

TRUE-SURFACE® VIBE V™ VIBRATORY GREENS ROLLERS OWNER'S MANUAL



***Vibe V Vibratory
Greens Rollers are made
to fit Toro, JohnDeere,
Jacobsen, and Ransome
triplex greensmowers.***

USA & Foreign Patents Passed & Pending



www.true-surface.com
1-800-443-8506 or +1-636-356-1210

TRUE-SURFACE® 
... makes true greens!™

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**INFORMATION ABOUT YOUR TRUE-SURFACE®
VIBRATORY GREENS ROLLING SYSTEM:**

DATE PURCHASED: _____

SERIAL NUMBER: _____


OPERATION NOTES: _____

This page is for your reference only. To activate the warranty on your new rollers, please fill out and fax the warranty card located in the back of this manual.

For parts and/or service, please call 1-800-443-8506; or if you are calling internationally, please call +1-636-356-1210.

Parts orders placed before Noon CST can be shipped the same day via UPS.

VIBE ™ Introduction

Congratulations on the purchase of your new True-Surface® VIBE ™ Vibratory Greens Rolling System from Turfline, Inc.

Please review this owner's manual before unpacking the rollers.

It is imperative to complete the warranty form in the back of this manual and return it to Turfline, Inc. via mail or fax. Doing this will activate your product's two year warranty.

Maintenance of the rollers is minimal. Clean Sand and dirt from rollers using air. Pressure washing units is not advised because it could damage the bearings.

The proper belt tension is 1/4" deflection, and is preset at the factory. If you need to adjust the belt tension, loosen the three nuts that secure the roller bearing to ***EACH*** end plate and adjust accordingly in the slotted holes. Retighten all of the six nuts, and replace the belt guard.

In the enclosed manual are the following:

- *Installation Instructions*
- *Parts Drawings and Numbers*
- *Mounting Kit Conversions*
- *Adaptation Kits*
- *Warranty and Safety Information*

If you have any technical questions or need to order parts, please call Turfline, Inc. at 1-800-443-8506

Parts orders received by Noon CST will be shipped the same day via U.P.S. ground to anywhere in the continental United States.

Thank you for choosing the best set of American-made rollers available!



Certificate & Declaration of Conformity for CE Marking

Hereby, Turfline, Inc. declares that the True-Surface® Vibratory Greens Roller and all of its components are in compliance with the essential requirements and other relevant provisions.

The True-Surface® Vibratory Greens Roller is classified within the following EU Directive: EU Machinery Directive 98/37/EC & 2006/42/EC, and further conform with the following EU

Harmonized Standards: EN 12100-1:2003 EN 12100-2:2003 EN ISO 214121-1:2007 EN ISO 4254-1:2005.

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US & Worldwide patents pending.

Turfline, Inc. operates a policy of ongoing development. Turfline, Inc. reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Warranty Information

To maintain superior warranty service, please call Turflines, Inc. before having work done on alleged defective equipment. We strive to maintain excellent customer service and quality products; keeping us informed of situations allows us to do so.

Within the industry, including the chat rooms of Turfnet and GCSAA., our company is known to be expedient in servicing our warranted products. Turflines, Inc.'s warranty policy is as follows:

Turflines, Inc. will either repair or replace any *non-wear* part of the True-Surface® Vibratory Greens Rolling System which is defective in workmanship or material for a period of twenty four (24) months from the date of delivery of the new product to the original end user determined by the **warranty registration**. These items will be repaired or replaced free of charge and freight free. *Warranties on used or ex-demo equipment are limited to 90 days from date of purchase.*

Turflines, Inc. will cover parts subject to normal maintenance routines as specified in the product's Owner Manual and parts subject to wear and tear during the correct operation of the product. These parts include, but are not limited to, shafts, bearings, belts, and rubber shock mounts (RSM's) for a limited 90 days. *The 90-day warranty on wear items specifically excludes used or ex-demo units.*

Turflines, Inc. will not issue warranty credit for:

- any item that has been damaged by accident, lack of reasonable care and protection, or lack of suitable storage.
- parts that have been altered or modified by anyone other than Turflines, Inc.
- used parts that have been installed in place of failed parts.
- parts that have been installed incorrectly by the end user or its agents.
- parts that have not been maintained as per the Owner's Manual.
- service calls and overtime labor rates as Turflines, Inc. shall be contacted immediately upon encountering any problems.
- any consequential loss, damage, or costs to the equipment caused by (or incidental to) failure of any new part supplied with the original purchase or any new part supplied as a replacement for any failed part.

Warranty Claims:

The final purchaser of the True-Surface® Vibratory Greens Rolling System must file a warranty claim with Turflines, Inc. The final purchaser must provide written evidence detailing the product's delivery date to that purchaser and the reasons why the purchaser believes the product or part is defective in the categories of faulty material or workmanship. The purchaser is to deliver the faulty product or part to Turflines, Inc. at the purchaser's expense to be reimbursed by Turflines, Inc. if found to be the responsible party. Acceptance or rejection of the warranty claim is entirely at the discretion of Turflines, Inc.

Turflines, Inc.
712 Jefferson St., Ste. A
Moscow Mills, Mo 63362

1-800-443-8506 or +1-636-356-1210 ~ Please ask for the warranty department.

TURFLINES, INC. reserves the right to make improvements in design or changes in specifications without prior notice and without prejudice or obligation to original design purchasers.

No person or organization has the authority to modify the terms, conditions, or limitations of this warranty without the written consent of Turflines, Inc.

VIBE ™ FACT SHEET

Patented: US Patent No. 5,261,213

Specifications:

Weight: Average of 85 lbs per unit
Frame: One piece welded assembly, formed steel frame
Roller Tube: 5.5" O.D. tube, .188" wall, 22.5" roller length 1018 mild steel
Roller Hub: (2) Flange mounted bushings 1.5" I.D.
Roller Shaft: 1" diameter 1045 mild steel, drilled and tapped for eccentric wts
Shaft bearings: Shielded type, maintenance free ball bearings.
Shaft Eccentric Speed: Designed to run at your greensmower's maximum RPM speed.
Front Roller: 22.25" roller length, 2.5" diameter, stainless steel roller

Easy Installation:

The roller can be attached to Toro, Jacobsen, John Deere and Ransomes triplex mowers within minutes.

Management Tool:

When incorporated into the general maintenance program, the system creates healthy greens quicker; enables superintendents to dial-in specific speeds or stimp requirements; can be used on contoured greens; adaptable to triplex greens mowers; does not need specific training to operate; provides consistency to all greens.

Controllable Results:

Vibration allows you to stimp all greens within 2 to 4 inches by varying ground speed.

Customer Satisfaction: Two-Year Limited Warranty

Distributors: Worldwide Distribution

Shipment: Approximately 90 lbs Each via UPS

Company Contacts:



John Humphrey – President/Owner
Terry Plemons – Director of Worldwide Sales
Christopher DeGeare – Sales Manager
Brad Everett – Production Manager

For sales and service, please contact Turflite, Inc.: Phone: 800-443-8506 Fax: 636-356-1218

Uses for Your True-Surface® Vibratory Greens Rollers

True Putting Surfaces:

Vibratory action trues the greens' surface without damaging grass, eliminates footprints, spike marks and ball marks, and energizes sand to conform to surface contour.

Grow-In:

Vibratory action does not damage or pull-up new plants. It energizes the surface, reduces the need for mowing, and makes greens playable earlier.

Sand Topdressing:

Vibration following dragging or brushing virtually eliminates dry sand from the turf canopy. Sand falls through the canopy just before the roller gets to it, thus minimizing bruising and saving your reels and bed knives.

Dew Removal:

The vibratory roller removes dew and trues the surface at the same time.

Aerification:

Vibration enables dry topdressing to work itself into aerification holes and trues the surface to allow acceptable ball play.

Integrated Pest Management:

By rolling more and mowing less, plants are healthier. Raising the height of cut 20% from .125" to .156" will increase the health of grass considerably and reduce potential infiltration from various pests and diseases. Decreased use of fertilizers, fungicides, pesticides and watering will generate savings. By alternating mowing and rolling, turf becomes more resilient and can withstand more play which equals more dollars for your course.

Be a Safe Operator

- Think
- Maintain Your Equipment
- Use Your Equipment Only For Applications For Which It Was Created

The True-Surface® Vibratory Greens Rolling System was created for exclusive use on triplex mowers as a greens maintenance tool. Use of the rollers in other application other will void its warranty and could possibly cause equipment damage and personal injury. If you are interested in a True-Surface Vibratory Greens Rollers to fit your walk behind greens roller, please check out www.true-surface.com for more information on the True-Surface Trekker units.

Avoid Accidents

Most accidents, whether they occur in the industry, on the farm, at home, or on the highway are caused by human mistakes. Most accidents can be prevented by careful operation and prevention.

Tips for Consistent Greens

Golfers demand consistent greens. They want to make sure they have the same putting conditions from green to green. Only the *True-Surface® Vibratory Greens Rolling System* will provide consistent ball roll distance on all greens.

To obtain consistency with the vibratory greens rollers follow this EXAMPLE:

Rolling at the same speed you mow equals 12 inches of Ball Roll Distance (BRD), then in order to achieve:

- 24 inches of BRD; roll at 1/2 the speed you mow;
- 18 inches of BRD; roll at 3/4 the speed you mow;
- 6 inches of BRD; roll at twice the speed you mow.

The variance of your greens mower's RPM and ground speed will allow you to obtain *any* desired results. Now you can adjust your roller's vibration with the Select-A-Vibe™ Dial – customized to fit your greens mower. This variable feature can *only* be obtained with the *True-Surface® Vibratory Greens Rolling System*.

Select-A-Vibe™ Dial Introduction



The True-Surface® VIBE **V**™ Vibratory Greens Rolling System allows flexibility with the new Select-A-Vibe™ dial. VIBE **V**™ owners now have the ability to experiment with a variety of vibration settings, hydraulic motor/engine speeds, and ground speeds – all of which will affect your greens' end-results. Turfline, Inc. created the Select-A-Vibe™ to produce smooth, healthy, consistent greens by controlling various conditions through its five levels of vibration.

You can now select your level of vibration with a simple click! Set the dial at setting number 1 for the least vibration, and increase your energy all the way to setting number 5. Simply follow the steps below.

NOTE:

- Make sure the indicators are aligned at the same setting for each end to maintain even vibration across the roller length.
- Make sure to tighten the set screw after each adjustment.
- The ball spring plunger is set and secured at the factory setting and requires no further adjustment, nor does it need to be loosened to adjust the eccentrics. Should these eccentrics need to be removed for other services, be sure they are returned to the correct end of the shaft from where they were removed.

Select-A-Vibe™ Adjustment Procedure:

For the Belt Guard Side:

- Insert 3/16 L-Key allen wrench into the end of the shaft through the center slot on end of belt guard.
- Rotate the shaft with the L-Key to bring eccentric set screw into view through top slots.
- Insert 3/16 T-handle key into eccentric set screw and loosen 1/4-1/2 turn. This set screw is aligned with the “1” on the eccentric dial. The set screw aligned at the “5” on the dial is a preset ball plunger and should NOT be moved.
- While holding the T-handle in the set screw to prevent the eccentric from rotating, rotate the shaft with the L-Key to desired setting (you will feel the ball plunger “click” in and out of the shaft detents);
- Tighten eccentric set screw and remove tools.



Use the same procedure for the hydraulic motor side of the roller.

NOTE: Make sure *both* eccentrics are at the same setting.

Hydraulic Motor Side B
Eccentric set at setting 3



Belt Guard Side A
Eccentric set at setting 3



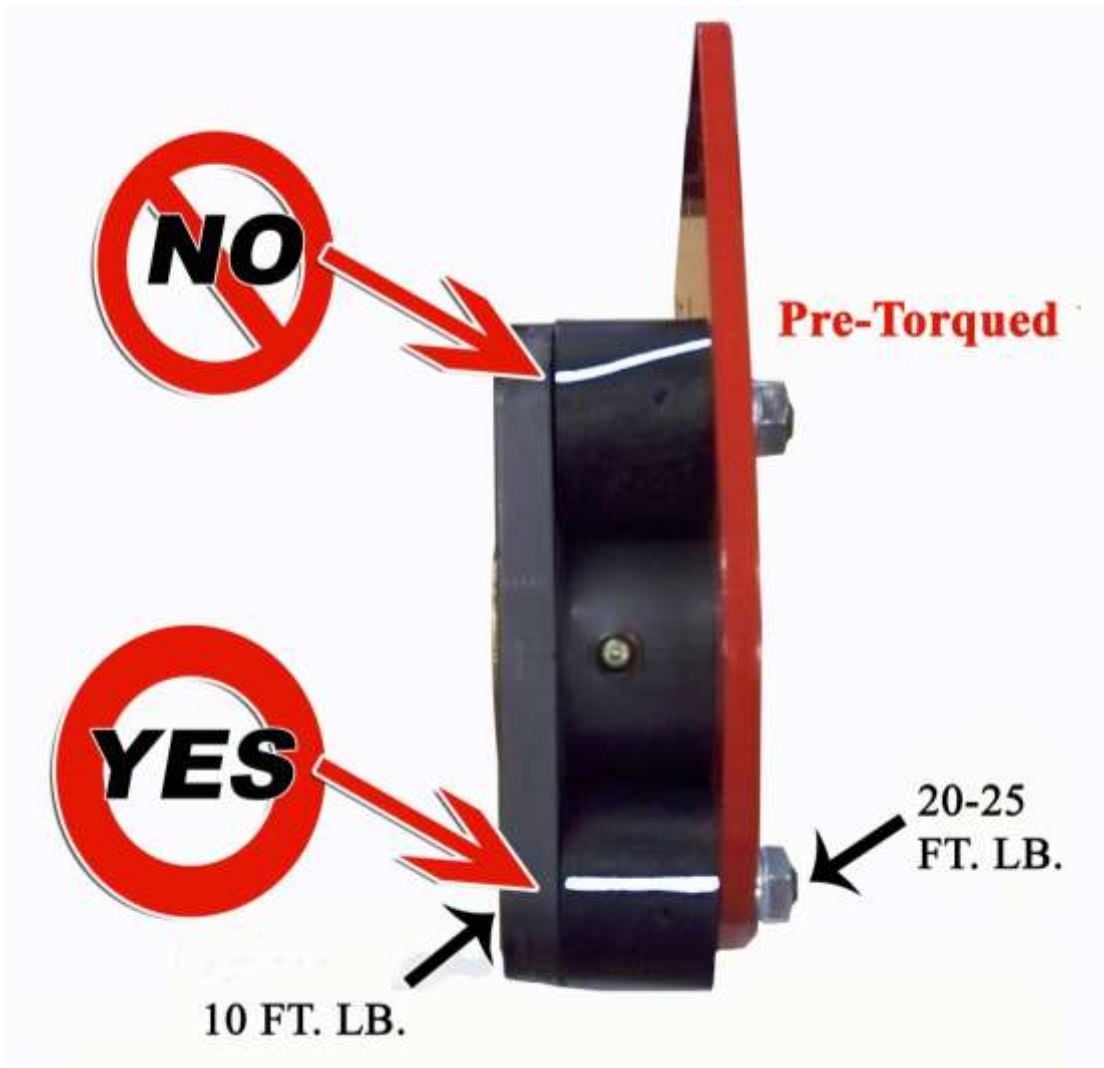
Note: Setting 1 is the lowest setting, and setting 5 is the highest setting available.

Rubber Shock Mount Replacement Notice

Part Number 30A-V7219 RSM

Once the frame end and roller have been removed from the unit, remove the serrated flange nuts from each of the RSM studs and remove the entire flange assembly. Remove each of the flat head screws securing the RSM to the flange, and remove. Install the new RSM and flat head screw. First mount the female side of the RSM to the flange with the 5/16" flathead countersunk screws and tighten. *NOTE: Tighten this screw by hand only to a maximum of 10ft. lbs. Over tightening may result in flange damage.*

Replace the entire assembly into end plate. Replace all flange nuts and leave them loose. Replace the frame end, install the belt, adjust the belt tension, and then tighten the RSM nuts. Be sure when tightening the flange nuts, the RSM's DO NOT twist or distort – this can lead to premature RSM failure. Be sure to reinstall and secure the belt guard and all components before use.



Counterbalance & Pulley Notice for The True-Surface® VIBE V™

Counterbalance Concerns:

It may be necessary to counterbalance one end of the roller due to the possibility of hydraulic hose and motor replacements, parts, and normal wear of the greens mower's lift systems.

If you notice any marking on the green due to premature roller drop on one side, please check your hoses and fittings for added torque on the rollers. If this torque forces the end of the roller down, then adjust the hose. If this doesn't solve the problem, please call us and ask for a counterweight that will bolt to the belt guard. One or two weights per roller should be sufficient.

Pulley Removal:

When it is time for a scheduled service or parts replacement, you may need to remove the 2" pulley (37P-1024) from the roller shaft. Care should be taken when removing and reinstalling this part to prevent possible pre-load on the shaft bearings (37P-1023) and premature bearing failure.

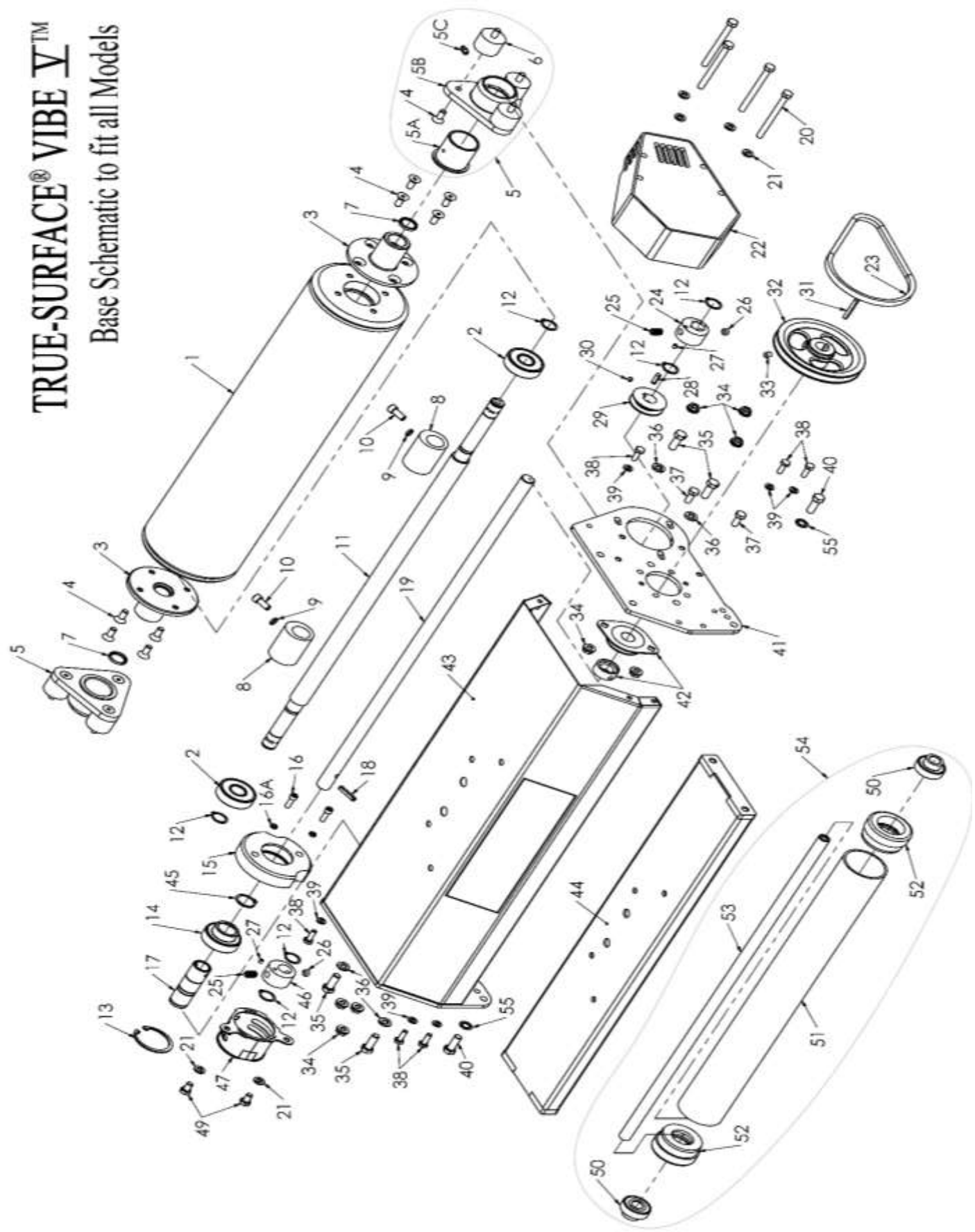
- When removing any pulley, make sure that the securing element (i.e. set screw, lock collar, etc.) is loosened or removed.
- Second, clean as much dirt/rust as possible from the shaft in the direction that you will be moving the pulley, and lubricate with some type of penetrating fluid to assist in the movement of the pulley.
- Third, if the pulley will not move with sensible force, and/or a prying technique, use a gear puller of the proper size to remove the pulley. *Always do your best to avoid beating or hammering to remove any pulley.*
- Fourth, as a last resort, apply heat to the pulley hub, close to the shaft. Heat will expand the pulley slightly and make removal easier. *Always be careful when using heat; keep flammable objects and materials clear of the heat area.*

When reinstalling the pulley, clean the following areas: the shaft where the pulley will rest, the drive key, the key slots, inside the pulley, etc. Make certain to secure the pulley with the supplied set screw or lock collar.

When replacing the 2" pulley on the True-Surface® roller, hammering the pulley in or out of position may cause pre-loading of the bearings. This pre-loading will lead to premature bearing failure, more costs, and additional down time. However, by taking precaution and following the above steps for removing the pulley, this can be avoided.

TRUE-SURFACE® VIBE V™

Base Schematic to fit all Models



VIBE V™ PARTS FOR ALL MODELS

VIBE V BASE SCHEMATIC LIST				
ITEM #	DEPT. #	PART #	DESCRIPTION	QTY.
1	30A	O9-16	Roller Tube	1
2	37P	1023	Bearing for Shaft (includes 4 of # 4)	2
3	30A	09-001T	Hub Assembly (includes 4 of #4 & 1 of #7)	2
4	H	1140	Flat Head Socket Cap Screw 5/16-18 x 3/4"	14
5	31A	V7219-1	Flanged Bearing Assy. (includes #'s 4,5A,5B,5C,6,& 34)	2
5A	37P	7928	Bronze Bushing for V 7219-1 Assy.	2
5B	37P	V7217	Nylon Flange	2
5C	H	1681	Grease Fitting	2
6	31P	V7219 RSM	Rubber Shock Mount for Vibe V	6
7	H	7410	Hub / Shaft Seal	2
8	31A	VR-004-1	Inboard Eccentric Weight (includes #'s 9 & 10)	2
9	H	V8001	5/16" High Collar Lock Washer	2
10	H	V8000	Socket Head Screw 5/16-18 x 3/4"	2
11	31A	VR-001-1	Shaft Only Assembly	1
*	31A	VR-001-2	Shaft Assembly (Includes #'s 2,4,11,12,29)	1
12	37P	1014	Snap Ring For Shaft	6
13	37P	1127	Bearing Snap Ring	1
14	37P	7101	Bearing With Set Screws	1
15	37P	7150-1	Bearing Housing	1
16	H	1505	Socket Head Cap Screw 1/4-20 x 3/4"	2
16A	H	6110	1/4" High Collar Lock Washer	2
17	37P	7001	Female Splined Coupler (includes 18 & 45)	1
*	37P	7001-E322	Coupler for Eclipse Models (includes 18 & 45)	1
*	37P	7001-JD25	Male Splined Coupler for John Deere (includes 18 & 45)	1
18	37P	7178	Split Spring Pin 1/4 x 1-1/8"	1
19	37P	7007	Spline Shaft - 3/4" Stainless Steel	1
20	H	7129	Gr. 5 Hex Bolt 5/16-18 x 3	4
*	H	7029	Gr. 5 Hex Bolt 5/16-18 x 3-1/4" for 1 Counterweight	4
*	H	1030	Gr. 5 Hex Bolt 5/16-18 x 3-1/2" for 2 Counterweights	4
*	H	1080	Gr. 5 Hex Bolt 5/16-18 x 4" for 3 or 4 Counterweights	4
21	H	1013	Split Lock Washer 5/16"	6
22	31P	VR7002-1	Black Vented Belt Guard for Vibe V	1
23	37P	7121	3L x 20" Belt	1
24	31A	VR-003A-1	Outboard Eccentric Weight Belt Side (includes #'s 25,26,27)	1
25	H	V8005	Ball Spring Plunger	2

VIBE V™ PARTS FOR ALL MODELS (CONTINUED)

VIBE V BASE SCHEMATIC LIST -- CONTINUED				
ITEM #	DEPT. #	PART #	DESCRIPTION	QTY.
26	H	V8002	Flat Point Set Screw 3/8-16 x 1/4"	2
27	H	V8003	Set Screw #10 -32 x 3/16"	2
28	H	5087	Short Machine Key 3/16 x 3/4"	1
29	37P	1024	2" Shaft Pulley (Includes #'s 28 & 30)	1
30	H	6014	Knurled Cup Point Set Screw 1/4-20 x 3/16"	1
31	H	1025	Long Square Machine Key 3/16 x 1-1/4"	1
32	37P	7100	5" Pulley (Includes #'s 31 & 33)	1
33	H	6012	Knurled Cup Point Set Screw 5/16-18 x 3/8"	1
34	H	1147	Serrated Flange Nut 5/16-18	8
35	H	1100	Gr. 5 Hex Bolt 3/8-16 x 1"	4
36	H	1010	Split Lock Washer 3/8"	6
37	H	1001	Gr. 5 Hex Bolt 5/16-18 x 3/4"	2
38	H	1003	Gr. 5 Hex Bolt 1/4-20 x 3/4"	6
39	H	1007	Split Lock Washer 1/4"	6
40	H	V1032	Gr. 5 Hex Bolt FINE 3/8-24 x 1"	2
41	37P	7011Black	Roller End Plate BLACK	2
42	37P	7102	3/4" Flush Mount Bearing (Includes locking collar)	1
43	37P	7003Black	Roller Hood BLACK	1
44	37P	7004	Frame Assembly	1
45	37P	1029	Snap Ring 63/64" x 0.042" Thick	1
46	31A	VR-003B-1	Outboard Eccentric Weight-Motor Side (Includes 25,26,27)	1
47	31P	VR-002	Outoard Eccentric Shaft Cover	1
49	H	V8004	Gr. 5 Hex Bolt 5/16-18 x 1/2"	2
50	21P	GCC-09 B3R	Front Roller Bearing	2
51	31A	V7209NG	Front Roller Tube (Includes # 52)	1
52	31P	V7206NG	Front Roller Non-Greasable End Cap	2
53	31P	V7208	Front Roller Axle	1
54	31A	V7207NG	Solid Front Roller Assy. (Includes 40,50,51,53,55)	1
55	H	6106	3/8" Int Tooth Lock Washer	2

True-Surface® Vibratory
Greens Rolling System

TRUE-SURFACE®



VIBE V

... makes true greens!

