer kraft • 装机容量 • Netuppsetningarorka • 搭載する正確出力 • 정미 출력 • Net Kurulu Güç • Корисна встановлена потужність</p>	<p>Hybrid Models 2,98 kW @ 3000 RPM Battery Models 1,3 kW @ 2200 RPM</p>
<p>Cutting Width • Широчина на рязане • Šírka rezu • Skærebredde • Maaibreedte • Löikeelaius • Leikkuuleveys • Largeur de coupe • Schnittbreite • Μήκος μισιέζας • Vágási szélesség • Larghezza di taglio • Griešanas platumš • Pjovimo plotis • Tikkonforma mad-Direttivi • Szerokosc cięcia • Largura de Corte • Lățimea de tăiere • Šírka záberu • Širina reza • Anchura de corte • Klippbreidd • Skurðbreidd • Klippebredde • 剪草寬度 • Breidd sláttar • 刈り取り幅 • 절단 폭 • Kesme Geniřlięi • Ширина рязання</p>	<p>118, 118F - 45,7 cm 122, 122F - 55,9 cm 126 - 66,1 cm</p>
<p>Conforms to Directives • В съответствие с директивите • Splñuje podminky směrnic • Er i overensstemmelse med direktiver • Voldoet aan de richtlijnen • Vastab direktiividele • Direktiivien mukainen • Conforme aux directives • Entspricht Richtlinien • Ακολουθήσει πιστά τις Οδηγίες • Megfelel az irányelveknek • Conforme alle Direttive • Atbilst direktívām • Atitinka direktivų reikalavimus • Valutazzjoni tal-Konformità • Dyrektywy związane • Cumpre as Directivas • Respectă Directivele • Je v súlade so smernicami • Skladnost z direktivami • Cuple con las Directivas • Uppfyller direktiv • Samræmist tilskipunum • I samsvar med direktiv • 符合指令 • Í samræmi við reglugerðir • 適合指令 • 규정 준수 • Şu Yönergelelere Uyumludur • Відповідає директиві</p>	<p>2004/108/EC 2006/42/EC 2000/14/EC, 2005/88/EC 2006/66/EC</p>
<p>Conformity Assessment • Оценка за съответствие • Hodnocení plnění podmínek • Overensstemmelsesvurdering • Conformiteitsbeoordeling • Vastavushindamine • Vaatimustenmukaisuuden arviointi • Evaluation de conformité • Konformitätsbeurteilung • Διαπίστωση Συμμόρφωσης • Megfelelőség-értékelés • Valutazione della conformità • Atbilstības novērtējums • Atitikties įvertinimas • Livell tal-Qawwa tal-Foss Imkejjeļ • Ocena zgodności • Avaliação de Conformidade • Evaluarea conformității • Vyhodnotenie zhodnosti • Ocena skladnosti • Evaluación de conformidad • Bedömning av överensstämmelse • Samræmistat • Konformitetsvurdering • 符合性评估 • Samræmistat • 適合性評価 • 적합성 평가 • Uygunluk Deęerlendirmesi • Оцінка відповідності</p>	<p>2006/42/EC Annex VIII</p>
<p>Measured Sound Power Level • Измерено ниво на звукова мощност • Naměřený akustický výkon • Målte lydstyrkeniveau • Gemeten geluidsniveau • Mõõdetud helivõimsuse tase • Mittattu äänitehotaso • Niveau de puissance sonore mesuré • Gemessener Schalldruckpegel • Σταθμισμένο επίπεδο ηχητικής ισχύος • Mért hangteljesítményszint • Livello di potenza sonora misurato • Izměřitais skaņas jaudas līmenis • Išmatuotas garso stiprumo lygis • Livell tal-Qawwa tal-Foss Iggarantit • Moc akustyczna mierzona • Nivel sonoro medido • Nivelul măsurat al puterii acustice • Nameranā hladina akustiského výkonu • Izmerjena raven zvočne moči • Nivel de potencia sonora medido • Upprætt ljúdeffektsnivá • Mælt hljóðafsstig • Mælt lydteffektivitét • 測得声功率级 • Mældur hljóðstyrkur • 音出力レベル測定値 • 측정된 음향 파워 레벨 • Ölçülen Ses Gücü Düzeyi • Вимряний рівень звукової потужності</p>	<p>Hybrid Models - 96 dB(A) LWA Battery Models - 86 dB(A) LWA</p>
<p>Guaranteed Sound Power Level • Гарантирано ниво на звукова мощност • Garantovaný akustický výkon • Garantert lydstyrkeniveau • Gearandeerd geluidsniveau • Garanteeritud helivõimsuse tase • Taattu äänitehotaso • Niveau de puissance sonore garanti • Garantierter Schalldruckpegel • Εγγυημένο επίπεδο ηχητικής ισχύος • Szavatolt hangteljesítményszint • Livello di potenza sonora garantito • Garantētais skaņas jaudas līmenis • Garantuotas garso stiprumo lygis • Livell tal-Qawwa tal-Foss Iggarantit • Moc akustyczna gwarantowana • Nivel sonoro fantidito • Nivelul garantat al puterii acustice • Garantovaná hladina akustického výkonu • Zajamčena raven zvočne moči • Nivel de potencia sonora garantizado • Garanterad ljúdeffektsnivá • Hljóðafsstig sem ábyrgd er tekin á • Garanter lydteffektivitét • 保证声功率级 • Trygðdur hljóðstyrkur • 音出力保証レベル • 보장된 음향 파워 레벨 • Garantili Ses Gücü Düzeyi • Гарантований рівень звукової потужності</p>	<p>Hybrid Models - 95 dB(A) LWA Battery Models - 85 dB(A) LWA</p>
<p>Conformity Assessment Procedure (Noise) • Оценка за съответствие на процедурата (Шум) • Postup hodnocení plnění podmínek (hluk) • Procedure for overensstemmelsesvurdering (Støj) • Procedure van de conformiteitsbeoordeling (geluid) • Vastavushindamismenetlus (müra) • Vaatimustenmukaisuuden arviointimenetely (Melu) • Procédure d'évaluation de conformité (bruit) • Konformitätsbeurteilungsverfahren (Geräusch) • Διαδικασία Αξιολόγησης Συμμόρφωσης (Οόρυθος) • Megfelelőség-értékelési eljárás (Zaj) • Procedura di valutazione della conformità (rumore) • Atbilstības novērtējuma procedūra (troksnis) • Atitikties įvertinimo procedūra (garsas) • Procedura tal-Valutazzjoni tal-Konformità (Foss) • Procedura oceny zgodności (poziom hałas) • Processo de avaliação de conformidade (nivel sonoro) • Procedura de evaluare a conformității (zgomot) • Postup vyhodnocovania zhodnosti (hluk) • Postopek za ugotavljanje skladnosti (hrup) • Procedimiento de evaluación de conformidad (ruido) • Procedur för bedömning av överensstämmelse (buller) • Samræmistatsaðferð (hávaði) • Prosedyre for konformitetsvurdering (støy) • 符合性评估程序 (噪声) • Aðgerð fyrir samræmistat (Hávaði) • 適合性評價の手順 (騒音) • 적합성 평가 절차 (소음) • Uygunluk Deęerlendirme Prosedürü (Gürültü) • Регламент оцінки відповідності (шум)</p>	<p>2000/14/EC Annex VI, Part 1</p>
<p>UK Notified Body for 2000/14/EC • Нотифициран орган в Обединеното кралство за 2000/14/EO • Úřad certifikovaný podle směrnice č. 2000/14/EC • Det britiske bemyndigede organ for 2000/14/EF • Engels adviesorgaan voor 2000/14/EG • Ühendkuningriigi teavitatud asutus direktiivi 2000/14/EÜ mõistes • Direktiivin 2000/14/EY mukainen ilmoitettu tarkastuslaitos Isossa-Britanniassa • Organisme notifié concernant la directive 2000/14/CE • Britische benannte Stelle für 2000/14/EG • Κοινοποιημένο Οργανισμός Ηνωμένου Βασιλείου για 2000/14/EK • 2000/14/EK – egyesült királyságbeli bejelentett szervezet • Organismo Notificato in GB per 2000/14/CE • 2000/14/EK AK regisztrált organizáció • JK notifikuotosios istaigos 2000/14/EC • Korp Notifikat tar-Renju Unit għal 2000/14/KE • Dopuszczona jednostka badawcza w Wielkiej Brytanii wg 2000/14/WE • Entidade notificada no Reino Unido para 2000/14/CE • Organism notificat în Marea Britanie pentru 2000/14/CE • Notifikovaný orgán Spojeného královstva pre smernicu 2000/14/ES • Britanski priklašeni organ za 2000/14/ES • Cuerpo notificado en el Reino Unido para 2000/14/CE • Anmäkt organ för 2000/14/EG i Storbritannien • Tilkynntur aðili í Bretlandi fyrir 2000/14/EC • Britisk teknisk for 2000/14/EF • 英国 2000/14/EC 认证机构 • Bretland Upplysingar fyrir 2000/14/EB • UK (英國) 公認機關、2000/14/EC • 2000/14/EC 에 대한 영국 인증 기관 • 2000/14/EC için BK Onaylı Kuruluş • Британський уповноважений орган для 2000/14/EC</p>	<p>Number: 1088 Sound Research Laboratories Limited Holbrook House, Little Waldingfield Sudbury, Suffolk CO10 0TH</p>
<p>Operator Ear Noise Level • Оператор на нивото на доловим от ухото шум • Hladina hluku v oblasti uší operátora • Støjniveau i førers ørehøjde • Geluidsniveau oor bestuurder • Műratas operaatori kõrvas • Melutaso käyttäjän korvan kohdalla • Niveau de bruit à hauteur des oreilles de l'opérateur • Schallpegel am Bedienerohr • Επίπεδο θορύβου σε λειτουργία • A kezelő felénél mért zajszint • Livello di potenza sonora all'orecchio dell'operatore • Trokšņa līmenis pie operatora auss • Dirbančiojo su mašina patiriamo triukšmo lygis • Livell tal-Foss fil-Widna tal-Operatur • Dopuszczalny poziom hałasu dla operatora • Nivel sonoro nos ouvidos do operador • Nivelul zgomotului la urechea operatorului • Hladina hluku pôsobiacna na sluch operátora • Raven hrupa pri užesu upravljavca • Nivel sonoro en el oído del operador • Ljudnivá vid förensens öra • Hávaðastig fyrir stjórnanda • Støynivá ved operatørens øre • 操作員耳旁噪声级 • Hljóðstyrkur fyrir stjórnanda • オペレータが感じる騒音レベル • 사용자 청각 소음 레벨 • Operatör Kulak Gürültü Düzeyi • Рівень шуму, що впливає на оператора</p>	<p>Hybrid Models 82 dB(a) Leq (2006/42/EC) Batter Models 70 dB(a) Leq (2006/42/EC)</p>
<p>Harmonised standards used • Исползвани хармонизирани стандарти • Použité harmonizované normy • Brugte harmoniserede standarder • Gebruikte geharmoniseerde standaards • Kasutatud ühtlustatud standardid • Káytetyt yhdenmukaistetut standardit • Normes harmonisées utilisées • Angewandte harmonisierte Normen • Εναρμονισμένα πρότυπα που χρησιμοποιήθηκαν • Harmonizált szabványok • Standard armonizzati applicati • Izmantotie saskaņotie standarti • Panaudoti suderinti standartai • Standards armonizzati uzati • Normy spójne powiązane • Normas harmonizadas usadas • Standardele armonizate utilizate • Použité harmonizované normy • Uparabljene usklajeni standardi • Estándares armonizados utilizados • Harmoniserade standarder som används • 所采用的协调标准 • Samstillt staðlar notaðir • 整合規格 • 적용되는 조화 표준 • Kullanilan uyumlu standartlar • Використані гармонізовані стандарти</p>	<p>BS EN ISO 20643 BS EN ISO 5349-1 BS EN ISO 5349-2 BS EN ISO 5395-3</p>
<p>Technical standards and specifications used • Исползвани технички стандарти и спецификации • Použité technické normy a specifikace • Brugte tekniske standarder og specifikationer • Gebruikte technische standaards en specificaties • Kasutatud tehnilised standardid ja spetsifikatsioonid • Káytetyt tekniset standardit ja eritelmät • Specifications et normes techniques utilisées • Angewandte technische Normen und Spezifikationen • Τεχνικά πρότυπα και προδιαγραφές που χρησιμοποιήθηκαν • Műszaki szabványok és specifikációk • Standard tecnici e specifiche applicati • Izmantotie tehniekie standarti un specifikācijas • Panaudoti techniniai standartai ir techninė informacija • Standards u specifikacijonijiet technici užati • Normy i specyfikacje techniczne powiązane • Normas técnicas e especificações usadas • Standardele tehnice și specificațiile utilizate • Použité technické normy a špecifikácie • Uparabljene tehnični standardi in specifikacije • Estándares y especificaciones técnicas utilizadas • Tekniska standarder och specifikationer som används • Samræmdir staðlar sem notaðir eru • Benyttede tekniske standarder og spesifikasjoner • 所采用的技术标准和规范 • Tæknistaðlar og -kröfur notaðar • 技術規格および仕様書 • 적용되는 기술 표준 및 규격 • Kullanilan teknisk standartlar ve şartnameler • Використані технічні стандарти і умови</p>	<p>B71.4 ISO 2631-1</p>
<p>The place and date of the declaration • Място и дата на декларацията • Misto a datum prohlášení • Sted og dato for erklæringen • Plaats en datum van de verklaring • Deklaratsiooni väljastamise koht ja kuupäev • Vakuutusksen paikka ja päivääärä • Lieu et date de la déclaration • Ort und Datum der Erklärung • Τόπος και ημερομηνία δήλωσης • A nyilatkozat kelte (hely és idő) • Luogo e data della dichiarazione • Deklarācijas vieta un datums • Deklarācijas vieta ir data • Il-post u d-data tad-dikjarazzjoni • Miejsce i data wystawienia deklaracji • Local e data da declaração • Locul și data declarației • Miesto a dátum vyhlásenia • Kraj in datum izjave • Lugar y fecha de la declaración • Plats och datum för deklarationen • Tæknistaðlar og tæknilysingar sem notaðar eru • Benyttede tekniske standarder og spesifikasjoner • Staður og dagsetning yfirlýsingar • Sted og dato for erklæringen • 声明的地点与日期 • Staður og dagsetning yfirlýsingarinnar • 宣言場所および日付 • 선언 장소 및 일자 • Beyan yeri ve tarihi • Місце і дата укладення декларації</p>	<p>Jacobsen, A Textron Company 11524 Wilmar Blvd. Charlotte, NC 28273, USA September 2nd, 2014</p>

## 2 SPECIFICATIONS

<p>Signature of the person empowered to draw up the declaration on behalf of the manufacturer, holds the technical documentation and is authorised to compile the technical file, and who is established in the Community.</p> <p>Подпис на човека, упълномощен да състави декларацията от името на производителя, който поддържащ техническата документация и е авторизиран да изготви техническия файл и е регистриран в общността.</p> <p>Podpis osoby oprávněné sestavit prohlášení jménem výrobce, držet technickou dokumentaci a osoby oprávněné sestavit technické soubory a založené v rámci Evropského společenství.</p> <p>Underskrift af personen, der har fuldmagt til at udarbejde erklæringen på vegne af producenten, der er indehaver af dokumentationen og er bemyndiget til at udarbejde den tekniske journal, og som er baseret i nærområdet.</p> <p>Handtekening van de persoon die bevoegd is de verklaring namens de fabrikant te tekenen, de technische documentatie bewaart en bevoegd is om het technische bestand samen te stellen, en die is gevestigd in het Woongebied.</p> <p>Ühenduse registrisse kantud isiku allkirri, kes on volitatud tootja nimel deklaratsiooni koostama, kes omab tehnilist dokumentatsiooni ja kellel on õigus koostada tehniline toimik.</p> <p>Sen henkilön allekirjoitus, jolla on valmistajan valtuutus vakuutuksen laadintaan, jolla on hallussaan tekniset asiakirjat, joka on valtuutettu laatimaan tekniset asiakirjat ja joka on sijoittautunut yhteisöön.</p> <p>Signature de la personne habilitée à rédiger la déclaration au nom du fabricant, à détenir la documentation technique, à compiler les fichiers techniques et qui est implantée dans la Communauté.</p> <p>Unterschrift der Person, die berechtigt ist, die Erklärung im Namen des Herstellers abzugeben, die die technischen Unterlagen aufbewahrt und berechtigt ist, die technischen Unterlagen zusammenzustellen, und die in der Gemeinschaft niedergelassen ist.</p> <p>Υπογραφή ατόμου εξουσιοδοτημένου για την σύνταξη της δήλωσης εκ μέρους του κατασκευαστή, ο οποίος κατέχει την τεχνική έκθεση και έχει την εξουσιοδότηση να ταξινομήσει τον τεχνικό φάκελο και ο οποίος είναι διορισμένος στην Κοινότητα.</p> <p>A gyártó nevében meghatalmazott személy, akinek jogában áll módosítania a nyilatkozatot, a műszaki dokumentációt őrizi, engedéllyel rendelkezik a műszaki fájl összeállításához, és aki a közösségben letelepedett személy.</p> <p>Firma della persona autorizzata a redigere la dichiarazione a nome del fabbricante, in possesso Della documentazione tecnica ed autorizzata a costituire il fascicolo tecnico, che deve essere stabilita nella Comunità.</p> <p>Tās personas paraksts, kura ir pilnvarota deklarācijas sastādīšanai ražotāja vārdā, kurai ir tehniskā dokumentācija, kura ir pilnvarota sagatavot tehnisko reģistru un kura ir apstiprināta Kopienā.</p> <p>Asmuo, kuris yra gana žinomas, kuriam gamintojas suteikė įgaliojimus sudaryti šią deklaraciją, ir kuris ją pasirašė, turi visą techninę informaciją ir yra įgaliotas sudaryti techninės informacijos dokumentą.</p> <p>Il-firma tal-persuna awtorizzata li tfassal id-dikjarazzjoni f'isem il-fabbrikant, għandha d-dokumentazzjoni teknika u hija awtorizzata li tikkompila l-fajl tekniku u li hija stabbilita fil-Komunità.</p> <p>Podpis osoby upoważnionej do sporządzenia deklaracji w imieniu producenta, przechowującej dokumentację techniczną, upoważnioną do stworzenia dokumentacji technicznej oraz wyznaczonej ds. wspólnotowych.</p> <p>Assinatura da pessoa com poderes para emitir a declaração em nome do fabricante, que possui a documentação técnica, que está autorizada a compilar o processo técnico e que está estabelecida na Comunidade.</p> <p>Semnătura persoanei împuternicite să elaboreze declarația în numele producătorului, care deține documentația tehnică, este autorizată să compileze dosarul tehnic și este stabilită în Comunitate.</p> <p>Podpis osoby poverenej vystavením vyhlásenia v mene výrobcu, ktorá má technickú dokumentáciu a je oprávnená spracovať technické podklady a ktorá je umiestnená v Spoločenstve.</p> <p>Podpis osebe, pooblaščene za izdelavo izjave v imenu proizvajalca, ki ima tehnično dokumentacijo in lahko sestavlja spis tehnične dokumentacije, ter ima sedež v Skupnosti.</p> <p>Firma de la persona responsable de la declaración en nombre del fabricante, que posee la documentación técnica y está autorizada para recopilar el archivo técnico y que está establecido en la Comunidad.</p> <p>Undertecknas av den som bemyndigad att upprätta deklarationen å tillverkarens vägnar, innehar den tekniska dokumentationen och är bemyndigad att sammanställa den tekniska informationen och som är etablerad i gemenskapen.</p> <p>Undirskrift aðilans sem hefur umboð til að gera yfirlýsinguna fyrir hönd framleiðandans, hefur undir höndum tæknigögnin og hefur leyfi til að taka saman tækniskýrsluna, og er viðurkenndur innan evrópska efnahagssvæðisins.</p> <p>Signaturen til personens som har fullmakt til å utferdige erklæringen på vegne av produsenten, er i besittelse av den tekniske dokumentasjonen, har autorisasjon til å utarbeide den tekniske filen og som har tilhold i EU.</p> <p>获得授权代表制造商起草声明者的签名，此人保留技术文档并获授权编译技术文件，且是社区中获得认可者。</p> <p>Undirskrift starfsmanns sem hefur heimild til að rita yfirlýsinguna fyrir hendi framleiðandans, hefur umsjón með tæknigögnum og hefur heimild til að setja saman tæknilega skýrslu og sem er tengdur inn í samfélagið.</p> <p>メーカーを代表して宣言書を起草し、技術文書を保有し技術ファイルを編集する権限を有し、地域において確固たる地位を築いている人物の署名。</p> <p>제조자를 대신하여 선언서를 작성하도록 위임받은 서명자는 기술 문서를 보유하고 기술 자료 수집의 허가를 받았으며 지역 공동체 내에 속해 있습니다</p> <p>İmalatçı adına beyan hazırlama yetkisi olan, teknik dokümantasyonu elinde bulunduran ve teknik dosyayı derleme yetkisine sahip, Topluluk içinde yerleşik kişinin imzası.</p> <p>Підпис особи, що уповноважена укласти декларацію від імені виробника, має технічну документацію, уповноважена укласти технічний паспорт і має добру репутацію в суспільстві.</p>	<p>2006/42/EC Annex II 1.A.2</p> <p>Christian D. Clifford Senior Engineering Manager Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, IP3 9TT, England</p> <p>2006/42/EC Annex II 1.A.10 Derek Mookhoek Director of Engineering Jacobsen, A Textron Company 11524 Wilmar Blvd, Charlotte, NC 28273, USA</p>
<p>Certificate Number • Номер на сертификат • Číslo osvědčení • Certifikatnummer • Certificaatnummer • Sertifikaadi number • Hyväksyntänumero • Numéro de certificat • Bescheinigungsnummer • Αριθμός Πιστοποιητικού • Hitelesítési szám • Numero del certificato • Serifikata numurs • Serifikato numeris • Numru tač-Certifikat • Numer certyfikatu • Número do Certificado • Număr certificat • Číslo osvedčenia • Številka certifikata • Número de certificado • Certifikatsnummer • Númer skirteinis • Serifikatnummer • 证书编号 • Skirteinisnúmer • 認證番号 • 인증 번호 • Serifika Numarası • Номер сертификата</p>	<p>4260472 Rev C</p>



3.1 DECALS

Familiarize yourself with the following decals. They are critical to the safe operation of the mower. REPLACE DAMAGED DECALS IMMEDIATELY.



**DANGER**

To prevent injury, disengage all drives, engage parking brake, turn off key switch and disconnect power connector before working on machine or emptying grass catchers.

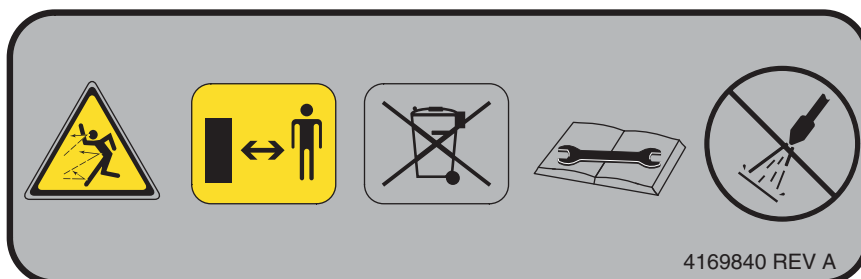


**DANGER**

Keep hands and feet away from the cutting unit to prevent serious injury.



Read the manual before adjusting engine throttle lever.



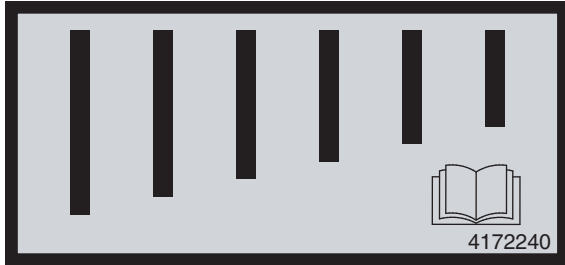
**DANGER**

1. Keep a safe distance from the machine. Keep bystanders away.
2. Properly dispose of components from this machine. Refer to local regulations for waste disposal and recycling.

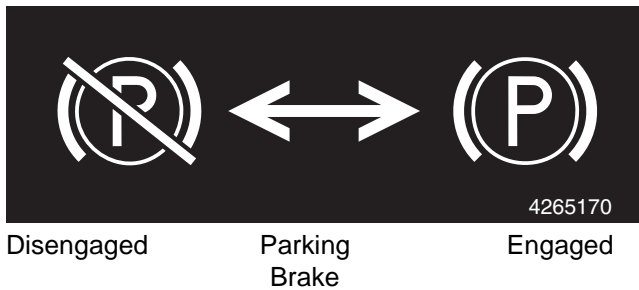
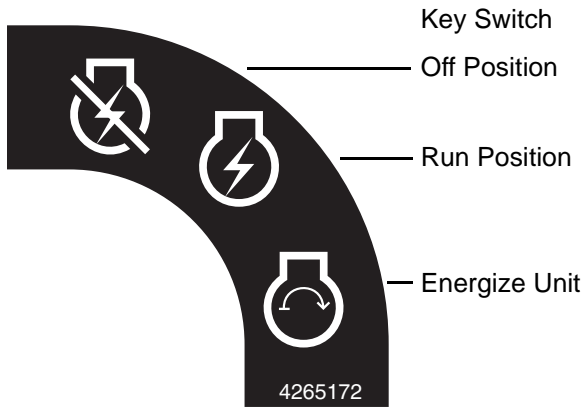
3. Refer to the manual for maintenance and service procedures.
4. Do not spray water at electrical connectors, motors or controllers. Do not use high pressure when to clean mower.

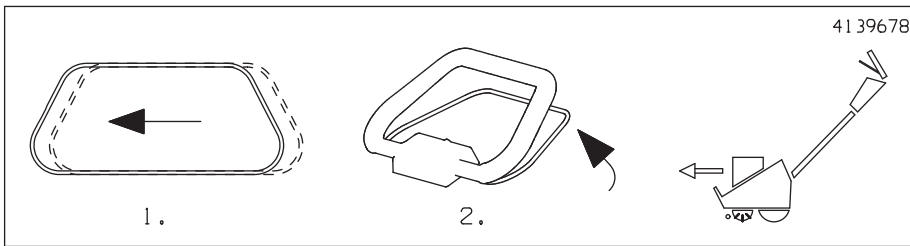
### 3 DECALS

Familiarize yourself with the following decals. They are critical to the safe operation of the mower. REPLACE DAMAGED DECALS IMMEDIATELY.



Read the manual before adjusting front roller weight.



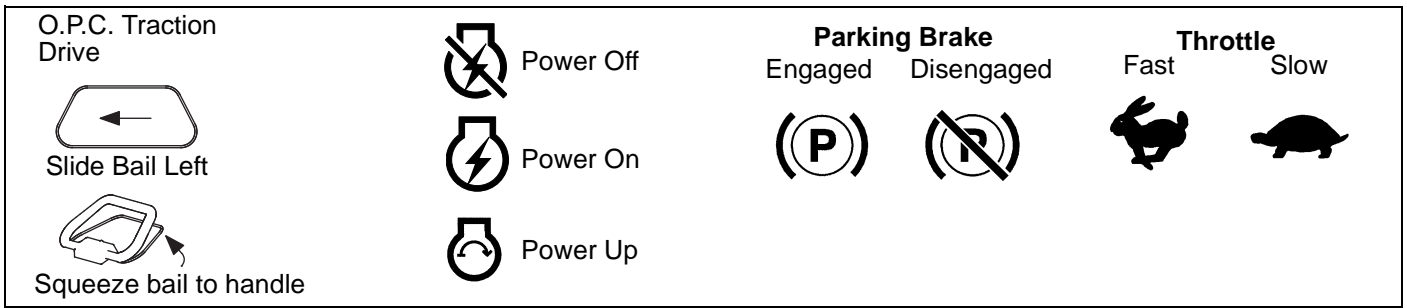


To Engage Traction.

1. Slide bail to the left.
2. Squeeze bail to handle.

## 4 CONTROLS

### 4.1 ICONS



### WARNING

Never attempt to operate the machine unless you have read the Safety and Operation Manual, the Parts and Maintenance Manual and know how to operate all controls correctly.

Familiarize yourself with the icons shown above and what they represent. Learn the location and purpose of all the controls before operating this mower.

### 4.2 HANDLE CONTROLS

- A. **Parking Brake** – Used whenever the mower is left unattended or as a service brake while transporting. Always use transport tires when transporting up or down hills.

### WARNING

To prevent injury, always use transport tires when transporting unit up or down hills.

- B. **Speed Paddle** – Sets maximum traction drive speed when O.P.C. Bail is engaged. Push (+) side of lever to increase speed. Push (-) side of lever to decrease speed.
- C. **O.P.C. Bail** – Slide bail slightly to the left and squeeze bail to start traction motor. Traction motor speed is increased as the bail moves towards the handle. Release bail to stop unit.
- D. **Key Switch** - The power switch turns the power on and off. It has three positions OFF, RUN, and START. Key switch must be in RUN position to start units equipped with Gen-Set power module.
- E. **Reel Switch** - The reel switch is used to start and stop the reel.
- F. **LCD Controls** - Used to navigate through menus.
- G. **LCD Display** - Used to display operating conditions.

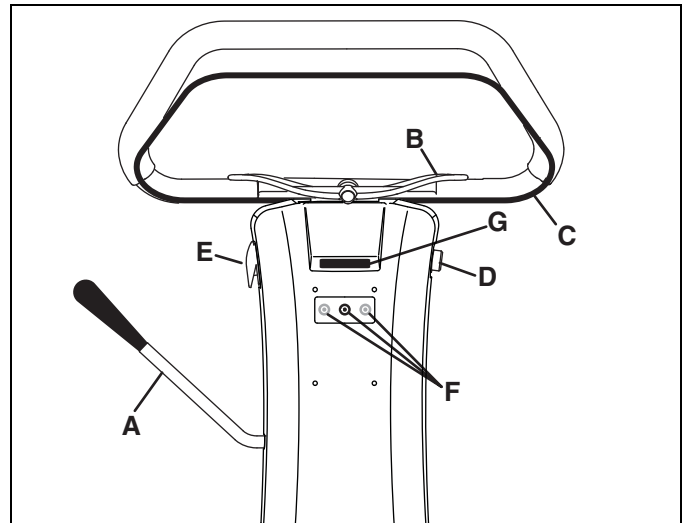


Figure 4A

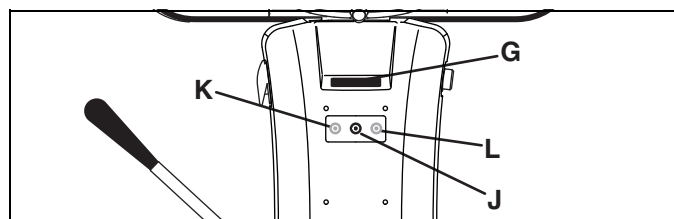
### DANGER

Keep hands and feet away from the cutting unit to prevent serious injury.

### 4.3 LCD DISPLAY

The LCD displays current functional values for the operation of the Eclipse 2 mower and sounds one of three types of audible alerts. The LCD operates in one of two modes, Operator Mode (Default), and Maintenance Mode. Use of Maintenance mode requires a four digit pin number.

Press either of the orange buttons (**K or L**) to change screen display or change values. Push the right orange button (**K**) to go forward in the display list or increase setting value, and push the left orange button (**L**) to go back in the display list or decrease setting value. The black button (**J**) is used to select, reset, or change values.



**Figure 4B**

**Audible Alerts** indicate one of three conditions detected by the LCD Display and a corresponding message would show on the display. A solid tone indicates low system voltage. A fast beeping (2 per second) alert indicates an over voltage condition. A slow beeping (1 every 3 seconds) alert indicates mower is in backlap mode.

**Alert Displays:** In addition to the standard displays for each mode, there are six displays that are used to alert the operator/mechanic of a problem the needs to be corrected.

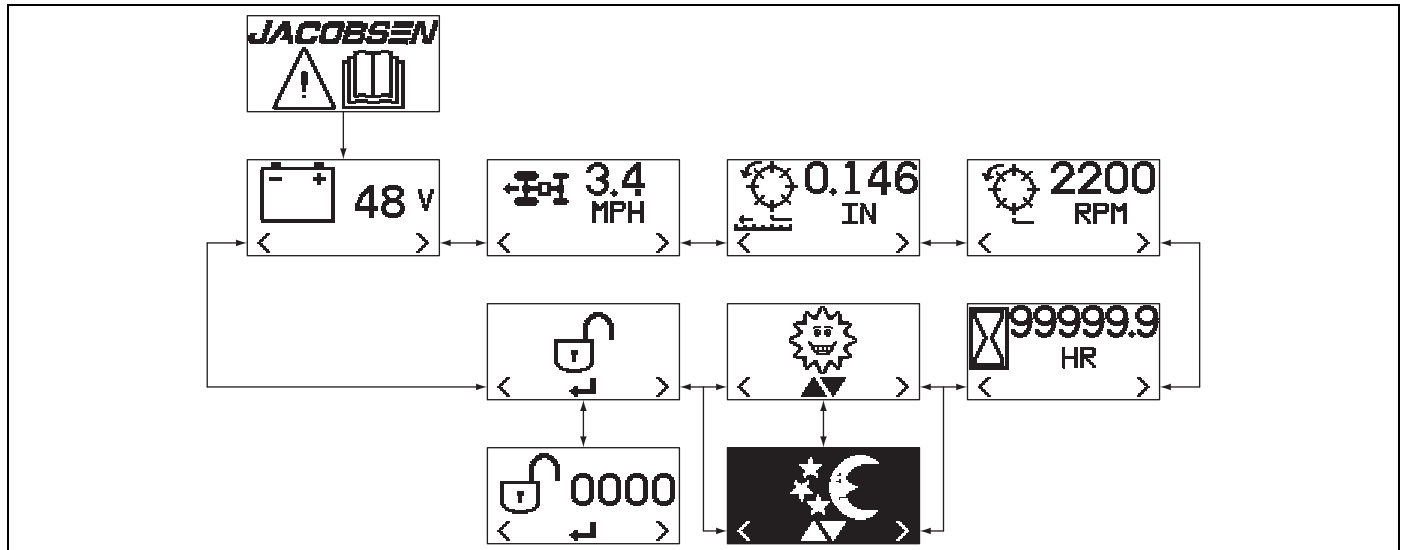
Alert Display	Alert Description
	<b>Low Voltage</b> display is shown when system voltage drops below 42 Volts DC on Battery powered mowers or 38 Volts DC on Gen-Set powered mowers, for 30 seconds and a solid tone alarm will sound. Press the black button ( <b>J</b> ) to silence the alarm. Return mower to storage area or install a fully charged battery pack. Reel motor will not operate with low voltage on the display.
	<b>Overvoltage/Check Voltage</b> display is shown when system voltage is above 60 Volts DC and a fast (2 per second) beeping alarm will sound. If not corrected, controller will shut down after 60 seconds. Check generator output before restarting system. <b>[See Section 11.4].</b>
	<b>Traction Motor Controller Fault</b> display is shown when a problem is detected in the traction motor controller. Traction motor will not operate until the problem is resolved. Return mower to maintenance area for repair.
	<b>Traction Motor Fault</b> display is shown when a traction motor short circuit is detected or the traction motor current draw exceeds 30 Amps for one second. Traction motor will not operate until the problem is resolved. Return mower to maintenance area for repair.
	<b>Reel Motor Controller Fault</b> display is shown when a problem is detected in the reel motor controller. Reel motor will not operate until the problem is resolved. Return mower to maintenance area for repair.
	<b>Reel Motor Fault</b> display is shown when a reel motor short circuit is detected or the reel motor current draw exceeds 30 Amps for one second. Reel motor will not operate until the problem is resolved. Return mower to maintenance area for repair.

## WARNING

Turn reel switch off, release bail, turn key to off position, and disconnect battery connector before checking for obstructions in reel.

## 4 CONTROLS

**Operator Mode** is used by the operator for system voltage information, travel speed, FOC setting, reel speed, and total hours on mower. Press the orange buttons (**K** and **L**) on the front handle cover to toggle between the different displays. Operator Mode is view only, only screen illumination mode can be changed.



Display	Description
	<b>Start-Up Screen</b> - Displays for up to five seconds when system is started.
	<b>System Voltage</b> - Displays system voltage between 42 and 59 volts. Screen will be replaced with alert screen when system voltage drops below 42 volts or rises above 60 volts.
	<b>FOC Setting</b> - Displays FOC (Frequency of Clip) setting. When FOC is set to 0, reel will operate at the fixed reel speed.
	<b>Fixed Reel Speed</b> - Displays fixed reel speed setting with FOC set to 0. Fixed reel speed setting is not used for any FOC other than 0.
	<b>Hour Meter</b> - Displays total hours unit has been operated.
	<b>Daytime Illumination</b> - When selected, LCD displays dark pixels on a light background. Press the black button ( <b>J</b> ) to toggle between daytime and nighttime illumination.
	<b>Nighttime Illumination</b> - When selected, LCD displays light pixels on a dark background. Press the black button ( <b>J</b> ) to toggle between daytime and nighttime illumination.
	<b>Maintenance Mode PIN</b> - Used to enter Maintenance Mode. Maintenance Mode pin is required. <b>See Maintenance Mode.</b>

**Maintenance Mode** is used to set and adjust all functional values for the Eclipse 2 Mower. LCD displays available in Maintenance Mode are, maintenance hours, backlap, system voltage, travel speed, set FOC, reel speed, traction motor current draw, reel motor current draw, total motor current draw, set mow speed, set reel speed, set power source, set number of reel blades, calibrate speed paddle, calibrate bail lever, set display units, and factory reset.

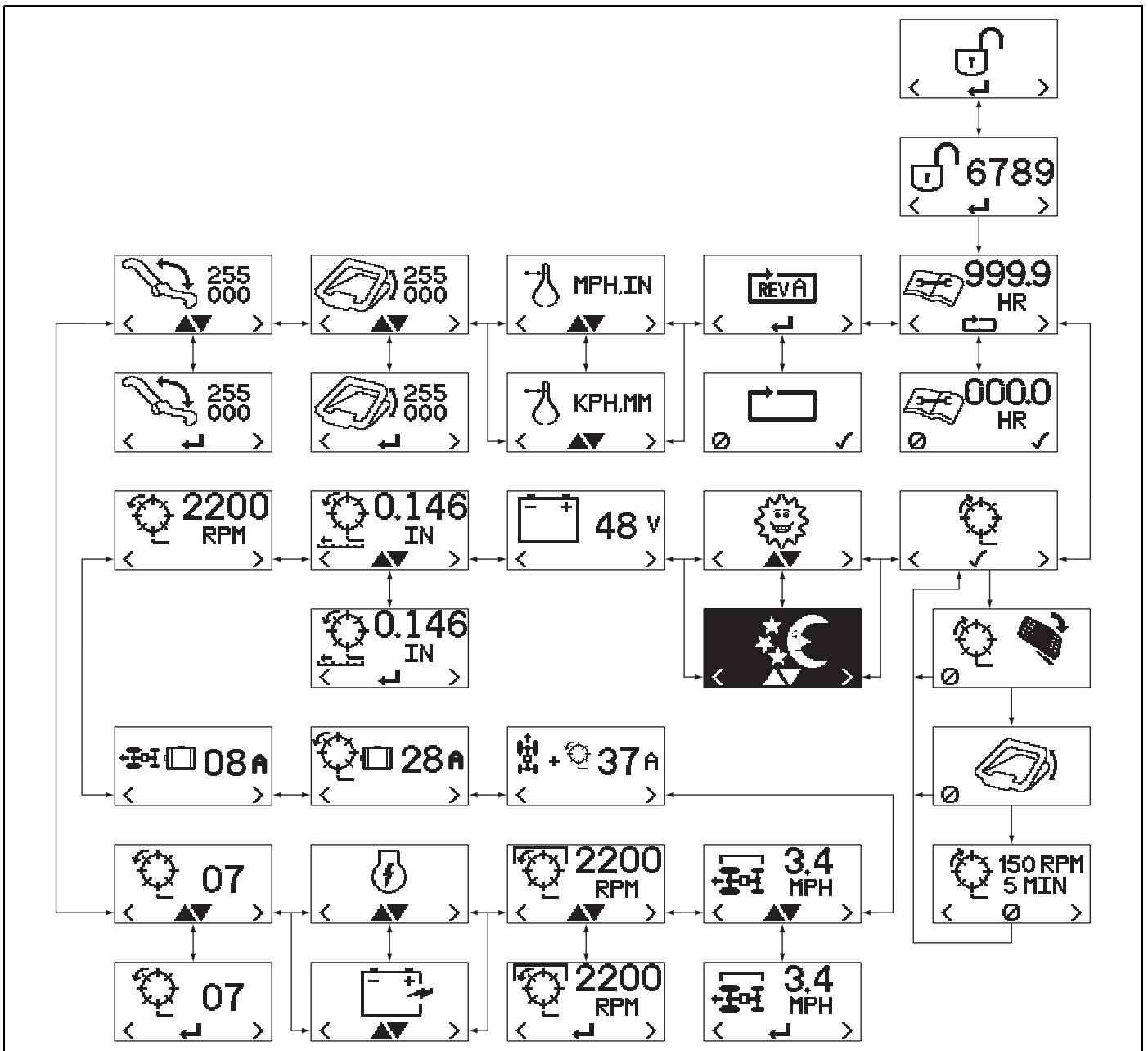




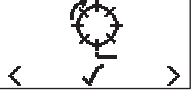




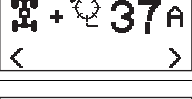







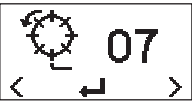







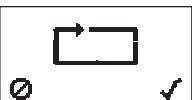


Figure 4C

See Operator Mode for descriptions of Daytime/ Nighttime Illumination, System Voltage, and Fixed Reel Speed screens.

