

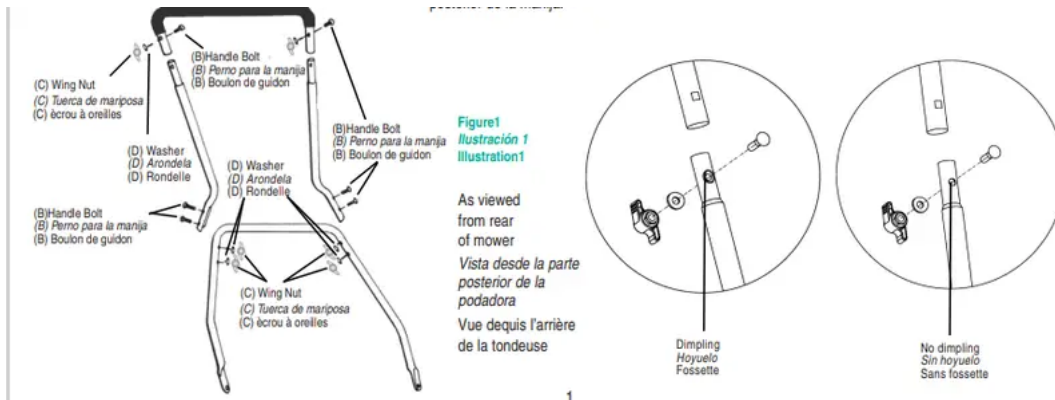
## How to Assemble

### Handle

Enclosed in carton are the: mower handle parts (1 top handle piece with foam grip, 2 center handle pieces and 1 lower handle piece) and hardware package.

As you follow the instruction below, refer to Figure 1 for more information.

- Insert the two (2) center handle pieces into the left and right side of the top handle piece. The center handles are interchangeable. The dimpling around the hole does not indicate on which side the tube is to be placed. Secure the center handles to the top handle using the two (2) M6X35 bolts and wingnuts provided. It is recommended that the bolts are inserted from the front to the rear with the wingnuts to the rear of the handle.



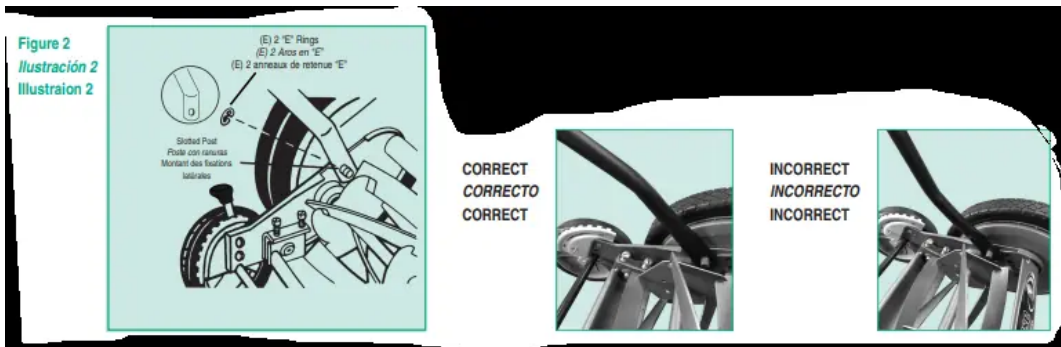
- Fasten the upper handle subassembly that you assembled in the preceding step to the lower handle subassembly using the four (4) remaining M6X35 bolts and wing nuts provided.

Be sure to tighten all wing nuts on the joints of the handle assembly so that none of the handle pieces are loose.

### Attaching the handle to the mower

As you follow the instruction below, refer to figure 2 for more information.

- After assembling the handle, fit the holes at the end of the lower portion of the handle on the left and right side, over the short posts extending out from the side plates.
- Ensure that the handle is attached to the mower in the CORRECT direction, as shown in Figure 2. Attaching the handle INCORRECTLY, as shown in Figure 2, will position the handle at a setting too high for comfortable use.
- When the handle is in place over the posts, snap the “E” rings onto the slotted posts on both sides to prevent the handle from coming off.