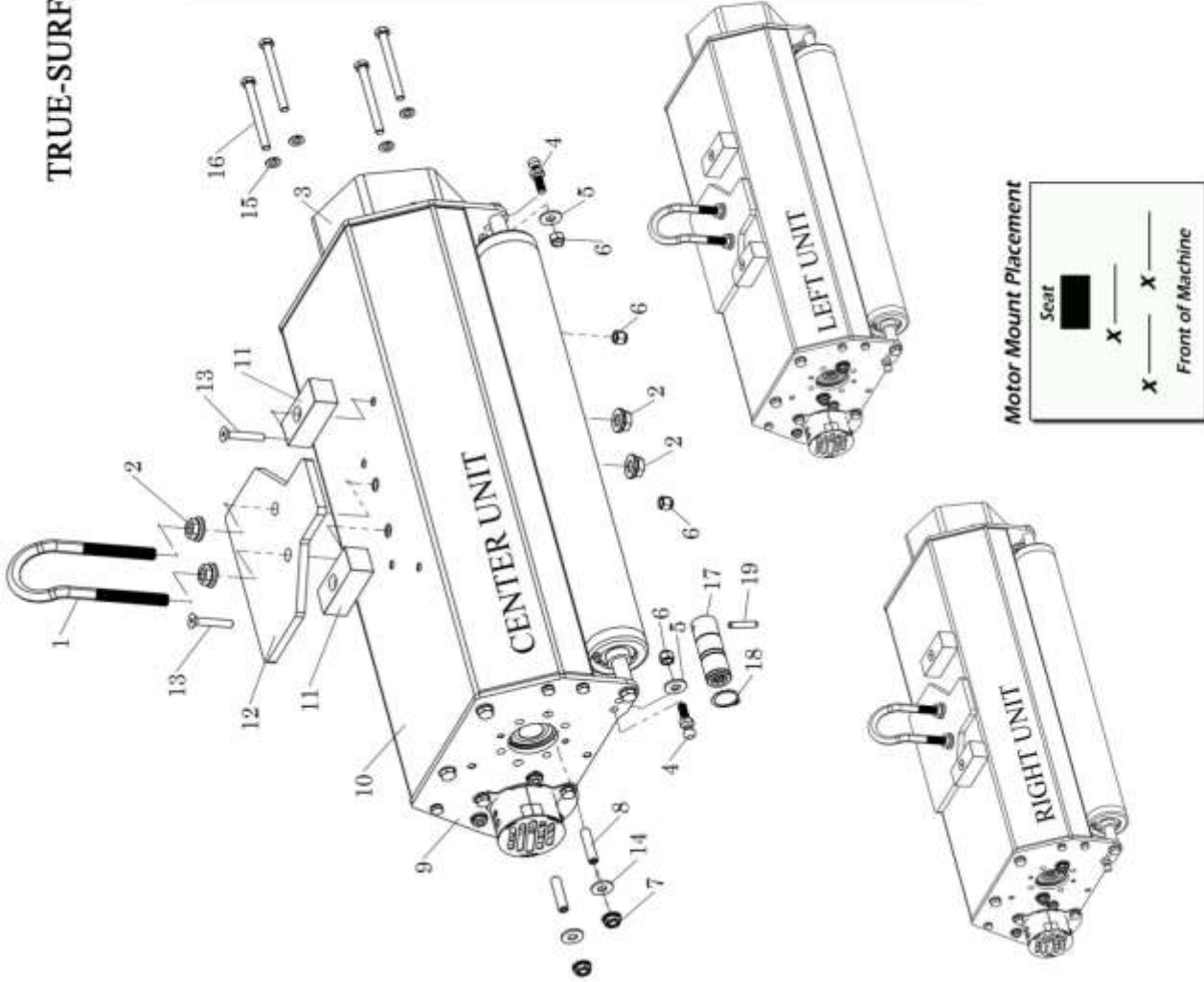
TORO MODELS



1-800-443-8506

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**TRUE-SURFACE® VIBE Y™ VIBRATORY GREENS ROLLER
TORO GM3, 3050, 3100, & 3150**



ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook Bent	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	3
4	30A	7126	Ball Stud Assembly (Includes 5 & 6)	6
5	H	1008	1/4" USS Flat Washer	6
6	H	3179	5/16-18 Nylon Lock Nut	12
7	H	1183	3/8-16 Smooth Flange Nut	6
8	H	1402	3/8-16 Motor Stud	6
9	31P	7011 BLACK	Black End Plate	6
10	31P	V7003 BLACK	Black Roller Hood	3
11	37P	7801	Hood Protector Block	6
12	37P	7802	Hood Protector Plate	3
13	H	1146	5/16-18 x 1-3/4" FHSCS	6
14	H	H-1019	5/16-USS Flat Washer	6
15	H	1013	5/16 Split Lock Washer	12
16	H	7129	5/16-18 x 3" GR. 5 Hex Bolt	12
17	37P	7001	Female Spline Coupler (Includes 18 & 19)	3
18	37P	1029	63/64 Ext. Snap Ring	3
19	37P	7178	1/4 x 1-1/4 Split Spring Pin	3

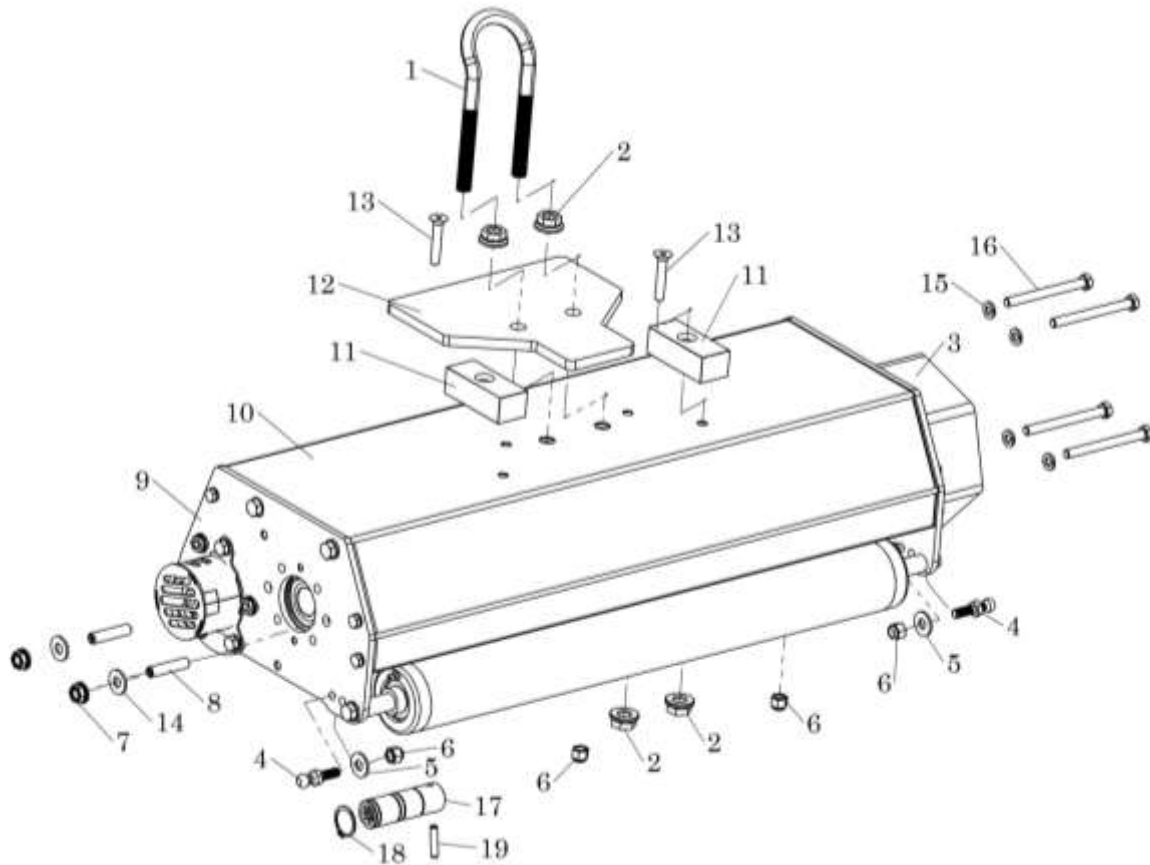
Installation of the VIBE ∇ TM to fit Toro GM3, 3050, 3100, & 3150

Tools Required: *3/4" Combination Wrench*
 9/16" Combination Wrench

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Unpack your new rollers.
3. Install the lift hook (37P-7090 BENT) to each roller unit by removing one nut (H-1026) from each side of the U-bolt and sliding the U-bolt through the hood protection plate (37P-7802) and the two 1/2" holes in the top of the roller. The top of the hook should be angled toward the rear of the unit, as shown in the schematic on page 16.
4. Replace the nuts on the bottom and tighten.
NOTE: Tighten evenly so the lift hook is perpendicular when secured. This hook is also height adjustable by moving the nuts up or down on the hook to provide the most desirable lift height.
5. Remove the hydraulic motors from the cutting units.
6. Remove the cutting units from the machine.
7. Position the rollers under the machine with the smaller diameter roller (30A-V7207) of the unit forward and lift arm of the machine passing through the lift hook.
8. Reconnect the ball couplers to the ball studs (30A-7126) on both sides of the roller frame.
9. If necessary, loosen or remove the flanged nuts (H-1183) and washers (H-1019) from the hydraulic motor-mounting studs (H-1402) on the drive side of the roller.
10. Wiggle the motor into place and secure with the washers and flanged nuts.
11. Start the machine and check the lift height, ground clearance, and raised position clearance between the roller and the machine.
12. Adjust the lift hooks as necessary.
13. Check the operation of the rollers.

Adaptation Kit to Fit Toro GM3 – 3150

Part Number 30A-7500



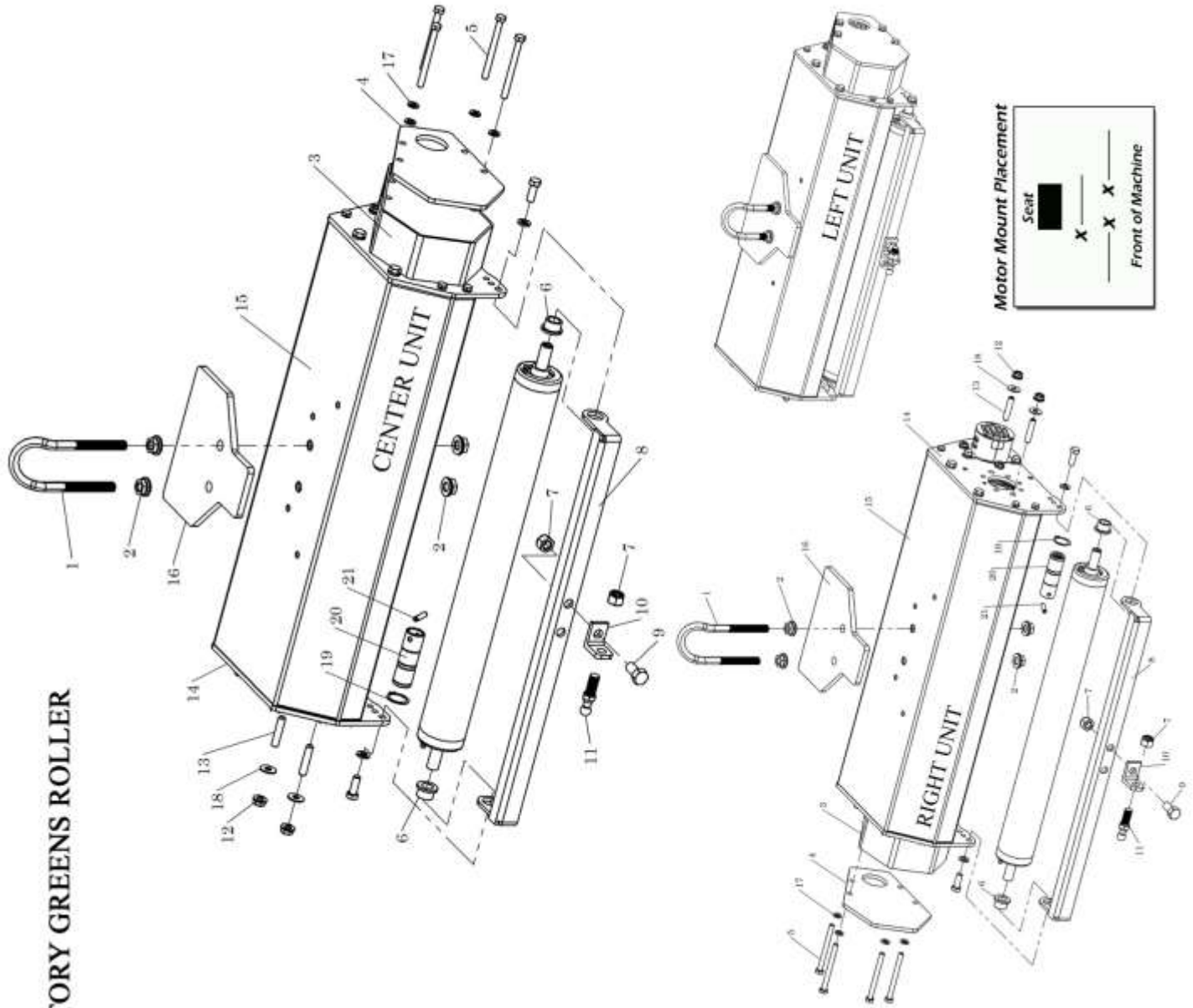
The 30A-7500 adaptation kit includes the following:

ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook Bent	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	*
4	30A	7126	Ball Stud Assembly (Includes 5 & 6)	6
5	H	1008	1/4" USS Flat Washer	6
6	H	3179	5/16-18 Nylon Lock Nut	12
7	H	1183	3/8-16 Smooth Flange Nut	6
8	H	1402	3/8-16 Motor Stud	6
9	31P	7011 BLACK	Black End Plate	*
10	31P	V7003 BLACK	Black Roller Hood	*
11	37P	7801	Hood Protector Block	6
12	37P	7802	Hood Protector Plate	3
13	H	1146	5/16-18 x 1-3/4" FHSCS	6
14	H	H-1019	5/16-USS Flat Washer	6
15	H	1013	5/16 Split Lock Washer	12
16	H	7129	5/16-18 x 3" GR. 5 Hex Bolt	12
17	37P	7001	Female Spline Coupler (Includes 18 & 19)	3
18	37P	1029	63/64 Ext. Snap Ring	3
19	37P	7178	1/4 x 1-1/4 Split Spring Pin	3

TRUE-SURFACE® VIBE V™ VIBRATORY GREENS ROLLER TORO 3200A

Quantities are for a set of 3 rollers.

ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook (Bent)	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	3
4	31P	VR-7CWB	Black Counterweight	3
5	H	7029	5/16-18 x 3-1/4" GR. 5 Hex Bolt	12
6	31P	V6045	3200 Bushing 5/8 x 7/8	6
7	H	1177	1/2-20 Nylon Lock Nut	6
8	31P	VR7042	Tow Bar	3
9	H	3183	1/2-20x1" GR. 5 Hex Bolt	3
10	31P	VR7042A	Tow Bar Bracket	3
11	37P	1115	Ball Stud -3200	3
12	H	1183	3/8-16 Smooth Flange Nut	6
13	H	1402	3/8-16 Motor Stud	6
14	31P	7011 BLACK	End Plate (Black)	6
15	31P	V7003 BLACK	Roller Hood (Black)	3
16	37P	7802	Hood Protector Plate	3
17	H	1013	5/16 Split Lock	12
18	H	H-1019	5/16-USS Flat Washer	6
19	37P	1029	63/64 Ext. Snap Ring	3
20	37P	7001	Female Spine Coupler (Includes 19 & 21)	3
21	37P	7178	1/4 x 1-1/4 Split Spring Pin	3

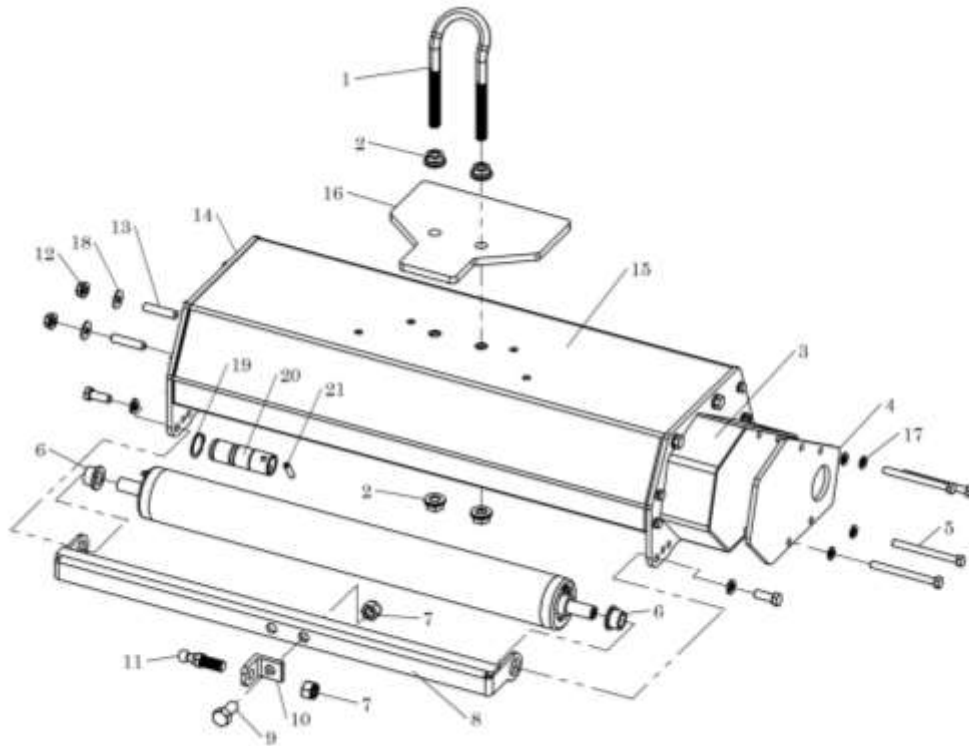


Installation of the VIBE ™ to fit Toro 3200A

Tools Required: 9/16" Combination Wrench
 2-3/4" Combination Wrench
 5/8" Combination Wrench

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Remove the hydraulic motors from the cutting units.
3. Detach the single point ball coupler and slide units out from under the machine and set aside. Unpack the new rollers.
4. Install the U-bolt lift hook (37P-7090 BENT) to each roller by removing one nut (H-1026) from each side of the U-bolt and sliding the U-bolt through the protection plate (37P-7802) then through the two 1/2" holes in the top of the roller. The top of the hook should be angled toward the rear of the unit, as shown in the schematic on page 19.
5. Replace the nuts (H-1026) on the bottom and tighten.
NOTE: Tighten evenly so the lift hook is perpendicular when secured. It is also adjustable by moving the nuts up or down on the hook to adapt to your needs.
6. Tilt the unit back to cut the zip tie from the tow bar assembly (31P-VR7042) and swing forward.
7. Set the rollers under the machine in their respective positions as marked, as if you were in the operator's seat, facing forward. The smaller diameter roller (31P-V7209) will be forward when installed.
8. Pass the lift arm through the lift hook (37P-7090 BENT) on the roller.
9. Attach the tow bar (31P-VR7042) and the tow bar bracket (31P-VR7042A).
10. If the roller unit is not centered with the basket frame after the unit is coupled, loosen the lock collars on either side of the tow bar and slide the entire roller assembly to the necessary position; retighten the collars. The ball stud (37P-1115) and bracket (31P-VR7042A) can be removed and re-oriented as necessary to adapt correctly.
11. Remove the flanged nuts (H-1183) and washers (H-1013) from the motor-mounting studs (H-1402), and twist the motors into place.
12. Install the nuts (H-1183) and washers (H-1019), then tighten.
13. 1/Repeat for the two other rollers.
14. Start the machine and check the lift height, ground clearance, and raised position clearance between the roller and the machine
15. Check the operation of the rollers.

Adaptation Kit to Fit Toro 3200A Part Number 30A-7551



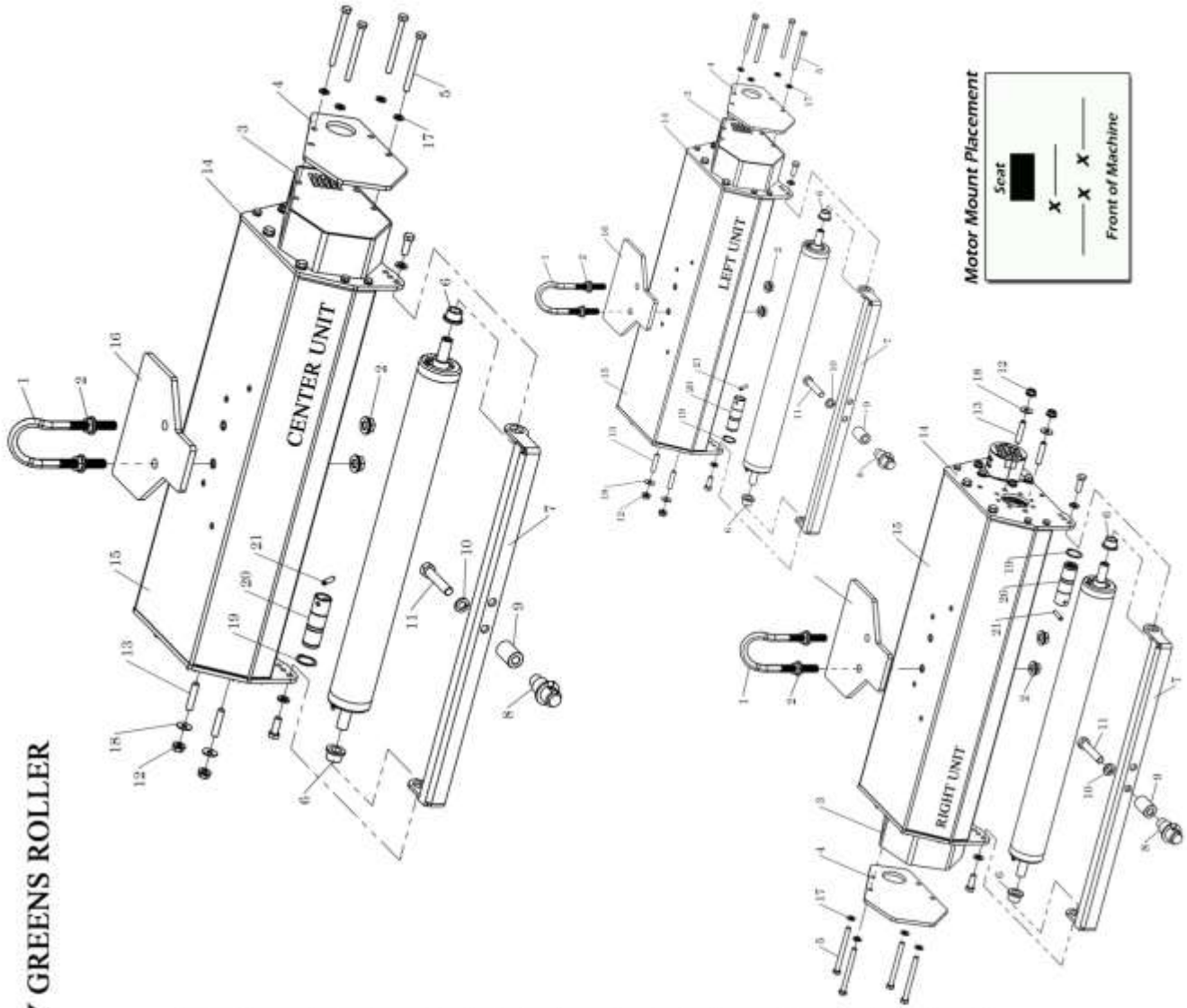
The 30A-7551 adaptation kit includes the following:

ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook (Bent)	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	*
4	31P	VR-7CWB	Black Counterweight	3
5	H	7029	5/16-18 x 3-1/4" GR. 5 Hex Bolt	12
6	31P	V6045	3200 Bushing 5/8 x 7/8	6
7	H	1177	1/2-20 Nylong Lock Nut	6
8	31P	VR7042	Tow Bar	3
9	H	3183	1/2-20x1" GR. 5 Hex Bolt	3
10	31P	VR7042A	Tow Bar Bracket	3
11	37P	1115	Ball Stud -3200	3
12	H	1183	3/8-16 Smooth Flange Nut	6
13	H	1402	3/8-16 Motor Stud	6
14	31P	7011 BLACK	End Plate (Black)	*
15	31P	V7003 BLACK	Roller Hood (Black)	*
16	37P	7802	Hood Protector Plate	3
17	H	1013	5/16 Split Lock Washer	12
18	H	H-1019	5/16-USS Flat Washer	6
19	37P	1029	63/64 Ext. Snap Ring	3
20	37P	7001	Female Spline Coupler (Includes 19 & 21)	3
21	37P	7178	1/4 x 1-1/4 Split Spring Pin	3

TRUE-SURFACE® VIBE V™ VIBRATORY GREENS ROLLER TORO 3200 B

Quantities are for a set of 3 rollers.

ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook (Bent)	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	3
4	31P	VR-7CWB	Black Counterweight	3
5	H	7029	5/16-18 x 3-1/4" GR. 5 Hex Bolt	12
6	31P	V6045	3200 Bushing 5/8 x 7/8	6
7	31P	VR7042	Tow Bar	3
8	37P	3200C	Quick Coupler	3
9	31P	VR7042B	Tow Bar Bracket	3
10	H	3184	1/2" Split Lock Washer	3
11	H	V1033	1/2-20 x 2-1/2" GR. 5 Hex Bolt	3
12	H	1183	3/8-16 Smooth Flange Nut	6
13	H	1402	3/8-16 Motor Stud	6
14	31P	7011 BLACK	End Plate (Black)	6
15	31P	V7003 BLACK	Roller Hood (Black)	3
16	37P	7802	Hood Protective Plate	3
17	H	1013	5/16 Split Lock Washer	12
18	H	H-1019	5/16-USS Flat Washer	6
19	37P	1029	63/64 EXT. Snap Ring	3
20	37P	7001	Female Spline Coupler (Includes 19 & 21)	3
21	37P	7178	1/4 x 1-1/4 Split Spring Pin	3

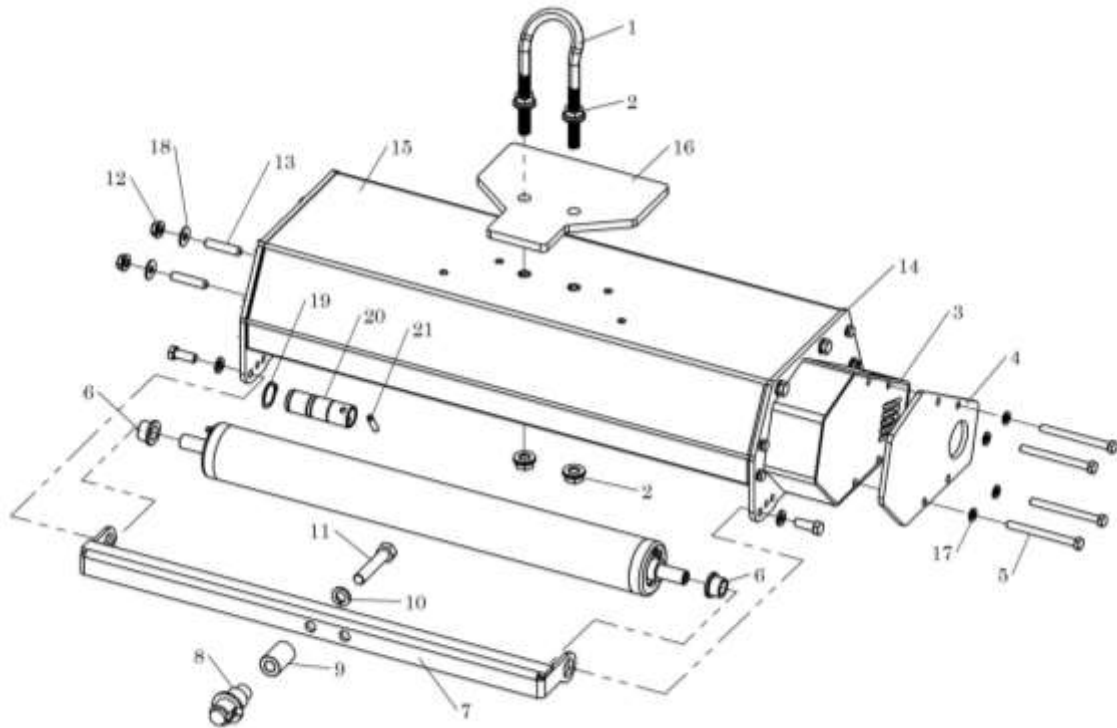


Installation of the VIBE ∇ TM to fit Toro 3200B

Tools Required: 9/16" Combination Wrench
 3/4" Combination Wrench

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Remove the hydraulic motors from the cutting units.
3. Detach the single point ball coupler, and slide the units out from under the machine and set aside.
4. Unpack the new rollers.
5. Install the U-bolt lift hook (37P-7090 BENT) to each roller by removing one nut from each side of the U-bolt and sliding the U-bolt through the protection plate (37P-7802), then through the two 1/2" holes in the top of the roller. The top of the hook should be angled toward the rear of the unit, as shown in the schematic on page 22.
6. Replace the nuts on the bottom and tighten.
NOTE: Tighten evenly so the lift hook is perpendicular when secured. It is also height adjustable by moving the nuts up or down on the hook to adapt to your needs.
7. Tilt the unit back and cut the zip tie from the tow bar (31P-VR7042).
8. Swing the tow bar out from under the machine so it points forward.
9. Remove the ball coupler (37P-3200C) and bolt from tow bar and reattach with coupler facing forward.
10. Set the rollers under the machine in their respective positions as marked, as if you were in the operator's seat, facing forward. The smaller diameter roller (31P-V7209) will be forward when installed.
11. Pass the lift arm through the lift hook (37P-7090 BENT) on the roller.
12. Align the ball coupler (37P-3200C) so the opening is facing toward the ball stud to which it will be coupled.
13. Tighten the mounting bolt.
14. Attach the coupler.
15. Remove the flange nuts (H-1183) and washers (H-1019) from the motor-mounting studs (H-1402), and twist the motors into place.
16. Re-install the washers and nuts, then tighten.
17. Repeat for the other two rollers.
18. Start the machine and check the lift height, ground clearance, and raised position clearance between the roller and the machine.
19. Check the operation of the rollers.

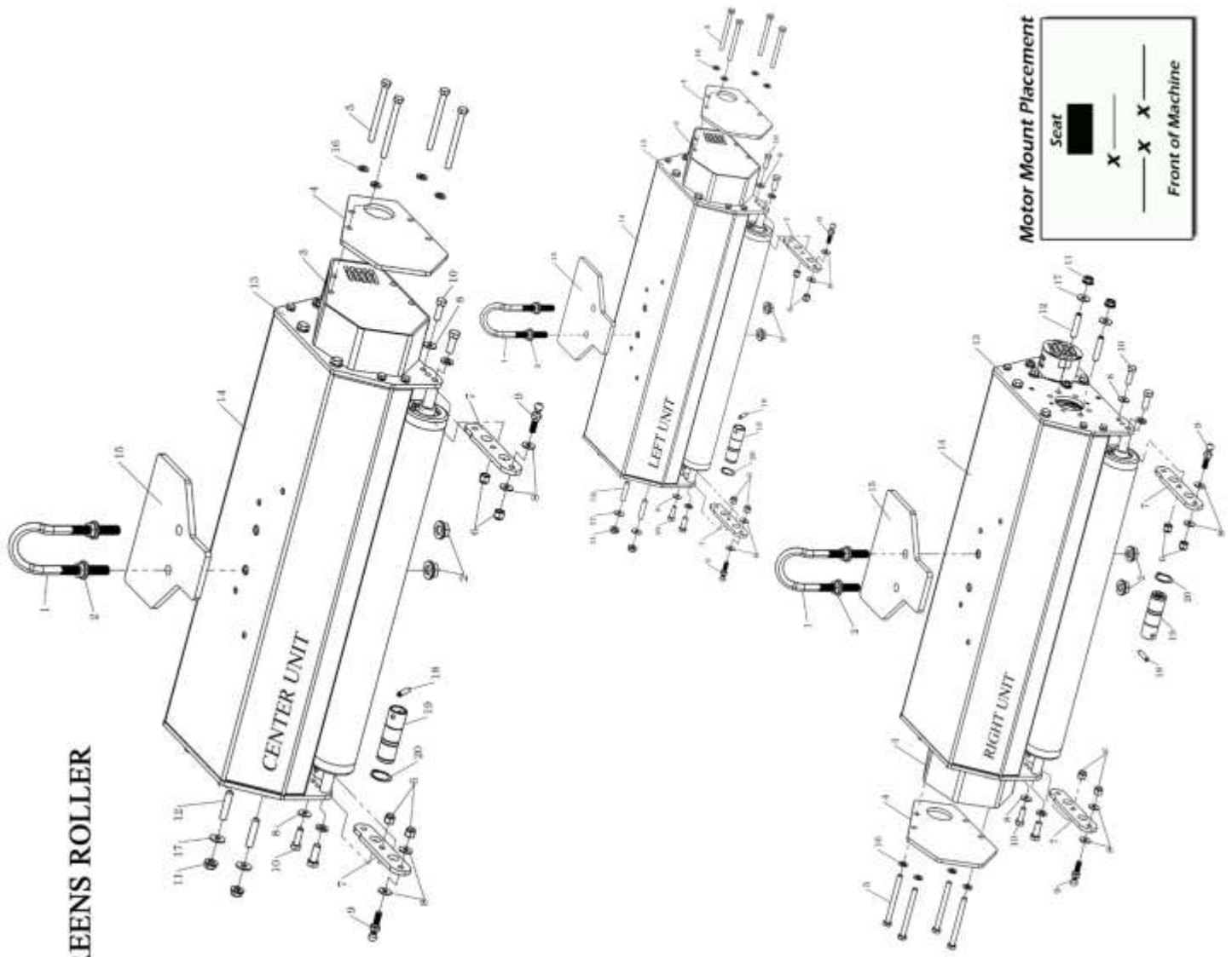
Adaptation Kit to Fit Toro 3200B Part Number 30A-7552



The 30A-7552 adaptation kit includes the following:

ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook (Bent)	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	*
4	31P	VR-7CWB	Black Counterweight	3
5	H	7029	5/16-18 x 3-1/4" GR. 5 Hex Bolt	12
6	31P	V6045	3200 Bushing 5/8 x 7/8	6
7	31P	VR7042	Tow Bar	3
8	37P	3200C	Quick Coupler	3
9	31P	VR7042B	Tow Bar Bracket	3
10	H	3184	1/2" Split Lock Washer	3
11	H	V1033	1/2-20 x 2-1/2" GR. 5 Hex Bolt	3
12	H	1183	3/8-16 Smooth Flange Nut	6
13	H	1402	3/8-16 Motor Stud	6
14	31P	7011 BLACK	End Plate (Black)	*
15	31P	V7003 BLACK	Roller Hood (Black)	*
16	37P	7802	Hood Protective Plate	3
17	H	1013	5/16 Split Lock Washer	12
18	H	H-1019	5/16-USS Flat Washer	6
19	37P	1029	63/64 EXT. Snap Ring	3
20	37P	7001	Female Spline Coupler (Includes 19 & 21)	3
21	37P	7178	1/4 x 1-1/4 Split Spring Pin	3