## 4 CONTROLS

Display	Description
	<p>To enter Maintenance Mode, press either orange buttons (<b>K or L</b>) until Maintenance Mode PIN screen is on the display and press black button (<b>J</b>). Use the orange buttons (<b>K or L</b>) to select and the black button (<b>J</b>) to enter the digits for the Mechanic Mode pin.</p>
	<p><b>NOTE:</b> The default PIN for Maintenance Mode is <b>6789</b>. The Maintenance Mode PIN can be customized to a setting of your choice. Please contact your Jacobsen Dealer or Jacobsen Technical Support (1800-848-1636 Option 2) for complete instructions.</p>
	<p><b>Maintenance Hours</b> - System can track up to 999.9 hours for maintenance purposes.</p>
	<p>To reset maintenance hours, press either of the orange buttons (<b>K or L</b>) on the front cover until the maintenance hours screen is on the LCD display. Press the black button (<b>J</b>) to move to the confirm reset screen. Press the right orange button (<b>K</b>) to confirm reset, or press left orange button (<b>L</b>) to cancel reset.</p>
	<p><b>Backlap Select</b> - Used to switch mower to backlap mode. See <b>Section 12.4</b> for backlap screen descriptions.</p>
	<p><b>Set FOC</b> - To set the fixed FOC, press either of the orange buttons (<b>K or L</b>) on the front cover until the FOC set screen is on the LCD display. Press the black button (<b>J</b>) to enter set mode. Use the orange buttons to raise (<b>K</b>) or lower (<b>L</b>) the FOC value to the desired setting. press the black button to set speed.</p>
	<p>Fixed FOC setting must be 0 or between 0.087 and 0.178 in. (2.2 and 4.5 mm). <b>[See Section 4.4].</b></p>
	<p><b>Traction Motor Current</b> - Displays current draw of traction drum motor. Fault will be displayed if current draw is greater than 30 Amps for one second.</p>
	<p><b>Reel Motor Current</b> - Displays current draw of reel motor. Fault will be displayed if current draw is greater than 30 Amps for one second.</p>
	<p><b>Total Motor Current</b> - Displays total current draw of traction drum motor and reel motor.</p>
	<p><b>Maximum Mow Speed</b> - To set the maximum mow speed, press either of the orange buttons (<b>K or L</b>) on the front cover until the set max mow speed screen is on the LCD display. Press the black button (<b>J</b>) to enter set mode. Use the orange buttons to raise (<b>K</b>) or lower (<b>L</b>) the maximum mow speed to the desired speed. press the black button to set speed.</p>
	<p>Maximum mow speed must be between 2.0 and 3.8 MPH (3.2 and 6.1 kph).</p>
	<p><b>Fixed Reel Speed:</b> To set the fixed reel speed, the FOC setting must be set to 0, then press either of the orange buttons (<b>K or L</b>) on the front cover until the set reel speed screen is on the LCD display. Press the black button (<b>J</b>) to enter set mode. Use the orange buttons to raise (<b>K</b>) or lower (<b>L</b>) the reel speed to the desired setting.</p>
	<p>Fixed reel speed must be set between 1800 and 2200 rpm. The Maximum Mow Speed and the Fixed Reel Speed are used to determine the FOC (Frequency of Cut) <b>[See Section 4.4].</b></p>

Display	Description
	<p><b>Gen-Set Power Module</b> - Used to indicate the gen-set power module is installed on the mower. This setting is used by system controllers and does not affect operation of mower. Do not operate mower with incorrect power module setting. Press the black button <b>(J)</b> to toggle between the power module settings.</p>
	<p><b>Battery Power Module</b> - Used to indicate the battery power module is installed on the mower. This setting is used by system controllers and does not affect operation of mower. Do not operate mower with incorrect power module setting. Press the black button <b>(J)</b> to toggle between the power module settings.</p>
	<p><b>Set Number of Reel Blades:</b> To set the number of reel blades, press either of the orange buttons <b>(K or L)</b> on the front cover until the reel blades screen is on the LCD display. Press the black button <b>(J)</b> to enter set mode. Use the orange buttons to set the number of blades.</p>
	<p>Available reel blades are 7, 9 (Floating Only), 11 or 15.</p>
	<p><b>Speed Paddle Calibration</b> - Before calibrating the speed paddle, check that paddle stops are properly adjusted [See Section 6.3]. To calibrate the paddle, press either of the orange buttons <b>(K or L)</b> on the front cover until the speed paddle calibration screen is on the LCD display. Press the black button <b>(J)</b> to enter set mode. Move the speed paddle through its entire range of movement to determine minimum and maximum values.</p>
	<p>Values displayed will change as controls are moved.</p>
	<p><b>Bail Lever Calibration</b> - To calibrate the bail lever, press either of the orange buttons <b>(K or L)</b> on the front cover until the bail lever calibration screen is on the LCD display. Press the black button <b>(J)</b> to enter set mode. Fully engage and disengage the bail lever to determine minimum and maximum values.</p>
	<p>Values displayed will change as controls are moved.</p>
	<p><b>Display Units</b> - To set the display units, press either of the orange buttons <b>(K or L)</b> on the front cover until the units screen is on the LCD display. Press the black button <b>(J)</b> to toggle between english (MPH, IN) or metric (KPH, mm) units.</p>
	
	<p><b>Factory Reset</b> - To reset controller to factory default values, press either of the orange buttons <b>(K or L)</b> on the front cover until the Factory Reset screen is on the LCD display. Press the black button <b>(J)</b> to move to the confirm reset screen. Press the right orange button <b>(K)</b> to confirm reset, or press left orange button <b>(L)</b> to cancel reset.</p>
	<p>Maximum Mow Speed.....3.4 Mph (5.5 kph)                      Reel Speed .....2200 rpm                      Fixed FOC Setting.....0.146                      Display units.....English</p>

## 4 CONTROLS

---

### 4.4 FREQUENCY OF CUT

---

The FOC (Frequency of cut) is the distance, in inches (mm), the machine travels forward between reel blades contacting the bedknife. The FOC can be adjusted either by changing the Fixed FOC setting or by changing the maximum mow speed and the fixed reel speed on the LCD display.

#### Adjust FOC with Fixed FOC setting

Changing the FOC setting to a value other than 0 will enable the fixed FOC mode and disable the reel speed setting. As mower travel speed increases or decreases, reel speed will automatically adjust as required to maintain set FOC.

#### Adjust FOC with Reel Speed Setting

1. Using the FOC charts, determine the maximum mow speed and fixed reel speed required for the desired FOC.
2. Start the unit in Maintenance mode. **[Section 4.3]**
3. Set fixed FOC setting to 0
4. Set desired Maximum Mow Speed
5. Set desired Fixed Reel Speed

**NOTE:** *Mow speed is measured in mph (kph), FOC is measured in inches (millimeters).*

15 Blade Reel FOC Table, Product No 63339, 63341, 63335, 63337, 63348, 63350, 63344, 63346 (Standard Reel)

Mow Speed	Reel RPM								
	1800	1850	1900	1950	2000	2050	2100	2150	2200
<b>2.00</b> <b>(3.22)</b>	0.078 (1.987)	0.076 (1.933)	0.074 (1.882)	0.072 (1.834)	0.070 (1.788)	0.069 (1.745)	0.067 (1.703)	0.065 (1.663)	0.064 (1.626)
<b>2.10</b> <b>(3.38)</b>	0.082 (2.086)	0.080 (2.030)	0.078 (1.976)	0.076 (1.926)	0.074 (1.878)	0.072 (1.832)	0.070 (1.788)	0.069 (1.747)	0.067 (1.707)
<b>2.20</b> <b>(3.54)</b>	0.086 (2.186)	0.084 (2.126)	0.082 (2.071)	0.079 (2.017)	0.077 (1.967)	0.076 (1.919)	0.074 (1.873)	0.072 (1.830)	0.070 (1.788)
<b>2.30</b> <b>(3.70)</b>	0.090 (2.285)	0.088 (2.223)	0.085 (2.165)	0.083 (2.109)	0.081 (2.056)	0.079 (2.006)	0.077 (1.958)	0.075 (1.913)	0.074 (1.869)
<b>2.40</b> <b>(3.86)</b>	0.094 (2.384)	0.091 (2.320)	0.089 (2.259)	0.087 (2.201)	0.084 (2.146)	0.082 (2.093)	0.080 (2.044)	0.079 (1.996)	0.077 (1.951)
<b>2.50</b> <b>(4.02)</b>	0.098 (2.484)	0.095 (2.416)	0.093 (2.353)	0.090 (2.293)	0.088 (2.235)	0.086 (2.181)	0.084 (2.129)	0.082 (2.079)	0.080 (2.032)
<b>2.60</b> <b>(4.18)</b>	0.102 (2.583)	0.099 (2.513)	0.096 (2.447)	0.094 (2.384)	0.092 (2.325)	0.089 (2.268)	0.087 (2.214)	0.085 (2.162)	0.083 (2.113)
<b>2.70</b> <b>(4.35)</b>	0.106 (2.682)	0.103 (2.610)	0.100 (2.541)	0.097 (2.476)	0.095 (2.414)	0.093 (2.355)	0.091 (2.299)	0.088 (2.246)	0.086 (2.195)
<b>2.80</b> <b>(4.51)</b>	0.110 (2.782)	0.107 (2.706)	0.104 (2.635)	0.101 (2.568)	0.099 (2.503)	0.096 (2.442)	0.094 (2.384)	0.092 (2.329)	0.090 (2.276)
<b>2.90</b> <b>(4.67)</b>	0.113 (2.881)	0.110 (2.803)	0.107 (2.729)	0.105 (2.659)	0.102 (2.593)	0.100 (2.530)	0.097 (2.469)	0.095 (2.412)	0.093 (2.357)
<b>3.00</b> <b>(4.83)</b>	0.117 (2.980)	0.114 (2.900)	0.111 (2.823)	0.108 (2.751)	0.106 (2.682)	0.103 (2.617)	0.101 (2.555)	0.098 (2.495)	0.096 (2.438)
<b>3.10</b> <b>(4.99)</b>	0.121 (3.080)	0.118 (2.996)	0.115 (2.918)	0.112 (2.843)	0.109 (2.772)	0.106 (2.704)	0.104 (2.640)	0.102 (2.578)	0.099 (2.520)
<b>3.20</b> <b>(5.15)</b>	0.125 (3.179)	0.122 (3.093)	0.119 (3.012)	0.116 (2.934)	0.113 (2.861)	0.110 (2.791)	0.107 (2.725)	0.105 (2.661)	0.102 (2.601)
<b>3.30</b> <b>(5.31)</b>	0.129 (3.278)	0.126 (3.190)	0.122 (3.106)	0.119 (3.026)	0.116 (2.950)	0.113 (2.879)	0.111 (2.810)	0.108 (2.745)	0.106 (2.682)
<b>3.40</b> <b>(5.47)</b>	0.133 (3.378)	0.129 (3.286)	0.126 (3.200)	0.123 (3.118)	0.120 (3.040)	0.117 (2.966)	0.114 (2.895)	0.111 (2.828)	0.109 (2.764)
<b>3.50</b> <b>(5.63)</b>	0.137 (3.477)	0.133 (3.383)	0.130 (3.294)	0.126 (3.210)	0.123 (3.129)	0.120 (3.053)	0.117 (2.980)	0.115 (2.911)	0.112 (2.845)
<b>3.60</b> <b>(5.79)</b>	0.141 (3.576)	0.137 (3.480)	0.133 (3.388)	0.130 (3.301)	0.127 (3.219)	0.124 (3.140)	0.121 (3.065)	0.118 (2.994)	0.115 (2.926)
<b>3.70</b> <b>(5.95)</b>	0.145 (3.676)	0.141 (3.576)	0.137 (3.482)	0.134 (3.393)	0.130 (3.308)	0.127 (3.227)	0.124 (3.151)	0.121 (3.077)	0.118 (3.007)
<b>3.80</b> <b>(6.12)</b>	0.149 (3.775)	0.145 (3.673)	0.141 (3.576)	0.137 (3.485)	0.134 (3.398)	0.130 (3.315)	0.127 (3.236)	0.124 (3.160)	0.122 (3.089)

## 4 CONTROLS

11 Blade Reel FOC Table, Product No. 63334, 63336, 63338, 63340, 63347, 63349, 63343, 63345 (Standard Reel)

Mow Speed	Reel RPM								
	1800	1850	1900	1950	2000	2050	2100	2150	2200
<b>2.0</b> <b>(3.22)</b>	0.107 (2.709)	0.104 (2.636)	0.101 (2.567)	0.098 (2.501)	0.096 (2.438)	0.094 (2.379)	0.091 (2.322)	0.089 (2.268)	0.087 (2.217)
<b>2.1</b> <b>(3.38)</b>	0.112 (2.845)	0.109 (2.768)	0.106 (2.695)	0.103 (2.626)	0.101 (2.56)	0.098 (2.498)	0.096 (2.438)	0.094 (2.382)	0.092 (2.328)
<b>2.2</b> <b>(3.54)</b>	0.117 (2.98)	0.114 (2.9)	0.111 (2.823)	0.108 (2.751)	0.106 (2.682)	0.103 (2.617)	0.101 (2.555)	0.098 (2.495)	0.096 (2.438)
<b>2.3</b> <b>(3.7)</b>	0.123 (3.116)	0.119 (3.032)	0.116 (2.952)	0.113 (2.876)	0.110 (2.804)	0.108 (2.736)	0.105 (2.671)	0.103 (2.609)	0.100 (2.549)
<b>2.4</b> <b>(3.86)</b>	0.128 (3.251)	0.125 (3.163)	0.121 (3.08)	0.118 (3.001)	0.115 (2.926)	0.112 (2.855)	0.110 (2.787)	0.107 (2.722)	0.105 (2.66)
<b>2.5</b> <b>(4.02)</b>	0.133 (3.387)	0.130 (3.295)	0.126 (3.208)	0.123 (3.126)	0.120 (3.048)	0.117 (2.974)	0.114 (2.903)	0.112 (2.835)	0.109 (2.771)
<b>2.6</b> <b>(4.18)</b>	0.139 (3.522)	0.135 (3.427)	0.131 (3.337)	0.128 (3.251)	0.125 (3.17)	0.122 (3.093)	0.119 (3.019)	0.116 (2.949)	0.113 (2.882)
<b>2.7</b> <b>(4.35)</b>	0.144 (3.658)	0.140 (3.559)	0.136 (3.465)	0.133 (3.376)	0.130 (3.292)	0.126 (3.212)	0.123 (3.135)	0.121 (3.062)	0.118 (2.993)
<b>2.8</b> <b>(4.51)</b>	0.149 (3.793)	0.145 (3.691)	0.141 (3.593)	0.138 (3.501)	0.134 (3.414)	0.131 (3.33)	0.128 (3.251)	0.125 (3.176)	0.122 (3.103)
<b>2.9</b> <b>(4.67)</b>	0.155 (3.929)	0.150 (3.822)	0.147 (3.722)	0.143 (3.626)	0.139 (3.536)	0.136 (3.449)	0.133 (3.367)	0.129 (3.289)	0.127 (3.214)
<b>3.0</b> <b>(4.83)</b>	0.160 (4.064)	0.156 (3.954)	0.152 (3.85)	0.148 (3.751)	0.144 (3.658)	0.140 (3.568)	0.137 (3.483)	0.134 (3.402)	0.131 (3.325)
<b>3.1</b> <b>(4.99)</b>	0.165 (4.199)	0.161 (4.086)	0.157 (3.978)	0.153 (3.876)	0.149 (3.78)	0.145 (3.687)	0.142 (3.6)	0.138 (3.516)	0.135 (3.436)
<b>3.2</b> <b>(5.15)</b>	0.171 (4.335)	0.166 (4.218)	0.162 (4.107)	0.158 (4.001)	0.154 (3.901)	0.150 (3.806)	0.146 (3.716)	0.143 (3.629)	0.140 (3.547)
<b>3.3</b> <b>(5.31)</b>	0.176 (4.47)	0.171 (4.35)	0.167 (4.235)	0.162 (4.127)	0.158 (4.023)	0.155 (3.925)	0.151 (3.832)	0.147 (3.743)	0.144 (3.658)
<b>3.4</b> <b>(5.47)</b>	0.181 (4.606)	0.176 (4.481)	0.172 (4.363)	0.167 (4.252)	0.163 (4.145)	0.159 (4.044)	0.155 (3.948)	0.152 (3.856)	0.148 (3.768)
<b>3.50</b> <b>(5.63)</b>	0.187 (4.741)	0.182 (4.613)	0.177 (4.492)	0.172 (4.377)	0.168 (4.267)	0.164 (4.163)	0.160 (4.064)	0.156 (3.969)	0.153 (3.879)
<b>3.60</b> <b>(5.79)</b>	0.192 (4.877)	0.187 (4.745)	0.182 (4.620)	0.177 (4.502)	0.173 (4.389)	0.169 (4.282)	0.165 (4.180)	0.161 (4.083)	0.157 (3.990)
<b>3.70</b> <b>(5.95)</b>	0.197 (5.012)	0.192 (4.877)	0.187 (4.748)	0.182 (4.627)	0.178 (4.511)	0.173 (4.401)	0.169 (4.296)	0.165 (4.196)	0.161 (4.101)
<b>3.80</b> <b>(6.12)</b>	0.203 (5.148)	0.197 (5.009)	0.192 (4.877)	0.187 (4.752)	0.182 (4.633)	0.178 (4.520)	0.174 (4.412)	0.170 (4.310)	0.166 (4.212)

9 Blade Reel FOC Table, Product No. 63340, 63349 (Optional Reel)

Mow Speed	Reel RPM								
	1800	1850	1900	1950	2000	2050	2100	2150	2200
<b>2.0</b> <b>(3.22)</b>	0.130 (3.311)	0.127 (3.222)	0.124 (3.137)	0.120 (3.057)	0.117 (2.98)	0.114 (2.908)	0.112 (2.838)	0.109 (2.772)	0.107 (2.709)
<b>2.1</b> <b>(3.38)</b>	0.137 (3.477)	0.133 (3.383)	0.130 (3.294)	0.126 (3.21)	0.123 (3.129)	0.120 (3.053)	0.117 (2.98)	0.115 (2.911)	0.112 (2.845)
<b>2.2</b> <b>(3.54)</b>	0.143 (3.643)	0.140 (3.544)	0.136 (3.451)	0.132 (3.362)	0.129 (3.278)	0.126 (3.198)	0.123 (3.122)	0.120 (3.05)	0.117 (2.98)
<b>2.3</b> <b>(3.7)</b>	0.150 (3.808)	0.146 (3.705)	0.142 (3.608)	0.138 (3.515)	0.135 (3.427)	0.132 (3.344)	0.129 (3.264)	0.126 (3.188)	0.123 (3.116)
<b>2.4</b> <b>(3.86)</b>	0.156 (3.974)	0.152 (3.866)	0.148 (3.765)	0.144 (3.668)	0.141 (3.576)	0.137 (3.489)	0.134 (3.406)	0.131 (3.327)	0.128 (3.251)
<b>2.5</b> <b>(4.02)</b>	0.163 (4.139)	0.159 (4.027)	0.154 (3.921)	0.150 (3.821)	0.147 (3.725)	0.143 (3.634)	0.140 (3.548)	0.136 (3.465)	0.133 (3.387)
<b>2.6</b> <b>(4.18)</b>	0.169 (4.305)	0.165 (4.188)	0.161 (4.078)	0.156 (3.974)	0.153 (3.874)	0.149 (3.78)	0.145 (3.69)	0.142 (3.604)	0.139 (3.522)
<b>2.7</b> <b>(4.35)</b>	0.176 (4.47)	0.171 (4.35)	0.167 (4.235)	0.162 (4.127)	0.158 (4.023)	0.155 (3.925)	0.151 (3.832)	0.147 (3.743)	0.144 (3.658)
<b>2.8</b> <b>(4.51)</b>	0.183 (4.636)	0.178 (4.511)	0.173 (4.392)	0.168 (4.279)	0.164 (4.172)	0.160 (4.071)	0.156 (3.974)	0.153 (3.881)	0.149 (3.793)
<b>2.9</b> <b>(4.67)</b>	0.189 (4.802)	0.184 (4.672)	0.179 (4.549)	0.174 (4.432)	0.170 (4.321)	0.166 (4.216)	0.162 (4.116)	0.158 (4.02)	0.155 (3.929)
<b>3.0</b> <b>(4.83)</b>	0.196 (4.967)	0.190 (4.833)	0.185 (4.706)	0.181 (4.585)	0.176 (4.47)	0.172 (4.361)	0.168 (4.258)	0.164 (4.159)	0.160 (4.064)
<b>3.1</b> <b>(4.99)</b>	0.202 (5.133)	0.197 (4.994)	0.191 (4.863)	0.187 (4.738)	0.182 (4.619)	0.177 (4.507)	0.173 (4.399)	0.169 (4.297)	0.165 (4.199)
<b>3.2</b> <b>(5.15)</b>	0.209 (5.298)	0.203 (5.155)	0.198 (5.019)	0.193 (4.891)	0.188 (4.768)	0.183 (4.652)	0.179 (4.541)	0.175 (4.436)	0.171 (4.335)
<b>3.3</b> <b>(5.31)</b>	0.215 (5.464)	0.209 (5.316)	0.204 (5.176)	0.199 (5.044)	0.194 (4.917)	0.189 (4.798)	0.184 (4.683)	0.180 (4.574)	0.176 (4.47)
<b>3.4</b> <b>(5.47)</b>	0.222 (5.629)	0.216 (5.477)	0.210 (5.333)	0.205 (5.196)	0.199 (5.066)	0.195 (4.943)	0.190 (4.825)	0.186 (4.713)	0.181 (4.606)
<b>3.5</b> <b>(5.63)</b>	0.228 (5.795)	0.222 (5.638)	0.216 (5.490)	0.211 (5.349)	0.205 (5.215)	0.200 (5.088)	0.196 (4.967)	0.191 (4.852)	0.187 (4.741)
<b>3.6</b> <b>(5.79)</b>	0.235 (5.961)	0.228 (5.799)	0.222 (5.647)	0.217 (5.502)	0.211 (5.364)	0.206 (5.234)	0.201 (5.109)	0.196 (4.990)	0.192 (4.877)
<b>3.7</b> <b>(5.95)</b>	0.241 (6.126)	0.235 (5.961)	0.228 (5.804)	0.223 (5.655)	0.217 (5.513)	0.212 (5.379)	0.207 (5.251)	0.202 (5.129)	0.197 (5.012)
<b>3.8</b> <b>(6.12)</b>	0.248 (6.292)	0.241 (6.122)	0.235 (5.961)	0.229 (5.808)	0.223 (5.663)	0.217 (5.524)	0.212 (5.393)	0.207 (5.267)	0.203 (5.148)

# 4 CONTROLS

7 Blade Reel FOC Table, Product No. 63342, 63351 (Standard Reel) and 63340, 63349 (Optional Reel)

Mow Speed	Reel RPM								
	1800	1850	1900	1950	2000	2050	2100	2150	2200
<b>2.0</b> <b>(3.22)</b>	0.168 (4.258)	0.163 (4.142)	0.159 (4.033)	0.155 (3.93)	0.151 (3.832)	0.147 (3.738)	0.144 (3.649)	0.140 (3.564)	0.137 (3.483)
<b>2.1</b> <b>(3.38)</b>	0.176 (4.47)	0.171 (4.35)	0.167 (4.235)	0.162 (4.127)	0.158 (4.023)	0.155 (3.925)	0.151 (3.832)	0.147 (3.743)	0.144 (3.658)
<b>2.2</b> <b>(3.54)</b>	0.184 (4.683)	0.179 (4.557)	0.175 (4.437)	0.170 (4.323)	0.166 (4.215)	0.162 (4.112)	0.158 (4.014)	0.154 (3.921)	0.151 (3.832)
<b>2.3</b> <b>(3.7)</b>	0.193 (4.896)	0.188 (4.764)	0.183 (4.638)	0.178 (4.52)	0.173 (4.407)	0.169 (4.299)	0.165 (4.197)	0.161 (4.099)	0.158 (4.006)
<b>2.4</b> <b>(3.86)</b>	0.201 (5.109)	0.196 (4.971)	0.191 (4.84)	0.186 (4.716)	0.181 (4.598)	0.177 (4.486)	0.172 (4.379)	0.168 (4.277)	0.165 (4.18)
<b>2.5</b> <b>(4.02)</b>	0.210 (5.322)	0.204 (5.178)	0.198 (5.042)	0.193 (4.913)	0.189 (4.79)	0.184 (4.673)	0.180 (4.562)	0.175 (4.456)	0.171 (4.354)
<b>2.6</b> <b>(4.18)</b>	0.218 (5.535)	0.212 (5.385)	0.206 (5.243)	0.201 (5.109)	0.196 (4.981)	0.191 (4.86)	0.187 (4.744)	0.182 (4.634)	0.178 (4.528)
<b>2.7</b> <b>(4.35)</b>	0.226 (5.748)	0.220 (5.592)	0.214 (5.445)	0.209 (5.306)	0.204 (5.173)	0.199 (5.047)	0.194 (4.927)	0.189 (4.812)	0.185 (4.703)
<b>2.8</b> <b>(4.51)</b>	0.235 (5.961)	0.228 (5.799)	0.222 (5.647)	0.217 (5.502)	0.211 (5.364)	0.206 (5.234)	0.201 (5.109)	0.196 (4.99)	0.192 (4.877)
<b>2.9</b> <b>(4.67)</b>	0.243 (6.173)	0.236 (6.007)	0.230 (5.848)	0.224 (5.699)	0.219 (5.556)	0.213 (5.421)	0.208 (5.291)	0.203 (5.168)	0.199 (5.051)
<b>3.0</b> <b>(4.83)</b>	0.251 (6.386)	0.245 (6.214)	0.238 (6.05)	0.232 (5.895)	0.226 (5.748)	0.221 (5.607)	0.216 (5.474)	0.210 (5.347)	0.206 (5.225)
<b>3.1</b> <b>(4.99)</b>	0.260 (6.599)	0.253 (6.421)	0.246 (6.252)	0.240 (6.092)	0.234 (5.939)	0.228 (5.794)	0.223 (5.656)	0.218 (5.525)	0.213 (5.399)
<b>3.2</b> <b>(5.15)</b>	0.268 (6.812)	0.261 (6.628)	0.254 (6.454)	0.248 (6.288)	0.241 (6.131)	0.235 (5.981)	0.230 (5.839)	0.225 (5.703)	0.219 (5.573)
<b>3.3</b> <b>(5.31)</b>	0.277 (7.025)	0.269 (6.835)	0.262 (6.655)	0.255 (6.485)	0.249 (6.322)	0.243 (6.168)	0.237 (6.021)	0.232 (5.881)	0.226 (5.748)
<b>3.4</b> <b>(5.47)</b>	0.285 (7.238)	0.277 (7.042)	0.270 (6.857)	0.263 (6.681)	0.256 (6.514)	0.250 (6.355)	0.244 (6.204)	0.239 (6.06)	0.233 (5.922)
<b>3.50</b> <b>(5.63)</b>	0.293 (7.451)	0.285 (7.249)	0.278 (7.059)	0.271 (6.878)	0.264 (6.706)	0.258 (6.542)	0.251 (6.386)	0.246 (6.238)	0.240 (6.096)
<b>3.60</b> <b>(5.79)</b>	0.302 (7.664)	0.294 (7.456)	0.286 (7.260)	0.279 (7.074)	0.272 (6.897)	0.265 (6.729)	0.259 (6.569)	0.253 (6.416)	0.247 (6.270)
<b>3.70</b> <b>(5.95)</b>	0.310 (7.876)	0.302 (7.664)	0.294 (7.462)	0.286 (7.271)	0.279 (7.089)	0.272 (6.916)	0.266 (6.751)	0.260 (6.594)	0.254 (6.444)
<b>3.80</b> <b>(6.12)</b>	0.318 (8.089)	0.310 (7.871)	0.302 (7.664)	0.294 (7.467)	0.287 (7.280)	0.280 (7.103)	0.273 (6.934)	0.267 (6.772)	0.261 (6.619)

## 4.5 GAS POWER MODULE CONTROLS

- M. Engine Switch** – The engine switch enables and disables the engine ignition system. The engine switch must be in the ON position for the engine to run. Turning the engine switch to the OFF position stops the engine.
- N. Choke Lever** - The choke lever opens and closes the choke valve in the carburetor. The CLOSED position enriches the fuel mixture for starting a cold engine. The OPEN position provides the correct fuel mixture for operation after starting, and for restarting a warm engine.
- P. Fuel Valve Lever** - The fuel valve opens and closes the connection between the fuel tank and the carburetor. The fuel valve lever must be in the ON position for the engine to run. When the engine is not in use, leave the fuel valve lever in the OFF position to prevent carburetor flooding, and to reduce the possibility of fuel leakage.

### NOTICE

Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase.

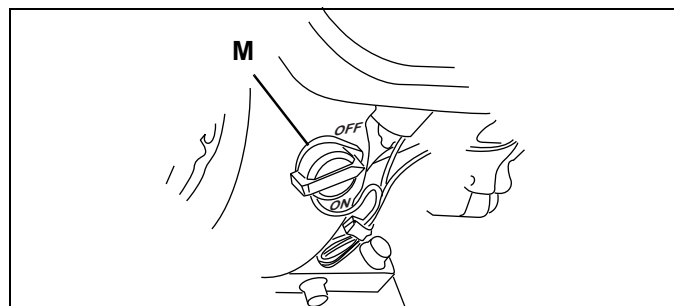


Figure 4D

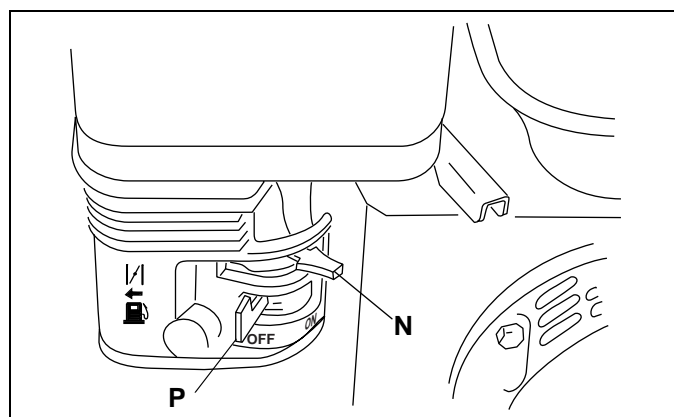


Figure 4E

## 4.6 BATTERY POWER MODULE CONTROLS

- R. Battery Monitor** - Located on the removable battery pack displays battery charge level.

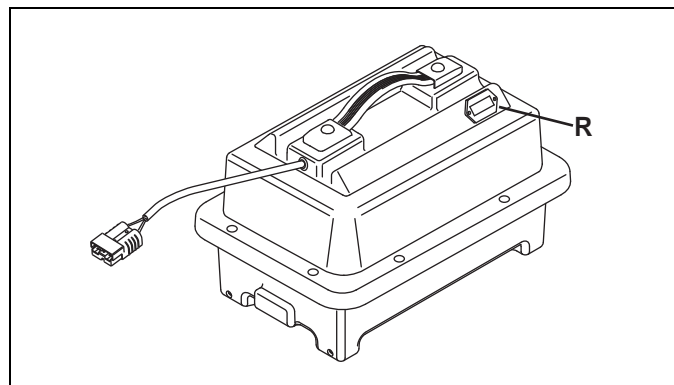


Figure 4F

## 5 OPERATION

---

### 5.1 DAILY INSPECTION

---



#### CAUTION

The daily inspection should be performed only with the parking brake engaged, and power connector disconnected.

1. Perform a visual inspection of the entire unit, look for signs of wear, loose hardware, missing or damaged components.

2. Make sure the mower is adjusted to the required cutting height.
3. Make sure the machine is lubricated and the transport tires are properly inflated.
4. Check the O.P.C. system.
5. Check motor connections are tight.

### 5.2 INTERLOCK SYSTEM (O.P.C.)

---

1. The Interlock System is intended to protect the operator and others from injury by stopping the reel and drive mechanism as soon as the operator releases the O.P.C. (Operator Presence Control) bail.



#### WARNING

Never operate equipment with the Interlock System disconnected or malfunctioning. Do not disconnect or bypass any switch.

2. To test the system:
  - a. Place mower on the kickstand.
  - b. Make certain reel switch is off.
3. **Gen-Set Power Module:** Start the engine.
4. Energize the unit.
  - a. Slide bail to the left and engage O.P.C. Bail.
  - b. The drive motor and the wheels will begin to turn.
  - c. Release the O.P.C. bail. The bail must disengage, and drive motor must stop.
5. If the drive motor engages before the O.P.C. bail is engaged or the drive motor continue to turn after the O.P.C. bail is released; stop the unit immediately and have the system repaired.

### 5.3 OPERATING PROCEDURES

#### CAUTION

To help prevent injury, always wear safety glasses, leather work shoes or boots, a hard hat, and ear protection.

1. Under no circumstances should the unit be started with operator or bystanders standing in front of the reel.
2. Never run the engine in an enclosed area.
3. Keep hands and feet away from moving parts and cutting units. If possible, do not make adjustments with the engine running.
4. Do not operate mower or attachments with loose, damaged, or missing components. Whenever possible mow when grass is dry.
5. First mow in a test area to become thoroughly familiar with the operation of the mower and control levers.
9. Disengage the reel switch to stop blades when not mowing.
10. Disengage the reel switch when crossing paths or roadways. Look out for traffic.
11. Stop and inspect the equipment for damage immediately after striking an obstruction, or if the machine begins to vibrate abnormally. Have the equipment repaired before resuming operation.

#### NOTICE

To prevent damage to the reel and bedknife **never** operate the reels when they are not cutting grass. Excessive friction and heat will develop between the bedknife and reel and damage the cutting edge.

6. Study the area to determine the best and safest operating procedure. Consider the height of the grass, type of terrain, and condition of the surface. Each condition will require certain adjustments or precautions. Only use accessories and attachments approved by Jacobsen.
7. Be aware of mower discharge direction and never direct discharge of material toward bystanders. Never allow anyone near the machine while in operation. The owner/operator is responsible for injuries inflicted to bystanders and/or damage to their property.
12. Slow down and use extra care on hillsides. Use caution when operating near drop offs.
13. Look behind and down before backing up to be sure of a clear path. Use care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.
14. Never use your hands to clean cutting units. Use a brush to remove grass clippings from blades. Blades are extremely sharp and can cause serious injuries.

#### WARNING

Before you clean, adjust, or repair this equipment, always disengage all drives, engage parking brake, turf key switch OFF, and disconnect power connector to prevent injuries.

#### CAUTION

Before mowing, pick up all debris such as rocks, toys, and wire which can be thrown by the machine. Enter a new area cautiously. Always operate at speeds that allow you to have complete control of the mower.

8. Use discretion when mowing near gravel areas (roadway, parking areas, cart paths, etc.). Stones discharged from the mower may cause serious injuries to bystanders and/or damage the equipment.

## 5 OPERATION

### 5.4 STARTING/STOPPING

1. Prepare power module to energize unit.

**Battery Power Module:** Disconnect battery charger and connect power connector.

**Gen-Set Power Module:**

- a. Check oil level and fuel supply then open fuel valve lever (**P**).
  - b. Move the choke lever (**N**) to the CLOSED position.
  - c. Set engine switch (**M**) to ON and power switch (**D**) to RUN position.
  - d. Start the engine.
  - e. Once engine starts move choke lever (**N**) to the OPEN position.
2. Make certain O.P.C. bail (**C**) is disengaged, reel switch (**E**) is off, and parking brake (**A**) is engaged.
  3. Turn power switch (**D**) to start position and release. LCD display (**G**) should show startup display for 5 seconds, then switch to system voltage.

If system fails to initialize, check to see if power connector is properly attached.

4. Check system voltage on LCD display (**G**). If the system voltage screen is not on the display, press either of the orange buttons (**F**) to forward display to the correct screen. If system voltage is low, recharge batteries or check generator output before operating.
5. To mow or transport unit, push O.P.C. bail (**C**) to the left and engage.
6. To stop the unit, release the O.P.C. bail, engage parking brake, and set power switch to OFF position.
7. **Battery Power Module:** Disconnect power connector and connect battery pack to charger.

**Gen-Set Power Module:** Turn engine switch (**M**) to off position and close fuel valve (**P**).

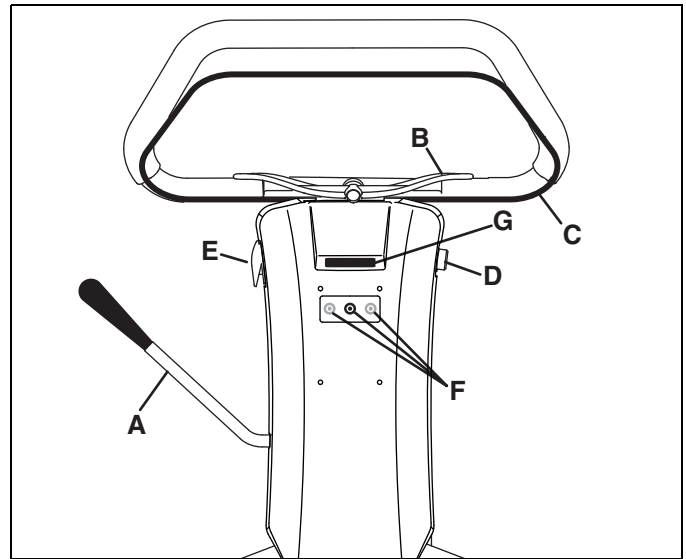


Figure 5A

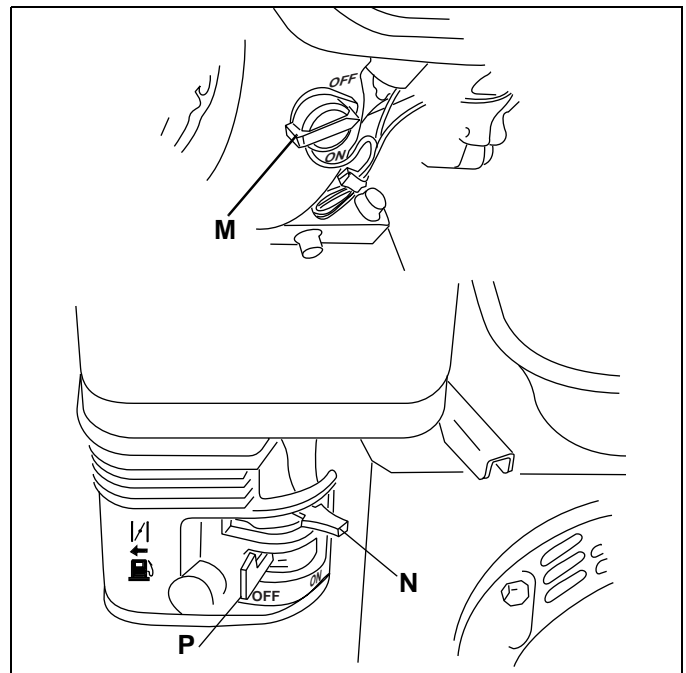


Figure 5B

## 5.5 MOWING


**WARNING**

To prevent serious injuries, keep hands, feet, and clothing away from cutting unit when the blades are moving.

**NEVER** use your hands to clean cutting units. Use a brush to remove grass clippings from blades. Blades can be sharp and could cause injuries.

To clear obstructions from cutting unit, disengage O.P.C. bail, engage parking brake, turn off power switch, and disconnect power connector then remove obstruction.

1. Turn power OFF. Remove the transport wheels (If installed).
2. Engage the reel switch. Start the unit.
3. Position mower slightly off green.
  - a. Adjust traction speed paddle **(B)** to provide a safe, comfortable walking speed.
  - b. Push handle down to lift the mower head above the grass then engage the O.P.C. bail **(C)**.
  - c. As the mower crosses the edge of the green, lower the mower head to the ground, and proceed across the green in a straight line.
 

When mowing lift up as required to keep handle centered in slots on handle stops. Do not push down on handle when mowing or the mower head may lift off the grass.
  - d. When the opposite side of the green is reached, push down of the handle to lift the mower head without disengaging the O.P.C. bail, and proceed off the green to turn around, or simply release O.P.C. bail and turn around.
  - e. To turn to the right, start by turning mower slightly to the left **(2)**. When the mower has moved approximately 1/2 its own width to the left, swing it around quickly to the right **(3 and 4)**, guiding the mower with your right hand. This method makes it possible to turn around quickly with very few steps. **[Figure 5C]**.

**NOTICE**

To prevent damage to the reel and bedknife **never** operate the reels when they are not cutting grass. Excessive friction and heat will develop between the bedknife and reel and damage the cutting edge.

4. To assure complete, even cutting, overlap swaths by 1 to 2 in., (25 to 50 mm), then make one or more passes around the perimeter of the green to clean ragged edges and separate the putting green surface from the apron.
5. For a more even playing surface and neater appearance, alter the mowing pattern each time a green is mowed. The patterns shown in **Figure 5D** are suggestions only, the operator or course superintendent can arrange patterns to suit each green.
6. Use caution while operating on hillside and drop-offs.

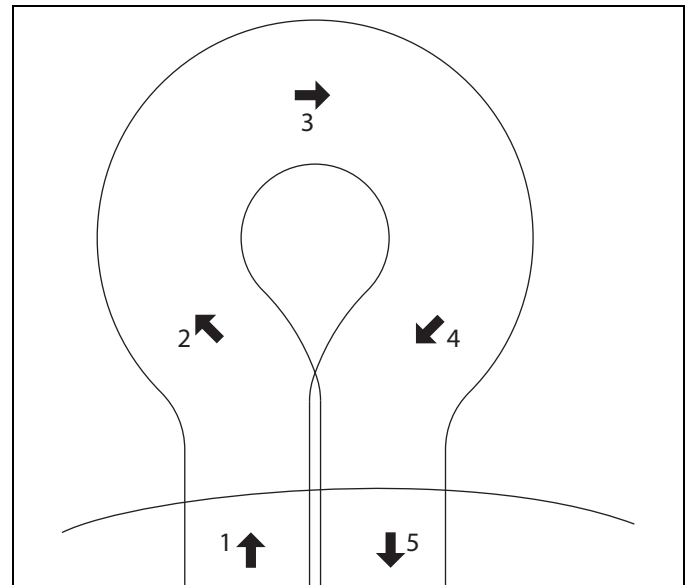


Figure 5C

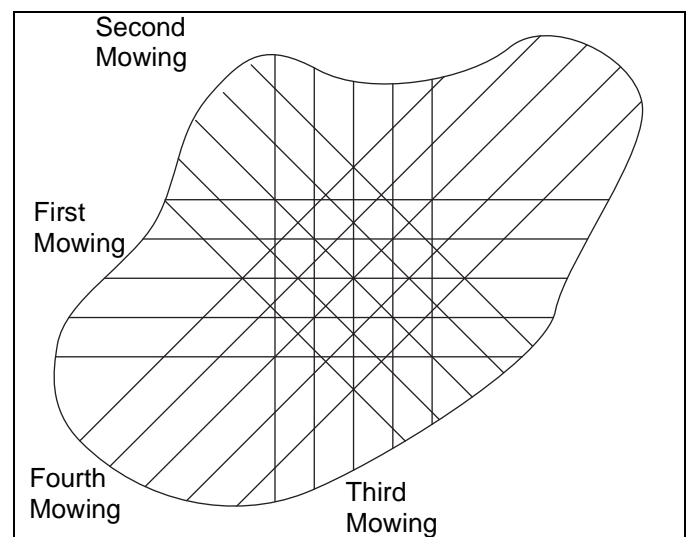


Figure 5D

## 5 OPERATION

### 5.6 TRANSPORT WHEELS (OPTIONAL)

#### **WARNING**

Always engage parking brake and disconnect power connector before installing or removing the transport wheels.