## How To Order Parts

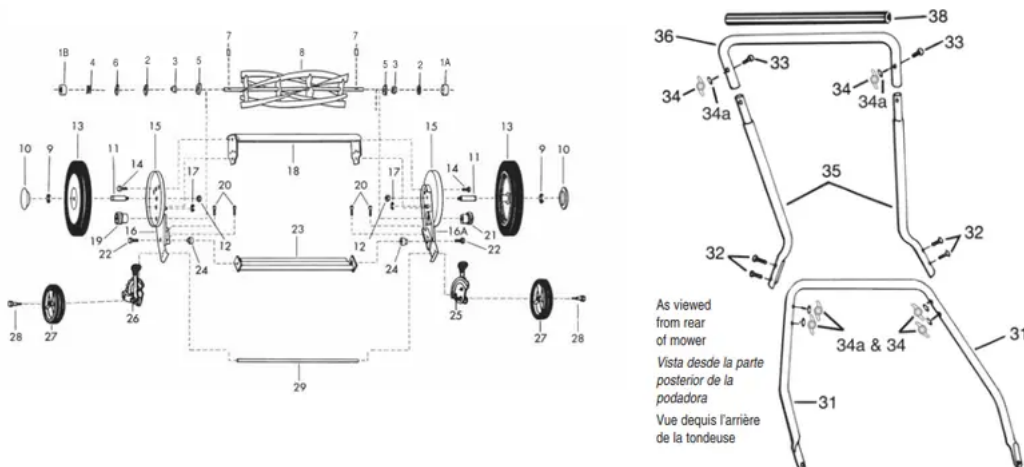
Specify the following information when ordering parts:

1. Complete model number (found on the identification decal on the rear of the cutter bar).
2. Color of the parts you are ordering.
3. Cutting width of your unit.

If you are uncertain of the number of the part to be replaced, you can make sure to receive the exact part(s) you need by mailing the broken part(s) prepaid to the factory along with your order. Be sure that when you are sending parts to enclose your name, address and telephone number in the package.

ALL PARTS ARE SOLD FACTORY DIRECT. MINIMUM CHARGE FOR ANY ORDER IS US\$2.00 EXCLUDING SHIPPING. ALL SHIPPING CHARGES ARE THE RESPONSIBILITY OF THE PURCHASER.