**TRUE-SURFACE® VIBE Y™ VIBRATORY GREENS ROLLER
TORO 3250**



ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook (Bent)	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	3
4	31P	VR-7CWB	Black Counterweight	3
5	H	7029	5/16-18 x 3-1/4" GR. 5 Hex Bolt	12
6	H	3179	5/16-18 Nylon Lock Nut	12
7	31P	7325-3	Ball Stud Extension	6
8	H	1008	1/4" USS Flat Washer	12
9	30A	7126-1	Ball Stud Assembly Includes # 6 & 8	6
10	H	1101	5/16-18 x 1" GR. 5 Hex Bolt	6
11	H	1183	3/8-16 Smooth Flange Nut	6
12	H	1402	3/8-16 Motor Stud	6
13	31P	7011 BLACK	End Plate (Black)	6
14	31P	V7003 BLACK	Roller Hood (Black)	3
15	37P	7802	Hood Protector Plate	3
16	H	1013	5/16 Split Lock Washer	12
17	H	H-1019	5/16-USS Flat Washer	6
18	37P	7178	1/4 x 1-1/4 Split Spring Pin	3
19	37P	7001	Female Spline Coupler (Includes 18 & 20)	3
20	37P	1029	63/64 Ext. Snap Ring	3

Installation of the VIBE ∇^{TM} to fit Toro 3250

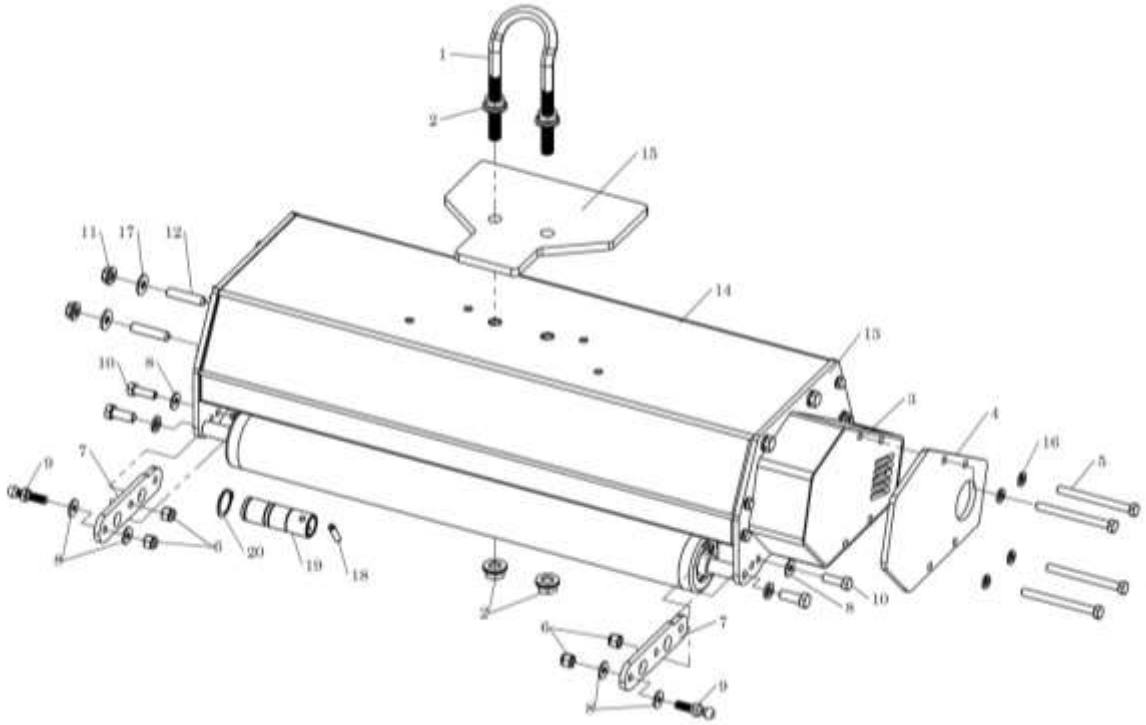
Tools Required: 9/16" Combination Wrench
 3/4" Combination Wrench

1. Read these instructions carefully and familiarize yourself with the parts and assembly drawings before starting.
2. Remove the hydraulic motors from the cutting units.
3. Detach the ball coupler and slide the units out from under the machine and set aside.
4. Unpack the new rollers.
5. Install the U-bolt lift hook (37P-7090 BENT) by removing one nut (H-1026) from each side of the U-bolt and sliding the U-bolt through the protection plate (37P-7802) then through the two 1/2" holes in the top of the roller. The top of the hook should be angled toward the rear of the unit, as shown in the schematic on page 25.
6. Replace the nuts (H-1026) on the bottom and tighten.
NOTE: Tighten evenly, so the lift hook is perpendicular when secured. This hook is also height adjustable by moving the nuts up or down on the hook to adapt to your needs.
7. Set the rollers under the machine in their respective positions as marked, as if you were in the operator's seat, facing forward. The smaller diameter roller (31P-V7209) will be forward when installed.
8. Pass the lift arm through the lift hook (37P-7090 BENT) on the roller.
9. Connect the ball couplers of the machine to the ball studs (30A-7126-1) on the rollers.
10. Remove the flange nuts (H-1183) and washers (H1019) from the motor-mounting studs (H-1402), and twist the motors into place.
11. Re-install the nuts (H-1183) and washers (H-1019), then tighten.
12. Repeat for the other two rollers.
13. Start the machine, and check the lift height, ground clearance, and raised position clearance between the roller and the machine.
14. Check the operation of the rollers.

Note: The ball stud extension brackets (H-7325-3) can be extended if you have groomers on your cutting reels. To adjust, remove the bolt from the ends of the axle; remove the assembly from the frame. Reposition the brackets in the secondary set of holes and reassemble.

Adaptation Kit to Fit Toro 3250

Part Number 30A-7506



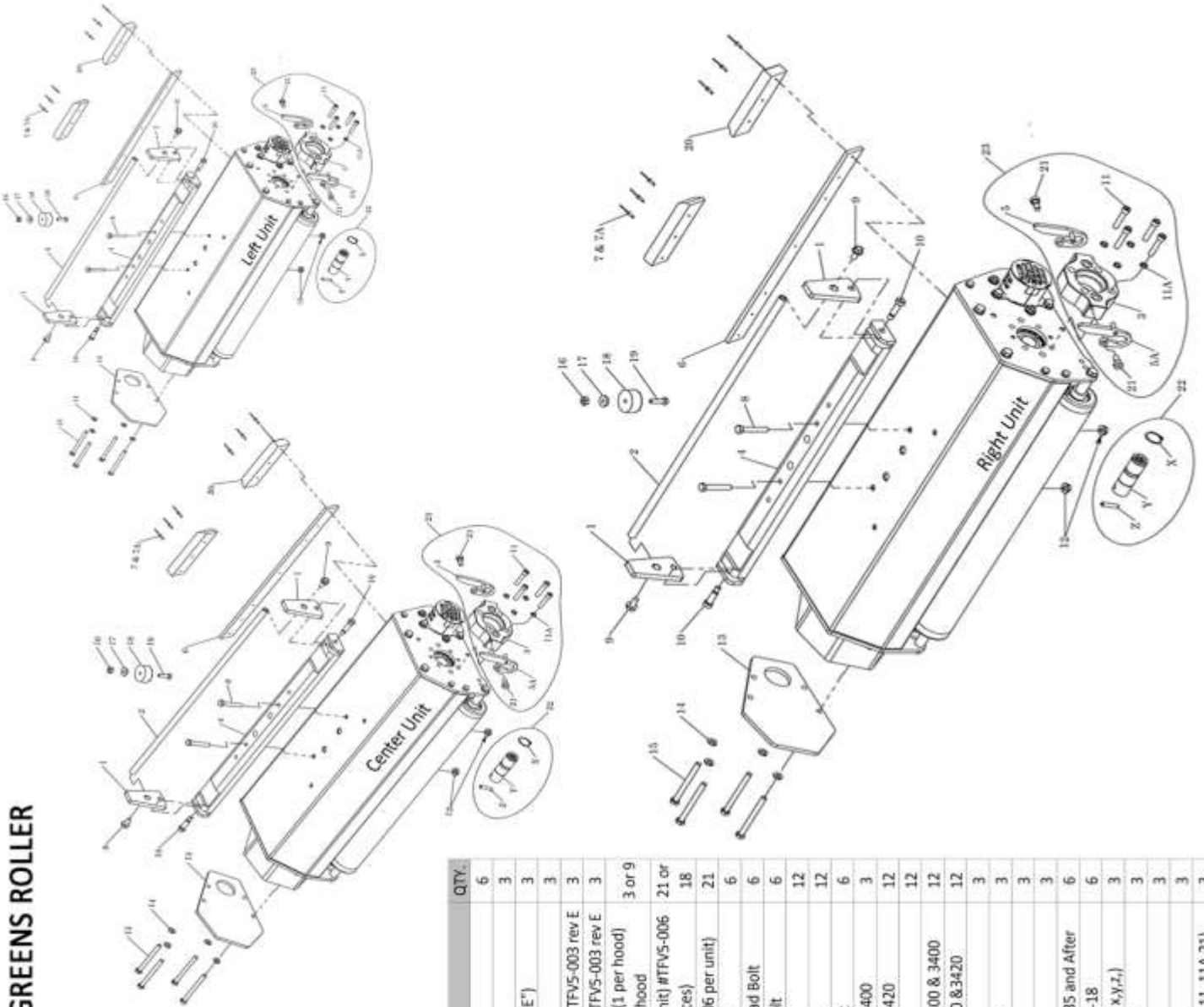
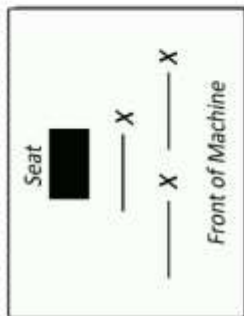
The 30A-7506 adaptation kit includes the following:

ITEM#	DEPT#	PART#	DESCRIPTION	QTY.
1	37P	7090 BENT	Lift Hook (Bent)	3
2	H	1026	1/2-13 Serrated Flange Nut	12
3	31P	VR7002-1	Black Belt Guard	*
4	31P	VR-7CWB	Black Counterweight	3
5	H	7029	5/16-18 x 3-1/4" GR. 5 Hex Bolt	12
6	H	3179	5/16-18 Nylon Lock Nut	12
7	31P	7325-3	Ball Stud Extension	6
8	H	1008	1/4" USS Flat Washer	12
9	30A	7126-1	Ball Stud Assembly (Includes 6 & 8)	6
10	H	1101	5/16-18 x 1" GR. 5 Hex Bolt	6
11	H	1183	3/8-16 Smooth Flange Nut	6
12	H	1402	3/8-16 Motor Stud	6
13	31P	7011 BLACK	End Plate (Black)	*
14	31P	V7003 BLACK	Roller Hood (Black)	*
15	37P	7802	Hood Protector Plate	3
16	H	1013	5/16 Split Lock Washer	12
17	H	H-1019	5/16-USS Flat Washer	6
18	37P	7178	1/4 x 1-1/4 Split Spring Pin	3
19	37P	7001	Female Spline Coupler (Includes 18 & 20)	3
20	37P	1029	63/64 Ext. Snap Ring	3

TRUE-SURFACE® VIBE V™ VIBRATORY GREENS ROLLER TORO 3300, 3320, 3400, 3420

Quantities are for a set of 3 Rollers.

Motor Mount Placement



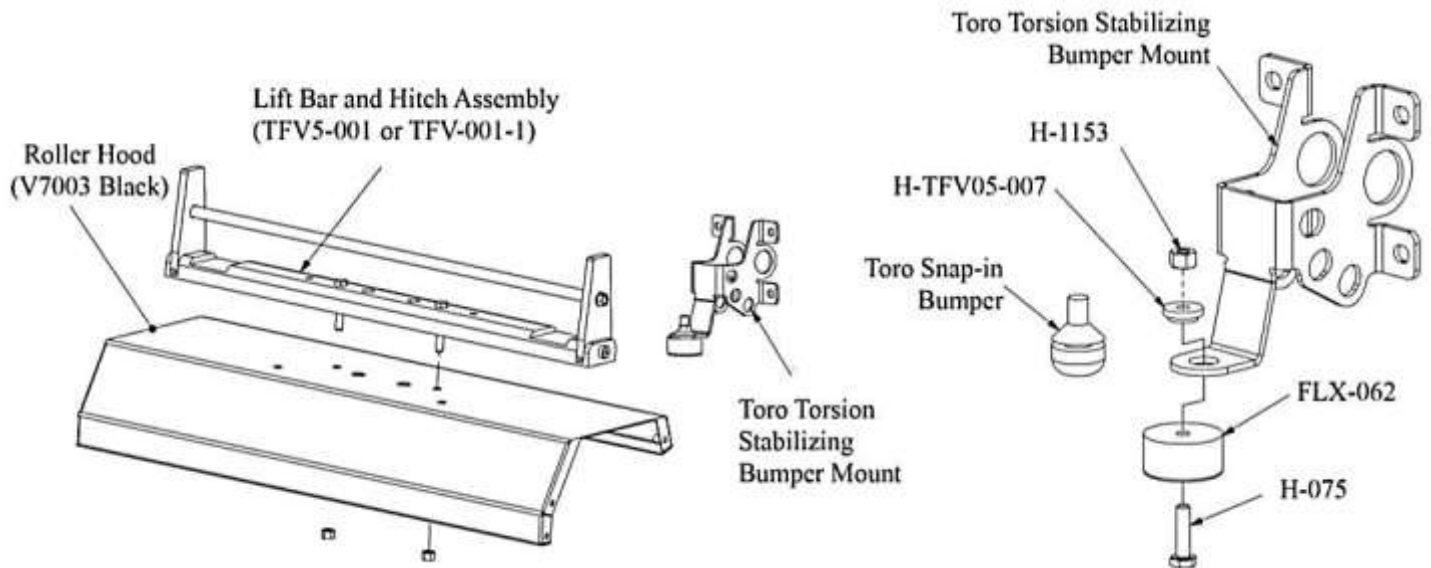
ITEM#	DEPTH#	PART #	DESCRIPTION	QTY.
1	31P	TFV5-001-1	Lift Bar Mount Plate	6
2	31P	TFV5-002	Lift Bar	3
3	31P	TFV5-003	Motor Mounting Flange (Rev. "E")	3
4	31P	TFV5-004	Hitch Mounting Bar	3
5	31P	TFV5-005C-R	Motor Locking Clamp (right hand)use with TFV5-003 rev E	3
5A	31P	TFV5-005C-L	Motor Locking Clamp (left hand)use with TFV5-003 rev E	3
6	31P	TFV5-006	Stabilizer Spring Pad Up to # VR072190. (1 per hood) # VR072191-VR072234 use 9 per hood	3 or 9
7	H	3027	1/8" x 3/8" Pop Rivet : Use with 3 (1 per unit) #TFV5-006	21 or 18
7A	H	N/A	AND with # TFV5-006-1 (18 pieces)	18
8	H	2503	5/32 x 3/4 rivet use with 9 (3 # TFV5-006 per unit)	21
9	H	1067	5/16-18 x 2" Gr.5 hex Bolt	6
10	H	22	5/16-18 x 5/8" Serrated Flange Head Bolt	6
11	H	1404	3/8 x 1 x 5/16-18 Shoulder Bolt	6
11A	H	V8001	5/16-18 x 1-1/2" S.H.C.S.	12
12	H	1147	5/16 Hi-Collar Lock Washer	12
13	31P	VR7CWB	5/16-18 Serrated Flange Nut	6
13	31P	VR7CWB	Counter Weight TORO 3300 & 3400	3
14	H	1013	Counter Weight TORO 3320 & 3420	12
15	H	7029	5/16 Split Lockwasher	12
15	H	1080	5/16-18 x 3-1/4" Gr.5 Hex bolt Toro 3300 & 3400	12
16	H	1153	5/16-18 x 4" Gr.5 Hex bolt Toro 3320 & 3420	12
17	H	TFV5-007	1/4-20 Nylon Locknut	3
18	44P	FLX-062	Bumper Centering Washer	3
19	H	O75	Bumper	3
20	31P	TFV5-006-1	1/4-20 bolt	3
21	H	2582	Stabilizer Spring Pad 3/4" ALL # VR072235 and After	6
22	37P	7001	Shoulder Bolt. 3/8"x1/4"x 51/6-18	6
X	37P	1029	Female Splined Coupler (Includes x,y,z.)	3
Y	7001	7001	Snap Ring 63/64" .042 thick	3
Z	37P	7178	Female Splined Coupler	3
23	31A	TFV5 MTR FLNG KT	Spring Pin 1/4" x 1-1/8"	3
			Motor Flange and Lock Kit (#'s 3, 5, SA, 11, 11A,21)	3

Installation of the VIBE ∇ TM to fit Toro TriFlex 3300, 3320, 3400 & 3420

Tools Required: *1/2" Combination Wrench*
 1/2" Socket with Ratchet & Extension

1. Read these instructions carefully and familiarize yourself with the parts and assembly drawings before starting.
2. Unpack the new rollers.
3. Bolt the hitch mounting bar (31P-TFV5-004) directly on top of the roller with two 5/16 – 18 x 2 Gr. 5 hex bolts (H-2503), add the flange nuts (H-1147) to bottom and tighten. Note: this part is symmetrical, so there is no left or right.
4. Read the "Lift Bar and Torsion Stabilizing Bumper Mount Notice" below, and follow the instructions if they apply to your Toro TriFlex Greens Mower.
5. Remove the clipping baskets, drive motors and cutting reels from the triplex greens mower and place the vibratory rollers into position. Reattach the lifting mechanism, install the drive motors, and lock into place.
6. Check the operation of all 3 True-Surface[®] rollers.

LIFT BAR AND TORSION STABILIZING BUMPER MOUNT NOTICE:

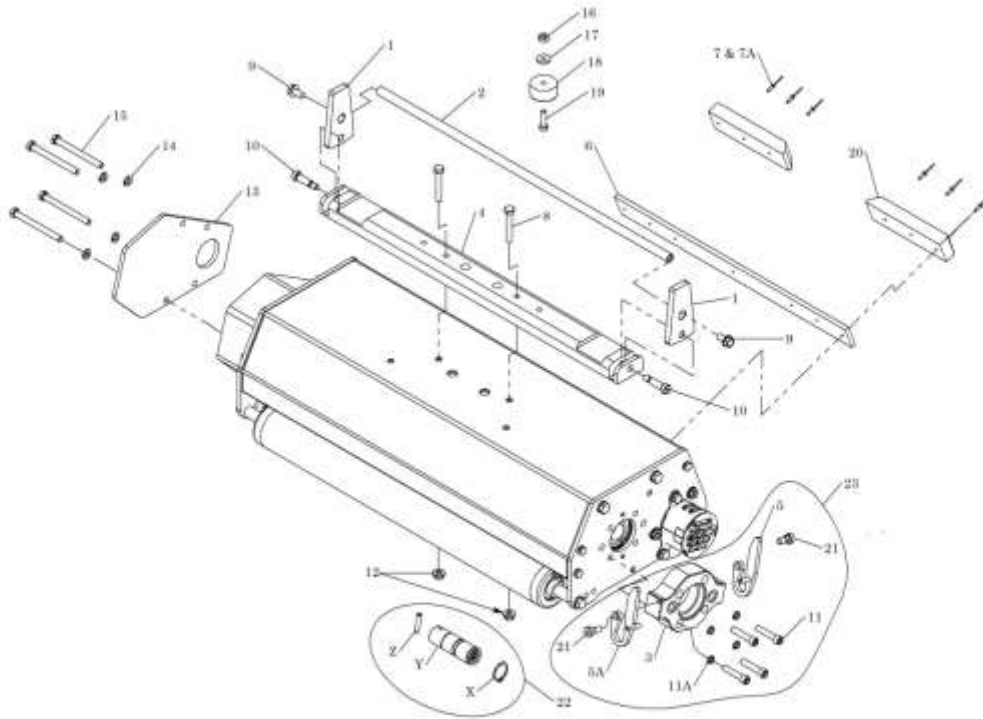


If your Toro TriFlex greens mower has the torsion mount stabilizing bumper for the rear cutting rollers, then mount the lift bar using the **two 5/16" holes that are at the rear most point of the True-Surface[®] roller hood**. This will provide clearance between the vibratory roller and the bumper tab.

We recommend replacing the Toro factory bumper with the True-Surface[®] style bumper to prevent scratching the roller against the tab. Simply pull the factory bumper out of the tab, and install the new bumper with the centering washer, bolt and nut as shown, and tighten.

Adaptation Kit to Fit Toro 3300-3420

Part Number 30A-7501 (Hydraulic) & 30A-7501E (Electric)



ITEM#	DEPT#	PART #	DESCRIPTION	QTY.
1	31P	TFV5-001-1	Lift Bar Mount Plate	6
2	31P	TFV5-002	Lift Bar	3
3	31P	TFV5-003	Motor Mounting Flange (Rev. "E")	3
4	31P	TFV5-004	Hitch Mounting Bar	3
5	31P	TFV5-005C-R	Motor Locking Clamp (Right hand)use with TFV5-003 rev E	3
5A	31P	TFV5-005C-L	Motor Locking Clamp (Left hand)use with TFV5-003 rev E	3
6	31P	TFV5-006	Stabilizer Spring Pad Up to # VR072190. (1 per hood) # VR072191-VR072234 use 9 per hood	3 or 9
7	H	3027	1/8" x 3/8" Pop Rivet : Use with 3 (1 per unit) #TFV5-006	21
7	H	3027	1/8" x 3/8" Pop Rivet : Use with TFV5-006-1	18
7A	H	N/A	5/32 x 3/4 Pop Rivet use with 9 (3 # TFV5-006 per unit)	21
8	H	2503	5/16-18 x 2" Gr.5 hex Bolt	6
9	H	1067	5/16-18 x 5/8" Serrated Flange Head Bolt	6
10	H	22	3/8 x 1 x 5/16-18 Shoulder Bolt	6
11	H	1404	5/16-18 x 1-1/2" S.H.C.S.	12
11A	H	V8001	5/16 Hi-Collar Lock Washer	12
12	H	1147	5/16-18 Serrated Flange Nut	6
13	31P	VR7CWB	Counter Weight TORO 3300 & 3400	3
13	31P	VR7CWB	Counter Weight TORO 3320 & 3420	12
14	H	1013	5/16 Split Lockwasher	12
15	H	7029	5/16-18 x 3-1/4" Gr.5 Hex bolt Toro 3300 & 3400	12
15	H	1080	5/16-18 x 4" Gr.5 Hex Bolt Toro 3320 & 3420	12
16	H	1153	1/4-20 Nylon Locknut	3
17	H	TFV5-007	Bumper Centering Washer	3
18	44P	FLX-062	Bumper	3
19	H	O75	1/4-20 x 1" Bolt	3
20	31P	TFV5-006-1	Stabilzer spring pad 3/4" ALL # VR072235 and After	6
21	H	2582	Shoulder Bolt 3/8"x1/4"x 5/16-18	6
22	37P	7001	Female Splined Coupler (Includes x,y,z,)	3
X	37P	1029	Snap Ring 63/64" .042 thick	3
Y		7001	Female Splined Coupler	3
Z	37P	7178	Spring Pin 1/4" x 1-1/8"	3



These two views show the TORO Triflex Counterbalance adjustment.

The view on the left shows the setting pin in the second (middle) position, with available increase or decrease in tension (lift) of the suspension arms.

The view on the right shows the retaining pin in the setting pin, as well as the torsion arm, note and the top of the plate the square hole. This is to insert a square drive tool such as a ratchet or break-over bar to release the tension from the retaining pin and adjust to a new position.

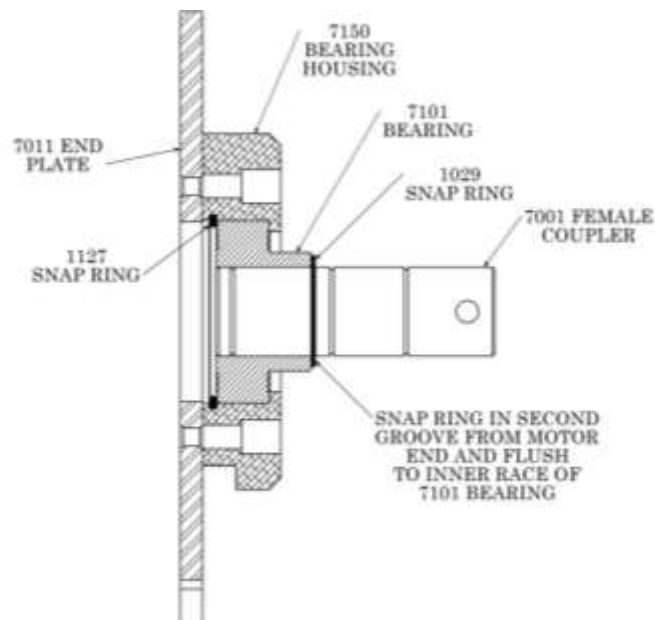
Positions range from resting the plate on top of the pin as shown in any of the available holes, or aligning the oval hole in the plate and passing the pin through it.

It may be more desirable in some cases using the Vibratory Rollers to reduce the lift force and allow more downward force for more effective results.

Snap Ring Installation Instructions for Toro GM3 – 3250

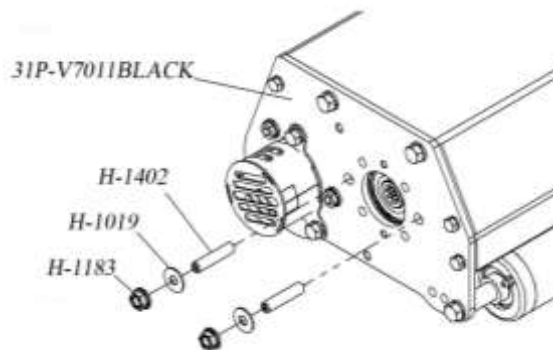
(Use page 12 for a parts reference)

1. Select the required shaft position that corresponds to your triplex machine.
2. Remove the shaft by turning the roller upside down.
3. Remove the belt guard (31P-VR7002-1) and the belt (37P-7121).
4. Loosen the set screw on the pulley (37P-7100) and the bearing (37P-7101).
5. Loosen the set screw and the lock collar on the bearing (37P-7102).
6. Tap the shaft with a rubber mallet to allow positioning of the snap ring.
7. Install the snap ring in its appropriate place and tap the shaft into the position indicated.
8. Retighten the bearings.
9. Lock the collar on the bearing (37P-7102). The bearing needs to be locked by rotating it in the direction at which the shaft will be turning. With a punch inserted into the predrilled hole, give one hit with a mallet in the same direction to lock the collar into place and tighten the set screw.
10. Align the pulleys and tighten the set screw on the pulley (37P-7100).
11. Replace the belt (37P-7121) and the belt guard (31P-VR7002-1).



Hydraulic Motor Mounting Configurations – Toro GM3 - 3250

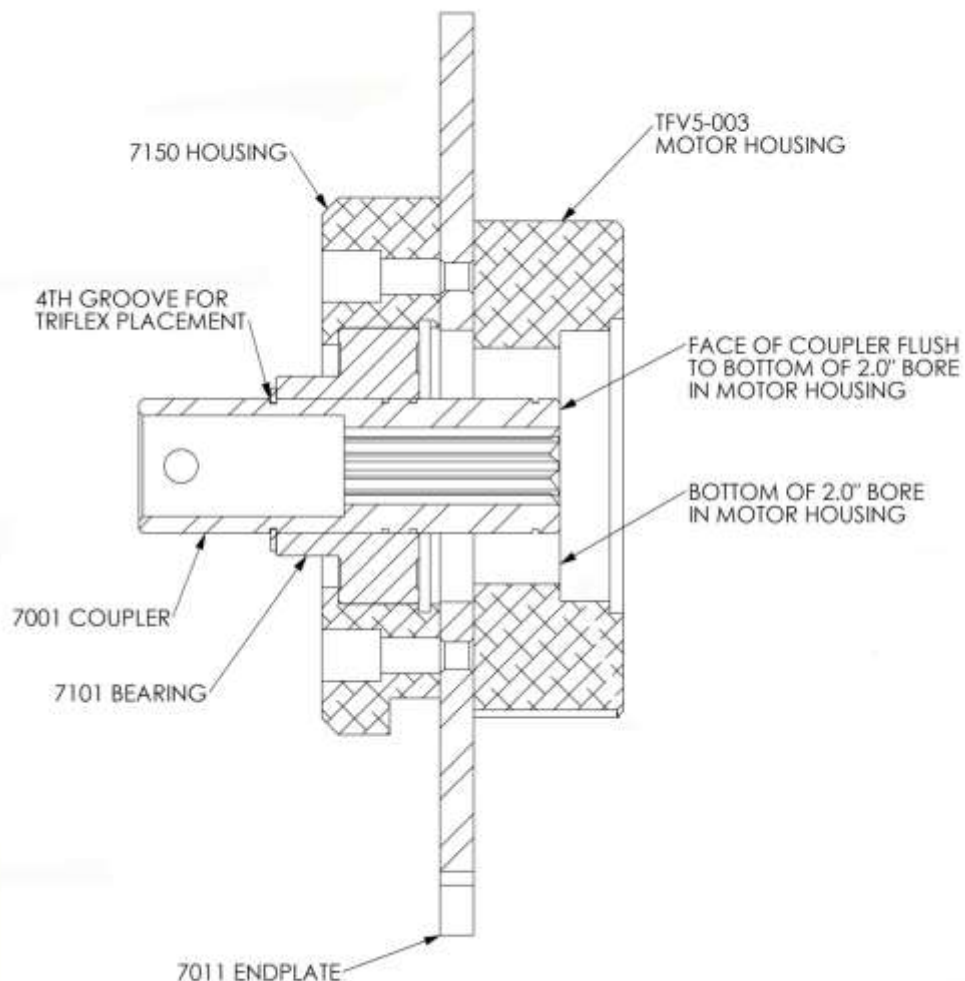
1. Remove the factory installed motor mounting hardware from the rolling unit.
2. Thread the two 3/8" motor studs (H-1402) from the outside of the unit through the endplate (31P-V7011Black) into the aluminum housing (37P-7150), and tighten the nuts (H-1183). *Note: The aluminum housing is on the interior of the unit.*
3. These studs (H-1402) will stick out from the endplate, providing a place to secure your hydraulic motor.



Snap Ring Installation Instructions for Toro TriFlex 3300-3420

(Use Page 12 as a Parts Reference)

1. Select the required shaft position that corresponds to your triplex machine.
2. Remove the shaft by turning the roller upside down.
3. Remove the belt guard (31P-VR7002-1) and the belt (37P-7121).
4. Loosen set screw on the pulley (37P-7100) and the bearing (37P-7101).
5. Loosen set screw and lock collar on the bearing (37P-7102).
6. Tap the shaft with a rubber mallet to allow for positioning of the snap ring.
7. Install the snap ring (37P-1029) into the 4th groove and tap the shaft into position.
8. Retighten bearings.
9. The lock collar on the bearing (37P-7102) needs to be locked by rotating the direction at which the shaft will be turning. Find the predrilled hole in the lock collar; using a punch, give one hit with a mallet in the same direction to lock it into place, and tighten the set screw.
10. Align pulleys, and tighten the set screw on the pulley (37P-7100).
11. Replace belt (37P-7121) and belt guard (31P-VR-7002-1).