Transport wheels are optional accessories available through your Jacobsen Dealer. Traction wheels are recommended when not using the Mower Caddy to move the mower from green to green.

1. Push and hold the kickstand against the ground then pull the mower handle, by the lift point, back until the mower rests on the stand (**S**). Engage parking brake.
2. To remove wheels, press retaining clip (**T**) away from hub, and pull wheel off hub.
3. To install wheels, press retaining clip (**T**), place wheel on hub, and turn the wheel backwards until studs on back of wheel line up with holes in hub (**U**). Push wheel in and release clip.

4. Always disengage reel switch prior to transporting the mower more than a few feet.
5. Push the mower forward off the kickstand, start the unit, and engage the O.P.C. bail.
6. When using a vehicle to transport the mower, apply parking brake, turn key switch OFF, and disconnect power connector.

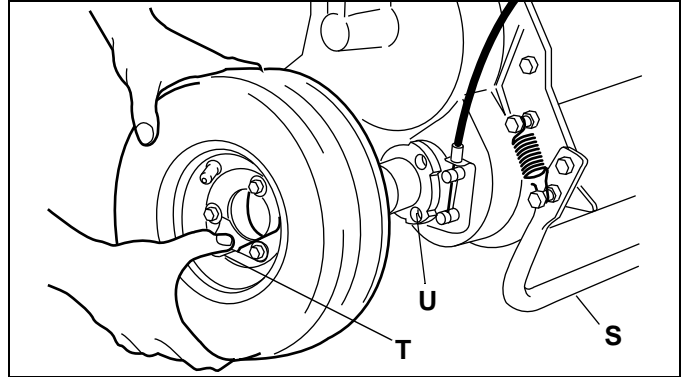


Figure 5E

### 5.7 KICKSTAND

1. To put the mower on the kickstand:
  - a. Use your foot to rotate kickstand down to the ground. Hold kickstand on the ground.
  - b. Pull up and back on lower portion of D handle until mower weight is on kickstand, and traction roller is off the ground.

#### **NOTICE**

To prevent damage to the D handle, only use the lower portion of the handle to put mower on the kickstand. Pulling on upper portion of D handle may cause damage to the handle.

2. To remove mower from kick stand:
  - a. Place foot behind kickstand.
  - b. Push mower forward while lifting slightly on the lower portion of D handle.
  - c. When traction roller is on the ground, use your foot to slowly allow kickstand to rotate up to rest against frame. Do not allow kick stand to snap back against frame.

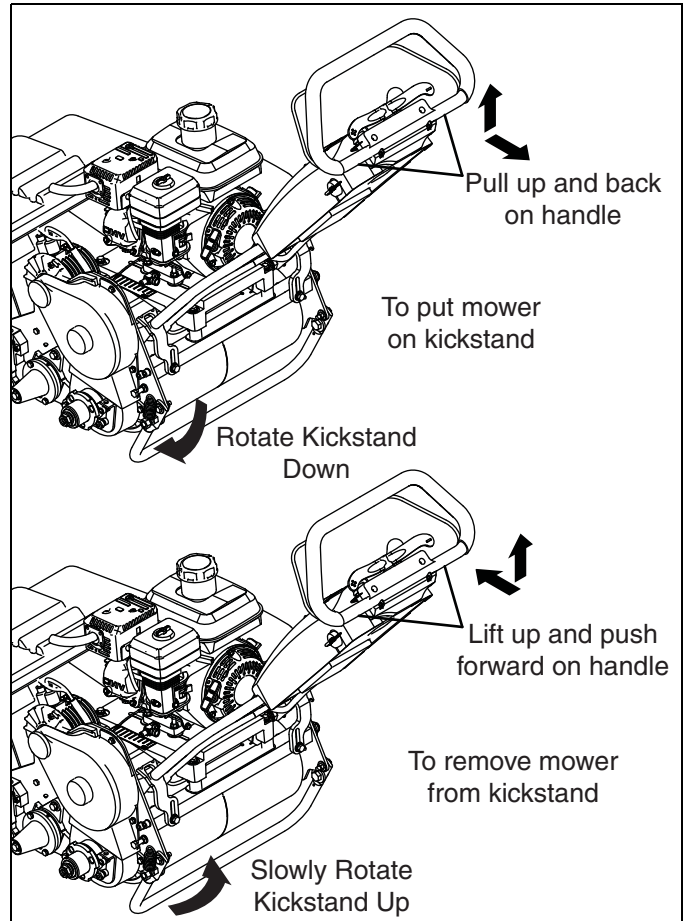


Figure 5F

## 5.8 GRASS CATCHER

1. When the basket is about two thirds (2/3) full of grass clippings, move the mower off the green.
2. Stop on a flat surface, disengage O.P.C. bail, engage parking brake, turn key switch OFF, and disconnect power connector.
3. Remove and empty the grass clippings from the mower.



### WARNING

To prevent serious injury, always disengage O.P.C. bail and disconnect power connector before emptying grass catcher.

## 5.9 DAILY MAINTENANCE

1. Park the mower on a flat, level surface. Engage parking brake, and turn key switch to off position.
2. Grease and lubricate all points if required. Use a manual grease gun only, do not use compressed air.

### NOTICE

To prevent damage to reel motor, do not over grease reel bearings. Damage of this nature is not covered by the factory warranty.

3. To prevent fires, wash the mower after each use.

### NOTICE

**Battery Power Modules:** Disconnect battery connector and remove the battery pack from the mower before washing.

- a. Use only fresh water for cleaning your equipment.

### NOTICE

Use of salt water or effluent water will encourage rust and corrosion of metal parts resulting in premature deterioration or failure. Damage of this nature is not covered by the factory warranty.

- b. Do not use high pressure spray.
- c. Do not spray water directly at electrical connectors, generator, motors, or controller
- d. Do not spray water into the cooling fins or the engine air intake.

### NOTICE

Do not wash a hot or running engine. Use compressed air to clean the engine.

### Battery Power Module:

4. Disconnect power connector and connect battery pack to charger.

### Gen-Set Power Module:

5. Fill fuel tank at the end of each operating day. Do not fill above the fuel strainer shoulder. Close fuel valve when unit is not in use.

Use clean, fresh, unleaded gasoline, 86 octane minimum. Refer to the engine's operator manual for fuel recommendations when using blended fuel.

**Handle fuel with care - it is highly flammable.** Use an approved container. The spout must fit inside the fuel filler neck. Avoid using cans and funnels to transfer fuel.



### WARNING

Never remove the fuel cap from the fuel tank, or add fuel, when the engine is running or while the engine is hot.

Do not smoke when handling fuel. Never fill or drain the fuel tank indoors.

Do not spill fuel and clean spilled fuel immediately.

Never handle or store fuel containers near an open flame or any device that may create sparks and ignite the fuel or fuel vapors.

Be sure to reinstall and tighten fuel cap securely.

6. Store fuel according to local, state or federal ordinances and recommendations from your fuel supplier.
7. Check the engine oil at the start and end of each day, before starting the engine. If the oil level is low, remove the oil filler cap and add oil as required. Do not overfill.

## 6 ADJUSTMENTS (ALL UNITS)

### 6.1 GENERAL

#### **WARNING**

Before you adjust, clean, or repair this equipment, always disengage all drives, engage parking brake, turn key switch OFF, and disconnect power connector to prevent serious injury.

1. Adjustments and maintenance should always be performed by a qualified technician. If proper adjustment cannot be made, contact an authorized Jacobsen Dealer.
2. Replace, do not adjust, worn or damaged components.

### 6.2 BRAKE

A properly adjusted brake requires 10 lbs. pull at top of brake lever to engage and must have 1-1/2" (38 mm) center to center when released.

1. Minor adjustments are made at the handle. Loosen nut (A), turn nut (B) to adjust the brake cable, then tighten nut (A).
2. If adjustments cannot be made at the handle, remove the transport wheel, and make the adjustment at the brake band.
3. Loosen screw (C) and pull cable to obtain desired brake tension. Tighten screw (C). Readjust (A) and (B).

3. Long hair, jewelry, or loose fitting clothing may get tangled in moving parts.

#### **CAUTION**

Be careful to prevent entrapment of the hands and fingers between moving and fixed components of the machine.

4. Do not change speed limit settings or overspeed the drive motors.

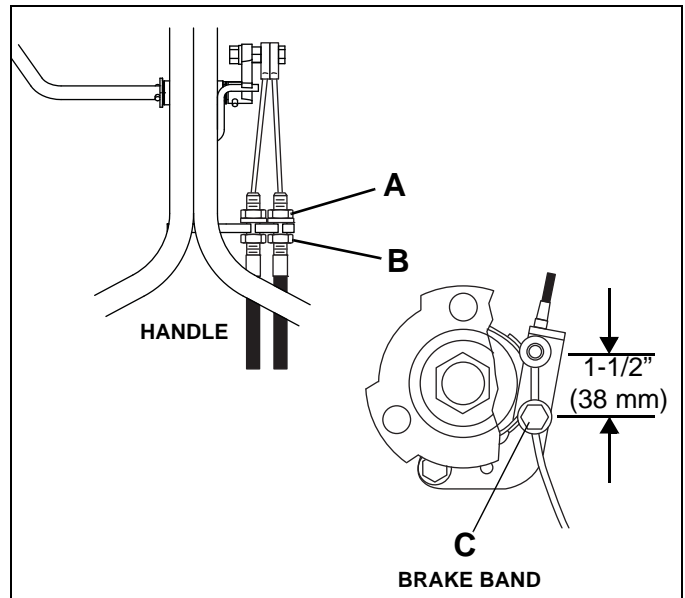


Figure 6A

### 6.3 SPEED PADDLE STOPS

1. Loosen both nuts (X).
2. Adjust positive paddle stop (Y) to 7/8 in. (22 mm).
3. Adjust negative paddle stop (Z) to 1-1/16 in. (27 mm).
4. Tighten nuts (X) to lock adjustment.

After adjusting paddle stops, the controller speed paddle calibration must be reset. [See Section 4.3].

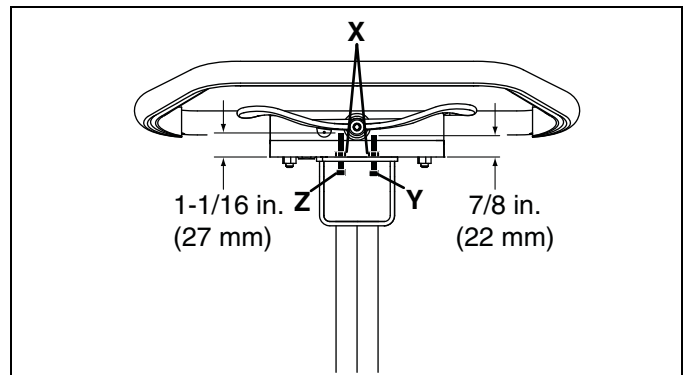


Figure 6B

### 6.4 HANDLE

1. To adjust the angle of the handle bar (F), loosen screw (D) on both sides of the mower and adjust the handle bar to the desired position.
2. After adjusting handle bar, adjust bracket (E) so that the handle bar just rests on the bottom of the slot in bracket. Tighten screw (D). Check that handle moves from bottom to top of slot in bracket (E) without binding.

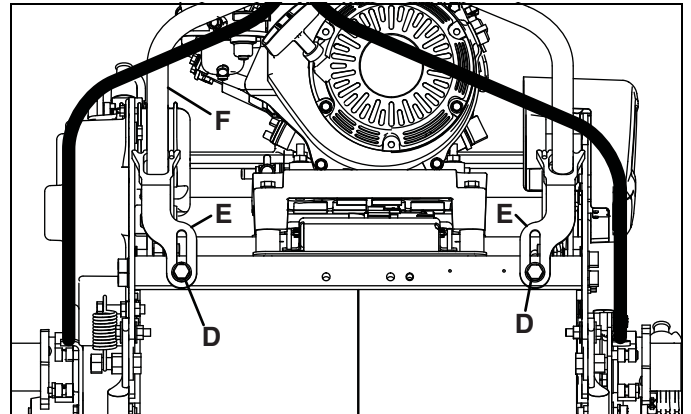


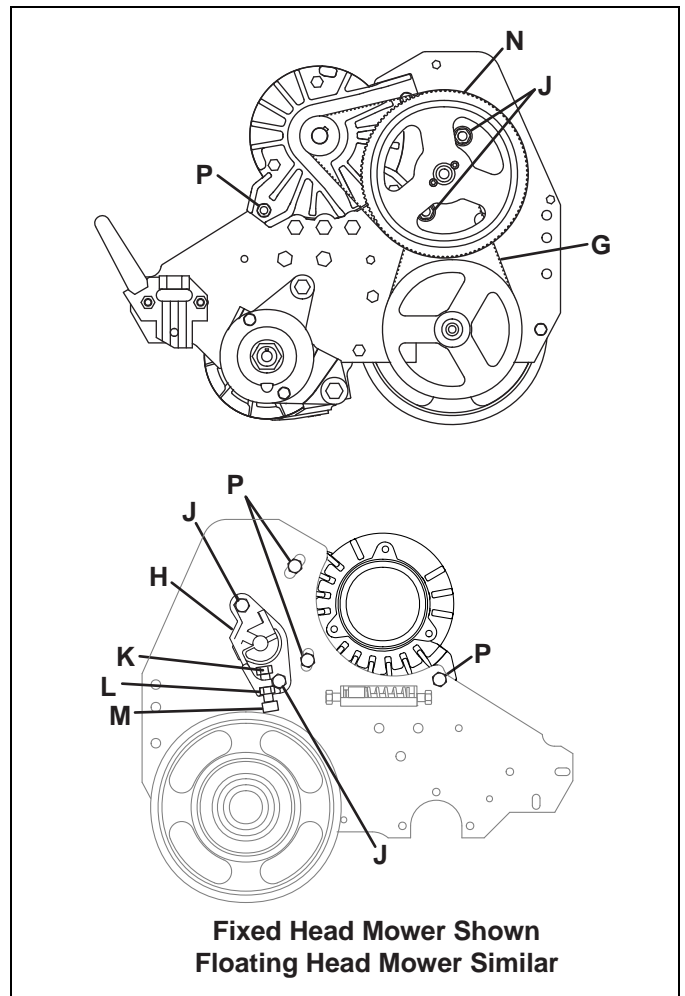
Figure 6C

### 6.5 TRACTION BELTS

**CAUTION**

To prevent permanent damage to the belt, do not twist, fold, bend, or overtighten the belt.

1. To adjust belt (G), assemble 5/16-18 x 1" hex head screw (K) and 5/16-18 hex nut (L) to bottom of bearing bracket (H). Loosen nuts (J).
2. Place bedknife gauge bar (M) on top of roller and under screw (K). Tighten screw (K) until belt (G) deflects 1/10" (2.5 mm) with 1 ~ 2 lb (0.45 ~ 0.91 kg) load applied at mid span.
3. Tighten nuts (J) and remove 5/16-18 x 1" screw (K) and lower nut (L).
4. Place hardware (K and L) in a safe place for future adjustments.
5. To adjust belt (N), loosen pivot hardware (P), and pivot motor housing towards front of mower until belt deflects 1/10" (2.5 mm) with 1 ~ 2 lb. (0.45 ~ 0.91 kg) load applied at mid span. Tighten hardware (P).



Fixed Head Mower Shown  
Floating Head Mower Similar

Figure 6D

## 6 ADJUSTMENTS (ALL UNITS)

### 6.6 FRONT ROLLER WEIGHT

The weight on the front roller is adjustable. Adjust the front roller weight as required to meet your turf needs.

#### CAUTION

To prevent injury or property damage, place mower on kickstand or support mower handle before removing battery pack.

Full battery packs weigh approximately 60 lbs (27.2 kg). Use proper lifting techniques when moving them.

1. **Battery Power Module:** To adjust front roller weight, disconnect power connector (**R**), and remove battery pack (**S**). Loosen hardware (**T**), place battery pack back onto mower, and slide battery mounting tray (**U**) as required.

**Gen-Set Power Module:** Loosen engine mounting hardware (**V**) and slide engine (**W**) as required.

2. To adjust the front roller weight:
  - a. To increase front roller weight, slide battery tray (**U**), or engine (**W**) towards front of mower.
  - b. To decrease front roller weight, slide battery tray (**U**), or engine (**W**) towards rear of mower.
  - c. Use the decal on the power module mount as a guide for adjusting the front roller weight. Aligning the oil drain (Gen-Set) or the V-notch in the battery tray (Battery Tray) with the desired line on the decal allows for consistent front roller weight setting.
3. **Battery Power Module:** When desired weight is attained, measure distance from edge of power module mount to tray (**U**). Remove battery pack (**S**). Recheck measured dimension and tighten hardware (**R**).

**Gen-Set Power Module:** Tighten engine mounting hardware (**V**).

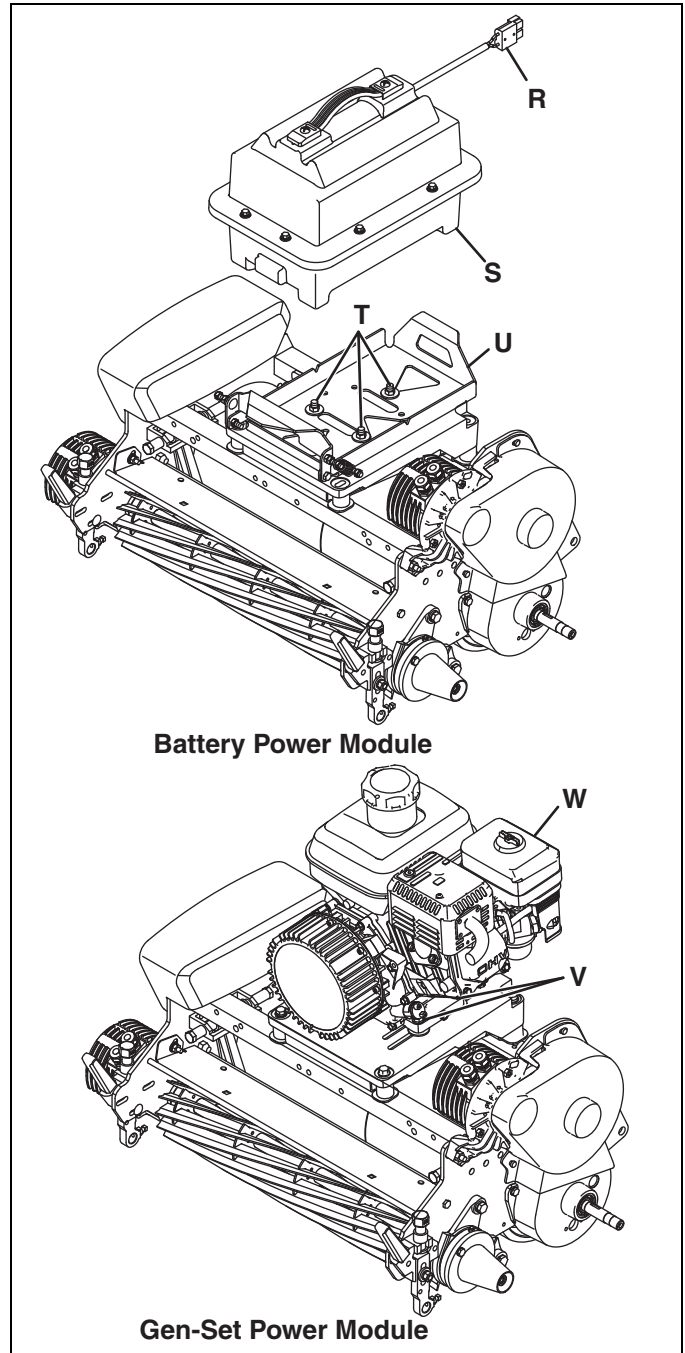


Figure 6E





6.7 TORQUE SPECIFICATION

**NOTICE**





All torque values included in these charts are approximate and are for reference only. Use of these torque values is at your sole risk. Jacobsen is not responsible for any loss, claim, or damage arising from the use of these charts. **Extreme caution should always be used when using any torque value.**

Jacobsen uses Grade 5 Plated bolts as standard, unless otherwise noted. For tightening plated bolts, use the value given for lubricated.

**AMERICAN NATIONAL STANDARD FASTENERS**

SIZE	UNITS					SIZE	UNITS				
		GRADE 5		GRADE 8				GRADE 5		GRADE 8	
		Lubricated	Dry	Lubricated	Dry			Lubri-cated	Dry	Lubri-cated	Dry
#6-32	in-lb (Nm)	–	20 (2.3)	–	–	7/16-14	ft-lb (Nm)	37 (50.1)	50 (67.8)	53 (71.8)	70 (94.9)
#8-32	in-lb (Nm)	–	24 (2.7)	–	30 (3.4)	7/16-20	ft-lb (Nm)	42 (56.9)	55 (74.6)	59 (80.0)	78 (105)
#10-24	in-lb (Nm)	–	35 (4.0)	–	45 (5.1)	1/2-13	ft-lb (Nm)	57 (77.2)	75 (101)	80 (108)	107 (145)
#10-32	in-lb (Nm)	–	40 (4.5)	–	50 (5.7)	1/2-20	ft-lb (Nm)	64 (86.7)	85 (115)	90 (122)	120 (162)
#12-24	in-lb (Nm)	–	50 (5.7)	–	65 (7.3)	9/16-12	ft-lb (Nm)	82 (111)	109 (148)	115 (156)	154 (209)
1/4-20	in-lb (Nm)	75 (8.4)	100 (11.3)	107 (12.1)	143 (16.1)	9/16-18	ft-lb (Nm)	92 (124)	122 (165)	129 (174)	172 (233)
1/4-28	in-lb (Nm)	85 (9.6)	115 (13.0)	120 (13.5)	163 (18.4)	5/8-11	ft-lb (Nm)	113 (153)	151 (204)	159 (215)	211 (286)
5/16-18	in-lb (Nm)	157 (17.7)	210 (23.7)	220 (24.8)	305 (34.4)	5/8-18	ft-lb (Nm)	128 (173)	170 (230)	180 (244)	240 (325)
5/16-24	in-lb (Nm)	173 (19.5)	230 (26.0)	245 (27.6)	325 (36.7)	3/4-10	ft-lb (Nm)	200 (271)	266 (360)	282 (382)	376 (509)
3/8-16	ft-lb (Nm)	23 (31.1)	31 (42.0)	32 (43.3)	44 (59.6)	3/4-16	ft-lb (Nm)	223 (302)	298 404	315 (427)	420 (569)
3/8-24	ft-lb (Nm)	26 (35.2)	35 (47.4)	37 (50.1)	50 (67.8)	7/8-14	ft-lb (Nm)	355 (481)	473 (641)	500 (678)	668 (905)

**METRIC FASTENERS**

SIZE	UNITS									Non Critical Fasteners into Aluminum
		4.6		8.8		10.9		12.9		
		Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	
M4	Nm (in-lb)	–	–	–	–	–	–	3.83 (34)	5.11 (45)	2.0 (18)
M5	Nm (in-lb)	1.80 (16)	2.40 (21)	4.63 (41)	6.18 (54)	6.63 (59)	8.84 (78)	7.75 (68)	10.3 (910)	4.0 (35)
M6	Nm (in-lb)	3.05 (27)	4.07 (36)	7.87 (69)	10.5 (93)	11.3 (102)	15.0 (133)	13.2 (117)	17.6 (156)	6.8 (60)
M8	Nm (in-lb)	7.41 (65)	9.98 (88)	19.1 (69)	25.5 (226)	27.3 (241)	36.5 (323)	32.0 (283)	42.6 (377)	17.0 (150)
M10	Nm (ft-lb)	14.7 (11)	19.6 (14)	37.8 (29)	50.5 (37)	54.1 (40)	72.2 (53)	63.3 (46)	84.4 (62)	33.9 (25)
M12	Nm (ft-lb)	25.6 (19)	34.1 (25)	66.0 (48)	88.0 (65)	94.5 (70)	125 (92)	110 (81)	147 (108)	61.0 (45)
M14	Nm (ft-lb)	40.8 (30)	54.3 (40)	105 (77)	140 (103)	150 (110)	200 (147)	175 (129)	234 (172)	94.9 (70)

# 7 FIXED HEAD REEL ADJUSTMENTS

## 7.1 GENERAL

### **WARNING**

Before you adjust, clean, or repair this equipment, always disengage all drives, engage parking brake, turn power off and disconnect power connector to prevent serious injury.

1. Adjustments and maintenance should always be performed by a qualified technician. If proper adjustment cannot be made, contact an authorized Jacobsen Dealer.
2. Replace, do not adjust, worn or damaged components.

## 7.2 REEL TO BEDKNIFE

### (Pre-adjustment Check)

1. Check the reel bearings for end play or radial play. If there is any abnormal movement of the reel, up and down, or side to side, adjust, or replace components as needed.

### **CAUTION**

Handle the reel with extreme care to prevent personal injury and damage to the cutting edges.

### **NOTICE**

Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase.

2. Inspect the reel blades and bedknife to insure good sharp edges without bends or nicks.
  - a. The cutting edges of the reel blades and bedknife must be sharp, free of burrs, and show no signs of rounding off.
  - b. The bedknife and bedknife backing must be securely tightened. The bedknife must be straight and sharp.
  - c. A flat surface of at least 1/32 in. (0.8 mm) minimum must be maintained on the front face of the bedknife. Use a standard flat file to dress the bedknife.
3. If wear or damage is beyond the point where the reel or bedknife can be corrected by the lapping process, they must be reground.
4. Proper reel-to-bedknife adjustment is critical. A gap of 0.001 to 0.003" (0.025 to 0.076 mm) must be maintained across the entire length of the reel and bedknife.

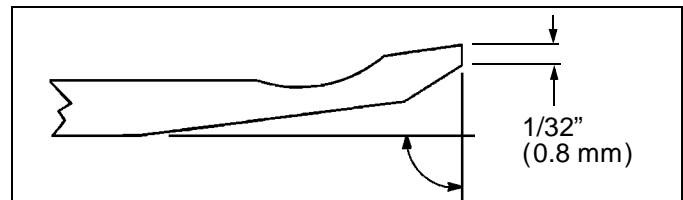
3. Long hair, jewelry, or loose fitting clothing may get tangled in moving parts.

### **CAUTION**

Be careful to prevent entrapment of the hands and fingers between moving and fixed components of the machine.

4. Do not change speed limit settings or overspeed the drive motors.

5. The reel must be parallel to the bedknife. An improperly adjusted reel will lose its sharp edges prematurely and may result in serious damage to the reel and bedknife.
6. Grass conditions will also affect the adjustment.
  - a. Dry, sparse conditions will require a wider gap to prevent heat buildup and damage to the reel and bedknife.
  - b. High quality grass with a good moisture content requires a closer gap (near zero).



**Figure 7A**

### 7.3 BEDKNIFE ADJUSTMENT

#### NOTICE

Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase.

1. Adjuster **(A)** is used to increase or decrease the spring load on the bedknife. Adjuster **(B)** is used to move the bedknife to the reel or away from the reel.
2. Once the spring is totally collapsed as a result of many adjustments, the bedknife cannot be moved. Back-off adjuster **(A)** before adjusting **(B)**.
3. For most applications, compress the spring to 1 in., (25 mm).
4. Start adjustment at the leading edge of the reel, followed by the trailing end. *The leading end of the reel blade is the end that passes over the bedknife first during normal rotation.*

#### CAUTION

Handle the reel with extreme care to prevent personal injury and damage to the cutting edges.

5. Turn adjuster **(B)** clockwise to bring the bedknife closer to the reel or counterclockwise to back the bedknife away from the reel.

- a. Slide a feeler gauge or shim stock 0.001 - 0.003 in., (0.025 - 0.075 mm) between the reel blade and the bedknife. Do not turn the reel.
- b. Adjust the trailing end of the reel in the same manner, then recheck the adjustment at the leading end.
- c. When the reel and bedknife are properly adjusted, the reel will spin freely and will cut a piece of newspaper along the full length of the reel when the paper is held at 90° to the bedknife.

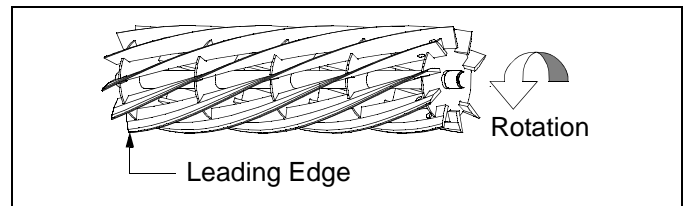


Figure 7B

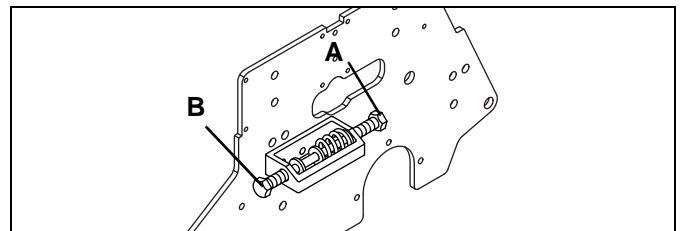


Figure 7C

### 7.4 CUTTING HEIGHT

**Note:** Make sure the bedknife is properly adjusted before setting the cutting height. [See Section 7.3].

1. Push kickstand down and tip mower back on its handle.

#### NOTICE

**Gen-Set Power Modules:** Do not leave the mower tipped back for an extended length of time or oil may migrate into the combustion chamber.

2. Loosen nuts **(D)** on both sides just enough to allow knob **(C)** to raise the front roller. Raise both sides an equal amount.
3. Set gauge screw **(G)** to the desired cutting height **(F)**. Measure from the gauge bar **(E)** to the underside of the screw head **(G)** then tighten wing nut to lock the adjustment.
4. Place gauge bar between front roller and traction roller, near the outer end of the rollers.

5. Slide screw head over bedknife **(H)** and adjust knob **(C)** so roller just contacts the gauge bar. Tighten nut **(D)**.
6. Repeat Steps 4 and 5 on the opposite end of the reel then tighten nuts **(D)**. Recheck and readjust the cutting height if necessary.

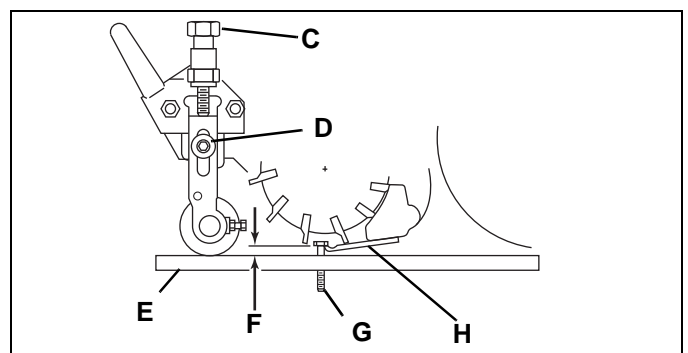


Figure 7D

## 8 CLASSIC FLOATING HEAD REEL ADJUSTMENTS

### 8.1 GENERAL

#### **WARNING**

Before you adjust, clean, or repair this equipment, always disengage all drives, engage parking brake, turn power off and disconnect power connector to prevent serious injury.

1. Adjustments and maintenance should always be performed by a qualified technician. If proper adjustment cannot be made, contact an authorized Jacobsen Dealer.
2. Replace, do not adjust, worn or damaged components.

3. Long hair, jewelry or loose fitting clothing may get tangled in moving parts.

#### **CAUTION**

Be careful to prevent entrapment of the hands and fingers between moving and fixed components of the machine.

4. Do not change speed limit settings or overspeed the drive motors.

### 8.2 BEDKNIFE-TO-REEL

#### (Pre-adjustment Check)

1. Check the reel bearings for end play or radial play. There should be no end play or radial play. **See Section 8.6.**

#### **CAUTION**

To prevent personal injury and damage to the cutting edges, wear gloves and handle the reel and bedknife with extreme care.

#### **NOTICE**

Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase.

2. Inspect the reel blades and bedknife to insure good sharp edges without bends or nicks.
  - a. The leading edge of the reel blades must be sharp, free of burrs and show no signs of rounding off.
  - b. The bedknife and bedknife backing must be securely tightened. The bedknife must be straight and sharp.
  - c. A flat surface of at least 1/32 in. (0.8 mm) minimum must be maintained on the front face of the bedknife. Use a standard flat file to dress the bedknife.
3. If wear or damage is beyond the point where the reel or bedknife can be corrected by the lapping process, they must be reground.
4. Proper reel-to-bedknife adjustment is critical. A gap of 0.001 to 0.003" (0.025 to 0.076 mm) must be

maintained across the entire length of the reel and bedknife.

5. The reel must be parallel to the bedknife. An improperly adjusted reel will lose its sharp edges prematurely and may result in serious damage to the reel and bedknife.
6. Grass conditions will also affect the adjustment.
  - a. Dry, sparse conditions will require a wider gap to prevent heat buildup and damage to the reel and bedknife.
  - b. High quality grass with a good moisture content requires a closer gap (near zero).

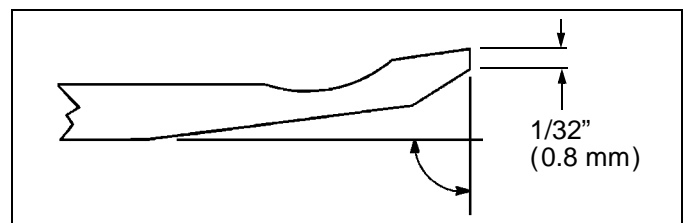


Figure 8A

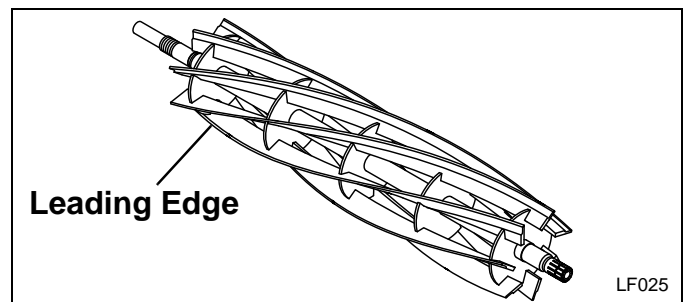


Figure 8B

### 8.3 BEDKNIFE ADJUSTMENT

1. Read Section 8.2 before making the adjustment.
2. Start adjustment at the leading end of the reel, followed by the trailing end. *The leading end of the reel blades is that end which passes over the bedknife first during normal reel rotation.*
3. Additional access to bedknife adjusting hardware (**B** and **C**) can be obtained by pressing the limit bracket (**A**) away from the reel as the mower is tipped back onto it's handle. This allows the back side of the reel to pivot down and away from the frame.

#### NOTICE

Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase.

#### NOTICE

**Gen-Set Power Modules:** Do not leave the mower tipped back for an extended length of time or oil may migrate into the combustion chamber.

4. Use adjusters (**B** and **C**), to adjust gap. Loosen bottom adjuster (**C**) and turn top adjuster (**B**) down (Clockwise) to close gap.
  - a. Slide a feeler gauge or shim stock 0.001" - 0.003" (0.025 - 0.075 mm) between the reel blade and the bedknife. Do not turn the reel.
  - b. Adjust the trailing end of the reel to the same gap in a similar manner then recheck the adjustment at the leading end.
  - c. When the reel is properly adjusted to the bedknife, the reel will spin freely and you should be able to cut a piece of newspaper, along the

full length of the reel, when the paper is held at 90° to the bedknife.

#### NOTICE

Avoid excessive tightening or serious damage may result to bedknife and reel blades. Reels must turn freely.

4. Return mower to upright position. Limit bracket (**A**) is spring loaded and should latch into bracket on reel.

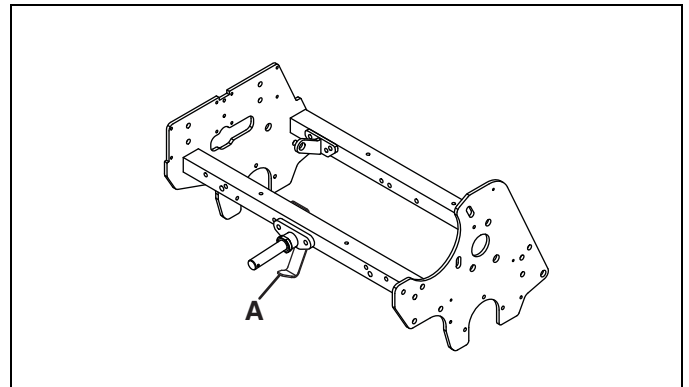
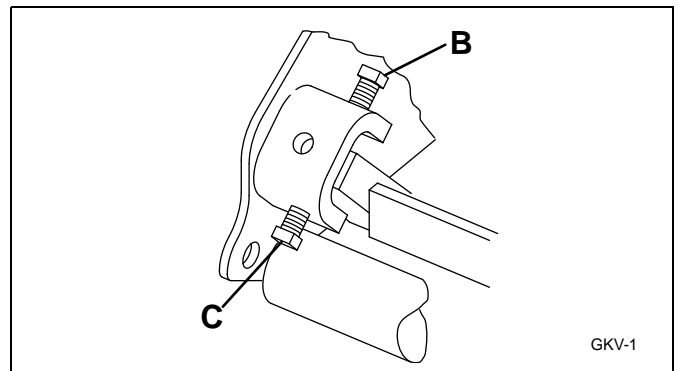


Figure 8C



GKV-1

### 8.4 REEL BEARING

Any end play or radial play indicates bad bearings, a weak tension spring or a backed off nut.

1. Check bearing housing mounting hardware. Tighten or replace components as required. Carefully clean threads with degreaser.
2. Apply a medium strength grade of Loctite to nut (**P**), then thread nut onto the reel shaft until the nut is 1-27/32 in. (46.8 mm) from the end of the reel shaft.
3. Fill reel bearing housings with NLGI - Grade O grease after adjusting spring.

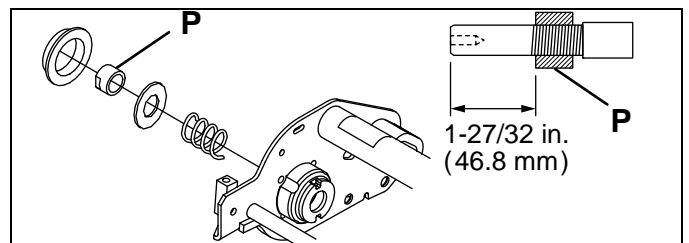


Figure 8E

## 8 CLASSIC FLOATING HEAD REEL ADJUSTMENTS

### 8.5 CUTTING HEIGHT

**Note:** Always make the reel to bedknife adjustment before adjusting height of cut. (Sections 8.2 and 8.3).

1. Push kickstand down and tip mower back on it's handle.

#### NOTICE

**Gen-Set Power Modules:** Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase. Do not leave the mower tipped back for an extended length of time or oil may migrate into the combustion chamber.

4. Set desired cutting height on the gauge (E).
  - a. Measure distance between the underside of screw head and gauge block surface (F).
  - b. Adjust screw (H) to obtain desired height then tighten the wing nut.
5. Loosen the nuts on the front roller brackets (G) just enough to allow the adjuster knob (K) to raise or lower the front roller.

6. Place gauge (E) across bottom of front and rear rollers near one end of roller.
7. Slide the head of gauge screw (H) over the bedknife (L) and adjust the knob (K) to close the gap between the screw head and bedknife. Then tighten locknut (G).
8. Repeat Steps 4 and 5 on opposite end. Complete adjustment to one end before adjusting opposite end.
9. Tighten nuts (G) and recheck each end.

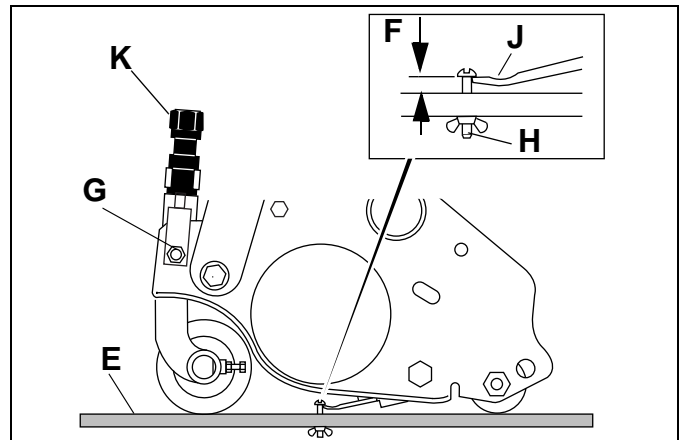


Figure 8F

### 8.6 REEL ASSEMBLY REMOVAL

The reel assembly can be removed for maintenance or to use a different reel.

1. Remove hairpin and washer and slide the lift hangers off the pins.
2. Disconnect motor electrical connectors and reel ground wire. Whenever the reel motors are disconnected from the harness, cover the connectors on the motor to prevent debris from entering motor.
3. Remove hairpin and flat washer and lift panhard rod off of reel bolt.

#### NOTICE

**Gen-Set Power Modules:** Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase. Do not leave the mower tipped back for an extended length of time or oil may migrate into the combustion chamber.

4. Tip the unit back onto the handle and slide the reel away from the mower.
5. Reel assembly is reverse of removal.

## 9.1 GENERAL

### **WARNING**

Before you adjust, clean, or repair this equipment, always disengage all drives, engage parking brake, turn power off and disconnect power connector to prevent serious injury.

1. Adjustments and maintenance should always be performed by a qualified technician. If proper adjustment cannot be made, contact an authorized Jacobsen Dealer.
2. Replace, do not adjust, worn or damaged components.