## Mower Parts



## Part Nos. & ID Guide

Key No. Clave Número	Part Description Descripción del Repuesto Description de la pièce	Mod. 1816-16 EW Part No. No. de Rep. Pièce No.	Key No. Clave Número	Part Description Descripción del Repuesto Description de la pièce	Mod. 1816-16 EW Part No. No. de Rep. Pièce No.	Key No. Clave Número	Part Description Descripción del Repuesto Description de la pièce	Mod. 1816-16 EW No.
1A	Ball Cup Receptáculo del cojinete Support due cossinet	A30122A	16A	Right Side Plate Placa lateral derecha Plaque latérale droite	A10326-16A	30	Complete Handle Assembly Montaje completo de la manija Poignée assemblée complète	10554-16A
1B	Ball Cup Receptáculo del cojinete Support du cossinet	A31203A	17	Retaining Ring Aro de retención Anneau de retenue	A30990A	31	Lower Handle Section Sección inferior de la manija Section de la poignée inférieure	31442-16A
2	Ball Bearing Assembly Montaje de la arandela Assemblage billes de roulement	A30137A	18	Torsion Bar Barra de torsión Barre de torsion	A10492A	32	Handle Bolt M6 X 35 (4) Perno para la manija, M6 X 35 (4) Boulon de la poignée M6 X 35 (4)	A31100A
3	Bearing Cone Receptáculo del cojinete Cone du cossinet	A31199A	19	Left Pinion Gear Engranaje del piñón izquierdo Engrenage à pignon gauche	A30737-3A	33	Handle Bolt M6 X 35 (2) Perno para la manija, M6 X 35 (2) Boulon de la poignée M6 X 35 (2)	A31100A
4	Spring, reel adjustment Resorte de ajuste del cilindro Ressort d'ajustement (moyeu)	31202-1	20	Adjustment Screw (incl. in 16 & 16A) Tornillo de ajuste (se incluye en 16 y 16A) Vis de réglage (compris dans 16 et 16A)	A30300A	34	Wing Nut M6 (6) Tuerca de mariposa M6 (6) Eccrou à oreilles M6 (6)	A31310A
5	Dust Washer Arandela de protección contra el polvo Bague de protection contre la poussière	A31200A	21	Right Pinion Gear Engranaje del piñón derecho Engrenage à pignon droit	A30737-2A	34a	Washer Arandela Rondelle	A31308A
6	Bearing Washer Arandela de conijnete Rondelle de roulement	A31201A	22	Cutter Bar Bolt M10 X 30 Tornillo de la barra de corte, M10 X 30 Boulon M10 X 30 - barre des lames	A31039A	35	Center Handle Section (2) Sección central de la manija Section centrale du guidon	31441A
7	Ratchet Pawl Trinquete Encliq. a rochete	A30316A	23	Cutter Bar Barra de corte Barre des lames	A10305-2A	36	Top Handle Section Sección superior de la manija Section supérieure du guidon	31440A
8	Reel Assembly (key #2-6) Montaje del cilindro (nos. de 2 a 6) Assemblage du moyeu (compris les no 2 à 6)	A10506-1A	24	Cutter Bar Stud (incl. in nos. 16 & 16A) Espárrago de la barra de corte (incl. en los nos. 16 y 16A) Rivet - barra des lames (compris dans les nos. 16 et 16A)	A30519A	37	Assem. Hardware Pkg. Paquete de ferreteria Paquet de pièces de quincaillerie	A10528-1A
9	Snap Ring, Axle Aro en "E" del eje Anneau élastique de l'essieu	A30317-1A	25	Wheel Adj. RH Ajuste de la rueda derecha Ajusteur pour la roue de droite	10461-13	38	Foam Grip Mango de espuma Poignée en mouss	A30948A
10	Hub Cap, Tapacubo, Chapeau de moyeu	A30926-1A	26	Wheel Adj. LH Ajuste de la rueda izquierda Ajusteur pour la roue de gauche	10461-12			
11	Axle, Eye, Essieu	A30337A	27	Trailing Wheel Rueda seguidora Roue de derrière	31066-1P			
12	Hex Nut, M10 Tuerca hexagonal, M10 Eccrou hexagonal M10	A30733A	28	Trailing Wheel Axle Eje de la rueda seguidora Essieu pour la roue de derrière	A31067A			
13	Wheel and Tire Assembly Montaje de la rueda y llanta Assemblage roue et pneu	10446P	29	Rear Tie Tube Tubo trasero de conexión Attachement pour pneu de derrière	A31065-2A			
14	Hex Head Bolt Perno de cabeza hexagonal Boulon à tête hexagonal	A30660A						
15	Cover Plate Placa de la cubierta Plaque de couverture	A30730A						
16	Left Side Plate Placa lateral izquierda Fixation laterale gauche	A10508-1A						

## Usage and Care

### General care

Minimum care is required to assure smooth operation of your mower.

- To avoid damage to the mower or cutting blades, keep the area to be mowed free from any debris.
- To prevent unnecessary wear on blades, pull mower rather than push when moving mower on concrete or paved surfaces.
- For best performance, apply a light coating of oil or WD-40 to the blades after every use.

### Basic cutting height adjustments

Your new reel mower is equipped with the newest easy height adjustment on 2 trailing wheels replacing the standard roller assembly. Adjustment is made by simply pulling forward on the height adjustment lever (see figure 3) to clear the locking tab and either raising or lowering the wheel. Initial setting of the factory gives a height adjustment of 2" to 3" (5.08 cm to 7.62 cm).