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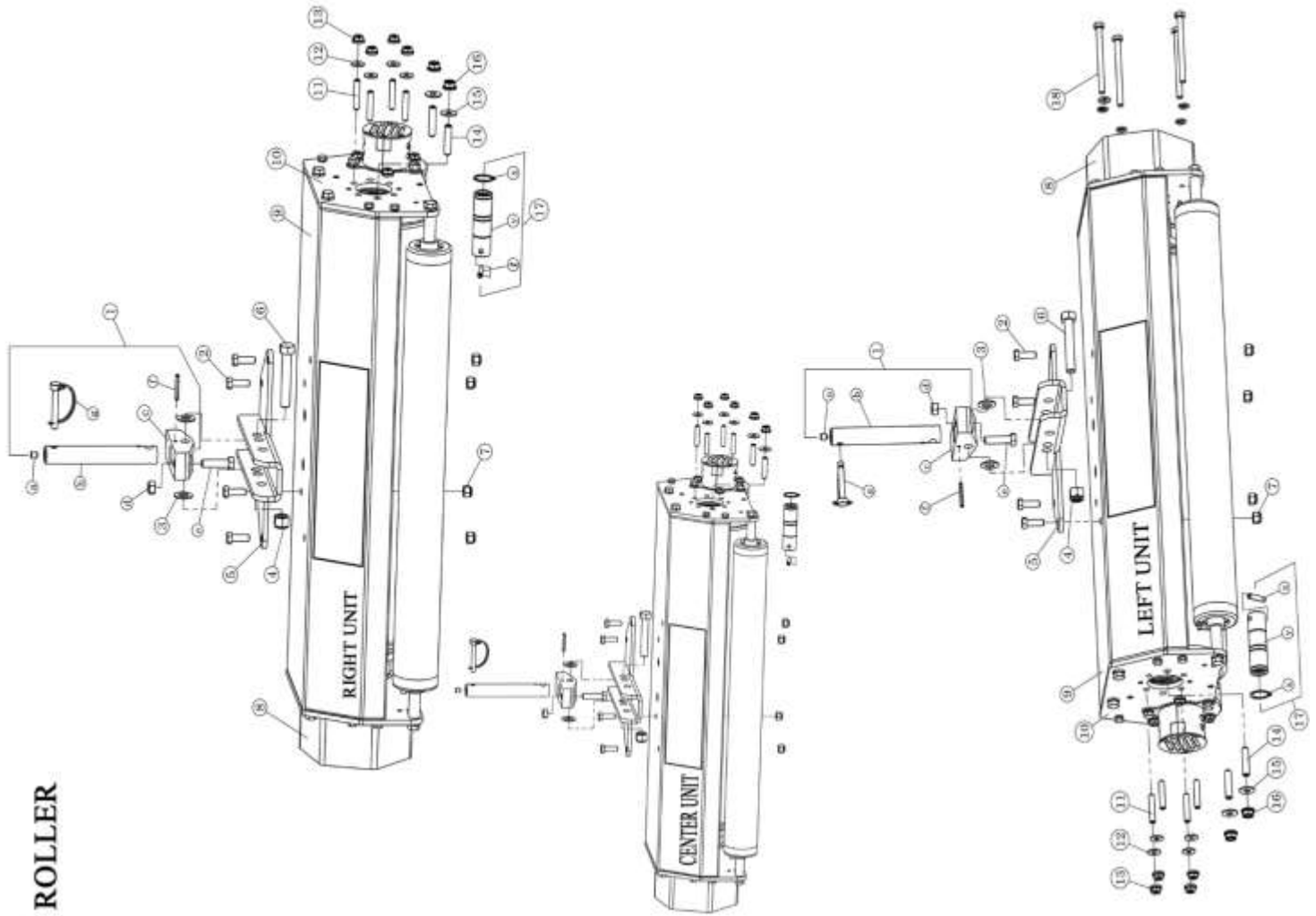


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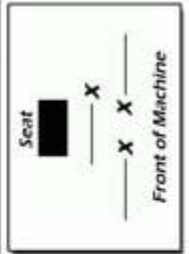
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TRUE-SURFACE® VIBE Y™ VIBRATORY GREENS ROLLER JACOBSEN GREENSKING 3 & 4

Quantities are for a set of 3 rollers.



ITEM #	DEPT #	PART #	DESCRIPTION	QTY
1	30A	7518	Lift Pin Assembly Includes Items: a, b, c, d, e,	3
a	H	6012	Set Screw 5/16 x 18 x 3/8	1 ea.
b	37P	7028-1	Lift Pin - 7/8 Diameter	1 ea.
c	37P	7026-1	Pivot Limiter	1 ea.
d	H	1005	Nut 3/8 - 16 Hex	1 ea.
e	H	032	Bolt 3/8 - 16 x 1 1/2 G8	1 ea.
f	H	7152	Split Spring Pin 3/16 x 1 1/4	1 ea.
g	H	66	Wire Loop Pin	1 ea.
2	H	1101	Bolt 5/16 - 18 x 1	12
3	H	3585	Shim 1/2" x .062	6
4	H	1073	Nylon Lock Nut	3
5	37P	7086	Black Lift Bracket	3
6	H	1004	1/2 - 13 x 2 3/4	3
7	H	3179	5/16" Lock Nut	12
8	31P	VR7002-1	Black Belt Guard	3
9	31P	V7003Black	Black Hood	3
10	31P	V7011Black	Black End Plate	6
11	H	1403	Motor Studs - 4 Bolt Config.	12
12	H	1008	1/4" Flat Washer	12
13	H	3147	Flange Nuts - 4 Bolt Config.	12
14	H	1402	Motor Studs - 2 Bolt Config.	6
15	H	1019	5/16" Flat Washer	6
16	H	1183	Flange Nuts - 2 Bolt Config.	6
17	37P	7001	Female Spine Coupler - Includes x, y, & z	3
x	H	1029	Snap Ring	1 ea.
y	37P	7001	Coupler	1 ea.
z	H	7178	Split Spring Pin	1 ea.



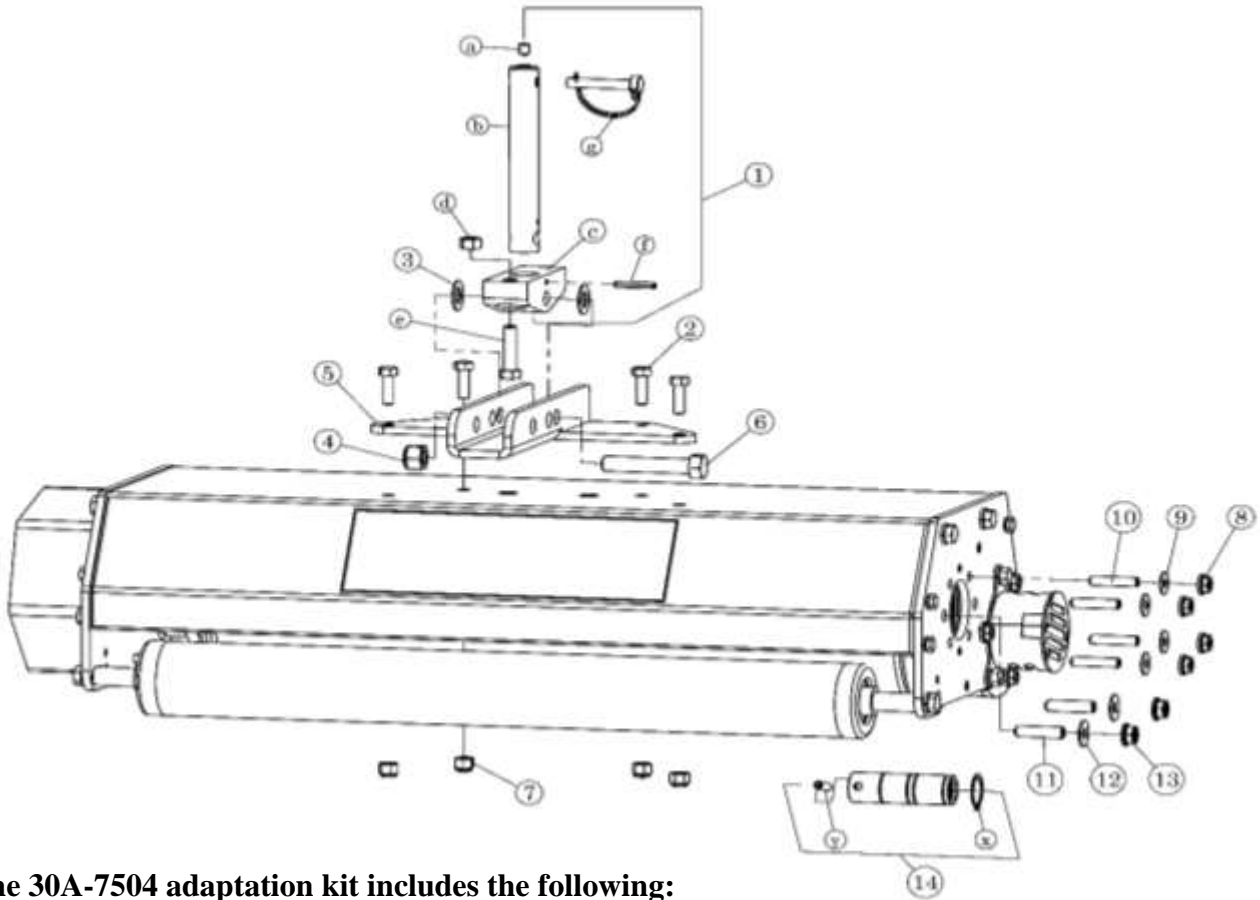
Installation of the VIBE ∇ TM to fit Jacobsen GK III & GK IV

Tools Required: *1/2" Combination Wrench and Socket*
 2-3/4" Combination Wrenches
 5/32" Allen wrench
 Pliers

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Remove the hydraulic motors from the cutting units, keeping the nuts with the cutting units. The nuts and cutting units are not needed for the rollers.
3. Remove the 5/16" retainer pin from the main attaching pin at the end of the lift arm, raise the lift arm off of the cutting units, and set them aside.
CAUTION: Some lift arms are equipped with torsion springs and are under tension.
4. After unpacking the rollers, remove the four loose 5/16" bolts (H-1101) from the lifting/towing bracket, and set the bracket on top of the roller unit.
5. Align all four holes, re-install the bolts (H-1101) and nuts (H-3179), and tighten securely.
6. Remove the 1/2" bolt from the tow bracket, and set the lift pin into the channel. Install one spacer on either side of the lift pin (30A-7518), and replace the bolt and nut in rear most position.
7. Tighten the bolt until some resistance is felt when pivoting the lift pin (30A-7518). **NOTE: The lift pin needs to remain moveable.**
8. Repeat the above steps for the other rollers. This is a once only procedure.
NOTE: There is an adjuster bolt on the front of the lift pin assembly that controls the forward and backward tilt of the rollers. You will need to adjust this to fit your needs, i.e., undulations on your greens, ground clearance while in transport, etc.
10. Set the rollers in their marked positions (right, left & center) as if you were in the operator's seat facing forward.
11. Raise the lift arm, set the roller in position, and lower the tube end of the lift arm over the lift pin (30A-7518).
12. Reinstall the 5/16" retainer pin.
13. **For a 2-Bolt Configuration**, remove the hydraulic motor retainer nuts (H-1183) and washers (H-1019) from the mounting studs (H-1402).
- 13a. **For a 4-Bolt Configuration**, remove the hydraulic motor retainer nut (H-3147) and washers (H-1008) from the mounting studs (H-1403)
14. Install the hydraulic motor and nuts. Some wiggling may be necessary to align the splines.
15. Tighten the nuts (H-1183).
16. Repeat the process for the other rollers.
17. Check the operation of the rollers.

Adaptation Kit to Fit Jacobsen GK III & GK IV

Part Number 30A-7504

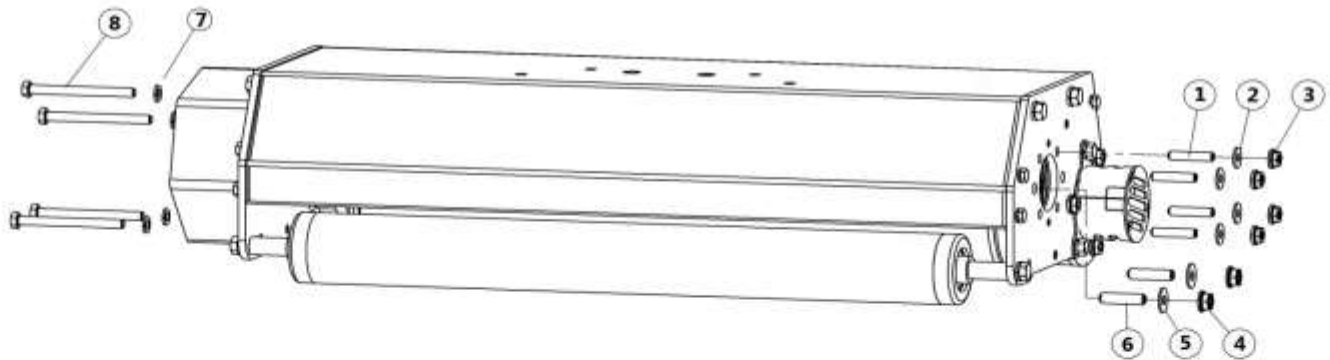


The 30A-7504 adaptation kit includes the following:

Item #	Dept. #	Part #	Description	Qty
1	30A	7518	Lift Pin Assembly Includes Items: a, b, c, d, & e	3
a	H	6012	Set Screw 5/16 x 18 x 3/8	1 ea.
b	37P	7028-1	7/8" Diameter Lift Pin	1 ea.
c	37P	7026-1	Pivot Limiter	1 ea.
d	H	1005	Nut 3/8 - 16 Hex	1 ea.
e	H	032	Bolt 3/8 - 16 x 1 1/2 G8	1 ea.
f	H	7152	Spring Pin 1 1/4	1 ea.
g	H	66	Wire Loop Pin- Jac/Rans	1 ea.
2	H	1101	Bolt 5/16 - 18 x 1	12
3	H	3585	Shim 1/2" x .062	6
4	H	1073	Nylon Lock Nut	3
5	37P	7086B	Black Lift Bracket	3
6	H	1004	1/2 - 13 x 2 3/4	3
7	H	3179	5/16" Lock Nut	12
8	H	3147	Flange Nuts - 4 Bolt Config.	12
9	H	1008	1/4" Flat Washer	12
10	H	1403	Motor Studs - 4 Bolt Config.	12
11	H	1402	Motor Studs - 2 Bolt Config.	6
12	H	1019	5/16" Flat Washer	6
13	H	1183	Flange Nuts - 2 Bolt Config.	6
14	37P	7001	Female Spline Shaft Coupler (Includes X & Y)	3
x	37P	1029	Snap Ring For Pulley	1 ea.
y	H	7178	Spring Pin 1/4 x 1-1/8 BL-OX	1 ea.

Adaptation Kit to Fit Jacobsen GK III & GK IV

Use when adapting from Jacobsen Greensking V or VI to a Jacobsen Greensking III or IV
Part Number 30A-7504A



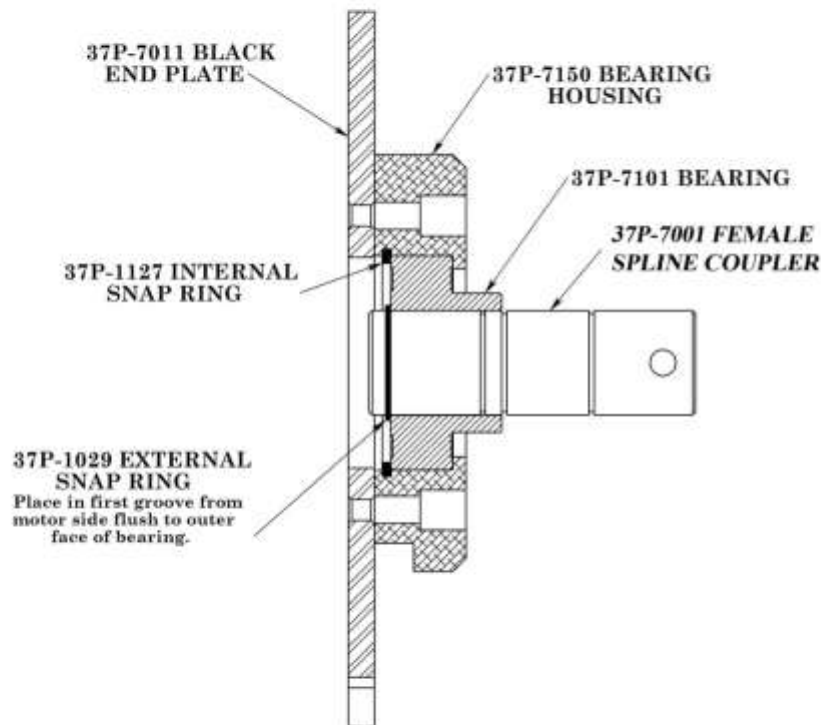
The 30A-7504A adaptation kit includes the following:

Item #	Dept. #	Part #	Description	Qty
1	H	1403	Motor Studs - 4 Bolt Config.	12
2	H	1008	1/4" Flat Washer - 4 Bolt Config.	12
3	H	3147	Flange Nuts - 4 Bolt Config.	12
4	H	1183	Flange Nuts - 2 Bolt Config.	6
5	H	1019	5/16 Flat Washer - 2 Bolt Config.	6
6	H	1402	Motor Studs - 2 Bolt Config.	6
7	H	1013	5/16 Split Lock Washer	12
8	H	7129	Bolt 5/16 - 18 x 3	12

Snap Ring Installation Instructions for Jacobsen GK III & GK IV

(Use Page 12 as a Parts Reference)

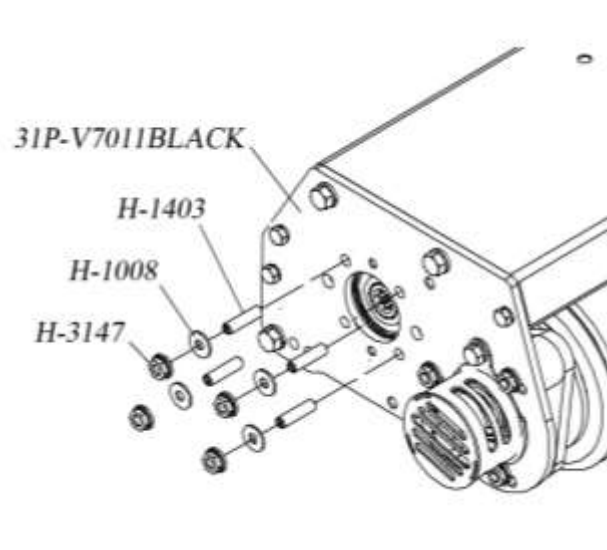
1. Select the required shaft position that corresponds to your triplex machine.
2. Remove the belt guard (31P-VR7002-1) and the belt (37P-7121).
3. Loosen the set screw on the pulley (37P-7100) and the bearing (37P-7101).
4. Loosen the set screw and the lock collar on the bearing (31P-VR7002-1).
5. Tap the shaft with a rubber mallet to allow positioning of the snap ring.
6. Install the snap ring (37P-1029) in its appropriate place and tap the shaft into the position indicated.
7. Retighten the bearings.
8. The lock collar on the bearing (37P-7101) needs to be locked by rotating the locking collar against the bearing in the direction at which the shaft will turn. With a punch, give one rap in the predrilled hole in lock collar in the same direction with a mallet to lock it into place, and tighten the set screw.
9. Align the pulleys and tighten the set screw on the pulley (37P-7100).
10. Replace the belt (37P-7121) and the belt guard (31P-VR7002-1).



Hydraulic Motor Mounting Configurations - 4-Bolt - Jacobsen GK III & GK IV.

1. Remove the factory installed motor mounting hardware from the rolling unit.
2. Thread the four 5/16" motor studs (H-1403) from the outside of the unit through the endplate (37P-7011R) into the aluminum housing (37P-7150), and tighten the nuts (H-3147). *Note: The aluminum housing is on the interior of the unit.*
3. These studs (H-1403) will stick out from the endplate, providing a place to secure your hydraulic motor.

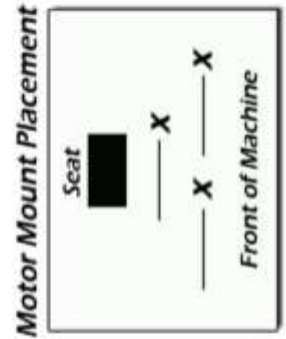
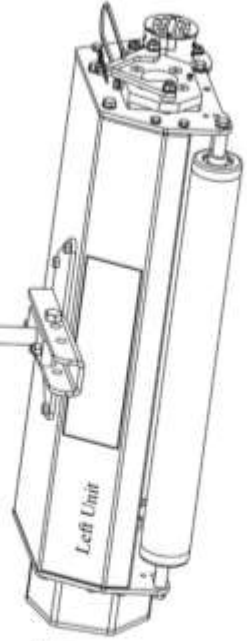
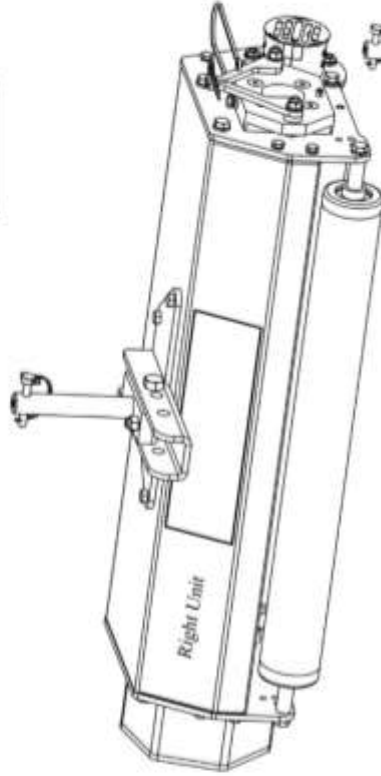
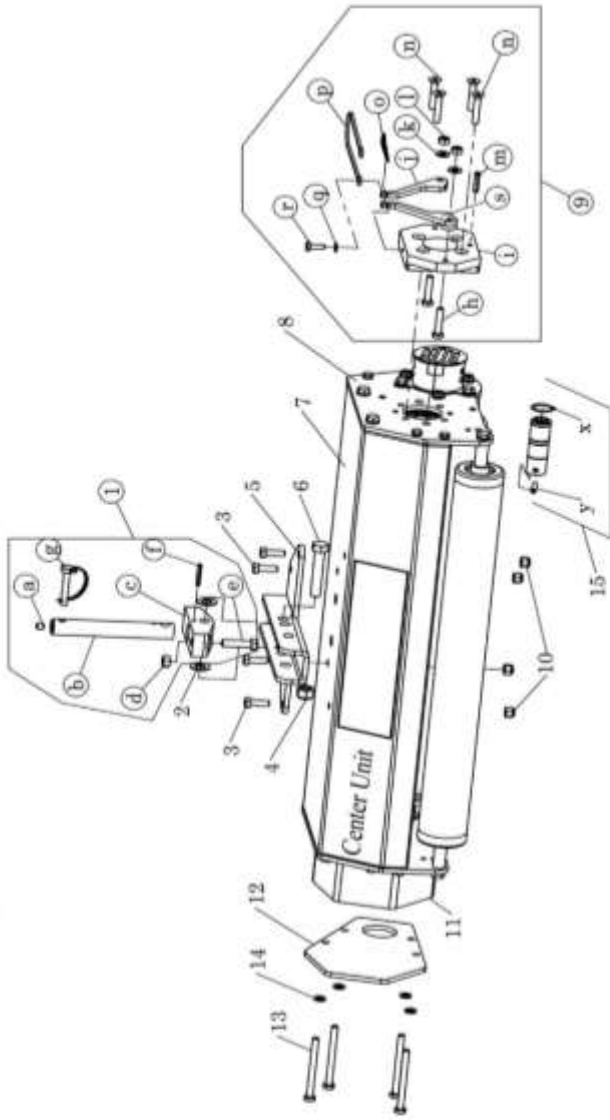
NOTE: *The same procedure applies for the installation of the two 3/8 motor studs (H-1402) in a 2-Bolt configuration.*



TRUE-SURFACE® VIBE-Y™ VIBRATORY GREENS ROLLER JACOBSEN GREENSKING 5 & 6

Quantities are for a set of 3 Rollers.

Item #	Dept. #	Part #	Description	Qty
1	30A	7518	Lift Pin Assembly - Includes Items: a, b, c, d, e, f, & g	3
a	H	6012	Set Screw 5/16 x 18 x 3/8	1 ea.
b	37P	7028-1	7/8" Diameter Lift Pin	1 ea.
c	37P	7026-1	Pivot Limiter	1 ea.
d	H	1005	Nut 3/8 - 16 Hex	1 ea.
e	H	032	Bolt 3/8 - 16 x 1 1/2 G8	1 ea.
f	H	7152	Spring Pin 1 1/4	1 ea.
g	H	66	5/16 Wire Loop Pin	1 ea.
2	H	3585	Shim 1/2" x .062	6
3	H	1101	Bolt 5/16 - 18 x 1	12
4	H	1014	1/2" Nylon Lock Nut	3
5	37P	7086	Black Lift Bracket	3
6	H	1004	1/2 - 13 x 2 3/4	3
7	37P	7003B	Black Roller Hood	*
8	37P	7011B	Black Roller End Plate	*
9	21A	GCC-1165	Motor Mount Lock Kit - Includes Items: e, f, g, h, i, j, k, l, & m.	3
h	H	3107	5/16" Bolt	2 ea.
i	37P	6034JV	Motor Adapter Flange	1 ea.
j	30A	3002	Motor Mount Lock Arm LH	1 ea.
k	H	3158	5/16" Wave Washer	2 ea.
l	H	3179	5/16" Lock Nut	2 ea.
m	H	7178	Spring Pin	1 ea.
n	H	1146	Motor Stud	4 ea.
o	H	2580	Cotter Pin	1 ea.
p	H	2528	Lanyard	1 ea.
q	H	1007	1/4" Split Lockwasher	1 ea.
r	H	1003	Hex Bolt 1/4-20 x 3/4	1 ea.
s	30A	3003	Motor Mount Lock Arm RH	1 ea.
10	H	3179	5/16" Lock Nut	12
11	31P	VR7002-1	Black Vented Belt Guard	*
12	31P	VR7CWB	Black Counterweight	3
13	H	7029	Bolt 5/16 - 18 x 3 1/4	12
14	H	1013	5/16 Split Washer (Fits the H-7029)	12
15	37P	7001	Female Spine Shaft Coupler (Includes X & Y)	3
x	37P	1029	Snap Ring- .63/.64" .042 thick	1 ea.
y	37P	7178	Spring Pin 1/4 x 1-1/8	1 ea.



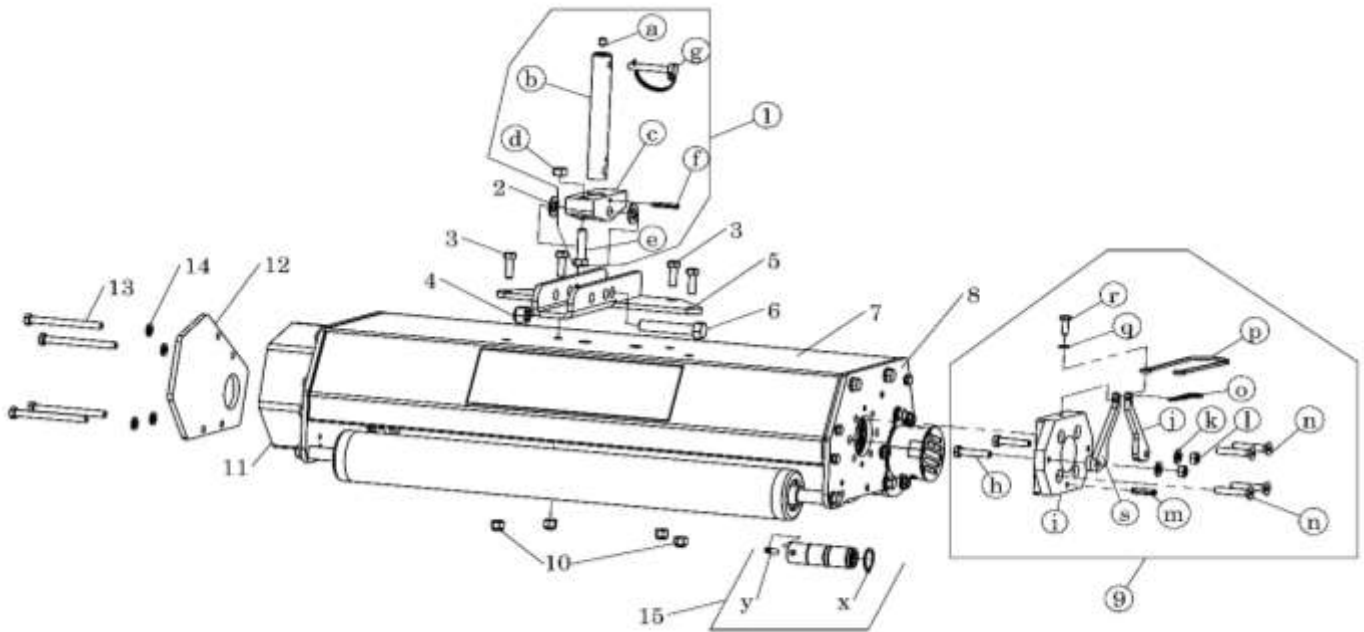
Installation of the VIBE ∇ TM to fit Jacobsen GK V & GK VI

Tools Required: *1/2" Combination Wrench and Socket*
 2-3/4" Combination Wrenches
 5/32" Allen Wrench
 Pliers

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Remove the hydraulic motors from the cutting units. ***Take care not to lose your factory splined coupler adaptors; these are not needed for the rollers.***
3. Remove the 5/16" retaining pin from the main attaching pin at the end of the lift arms, raise the lift arms off of the cutting units, and set the cutting units aside.
4. After unpacking the rollers, remove the four loose 5/16" bolts from the lifting/towing bracket, and set the bracket on top of the roller unit.
5. Align all four holes, install the bolts and nuts, and tighten securely.
6. Remove the 1/2" bolt from the tow bracket and set the lift pin into the channel. The adjuster bolt is positioned to the front of the unit.
7. Install one spacer on either side of the lift pin and replace the bolt and nut.
8. Tighten the bolt until some resistance is felt when pivoting the lift pin.
NOTE: The lift pin needs to remain moveable.
9. Repeat this process for the other rollers. This is a one-time procedure.
NOTE: There is an adjuster bolt on the front of the lift pin assembly that controls the forward and backward tilt of the rollers. Adjust it to suit your needs, i.e.: undulations on greens, ground clearance while in transport, etc.
10. Set the rollers under the machine. (The smaller diameter roller of the unit will be to the front of the machine).
11. Raise the lift arm, set the roller in position, lower the tube end of the lift arm over the lift pin, and reinstall the 5/16" retainer pin.
12. Remove the hairpin cotter from the motor clamps.
13. Open the clamp arms, twist and push the motor into position, close the clamps, and replace the hairpin cotter.
14. Repeat #10 through # 13 for the other rollers.
15. Check the operation of the rollers.