3. Long hair, jewelry or loose fitting clothing may get tangled in moving parts.

### **CAUTION**

Be careful to prevent entrapment of the hands and fingers between moving and fixed components of the machine.

4. Do not change speed limit settings or overspeed the drive motors.

## 9.2 BEDKNIFE-TO-REEL (Pre-adjustment Check)

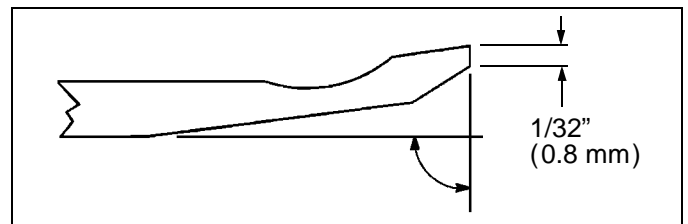
1. Check the reel bearings for end play or radial play. There should be no end play or radial play. See Section 8.6.

### **CAUTION**

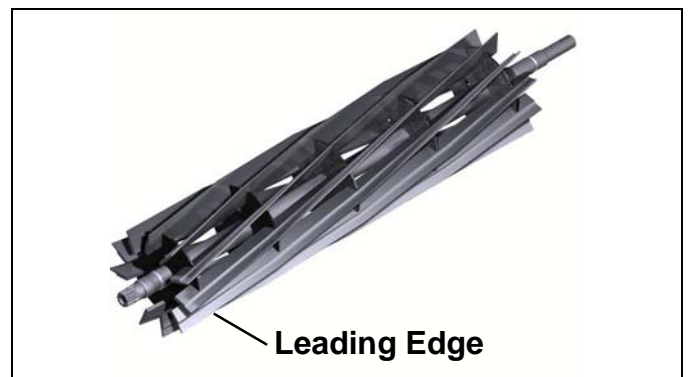
To prevent personal injury and damage to the cutting edges, wear gloves and handle the reel and bedknife with extreme care.

2. Inspect the reel blades and bedknife to insure good sharp edges without bends or nicks.
  - a. The leading edge of the reel blades must be sharp, free of burrs and show no signs of rounding off.
  - b. The bedknife and bedknife backing must be securely tightened. The bedknife must be straight and sharp.
  - c. A flat surface of at least 1/32 in. (0.8 mm) minimum must be maintained on the front face of the bedknife. Use a standard flat file to dress the bedknife.
3. If wear or damage is beyond the point where the reel or bedknife can be corrected by the lapping process, they must be reground.
4. Proper reel-to-bedknife adjustment is critical. A gap of 0.001 to 0.003" (0.025 to 0.076 mm) must be maintained across the entire length of the reel and bedknife.
5. The reel must be parallel to the bedknife. An improperly adjusted reel will lose its sharp edges prematurely and may result in serious damage to the reel and bedknife.
6. Grass conditions will also affect the adjustment.

- a. Dry, sparse conditions will require a wider gap to prevent heat buildup and damage to the reel and bedknife.
- b. High quality grass with a good moisture content requires a closer gap (near zero).



**Figure 9A**



**Figure 9B**

## 9 TRUESET FLOATING HEAD REEL ADJUSTMENTS

### 9.3 BEDKNIFE ADJUSTMENT

1. Read Section 8.2 before making the adjustment.
2. Start adjustment at the leading end of the reel, followed by the trailing end. *The leading end of the reel blades is that end which passes over the bedknife first during normal reel rotation.*
3. Use adjusters **(B and C)**, to adjust gap. Rotate adjusters (Clockwise) to close gap. Each click of the adjuster moves the bedknife 0.001" (0.025 mm) closer to the reel.
  - a. Slide a feeler gauge or shim stock 0.001" - 0.003" (0.025 - 0.075 mm) between the reel blade and the bedknife. Do not turn the reel.
  - b. Adjust the trailing end of the reel to the same gap in a similar manner then recheck the adjustment at the leading end.
  - c. When the reel is properly adjusted to the bedknife, the reel will spin freely and you should be able to cut a piece of newspaper, along the full length of the reel, when the paper is held at 90° to the bedknife.

#### NOTICE

Avoid excessive tightening or serious damage may result to bedknife and reel blades. Reels must turn freely.

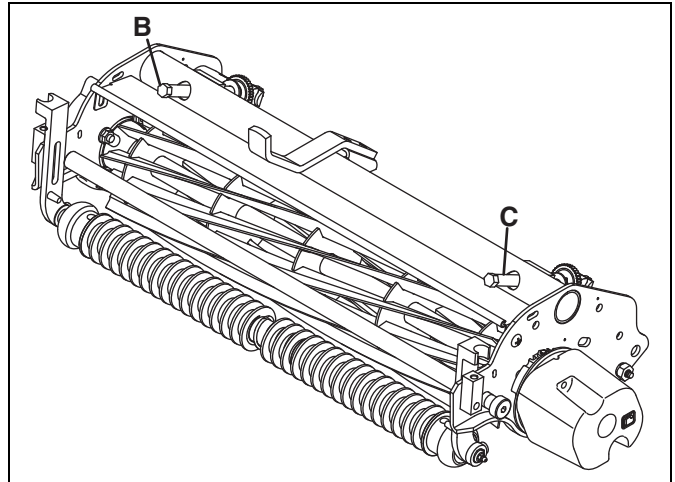


Figure 9C

### 9.4 CUTTING HEIGHT

**Note:** Always make the reel to bedknife adjustment before adjusting height of cut. (Sections 9.2 and 9.3).

10. Set desired cutting height on the gauge **(E)**.
  - a. Measure distance between the underside of screw head and gauge block surface **(F)**.
  - b. Adjust screw **(H)** to obtain desired height then tighten the wing nut.
11. Loosen the nuts on the front roller brackets **(G)** just enough to allow the adjuster knob **(K)** to raise or lower the front roller.
12. Place gauge **(E)** across bottom of front and rear rollers near one end of roller.
13. Slide the head of gauge screw **(H)** over the bedknife **(L)** and adjust the knob **(K)** to close the gap between the screw head and bedknife. Then tighten locknut **(G)**.
14. Repeat Steps 4 and 5 on opposite end. Complete adjustment to one end before adjusting opposite end.
15. Tighten nuts **(G)** and recheck each end.

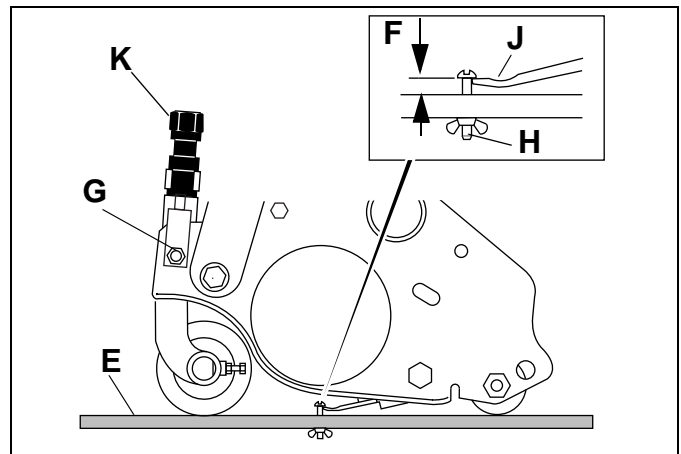


Figure 9D

## 9.5 REEL BEARING

Any radial play or excessive end play indicates bad bearings, a weak tension spring or a backed off nut.

1. Check bearing housing mounting hardware. Tighten or replace components as required. Carefully clean threads with degreaser.
2. Apply a medium strength grade of Loctite to nut **(P)**, then thread nut onto the reel shaft until the nut is 1-27/32" (46 mm) from the end of the reel shaft.
3. Fill reel bearing housings with NLGI - Grade O grease after adjusting spring.

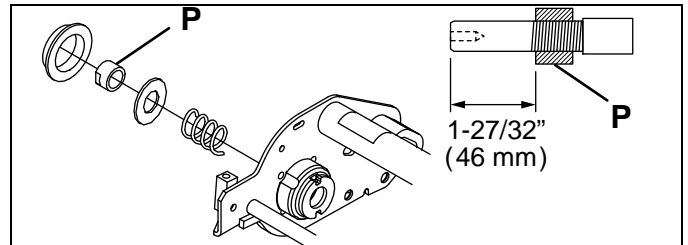


Figure 9E

## 9.6 BEDKNIFE ADJUSTER SPRING

For proper operation, bedknife adjuster spring should be compressed to a dimension of 1-7/16 - 1-1/2 in. (36.5-38 mm).

To adjust spring compression, loosen or tighten nut **(R)** to obtain a distance of 1-7/16 - 1-1/2 in. (36.5-38 mm).

After adjusting spring, check reel to bedknife adjustment.

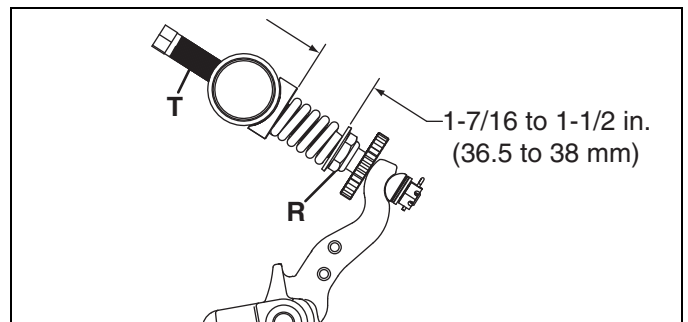


Figure 9F

## 9.7 BEDKNIFE ADJUSTER TENSION

### NOTICE

Overtightening slotted nut **(S)** will make bedknife adjuster rod **(T)** difficult to adjust.

Remove cotter pin **(U)** and fully loosen, then tighten slotted nut **(S)** to remove clearance (no end play) between components. Continue to tighten nut until next slot in nut aligns with hole in bedknife adjuster rod **(T)**. Install new cotter pin.

Check torque required to rotate adjuster rod **(T)**. Maximum torque should be 24 in. lb. (2 ft. lb.) (2.7 Nm).

After adjusting nut, check reel to bedknife adjustment.

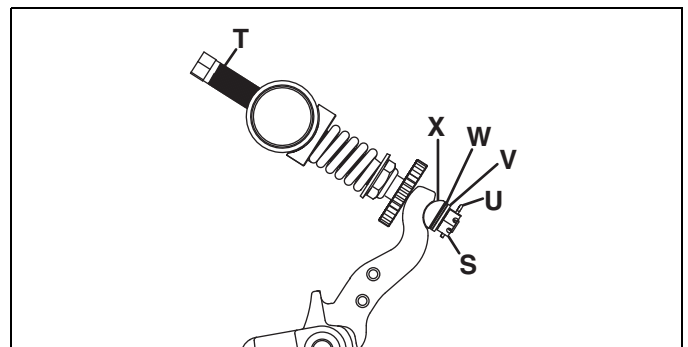


Figure 9G

## 9.8 GRINDING BEDKNIFE

Bedknife can be lowered out of the reel for grinding without completely removing the bedknife assembly.

1. Remove cotter pin **(U)**, slotted nut **(S)**, bellville washer **(V)**, shim washer **(W-If required)**, and half trunnion **(X)**. See Figure 9G
4. Press down on adjuster end of rod **(T)** to rotate other end of the adjuster out of the bedknife finger.

5. Rotate bedknife backing to access the reel and bedknife for grinding.
6. After grinding, assemble bedknife using reverse order of removal. Check adjustment of bedknife adjuster tension **(Section 9.7)**, and reel to bedknife adjustment **(Section 8.3)**.

## 9 TRUESET FLOATING HEAD REEL ADJUSTMENTS

---

### 9.9 REEL ASSEMBLY REMOVAL

---

The reel assembly can be removed for maintenance or to use a different reel.

1. Remove hairpin and washer and slide the lift hangers off the pins.
2. Disconnect motor electrical connectors and reel ground wire. Whenever the reel motors are disconnected from the harness, cover the connectors on the motor to prevent debris from entering motor.
3. Remove hairpin and flat washer and lift panhard rod off of reel bolt.

#### NOTICE

**Gen-Set Power Modules:** Before tipping mower back for adjustments, the fuel lever must be moved to the OFF position to prevent fuel from leaking into the crankcase. Do not leave the mower tipped back for an extended length of time or oil may migrate into the combustion chamber.


4. Tip the unit back onto the handle and slide the reel away from the mower.
5. Reel assembly is reverse of removal.

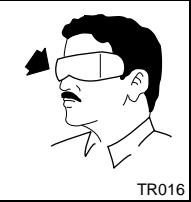
## 10.1 SAFETY

Batteries contain dilute sulfuric acid which can result in severe burns.

Hydrogen gas is formed within a battery during the charging cycle. Hydrogen in concentrations of 4% and higher are explosive and can be ignited by open flame or an electrical spark. A battery explosion will cause sulfuric acid and battery components to be thrown over a large area with considerable force.

Always observe the following warnings when working on or near batteries:


WARNING



TR016

The electrolyte in a storage battery is a dilute acid which can cause severe burns to the skin and eyes. Treat all electrolyte spills to the body and eyes with extended flushing with clear water. Contact a physician immediately. Always wear a safety shield or approved safety goggles when charging batteries.


Hydrogen is explosive in concentrations as low as 4% and is generated in the charging cycle of electric mowers. Because it is lighter than air, it will collect in the ceiling of buildings necessitating proper ventilation. Air exchanges of 5 changes per hour is considered the minimum requirement.

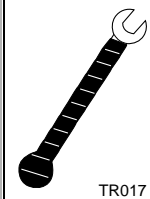
Never smoke around batteries.

Never charge batteries in an area that has open flame or electrical equipment that could cause an electrical arc.

Be sure that the key switch is off, all electrical accessories are turned off and power connector is disconnected before starting work on vehicle.

Remove all jewelry (watches, ring etc.)


WARNING



TR017

Wrap wrenches with vinyl tape to prevent the possibility of a dropped wrench from 'shorting out' a battery, which could result in an explosion and severe personal injury.

Electrolyte spills should be neutralized with a solution of 1/4 cup (59.1ml) of sodium bicarbonate (baking soda) dissolved in 1-1/2 gallons (5.7 liters) of water and flushed with water.

Never disconnect a circuit under load at a battery terminal.

Wear appropriate protective clothing when working with batteries. Electrolyte can cause severe burns to the eyes, skin and clothing.

Full battery packs weigh approximately 55 lbs. Use proper lifting techniques when moving them.

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash your hands after handling.**

## 10.2 GENERAL

The batteries used in this mower are sealed lead acid (SLA) maintenance free type.

Temperature is important when conducting tests on a battery and test results must be corrected to compensate for temperature differences.

As a battery ages, it still performs adequately except that its **capacity** is diminished. Capacity describes the time that a battery can continue to provide its design amperes from a full charge.

A new battery must **mature** before it will develop its maximum capacity. A battery has a maximum life, therefore good maintenance is designed to maximize the **available** life and reduce the factors that can reduce the life of the battery.

## 10 BATTERY POWER MODULE

### 10.3 MAINTENANCE

#### Tool List

Insulated wrench, 3/8"  
Insulated wrench, 11/32"  
Standard Screwdriver

#### Before charging batteries

Inspect the connector housings of the battery charger and battery pack for dirt or debris. It is suggested to apply white lithium grease to both terminals to prevent corrosion.

Charge the batteries daily after use.

### 10.4 CLEANING BATTERIES

When cleaning the batteries, do not use a water hose without first spraying with a solution of sodium bicarbonate (baking soda) and water to neutralize any acid deposits.

Use of a water hose without first neutralizing any acid, will move acid from the top of the batteries to another area of the mower or storage facility where it will attack the metal structure or the concrete/asphalt floor. After hosing down the batteries, a residue will be left on the batteries which is conductive and will contribute to the discharge of the batteries.

The correct cleaning technique is to spray the top and sides of the batteries with a solution of sodium bicarbonate (baking soda) and water. This solution is best applied with a garden type sprayer equipped with a **non metallic spray wand**. The solution should consist of 1/4 cup (59.1 ml) of sodium bicarbonate (baking soda) mixed with 1-1/2 gallons (5.7 l) of clear water. In addition to the batteries, special attention should be paid to metallic components adjacent to the batteries which should also be sprayed with the sodium bicarbonate (baking soda) solution.

Allow the solution to sit for at least three minutes; use a soft bristle brush or cloth to wipe the tops of the batteries in order to remove any residue that could cause the self discharge of the battery. Rinse the entire area with low pressure clear water. Cleaning should take place yearly or more often under extreme conditions.

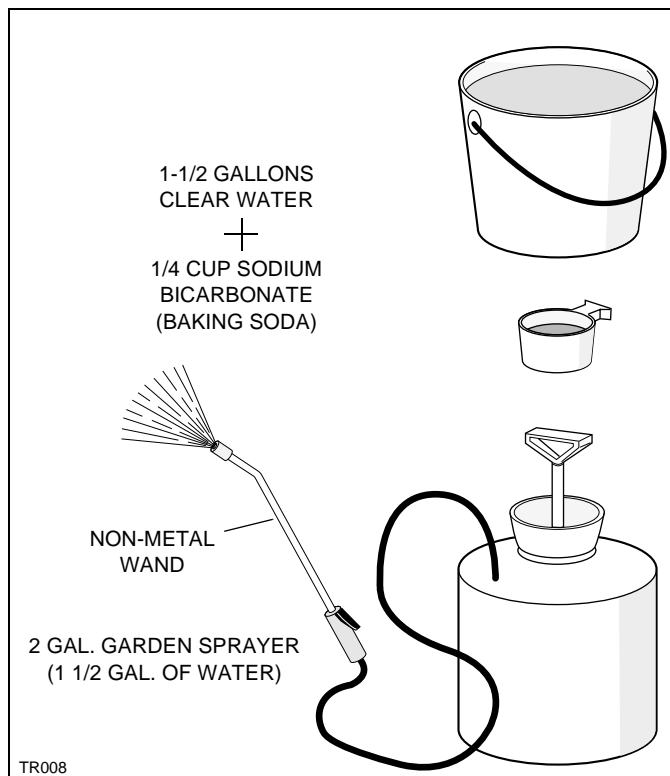



Figure 10A

## 10.5 BATTERY CHARGER

The battery charger is designed to fully charge the battery pack. Read the instruction manual included with the charger for proper operating procedure.

Before charging, the following should be observed:


WARNING

Portable chargers should be mounted on a platform above the ground, or in such a manner as to permit the maximum air flow underneath and around the charger. Serious damage to the charger, overheating and potential for fire may result if the charger does not have sufficient air flow.

The charging must take place in an area that is well ventilated and capable of removing the hydrogen gas that is generated by the charging process. A **minimum** of five air exchanges per hour is recommended.

The charging connector components are in good condition and free from dirt or debris. It is suggested to apply white lithium grease to both terminals to prevent corrosion.

The charger connector is fully inserted into the battery pack receptacle.

The charger connector/cord set is protected from damage and is located in an area to prevent injury that may result from personnel running over or tripping over the cord set.

Install all chargers in accordance with the manufacturers instructions.

If the charger is operated in an outdoor location, rain and sun protection must be provided.

Remove AC power cord from outlet before connecting or disconnecting battery charger to battery pack.

The charging (DC) cord is equipped with a polarized connector which fits into a matching receptacle on the battery pack.

If the charger is not operating correctly, unplug charger from both the AC outlet and the battery pack and check the fuse. If a new fuse is required, order part number 4102780 from your Jacobsen Dealer. There is one spare fuse included in the fuse holder.

### AC Voltage

The charger is equipped with an input voltage selector switch located on the rear of the charger. Determine what input voltage is used in your area and set switch accordingly before connecting AC power cord. This charger can be used with the following AC input voltages:

- 100 - 130 V (Set voltage selector to 115 V (Position 1))
- 200 - 240 V (Set voltage selector to 230 V (Position 2))

**NOTE:** *Charger will operate with either a 50 or 60 Hz input voltage.*

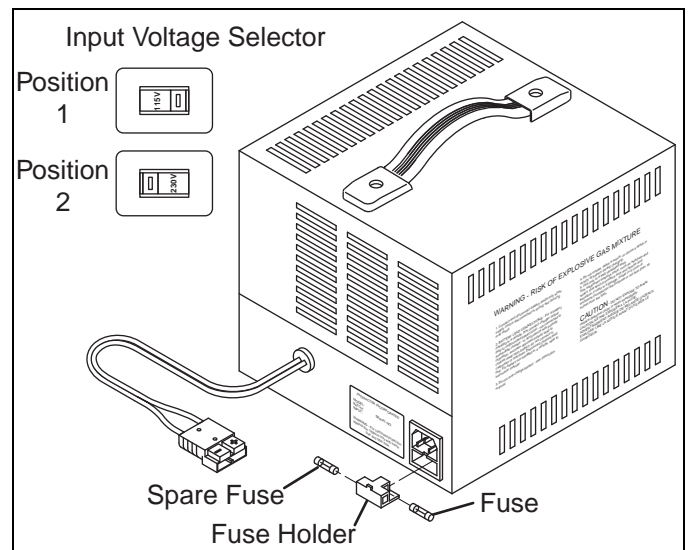
Make certain the AC power cord is equipped with an appropriate plug for the area you live in. The charger is equipped with a grounding plug, do not attempt to defeat its functionality.


WARNING

An ungrounded electrical device may become a physical hazard that could result in an electrical shock or electrocution

**Note:** *The AC power cord included with the battery charger is used with 115 V - 60 Hz (North America) input voltage only. If you live in an area where 115 V - 60 Hz input voltage is not used, a new AC power cord must be purchased locally.*

The battery charger should fully charge the battery pack in approximately 5 hours with 115V AC input voltage. Battery charging times may exceed 8 hours in areas where 100V AC input voltage is used.



# 10 BATTERY POWER MODULE

## 10.6 BATTERY INSTALLATION

If the batteries have been cleaned and any acid in the battery tray area neutralized, no corrosion to the surrounding area should be present. Any corrosion found should be immediately removed with a putty knife and a wire brush. The area should be washed with a solution of sodium bicarbonate (baking soda) and water and thoroughly dried before priming and painting with a corrosion resistant paint.

The batteries should be placed into the battery tray as shown in **Figure 10B**. Using batteries with the correct physical size will prevent movement, but will not be tight enough to cause distortion of the battery case.

Inspect all wires and terminals. Clean any corrosion from the battery terminals or the wire terminals with a solution of sodium bicarbonate (baking soda) and brush clean if required.

Use care to connect the battery wires as shown in **Figure 10C** and tighten the battery post hardware securely. Protect the battery terminals and battery wire terminals with a commercially available protective coating.

### Battery Pack Assembly:

1. Install batteries into battery tray.
2. Fasten fuse cable assembly (**D**) to battery pack with screws, lockwashers, and nuts.
3. Fasten two cable jumper wires (**E**) into their respective positions.
4. Thread the main cable (**F**) through the hole in the side of the battery case lid (**G**).
5. Attach the main cable (**F**) to the batteries, and battery monitor (**M**).

**NOTE:** There will be an Orange/Green wire with insulated 1/4" terminal that is not used on the Eclipse 2 mowers. Seal end of the wire to prevent short-circuits.

6. Assemble the two halves of the battery case (**G**) and (**H**), with screws (**J**), flat washers (**K**), and battery casing straps (**L**).

Refer to Section 2.6 for battery specifications.

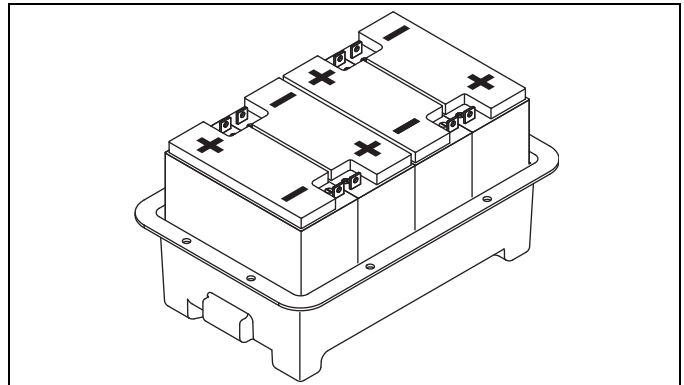


Figure 10B

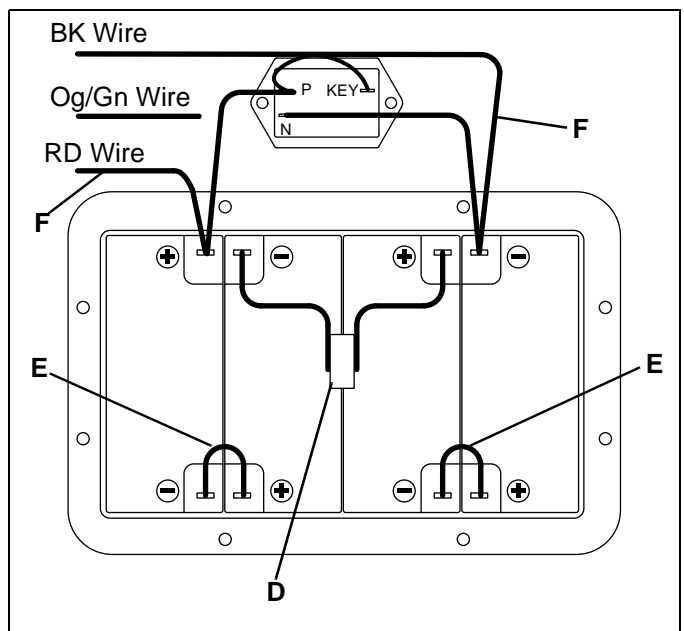


Figure 10C

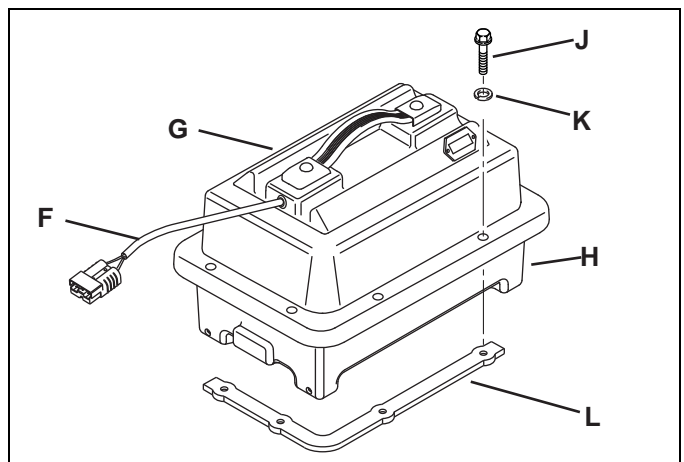


Figure 10D

### **WARNING**

Aerosol containers of battery terminal protectant must be used with extreme care. Insulate the metal container to prevent the metal can from contacting battery terminals which could result in an explosion.

## 10.7 REPLACING BATTERY PACK

The battery pack **(A)** is designed to be easily lifted out and replaced. This allows the mower to quickly return to service should the batteries become discharged or fail. Additional battery packs are available as an accessory. See Section 2.7



### CAUTION

To prevent injury or property damage, place mower on kick stand before removing battery pack.

Full battery packs weigh approximately 60 lbs. (27.2 kg) Use proper lifting techniques when moving them.

#### To remove battery pack:

1. Park mower on a solid, level area.
2. Set parking brake and remove key from switch.
3. Disconnect battery connector **(B)**, place mower on kickstand.
4. Push and hold battery release latch **(C)** down and lift battery pack **(A)** away from mower.
5. Reverse procedure to install pack. Be sure pack is completely seated on frame and secure.

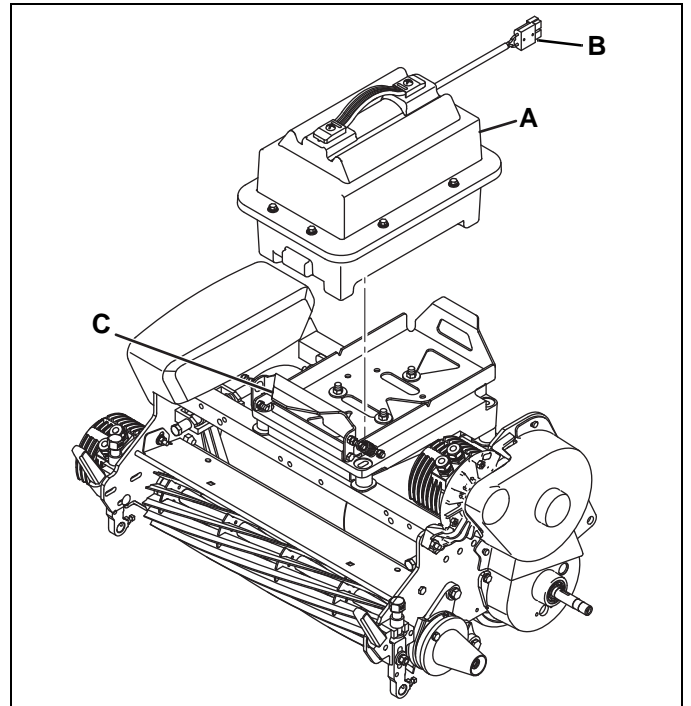


Figure 10E

# 11 GEN-SET POWER MODULE

## 11.1 ENGINE

**IMPORTANT:** A separate Engine Manual, prepared by the engine manufacturer, is supplied with the power module. Read the engine manual carefully until you are familiar with the operation and maintenance of the engine. Proper attention to the engine manufacturer's directions will assure maximum service life of the engine. To order replacement engine manuals contact the engine manufacturer.

The proper break-in of a new engine can make a considerable difference to the performance and life of the engine.

## 11.2 ENGINE OIL

Check the engine oil at the start of each day, before starting the engine. If the oil level is low, remove oil filler cap and add oil as required.

**See the engine manufacturer's Owners' Manual for detailed service information.**

After adding or changing oil, start and run engine at idle with all drives disengaged for 30 seconds. Shut engine off. Wait 30 seconds and check oil level. Add oil to bring up to FULL mark on dipstick.

Use only SAE 10W30 engine oils with API classification SG,SF/CC,CD.

### NOTICE

The mower is designed to operate and cut most efficiently at the preset governor setting. Do not change the engine governor settings or overspeed the engine.

During the break-in period, Jacobsen recommends the following:

1. Operate machine modestly for the first 25 hours.
2. Allow the engine to reach operating temperature before operating at full load.
3. Change the engine oil after the first 20 hours of operation.
4. Refer to Section 14.2 and Engine Manual for specific maintenance intervals.

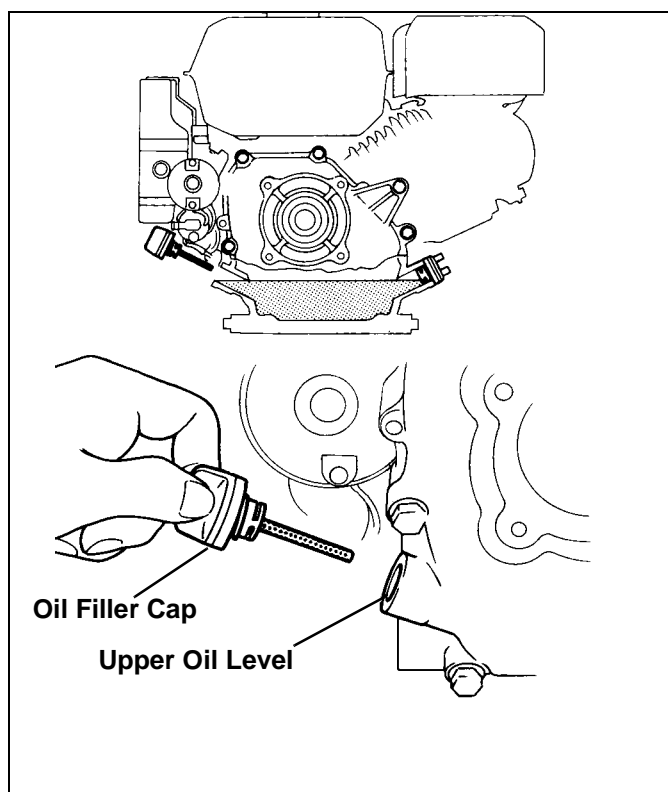


Figure 11A

### 11.3 ENGINE OIL CHANGE

Perform initial oil change after the first 20 hours of operation. Change oil every 100 hours thereafter.

Use only SAE 10W30 engine oils with API classification SG.SF/CC.CD.

1. To change engine oil, attach a 7/16 in. (11 mm) i.d. hose **(A)** to oil drain valve **(B)**. Place other end of hose into a suitable container.
2. Remove oil fill plug **(C)**.
3. Push drain lever **(D)** towards rear of mower and rotate down. Allow engine oil to drain into container.
4. When oil has completely drained, rotate drain lever **(D)** up until it latches in the closed position.
5. Remove hose **(A)** and clean up any spilled oil.
6. Add engine oil until oil level is at full level. **See Figure 11A.**

After adding or changing oil, start and run engine at idle with all drives disengaged for 30 seconds. Shut engine off. Wait 30 seconds and check oil level. Add oil to bring up to FULL level.

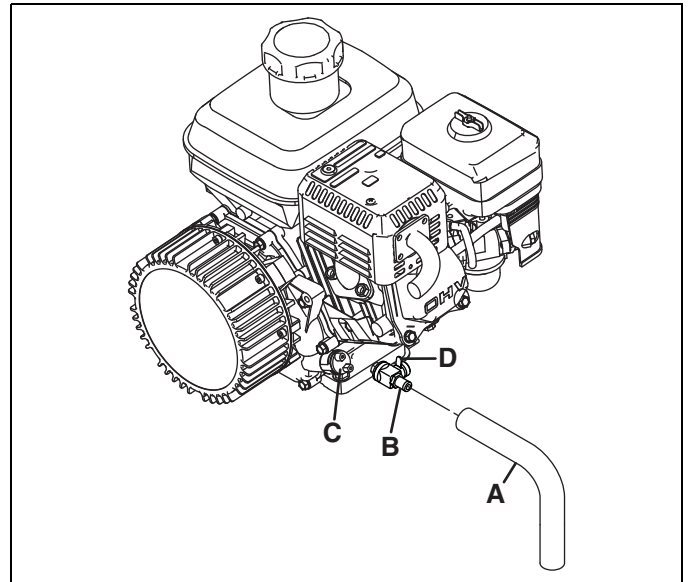


Figure 11B

### 11.4 ENGINE SPEED

The engine speed is set at the factory for proper generator output. However, engine speed should be checked periodically, and adjusted to 59 volts. An output voltage greater than 60 volts will cause an alarm to sound and may cause system damage. Controller will shut down after 60 seconds if the over voltage condition is not corrected.

1. Turn the ignition switch to run position. Start the engine and turn ignition switch to start position.
2. Press either orange button on LCD display until system voltage screen is on the display.
3. Remove the throttle lever cover.
4. Adjust the engine throttle position until LCD displays system voltage of 59 volts.
5. Stop the engine and install throttle lever cover.

## 11 GEN-SET POWER MODULE

---

### 11.5 FUEL

---

**Handle fuel with care - it is highly flammable.** Use an approved container, the spout must fit inside the fuel filler neck. Avoid using cans and funnels to transfer fuel.



#### **WARNING**

Never remove the fuel cap from the fuel tank, or add fuel, when the engine is running or while the engine is hot.

Do not smoke when handling fuel. Never fill or drain the fuel tank indoors.

Do not spill fuel and clean spilled fuel immediately.

Never handle or store fuel containers near an open flame or any device that may create sparks and ignite the fuel or fuel vapors.

Be sure to reinstall and tighten fuel cap securely.

- Store fuel according to local, state or federal ordinances and recommendations from your fuel supplier.
- Never overfill or allow the tank to become empty.
- Use clean, fresh, regular grade, unleaded gasoline minimum 86 Octane.
- See engine manual before using oxygenated (blended) fuel.
- Do not fill above the fuel filler neck.

12.1 GENERAL

**! WARNING**

Before you adjust, clean, or repair this equipment, always disengage all drives, engage parking brake, turn power off and disconnect power connector to prevent serious injury.

1. Adjustment and maintenance should always be performed by a qualified technician. If proper adjustments cannot be made, contact an Authorized Jacobsen Dealer.
2. Inspect the equipment on a regular basis, establish a maintenance schedule and keep detailed records.
  - a. Keep the equipment clean.
  - b. Keep all moving parts properly adjusted and lubricated.
  - c. Replace worn or damaged parts before operating the machine.
  - d. Keep shields in place and all hardware securely fastened.

e. Keep tires properly inflated (If installed).

3. Long hair, jewelry or loose fitting clothing may get tangled in moving parts.

**! CAUTION**

Be careful to prevent entrapment of the hands and fingers between moving and fixed components of the machine.

4. Use the illustrations in the Parts Catalog as reference for the disassembly and reassembly of components.
5. Recycle or dispose of all hazardous materials (batteries, lubricants, etc.) according to local, state or federal regulations.
6. Do not change speed limit settings or overspeed the drive motors.
7. After servicing reel or traction motor, check to be sure motor connections are tight.

12.2 TIRES (OPTION)

1. Keep tires properly inflated to prolong tire life. Check pressure only when the tires are cool.
2. Use an accurate, low pressure tire gauge. 6 - 8 psi (0.413-0.551 BAR)

**! CAUTION**

Unless you have the proper training, tools and experience, DO NOT attempt to mount a tire on a rim. Improper mounting can produce an explosion that may result in serious injury.

12.3 WHEEL BEARING

The bearing has the word **LOCK** and an arrow stamped on the face. When replacing the bearing, make absolutely certain that the bearing is being installed in the proper direction or rotation.

For the **Right** wheel, install the bearing with the "**LOCK**➡" arrow to the **Outside** of the bearing housing.

For the **Left** wheel, install the bearing with the "**LOCK**➡" arrow to the **Inside** of the housing.

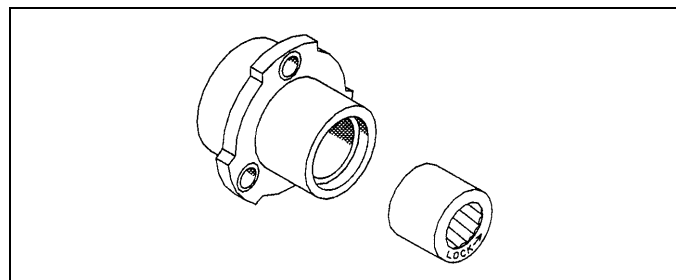


Figure 12A

## 12 MAINTENANCE

### 12.4 BACKLAPPING AND GRINDING

Check for damage to the bedknife and reel blades. Refer to (Section 6.2).

1. Determine if backlapping or grinding will restore the proper cutting edge.
2. For optimum performance use a bedknife grinder to touch-up the blade then reassemble and adjust the bedknife to the reel as described in (Section 6.2).

Disconnect motor connections whenever turning the reel by means other than the reel motor. When tightening, **hand tighten motor connections only, do not use wrenches to tighten motor connection.**

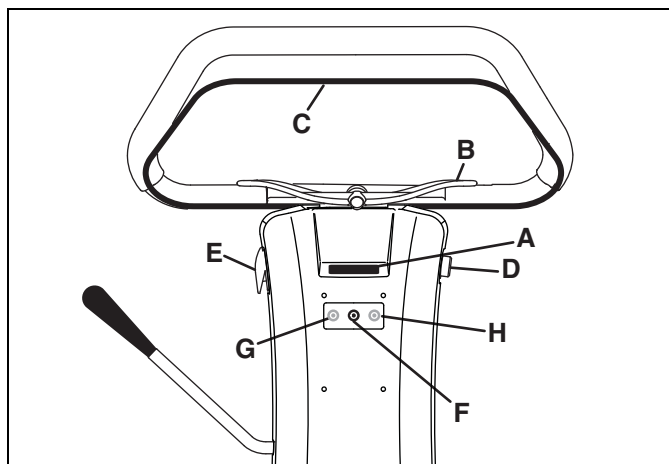


Figure 12B

Backlap Display	Description
	<b>Backlap Select</b> - Used to switch mower into backlap mode. Start the mower and enter Maintenance mode. [See Section 4.3] Use the orange buttons ( <b>G or H</b> ) until the select backlap screen is on the display. Press the black button ( <b>F</b> ) to enter backlap mode.
	<b>Engage Reel Switch</b> - To backlap, place reel switch ( <b>E</b> ) in ON position. If Cancel ( $\emptyset$ ) is selected, display will return to backlap select screen.
	<b>Engage Bail</b> - Engage O.P.C. bail ( <b>C</b> ) and release. Reel motor will begin turning, a slow beeping (1 every three seconds) alarm will sound and a five minute timer will start. If Cancel ( $\emptyset$ ) is selected, display will return to backlap select screen.
	<b>Backlap Reel Speed and Timer</b> Adjust reel speed between 150 to 400 rpm using the orange buttons ( <b>G or H</b> ). Press the black button ( <b>F</b> ) to Cancel ( $\emptyset$ ) backlap.

3. Apply lapping compound with a long handle brush along the entire length of the reel, (180 grit is recommended, Section 2.7).
4. Continue lapping and at the same time make a fine adjustment on the reel and bedknife until there is a uniform clearance along the full length of the cutting edges.
5. Exit backlap mode by allowing the five minute timer to end, selecting Cancel ( $\emptyset$ ), placing reel switch (**E**) in the OFF position, moving the O.P.C. bail (**C**), moving the thumb lever (**B**), or turning key switch (**D**) to the OFF position.
6. Turn key switch (**D**) to off position.
7. Carefully and thoroughly remove all lapping compound from reel and bedknife *before running the reel in forward direction.*

## 12.5 STORAGE

### General

1. Wash the mower thoroughly and lubricate. Repair and paint damaged or exposed metal.
2. Inspect the mower, tighten all hardware, replace worn or damaged components.
3. Clean the tires thoroughly and store the tractor on the kickstand so the load is off the tires. The front roller should be resting on a wood board.
4. Keep the machine and all its accessories clean, dry and protected from the elements during storage. Never store equipment near an open flame.
5. Wash the reel and bedknife thoroughly, then repair and paint any damaged or exposed metal.
6. Lubricate all fittings and friction points.
7. Backlap the reels then back the reel away from the bedknife. Apply a light coat of rust preventative oil to the sharpened edges of the reel and bedknife.



### CAUTION

To prevent personal injury and damage to the cutting edges, handle the reel with extreme care.

### Battery Power Module:

During periods of storage, the batteries will need attention to keep them maintained and prevent discharge.