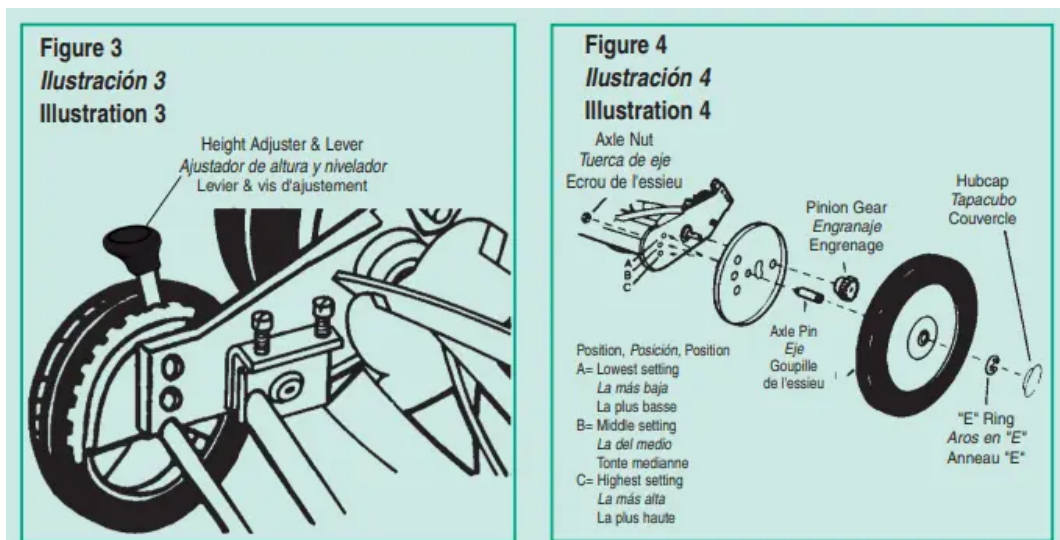
### To reduce your cutting height below 2" (5 cm)

- First remove the plastic hub cap by inserting a small screwdriver into the slot on the hub cap and pop it off the wheel.

- In order to move the axle pin, it is necessary to remove the axle nut first by holding the axle pin in place with a large flat blade screw driver and either a socket or box-end wrench on the nut.
- After the nut has been removed, pull forward on the wheel, dust cover and axle assembly until the end of the axle clears the side of the mower. Move the axle to one of the other two holes to get the height you desire (see figure 4). Replace and retighten axle nut (repeat for other side).

Basic concept is to raise the wheel to be able to cut lower or to lower the wheel to be able to cut higher.

NOTICE: It is not recommended to use position "A" unless you have an extremely flat lawn in order to avoid scalping.



## Mower blade adjustment

The blades have been preadjusted before leaving the factory.

Misalignment can occur resulting in blades that are too loose or too tight. If this happens, you will notice a rough, uneven cut or a hard-pushing mower.

All adjustments are made from the rear of the mower (opposite from the bar with the logo decal). Each end of the cutting bar can be adjusted separately.

As you follow the instructions below, refer to figure 5 for more information.

- The cutting bar blade (located under the reel) pivots. The front screws move the cutter bar away from the blades, while the rear screws move the cutter bar toward the blades.
- Adjusting the screws is a very sensitive procedure. 1/16th of a turn is considered a major adjustment.
- Before tightening one adjusting screw, be sure to loosen the opposing screw an equal amount.

## Loosening the blades

The cutting bar blade must be moved further from the cutting reel.

- Loosen both back screws equally by turning them counterclockwise.
- Tighten both front screws equally by turning them clockwise.

## Tightening the blades

The cutting bar blade must be moved closer to the cutting reel.

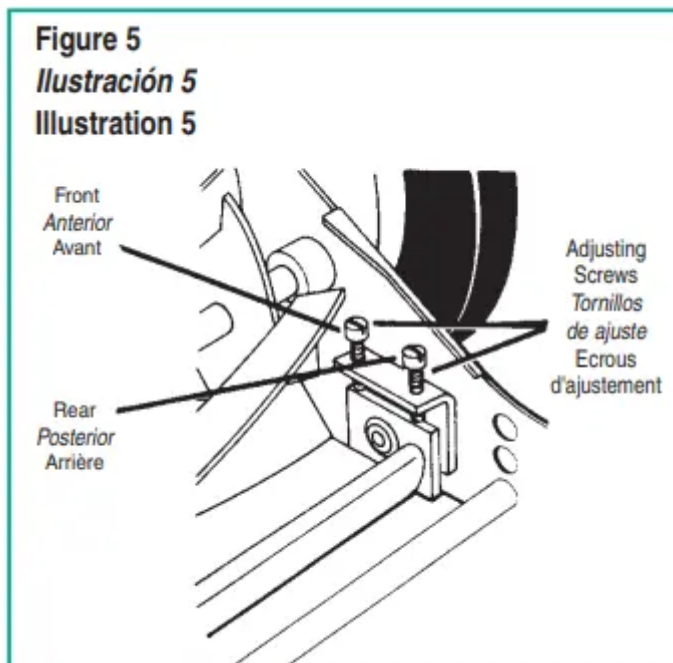
- Loosen both front screws equally by turning them counterclockwise.
- Tighten both back screws equally by turning them clockwise.