Adaptation Kit to Fit Jacobsen GK V & GK VI

PART NUMBER 30A-7503



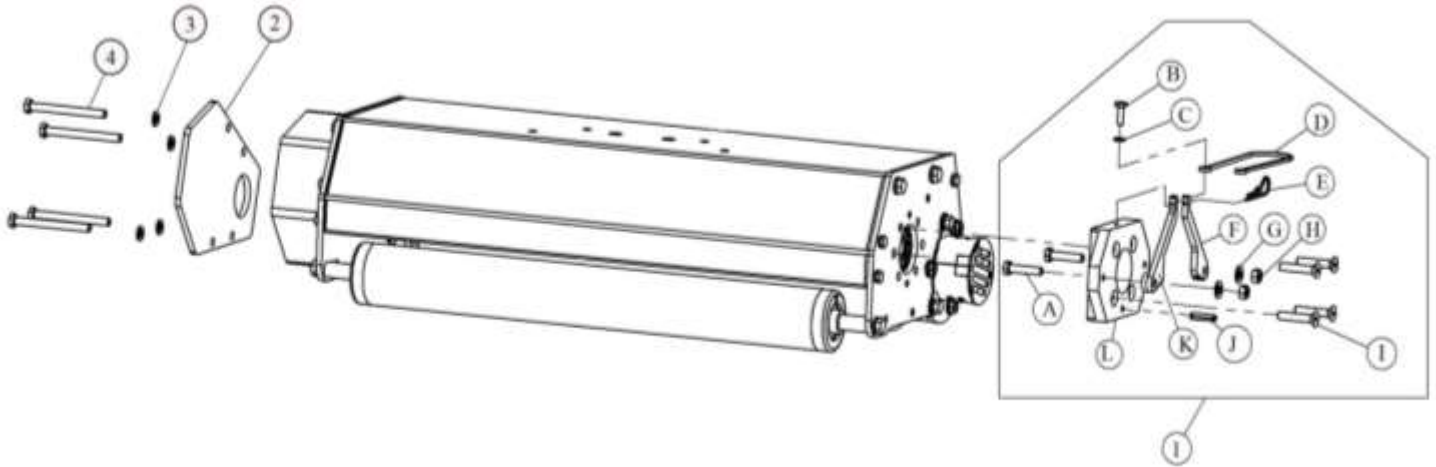
The 30A-7503 adaptation kit includes the following

Item #	Dept. #	Part #	Description	Qty
1	30A	7518	Lift Pin Assembly - Includes Items: a, b, c, d, e, f, & g	3
a	H	6012	Set Screw 5/16 x 18 x 3/8	1 ea.
b	37P	7028-1	7/8" Diameter Lift Pin	1 ea.
c	37P	7026-1	Pivot Limiter	1 ea.
d	H	1005	Nut 3/8 - 16 Hex	1 ea.
e	H	032	Bolt 3/8 - 16 x 1 1/2 G8	1 ea.
f	H	7152	Spring Pin 1 1/4	1 ea.
g	H	66	5/16 Wire Loop Pin	1 ea.
2	H	3585	Shim 1/2" x .062	6
3	H	1101	Bolt 5/16 - 18 x 1	12
4	H	1014	1/2" Nylon Lock Nut	3
5	37P	7086B	Black Lift Bracket	3
6	H	1004	1/2 - 13 x 2 3/4	3
7	37P	7003Black	Black Roller Hood	*
8	37P	7011Black	Black Roller End Plate	*
9	21A	GCC-1165	Motor Mount Lock Kit - Includes Items: e, f, g, h, i, j, k, l, & m .	3
h	H	3107	5/16" Bolt	2 ea.
i	37P	6034JV	Motor Adapter Flange	1 ea.
j	30A	3002	Motor Mount Lock Arm LH	1 ea.
k	H	3158	5/16" Wave Washer	2 ea.
l	H	3179	5/16" Lock Nut	2 ea.
m	H	7178	Spring Pin	1 ea.
n	H	1146	5/16"-18 X 1 3/4" F.H.S.C.S. Motor Stud	4 ea.
o	H	2580	Cotter Pin	1 ea.
p	H	2528	Lanyard	1 ea.
q	H	1007	1/4" Split Lockwasher	1ea.
r	H	1003	Hex Bolt 1/4-20 x 3/4	1ea.
s	30A	3003	Motor Mount Lock Arm RH	1 ea.
10	H	3179	5/16" Lock Nut	12
11	31P	VR7002-1	Black Vented Belt Guard for the Vibe V	*
12	31P	VR7CWB	Black Counterweight	3
13	H	7029	Bolt 5/16 - 18 x 3 1/4	12
14	H	1013	5/16 Split Washer (Fits the H-7029)	12
15	37P	7001	Female Spline Shaft Coupler (Includes X & Y)	3
x	37P	1029	Snap Ring- 63/64" .042 thick	1 ea.
y	37P	7178	Spring Pin 1/4 x 1-1/8	1 ea.

Adaptation Kit to Fit Jacobsen GK V & GK VI

Use when adapting from Jacobsen Greensking III or IV to a Jacobsen Greensking V or VI.

Part Number 30A-7503A



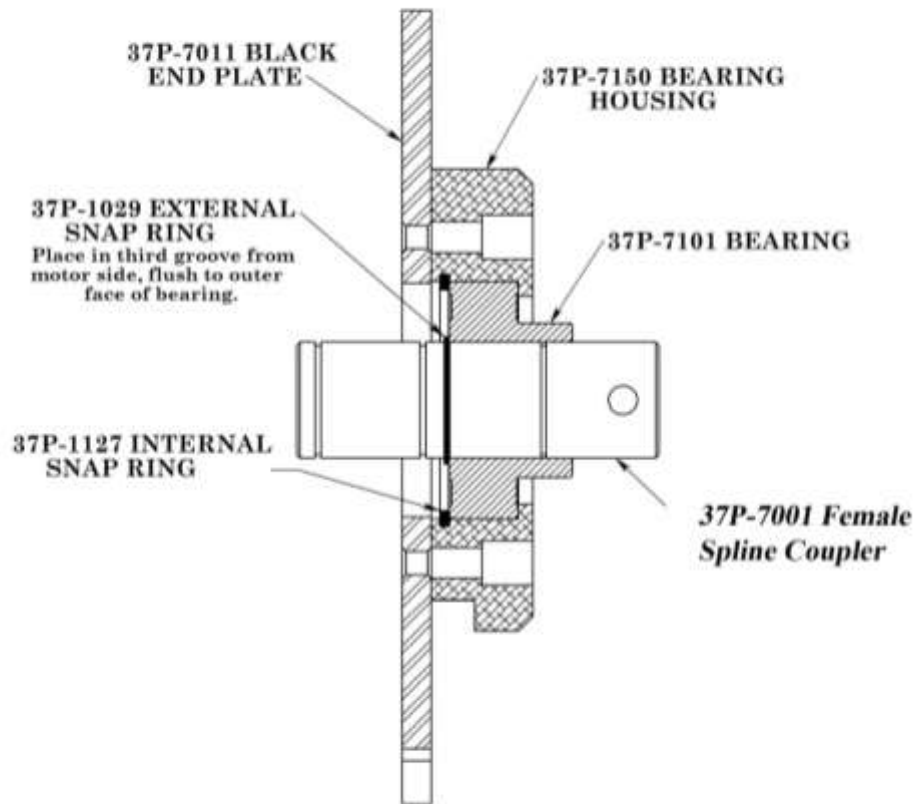
The 30A-7503A adaptation kit includes the following

Item #	Dept. #	Part #	Description	Qty
1	21A	GCC-1165	Motor Mount Lock Kit Includes Items: a, b, c, d, e, f, g, h, i, j, k, & l.	3
a	H	3107	5/16" Bolt	2 ea.
b	H	1003	1/4 x 20 x 3/4 Hex Bolt	1 ea.
c	H	1007	1/4" Split Lock Washer	1 ea.
d	H	2528	Lanyard	1 ea.
e	H	2580	Cotter Pin	1 ea.
f	30A	3002	Motor Mount Lock Arm LH	1 ea.
g	H	3158	5/16" Wave Washer	2 ea.
h	H	3179	5/16" Lock Nut	2 ea.
i	H	1146	5/16"-18 X 1 3/4" F.H.S.C.S. Motor Stud	4 ea.
j	H	7178	Spring Pin	1 ea.
k	30A	3003	Motor Mount Lock Arm RH	1 ea.
l	37P	6034JV	Motor Adapter Flange	1 ea.
2	31P	VR7CWB	Black Counterweight	3
3	H	1013	5/16 Split Lock Washer	12
4	H	7029	Bolt 5/16 - 18 x 3 1/4	12

Snap Ring Installation Instructions for Jacobsen GK V & GK VI

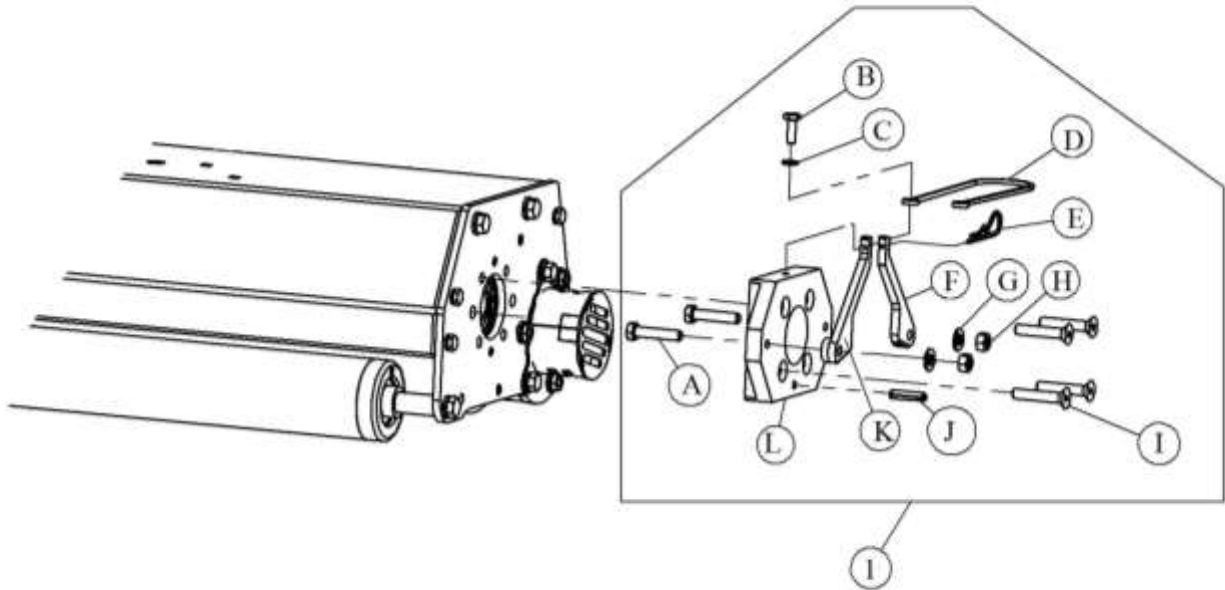
(Use Page 12 as a Parts Reference)

1. Select the required shaft position that corresponds to your triplex machine.
2. Remove the shaft by turning the roller upside down.
3. Remove the belt guard (31P-VR7002-1) and the belt (37P-7121).
4. Loosen set screw on the pulley (37P-7100) and the bearing (37P-7101).
5. Loosen set screw and lock collar on the bearing (37P-7102).
6. Tap the shaft with a rubber mallet to allow for positioning of the snap ring.
7. Install the snap ring (37P-1029) in its appropriate place and tap the shaft into position indicated.
8. Retighten bearings.
9. The lock collar on the bearing (37P-7102) needs to be locked by rotating the direction at which the shaft will be turning. Find the predrilled hole in the lock collar; using a punch, give one hit with a mallet in the same direction to lock it into place, and tighten the set screw.
10. Align pulleys, and tighten set screw on pulley (37P-7100).
11. Replace belt (37P-7121) and belt guard (31P-VR-7002-1).



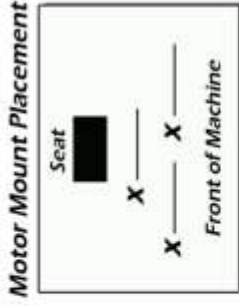
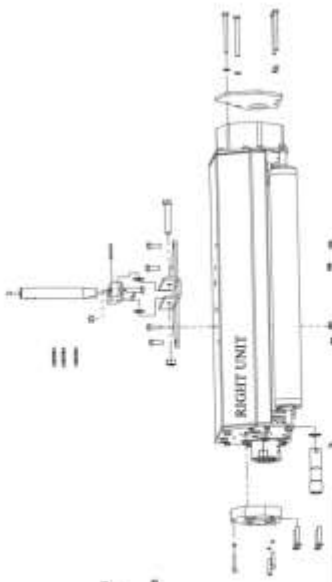
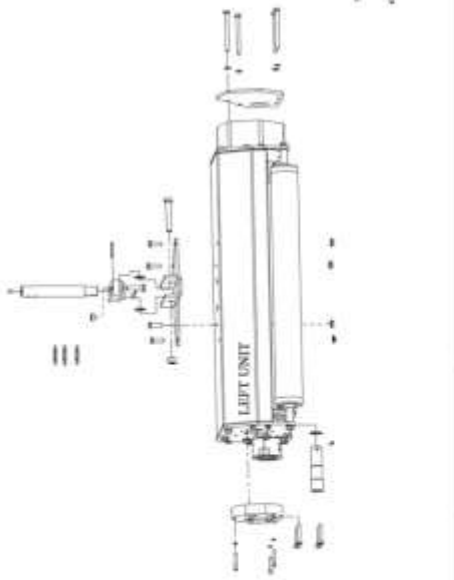
VIBE V™ Hydraulic Motor Mounting Configurations - “Flash Attach” Jacobsen GK V & VI

1. Remove the factory installed motor mounting hardware from the rolling unit.
2. Mount the motor mount adapter (37P-6034JV) directly to the endplate (37P-7011Black) using the four 5/16 x 1-3/4” flathead screws (H-1146), and tighten. Be sure to check the motor fit as it may be necessary to loosen and retighten to the center mounting plate with a splined shaft.

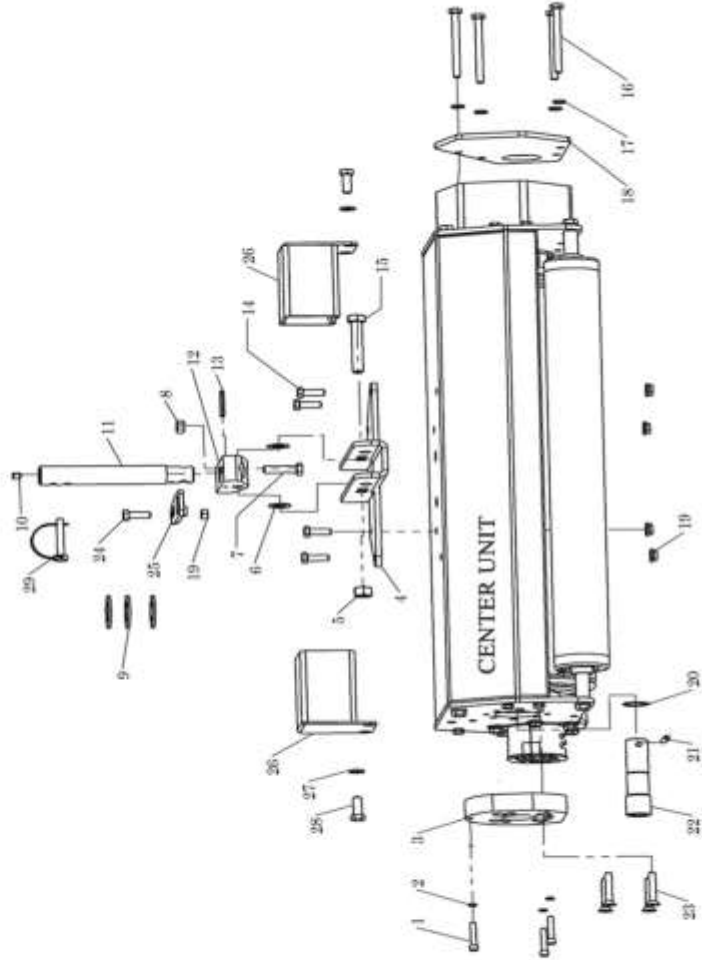


Item #	Dept. #	Part #	Description	Qty
1	21A	GCC-1165	Motor Mount Lock Kit Includes Items: a, b, c, d, e, f, g, h, i, j, k, & l.	3
a	H	3107	5/16" Bolt	2 ea.
b	H	1003	1/4 x 20 x 3/4 Hex Bolt	1 ea.
c	H	1007	1/4" Split Lock Washer	1 ea.
d	H	2528	Lanyard	1 ea.
e	H	2580	Cotter Pin	1 ea.
f	30A	3002	Motor Mount Lock Arm LH	1 ea.
g	H	3158	5/16" Wave Washer	2 ea.
h	H	3179	5/16" Lock Nut	2 ea.
i	H	1146	5/16"-18 x 1 3/4" F.H.S.C.S. Motor Stud	4 ea.
J	H	7178	Spring Pin	1 ea.
k	30A	3003	Motor Mount Lock Arm RH	1 ea.
L	37P	6034JV	Motor Adapter Flange	1 ea.

TRUE-SURFACE® VIBE V™ VIBRATORY GREENS ROLLER JACOBSEN E-322



ITEM #	DEPT #	PART #	DESCRIPTION	QTY
1	H	2016	1/4 - 20 X 1 3/8 SHCS (Use for Wide Motor Flange)	9
1	H	H-20	1/4-20 X 7/8 SHCS (Use for Narrow Motor Flange)	9
2	H	6110	1/4 Hi-Collar Lock Washer	9
3	21P	GCC-02-E322	GCC Eclipse Motor Flange	3
4	37P	7086	Jacobsen Lift Bracket - Black	3
5	H	1073	1/2 Nylon Lock Nut	3
6	H	3585	1/2" x .062 Shim	6
n/a	30A	7517	Ransome Lift Pin Assembly Includes Item #'s 7, 8, 9, 10, 11, 12, 13, & 29	3
7	H	032	3/8 x 16 x 1 1/2 Grade 8 Hex Bolt	3
8	H	1005	3/8 x 16 Hex Nut	3
9	H	1150	Washer 1" Flat USS	9
10	H	6012	Set Screw 5/16 x 18 x 3/8	3
11	37P	7027-1	Lift Pin Ransome & G-Plex	3
12	37P	7026-1	Pivot Limiter for Lift Pins	3
13	H	7152	1/8 Spring Pin	3
14	H	1101	5/16 x 18 x 1 Bolt	12
15	H	1004	1/2 x 13 x 23/4 Hex Bolt	3
16	H	7029	5/16 - 18 x 3 1/4	12
17	H	1013	5/16 Split Lock Washer	12
18	31P	VR7CWB	Black Counter Weight	3
19	H	3179	5/16 Nylon Lock Nut	15
20	H	1029	Snap Ring	3
21	H	7178	1/4 x 1 1/8 Spring Pin	3
22	31P	V7001-E322	Eclipse Drive Coupler	3
23	H	1146	5/16 x 18 x 1 3/4 Flat Head Socket Screw	12
24	H	1160	5/16 - 18 x 1 1/2 Bolt	3
25	31P	V7804	Spring Anchor for Center Unit Only	1
26	31P	V7803	Bumper Pad for Center Unit Only	2
27	H	1010	3/8 Lock Washer for Center Unit Only	2
28	H	1100	3/8 - 16 x 1 Gr 5 for Center Unit Only	2
29	H	66	5/16 Wire Loop Pin	3



Installation of the VIBE ∇ TM to fit Jacobsen E-322

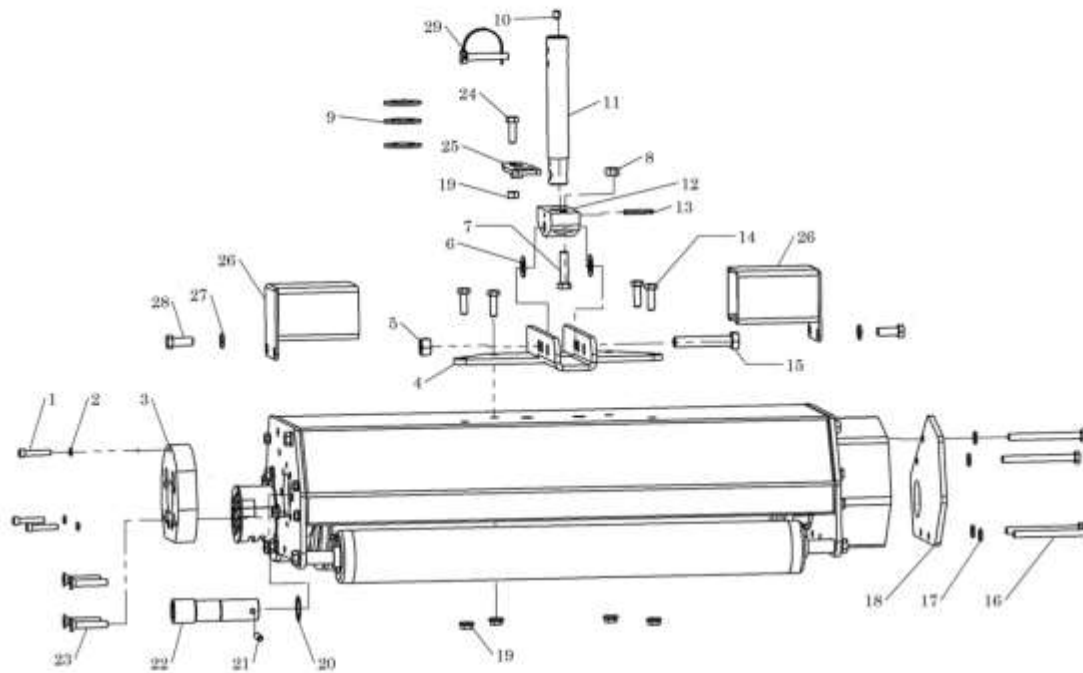
Tools required: ½” combination wrench
½” socket with ratchet and 6” extension
2 ¾” combination wrenches
3/16” hex key (allen) wrench. Two styles supplied for eccentric adjustment.

1. After opening boxes and finding instructions, familiarize yourself with the parts and the sketches before proceeding.
2. Each box contains the mounting hardware for the roller within it.
3. Locate lift bracket (Item 4) and remove nuts (Item 19) from bolts (Item 14). Install on top of roller, with bolts passing through hood and frame, replace nuts to underside and tighten.
4. Remove ½” nut (Item 5) from bolt (Item 15) and washers (Item 6). Set the pin assembly (Items 7, 8,9,10,11,12,13 & 29) into the channel with the pivot limiter bolt (Item 7) forward, and replace the bolt (Item 15) with the washer (Item 6) on either side. Tighten until some resistance is felt, but that pin is still pivotal. The pin will mount in the center hole of part number 7056B.
5. Large washers (Item 9) are used as required. One over each pin (Item 11) will allow wire loop pin to be installed in the lower cross hole of pin (Item 11) for front units while center units thus far require three, with the wire loop pin in the top cross hole of (Item 11). The object is to have the wire loop retainer as low in the “V”-notch of the lift arm as possible.
6. The above instructions repeat for all three rollers, as they can be installed in any position.
7. Remove the clipping baskets and drive motors from the cutting reels; then remove the factory wire loop pins from the lift arms.
8. Raise the lift arms up off of pins and roll cutting units away.
9. Place rollers under lift arms, and slide sleeve down over lift pin. And install the Turflite provided wire loop pins (not shown in the schematic – part # H-66).
10. Align the motor shaft key with the drive coupler (Item 21), insert motor, and secure with motor mounting screws.
11. Check operation of rollers, lift clearance etc. Pivot limiter (Item 7) can be adjusted down to “limit” how far the rear roller hangs when in transport mode. Be careful not to be too aggressive with this as it will also limit flexibility and floatability on the green.

NOTE: If there is a Frequency of Cut (F.O.C.) programmed into your Jacobsen greensmower, you will need to turn it off when using the True-Surface[®] Vibratory Greens Rollers, to ensure the motors will operate at maximum speed (preferably 2,000 rpm). This drive rpm will result in optimum performance of your rollers. Refer to your Jacobsen owner’s manual to make this adjustment.

Adaptation Kit to Fit Jacobsen E-322

Part Number 30A-7508



ITEM #	DEPT #	PART #	DESCRIPTION	QTY
1	H	2016	1/4 - 20 X 1 3/8 SHCS (Use for Wide Motor Flange)	9
1	H	20	1/4-20 X 7/8 SHCS (Use for Narrow Motor Flange)	9
2	H	6110	1/4 Hi-Collar Lock Washer	9
3	21P	GCC-02-E322	GCC Eclipse Motor Flange	3
4	37P	7086	Jacobsen Lift Bracket - Black	3
5	H	1073	1/2 Nylon Lock Nut	3
6	H	3585	1/2" x .062 Shim	6
n/a	30A	7517	Ransome Lift Pin Assembly Includes Item #'s 7, 8, 9, 10, 11, 12, 13, & 29	3
7	H	032	3/8 x 16 x 1 1/2 Grade 8 Hex Bolt	3
8	H	1005	3/8 x 16 Hex Nut	3
9	H	1150	Washer 1" Flat USS	9
10	H	6012	Set Screw 5/16 x 18 x 3/8	3
11	37P	7027-1	Lift Pin Ransome & G-Plex	3
12	37P	7026-1	Pivot Limiter for Lift Pins	3
13	H	7152	1/8 Spring Pin	3
14	H	1101	5/16 x 18 x 1 Bolt	12
15	H	1004	1/2 x 13 x 23/4 Hex Bolt	3
16	H	7029	5/16 - 18 x 3 1/4	12
17	H	1013	5/16 Split Lock Washer	12
18	31P	VR7CWB	Black Counter Weight	3
19	H	3179	5/16 Nylon Lock Nut	15
20	H	1029	Snap Ring	3
21	H	7178	1/4 x 1 1/8 Spring Pin	3
22	31P	V7001-E322	Eclipse Drive Coupler (Includes 20 & 21)	3
23	H	1146	5/16 x 18 x 1 3/4 Flat Head Socket Screw	12
24	H	1160	5/16 - 18 x 1 1/2 Bolt	3
25	31P	V7804	Spring Anchor for Center Unit Only	1
26	31P	V7803	Bumper Pad for Center Unit Only	2
27	H	1010	3/8 Lock Washer for Center Unit Only	2
28	H	1100	3/8 - 16 x 1 Gr 5 for Center Unit Only	2
29	H	66	5/16 Wire Loop Pin	3

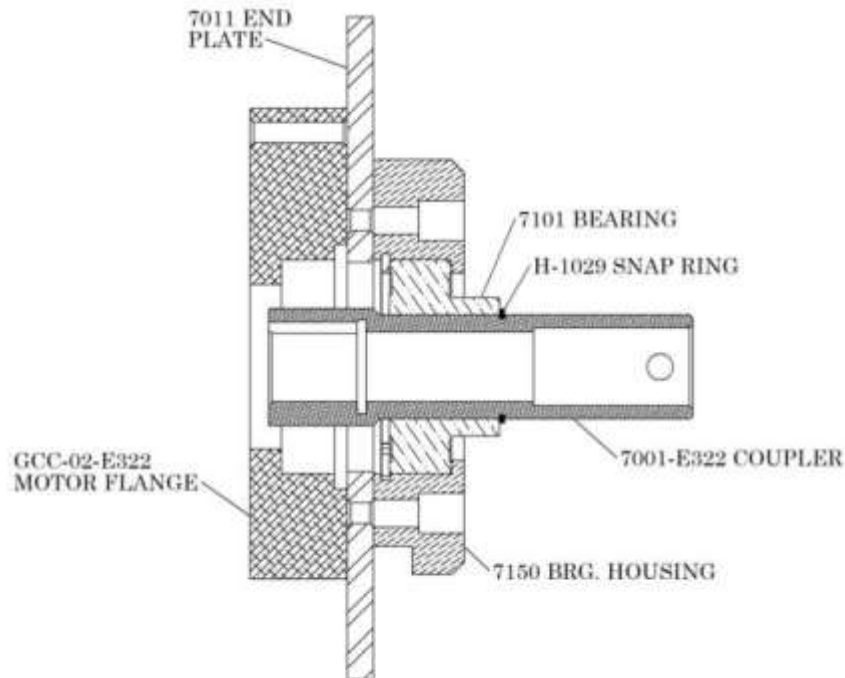
Snap Ring Installation Instructions for Jacobsen E-322

(Use Page 12 as a Parts Reference)

True-Surface® Vibratory Rollers mounted to Jacobsen E- 322 triplex, require the use of a slightly different spline coupler than what most True-Surface Rollers require. You will need to use part number # 7001-E322 that has one external snap ring groove. Position the coupler (7001-E322) against the set screw side of the inner face of the 7101 bearing.

To remove the shaft and replace the coupler:

1. Remove the belt guard (VR7002-1)
2. Loosen the set screws on the 7101 bearing
3. Remove the snap ring (1029) from the coupler (7001-E322), and allow it to float on the shaft.
4. Slide the entire assembly out through the motor flange.
5. Remove the ¼" split roll pin (7158), and then remove the coupler from the shaft (7007).
6. Add the new coupler, replace the roll pin and then lightly sand or grind exposed ends of the roll pin down to match the diameter of the coupler.
7. Replace the entire assembly opposite of how it was removed and replace and secure all components.



True-Surface® Vibratory
Greens Rolling System

TRUE-SURFACE®



VIBE V

... makes true greens!