In high temperatures the chemical reaction is faster, while low temperatures cause the chemical reaction to slow down. If a fully charged battery is allowed to sit unused, it will slowly self discharge. When the battery charge level falls to 80% of its full charge, it should be recharged.

If a battery is allowed to fully discharge and is left in a discharged state, sulfation takes place on and within the plates. This condition is not reversible and will cause permanent damage to the battery. In order to prevent damage, the battery should be recharged.

In winter conditions, the battery must be fully charged to prevent the possibility of freezing. A fully charged battery will not freeze in the most severe of winter climates. Although the chemical reaction is slowed in cold temperatures, the battery must be stored fully charged, and disconnected from any circuit that could discharge the battery. Disconnect the charging plug from the mower power connector. The batteries must be cleaned and all

deposits neutralized and removed from the battery case to slow self discharge. The batteries should be tested or recharged at thirty day intervals.

### Battery Power Module After Storage

1. Fully charge the batteries.
2. Make certain that the tires are properly inflated.
3. Remove all oil from the reels and bedknife. Adjust bedknife and cutting height.

### Gen-Set Power Module:

1. While the engine is warm, remove drain plug, drain the oil from the crankcase. Install drain plug and refill with fresh oil. Torque drain plug to 22 ft. lb. (30 Nm).
2. Clean exterior of engine. Paint the exposed metal or apply a light coat of rust preventative oil.
3. To prevent the build-up of gum residues and varnish films, fill the tank with stabilized fuel. Use an anti-oxidant fuel conditioner, such as STA-BIL®. Read and follow the instructions on the container.
4. Operate the engine for about 5 minutes to distribute the treated fuel. Stop the engine, close the fuel shut-off valve and let the engine cool. Drain fuel.
5. Remove the spark plug and pour about one ounce of SAE 30 oil into the cylinder. Crank engine slowly by hand to distribute oil over the cylinder wall. Replace the spark plug.
6. Pull the starter rope slowly until resistance is felt. Continue pulling until the notch on the starter pulley aligns with the hole on the recoil starter. At this point, the intake and exhaust valves are closed.

### Gen-Set Power Module After Storage

1. Check or service the fuel filter and air cleaner.
2. Check oil level in the engine crankcase.
3. Fill the fuel tank with fresh fuel. Open fuel shut off valve.
4. Remove all oil from the cutting edges. Readjust reel-to-bedknife and cutting height.
5. Start the engine and allow enough time for the engine to become properly warmed and lubricated.



### WARNING

## 12 MAINTENANCE

---

Never operate the engine without proper ventilation; exhaust fumes can be fatal if inhaled.

### 13.1 GENERAL

The troubleshooting chart below lists basic problems that may occur during start-up and operation. For more detailed information, contact your area Jacobsen Dealer.

Symptoms	Possible Causes	Action
Unit does not have power	<ol style="list-style-type: none"> <li>1. Power Connector Disconnected</li> <li>2. Batteries Discharged</li> <li>3. Engine not running</li> <li>4. 50 Amp fuse blown</li> <li>5. 30 Amp fuse blown</li> <li>6. Defective Battery</li> <li>7. O.P.C. bail engaged</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect Power Connector</li> <li>2. Fully charge battery pack</li> <li>3. Start engine before attempting to energize unit</li> <li>4. Open battery tray and check fuse. Replace if required</li> <li>5. Remove handle cover and check fuse. Replace if required</li> <li>6. Perform load test, replace batteries as needed</li> <li>7. Disengage bail and restart</li> </ol>
Engine will not start.	<ol style="list-style-type: none"> <li>1. Choke in wrong position</li> <li>2. Empty fuel tank or dirty fuel</li> <li>3. Fuel Shut-off valve closed</li> <li>4. Engine / Spark Plug</li> <li>5. Engine switch off</li> </ol>	<ol style="list-style-type: none"> <li>1. See Engine Manual</li> <li>2. Drain and refill fuel tank with fresh, clean fuel</li> <li>3. Open fuel shut-off valve</li> <li>4. See Engine Manual</li> <li>5. Turn engine switch to On</li> </ol>
Engine hard to start or runs poorly, loses power or stalls.	<ol style="list-style-type: none"> <li>1. Choke in wrong position</li> <li>2. Dirty or incorrect fuel</li> <li>3. Loose Wiring</li> <li>4. Air intake plugged</li> <li>5. Vent in fuel cap plugged</li> </ol>	<ol style="list-style-type: none"> <li>1. See Engine Manual</li> <li>2. Refill with proper grade, clean fuel</li> <li>3. Check spark plug wire</li> <li>4. Clean air intake and air cleaner</li> <li>5. Clean fuel cap</li> </ol>
Mower does not react properly to O.P.C. Lever	<ol style="list-style-type: none"> <li>1. Power switch not on</li> <li>2. Parking brake engaged</li> <li>3. Reel switch in off position</li> <li>4. Broken Belt</li> <li>5. Bail lever not properly calibrated</li> <li>6. Traction motor fault</li> </ol>	<ol style="list-style-type: none"> <li>1. Follow proper start-up procedure</li> <li>2. Disengage parking brake</li> <li>3. Turn reel switch on</li> <li>4. Check and replace belts as needed</li> <li>5. Calibrate bail lever</li> <li>6. Check LCD display, service traction motor</li> </ol>
Reel does not cut, or cuts unevenly	<ol style="list-style-type: none"> <li>1. Reel to bedknife not adjusted</li> <li>2. Reel switch in off position</li> <li>3. Reel motor fault</li> <li>4. Low battery charge</li> <li>5. Over Voltage condition</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust Reel to Bedknife</li> <li>2. Turn reel switch on</li> <li>3. Check LCD display, service reel motor</li> <li>4. Fully charge battery pack</li> <li>5. Adjust generator output</li> </ol>

# 14 MAINTENANCE & LUBRICATION CHARTS

## 14.1 GENERAL

The mower was designed for minimum lubrication. Over greasing will produce high loads on the bearings; thereby reducing the performance of the machine. Over greasing reel bearings may also damage the electric motor; voiding the warranty.

*All maintenance intervals must be performed more frequently when operating in extremely dusty conditions.*



### WARNING

Before you clean, adjust, or repair this equipment, disengage all drives, engage parking brake, turn power off and disconnect power connector to prevent injuries.

1. Always clean grease fittings before and after lubrication.

2. Lubricate with grease that meets or exceeds NLGI Grade 2 LB specifications. Apply grease with a manual grease gun and fill slowly until grease begins to seep out. Do not use compressed air.
3. For smooth operation of pivot points and other friction points, apply several drops of SAE 30 oil every 50 hours or as required.
4. Do not over grease reel bearing (**L2**). Damage to the motor may result. This damage is not covered under the warranty.
5. To lubricate point (**L4**), remove L.H. transport wheel and mounting bracket (**E**) to gain access to fitting. Turn the traction drum if pulley (**F**) is blocking the fitting then insert grease gun through hole and carefully apply grease.
6. To lubricate points (**L7**), remove transport wheel, nut (**A**) from end of shaft and pull wheel hub (**D**) off. Remove collar (**B**) and bushing (**C**) then pack bearing with lithium grease.

## 14.2 MAINTENANCE CHART

Recommended Service and Lubrication Intervals

	Every 3-4 Hours	Every 20 Hours	Every 50 Hours	Every 100 Hours	Every 250 Hours	Yearly	Lubricant Type
● Charge Batteries	AR		I			C	
Belt Tension						I-A	
Air Cleaner	I		C				
▼ Combustion Chamber					C		
▼ Engine Oil	I	R*		R			II
▼ Fuel Line						R - 2yrs	
▼ Fuel Strainer				C			
▼ Spark Plug				A/R			
▼ Valve Clearance					A		
Grease Locations							
L1 - L5			L			L	I
L6-L7						L	I

**A - Adjust   C - Clean   I - Inspect   L - Lubricate   R - Replace   AR - As Required**

\* Indicates initial service for new machines.

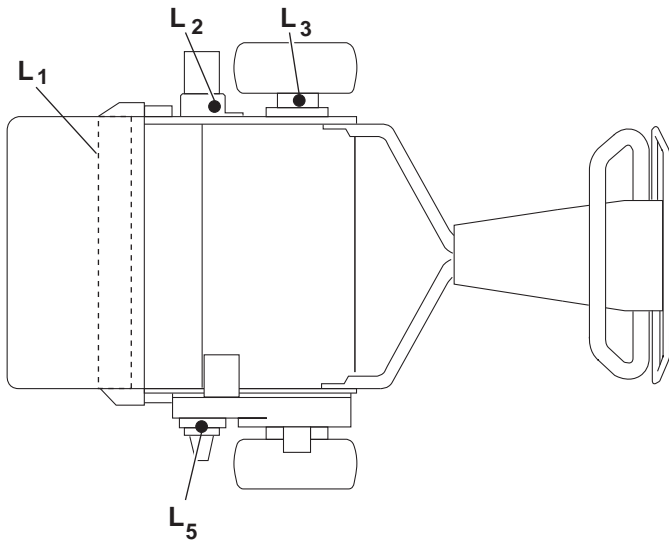
I Manual grease gun with NLGI Grade 2 (Service Class LB).

II Engine Oil - See 11.2

● Battery Power Module

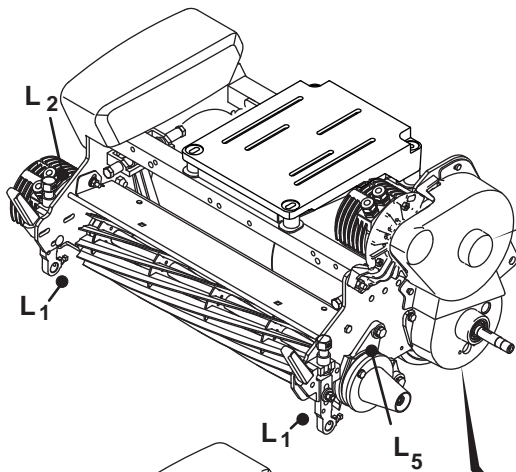
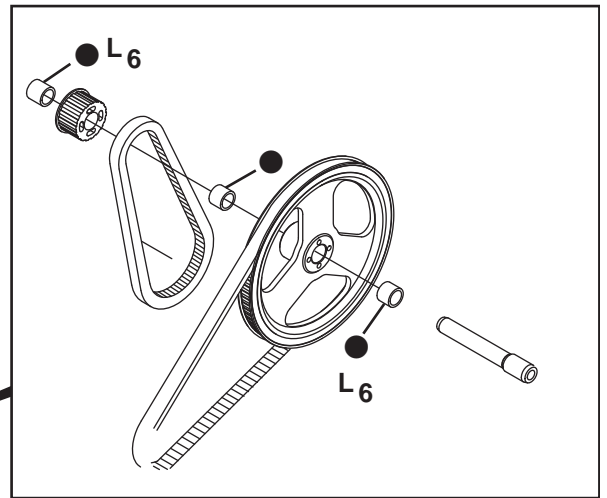
▼ Gen-Set Power Module

14.3 LUBRICATION CHART

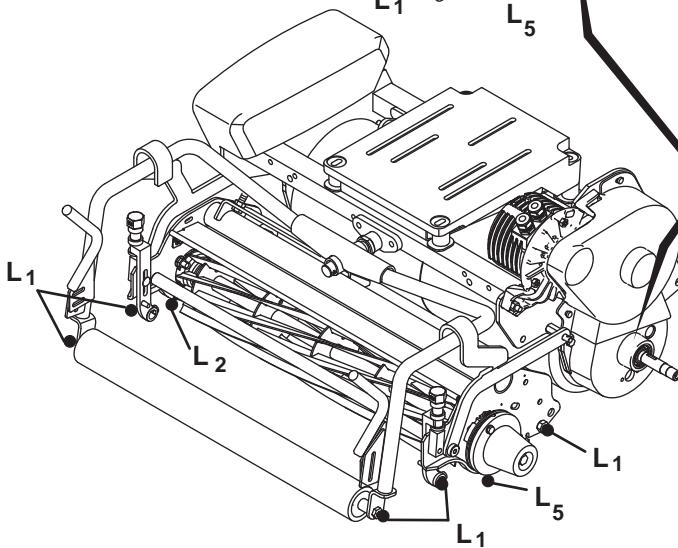
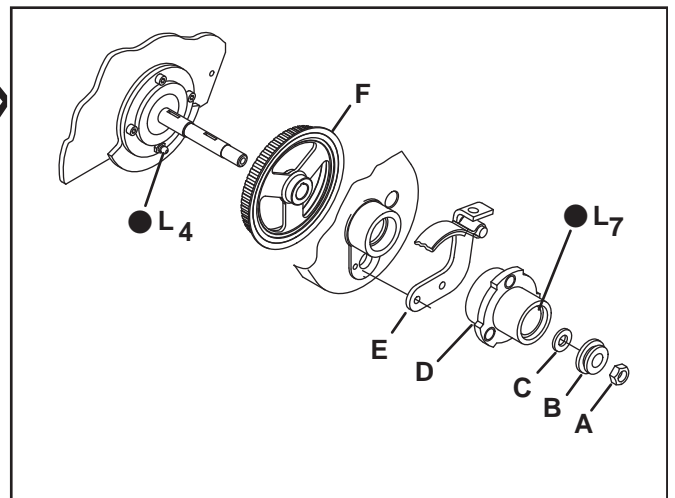


- L1 - Reel Roller Bearing
- L2 - Reel Motor Bearing Housing
- L3 - Right Side Traction Drum Bearing Housing
- L4 - Left Side Traction Drum Bearing Housing
- L5 - Reel Bearing Housing
- L6 - Pulley Shaft Bearing
- L7 - Hub

Pulley Shaft Assembly



Wheel Hub Assembly



# 15 PARTS CATALOG

## 15.1 HOW TO USE THE PARTS CATALOG

### Abbreviations

**N/S** - Not serviced separately, can only be obtained by ordering main component or kit.

**AR** -Variable quantity or measurement is required to obtain correct adjustment.

**Symbols** such as ●, next to the item number, indicate that a note exists which contain additional information important in ordering that part.

### Indented Items

Indented items indicate component parts that are included as part of an assembly or another component. These parts can be ordered separately or as part of the main component.

Item	Part No.	Qty	Description	Serial Numbers/Notes
● 1	123456	1	Mount, Valve	<i>Indicates a piece part Includes Items 2 and 3 Serviced part included with Item 2 Non serviced part included with Item 2</i>
2	789012	1	Valve, Lift	
3	345678	1	• Handle	
4	N/S	1	• Seal Kit	
5	901234	1	Screw, 1/4-20 x 2" Hex Head	

## 15.2 TO ORDER PARTS

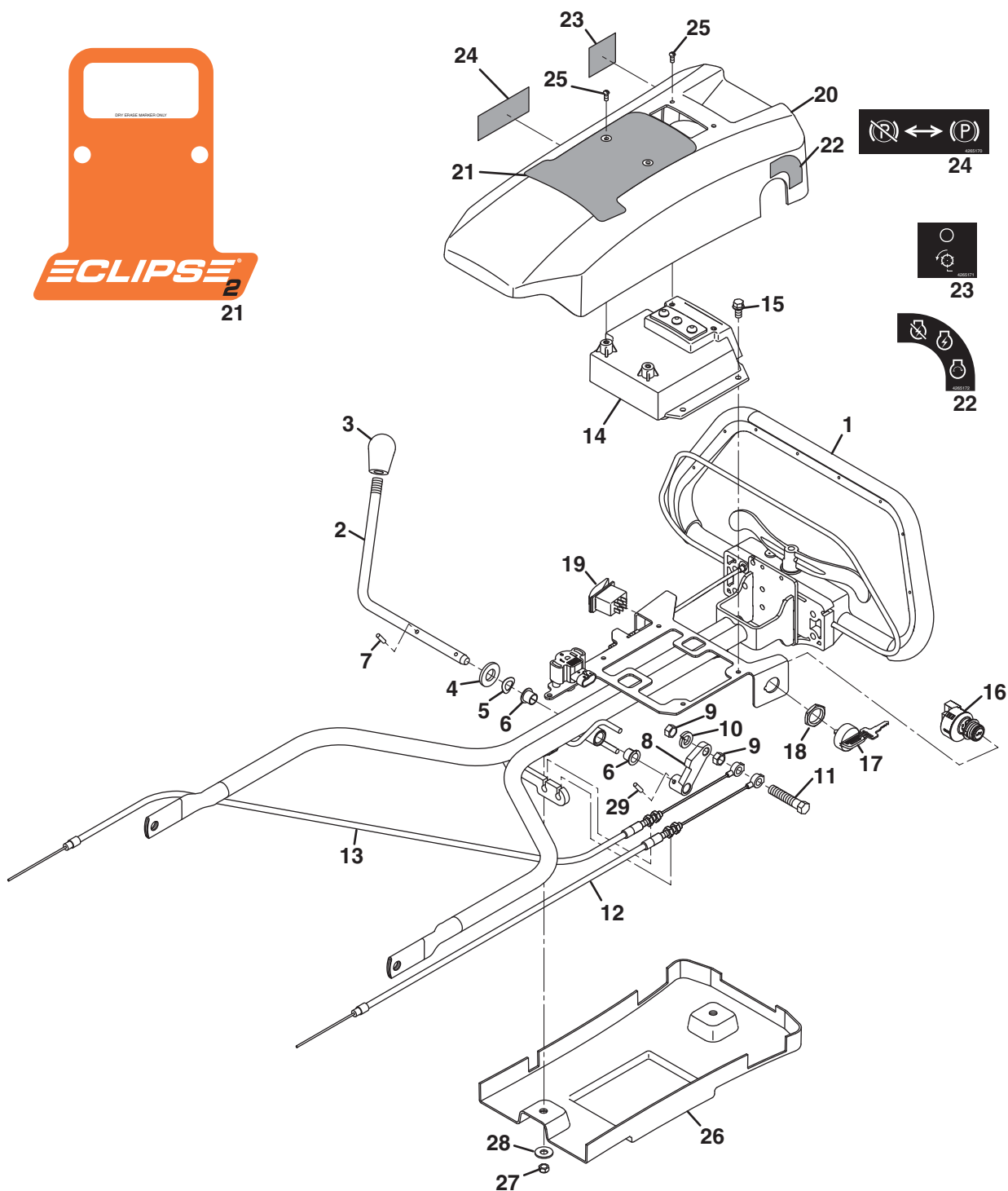
- Write your **full** name and **complete** address on the order.
- Explain where and how to make shipment.
- Give product number, name and serial number that is stamped on the name plate or serial plate of your product.
- Order by the quantity desired, the part number, and description of the part as given in the parts list.
- Send or bring the order to an authorized Jacobsen Distributor.
- Inspect all shipments on receipt. If any parts are damaged or missing, file a claim with the carrier before accepting.
- Do not return material without a letter of explanation, listing the parts being returned. Transportation charges must be prepaid.

## 15.3 PARTS CATALOG TABLE OF CONTENTS

1.1	Handle Covers	64
2.1	Handle Assembly	66
3.1	Handle to Frame Mount	68
4.1	Power Module Mounting Plate	70
5.1	Frame	72
6.1	Lower Unit	74
7.1	Reel	76
8.1	Grass Shield and Roller Brackets	78
9.1	Floating Head Reel Connection	80
9.2	Floating Head Reel Connection	82
10.1	Outer Reel Assembly	84
11.1	Outer Reel Assembly	86
12.1	Inner Reel Assembly	88
13.1	Inner Reel Assembly	90
14.1	Differential and Rollers	92
15.1	Parking Brake and Wheels	94
16.1	Belts and Drive Motors	96
17.1	Harness Routing	98
18.1	Genset Power Source	100
19.1	Battery Power Source	102
20.1	Battery Case	104
21.1	Electrical Schematic	106



## 1.1 Handle Covers



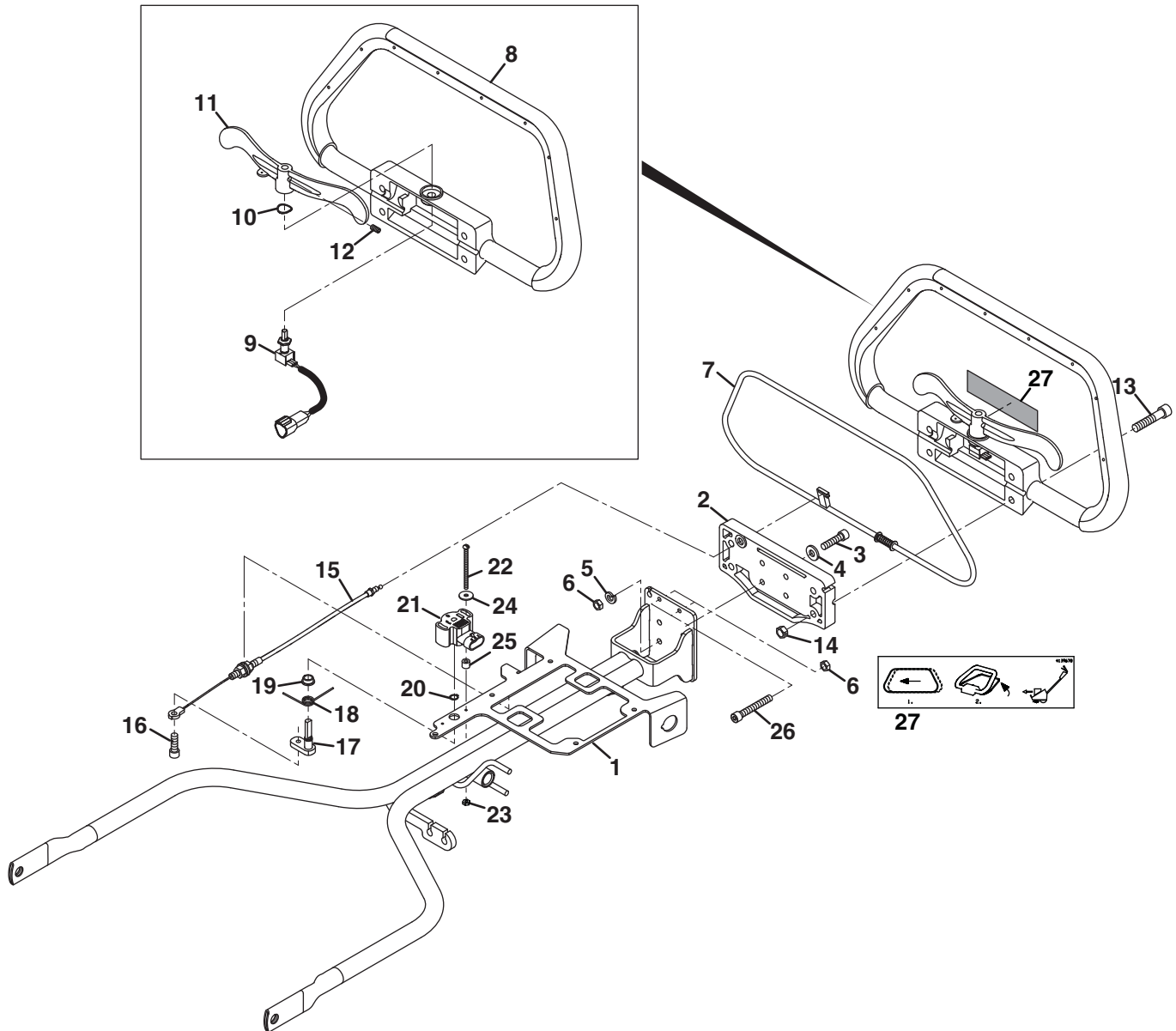
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	REF	1	Handle Assembly	See 2.1
2	4254050	1	Control Lever	
3	4127340	1	Knob	
4	453017	1	Flat Washer, 1/2	
5	454025	AR	Spring Washer, 1/2	
6	366708	2	Bearing, Flanged	
7	461381	1	Roll Pin, 3/16 x 13/16"	
8	2000067	1	Lever, Brake Cable	
9	443110	2	Nut, 3/8-16 Hex	
10	446142	1	Lockwasher, 3/8 Heavy	
11	400268	1	Screw, 3/8-16 x 1-3/4" Hex Head	
12	4258791	1	Cable, 34-1/2" Brake	Eclipse 2 118, 118F Left Side
12	4258791	1	Cable, 34-1/2" Brake	Eclipse 2 122, 122F Left Side
12	4258830	1	Cable, 38-1/2" Brake	Eclipse 2 126 Left Side
13	4258830	1	Cable, 38-1/2" Brake	Eclipse 2 118, 118F Right Side
13	4258830	1	Cable, 38-1/2" Brake	Eclipse 2 122, 122F Right Side
13	4258790	1	Cable, 40-1/2" Brake	Eclipse 2 126 Right Side
14	4253551	1	Controller, MCU	<b>REFERENCE U5, See 21.1</b>
15	409807	4	Screw, 1/4-20 x 1/2" Thread Cutting	
16	4165020	1	Key Switch	<b>REFERENCE SW2, See 21.1</b>
17	4131618	1	• Key	
18	N/S	1	• Nut, Face	
19	4130132	1	Switch, Rocker	<b>REFERENCE SW1, See 21.1</b>
20	4253330	1	Cover, Upper Console	
21	4260810	1	Decal, Eclipse 2	
22	4265172	1	Decal, Key Switch	
23	4265171	1	Decal, Reel	
24	4265170	1	Decal, Parking Brake	
25	402056	4	Screw, #8-32 x 3/8" Slotted	
26	4253310	1	Cover, Lower Console	
27	445770	2	Nut, 1/4-20 Nylon Insert	
28	452004	2	Flat Washer, 1/4	
29	461181	1	Groove Pin, 3/16 x 3/4"	

> Change from previous revision

# ECLIPSE 2

Serial No. All

## 2.1 Handle Assembly



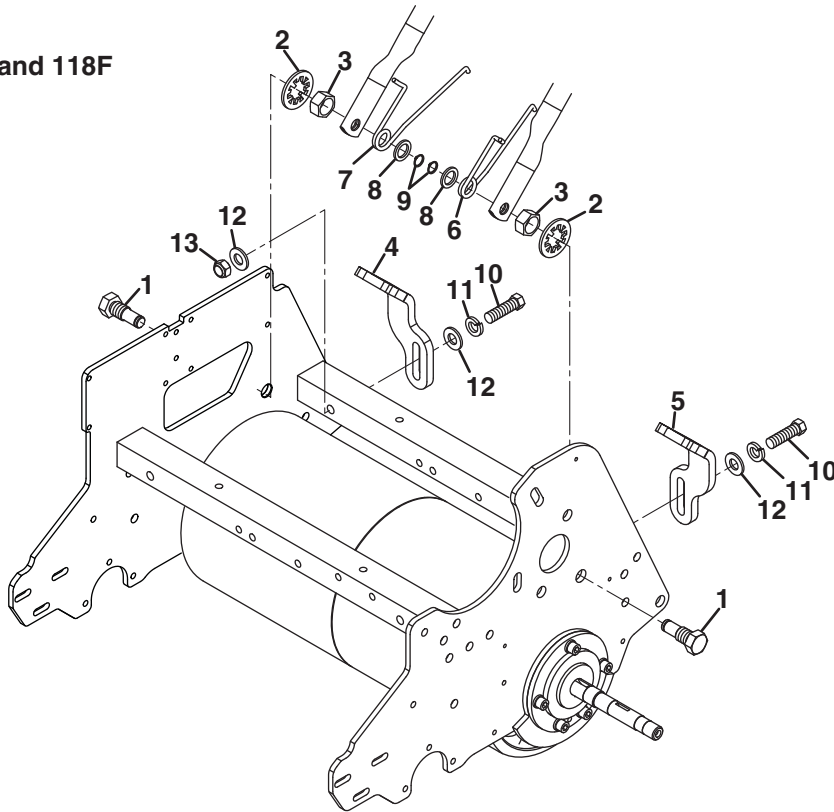
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4256578	1	Handle	
2	4136328	1	Plate, Tilt	
3	434029	4	Screw, 1/4-20 x 1" Hex Socket	
4	453023	4	Flat Washer, 1/4	
5	446130	4	Lockwasher, 1/4 Heavy	
6	443102	6	Nut, 1/4-20 Hex	
7	4136325	1	Bail	
8	4147696	1	Handle, Overmolded	Includes Decal
9	4260432	1	Hand Throttle Potentiometer	<b>REFERENCE R1, See 21.1</b>
10	454020	1	Spring Washer, 7/16	
11	4137303	1	Plate, Throttle	
12	422504	1	Set Screw, #10-32 x 3/8"	
13	4128933	4	Screw, 5/16-18 x 1-1/2" Hex Socket	
14	444718	4	Locknut, 5/16-18 Hex Center	
15	4256692	1	Cable, OPC	
16	434031	1	Screw, 1/4-20 x 3/4" Hex Socket	Nylon Patch
17	4156781	1	Lever, Bail	
18	4196280	1	Spring, Torsion	
19	364154	1	Bushing	
20	458001	1	Retaining Ring, 3/8 Truarc	
21	4145428	1	Switch, Rotary	<b>REFERENCE R2, See 21.1</b>
22	402022	2	Screw, #6-32 x 2" Slotted Round	
23	444304	AR	Nut, #6-32 Hex	
24	453005	2	Flat Washer, #6	
25	4136366	2	Spacer, 3/8 x 5/16	
26	434054	2	Screw, 1/4-20 x 1-3/4" Hex Socket	
27	4139878	1	Decal, Bail Operation	

> Change from previous revision

## 3.1 Handle to Frame Mount

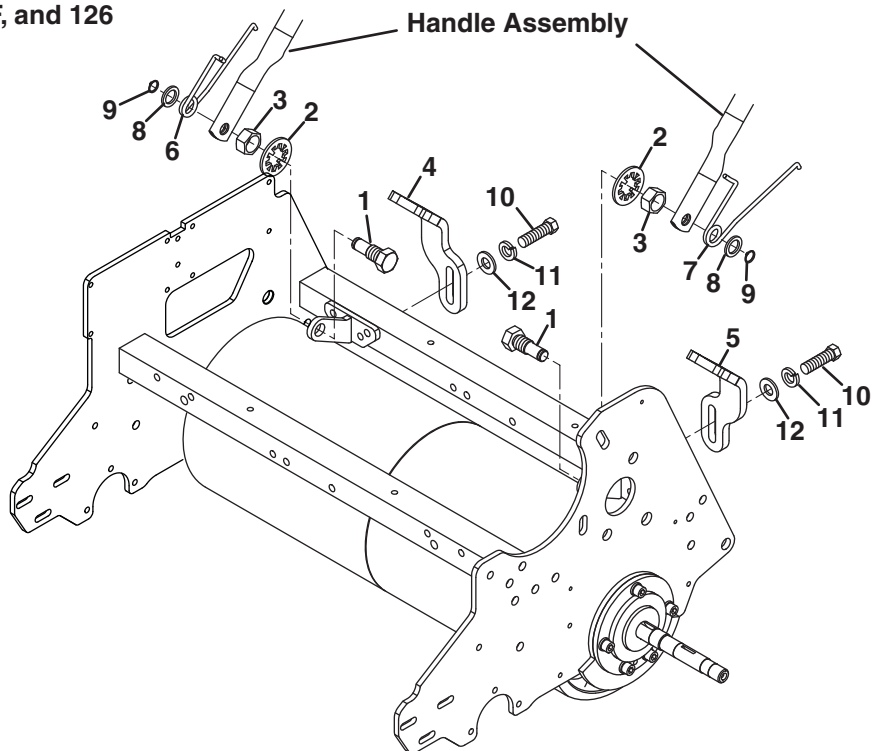
### Eclipse2 118 and 118F

- 63334 63343
- 63335 63344
- 63336 63345
- 63337 63346



### Eclipse 2 122, 122F, and 126

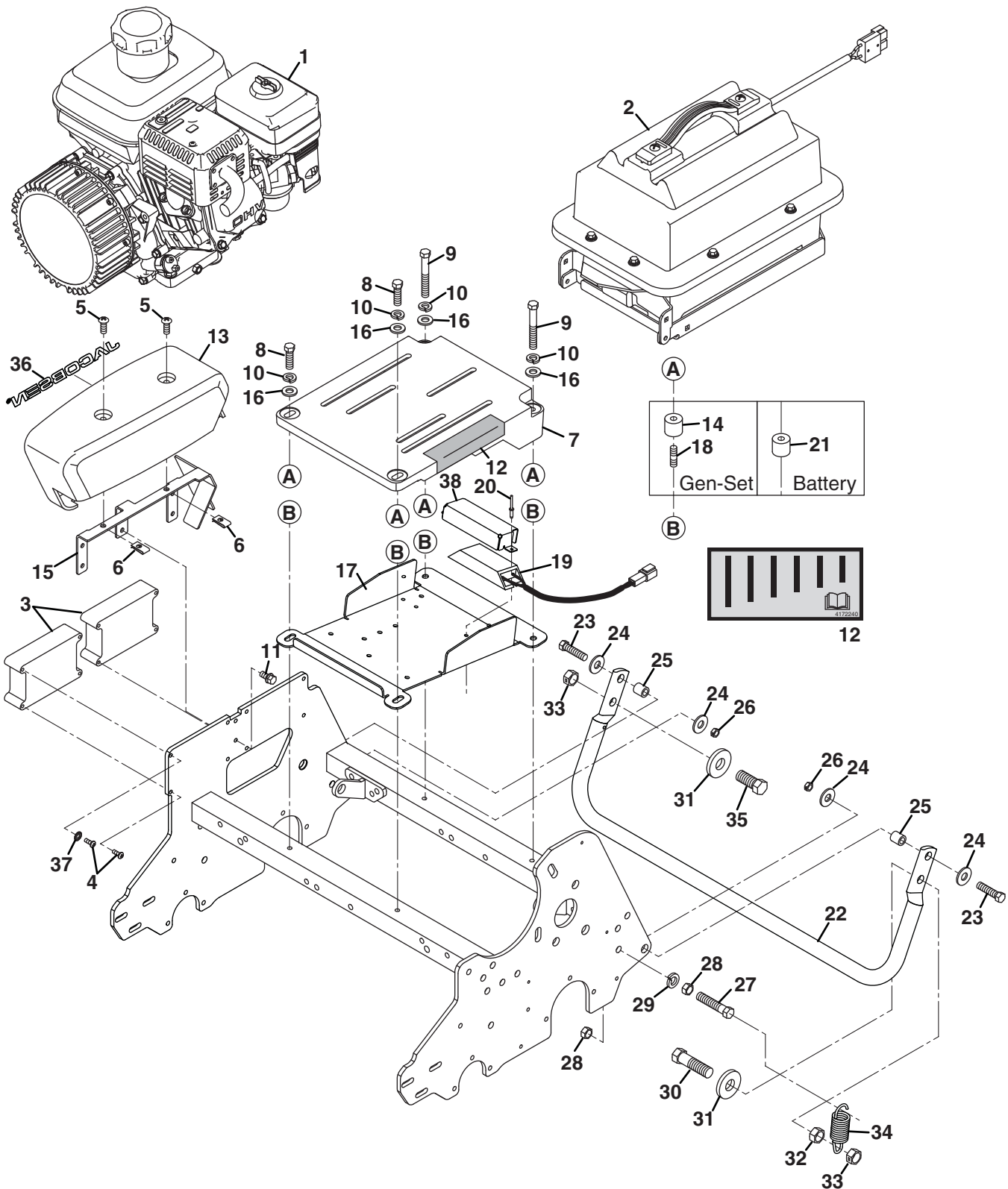
- 63338 63347
- 63339 63348
- 63340 63349
- 63341 63350
- 63342 63351



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	2811559	2	Bolt, Handle Mount	
2	447224	2	Lockwasher, 5/8 Internal Tooth	
3	443828	2	Nut, 5/8-18 Hex Jam	
4	4257813	1	Handle Stop, Right Side	
5	4257814	1	Handle Stop, Left Side	
6	2809900	1	Torsion Spring, Handle	Eclipse <sub>2</sub> 118, 118F Left Side
6	2809900	1	Torsion Spring, Handle	Eclipse <sub>2</sub> 122, 122F, 126 Right Side
7	2809901	1	Torsion Spring, Handle	Eclipse <sub>2</sub> 118, 118F Right Side
7	2809901	1	Torsion Spring, Handle	Eclipse <sub>2</sub> 122, 122F, 126 Left Side
8	455012	2	Flat Washer, 1/2	
9	458006	2	Retaining Ring, 1/2" Truarc	
10	400286	2	Screw, 3/8-16 x 2-3/4" Hex Head	Eclipse <sub>2</sub> 118, 118F
10	400274	2	Screw, 3/8-16 x 2-1/2" Hex Head	Eclipse <sub>2</sub> 122, 122F, 126
11	446142	2	Lockwasher, 3/8 Heavy	
12	453011	4	Flat Washer, 3/8	Eclipse <sub>2</sub> 118, 118F
12	453011	2	Flat Washer, 3/8	Eclipse <sub>2</sub> 122, 122F, 126
13	445808	2	Nut, 3/8-16 Hex Nylock	Eclipse <sub>2</sub> 118, 118F Only

> Change from previous revision

## 4.1 Power Module Mounting Plate



Fixed Head Frame Shown. Floating Head Similar

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	63305	1	Gen-Set Power Module	See 19.1
2	63306	1	Battery Power Module	See 20.1
3	4253190	2	Controller, Motor	<b>REFERENCE U1, U2, See 21.1</b>
4	800271	8	Screw, #10-24 x 1/2" Pan Head	
5	404016	2	Screw, 1/4-20 x 5/8" Truss Head	
6	445245	2	Tinnerman Nut, 1/4-20	
7	4253595	1	Mount, Power Module	
8	400186	2	Screw, 5/16-18 x 7/8" Hex Head	Gen-Set Power Module Only
8	400198	2	Screw, 5/16-18 x 2-1/4" Hex Head	Battery Power Module Only
9	400196	2	Screw, 5/16-18 x 2" Hex Head	Gen-Set Power Module Only
9	400204	2	Screw, 5/16-18 x 3-1/2" Hex Head	Battery Power Module Only
10	446136	4	Lockwasher, 5/16	Battery Power Module Only
11	409807	2	Screw, 1/4-20 x 1/2" Thread Cutting	
12	4193060	1	Decal, Front Roller Weight	
13	4258590	1	Cover, Motor Controller	
14	4255550	4	Female Iso Mount	Gen-Set Power Module Only
15	4259130	1	Bracket, Controller Cover	
16	453009	4	Flat Washer, 5/16	
17	4257457	1	Plate, Power Module Mounting	
18	4255551	4	Stud, Iso-Mount	Gen-Set Power Module Only
19	4265710	1	Resistor, Ceramic	<b>REFERENCE R3, See 21.1</b>
20	400058	2	Pop Rivet, 3/16 x 1/2"	
21	361139	4	Spacer	Battery Power Module Only
22	4257455	1	Kickstand, 18"	Used on 63334, 63335, 63336, 63337, 63343, 63344, 63345, and 63346
22	4247755	1	Kickstand, 22"	Used on 63338, 63339, 63340, 63341, 63347, 63348, 63349, and 63350
22	4257770	1	Kickstand, 26"	Used on 63342 and 63351
23	400190	2	Screw, 5/16-18 x 1-1/4" Hex Head	
24	452006	4	Flat Washer, 5/16	
25	366715	2	Spacer	
26	444718	2	Locknut, 5/16-18 Hex Center	
27	400268	1	Screw, 3/8-16 x 1-3/4" Hex Head	
28	443810	2	Nut, 3/8-16 Hex Jam	
29	446142	1	Lockwasher, 3/8 Heavy	
30	400410	1	Screw, 1/2-13 x 1-3/4" Hex Head	
31	344132	2	Washer, 1/2	
32	443118	1	Nut, 1/2-13 Hex	
33	444758	2	Locknut, 1/2-13 Hex Center	
34	364164	1	Spring, Extension	
35	400404	1	Screw, 1/2-13 x 1" Hex Head	
36	4264210	1	Decal, Jacobsen	
37	306998	2	Lockwasher, #10 Int/Ext Tooth	
38	4265790	1	Cover, Resistor	

> Change from previous revision

# ECLIPSE 2

Serial No. All

## 5.1 Frame

### Eclipse 2 118, 122 and 126

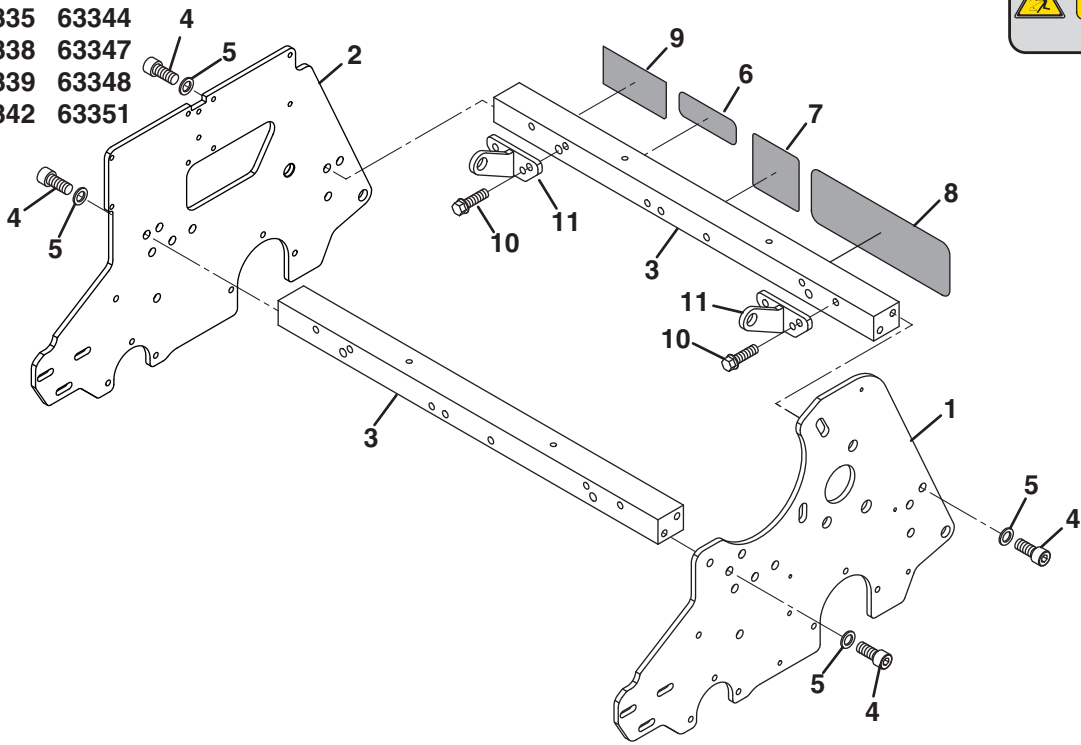
63334 63343

63335 63344

63338 63347

63339 63348

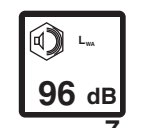
63342 63351



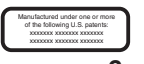
8



9



7



6

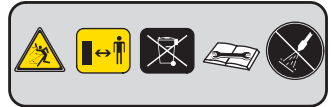
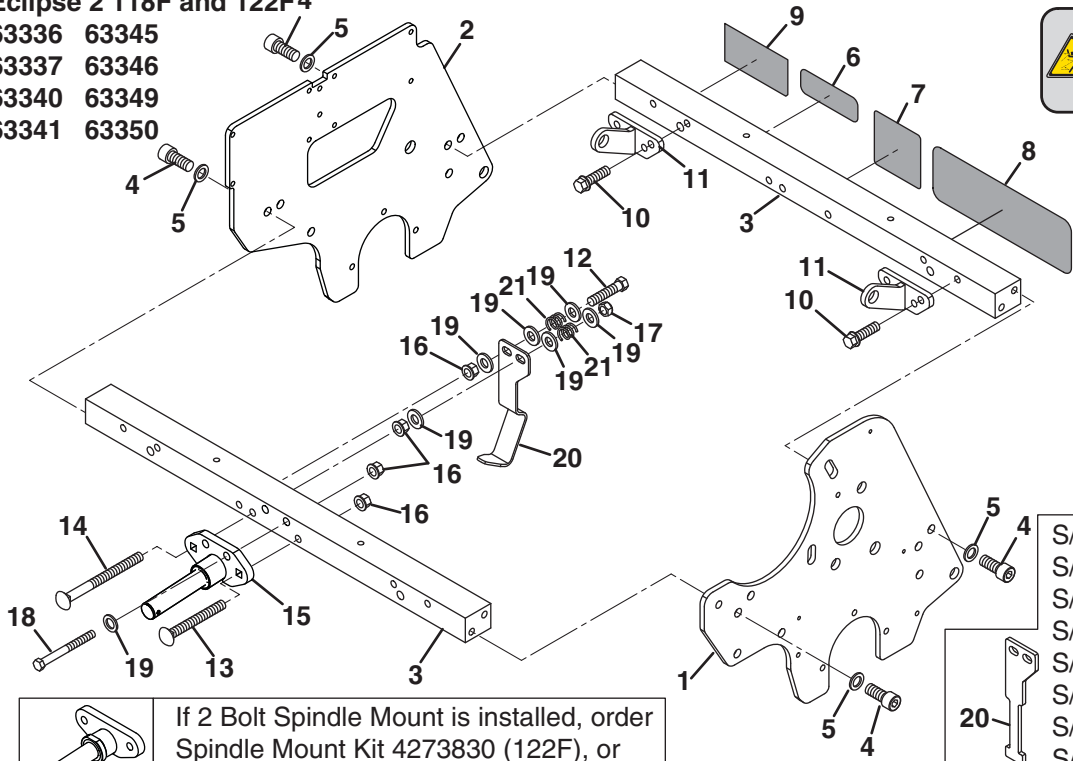
### Eclipse 2 118F and 122F4

63336 63345

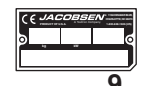
63337 63346

63340 63349

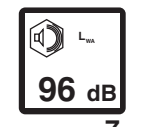
63341 63350



8



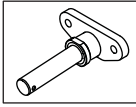
9



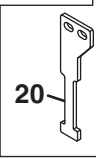
7



6



If 2 Bolt Spindle Mount is installed, order Spindle Mount Kit 4273830 (122F), or 4273831 (118F).