## Checking adjustments

- Turn mower upside down.
- Insert piece of paper (i.e., writing or newspaper) between the cutter bar and the reel blades, and carefully turn the reel blades by hand.

All blades should slice the paper evenly the entire length of the cutter bar while the reel turns smoothly.

If the mower has an intermittent cut, adjustment should be made to the appropriate side of the blades to attain proper cutting action.



## Sharpening the cutting blades

When the mower is properly lubricated and adjusted, sharpening should not be necessary for several years. However, the following steps will allow you to do the procedure yourself at relatively little expense.

- Remove the "E" rings, wheels and pinion from both sides of the mower (refer to figure 6).
- Remove both pawls from the rectangular slots in reel shaft and reverse their positions (refer to figure 7).
- Reverse the placement of the pinion gears.
- Place the left pinion on the reel shaft.
- Replace the wheels and "E" rings.
- Spread a thin layer of lapping compound on the front edge of the reel blades.
- Adjust the cutter bar blade so it has light but firm contact with the reel blades across the full width of the cutter bar (refer to figure 8). CAUTION: Do not overtighten the adjusting screws, as this could damage the cutter bar. Both screws must be tight on the final adjustment.
- Push the mower backward on a smooth surface (such as a sidewalk or paved driveway). Continue to do this until the reel blades rotate relatively free and front edge of the cutter bar blades are polished.
- Remove wheels; reverse pinions and pawl is on the right. CAUTION: Clean any grinding compound or debris from the cutter bar blades, reel blades, pinion and pawl. Lubricate axle and pinion with a light film of wheel bearing grease and replace wheels and "E" rings.

NOTE: It is recommended to use an industrial or valve lapping compound between 100-240 grit. This is usually available at an industrial or automobile supply store. If professional sharpening is required, consult your local yellow pages for lawn mower repair services.

Figure 6  
Ilustración 6  
Illustration 6

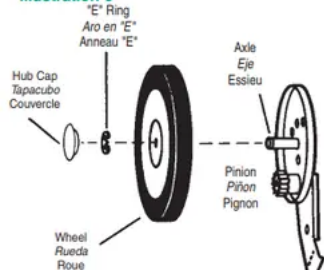


Figure 7  
Ilustración 7  
Illustration 7

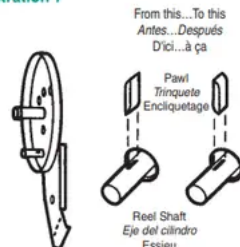
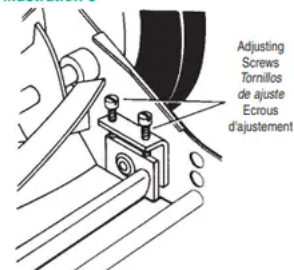


Figure 8  
Ilustración 8  
Illustration 8



## Customer Responsibilities

Always use care when operating your lawn mower and keep clear of moving parts. Avoid striking or running into solid objects or debris in the area to be mowed. Be sure the mower is clear and

follow a regular maintenance schedule in order to provide efficient and safe operation. A well-cared-for lawn mower will last long and operate more efficiently

## LIMITED WARRANTY

There are no warranties that extend beyond the product description except that the lawn mower sold thereunder is warranted as follows:

### 2 YEARS LIMITED WARRANTY

For 2 years from purchase, Great State Lawn Mower Company will replace free of charge to the original buyer, any part(s) found defective in material and/or workmanship upon examination by our factory or a factory authorized service center. Parts sent to the factory for replacement must be shipped prepaid by the buyer.

THERE IS NO OTHER EXPRESS WARRANTY. ALL IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO 2 YEARS FROM THE PURCHASE AND TO THE EXTENT PERMITTED BY LAW, AND ALL IMPLIED WARRANTIES ARE EXCLUDED. THIS IS THE EXCLUSIVE REMEDY AND LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES.

Warranty is limited to manual push walk behind applications and specifically excludes any non-manual powered propulsion of any kind or any commercial/non-residential applications.

ANY NON-RESIDENTIAL USE OF THIS PRODUCT VOIDS ALL WARRANTY

#### **Warning**

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