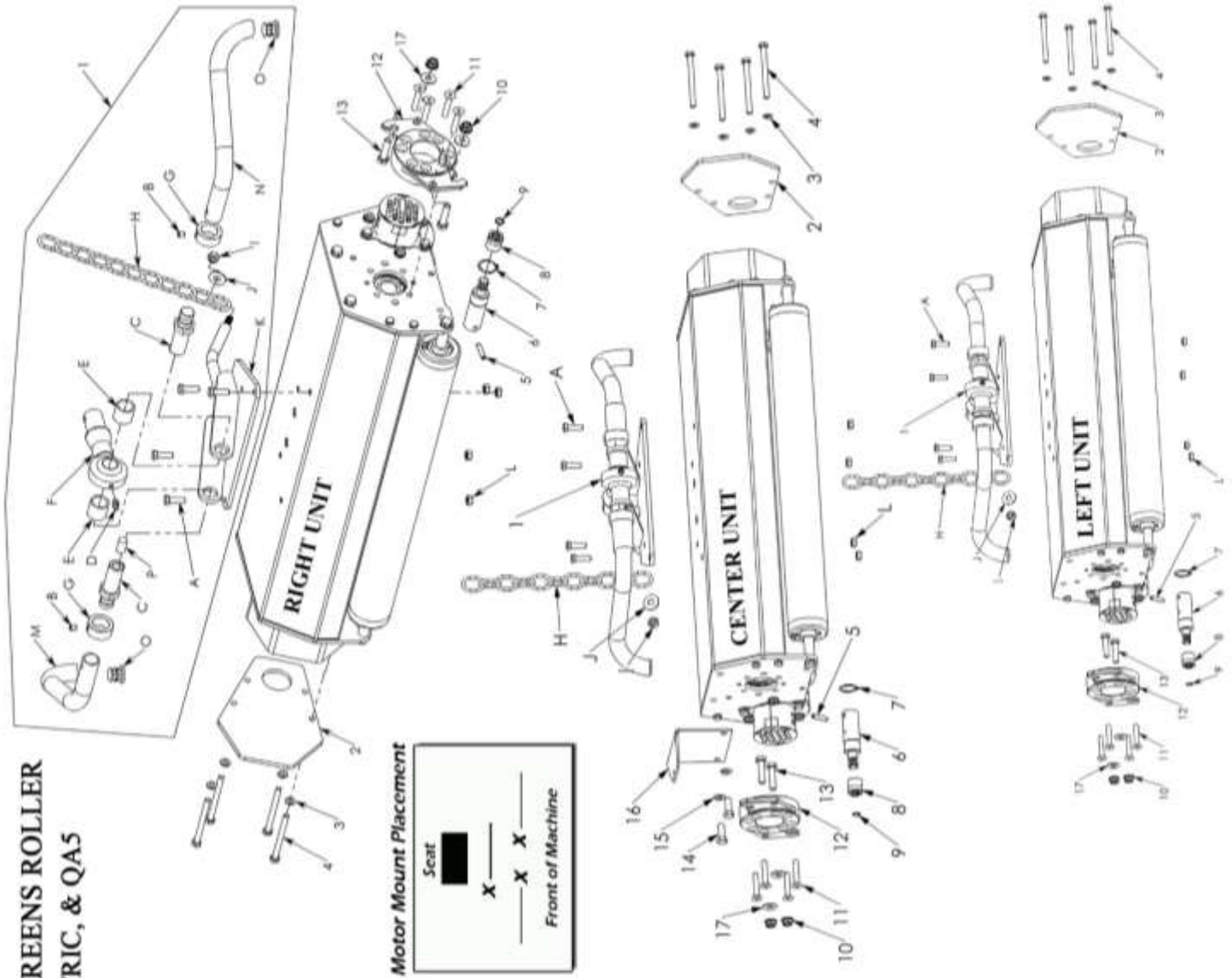
JOHN DEERE MODELS



1-800-443-8506

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**TRUE-SURFACE® VIBE V™ VIBRATORY GREENS ROLLER
JOHN DEERE 2500, JOHN DEERE 2500 ELECTRIC, & QA5**



Item #	Dept. #	Part #	Description	Qty
1	30A	7255	JD HITCH ASSEMBLY INCLUDES ITEMS: A-P	3
A	H	1101	Bolt 5/16-18 x 1	4 ea.
B	H	6014	Set Screw	2 ea.
C	H	7805	JD Lift Bar	2 ea.
D	H	1681	Grease Zert	1 ea.
E	H	7255C	JD Lift Bar Spacer	2 ea.
F	30A	7254	Swivel Shaft Hitch Assembly	1 ea.
G	H	1082	Shaft Collar	2 ea.
H	21P	GCC-212	JD Lift Chain	1 ea.
I	H	1180	3/8-16 Nylon Locknut	1 ea.
J	H	1006	3/8" Flat Washer	1 ea.
K	30A	7050W	Hitch Frame	1 ea.
L	H	3179	5/16-18 Locknut	4 ea.
M	31P	V7806R	Upstop Tube Right	1 ea.
N	31P	V7806L	Upstop Tube Left	1 ea.
O	31P	1083	Pipe Plug	2 ea.
P	H	1081	1/2-13 x 1 Threaded Stud	1 ea.
2	31P	VR7CWB	Black Counterweight	3
2	31P	VR7CWB	Black Counterweight - Used for Electric Units	6
3	H	1013	5/16 Split Lock Washer	12
4	H	7029	Bolt 5/16-18 x 3 1/4- For Hydraulic Models Only	12
4	H	1030	Bolt 5/16-18 x 3 1/2- For Electric Models Only	12
5	37P	7178	Spring Roll Pin	3
6	30A	7001JD25	Male Spline Coupler- Includes items #3, 5 & 7	3
7	37P	1029	Snap Ring	3
8	37P	7704	Coupler	3
9	21P	GCC-129	12mm Internal Snap Ring	3
10	H	1183	3/8-16 smooth flange nut- John Deere QA5 Only	6
11	H	1146	5/16-18 x 1 3/4 Flat Head SCS	12
12	37P	7036-3	JD Motor Mount Flange	3
13	H	32	3/8-16 x 1 1/2 Gr 8 Full Thread Hex - John Deere QA5 Only	6
14	H	1011	3/8-16 x 1 1/4 Hex Bolt - For Electric Models only on the center unit	2
15	H	1010	3/8 Lock Washer	12
16	37P	7037	JD Motor Haurd Plate- For electric models only on the center unit	1
17	H	1019	5/16 USS Flat Washer	6

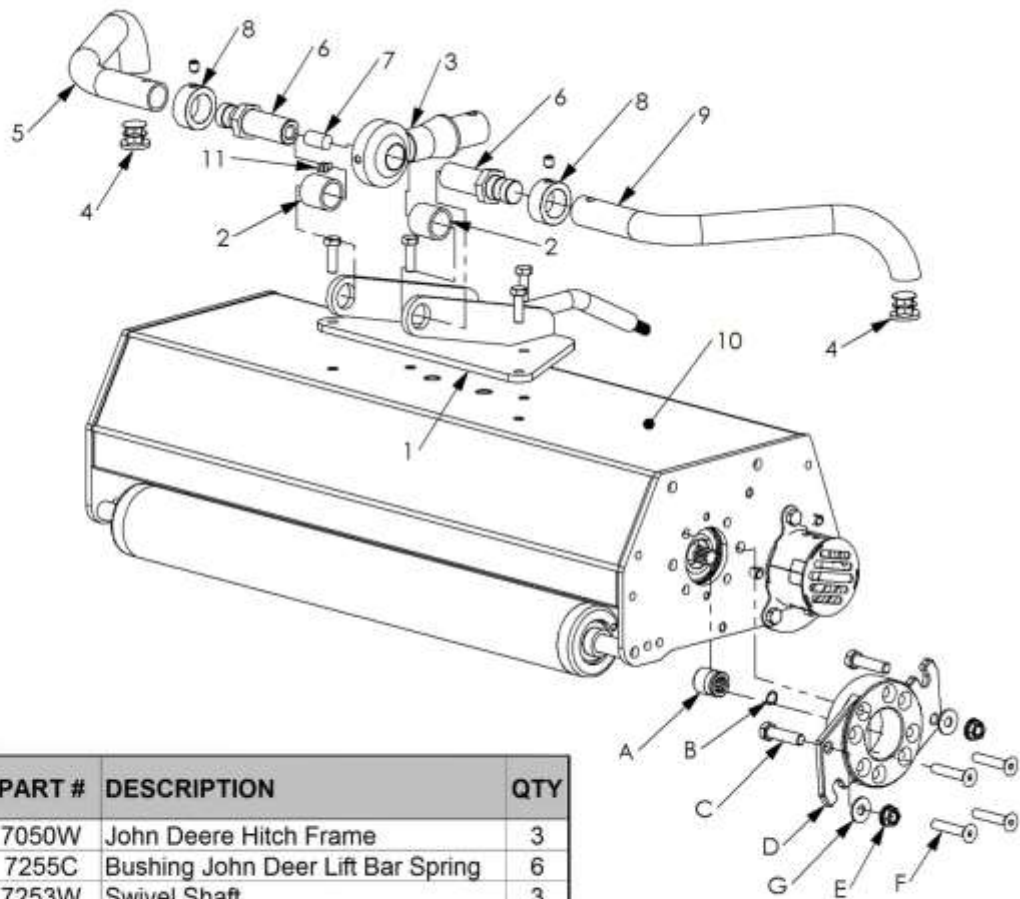
Installation of the VIBE ∇ TM to fit John Deere 2500, 2500E, & QA5

Tools Needed:

- 15mm Combination Wrench*
- 9/16" Combination Wrench*
- 1/2" Combination Wrench*
- 7/16" Combination Wrench*
- Pliers*

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Remove the cutting units by removing the 5/16 diameter wire loop pins at the tip of each lift arm.
3. Remove the cotter pin and chain from the cutting unit *only*. Leave them attached to the lift arm.
4. Roll the cutting unit forward until the ball mounting tube is clear of the lift arm.
5. Loosen the two hydraulic motor-mount bolts using a 15mm wrench.
6. Twist and pull the hydraulic motor free from the cutting unit. ***Be careful not to lose the splined hub in the cutting unit. This is not needed for the roller.***
7. Remove the rollers from the box and lay them in their respective positions: Left, Right, Center, as if you are seated in the driver's position facing forward.
8. Remove the four loose 5/16" bolts (H-1101) from the lifting/towing bracket and set the bracket on top of the roller unit. *The large ball socket will be forward and up. The 5/8" diameter rod with chain will point to the rear of the machine over the large roller tube.*
9. Align all four of the holes, install the bolts (H-1101) and nuts (H-3179), then tighten securely.
10. Slide the roller into position and guide the 1 1/8" pin into the end of the lift arm.
11. Reinstall the wire loop pin.
12. To set lift chain tension, remove the 3/8" locknut (H-1180) and washer (H-1006) from the lift chain attachment.
13. Attach the chain with desired tension and install the washer and nut.
***NOTE: The lift height will be determined by this chain.
Your terrain and needs will determine its position.***
14. Install the Hydraulic motor by inserting the retaining bolts into the cutouts.
15. Use the female coupler (37P-7704) to join the motor to the spline coupler (37P-7001JD25).
16. Twist the motor into place and tighten the mounting bolts.
17. Eccentric cover (31P-VR-002) has knockouts removed at the factory to provide motor flange clearance necessary for motors prior to QA-5 models on the left and center units only.
18. Repeat the above procedures for the other two rollers.
19. Check the operation of the rollers

John Deere 2500 Motor Flange Alignment for QA-5 & Angled UpStop and QA-5 Motor Flange Position



ITEM #	DEPT #	PART #	DESCRIPTION	QTY
1	30A	7050W	John Deere Hitch Frame	3
2	H	7255C	Bushing John Deere Lift Bar Spring	6
3	R	7253W	Swivel Shaft	3
4	31P	1083	Pipe Plug	6
5	31P	V7806R	Right Angle Upstop Tube	3
6	31P	7805	John Deere Lift Bar	6
7	H	1081	1/2 - 13 x 1 Threaded Stud	3
8	H	1082	1" Zinc Plated Shaft Collars	6
9	31P	V7806L	Left Angle Upstop Tube	3
10	n/a	n/a	Roller Assembly	3
11	H	1680	Grease Zert	3
A	37P	7704	Female Coupler	3
B	21P	GCC-129	12mm Internal Snap Ring	3
C	H	032	3/8 - 16 x a 1 1/2 Bolt	6
D	37P	7036-3	John Deere Motor Flange	3
E	H	1183	3/8 - 16 Smooth Flange Nut	3
F	H	1146	5/16 - 18 x 1 3/4 FHSCS	12
G	H	1019	5/16 USS Flat Washer	6

John Deere 2500 Motor Flange Alignment

For QA-5 & Angled UpStop Installation

1. Using the numbers for reference, units are supplied to fit all JD2500 greens-mowers with the 30A-7255 hitch assembly (Item 1).
2. Items 2,4,6,7,8 are duplicated for each side of the hitch.
3. To assemble this hitch, you will start with the frame (30A-7050W) and slide one of the 31P-7805 into the front hole. Install H-1081 into the other 31p-7805 using blue Loctite. You will want to install R-7253W using H-7255C to center it in the hitch and tightening 31P-7805 to secure it in place.
4. After installing 31p-1083 in the end of 31P-V7806L & 31P-V7806R and installing H-1082 with the set screw lining up with the hole in 31P-1083, these will be ready to be installed onto 31P-7805.
5. 31P-V7806L & 31P-V7806R are directional and need to be installed to when down, the 31P-1083 is touching the hood in the rear of the roller near the 5" roller drum.
6. Once in position you may tighten down the set screws in the V1082 and this will complete the steps of installing your upstops.

QA-5 Motor Flange Position

If you have a greensmower equipped with QA-5 cutting reels, the motor flange will need to be installed as follows: *Note, if an older unit is being upgraded, the flange simply rotates from a position where the open notches are horizontal (3 and 9 O'clock) to a pair of tapped holes in this position.*

1. Fully threaded bolts (Item C) and threaded into the back of flange (Item D) with thread-locker and tightened. This creates mounting studs for the motor.
2. Install the motor flange (Item D) with the four flat-head screws (Item F) so that the newly installed studs are horizontal.
3. Use the female coupler (Item A) to make the connection between the motor shaft and roller shaft.
4. Use the flange nuts (Item E) to secure the motor.

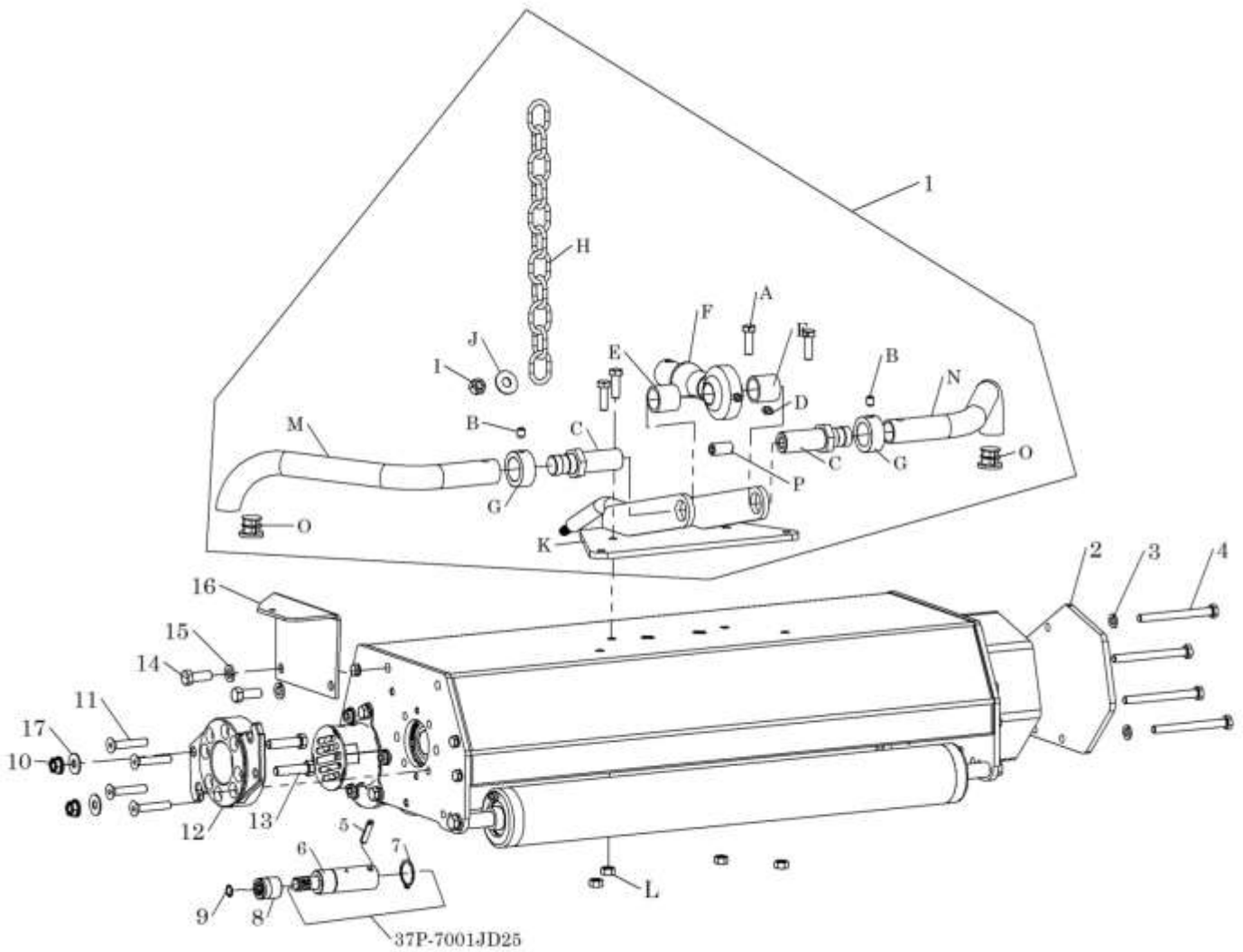
Hydraulic Motor Mounting Configurations

John Deere 2500, John Deere 2500 Electric, John Deere Quick Adjust (QA5)

1. Remove the factory installed motor mounting hardware from the rolling unit
2. Install the motor mount adapter (37P-7036-3), and secure it with four 5/16 x 1 3/4 flat head screws (H-1146).

Adaptation Kit to Fit John Deere 2500

*Part Number 30A-7502 (Hydraulic), 30A-7502E (Electric),
30A-7502QA5 (Hydraulic), & 30A-7502QA5E (Electric)*



Please refer to the next page for a full parts listing:

The 30A-7502, 30A-7502E, 30A-7502QA5, & 30A-7502QA5E adaptation kit includes the following:

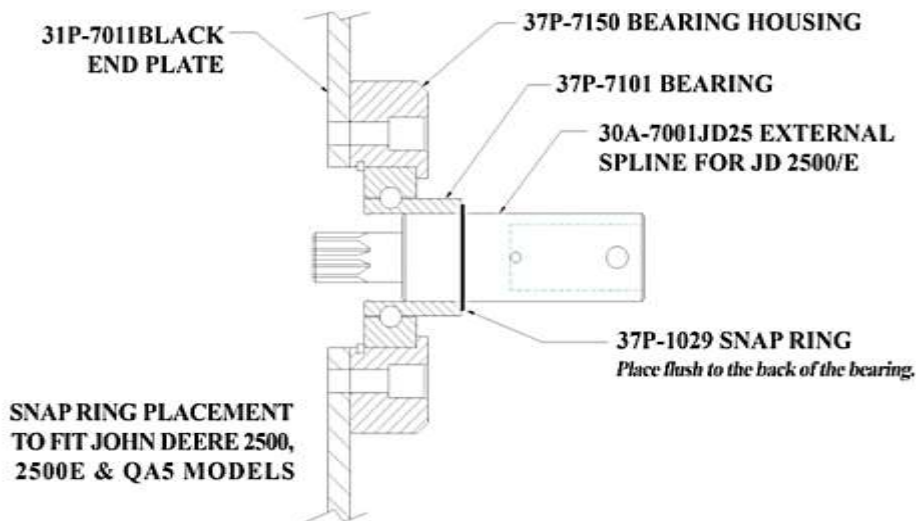
Item #	Dept. #	Part #	Description	Qty
1	31A	7255-1A	JD Hitch Assembly Includes Items: A - L	3
A	H	1101	Bolt 5/16 - 18 x 1	4 ea.
B	H	6014	Set Screw	2 ea.
C	H	7805	JD Lift Bar	2 ea.
D	H	1681	Grease Zert	1 ea.
E	H	7255C	JD Lift Bar Spacer	2 ea.
F	30A	7254	Swivel Shaft Hitch Assembly	1 ea.
G	H	1082	Shaft Collar	2 ea.
H	21P	GCC-212	JD Lift Chain	1 ea.
I	H	1180	3/8 - 16" Nylon Locknut	1 ea.
J	H	1006	3/8" Flat Washer	1 ea.
K	30A	7050W	Hitch Frame	1 ea.
L	H	3179	5/16 - 18 Locknut	4 ea.
M	31P	V7806R	Upstop Tube Right	1 ea.
N	31P	V7806L	Upstop Tube Left	1 ea.
O	31P	1083	Pipe Plug	2 ea.
P	H	1081	1/2 -13 x 1 Threaded Stud	1 ea.
2	31P	VR7CWB	Black Counterweight- Used for JD2500	3
2	31P	VR7CWB	Black Counterweight - Used for JD2500E & QA5 Hydraulic	6
2	31P	VR7CWB	Black Counterweight - Used for QA5 Electric	9
3	H	1013	5/16 Split Lock Washer	12
4	H	7029	Bolt 5/16 - 18 x 3 1/4 - For JD2500 (1 counter weight per unit)	12
4	H	1030	Bolt 5/16 - 18 x 3 1/2 - For JD2500E & QA5 Hydraulic (2 counter weights per unit)	12
4	H	1080	Bolt 5/16 - 18 x 4 For QA5 Electric (3 counter weights per unit)	12
5	37P	7178	Spring Roll Pin	3
6	30A	7001JD25	Male Spline Coupler - Includes Item #'s 5 & 7	3
7	37P	1029	Snap Ring	3
8	37P	7704	Coupler	3
9	21P	GCC-129	12mm Internal Snap Ring	3
10	H	1183	3/8 - 16 Smooth Flange Nut - John Deere QA5 Only	6
11	H	1146	5/16 - 18 x 1 3/4 Flat Head SCS	12
12	37P	7036-3	JD Motor Mount Flange	3
13	H	032	3/8 - 16 x 1 1/2 Gr 8 Full Thread Hex - John Deere QA5 Only	6
14	H	1011	3/8 - 16 x 1 1/4 Hex Bolt - For electric models only on the center unit	2
15	H	1010	3/8" Lock Washer	2
16	37P	7037	JD Motor Guard Plate - For electric models only on the center unit	1
17	H	1019	5/16 -USS Flat Washer - QA5 Units Only	6

Snap Ring Installation Instructions for John Deere 2500, 2500E and QA5

(Use Page 12 as a Parts Reference)

The following instructions may be used for replacing your coupler, or adapting your unit to a John Deere 2500:

1. Turn the roller unit upside down.
2. Remove the belt guard (31P-VR7002-1) and the belt (37P-7121).
3. Loosen the set screw on the 5" pulley (37P-7100), and remove the pulley.
4. Loosen both set screws on the bearing (37P-7101) and the lock collar on the bearing (37P-7102).
5. Insert a punch into the hole in the lock collar and tap it in the opposite direction it will rotate, to loosen the eccentric grip on the shaft, and slide it free of the bearing.
6. If the snap ring on the bearing is on the outside of the unit, use a rubber mallet to tap the shaft towards the motor end until the snap ring can be removed. Then tap it back in the opposite direction until it is free of the bearing (37P-7101). In other cases, a socket or a tube – slightly under 1 inch diameter – can be used to tap shaft towards the belt side of the roller until it is free of the bearing (37P-7101).
7. Lift the coupler end of the shaft. The bearing (37P-7102) will pivot within flange until it can be pulled from bearing.
8. Use a 1/4" punch and drive out the roll pin joining the coupler and the shaft, and remove the coupler. NOTE: A punch can be used inside the spline to tap the shaft free on internal spline couplers. However, external splines may require a light heat application to aid in removal.
9. Install the new coupler to the shaft; a light oil or anti-seize may be used. Make sure the holes align, tap them together, and install the new roll pin.
10. Install the snap ring (37P-1029) into the coupler groove and slide the shaft back into bearing (37P-7102). Push the shaft back down and align it with the center of the bearing (37P-7101), then insert it into the bearing.
11. Slide the shaft into the bearing (37P-7101) until the snap ring is tight against it. Next, tighten the bearing set screws.
12. Slide the lock collar up to the bearing (37P-7102); be sure the recess of the lock collar fits over and engages the hub on the bearing. Turn the lock collar in the direction the shaft will rotate until it is snug. Then, using a punch and hammer, give the lock collar one good tap in that same direction to lock the bearing, collar and shaft together. Finally, tighten the set screw.
13. Install the pulley (37P-7100) and the belt (37P-7121). Align the belt and tighten the set screw.
14. Replace the belt guard (31P-VR7002-1) and tighten.
15. Install the internal spline coupler adaptor.
16. Align the motor splines, slide and twist the motor into place, and tighten the mounting bolts.

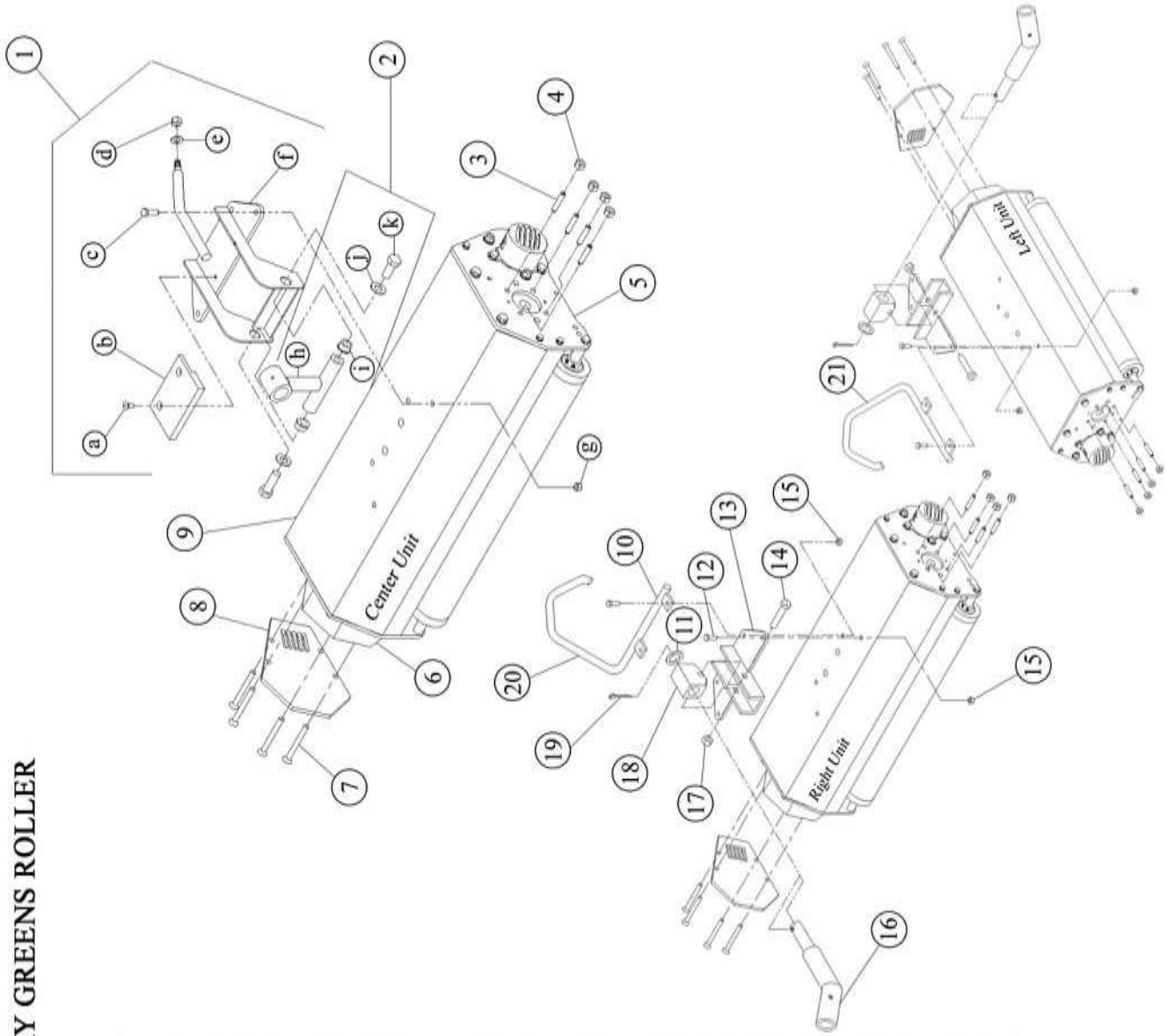
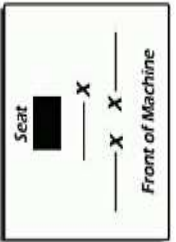


TRUE-SURFACE® VIBE Y™ VIBRATORY GREENS ROLLER JOHN DEERE 2243

Quantities are for a set of 3 rollers.

ITEM #	DEPT #	PART #	DESCRIPTION	QTY
1	30A	7686	Center Hitch Amb Bracket Includes Items: a, b, c, d, e, f, & g.	3
a	H	1579	Bolt 1/4 - 20 x 1/2	2 ea.
b	37P	7608	Nylon Spacer	1 ea.
c	H	1101	Bolt 5/16 - 18 x 1	4 ea.
d	H	1180	3/8 - 16" Nylon Locknut	1 ea.
e	H	1006	3/8" Flat Washer	1 ea.
f	H	7606	Center Hitch Bracket	1 ea.
g	H	3179	5/16 - 18 Locknut	4 ea.
2	30A	7609	Center Lift Tube Asmb. Includes Items: h, i, j, & k.	1
h	37P	7609	Lift Tube	1 ea.
i	H	6044	1/2" Bushing	2 ea.
j	H	1143	1/2" Flat Washer	2 ea.
k	H	1069	Bolt 1/2 - 13 x 1 1/2	2 ea.
3	H	1403	Socket Screw	12
4	H	3147	Smooth Flange Nuts	12
5	37P	7011G	Green End Plate	6
6	31P	VR7002-1	Black Belt Guard	3
7	H	7029	Bolt 5/16 - 18 x 3 1/4	12
8	31P	VR7CWB	Black Counterweight	3
9	37P	7003G	Green Hood	3
10	H	1160	Bolt 5/16 - 18 1 1/2 Gr 8	4
11	H	1150	Washer 1" Flat SAE	2
12	H	1101	Bolt 5/16 - 18 x 1 Gr 5	8
13	37P	7056B	Black Lift Bracket	2
14	H	1004	1/2" Bolt	2
15	H	3179	5/16 - 18 Locknut	12
16	37P	T-300	Extension Tube	2
17	H	1014	1/2" Nylon Locknut	2
18	30M	7601	Pivot Block	2
19	H	1071	Cotter Pin 1/4 x 1 1/4	2
20	30A	7602R	Right Hand Lift Bar	1
21	30A	7602L	Left Hand Lift Bar	1

Motor Mount Placement



Installation of the VIBE ™ John Deere 2243

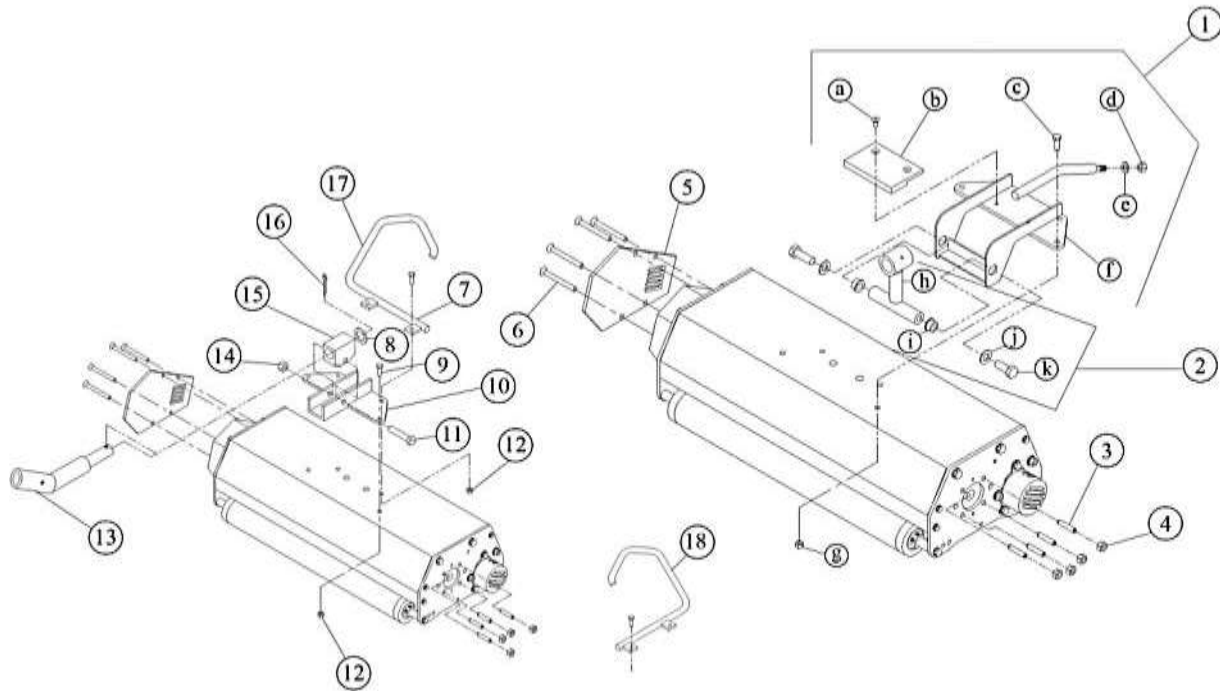
Be sure to keep all hardware with the proper unit. Each unit of this particular model is different from the other two.