S/N 63336 - 2600 and Up  
 S/N 63337 - 2600 and Up  
 S/N 63340 - 2600 and Up  
 S/N 63341 - 2600 and Up  
 S/N 63345 - 2600 and Up  
 S/N 63346 - 2600 and Up  
 S/N 63349 - 2600 and Up  
 S/N 63350 - 2600 and Up

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4253156	1	Frame, L.H. Side Fixed Head	Eclipse 2 118, 122, and 126
1	4253154	1	Frame, L.H. Side Floating Head	Eclipse 2 118F and 122F
2	4253155	1	Frame, R.H. Side Fixed Head	Eclipse 2 118, 122, and 126
2	4253157	1	Frame, R.H. Side Floating Head	Eclipse 2 118F and 122F
3	4257453	2	18" Crossbar	Eclipse 2 118 and 118F
3	4247754	2	22" Crossbar	Eclipse 2 122, and 122F
3	4257470	2	26" Crossbar	Eclipse 2 126
4	434030	8	Screw, 3/8-16 x 7/8" Hex Socket	
5	64163-04	8	Flat Washer, 3/8	
6	4127931	1	Decal, Patent	
7	4117466	1	Decal, 96 dBA Noise	
8	4169640	1	Decal, Danger	
9	REF	1	Serial Plate	
10	800710	2	Screw, 5/16-18 x 1" Hex Flange	Eclipse 2 122, 122F, and 126
11	4258190	2	Bracket, Handle Mount	Eclipse 2 122, 122F, and 126
12	400194	1	Screw, 5/16-18 x 1-3/4" Hex Head	Eclipse 2 118F and 122F Only
13	441672	1	Carriage Bolt, 5/16-18 x 2-1/2"	Eclipse 2 118F and 122F Only
14	441688	1	Carriage Bolt, 5/16-18 x 3-1/2"	Eclipse 2 118F and 122F Only
15	4273518	1	Spindle Mount	Eclipse 2 118F and 122F Only
16	548911	5	Nut, 5/16-18 Hex Flange	Eclipse 2 118F and 122F Only
17	445802	1	Nut, 5/16-18 Nylon Insert Hex	Eclipse 2 118F and 122F Only
18	400200	2	Screw, 5/16-18 x 2-1/2" Hex Head	Eclipse 2 118F and 122F Only
19	453009	8	Flat Washer, 5/16	Eclipse 2 118F and 122F Only
20	4255870	1	Limit Bracket	Eclipse 2 118F and 122F Only S/N 63336 - 1651 ~ 2599 S/N 63337 - 1651 ~ 2599 S/N 63340 - 1651 ~ 2599 S/N 63341 - 1651 ~ 2599 S/N 63345 - 1651 ~ 2599 S/N 63346 - 1651 ~ 2599 S/N 63349 - 1651 ~ 2599 S/N 63350 - 1651 ~ 2599
20	4277191	1	Limit Bracket	Eclipse 2 118F and 122F Only S/N 63336 - 2600 and Up S/N 63337 - 2600 and Up S/N 63340 - 2600 and Up S/N 63341 - 2600 and Up S/N 63345 - 2600 and Up S/N 63346 - 2600 and Up S/N 63349 - 2600 and Up S/N 63350 - 2600 and Up
21	332844	2	Spring, Compression	Eclipse 2 118F and 122F Only

> Change from previous revision

# ECLIPSE 2

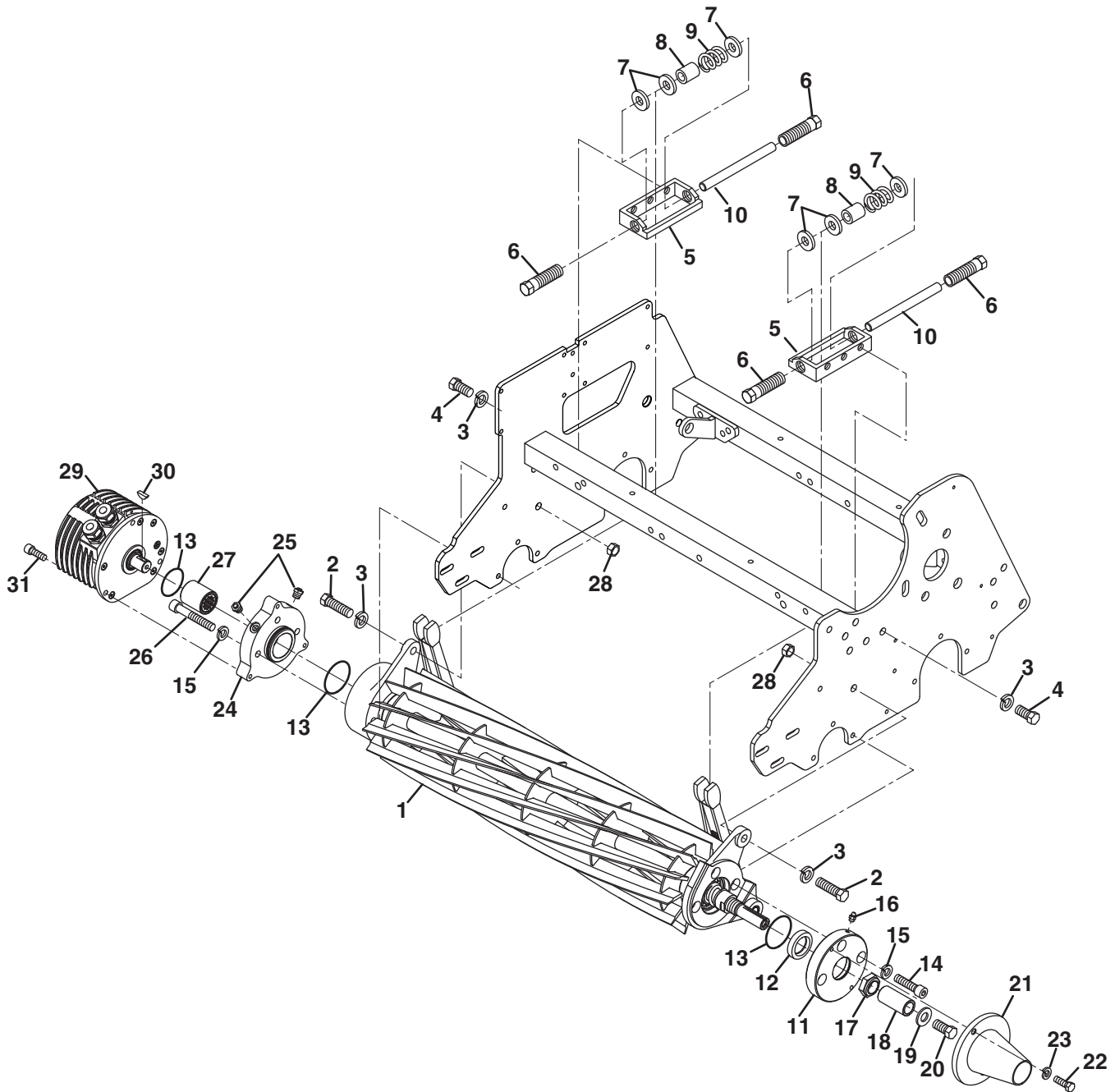
## 6.1 Lower Unit

### Fixed Head Units

Serial No. 63334 - All  
Serial No. 63335 - All  
Serial No. 63338 - All  
Serial No. 63339 - All

Serial No. 63342 - All  
Serial No. 63343 - All  
Serial No. 63344 - All  
Serial No. 63347 - All

Serial No. 63348 - All  
Serial No. 63351 - All



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	REF	1	Reel and Bedknife Assembly	See 7.1
2	400264	2	Screw, 3/8-16 x 1-1/4" Hex Head	
3	446142	8	Lockwasher, 3/8 Heavy	
4	400258	6	Screw, 3/8-16 x 3/4" Hex Head	
5	3001610	2	Block, Bedknife Adjuster	
6	366726	4	Bolt, 5/8-11 Special	
7	366653	6	Spacer, 7/8 x 3/8 x 1/8"	
8	367512	2	Spacer, 5/8 x 3/8 x 3/4"	
9	366709	2	Spring	
10	366727	2	Rod	
11	4179780	1	Seal Carrier	
12	366648	1	Grease Seal	
13	4104720	3	O-Ring	
14	434036	3	Screw, 5/16-18 x 1-1/4" Hex Socket	
15	446136	6	Lockwasher, 5/16 Heavy	
16	471214	1	Grease Fitting, 1/4-20 Straight	
17	367029	1	Nut, 3/4-16 Nylock Hex Jam Nut	
18	367164	1	Spacer, Reel Shaft	
19	453011	1	Flat Washer, 3/8	
20	400294	1	Screw, 3/8-24 x 3/4" Hex Head	
21	557775	1	Cover, Reel Shaft	
22	400108	2	Screw, 1/4-20 x 3/4" Hex Head	
23	446130	2	Lockwasher, 1/4 Heavy	
24	4167541	1	Adapter, Motor	
25	471242	2	Grease Fitting, Relief	
26	434049	3	Screw, 5/16-18 x 2" Hex Socket	
27	2812384	1	Coupler, Motor	
28	443110	2	Nut, 3/8-16 Hex	
29	4261470	1	Motor, Brushless Bi-Directional	<b>Reference M1, See 21.1</b>
30	463029	1	Key, Woodruff	
31	434028	3	Screw, 1/4-20 x 3/4" Hex Socket	

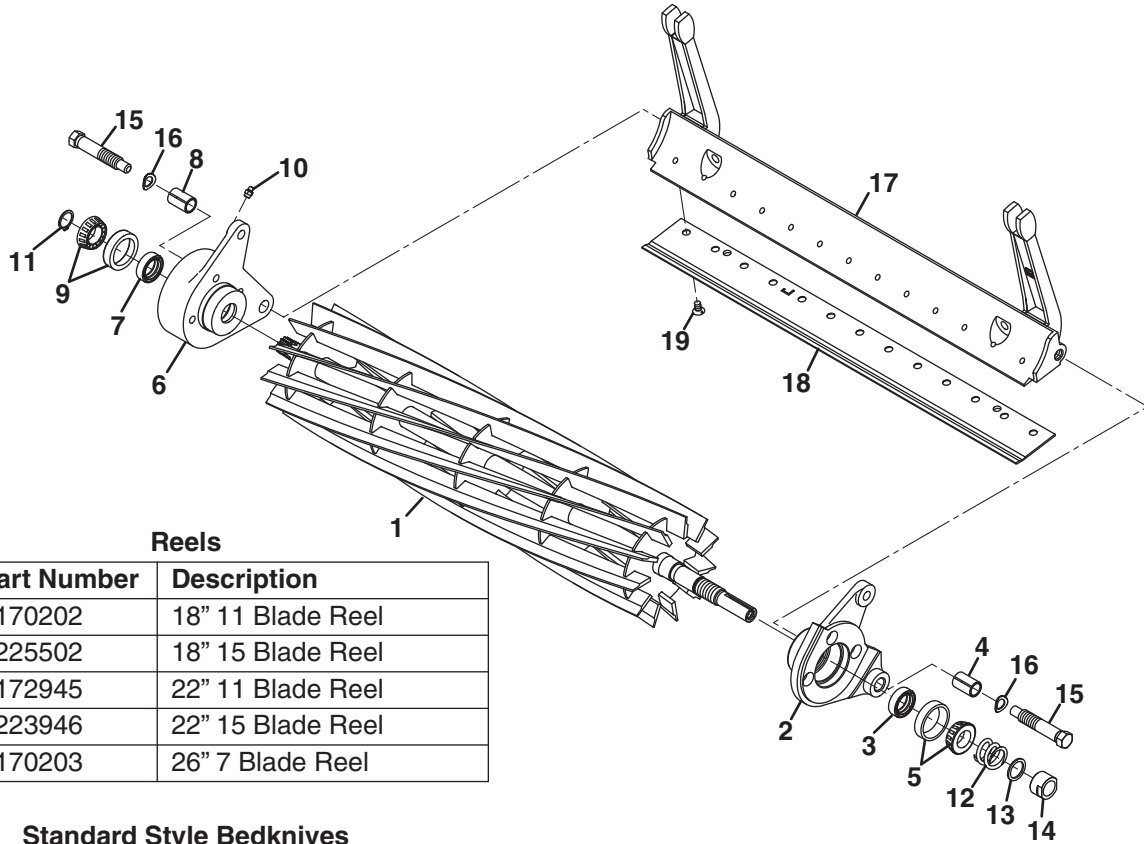
> Change from previous revision

# ECLIPSE 2

## 7.1 Reel

### Fixed Head Units

Serial No. 63334 - All	Serial No. 63342 - All	Serial No. 63348 - All
Serial No. 63335 - All	Serial No. 63343 - All	Serial No. 63351 - All
Serial No. 63338 - All	Serial No. 63344 - All	
Serial No. 63339 - All	Serial No. 63347 - All	



#### Reels

Part Number	Description
4170202	18" 11 Blade Reel
4225502	18" 15 Blade Reel
4172945	22" 11 Blade Reel
4223946	22" 15 Blade Reel
4170203	26" 7 Blade Reel

#### Standard Style Bedknives (Secured with screws)

Part Number	Description
5000098	18" Low Profile
● 5002888	18" Super Tournament
4234901	18" Championship
503478	22" Low Profile
503477	22" High Profile
● 5002887	22" Super Tournament
4234900	22" Championship
● 5000141	26" Heavy Section
5000414	26" High Profile
5000413	26" Low Profile

#### Optional MagKnife Bedknives

Part Number	Description
4131005	22" Medium Section
4131369	22" High Profile
4131001	22" Low Profile
4131370	22" Tournament
4131003	22" Super Tournament

● Standard Bedknife

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	See Chart	1	Reel	
2	4105281	1	Bearing Housing	
3	366650	1	• Grease Seal	
4	545940	1	• Bushing	
5	500534	1	• Bearing Cup and Cone	
6	4179720	1	Bearing Housing	
7	366650	1	• Seal	
8	545940	1	• Bushing	
9	500534	1	• Bearing Cup and Cone	
10	4128725	1	• Grease Fitting	
11	458013	1	Snap Ring	
12	5002151	1	Spring	
13	304745	1	Washer	
14	364900	1	Nut, 3/4-16 Reel	
15	365501	2	Screw, Bedknife Backing	
16	454017	2	Spring Washer, 7/16	
17	2000074	1	Bedknife Backing, 18"	Used on 63334, 63335, 63343, and 63344
17	2000075	1	Bedknife Backing, 22"	Used on 63338, 63339, 63347, and 63348
17	2000076	1	Bedknife Backing, 26"	Used on 63342 and 63351
18	See Chart	1	Bedknife	
19	4252470	AR	Screw, 1/4-20 x 1/2" Bedknife	Package of 100 Screws

> Change from previous revision

# ECLIPSE 2

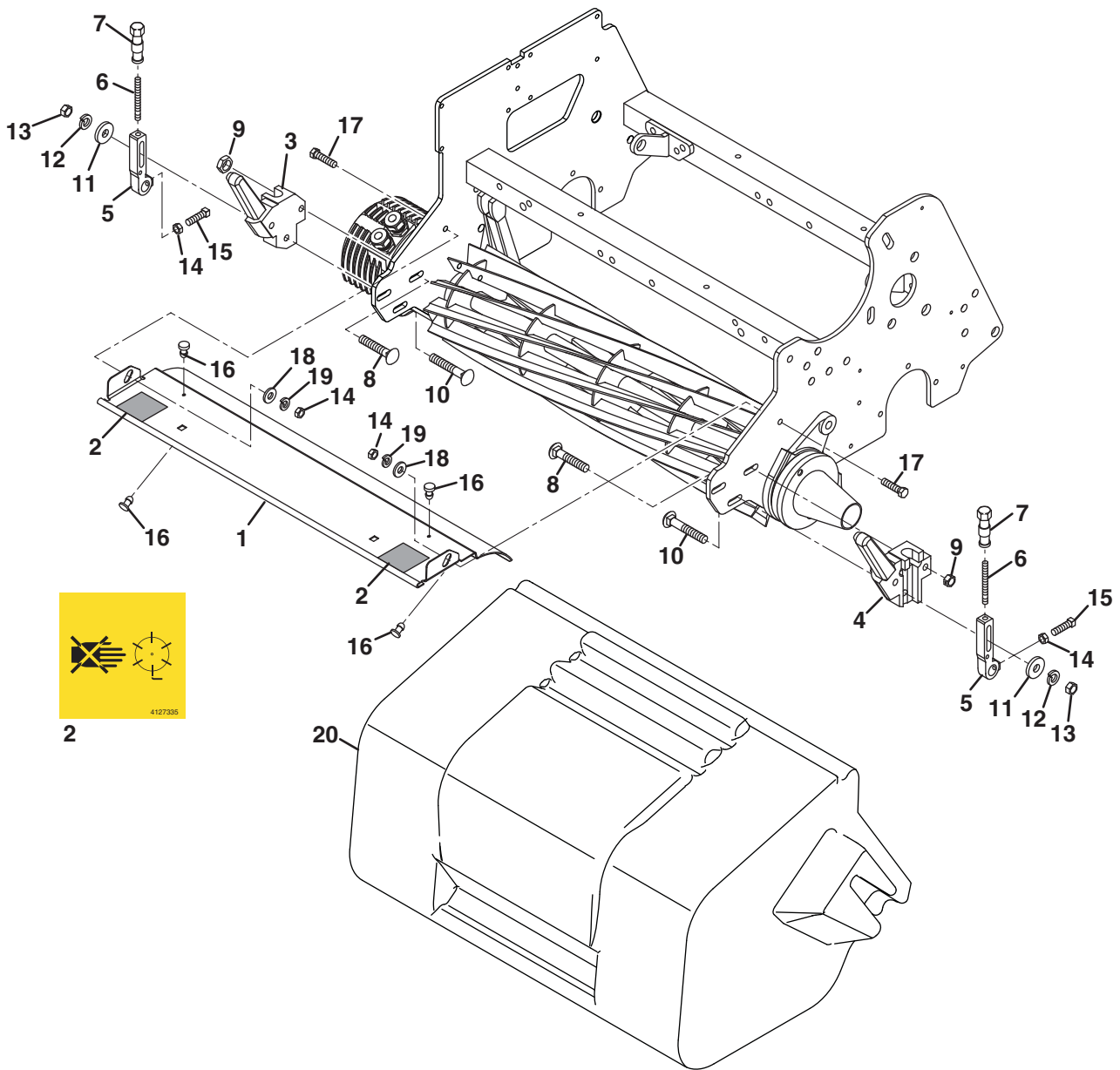
## 8.1 Grass Shield and Roller Brackets

Fixed Head Units Only

Serial No. 63334 - All  
Serial No. 63335 - All  
Serial No. 63338 - All  
Serial No. 63339 - All

Serial No. 63342 - All  
Serial No. 63343 - All  
Serial No. 63344 - All  
Serial No. 63347 - All

Serial No. 63348 - All  
Serial No. 63351 - All



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4139661	1	Grass Shield, 18 Inch	Used on 63334, 63343, 63335, and 63344
1	4139660	1	Grass Shield, 22 Inch	Used on 63338, 63347, 63339, and 63348
1	4139662	1	Grass Shield, 26 Inch	Used on 63342 and 63351
2	4127335	2	• Decal, Danger	
3	241928	1	Bracket, Catcher Mounting, R.H.	
4	241927	1	Bracket, Catcher Mounting, L.H.	
5	2000072	2	Bracket, Roller Adjusting	
6	343616	2	Stud, Front Roller Adjusting	
7	3005692	2	Adjusting Knob	
8	441677	4	Carriage Bolt 5/16-18 x 1-1/2"	
9	444718	4	Locknut, 5/16-18 Center	
10	441674	2	Carriage Bolt, 5/16-18 x 1-3/4"	
11	364441	2	Spacer	
12	446136	2	Lockwasher, 5/16 Heavy	
13	443106	2	Nut, 5/16-18 Hex	
14	443102	4	Nut, 1/4-20 Hex	
15	352737	2	Set Screw, 1/4-20 x 7/8" Square Hd	
16	3008974	4	Grommet	
17	400112	2	Screw, 1/4-20 x 1" Hex Head	
18	453023	2	Flat Washer, 1/4	
19	446130	2	Lockwasher, 1/4 Heavy	
20	3007821	1	Grass Catcher, 118	Used on 63334, 63343, 63335, and 63344
20	3007820	1	Grass Catcher, 122	Used on 63338, 63347, 63339, and 63348
20	3007822	1	Grass Catcher, 126	Used on 63342 and 63351

> Change from previous revision

# ECLIPSE 2

## 9.1 Floating Head Reel Connection

Floating Head Units Only

Serial No. 63336 - 1651 ~ 2599

Serial No. 63337 - 1651 ~ 2599

Serial No. 63340 - 1651 ~ 2599

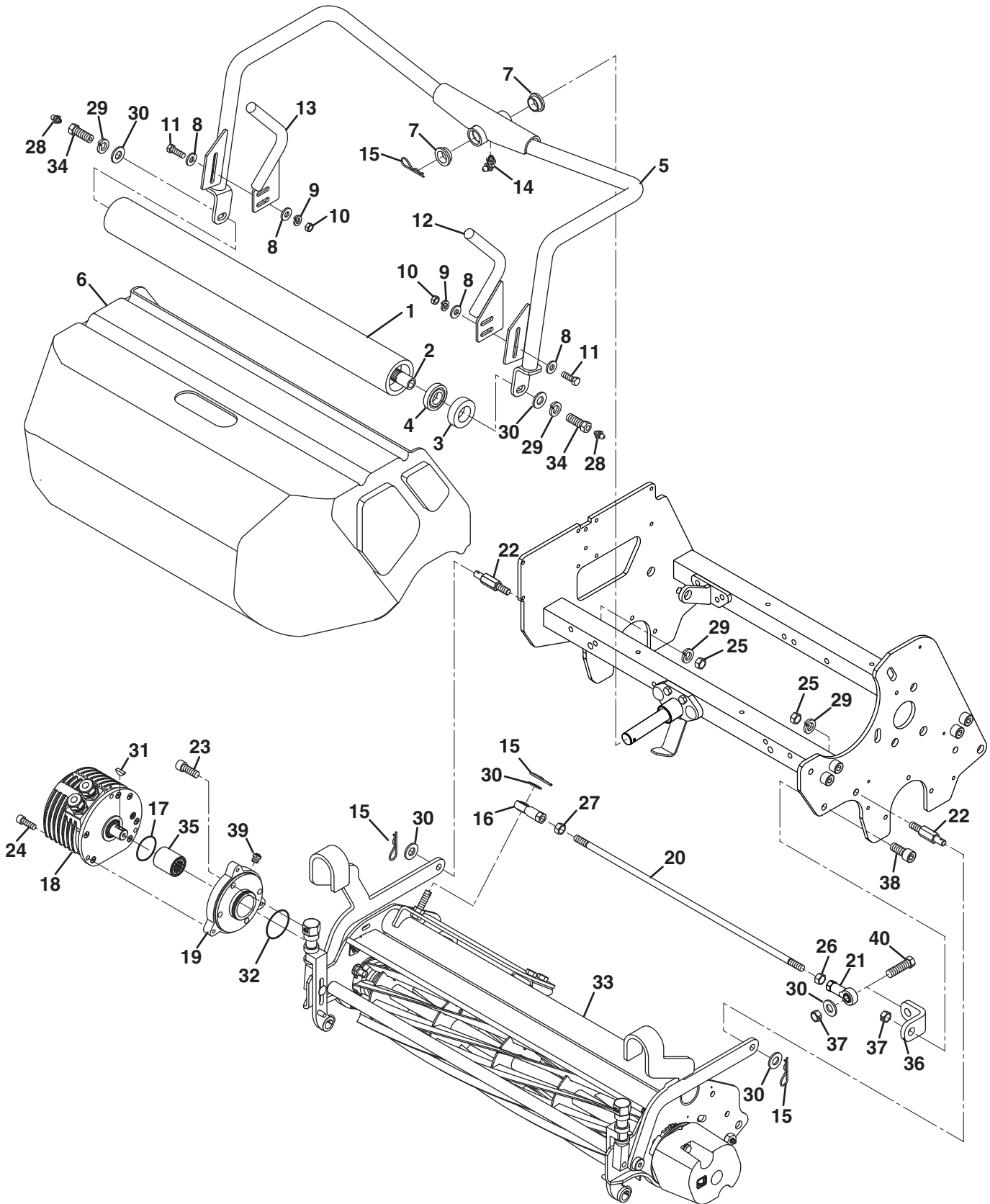
Serial No. 63341 - 1651 ~ 2599

Serial No. 63345 - 1651 ~ 2599

Serial No. 63346 - 1651 ~ 2599

Serial No. 63349 - 1651 ~ 2599

Serial No. 63350 - 1651 ~ 2599



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4175221	1	Rear Roller - 18"	Used on 63336, 63345, 63337, 63346
1	1004990	1	Rear Roller - 22"	Used on 63340, 63349, 63341, 63350
2	4175220	1	• Shaft, 18"	Used on 63336, 63345, 63337, 63346
2	3010422	1	• Shaft, 22"	Used on 63340, 63349, 63341, 63350
3	3010286	2	• Seal	
4	3010712	2	• Bearing	
5	4168727	1	Roller Mount - 18"	Used on 63336, 63345, 63337, 63346
5	4136994	1	Roller Mount - 22"	Used on 63340, 63349, 63341, 63350
6	4203300	1	Grass Catcher, 18" Floating Head	Used on 63336, 63345, 63337, 63346
6	4239563	1	Grass Catcher, 22" Floating Head	Used on 63340, 63349, 63341, 63350
7	352726	2	Bushing	
8	453023	8	Flat Washer, 1/4	
9	446128	4	Lockwasher, 1/4 Med.	
10	443102	4	Nut, 1/4-20 Hex	
11	400108	4	Screw, 1/4-20 x 3/4" Hex Head	
12	4140152	1	Mount, Left Side Catcher	
13	4140151	1	Mount, Right Side Catcher	
14	471221	1	Grease Fitting, 1/4-28 90°	
15	460312	4	Hairpin	
16	366317	1	Rod End, 3/8-24	
17	4104720	1	O-Ring, Motor	
18	4261470	1	Motor, Brushless Bi-Directional	<b>Reference M2, See 21.1</b>
19	4167400	1	Plate, Motor Adapter	
20	4169040	1	Rod, Panhard, 18"	Used on 63336, 63345, 63337, 63346
20	4138778	1	Rod, Panhard, 22"	Used on 63340, 63349, 63341, 63350
21	360893	1	Rod End	
22	4140166	2	Pin, Threaded	
23	434024	4	Screw, 5/16-18 x 3/4" Socket Head	
24	434029	3	Screw, 1/4-20 x 3/4" Socket Head	
25	443110	2	Nut, 3/8-16 Hex	
26	443112	1	Nut, 3/8-24 Hex	
27	445785	1	Nut, 3/8-24 Left Hand Hex	
28	471214	2	Grease Fitting	
29	446142	5	Lockwasher, 3/8 Heavy	
30	453011	5	Flat Washer, 3/8	
31	463029	1	Key, Woodruff	
32	845279	1	Seal, O-Ring	
33	REF	1	Reel Assembly	See 10.1
34	4156930	2	Screw, 3/8-24 x 1" Special	
35	2812384	1	Coupler	
36	4261071	1	Bracket, Panhard Mount	
37	444762	2	Locknut, 3/8-16 Hex Center	
38	434030	1	Screw, 3/8-16 x 7/8" Hex Socket	
39	417242	1	Fitting, Relief	
40	400264	1	Screw, 3/8-16 x 1-1/4" Hex Head	
41				

> Change from previous revision

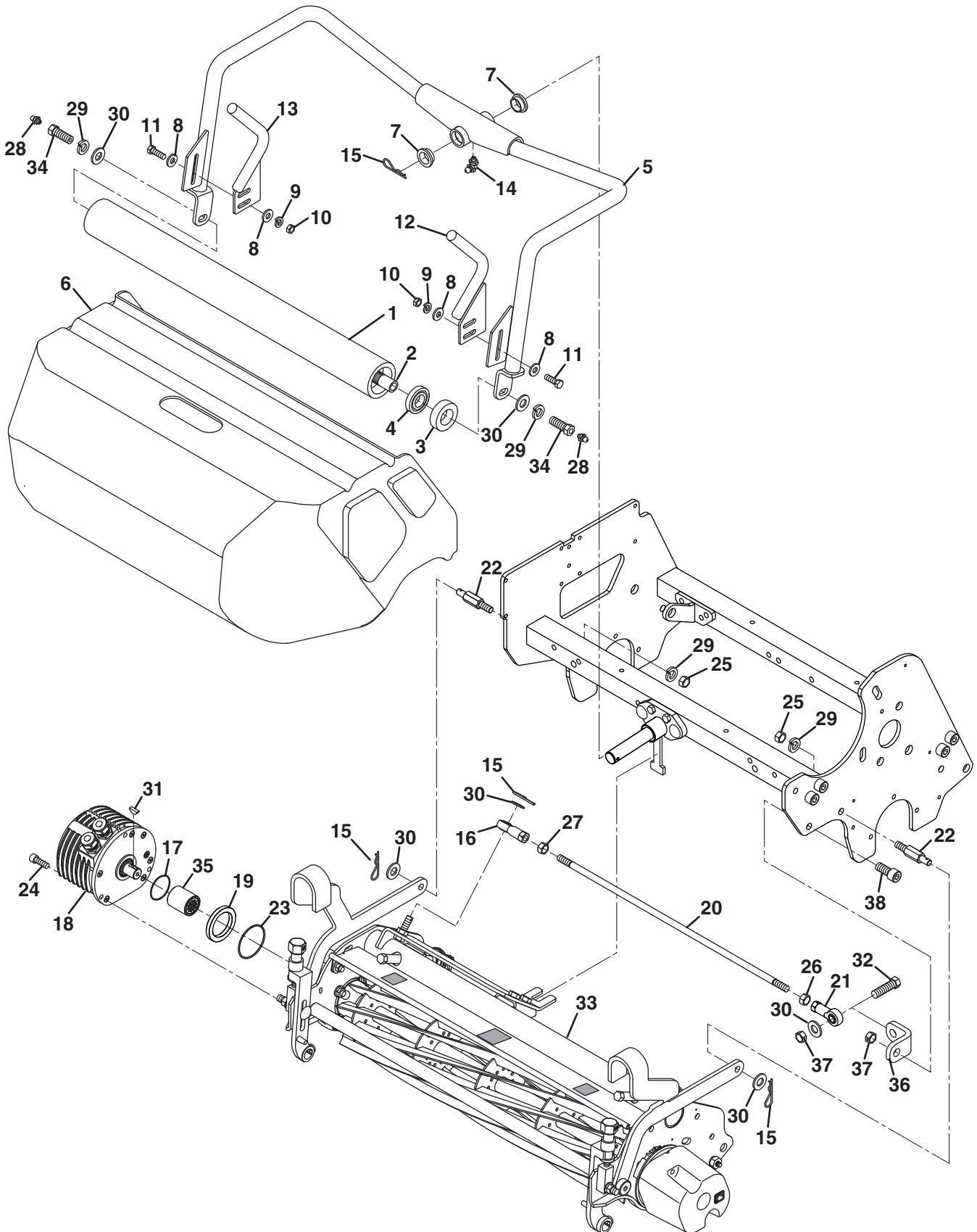
# ECLIPSE 2

## 9.2 Floating Head Reel Connection

Floating Head Units Only

Serial No. 63336 - 2600 and Up  
Serial No. 63337 - 2600 and Up  
Serial No. 63340 - 2600 and Up  
Serial No. 63341 - 2600 and Up

Serial No. 63345 - 2600 and Up  
Serial No. 63346 - 2600 and Up  
Serial No. 63349 - 2600 and Up  
Serial No. 63350 - 2600 and Up



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4175221	1	Rear Roller - 18"	Used on 63336, 63345, 63337, 63346
1	1004990	1	Rear Roller - 22"	Used on 63340, 63349, 63341, 63350
2	4175220	1	• Shaft, 18"	Used on 63336, 63345, 63337, 63346
2	3010422	1	• Shaft, 22"	Used on 63340, 63349, 63341, 63350
3	3010286	2	• Seal	
4	3010712	2	• Bearing	
5	4168727	1	Roller Mount - 18"	Used on 63336, 63345, 63337, 63346
5	4136994	1	Roller Mount - 22"	Used on 63340, 63349, 63341, 63350
6	4203300	1	Grass Catcher, 18" Floating Head	Used on 63336, 63345, 63337, 63346
6	4239563	1	Grass Catcher, 22" Floating Head	Used on 63340, 63349, 63341, 63350
7	352726	2	Bushing	
8	453023	8	Flat Washer, 1/4	
9	446128	4	Lockwasher, 1/4 Med.	
10	443102	4	Nut, 1/4-20 Hex	
11	400108	4	Screw, 1/4-20 x 3/4" Hex Head	
12	4140152	1	Mount, Left Side Catcher	
13	4140151	1	Mount, Right Side Catcher	
14	471221	1	Grease Fitting, 1/4-28 90°	
15	460312	4	Hairpin	
16	366317	1	Rod End, 3/8-24	
17	4104720	1	O-Ring, Motor	
18	4261470	1	Motor, Brushless Bi-Directional	<b>Reference M2, See 21.1</b>
19	4265194	1	Adapter, Motor	
20	4169040	1	Rod, Panhard, 18"	Used on 63336, 63345, 63337, 63346
20	4138778	1	Rod, Panhard, 22"	Used on 63340, 63349, 63341, 63350
21	360893	1	Rod End	
22	4140166	2	Pin, Threaded	
23	4268910	1	O-Ring	
24	434028	3	Screw, 1/4-20 x 3/4" Socket Head	
25	443110	2	Nut, 3/8-16 Hex	
26	443112	1	Nut, 3/8-24 Hex	
27	445785	1	Nut, 3/8-24 Left Hand Hex	
28	471214	2	Grease Fitting	
29	446142	5	Lockwasher, 3/8 Heavy	
30	453011	5	Flat Washer, 3/8	
31	463029	1	Key, Woodruff	
32	400264	1	Screw, 3/8-16 x 1-1/4" Hex Head	
33	REF	1	Reel Assembly	See 10.1
34	4156930	2	Screw, 3/8-24 x 1" Special	
35	2812384	1	Coupler	
36	4261071	1	Bracket, Panhard Mount	
37	444762	2	Locknut, 3/8-16 Hex Center	
38	434030	1	Screw, 3/8-16 x 7/8" Hex Socket	

> Change from previous revision

# ECLIPSE 2

## 10.1 Outer Reel Assembly

Floating Head Units Only

Serial No. 63336 - 1651 ~ 2599

Serial No. 63337 - 1651 ~ 2599

Serial No. 63340 - 1651 ~ 2599

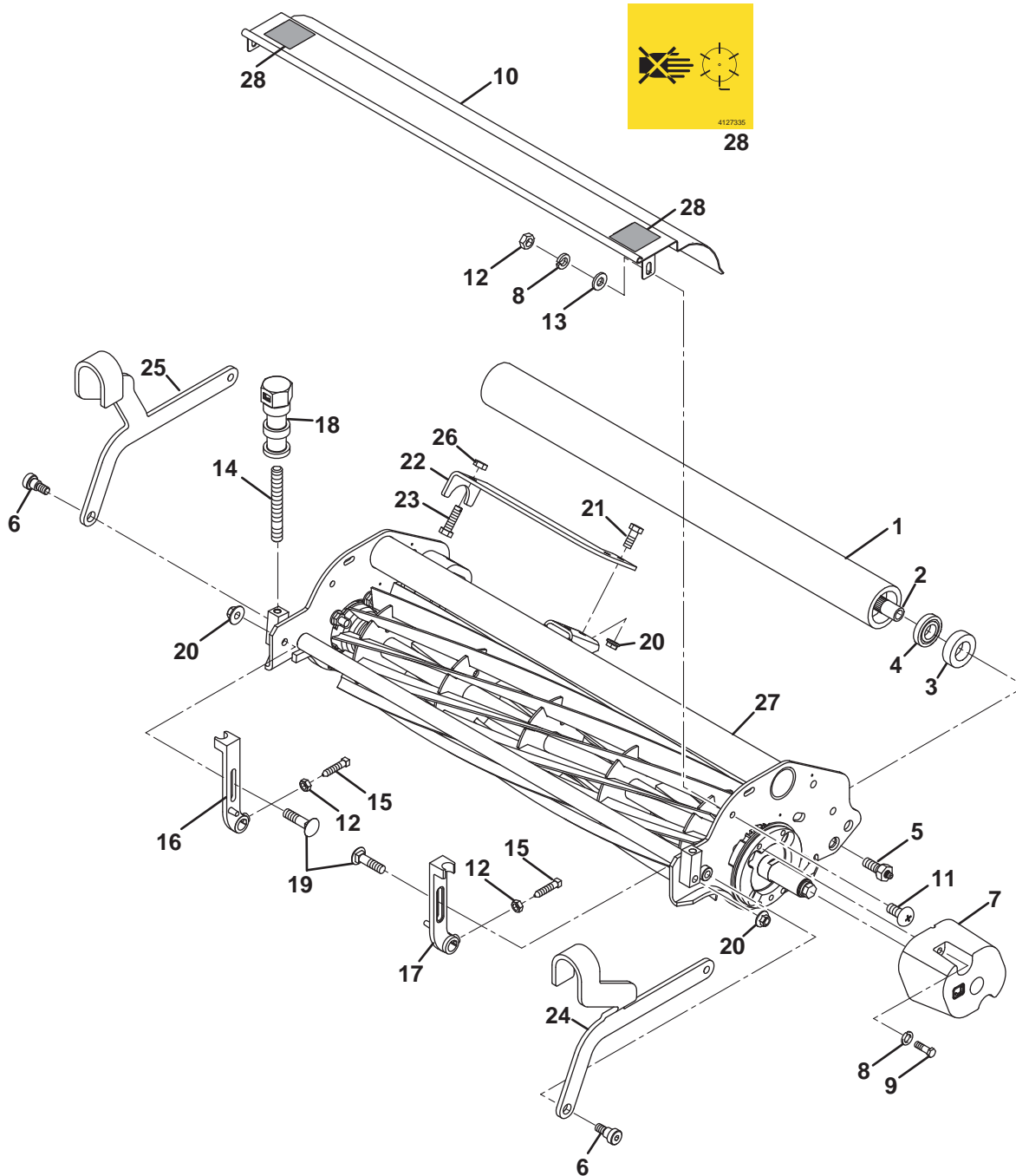
Serial No. 63341 - 1651 ~ 2599

Serial No. 63345 - 1651 ~ 2599

Serial No. 63346 - 1651 ~ 2599

Serial No. 63349 - 1651 ~ 2599

Serial No. 63350 - 1651 ~ 2599



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4175221	1	Rear Roller, 18"	Used on 63336, 63345, 63337, and 63346
1	1004990	1	Rear Roller, 22"	Used on 63340, 63349, 63341, and 63350
2	4175220	1	• Shaft, 18" Roller	Used on 63336, 63345, 63337, and 63346
2	3010422	1	• Shaft, 22" Roller	Used on 63340, 63349, 63341, and 63350
3	3010286	2	• Seal	
4	3010712	2	• Bearing	
5	1002224	2	Zerk Bolt	
6	365246	2	Shoulder Bolt	
7	4171380	1	Casting, Counterweight	
8	446130	4	Lockwasher, 1/4 Heavy	
9	400118	2	Screw, 1/4-20 x 1-3/4" Hex Head	
10	2811027	1	Shield, Reel, 18"	Used on 63336, 63345, 63337, and 63346
10	4174640	1	Shield, Reel, 22"	Used on 63340, 63349, 63341, and 63350
11	403782	2	Screw, 1/4-20 x 3/4" Truss Head	
12	443102	4	Nut, 1/4-20 Hex	
13	453023	2	Flat Washer, 1/4	
14	343616	2	Stud	
15	352737	2	Screw, 1/4-20 x 7/8" Sq Hd Set	
16	3008438	1	Roller Bracket	
17	3008439	1	Roller Bracket	
18	3005692	2	Knob, Front Roller Adjusting	
19	441674	2	Carriage Bolt, 5/16-18 x 1-3/4"	
20	445795	4	Nut, 5/16-18 Spiralock Flange	
21	400184	2	Screw, 5/16-18 x 3/4" Hex Head	
22	4175240	1	Bracket, 118F Panhard Rod	Used on 63336, 63345, 63337, and 63346
22	4140163	1	Bracket, 122F Panhard Rod	Used on 63340, 63349, 63341, and 63350
23	4140164	1	Screw, 3/8-16 x 1-1/4 Special	
24	4140284	1	Bar, Left Support	
25	4140285	1	Bar, Right Support	
26	443810	1	Nut, 3/8-16 Hex Jam	
27	N/S	1	Inner Reel Assembly	See 12.1
28	4127335	2	Decal, Danger	

> Change from previous revision

# ECLIPSE 2

## 11.1 Outer Reel Assembly

Floating Head Units Only

Serial No. 63336 - 2600 and Up

Serial No. 63337 - 2600 and Up

Serial No. 63340 - 2600 and Up

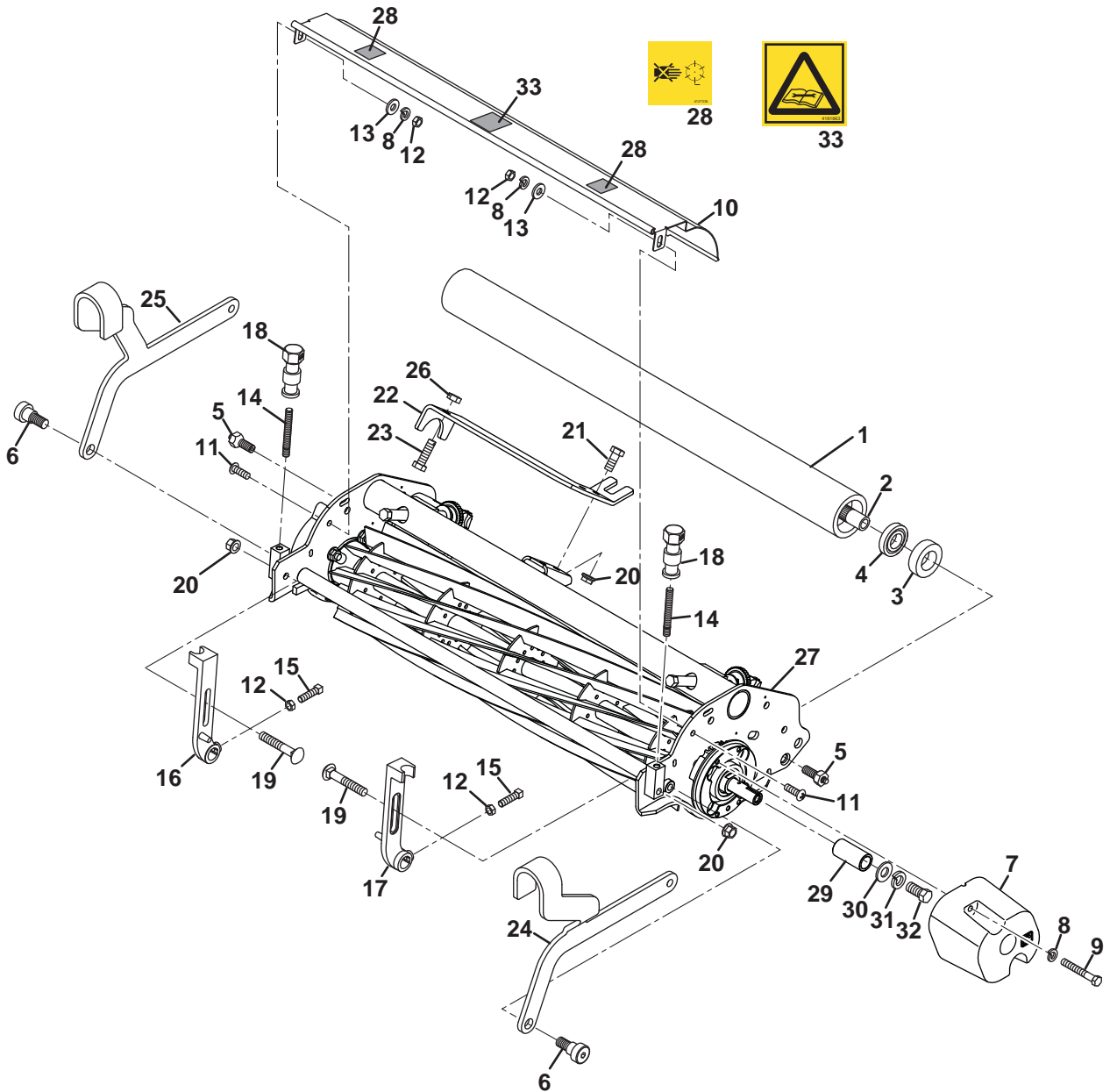
Serial No. 63341 - 2600 and Up

Serial No. 63345 - 2600 and Up

Serial No. 63346 - 2600 and Up

Serial No. 63349 - 2600 and Up

Serial No. 63350 - 2600 and Up



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4175221	1	Rear Roller, 18"	Used on Eclipse 2 118F
1	1004990	1	Rear Roller, 22"	Used on Eclipse 2 122F
2	4175220	1	• Shaft, 18" Roller	Used on Eclipse 2 118F
2	3010422	1	• Shaft, 22" Roller	Used on Eclipse 2 122F
3	3010286	2	• Seal	
4	3010712	2	• Bearing	
5	1002224	2	Zerk Bolt	
6	365246	2	Shoulder Bolt	
7	4171380	1	Casting, Counterweight	
8	446130	4	Lockwasher, 1/4 Heavy	
9	400118	2	Screw, 1/4-20 x 1-3/4" Hex Head	
10	2811027	1	Shield, Reel, 18"	Used on Eclipse 2 118F
10	4174640	1	Shield, Reel, 22"	Used on Eclipse 2 122F
11	403782	2	Screw, 1/4-20 x 3/4" Truss Head	
12	443102	4	Nut, 1/4-20 Hex	
13	453023	2	Flat Washer, 1/4	
14	343616	2	Stud	
15	352737	2	Screw, 1/4-20 x 7/8" Sq Hd Set	
16	3008438	1	Roller Bracket	
17	3008439	1	Roller Bracket	
18	3005692	2	Knob, Front Roller Adjusting	
19	441674	2	Carriage Bolt, 5/16-18 x 1-3/4"	
20	445795	4	Nut, 5/16-18 Spirallock Flange	
21	400184	2	Screw, 5/16-18 x 3/4" Hex Head	
22	4277192	1	Bracket, 118F Panhard Rod	Used on Eclipse 2 118F
22	4277193	1	Bracket, 122F Panhard Rod	Used on Eclipse 2 122F
23	4140164	1	Screw, 3/8-16 x 1-1/4 Special	
24	4140284	1	Bar, Left Support	
25	4140285	1	Bar, Right Support	
26	443810	1	Nut, 3/8-16 Hex Jam	
27	N/S	1	Inner Reel Assembly	See 12.1
28	4127335	2	Decal, Danger	
29	367164	1	Spacer	
30	453011	1	Flat Washer, 3/8	
31	446142	1	Lockwasher, 3/8 Heavy	
32	400294	1	Screw, 3/8-24 x 1" Hex Head	
33	4181863	1	Decal, Read Manual For Service	

> Change from previous revision

# ECLIPSE 2

## 12.1 Inner Reel Assembly

Floating Head Units Only

Serial No. 63336 - 1651 ~ 2599

Serial No. 63337 - 1651 ~ 2599

Serial No. 63340 - 1651 ~ 2599

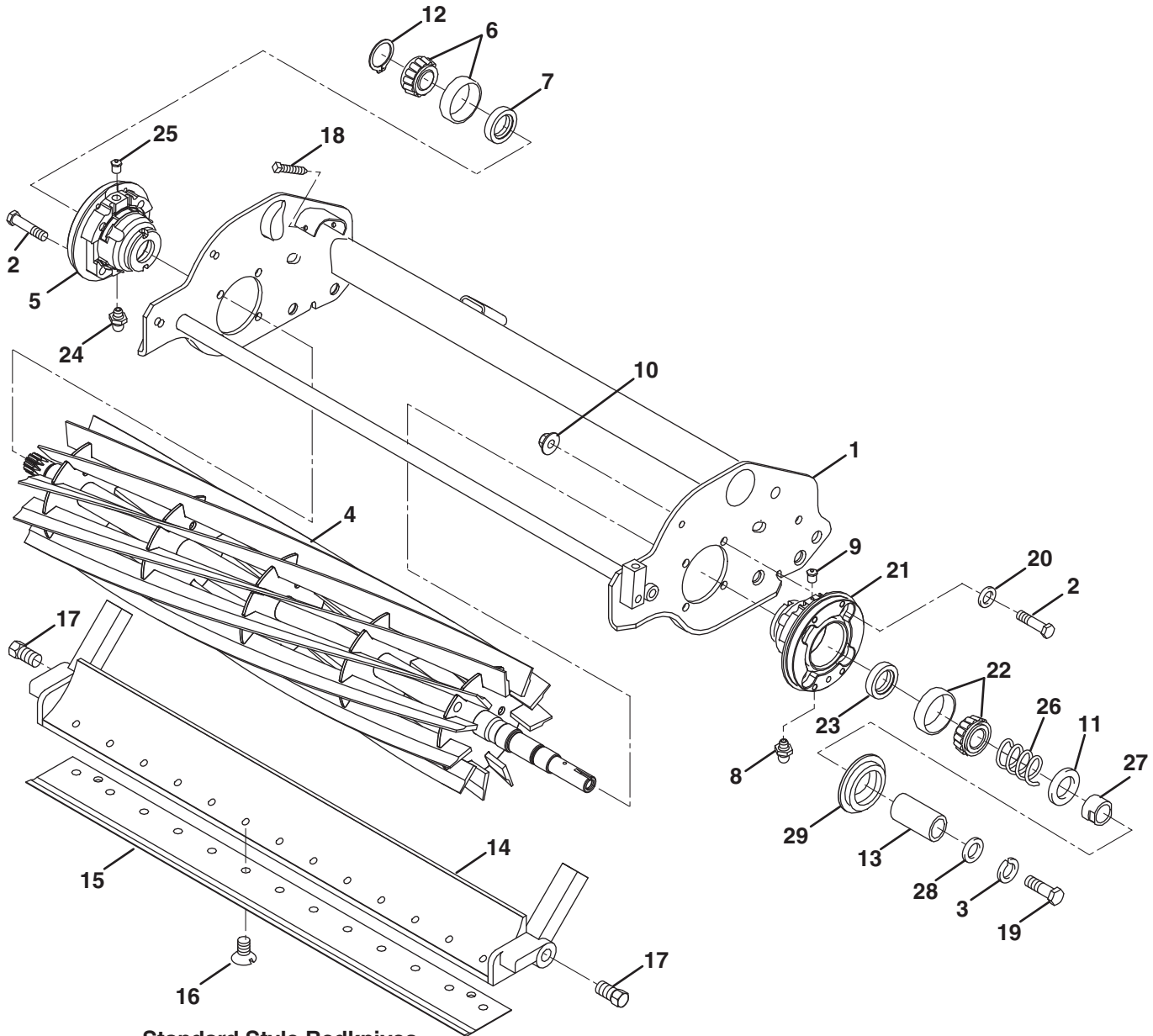
Serial No. 63341 - 1651 ~ 2599

Serial No. 63345 - 1651 ~ 2599

Serial No. 63346 - 1651 ~ 2599

Serial No. 63349 - 1651 ~ 2599

Serial No. 63350 - 1651 ~ 2599



**Standard Style Bedknives  
(Secured with screws)**

Part Number	Description
5000098	18" Low Profile
● 5002888	18" Super Tournament
4234901	18" Championship
503478	22" Low Profile
503477	22" High Profile
● 5002887	22" Super Tournament
4234900	22" Championship

● Standard Bedknife

**Optional MagKnife Bedknives**

Part Number	Description
4131371	18" Low Profile
4131373	18" Tournament
4131004	18" Super Tournament
4131369	22" High Profile
4131001	22" Low Profile
4131370	22" Tournament
4131003	22" Super Tournament

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4170204	1	Frame, 18" Reel	Used on 63336, 63345, 63337, and 63346
1	5002577	1	Frame, 22" Reel	Used on 63340, 63349, 63341, and 63350
2	400192	8	Screw, 5/16-18 x 1-1/2" Hex Head	
3	446142	1	Lockwasher, 3/8 Heavy	
4	4225504	1	15 Blade, 18" Left Hand Reel	Used on 63337 and 63346
4	4225505	1	15 Blade, 22" Left Hand Reel	Used on 63341 and 63350
4	4170220	1	11 Blade, 18" Left Hand Reel	Used on 63336 and 63345
4	5001101	1	11 Blade, 22" Left Hand Reel	Used on 63340 and 63349
4	5001099	1	9 Blade, 22" Left Hand Reel	Optional Reel
4	5003053	1	7 Blade, 22" Left Hand Reel	Optioanl Reel
5	1004756	1	Bearing Housing	
6	500534	1	• Bearing, Cup and Cone	
7	336962	1	• Seal, Grease	
8	471214	1	• Grease Fitting	
9	471242	1	• Vent Fitting	
10	445795	8	Nut, 5/16-18 Spiralock Flange	
11	304745	1	Washer	
12	458013	1	Snap Ring	
13	367164	1	Spacer	
14	2811055	1	Backing, 18" Bedknife	
14	2000068	1	Backing, 22" Bedknife	
15	See Chart	1	Bedknife	
16	4252470	AR	Screw, 1/4-20 x 1/2" Bedknife	Package of 100 Screws
17	315298	2	Wheel Bolt, 7/16 x 3/4"	
18	412503	4	Screw, 3/8-16 x 1-1/4" Square Head	
19	400294	1	Screw, 3/8-24 x 1" Hex Head	
20	453009	4	Flat Washer, 5/16	
21	1000480	1	Bearing Housing	
22	500534	1	• Bearing, Cup and Cone	
23	336962	1	• Seal, Grease	
24	471214	1	• Grease Fitting	
25	471242	1	• Vent Fitting	
26	5002151	1	Spring, Compression	
27	364900	1	Nut, Reel	
28	453011	1	Flat Washer, 3/8	
29	163892	1	Seal	

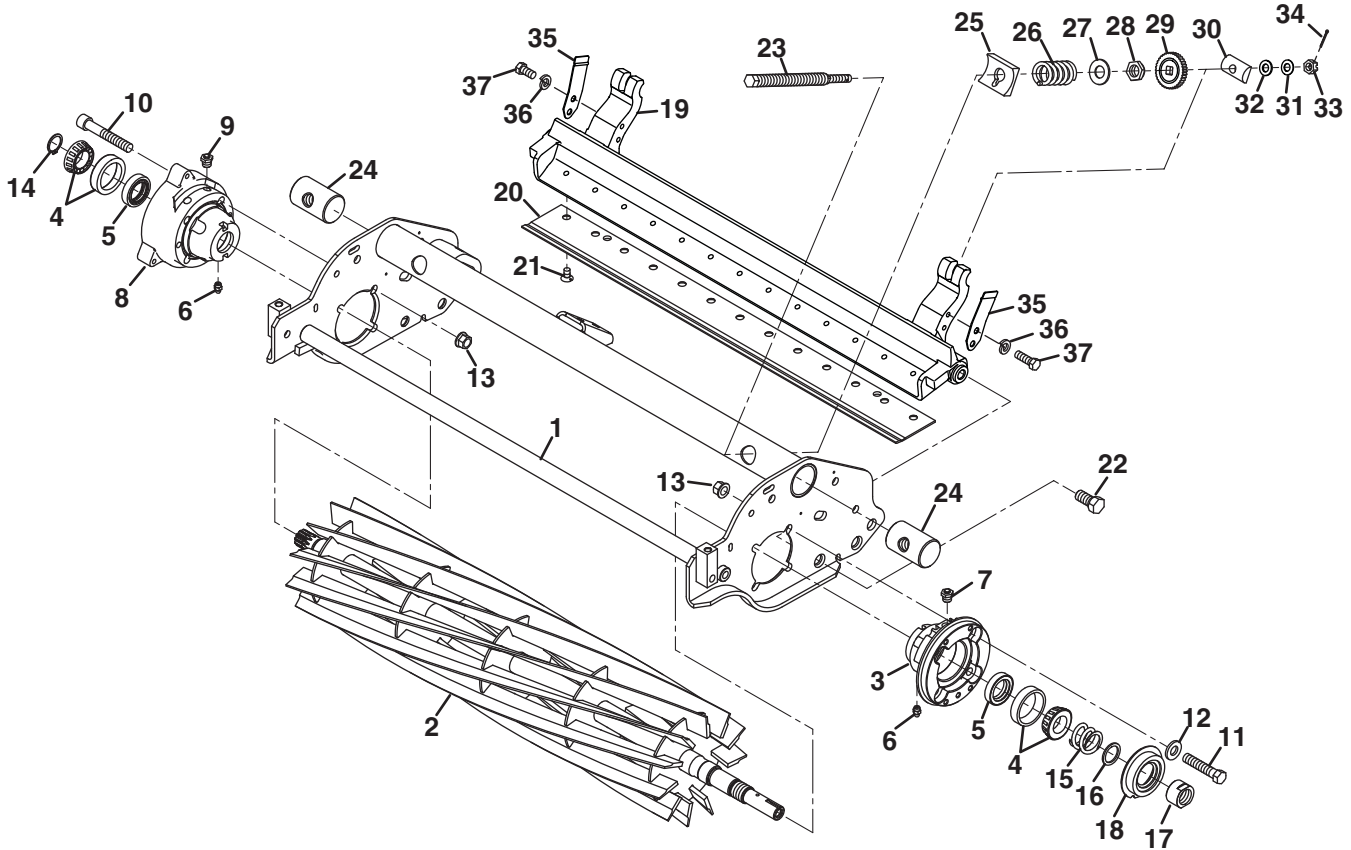
> Change from previous revision

# ECLIPSE 2

## 13.1 Inner Reel Assembly

Floating Head Units Only

Serial No. 63336 - 2600 and Up  
 Serial No. 63337 - 2600 and Up  
 Serial No. 63340 - 2600 and Up  
 Serial No. 63341 - 2600 and Up  
 Serial No. 63345 - 2600 and Up  
 Serial No. 63346 - 2600 and Up  
 Serial No. 63349 - 2600 and Up  
 Serial No. 63350 - 2600 and Up



### Standard Style Bedknives (Secured with screws)

Part Number	Description
5000098	18" Low Profile
● 5002888	18" Super Tournament
4234901	18" Championship
▲ 5003150	22" Medium Section
503477	22" High Profile
◆ 503478	22" Low Profile
503479	22" Tournament
● 5002887	22" Super Tournament
4234900	22" Championship

- ▲ Standard Bedknife (7 Blade)
- ◆ Standard Bedknife (9 Blade)
- Standard Bedknife (11 and 15 Blade)

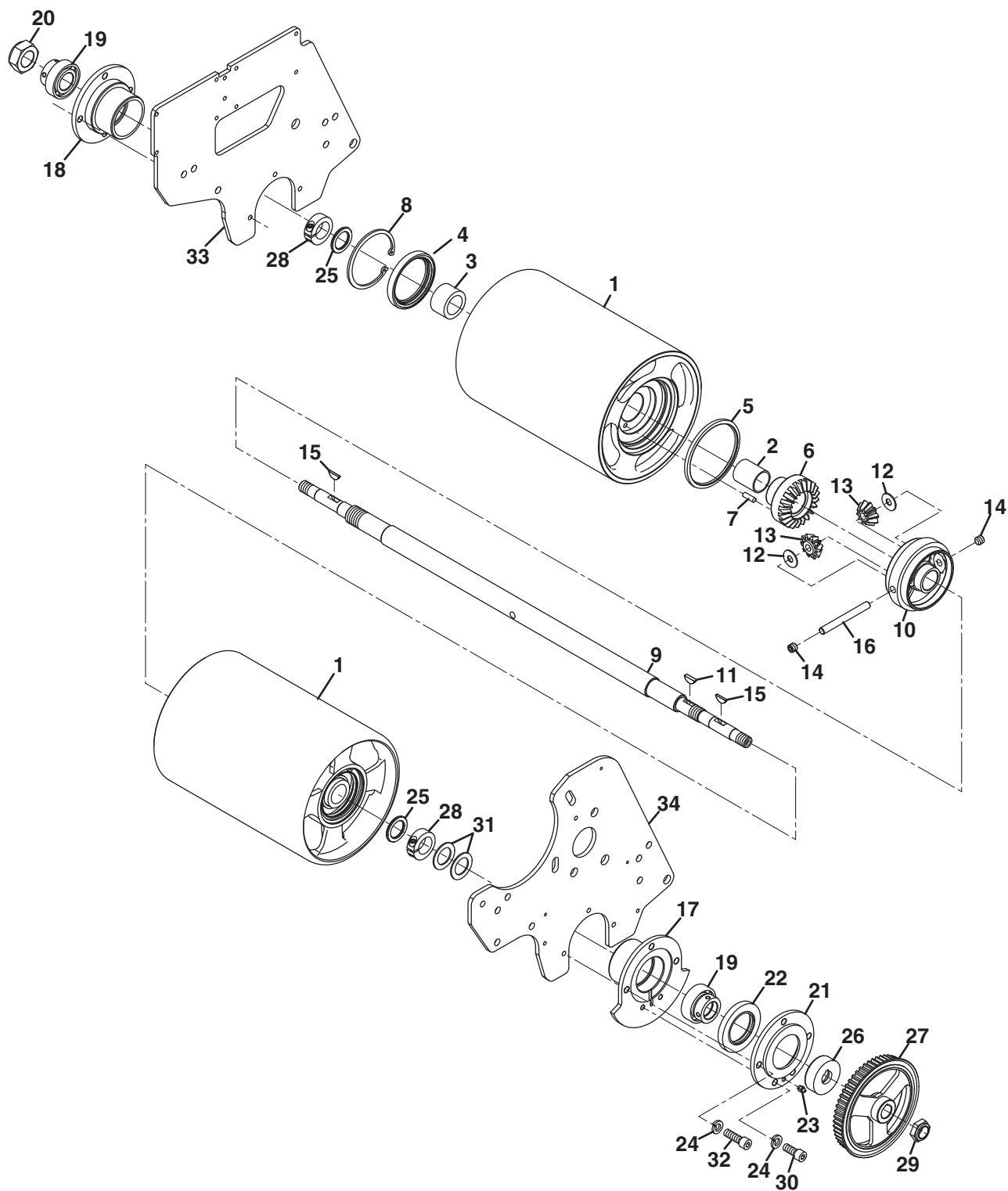
### Optional MagKnife Bedknives

Part Number	Description
4131371	18" Low Profile
4131373	18" Tournament
4131004	18" Super Tournament
4131369	22" High Profile
4131001	22" Low Profile
4131370	22" Tournament
4131003	22" Super Tournament

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4256224	1	18" Reel Frame	
1	4256225	1	22" Reel Frame	
2	4170220	1	Reel, 18" 11 Blade	Used on 63336 and 63345
2	4225504	1	Reel, 18" 15 Blade	Used on 63337 and 63346
2	5003053	1	Reel, 22" 7 Blade	Optional Reel
2	5001099	1	Reel, 22" 9 Blade	Optional Reel
2	5001101	1	Reel, 22" 11 Blade	Used on 63340 and 63349
2	4225505	1	Reel, 22" 15 Blade	Used on 63341 and 63350
3	1000480	1	Housing, Bearing	
4	500534	1	• Bearing, Cup and Cone	
5	336962	1	• Seal, Grease	
6	471214	1	• Grease Fitting	
7	471240	1	• Vent Fitting	
8	4268330	1	Housing, Bearing	Includes Items 4~6
9	471242	2	• Vent Fitting	
10	434049	4	Screw, 5/16-18 x 2" Socket Head	
11	400192	4	Screw, 5/16-18 x 1-1/2" Socket Head	
12	453009	4	Flat Washer, 5/16	
13	445795	8	Nut, 5/16-18 Spirallock Flange	
14	458013	1	Ring, Snap	
15	5002151	1	Spring, Compression	
16	304745	1	Washer, Reel Shaft	
17	364900	1	Nut, 3/4-16 Reel	
18	163892	1	Seal Assembly	
19	4255751	1	Backing, 18" Bedknife	
19	4255754	1	Backing, 22" Bedknife	
20	See Chart	1	Bedknife	
21	4252470	AR	Screw, Bedknife	Package of 100 Screws
22	315298	2	Bolt, 7/16-20 x 3/4" Wheel	
23	4256228	2	Rod, Bedknife Adjuster	
24	4256227	2	Trunnion, Internal	
25	4256229	2	Cradle, Tube Spring	
26	4256231	2	Spring, Compression	
27	400051	2	Washer, 1/2" Bellville	
28	400050	2	Nut, 1/2-20 Hex Jam Nylock	
29	4256233	2	Washer, Bedknife Adjustment	
30	4256232	2	Trunnion Half	
31	400052	2	Washer, 5/16 Bellville	
32	400065	AR	Washer, Shim	
33	400053	2	Nut, 5/16-24 Hex Slotted	
34	460008	2	Cotter Pin, 5/64 x 3/4"	
35	4256230	2	Spring, Detent	
36	446130	4	Lockwasher, 1/4 Heavy	
37	400104	4	Screw, 1/4-20 x 1/2" Hex Head	

> Change from previous revision

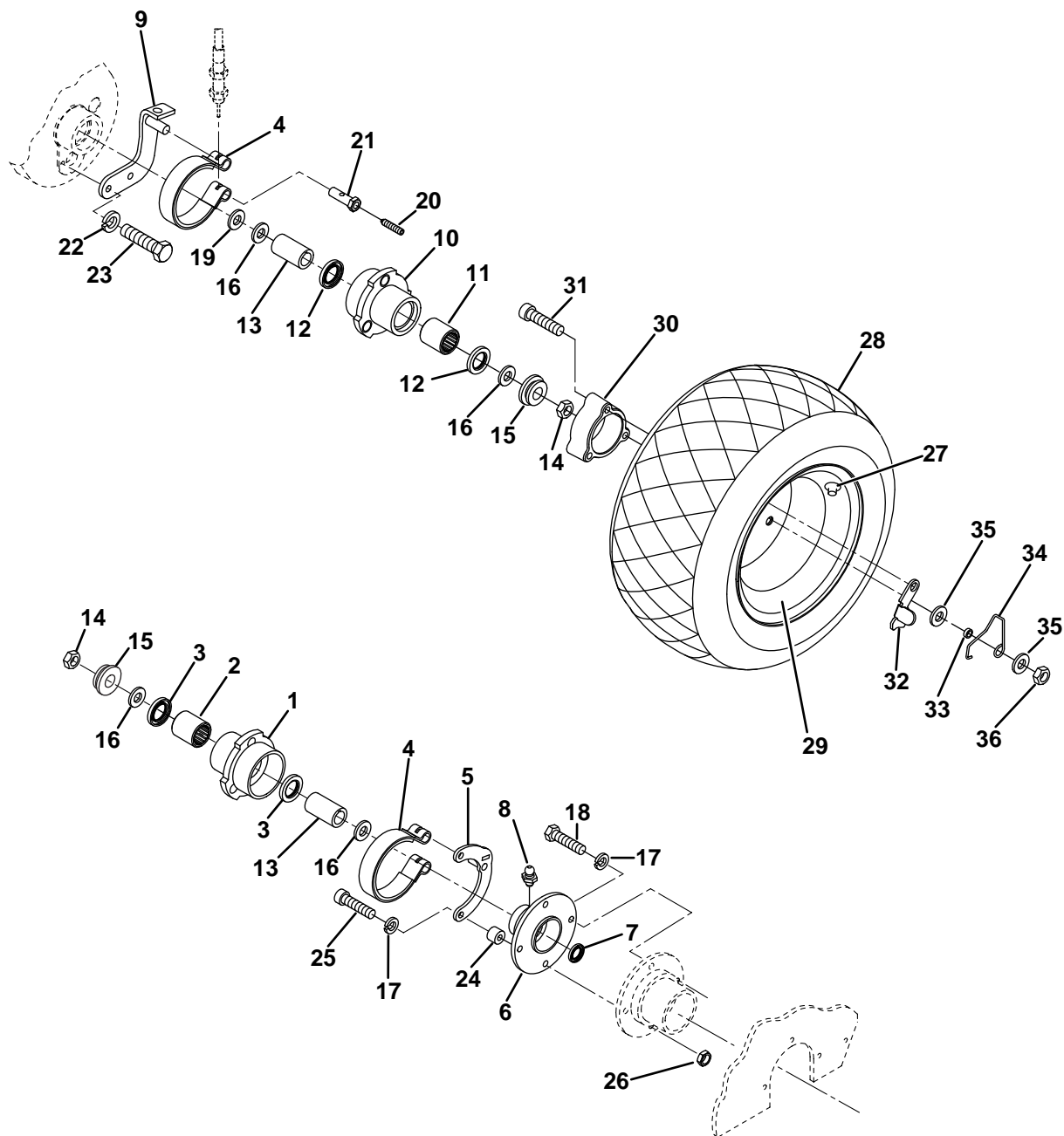
## 14.1 Differential and Rollers



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1000024	2	18" Smooth Roller	
1	132655	2	22" Smooth Roller	
1	1000027	2	26" Dimpled Roller	
2	366699	1	• Differential Gear Bushing	
3	366698	1	• Drum Bushing	
4	366701	1	• Grease Seal	
5	366700	1	• Grease Seal	
6	241836	1	• Differential Gear	
7	319085	1	• Pin	
8	458127	1	• Snap Ring	
9	395419	1	18" Roller Shaft	
9	395367	1	22" Roller Shaft	
9	395418	1	26" Roller Shaft	
10	241835	1	Differential	
11	463017	1	Key, #9 Woodruff	
12	308030	2	Thrust Washer	
13	202947	2	Pinion Gear	
14	415563	2	Set Screw, 7/16-20 x 3/8"	
15	463007	2	Key, #7 Woodruff	
16	308028	1	Pinion Shaft	
17	220318	1	Bearing Housing	
18	220319	1	Bearing Housing	
19	366693	2	Bearing	
20	2810096	1	Nut, 1-14 Nylock Hex	
21	241833	1	Seal Cover	
22	366702	1	Grease Seal	
23	471214	1	Grease Fitting	
24	446136	5	Lockwasher, 5/16 Heavy	
25	366697	2	Spacer	
26	366696	1	Spacer	
27	3004484	1	Pulley, 56 Tooth	
28	366695	2	Locking Collar	
29	367029	1	Nut, 3/4-16 Hex Nylock Jam	
30	434024	2	Screw, 5/16-18 x 3/4" Socket Head	
31	361451	2	Washer	
32	434003	3	Screw, 5/16-18 x 1" Socket Head	
33	REF	1	Right Side Frame	<b>See 5.1</b>
34	REF	1	Left Side Frame	<b>See 5.1</b>

> Change from previous revision

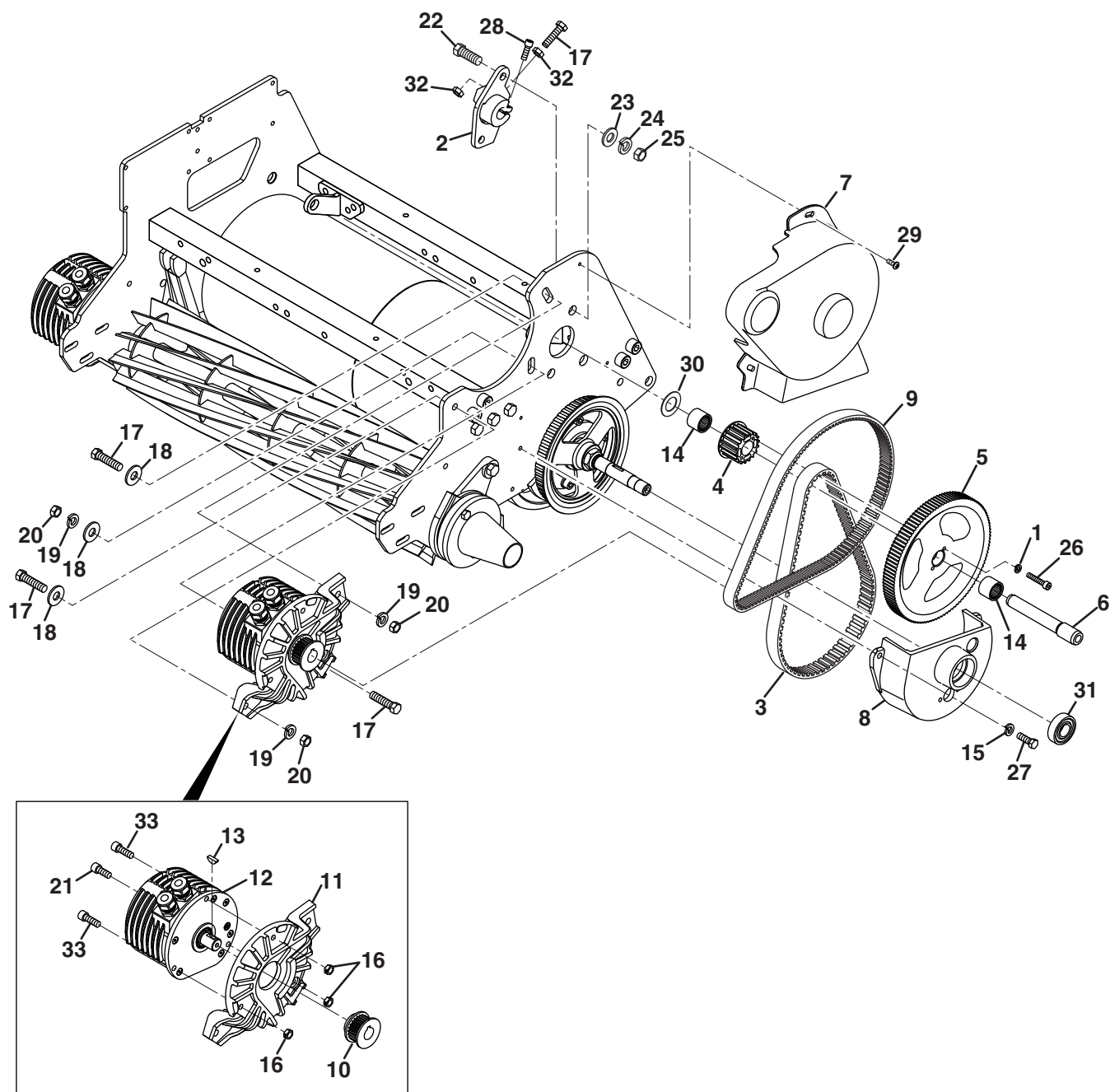
## 15.1 Parking Brake and Wheels



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1000476	1	R.H. Hub	
2	338766	1	• Bearing	
3	366705	2	• Grease Seal	
4	164056	2	Brake Band	
5	132663	1	Brake Mounting Bracket	
6	132658	1	Seal Housing	
7	365753	1	• Grease Seal	
8	4128725	1	• Grease Fitting	
9	164063	1	Brake Mounting Bracket	
10	1000477	1	L.H. Hub	
11	338766	1	• Bearing	
12	366705	2	• Grease Seal	
13	366717	2	Clutch Sleeve	
14	445801	2	Nut, 5/8-18 Hex Jam Lock	
15	366718	2	Latching Collar	
16	366697	4	Bushing	
17	446136	4	Lockwasher, 5/16 Heavy	
18	400188	2	Screw, 5/16-18 x 1" Hex Head	
19	361451	1	Washer	Left Side Only
20	415513	2	Set Screw, 1/4-20 x 1/2"	
21	366742	2	Brake Band Pin	
22	446130	2	Lockwasher, 1/4 Heavy	
23	400108	2	Screw, 1/4-20 x 3/4" Hex Head	
24	366737	2	Spacer	
25	434032	2	Screw, 5/16-18 x 1-3/4" Socket Head	
26	443106	1	Nut, 5/16-18 Hex	
	62293	1	Pneumatic Transport Tire Kit	Optional Accessory
27	360111	2	• Valve	
28	4256477	2	• Tire, 11 x 4-5	
29	4256478	2	• Wheel Rim, 5 x 3"	
30	271920	2	• Wheel Spacer	
31	434049	6	• Screw, 5/16-18 x 2" Socket Head	
32	366719	2	• Latch	
33	366716	6	• Spacer	
34	366704	2	• Spring	
35	453009	12	• Flat Washer, 5/16	
36	444718	6	• Locknut, 5/16-18 Center	

> Change from previous revision

## 16.1 Belts and Drive Motors

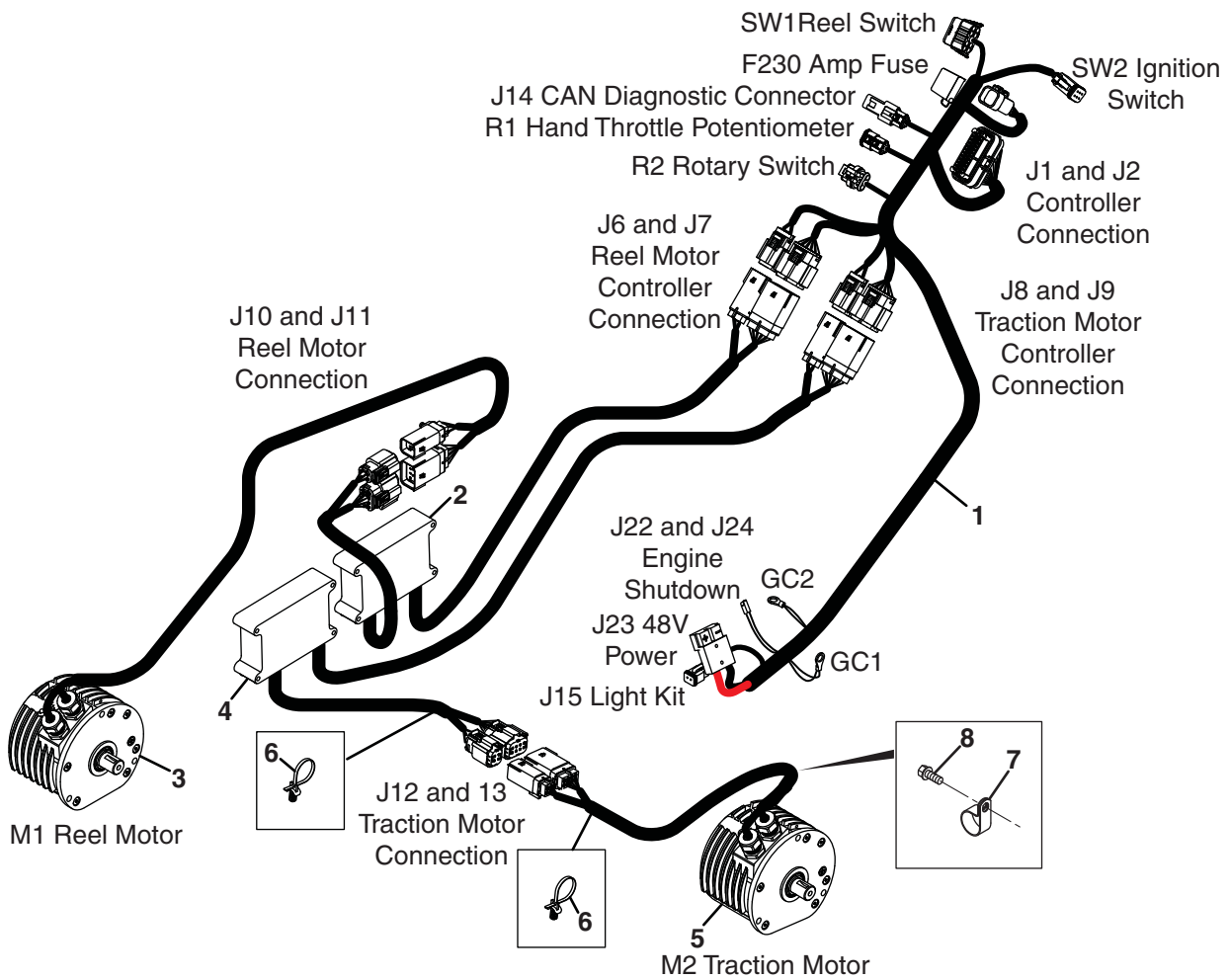


Fixed Head Frame Shown. Floating Head Similar

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	446116	2	Lockwasher, #10	
2	2000148	1	Bracket, Bearing	
3	2811070	1	Belt, Polychain, 80 Tooth	
4	2811223	1	Pully, 18 Tooth	
5	2811107	1	Pully, 112 Tooth	
6	3001273	1	Shaft	
7	4140154	1	Floating Head Pulley Cover	
8	4199640	1	Cover, Belt	
9	2811106	1	Belt, 130 Tooth	
10	2811108	1	Pulley, 23 Tooth	
11	4256571	1	Mount, Motor	
12	4261470	1	Motor, Brushless Bi-Directional	<b>Reference M2, See 21.1</b>
13	463029	1	Key, Woodruff	
14	367554	2	Bearing, Needle	
15	446130	2	Lockwasher, 1/4 Heavy	
16	444708	3	Locknut, 1/4-20 Center	
17	400190	4	Screw, 5/16-18 x 1-1/4" Hex Head	
18	452006	3	Flat Washer, 5/16	
19	446136	3	Lockwasher, 5/16 Heavy	
20	443106	3	Nut, 5/16-18 Hex	
21	434011	1	Screw, 14-20 x 5/8" Socket Head	
22	400262	2	Screw, 3/8-16 x 1" Hex Head	
23	453011	2	Flat Washer, 3/8	
24	446142	2	Lockwasher, 3/8 Heavy	
25	443110	2	Nut, 3/8-16 Hex	
26	434034	2	Screw, 10-24 x 1" Socket Head	
27	400106	2	Screw, 1/4-20 x 5/8" Hex Head	
28	434031	1	Screw, 1/4-20 x 3/4" Socket Head	
29	409807	3	Screw, 1/4-20 x 3/4" Thread Cutting	
30	359864	AR	Thrust Washer	
31	366707	1	Ball Bearing	
32	443806	2	Nut, 5/16-24 Hex Jam	
33	434028	2	Screw, 1/4-20 x 3/4" Socket Head	

> Change from previous revision

## 17.1 Harness Routing



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4254330	1	Harness, Main	
	4262910	1	• 30 Amp Mini Fuse	<b>REFERENCE F1, See 21.1</b>
2	4253190	1	Controller, Reel Motor	<b>REFERENCE U1, See 21.1, 4.1</b>
3	4261470	1	Motor, Brushless Bi-Directional	<b>REFERENCE M1, See 21.1, 6.1, 9.1</b>
4	4253190	1	Controller, Traction Motor	<b>REFERENCE U2, See 21.1, 4.1</b>
5	4261470	1	Motor, Brushless Bi-Directional	<b>REFERENCE M2, See 21.1, 16.1</b>
6	4167640	3	Cable Tie, Fir Tree	
7	354080	1	Clamp, 1" Tube	
8	409807	1	Screw, 1/4-20 x 1/2" Thread Cutting	
9	473142	12	Cable Tie, 3/16 x 14"	Not Shown, harness to handle.