Tools Needed: *1/2" Combination Wrench* *9/16" Combination Wrench*
 1/2" Socket Ratchet & Extension *2-3/4" Combination Wrench*

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Remove all the cutting units from the machine by removing the wire loop pin that retains the tow bar of the cutting unit to the lift arm of the machine.
3. Remove the nuts from the hydraulic motors, and slip them out of place.
4. Pull the cutting units out from under the machine.
5. Starting with the Left Unit, remove the four bolts (H-1101) from the Universal Lift Bracket (37P-7519G), and set the bracket into place on top of the roller unit.
6. Install the one inch bolts (H-1101) into the forward holes of the bracket.
7. Install the longer (H-1160) bolts into the tabs of the Lift Bar Assembly (30A-7602R or 30A-7602L) and into the rear holes of the Lift Bracket (37P-7519G). Make sure the Lift Bar Assembly hook is open to the motor mount side of the unit.
8. Tighten all four bolts.
9. Install the Extension Pin (37P-T300) into the Pivot Block (30M-7601).
10. Remove the bolt (H-1004) from the Lift Bracket (37P-7519G), and set the Pivot Block/Extension Pin combo down into the Lift Bracket. The Extension Pin (37P-T300) will be facing forward.
11. Reinstall the bolt (H-1004) into the Lift Bracket and through the Pivot Block (30M-7601).
12. Replace the nut and tighten. ***Do not over tighten the bolt. The pivot block needs to remain moveable.***
13. Repeat steps 1-11 with the right unit.
14. Slide the left and right units into position under the machine, allowing the lift bars (30A-7602 L and R) to pass over the guide roller on the lift arm of the greens mower.
15. Slide the downward angled lift arm pin of the greens mower into the tube end of the Extension Pin (37P-T300) and replace the wire loop pin.
16. Attach the hydraulic motors, securing them with the four bolts (H-1146). It may be necessary to rotate the splined shaft to align the splines to allow the motor to fit.
17. Remove the four bolts (H-1101) from the Lifting Bracket-Center Unit (30A-7606).
18. Set the Lifting Bracket into position on the center unit roller. Replace the bolts and nuts and tighten.
19. Slide the roller into position under the mower.
20. Slide the lift arm pin from the mower through the Lift Bar Assembly Tube (30A-7609) on the lifting bracket, and replace the retaining pin.
21. Remove the locknut (H-1180) and the washer (H-1006) from the back of the lifting bracket and attach the lifting chain from the mower.
22. Replace the locknut and the washer. The chain length will have to be determined so the roller is level in the raised position with enough slack to allow the roller to follow the contour of the turf when lowered.
23. Attach the hydraulic motors as in step 16.
24. Check the operation of the rollers.

NOTE: Once installed, it is only necessary to remove the loop pins and the hydraulic motors to switch from rolling to cutting units.

Adaptation Kit to Fit John Deere 2243 Part Number 30A-7507



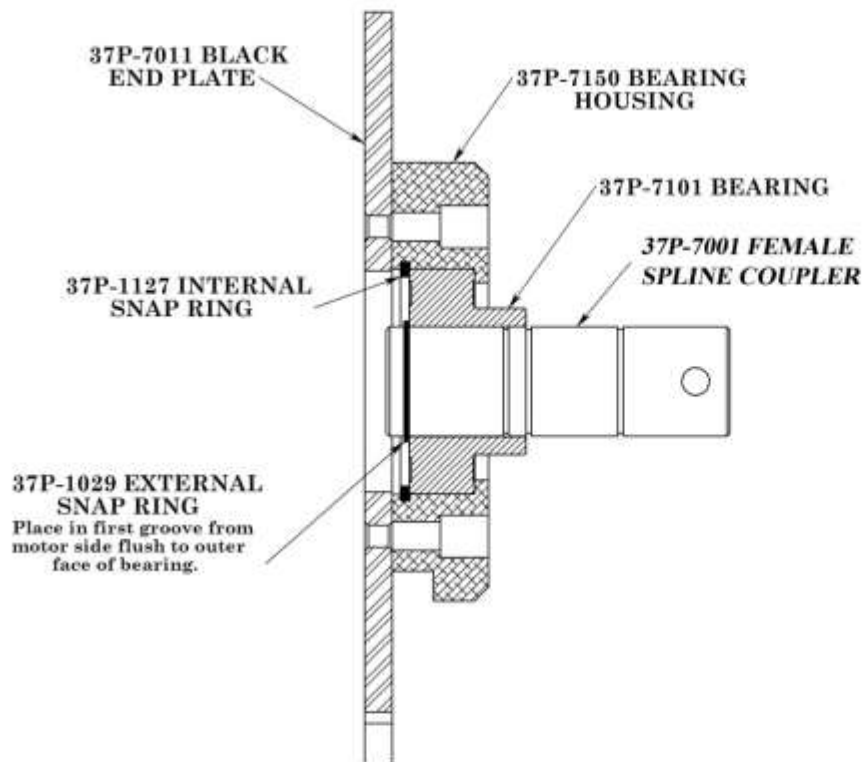
The 30A-7507 adaptation kit includes the following:

Item #	Dept. #	Part #	Description	Qty	Item #	Dept. #	Part #	Description
1	30A	7686	Center Hitch Asmb Bracket Includes Items: a, b, c, d, e, f, & g	3	5	31P	VR7CWB	Black Counterweight
a	H	1579	Bolt 1/4 - 20 x 1/2	2 ea.	6	H	7029	Bolt 5/16 - 18 x 3 1/4
b	37P	7608	Nylon Spacer	1 ea.	7	H	1160	Bolt 5/16 - 18 1 1/2 Gr 8
c	H	1101	Bolt 5/16 - 18 x 1	4 ea.	8	H	1150	Washer 1" Flat SAE
d	H	1180	3/8 - 16" Nylon Locknut	1 ea.	9	H	1101	Bolt 5/16 - 18 x 1 Gr5
e	H	1006	3/8" Flat Washer	1 ea.	10	37P	7086B	Black Lift Bracket
f	37P	7606	CenterHitch Bracket	1 ea.	11	H	1004	1/2" Bolt
g	H	3179	5/16 - 18 Locknut	4 ea.	12	H	3179	5/16 - 18 Locknut
2	30A	7609	Center Lift Tube Assembly Includes items: h, i, j, & k	1	13	37P	T-300	Extension Tube
h	37P	7609	Lift Tube	1 ea.	14	H	1014	1/2" Nylon Locknut
i	H	6044	1/2" Bushing	2 ea.	15	30M	7601	Pivot Block
j	H	1143	1/2" Flat Washer	2 ea.	16	H	1071	Cotter Pin 1/4 x 1 1/4
k	H	1069	Bolt 1/2 - 13 x 1 1/2	1 ea.	17	30A	7602R	Right Hand Lift Bar
3	H	1403	Socket Screw	12	18	30A	7602L	Left Hand Lift Bar
4	H	3147	Smooth Flange Nuts	12	n/a	37P	7001	Splined Coupler

Snap Ring Installation Instructions for John Deere 2243

(Use Page 12 as a Parts Reference)

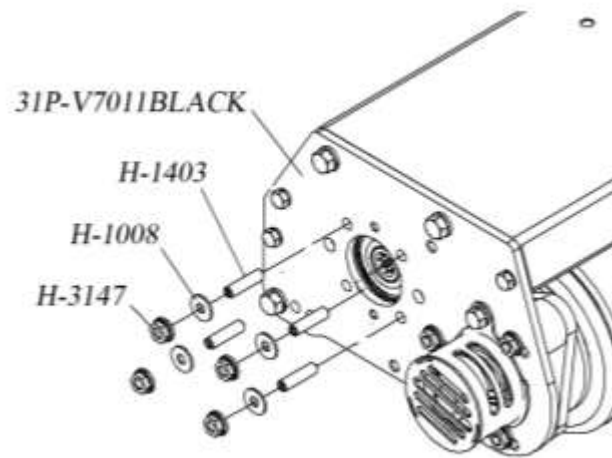
1. Select the required shaft position that corresponds to your triplex machine.
2. Remove the belt guard (31P-VR7002) and the belt (37P-7121).
3. Loosen the set screw on the pulley (37P-7100) and the bearing (37P-7101).
4. Loosen the set screw and the lock collar on the bearing (37P-7102).
5. Tap the shaft with a rubber mallet to allow positioning of the snap ring.
6. Install the snap ring in its appropriate place and tap the shaft into the position indicated.
7. Retighten the bearings.
8. The lock collar on the bearing (37P-7102) needs to be locked by rotating in the direction at which the shaft will be turning. With a punch, give one rap in the predrilled hole in the lock collar in the same direction with a mallet to lock it into place and tighten set screw.
9. Align the pulleys and tighten the set screw on the pulley (37P-7100).
10. Replace the belt (37P-7121) and the belt guard (31P-VR7002).



Hydraulic Motor Mounting Configurations - 4-BOLT - John Deere 2243

1. Remove the factory installed motor mounting hardware from the rolling unit.
2. Thread the four 5/16" motor studs (H-1403) from the outside of the unit through the endplate (37P-7011G) into the aluminum housing (37P-7150), and tighten the nuts (H-3147). *Note: The aluminum housing is on the interior of the unit.*
3. These studs (H-1403) will stick out from the endplate, providing a place to secure your hydraulic motor.

NOTE: The same procedure applies for the installation of the two 3/8 motor studs (H-1402) in a 2-bolt configuration.



True-Surface® Vibratory
Greens Rolling System

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VIBE V

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RANSOME & G-PLEX MODELS



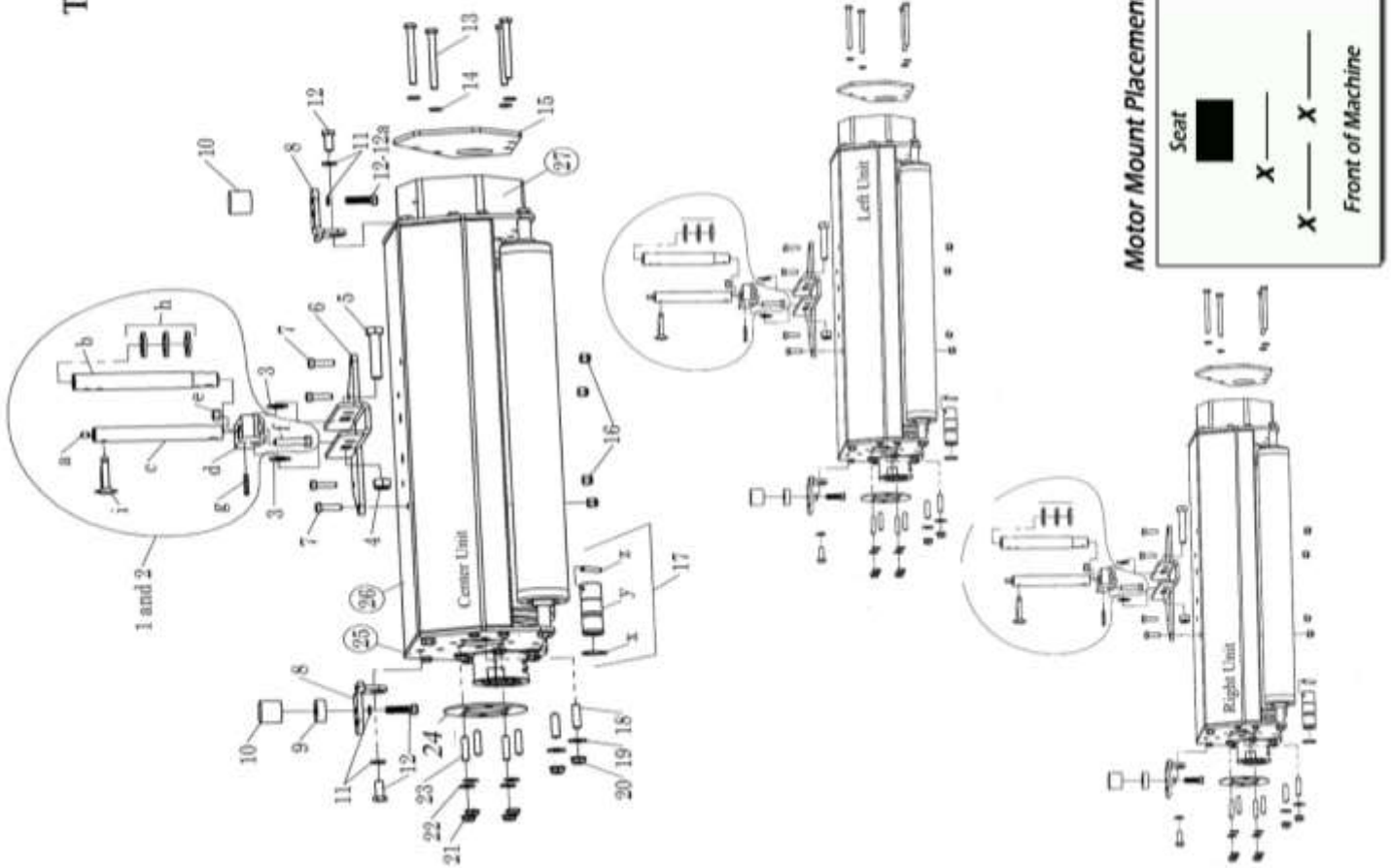
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TRUE-SURFACE® VIBEY™ VIBRATORY GREENS ROLLER RANSOMES & JACOBSEN G-PLEX II / III & GP 400

Quantities are for a set of 3 Rollers.

ITEM #	DEPT #	PART #	DESCRIPTION	QTY.
1	30A	7517	Lift Pin Assy. 1" Diameter (Ransome and G-PLEX II) Includes Items a, b & d thru l.	3
2	30A	7518	Lift Pin Assy. 7/8" Diameter (Jacobsen G-PLEX III & GP 400) Includes Items a, c, d, e, f, g, i.	3
a	H	6012	Set Screw 5/16-18 x 3/8	1 ea.
b	37P	7027-1	Lift Pin - 1" Diameter	1 ea.
c	37P	7028-1	Lift Pin - 7/8" Diameter	1 ea.
d	37P	7026-1	Pivot Limiter	1 ea.
e	H	1005	3/8-16 hex nut	1 ea.
f	H	O32	Bolt 3/8-16 x 1-1/2" Gr. 8	1 ea.
g	H	7152	Spring Pin 3/16 x 1-1/4"	1 ea.
h	H	1150	1" SAE Flatwasher (Ransome Only)	3 ea.
i	H	66	5/16" Wire Loop Pin	1 ea.
3	H	3585	Shim 1/2" x .062	6
4	H	1014	1/2-13 nylon Locknut	3
5	H	1004	Bolt 1/2-13 x 2-3/4" Gr. 5	3
6	30A	70868	Lift Bracket (3 hole)	3
7	H	1101	Bolt 5/16-18 x 1" Gr. 5	12
8	37P	7046	Large Bumper Mount	4
9	37P	7016	Nylon Bumper Spacer (Not used center unit left side)	3
10	37P	7729	Bumper	4
11	H	1010	3/8" Split Lockwasher	8
12	H	1135	Bolt 3/8-16 x 1-1/4" Gr. 8	10
12a	H	1100	Bolt 3/8-16 X 1" Gr. 5 (Center unit left side only)	1
13	H	7029	Bolt 5/16 - 18 x 3-1/4" Gr. 5	12
14	H	1013	5/16" Split Lock Washer	12
15	31P	VR7CWB	Black Counterweight	3
16	H	3179	5/16-18 Nylon Lock Nut	12
17	37P	7001	Shaft Spline Coupler (includes x,y,z)	3
x	37P	1029	63/64" External Snap Ring	1 ea.
y		7001	Splined Coupler	1 ea.
z	37P	7178	1/4" x 1-1/4" split Spring Pin	1 ea.
18	H	1402	3/8-16 x 1-3/4" Motor Studs (2-bolt)	6
19	H	1019	5/16" USS Flat Washer (2-bolt)	6
20	H	1183	3/8-16 Smooth Flange Nut (2-bolt)	6
21	H	3147	5/16-18 Smooth Flange Nut (4-bolt)	12
22	H	1008	1/4" USS Flatwashers (4-bolt)	12
23	H	1403	5/16-18 x 1-1/2" Motor Studs (4-bolt)	12
24		7730	Motor Spacer (G-Plex III & GP400)	3
25	31P	V7011Black	Black Endplate (reference only)	*
26	31P	V7003Black	Black Roller Hood (reference only)	*
27	31P	VR7002-1	Black Belt Guard (reference only)	*



Installation of VIBE ™ Ransome Models

Your new units come with the parts to fit all styles of Ransome Triplex Mowers.

Tools Required: *1/2" Combination Wrench and Socket* *9/16" Combination Wrench*
 2-3/4" Combination Wrenches *5/32" Allen Wrench*

1. Read these instructions carefully, and familiarize yourself with the parts and assembly drawings before starting.
2. Loosen and/or remove the retaining nuts from the hydraulic motors on the cutting units, and remove the motors. (*Spline coupler and retaining nuts are not needed for the roller, so keep them with the cutting unit*).
3. Remove cover cap, and the 3/8" retainer pin from the 1" vertical lift pin on the cutting unit, raise the lift arm off of the cutting unit, and slide the cutting unit out of the way.
4. After unpacking all the rollers and identifying all the hardware, remove the 5/16" nuts from the four mounting bolts for the lift plate (31A-7086B).
5. Install this plate as shown, replace bolts and nuts, and tighten securely.
6. Remove the 1/2" bolt from the lift plate and install the lift pin (37P-7517) as shown; be sure the pivot limiter is forward.
7. Reinstall the bolt, with one spacer on either side of the lift pin, replace the nut, and tighten until some resistance is noticed yet does not restrict the pivot action of lift pin. **NOTE: Generally all Ransome Models will require this pin to be mounted in the rear most hole of the lift plate; however, some early model G-Plex II models require the center unit to be mounted in the forward hole.**
8. On the belt guard side, remove the 3/8" bolt securing the endplate to frame that is located directly above the roller. Install the rubber mount (37P-7046) as indicated on the drawing.
9. On the opposite end of the roller, install the rubber mount (37P-7046). This is now the center unit.
10. Install the remaining rubber mounts (37P-7046), one per unit, on the other units. One will go above the belt guard on the Right Unit. One will go above the hydraulic motor location on the Left Unit.
11. Place the rollers under the machine in their respective positions: left, right, center.
12. Raise the lift arm and the tube and install it over the lift pin (37P-7517).
13. Replace the 3/8" retaining the pin and the cap.
14. Loosen and/or remove the motor mount nuts and washers, fit the motor into place and replace the washers and nuts then tighten.
15. Check that all rubber stops contact their respective positions and do not interfere with any of the mechanical workings of the mower. Adjust if necessary.
16. Check the operation of the rollers.

The pivot limiter on lift pin will need to be adjusted to fit your needs, i.e. undulations on your greens, ground clearance while in transport, etc.

Other hardware included:

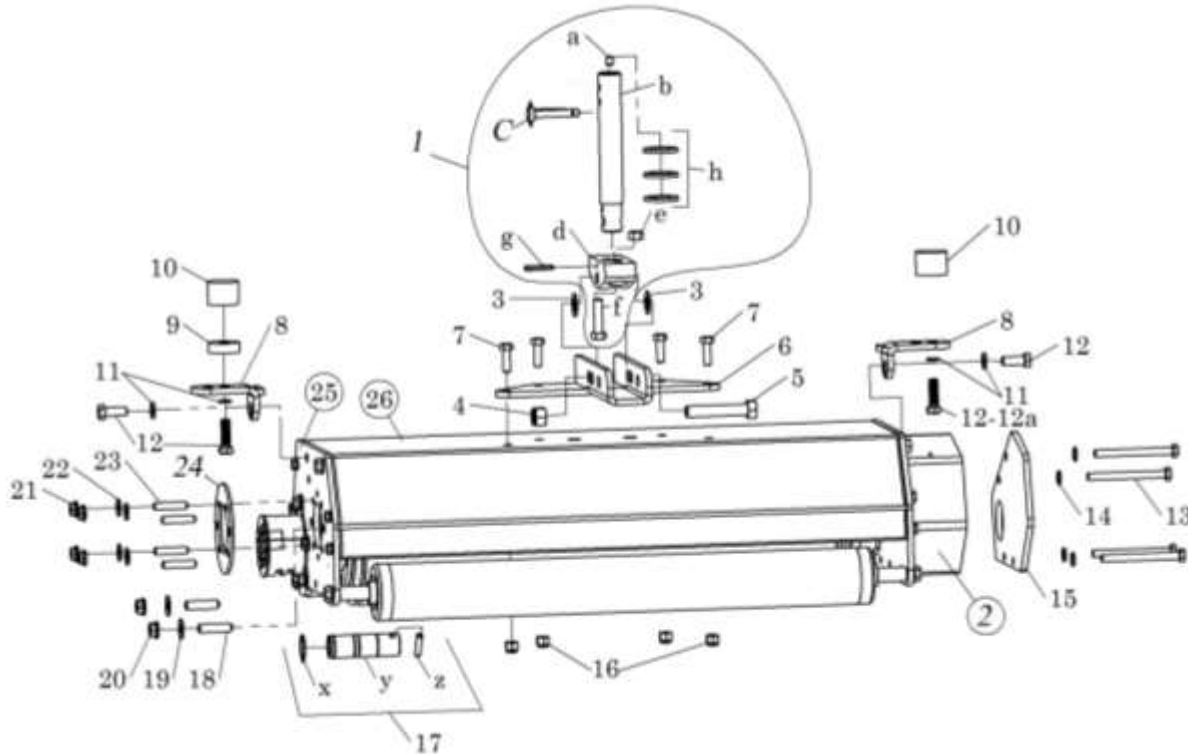
12-5/16" x 1-3/4" flathead screws with nuts are used for four bolt motor units. Remove the two 3/8" studs from the aluminum housing, thread and tighten the four 5/16" screws into the pre-tapped holes per each roller, and secure the motor on the outside with the four units.

1" flat washers are needed in the event that your rollers twist, or travel at an angle. Install these washers on the lift pin (37P-7057) and under the lift arm tube, so the 3/8" diameter retainer pin is as near the bottom of the V-groove in the lift pin as possible. This will control the twisting of the roller on the green.

Hydraulic motor spacer (30M-7730) may be required between the endplate and hydraulic motor due to the design of the motor on the new G-Plex II models. If there is a gap between the motor and the endplate when installing the motor and contact between these two surfaces cannot be made by hand, then install one spacer to each roller.

DO NOT FORCE THE MOTOR INTO THE END PLATE WITH THE RETAINING NUTS.

Adaptation Kit to fit Ransome & Jacobsen G-Plex II Part Number 30A-7505

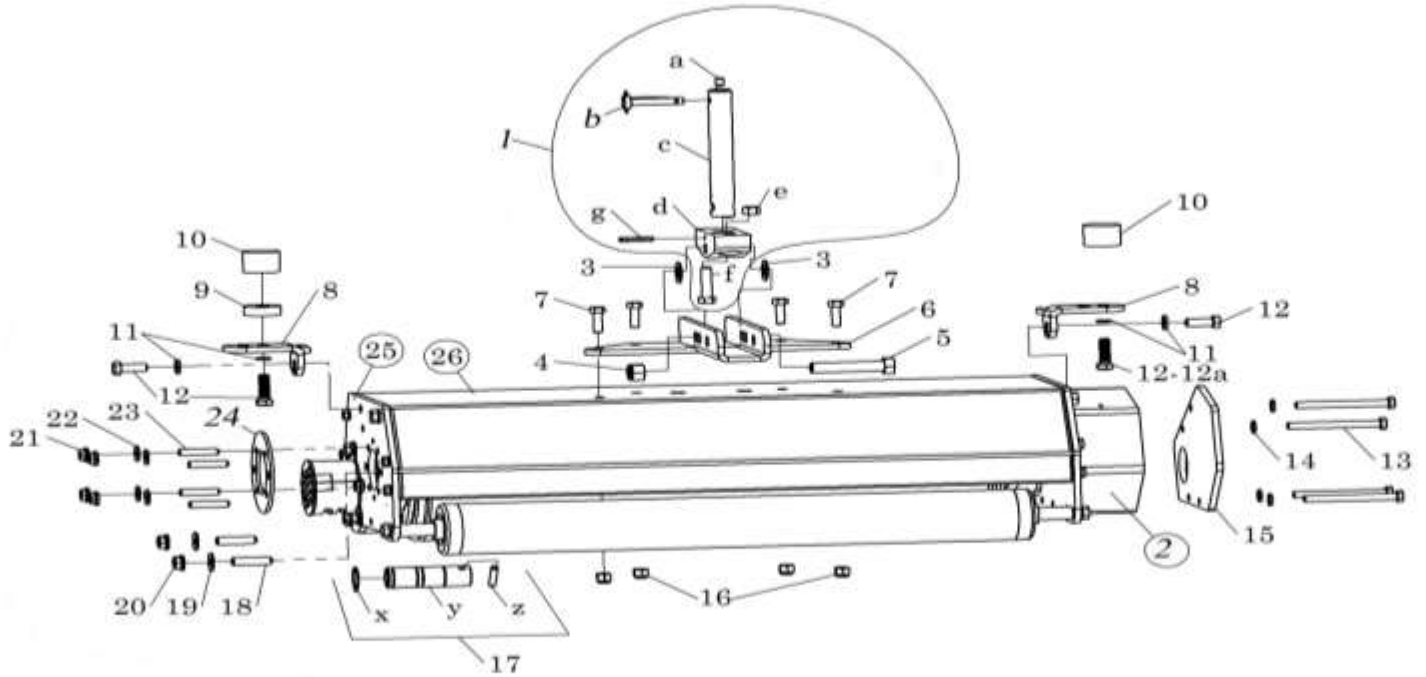


The 30A-7505 adaptation kit includes the following:

ITEM #	DEPT #	PART #	DESCRIPTION	QTY.	ITEM #	DEPT #	PART #	DESCRIPTION	QTY.
1	30A	7517	Lift Pin Assy. 1" Diameter (Jacobsen G-PLEX II & Ransome) Includes Items a,b,c,d,e,f,g,h.	3	12	H	1135	Bolt 3/8-16 x 1-1/4" Gr. 8	10
a	H	6012	Set Screw 5/16-18 x 3/8	1 ea.	12a	H	1100	Bolt 3/8-16 X 1" Gr. 5 (Center unit left side only)	1
b	37P	7027-1	Lift Pin - 1" Diameter	1 ea.	13	H	7029	Bolt 5/16 - 18 x 3-1/4" Gr. 5	12
c	H	66	5/16" Wire Loop Pin	1 ea.	14	H	1013	5/16" Split Lock Washer	12
d	37P	7026-1	Pivot Limiter	1 ea.	15	31P	VR7CWB	Black Counterweight	3
e	H	1005	3/8-16 hex nut	1 ea.	16	H	3179	5/16-18 Nylon Lock Nut	12
f	H	032	Bolt 3/8-16 x 1-1/2" Gr. 8	1 ea.	17	37P	7001	Shaft Spline Coupler (includes x,y,z)	3
g	H	7152	Spring Pin 3/16 x 1-1/4"	1 ea.	x	37P	1029	63/64" External Snap Ring	1 ea.
h	H	1150	1" SAE Flatwasher (Ransome Only)	3 ea.	y		7001	Splined Coupler	1 ea.
2	31P	VR7002-1	Black Belt Guard (reference only)	*	z	37P	7178	1/4" x 1-1/4" split Spring Pin	1 ea.
3	H	3585	Shim 1/2" x .062	6	18	H	1402	3/8-16 x 1-3/4" Motor Studs (2-bolt)	6
4	H	1014	1/2-13 nylon Locknut	3	19	H	1019	5/16" USS Flat Washer (2-bolt)	6
5	H	1004	Bolt 1/2-13 x 2-3/4" Gr. 5	3	20	H	1183	3/8-16 Smooth Flange Nut (2-bolt)	6
6	37P	7086B	Lift Bracket (3 hole)	3	21	H	3147	5/16-18 Smooth Flange Nut (4-bolt)	12
7	H	1101	Bolt 5/16-18 x 1" Gr. 5	12	22	H	1008	1/4" USS Flatwashers (4 -bolt)	12
8	37P	7046	Large Bumper Mount	4	23	H	1403	5/16-18 x 1-1/2" Motor Studs (4 - bolt)	12
9	37P	7016	Nylon Bumper Spacer (Not used center unit left side)	3	24	37P	7730	Motor Spacer (G-Plex III & GP400)	3
10	37P	7729	Bumper	4	25	31P	V7011Black	Black Endplate (reference only)	*
11	H	1010	3/8" Split Lockwasher	8	26	31P	V7003Black	Black Roller Hood (reference only)	*

Adaptation Kit to fit Jacobsen G-Plex III & GP 400

Part Number 30A-7509



The 30A-7509 adaptation kit includes the following:

ITEM #	DEPT #	PART #	DESCRIPTION	QTY.
1	30A	7518	Lift Pin Assy. 7/8" Diameter (Jacobsen G-PLEX III & GP 400) Includes Items a,b,c,d,e,f,g,h.	3
a	H	6012	Set Screw 5/16-18 x 3/8	1 ea.
b	H	66	5/16" Wire Loop Pin	1 ea.
c	37P	7028-1	Lift Pin - 7/8" Diameter	1 ea.
d	37P	7026-1	Pivot Limiter	1 ea.
e	H	1005	3/8-16 hex nut	1 ea.
f	H	O32	Bolt 3/8-16 x 1-1/2" Gr. 8	1 ea.
g	H	7152	Spring Pin 3/16 x 1-1/4"	1 ea.
2	31P	VR7002-1	Black Belt Guard (reference only)	*
3	H	3585	Shim 1/2" x .062	6
4	H	1014	1/2-13 nylon Locknut	3
5	H	1004	Bolt 1/2-13 x 2-3/4" Gr. 5	3
6	37P	7086B	Lift Bracket (3 hole)	3
7	H	1101	Bolt 5/16-18 x 1" Gr. 5	12
8	37P	7046	Large Bumper Mount	4
9	37P	7016	Nylon Bumper Spacer (Not used center unit left side)	3
10	37P	7729	Bumper	4
11	H	1010	3/8" Split Lockwasher	8
12	H	1135	Bolt 3/8-16 x 1-1/4" Gr. 8	10

ITEM #	DEPT #	PART #	DESCRIPTION	QTY.
12a	H	1100	Bolt 3/8-16 X 1" Gr. 5 (Center unit left side only)	1
13	H	7029	Bolt 5/16 - 18 x 3-1/4" Gr. 5	12
14	H	1013	5/16" Split Lock Washer	12
15	31P	VR7CWB	Black Counterweight	3
16	H	3179	5/16-18 Nylon Lock Nut	12
17	37P	7001	Shaft Spline Coupler (includes x,y,z)	3
x	37P	1029	63/64" External Snap Ring	1 ea.
y		7001	Splined Coupler	1 ea.
z	37P	7178	1/4" x 1-1/4" split Spring Pin	1 ea.
18	H	1402	3/8-16 x 1-3/4" Motor Studs (2-bolt)	6
19	H	1019	5/16" USS Flat Washer (2-bolt)	6
20	H	1183	3/8-16 Smooth Flange Nut (2-bolt)	6
21	H	3147	5/16-18 Smooth Flange Nut (4-bolt)	12
22	H	1008	1/4" USS Flatwashers (4 -bolt)	12
23	H	1403	5/16-18 x 1-1/2" Motor Studs (4 - bolt)	12
24	37P	7730	Motor Spacer (G-Plex III & GP400)	3
25	31P	V7011Black	Black Endplate (reference only)	*
26	31P	V7003Black	Black Roller Hood (reference only)	*

Snap Ring Installation Instructions for All Model Ransomes, G-Plex, & GP-400

(Use Page 12 as a Parts Reference)

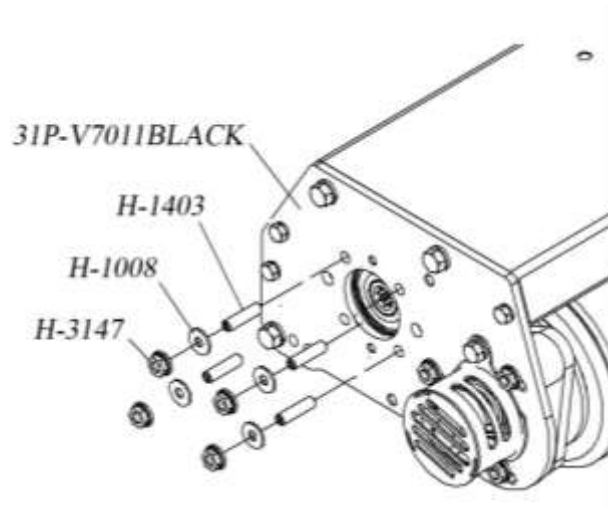
1. Select the required shaft position that corresponds to your triplex machine.
2. Remove the belt guard (31P-VR7002-1) and the belt (37P-7121).
3. Loosen the set screw on pulley (37P-7100) and the bearing (37P-7101).
4. Loosen the set screw and the lock collar on the bearing (37P-7102).
5. Tap the shaft with a rubber mallet to allow positioning of the snap ring (37P-1029).
6. Install the snap ring (37P-1029) in the 1st snap ring groove and tap the shaft into the indicated position.
7. Retighten the bearings.
8. The lock collar on the bearing (37P-7102) needs to be locked by rotating it in the direction at which the shaft will be turning. With a punch, give one tap in the predrilled hole in the lock collar in the same direction with a mallet to lock it into place and tighten the set screw.
9. Align the pulleys and tighten the set screw on the pulley (37P-7100).
10. Replace the belt (37P-7121) and the belt guard (31P-VR7002-1).