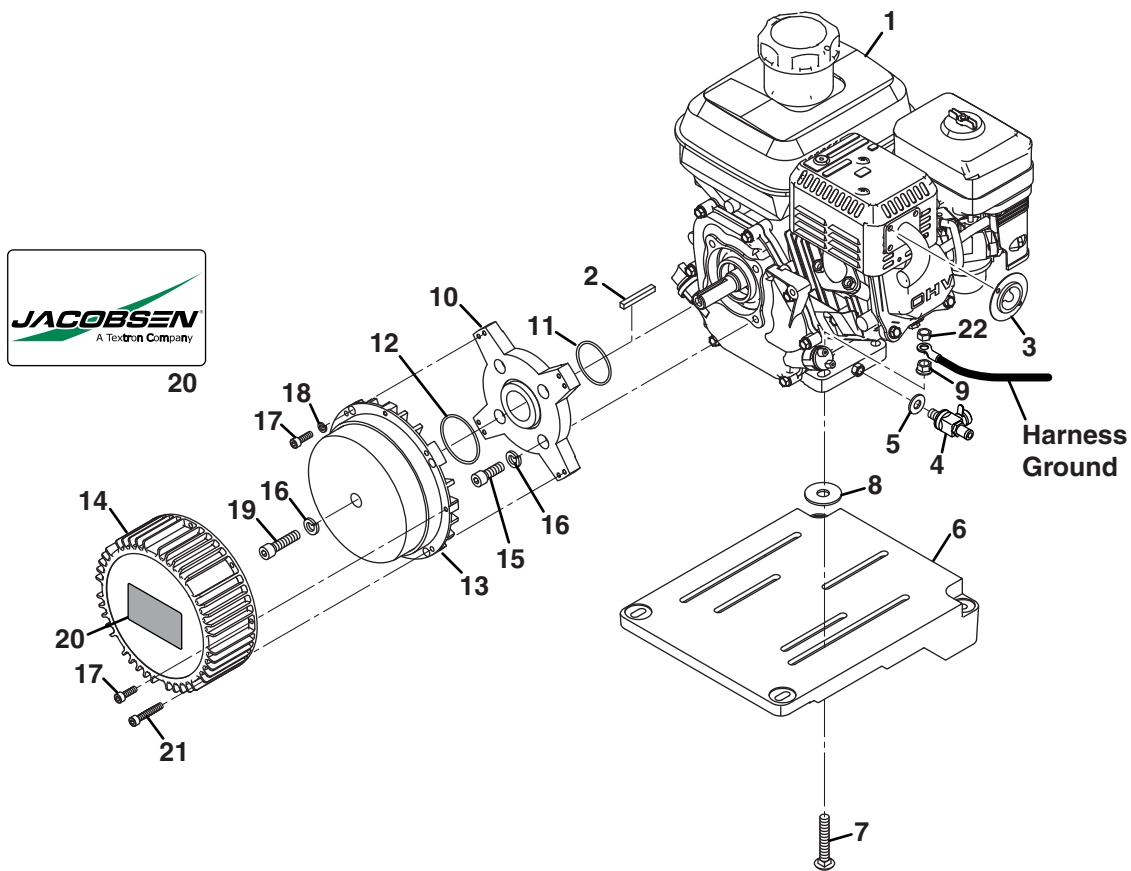
&gt; Change from previous revision

# ECLIPSE 2

## 18.1 Genset Power Source

63305

Serial No. 63334 - All	Serial No. 63337 - All	Serial No. 63341 - All
Serial No. 63335 - All	Serial No. 63338 - All	
Serial No. 63336 - All	Serial No. 63339 - All	
Serial No. 63337 - All	Serial No. 63340 - All	



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4258930	1	Engine, Honda GX-120	
2	320774	1	• Key, 3/16 x1-1/2" Square	
3	4170500	1	Trim, Muffler	
4	4172080	1	Valve, Oil Drain	
5	4187840	1	Gasket, Oil Drain Valve	
6	4253595	1	Mount, Power Source	
7	441674	4	Carriage Bolt, 5/16-18 x 1-3/4"	
8	455043	4	Flat Washer, 3/8	
9	548911	4	Nut, 5/16-18 Hex Flange	
	4258510	1	Generator, Eclipse II	<b>REFERENCE U3, See 21.1</b>
10	N/S	1	• Generator Adapter Base	
11	N/S	1	• O-Ring, 2" O.D.	
12	N/S	1	• O-Ring, 2-1/4" O.D.	
13	N/S	1	• Generator	
14	N/S	1	• Cover, Generator	
15	434060	4	Screw, 5/16-24 x 7/8" Hex Socket	
16	446136	5	Lockwasher, 5/16 Heavy	
17	450697	8	Screw, M5-.8 x 16 mm Hex Socket	
18	450409	4	Lockwasher, M5	
19	800646	1	Screw, 5/16-24 x 1-1/4" Hex Socket	
20	4182386	1	Decal, Jacobsen	
21	450700	4	Screw, M5-.5 x 30 mm Hex Socket	
22	443806	1	Nut, 5/16-18 Hex Jam	

> Change from previous revision

# ECLIPSE 2

## 19.1 Battery Power Source

63306

Serial No. 63343 - All

Serial No. 63344 - All

Serial No. 63345 - All

Serial No. 63346 - All

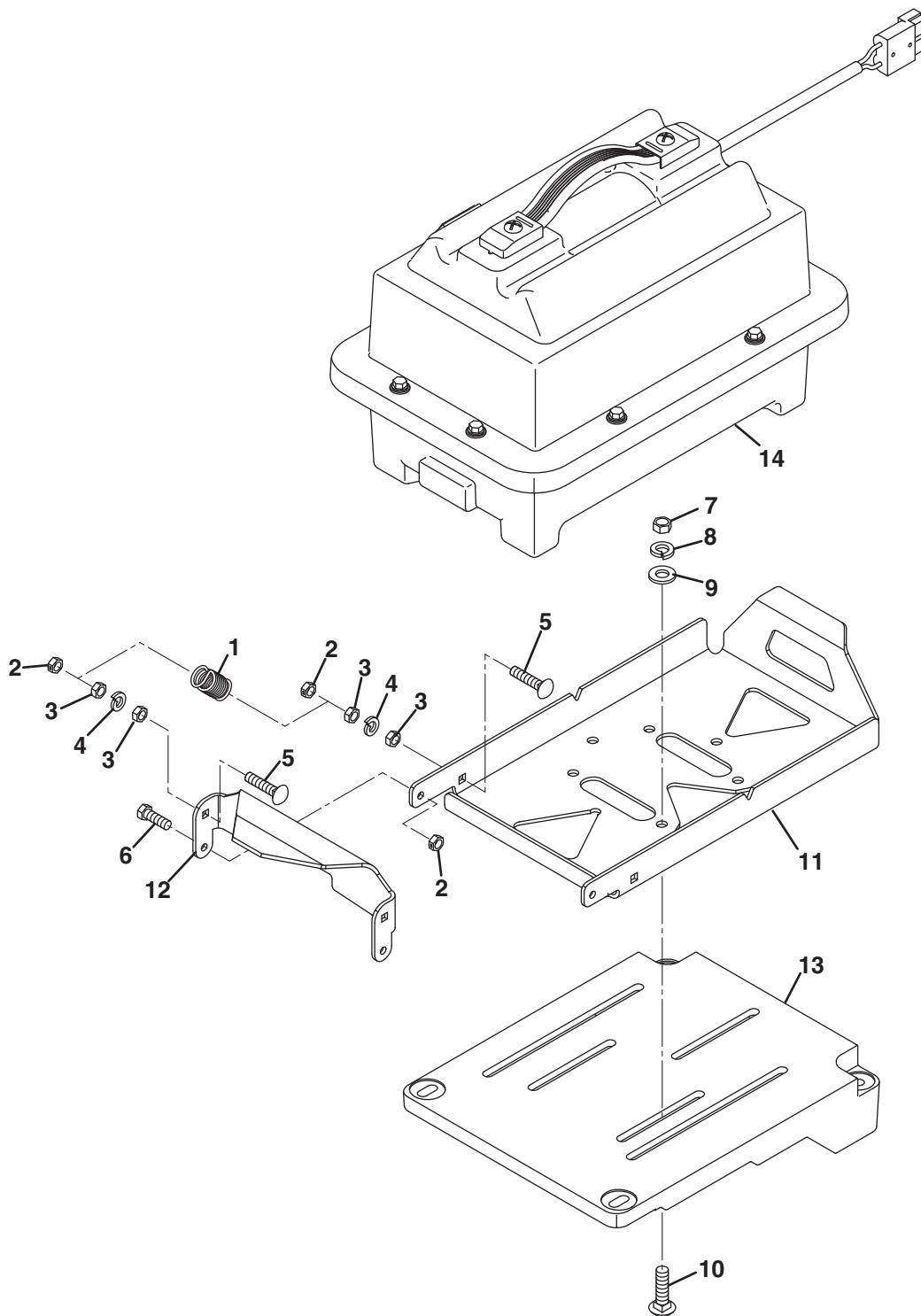
Serial No. 63347 - All

Serial No. 63348 - All

Serial No. 63349 - All

Serial No. 63350 - All

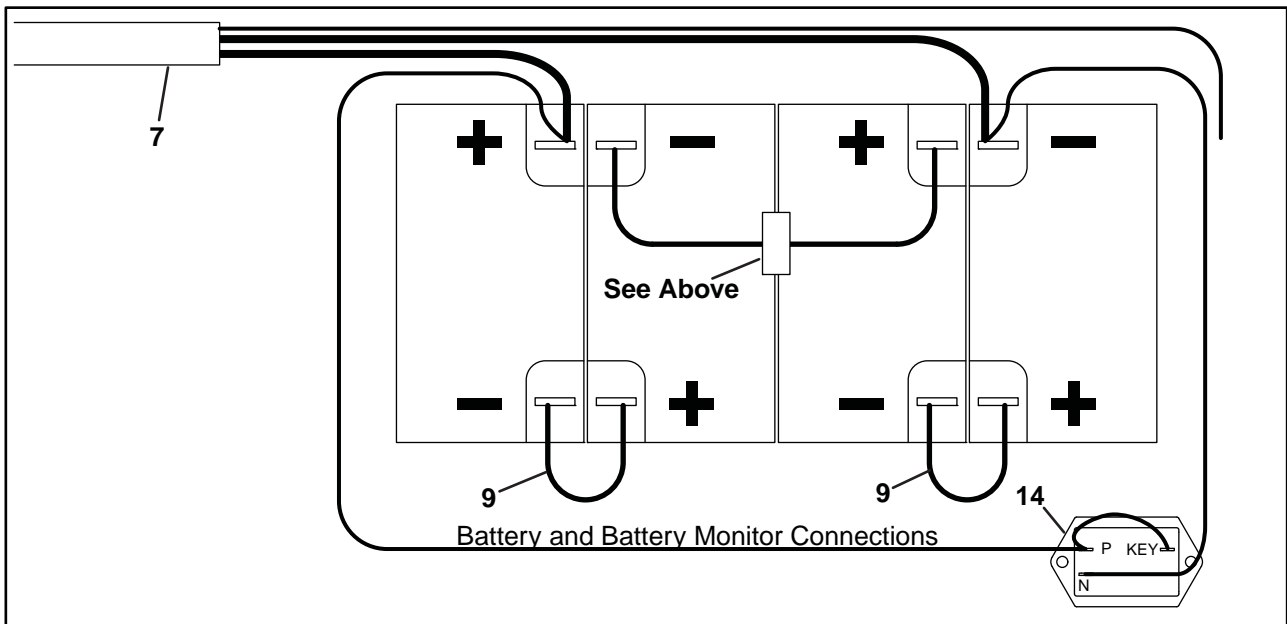
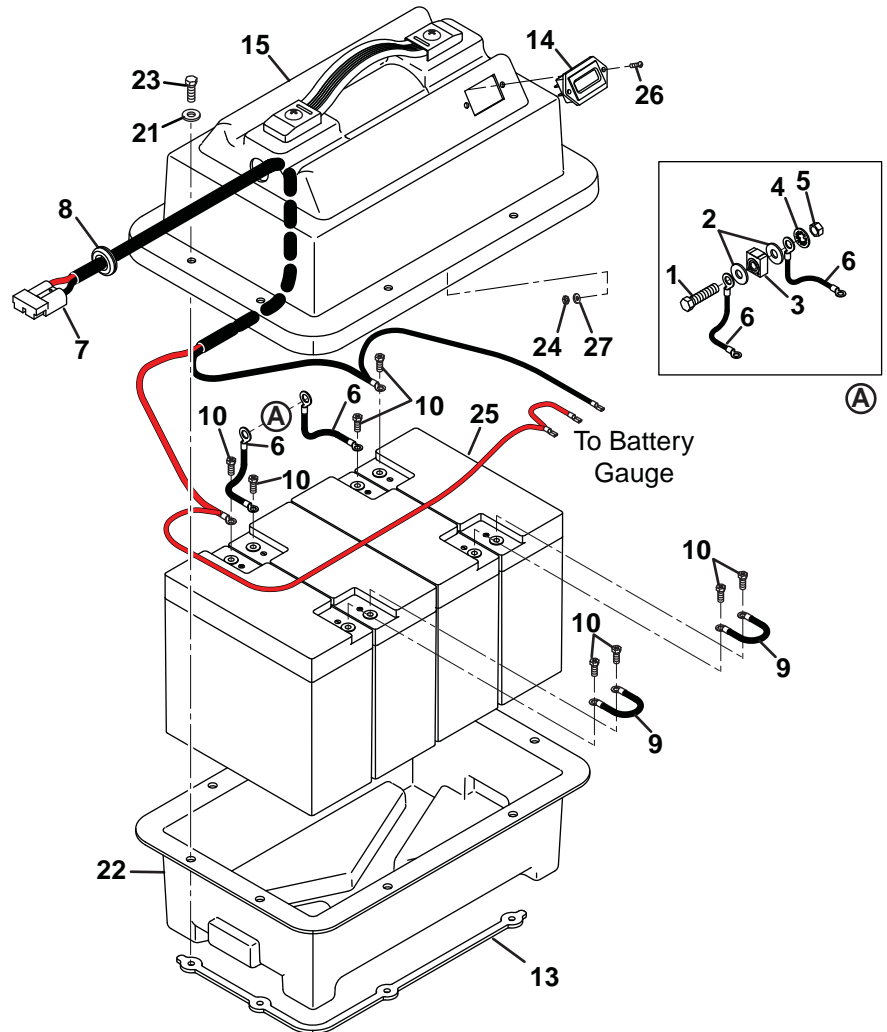
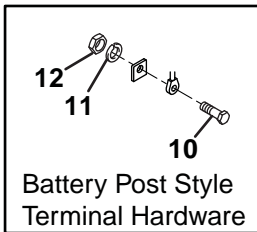
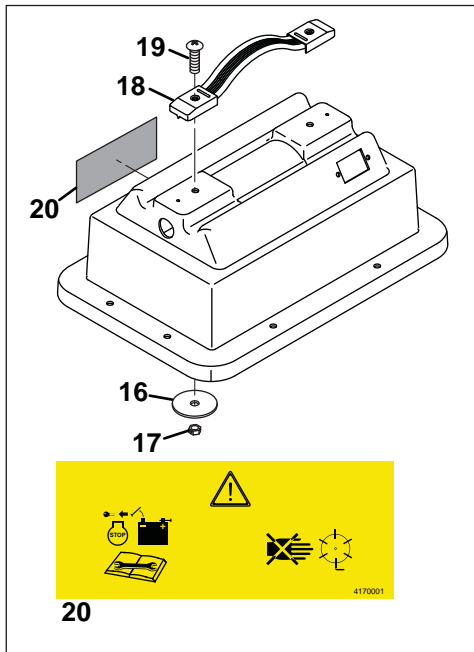
Serial No. 63341 - All



<b>Item</b>	<b>Part No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Serial Numbers/Notes</b>
1	2809837	2	Spring, Extension	
2	444708	6	Locknut, 1/4-20 Center	
3	443102	8	Nut, 1/4-20 Hex	
4	446130	4	Lockwasher, 1/4 Heavy	
5	441604	4	Carriage Bolt, 1/4-20 x 1"	
6	400108	2	Screw, 1/4-20 x 3/4 Hex Head	
7	443106	3	Nut, 5/16-18 Hex	
8	446136	3	Lockwasher, 5/16 Heavy	
9	453009	3	Flat Washer, 5/16	
10	440082	3	Carriage Bolt, 5/16-18 x 1"	
11	4104080	1	Battery Tray	
12	2811206	1	Clip	
13	4253595	1	Power Module Mount	
14	68668	1	Battery Pack	See 20.1

&gt; Change from previous revision

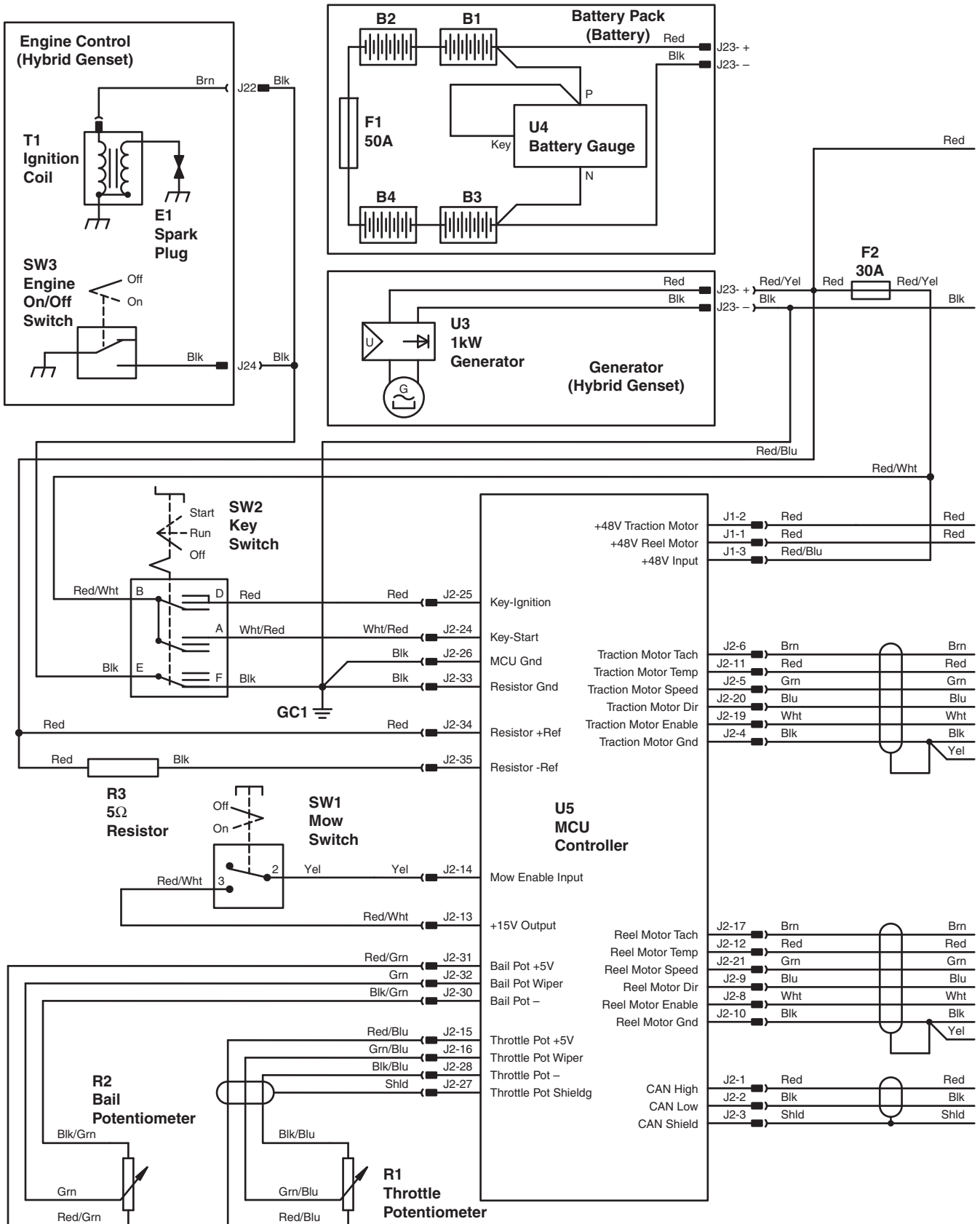
## 20.1 Battery Case

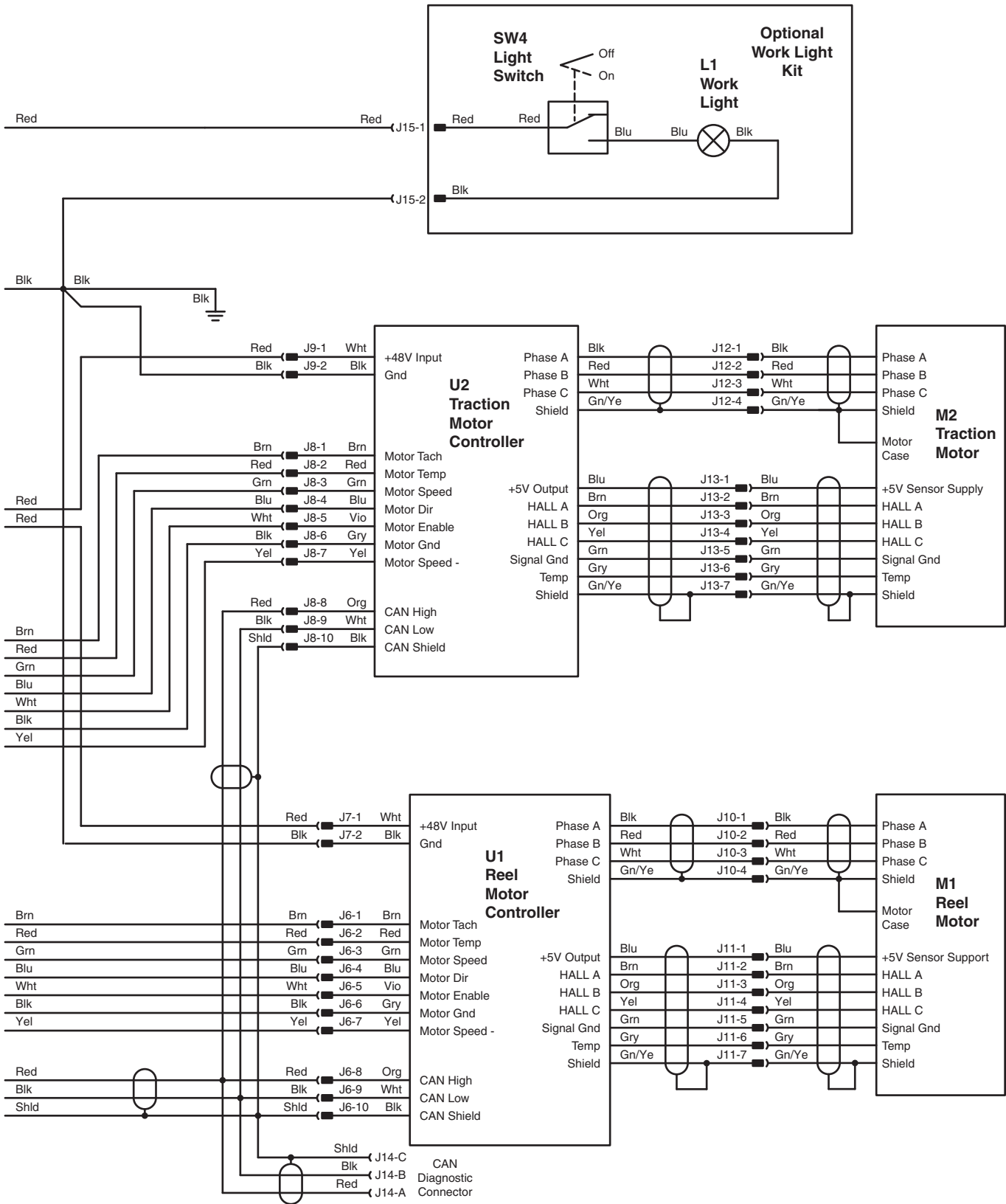


Item	Part No.	Qty.	Description	Serial Numbers/Notes	
	68668	1	Battery Case	Does Not Include Batteries	
1	4105660	1	• Screw, 5/16-18 x 1-1/4" Nylon	<b>Reference F1, See 21.1</b>	
2	452004	2	• Flat, Washer 1/4		
3	4105800	1	• Fuse, 50A		
4	447214	1	• Lockwasher, 5/16 Internal		
5	443106	1	• Nut, 5/16 Hex		
6	2811664	2	• Cable		
7	2811662	1	• Main Cable		
8	366984	1	• Grommet		
9	2811663	2	• Cable, Jumper		
10	403741	8	• Screw, #8-32 x 5/8" Hex Head		
11	444306	8	• Nut, 8-32 Hex		
12	446112	8	• Lockwasher, #8 Heavy		
13	4101600	2	• Strap, Battery Case		<b>Reference U4, See 21.1</b> Includes Decals
14	4245270	1	• Gauge, Battery		
15	2811221	1	• Lid, Battery Case		
16	455058	2	• • Flat Washer, 1/4		
17	444708	2	• • Locknut, 1/4-20, Center Lock		
18	2811220	1	• • Handle, Battery Case		
19	404022	2	• • Screw, 1/4-20 x 1" Truss Head		
20	4170001	1	• • Decal, Danger		
21	453023	8	• Flat Washer, 1/4		
22	2809762	1	• Battery Case, Lower Half		
23	408851	8	• Screw, 1/4-20 x 3/4" Hex Self Tap		
24	444304	2	Nut, #6-32 Hex	<b>Reference B1, B2, B3, B4, See 21.1</b>	
25	N/S	4	Battery, 12V		
26	402006	2	Screw, #6-32 x 1/2" Slotted Round		
27	450419	2	Flat Washer, #6		

> Change from previous revision

## 21.1 Electrical Schematic



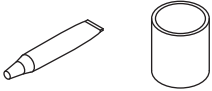
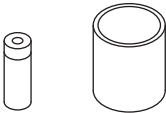

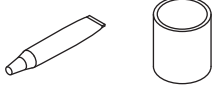

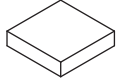




## ECLIPSE 2

Item	Reference Illustration	Part Number	Description	Serial Numbers/Notes
B1	See 20.1	N/S	12 Volt SLA Battery	Obtain batteries locally or through your Jacobsen Dealer Battery Power Module Only
B2	See 20.1	N/S	12 Volt SLA Battery	
B3	See 20.1	N/S	12 Volt SLA Battery	
B4	See 20.1	N/S	12 Volt SLA Battery	
E1	Not Shown	N/S	Spark Plug	Included with Engine
F1	See 20.1	4105800	50 Amp Fuse (Battery)	Battery Power Module Only
F2	Not Shown	4262910	30 Amp Fuse (Main)	Included with Harness
L1	Not Shown	4187221	48V Work Light	Part of optional light kit 63320
M1	See 6.1 or 9.1	4261470	Reel Motor	
M2	See 16.1	4261470	Traction Motor	
R1	See 2.1	4260432	Hand Throttle Potentiometer	
R2	See 2.1	4145428	Bail Lever Potentiometer	
R3	See 4.1	4260610	Resistor, 5Ω Ceramic	
SW1	See 1.1	4165020	Key Switch	
SW2	See 1.1	4130132	Reel Switch	
SW3	Not Shown	N/S	Engine Shut Down Switch	Included with Engine
SW4	Not Shown	4208861	Light Switch	
T1	Not Shown	N/S	Ignition Coil	Included with Engine
U1	See 4.1	4253190	Reel Motor Controller	
U2	See 4.1	4253190	Traction Motor Controller	
U3	See 18.1	4258510	Generator, 1kW	Gen-Set Power Module Only
U4	See 20.1	4245270	Battery Gauge	Battery Power Module Only
U5	See 1.1	4253551	MCU Controller	

# Fluids and Compounds

<b>Hydraulic Fluid*</b>		
5001405	Two 2-1/2 Gallon Container of ISO VG68 Oil	
5001404	One 5 Gallon Pail of ISO VG68 Oil	
2500548	Two 2-1/2 Gallon Container of 10W30 Oil	
2500546	One 5 Gallon Pail of 10W30 Oil	
503409	Two 2-1/2 Gallon Container of ATF Fluid	
503407	One 5 Gallon Pail of ATF Fluid	
<b>2-Cycle Oil</b>		
554600	Twenty Four 16 Ounce Plastic Container	
554599	Twenty Four 8 Ounce Plastic Container	
<b>Grease</b>		
5000067	One 5 Gallon Pail OO-Grease	
5000068	Twenty Four 8 Ounce Tube OO-Grease	
<b>Paint</b>		
5003469	16 Ounce Gray Aerosol	
554598	Six 12 Ounce Orange Aerosol	
2500789	Twelve 1 Quart Can Orange	
546409	Two 1 Gallon Can Orange	
<b>Lapping Compound</b>		
5002488	One 10 Pound Pail of 80 Grit	
5002490	One 25 Pound Pail of 80 Grit	
5002489	One 10 Pound Pail of 120 Grit	
5002491	One 25 Pound Pail of 120 Grit	
<b>Specialty Compound</b>		
365422	5.3 Ounce Tube of Electrical Insulating Gel	
5001581	14 Ounce Can of Lubriplate Multi Lube A	
<b>Biodegradable Hydraulic Fluid*</b>		
5003102	One 55 Gallon Drum TGTSP GreensCare 68	
5003103	One 5 Gallon Pail TGTSP GreensCare 68	
5003105	One 55 Gallon Drum TGTSP GreensCare 46	
5003104	One 5 Gallon Pail TGTSP GreensCare 46	
4115976	One 55 Gallon Drum TGTSP GreensCare 32	
4115977	One 5 Gallon Pail TGTSP Greens Care 32	
5003106	Twenty Four 14 Ounce Tube Greens Care Grease	
<b>O-Ring Kit</b>		
5002452	SAE O-Ring Boss (3/32 ~ 2" Tube O.D.)	
5002453	Common O-Ring Kit	
5002454	O-Ring Face Seal ORFS (-4 ~ -24 ORS Tube Size)	
<b>Right Start Kit for New Machines</b>		
See your local TGTSP Dealer		
<b>On-Time Maintenance Kit</b>		
See your local TGTSP Dealer		

\* Refer to the Operator's manual or the Parts & Maintenance Manual for the correct hydraulic oil requirements for your machine. Textron Golf, Turf & Specialty Products offers a High Usage Parts Catalog illustrating commonly used Parts through easy to read line Drawings. See your local TGTSP Dealer for a copy.

# INDEX

1000024.....	93	3008974.....	79	366737.....	95	4117466.....	73
1000027.....	93	3010286....	81, 83, 85, 87	366742.....	95	412503.....	89
1000476.....	95	3010422....	81, 83, 85, 87	366984.....	105	4127335.....	79, 85, 87
1000477.....	95	3010712....	81, 83, 85, 87	367029.....	75, 93	4127340.....	65
1000480.....	89, 91	304745.....	77, 89, 91	367164.....	75, 87, 89	4127931.....	73
1002224.....	85, 87	306998.....	71	367512.....	75	4128725.....	77, 95
1004756.....	89	308028.....	93	367554.....	97	4128933.....	67
1004990....	81, 83, 85, 87	308030.....	93	395367.....	93	4130132.....	65, 108
132655.....	93	315298.....	89, 91	395418.....	93	4131001.....	77, 89
132658.....	95	319085.....	93	395419.....	93	4131003.....	77, 89
132663.....	95	320774.....	101	400050.....	91	4131004.....	89
163892.....	89, 91	332844.....	73	400051.....	91	4131005.....	77
164056.....	95	336962.....	89, 91	400052.....	91	4131369.....	77, 89
164063.....	95	338766.....	95	400053.....	91	4131370.....	77, 89
2000067.....	65	343616.....	79, 85, 87	400058.....	71	4131371.....	89
2000068.....	89	344132.....	71	400065.....	91	4131373.....	89
2000072.....	79	352726.....	81, 83	400104.....	91	4131618.....	65
2000074.....	77	352737.....	79, 85, 87	400106.....	97	4136325.....	67
2000075.....	77	354080.....	99	400108....	75, 81, 83, 95,	4136328.....	67
2000076.....	77	359864.....	97		103	4136366.....	67
2000148.....	97	360111.....	95	400112.....	79	4136994.....	81, 83
202947.....	93	360893.....	81, 83	400118.....	85, 87	4137303.....	67
220318.....	93	361139.....	71	400184.....	85, 87	4137577.....	81
220319.....	93	361451.....	93, 95	400186.....	71	4138778.....	81, 83
241833.....	93	364154.....	67	400188.....	95	4139660.....	79
241835.....	93	364164.....	71	400190.....	71, 97	4139661.....	79
241836.....	93	364441.....	79	400192.....	89, 91	4139662.....	79
241927.....	79	364900....	77, 89, 91	400194.....	73	4139878.....	67
241928.....	79	365246.....	85, 87	400196.....	71	4140151.....	81, 83
271920.....	95	365501.....	77	400198.....	71	4140152.....	81, 83
2809762.....	105	365753.....	95	400200.....	73	4140154.....	97
2809837.....	103	366317.....	81, 83	400204.....	71	4140163.....	85
2809900.....	69	366648.....	75	400258.....	75	4140164.....	85, 87
2809901.....	69	366650.....	77	400262.....	97	4140166.....	81, 83
2810096.....	93	366653.....	75	400264.....	75, 81, 83	4140284.....	85, 87
2811027.....	85, 87	366693.....	93	400268.....	65, 71	4140285.....	85, 87
2811055.....	89	366695.....	93	400274.....	69	4145428.....	67, 108
2811070.....	97	366696.....	93	400286.....	69	4147696.....	67
2811106.....	97	366697.....	93, 95	400294.....	75, 87, 89	415513.....	95
2811107.....	97	366698.....	93	400404.....	71	415563.....	93
2811108.....	97	366699.....	93	400410.....	71	4156781.....	67
2811206.....	103	366700.....	93	402006.....	105	4156930.....	81, 83
2811220.....	105	366701.....	93	402022.....	67	4165020.....	65, 108
2811221.....	105	366702.....	93	402056.....	65	4167541.....	75
2811223.....	97	366704.....	95	403741.....	105	4167640.....	99
2811559.....	69	366705.....	95	403782.....	85, 87	4168727.....	81, 83
2812384....	75, 81, 83	366707.....	97	404016.....	71	4169040.....	81, 83
3001273.....	97	366708.....	65	404022.....	105	4169640.....	73
3001610.....	75	366709.....	75	408851.....	105	4170001.....	105
3004484.....	93	366715.....	71	409807....	65, 71, 97, 99	4170202.....	77
3005692....	79, 85, 87	366716.....	95	4101600.....	105	4170203.....	77
3007820.....	79	366717.....	95	4104080.....	103	4170204.....	89
3007821.....	79	366718.....	95	4104720....	75, 81, 83	4170220.....	89, 91
3007822.....	79	366719.....	95	4105281.....	77	4170500.....	101
3008438.....	85, 87	366726.....	75	4105660.....	105	4171380.....	85, 87
3008439....	85, 87	366727.....	75	4105800.....	105, 108	4172080.....	101

# INDEX

417242.....	81	4256571.....	97	441688.....	73	458006.....	69
4172945.....	77	4256578.....	67	44310267, 79, 81, 83, 85,		458013.....	77, 89, 91
4174640.....	85, 87	4256692.....	67	.....	87, 103	458127.....	93
4175220....	81, 83, 85, 87	4257453.....	73	443106 ..	79, 95, 97, 103,	460008.....	91
4175221....	81, 83, 85, 87	4257455.....	71	105		460312.....	81, 83
4175240.....	85	4257457.....	71	443110	65, 75, 81, 83, 97	461181.....	65
4179720.....	77	4257470.....	73	443112.....	81, 83	461381.....	65
4179780.....	75	4257770.....	71	443118.....	71	463007.....	93
4181863.....	87	4257813.....	69	443806.....	97, 101	463017.....	93
4182386.....	101	4257814.....	69	443810.....	71, 85, 87	463029.....	75, 81, 83, 97
4187221.....	108	4258190.....	73	443828.....	69	47121475, 81, 83, 89, 91,	
4187840.....	101	4258510.....	101, 108	444304.....	67, 105	.....	93
4193060.....	71	4258590.....	71	444306.....	105	471221.....	81, 83
4196280.....	67	4258790.....	65	444708.....	97, 103, 105	471240.....	91
4199640.....	97	4258791.....	65	444718.....	67, 71, 79, 95	471242.....	75, 89, 91
4203300.....	81, 83	4258830.....	65	444758.....	71	473142.....	99
4208861.....	108	4258930.....	101	444762.....	81, 83	5000098.....	77, 89
4223946.....	77	4259130.....	71	445245.....	71	5000141.....	77
422504.....	67	4260432.....	67, 108	445770.....	65	5001099.....	89, 91
4225502.....	77	4260610.....	108	445785.....	81, 83	5001101.....	89, 91
4225504.....	89, 91	4260810.....	65	445795.....	85, 87, 89, 91	5002151.....	77, 89, 91
4225505.....	89, 91	4261071.....	81, 83	445801.....	95	5002577.....	89
4234900.....	89	4261470... 75, 81, 83, 97,		445802.....	73	5002887.....	77, 89
4234901.....	77, 89	99, ..... 108		445808.....	69	5002888.....	77, 89
4239563.....	81, 83	4264210.....	71	446112.....	105	5003053.....	89, 91
4245270.....	105, 108	4265170.....	65	446116.....	97	500534.....	77, 89, 91
4247754.....	73	4265171.....	65	446128.....	81, 83	503477.....	77, 89
4247755.....	71	4265172.....	65	44613067, 75, 79, 85, 87,		503478.....	77, 89
4252470.....	77, 89, 91	4265194.....	83	...91, 95, 97, 103		545940.....	77
4253154.....	73	4265710.....	71	44613671, 75, 79, 93, 95,		548911.....	73, 101
4253155.....	73	4265790.....	71	.....97, 101, 103		557775.....	75
4253156.....	73	4268330.....	91	44614265, 69, 71, 75, 81,		62293.....	95
4253157.....	73	4268910.....	83	....83, 87, 89, 97		64163-04.....	73
4253190.....	71, 99, 108	4273518.....	73	447214.....	105	68668.....	103, 105
4253310.....	65	4277191.....	73	447224.....	69	800271.....	71
4253330.....	65	4277192.....	87	450409.....	101	800646.....	101
4253551.....	65, 108	4277193.....	87	450419.....	105	800710.....	73
4253595.....	71, 101, 103	4324900.....	77	450697.....	101	845279.....	81
4254050.....	65	434003.....	93	450700.....	101		
4254330.....	99	434011.....	97	452004.....	65, 105		
4255550.....	71	434024.....	81, 93	452006.....	71, 97		
4255551.....	71	434028.....	75, 83, 97	453005.....	67		
4255751.....	91	434029.....	67, 81	45300971, 73, 89, 91, 95,			
4255754.....	91	434030.....	73, 81, 83	.....	103		
4255870.....	73	434031.....	67, 97	45301169, 75, 81, 83, 87,			
4256224.....	91	434032.....	95	.....	89, 97		
4256225.....	91	434034.....	97	453017.....	65		
4256227.....	91	434036.....	75	45302367, 79, 81, 83, 85,			
4256228.....	91	434049.....	75, 91, 95	.....	87, 105		
4256229.....	91	434054.....	67	454017.....	77		
4256230.....	91	434060.....	101	454020.....	67		
4256231.....	91	440082.....	103	454025.....	65		
4256232.....	91	441604.....	103	455012.....	69		
4256233.....	91	441672.....	73	455043.....	101		
4256477.....	95	441674.....	79, 85, 87, 101	455058.....	105		
4256478.....	95	441677.....	79	458001.....	67		

Europe & Rest of The World Except North & South America

Ransomes Jacobsen Limited  
West Road, Ransomes Europark, Ipswich, IP3 9TT  
English Company Registration No. 1070731  
[www.ransomesjacobsen.com](http://www.ransomesjacobsen.com)

North & South America

Jacobsen, A Textron Company  
11108 Quality Drive, Charlotte,  
NC 28273, USA  
[www.Jacobsen.com](http://www.Jacobsen.com)



***When Performance Matters.™***