Hydraulic Motor Mounting Configurations

4-Bolt – Ransome (Early Models)

1. Remove the factory installed motor mounting hardware from the rolling unit.
2. Thread the four 5/16" motor studs (H-1403) from the outside of the unit through the endplate (31P-V7011BLACK) into the aluminum housing (37P-7150), and tighten the nuts (H-3147). *Note: The aluminum housing is on the interior of the unit.*
3. These studs (H-1403) will stick out from the endplate, providing a place to secure your hydraulic motor.

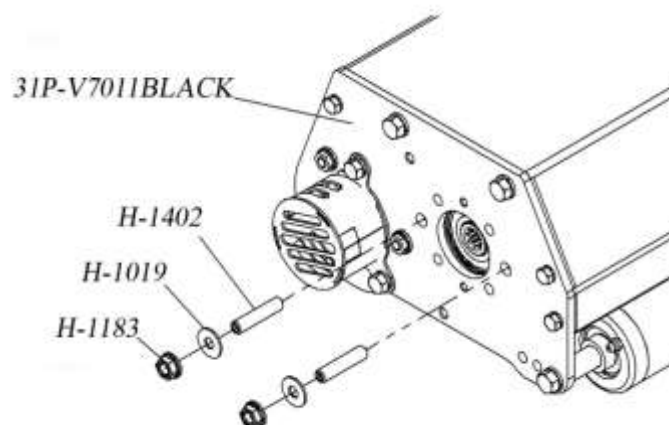
NOTE: The same procedure applies for the installation of the two 3/8" motor studs (H-1402) in a 2-Bolt configuration.



Hydraulic Motor Mounting Configurations

2-Bolt G-Plex II

1. Remove the factory installed motor mounting hardware from the rolling unit.
2. Thread the two 3/8" motor studs (H-1402) from the outside of the unit through the endplate (31P-V7011BLACK) into the aluminum housing (37P-7150), and tighten the nuts (H-1183). *Note: The aluminum housing is on the interior of the unit.*
3. These studs (H-1402) will stick out from the endplate, providing a place to secure your hydraulic motor.



Adaptation Kit Instructions

All True-Surface® Vibratory Greens Rollers are built model specific, according to the brand of greensmower you own. However, all True-Surface® products are easily adapted to fit a different model greensmower by simply purchasing an adaptation kit.

You will find the adaptation kit you need on the following pages:

Toro GM3 - 3150 – Page 18	Jacobsen GK 5/6 – Page 44 & 45
Toro 3200A – Page 21	Jacobsen E-322 – Page 50
Toro 3200B - Page 24	John Deere 2500/E & QA5 – Page 58 & 59
Toro 3250 – Page 27	John Deere 2243 – Page 64
Toro 3300-3420 – Page 30	Ransome & Jacobsen G-Plex II – Page 70
Jacobsen GK 3/4 – Page 38 & 39	Jacobsen G-Plex III – Page 71

NOTE: The model mower you are adapting to, is the model adaptation kit you will need.

Once you have located the adaptation kit required, you will need to determine if you are required to perform a “Drive End Reversal,” based on the motor mount placement that can be found throughout this manual. Motor Mount Placements can be found on the following pages:

Toro GM3 - 3150 – Page 16	Jacobsen GK 5/6 – Page 42
Toro 3200A – Page 19	Jacobsen E-322 – Page 48
Toro 3200B - Page 22	John Deere 2500/E & QA5 – Page 54
Toro 3250 – Page 25	John Deere 2243 – Page 62
Toro 3300-3420 – Page 28	Ransome & Jacobsen G-Plex II/III – Page 68
Jacobsen GK 3/4 – Page 36	

NOTE: The model mower you are adapting to, is the motor mount configuration you will need.

The Drive End Reversal instructions can be found on page 76.

For adaptation kit instructions, please refer to the following pages:

Toro GM3 - 3150 – Page 17	Jacobsen GK 5/6 – Page 43
Toro 3200A – Page 20	Jacobsen E-322 – Page 49
Toro 3200B – Page 23	John Deere 2500/E & QA5 – Page 55
Toro 3250 – Page 26	John Deere 2243 – Page 63
Toro 3300-3420 – Page 29	Ransome & Jacobsen G-Plex II/III – Page 69
Jacobsen GK 3/4 – Page 37	

NOTE: The model mower you are adapting to, is the mounting instructions you will need.

Please note that each model has a reference page for the proper placement of the drive coupler, and information about motor connection.

Please contact Turflite, Inc. for further assistance.

1-800-443-8506

www.true-surface.com

Frame-End Removal Instructions

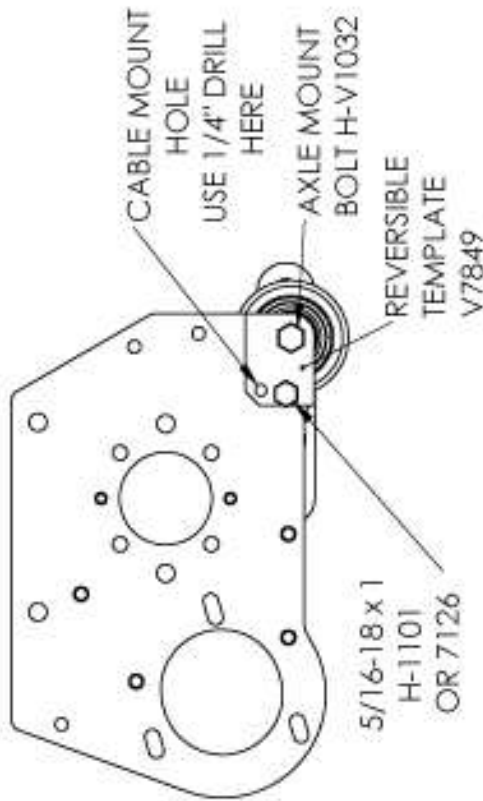
1. Remove the belt guard (31P-VR7002-1) and/or the counterweights (31P-VR7CWB) by removing 4 bolts (H-7029).
2. Remove the belt (37P-7121) by rolling it off of the pulleys.
3. Remove the snap ring (37P-1014) next to the outboard eccentric weight (31A-VR-003A). Loosen the set screw (H-V8005) on the eccentric weight and remove it, (it is not necessary to loosen the ball plunger) then remove the 2nd snap ring (37P-1014).
4. Remove both the 5" pulley (37P-7100) & the 2" pulley (37P-1024). Also remove their keys (H-1025 & H-5087).
5. Remove the bolt (H-V1032) from the end of the front roller axle (31P-V7208).
6. Remove the 3 bolts (H-1003) that secure the hood (37P-7003B) to the end plate (37P-7011B).
7. Remove the bolts (H-1001) and nuts (H-1147) that secure the spline shaft bearing (37P-7102) to the end plate.
8. Remove the 2 bolts (H-1100) that secure the end plate to the frame (37P-7004).
9. Slide the end plate away from the roller unit.
10. To remove the roller, remove the eccentric weight cover (31P-VR002) from the opposite end, and remove outboard eccentric (31A-VR-003B) from that end using same procedure in step #3. ***Be sure the eccentrics are returned to the correct sides – they are labeled A & B.***

To reassemble, follow the above procedures in reverse order.

Drive-End Reversal Instructions

1. Follow the Frame End Removal Instructions 1-10.
2. Slide the entire roller tube (30A-09-16) out of the opposite endplate, and rotate it end for end.
3. Remove the nuts (H-1183 or H-3147) from the motor mount studs (H-1402 or H-1403), or the motor adapter plates (37P-7036-1 or 37P-6034JV), depending on which model is being converted.
4. Remove the two ¼" screws (H-1505) that secure the aluminum bearing housing (37P-7150) to the endplate (31P-V7011Black).
5. Rotate the drive shaft (37P-7007) with bearing housings attached, end for end & re-attach the 7150 housing to the new location..
6. Slip the roller back through endplate that is still mounted to frame.
7. Replace the endplate over the roller hub (30A-09-001) and the drive shaft (37P-7007).
8. Install the two 3/8" bolts (H-1100) into the frame.
9. Replace the axle bolt (H-V1032) and the three hood bolts (30H-1003).
10. Replace the 5/16" bolts (H-1001) and nuts (H-1147) into flange mounted bearing (37P-7102).
11. If you are switching mower types, please refer to the snap ring placement instructions for the mower you are adapting to.
12. Replace the 5" pulley (37P-7100) and the 2" pulley (37P-1024) as they were on the opposite side.
13. Tighten the set screws on both pulleys.
14. Install the belt (37P-7121), check alignment, and adjust it to ¼" deflection.
15. Replace the belt guard (31P-VR7002-1) and the motor mounting or adapter components.
16. Follow the mounting procedure in this manual for the corresponding triplex greensmower model you are working with.

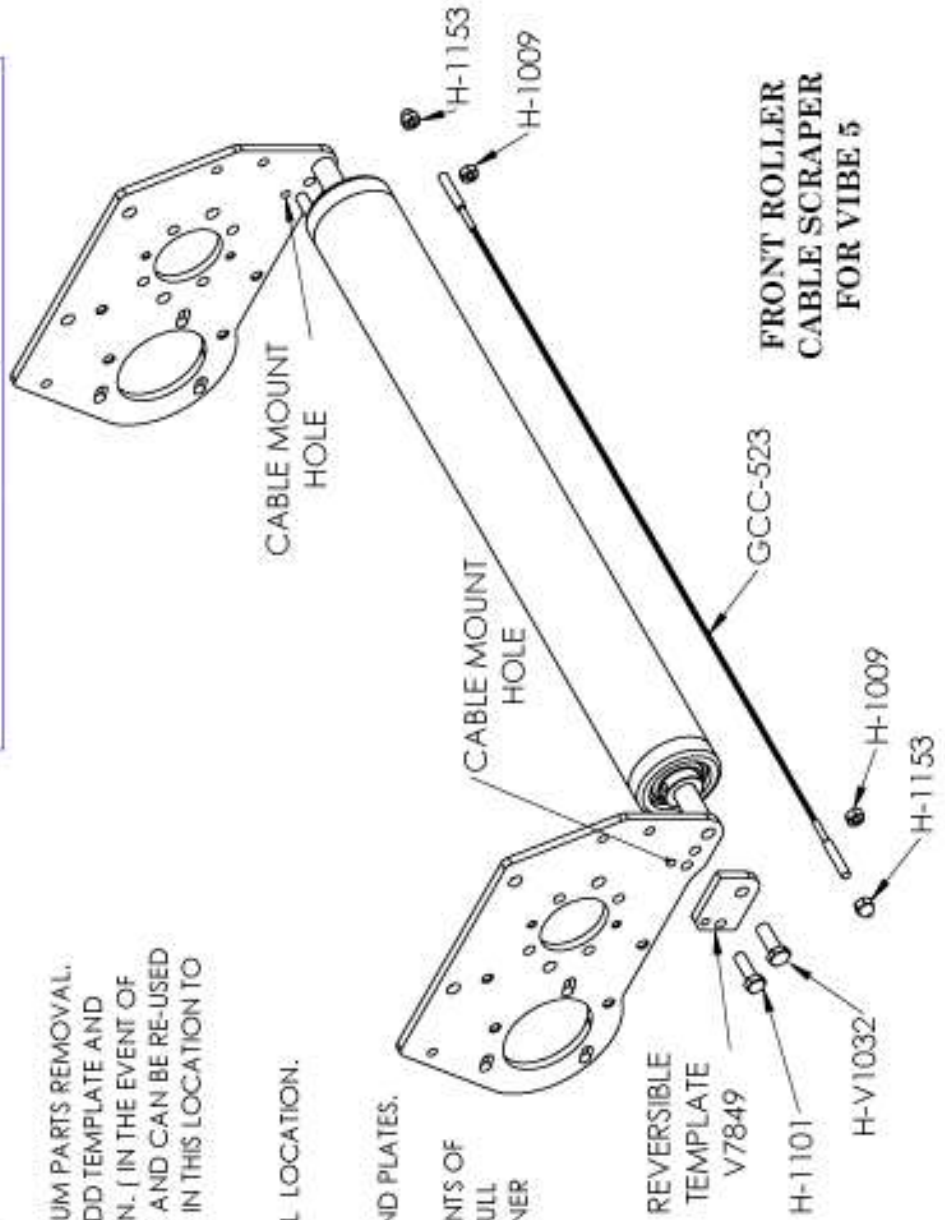
V7850 (FOR ONE SINGLE ROLLER)			
V7850-3 (FOR SET OF THREE ROLLERS)			
FRONT ROLLER CABLE SCRAPER KIT			
QUANTITIES FOR FULL SET OF 3 ROLLERS			
PART#	DESCRIPTION	QTY.	
GCC-523	CABLE SCRAPER	3	
H-1009	1/4-20 HEX NUT	6	
H-1153	1/4-20 NYLON LOCK NUT	6	
H-1101	5/16-18 x 1" BOLT	1	
V7849	REVERSIBLE TEMPLATE	1	
H-1020	5/16-18 HEX NUT	1	
V7848	1/4" DRILL BIT	1	



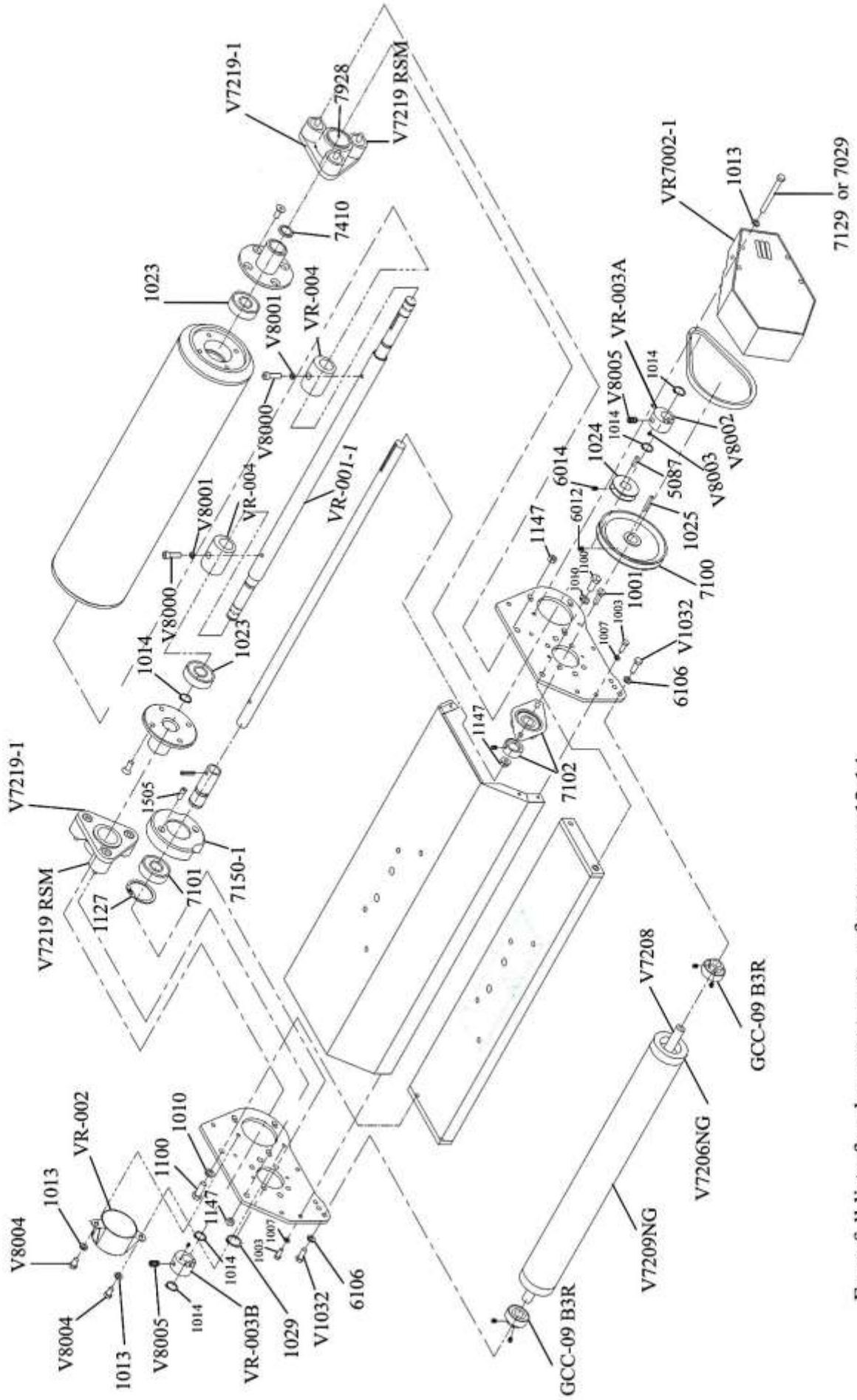
SCRAPER MOUNT HOLES CAN BE ADDED WITH MINIMUM PARTS REMOVAL. REMOVE H-V1032 FROM FRONT ROLLER AXLE, AND ADD TEMPLATE AND ADDITIONAL H-1101, 5/16 BOLT AND NUT AND TIGHTEN. (IN THE EVENT OF A TORO 3100, THE 7126 BALL STUD WILL BE REMOVED, AND CAN BE RE-USED TO SECURE TEMPLATE). TORO 3250 WILL HAVE A BOLT IN THIS LOCATION TO RETAIN THE BALL STUD EXTENSION.
 DRILL 1/4" HOLE, REPEAT ON OPPOSITE SIDE.
 REPLACE ALL BOLTS AND/OR BALL STUDS IN ORIGINAL LOCATION.
 INSTALL CABLE INTO NEW HOLES.

USE STANDARD 1/4" NUTS H-1009 ON THE INSIDE OF END PLATES.
 USE NYLON LOCK NUTS H-1153 ON THE OUTSIDE.
 TIGHTEN OUTER NUTS EVENLY SO THAT EQUAL AMOUNTS OF CABLE ENDS PROTRUDE. STOP WHEN DIFFICULTY TO PULL CABLE AWAY FROM ROLLER IS REACHED. TIGHTEN INNER NUTS UP TO END PLATE.

IN THE EVENT THERE IS INTERFERENCE BETWEEN THE CABLE STUD AND TORO BALL COUPLER, THE END OF THE CABLE STUD CAN BE GROUND DOWN OR CUT OFF.



TRUE-SURFACE® VIBE V™ UPGRADE SCHEMATIC



For a full list of replacement parts, refer to pages 12-14.

Parts Included in the Upgrade Kits

Nylon Composite Flanged Bearings/Large RSM Kit

31A-VibeKit 1 Toro: Vibe Kit 1 to Fit All Toro Models

Dept. #	Part #	Description	Qty
37P	1127	Bearing Snap Ring	3
H	1183	3/8 - 16 Smooth Flange Nut	6
H	1402	Toro/Jac Motor Mount Stud	6
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	6110	1/4 Hi Collar Lock Washer	6
37P	7101	Bearing with Set Screw	3
37P	7150	Bearing Housing	3
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6
H	1019	5/16 - USS Flat Washer	6

31A-VibeKit 1 Jac4/Ra: Vibe Kit 1 to Fit Jacobsen 3, 4 & Ransome Models

Dept. #	Part #	Description	Qty
37P	1127	Bearing Snap Ring	3
H	1183	3/8 - 16 Smooth Flange Nut	6
H	1402	Toro/Jac Motor Mount Stud	6
H	1403	5/16 - 18 x 1 1/2 Motor Mount Stud	12
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	3147	5/16 - 18 Flange Nut	12
H	6110	1/4 Hi Collar Lock Washer	6
37P	7101	Bearing with Set Screw	3
37P	7150	Bearing Housing	3
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6
H	1008	1/4 USS Flat Washer	12
H	1019	5/16 USS Flat Washer	6

31A-VibeKit 1 JD/Jac5: Vibe Kit 1 to Fit John Deere & Jacobsen 5, 6 Models

Dept. #	Part #	Description	Qty
37P	1127	Bearing Snap Ring	3
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	6110	1/4 Hi Collar Lock Washer	6
37P	7101	Bearing with Set Screw	3
37P	7150	Bearing Housing	3
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6

Solid Stainless Steel Front Roller

31A-VibeKit 2: Vibe Kit 2 to Fit All Models

Dept. #	Part #	Description	Qty
H	6106	3/8 Internal Tooth Lock Washer	6
H	V1032	Bolt 3/8-24 x1	6
31P	V7206NG	Front Roller End Caps	6
31P	V7208	Solid Front Roller Axle	3
31P	V7209NG	Solid Front Roller Tube	3
21P	GCC-09 B3R	Solid Front Roller Bearings w/out Seals	6

Select-A-Vibe™ Dial: Adjust Your Vibration

31A-VibeKit 3 Toro310: Vibe Kit 3 to Fit Toro GM3-3150 Models

Dept#	Part #	Description	Qty
H	6106	3/8 Internal Tooth Lock Washer	6
H	1013	5/16 Split Lock Washer	18
37P	1014	Snap Ring for Sahft	18
H	1019	5/16 USS Flat Washer	6
37P	1023	Shaft Bearing - Includes (4) H-1140	6
37P	1024	2" Pulley - Includes (3) H-6014 & (3) H-5087	3
37P	1127	Bearing Snap Ring	3
H	1183	3/8 - 16 Smooth Flange Nut	6
H	1402	Toro/Jac Motor Mount Stud	6
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	6110	1/4 Hi Collar Lock Washer	6
37P	7100	5" Pulley - Includes (3) H-6012 & (3) H-1025	3
37P	7101	Bearing with Set Screw	3
H	7129	5/16 - 18 x 3 Hex Bolt	12
H	7410	Hub/Shaft Seal	6
37P	7150	Bearing Housing	3
H	V1032	Bolt 3/8 - 24 x 1	6
31P	V7206NG	Front Roller End Cap	6
31P	V7208	Solid Front Roller Axle	3
31P	V7209NG	Solid Front Roller Tube	3
21P	GCC-09 B3R	Triple Lip Roller Bearing	6
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6
H	V8000	5/16 - 18 x 3/4 Socket Head Cap Screw	6
H	V8001	5/16 Hi Collar Lock Washer	6
H	V8002	3/8 - 16 x 1/4 Flat Point Set Screw	6
H	V8003	10 - 32 x 3/16 Flat Point Set Screw	6
H	V8004	5/16 - 18 x 1/2 Hex Bolt Grd 5	6
H	V8005	Ball Spring Plunger	6
31A	VR-001-1	Vibe Shaft Only	3
31P	VR-002	Eccentric Shaft Cover	3
31P	VR-003A	Variable Outboard Eccentric Weight A	3
31P	VR-003B	Variable Outboard Eccentric Weight B	3
31P	VR-004	Variable Inboard Eccentric Weight	6
31P	VR7002-1	Black Belt Guard	3
30S	Manual Vibe V	Vibe V Owner/Operator Manual	1

31A-VibeKit 3 Toro325: Vibe Kit 3 to Fit Toro 3250 Models

Item #	Part #	Description	Qty
H	6106	3/8 Internal Tooth Lock Washer	6
H	1013	5/16 Split Lock Washer	18
37P	1014	Snap Ring for Shaft	18
H	1019	5/16 USS Flat Washer	6
37P	1023	Shaft Bearing	6
37P	1024	2 " Shaft Pulley - Includes (3) H-5087 & (3) 6014	3
37P	1127	Bearing Snap Ring	3
H	1140	5/16 - 18 x 3/4 Flat Head Socket Screw	24
H	1183	3/8 - 16 Smooth Flange Nut	6
H	1402	Toro/Jac Motor Mount Stud	6
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	6110	1/4 Hi Collar Lock Washer	6
H	7029	5/16 - 18 x 3 1/4 Hex Bolt	12
37P	7100	5" Pulley - Includes (3) H-1025 & (3) H-6012	3
37P	7101	Bearing with Set Screw	3
H	7410	Hub/Shaft Seal	6
37P	7150	Bearing Housing	3
H	V1032	Bolt 3/8-24 x1	6
31P	V7206NG	Front Roller End Caps	6
31P	V7208	Solid Front Roller Axle	3
31P	V7209NG	Solid Front Roller Tube	3
21P	GCC-09 B3R	Solid Front Roller Bearings w/out seals	6
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6
H	V8000	5/16 - 18 x 3/4 Socket Head Cap Screw	6
H	V8001	5/16 Hi Collar Lock Washer	6
H	V8002	3/8 - 16 x 1/4 Flat Point Set Screw	6
H	V8003	10 - 32 x 3/16 Flat Point Set Screw	6
H	V8004	5/16 - 18 x 1/2 Hex Bolt Grd 5	6
H	V8005	Ball Spring Plunger	6
31A	VR-001-1	Vibe Shaft Only	3
31P	VR-002	Eccentric Shaft cover	3
31P	VR-003A	Variable Outboard Eccentric Weight A	3
31P	VR-003B	Variable Outboard Eccentric Weight B	3
31P	VR-004	Variable Inboard Eccentric Weight	6
31P	VR7002-1	Black Belt Guard	3
31P	VR7CWB	Black Counter Weight	3
30S	Manual Vibe V	Vibe V Owner/Operator Manual	1

31A-VibeKit 3 ToroJa4/RA: Vibe Kit 3 to Fit Jacobsen 3, 4 & Ransome Models

Dept. #	Part #	Description	Qty
H	1008	1/4 USS Flat Washer	12
H	6106	3/8 Internal Tooth Lock Waher	6
H	1013	5/16 Split Lock Washer	18
37P	1014	Snap Ring for Shaft	18
H	1019	5/16 USS Flat Washer	
37P	1023	Shaft Bearing	6
37P	1024	2" Shaft Pulley - Includes (3) H-5087 & (3) H-6014	3
37P	1127	Bearing Snap Ring	3
H	1140	5/16 - 18 x 3/4 Flat Head Socket Screw	24
H	1183	3/8 - 16 Smooth Flange Nut	6
H	1402	Toro/Jac Motor Mount Stud	6
H	1403	5/16 - 18 x 1 1/2 Motor Mount Stud	12
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	3147	5/16 - 18 Flange Nut	12
H	6110	1/4 Hi Collar Lock Waasher	6
37P	7100	5" Pulley - Includes (3) H-1025 & (3) H-6012	3
37P	7101	Bearing with Set Screw	3
H	7129	5/16 - 18 x 3 Hex Bolt	12
H	7410	Hub/Shaft Seal	6
37P	7150	Bearing Housing	3
H	V1032	Bolt 3/8-24 x1	6
31P	V7206NG	Front Roller End Caps	6
31P	V7208	Solid Front Roller Axle	3
31P	V7209NG	Solid Front Roller Tube	3
21P	GCC-09 B3R	Triple Lip Roller Bearing	6
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6
H	V8000	5/16 - 18 x 3/4 Socket Head Cap Screw	6
H	V8001	5/16 Hi Collar Lock Washer	6
H	V8002	3/8 - 16 x 1/4 Flat Point Set Screw	6
H	V8003	10 - 32 x 3/16 Flat Point Set Screw	6
H	V8004	5/16 - 18 x 1/2 Hex Bolt Grd 5	6
H	V8005	Ball Spring Plunger	6
31A	VR-001-1	Vibe Shaft Only	3
31P	VR-002	Eccentric Shaft cover	3
31P	VR-003A	Variable Outboard Eccentric Weight A	3
31P	VR-003B	Variable Outboard Eccentric Weight B	3
31P	VR-004	Variable Inboard Eccentric Weight	6
31P	VR7002-1	Black Belt Guard	3
30S	Manual Vibe V	Vibe V Owner/Operator Manual	1

31A-VibeKit 3 JD/Jac5: Vibe Kit 3 to Fit John Deere & Jacobsen 5 & 6 Models

Dept. #	Part #	Description	Qty
H	1008	1/4 USS Flat Washer	12
H	6106	3/8 Internal Tooth Lock Washer	6
H	1013	5/16 Split Lock Washer	18
37P	1014	Snap Ring for Shaft	3
H	1019	5/16 USS Flat Washer	6
37P	1023	Shaft Bearing	6
37P	1024	2" Shaft Pulley - Includes (3) H-5087 & (3) H-6014	3
37P	1127	Bearing Snap Ring	3
H	1140	5/16 - 18 x 3/4 Flat Head Socket Screw	24
H	1146	5/16 - 18 x 1 3/4 FHSC Black Oxide	6
H	1505	1/4 - 20 x 3/4 Socket Cap Screw	6
H	6110	1/4 Hi Collar Lock Washer	6
H	7029	5/16 - 18 x 3 1/4 Hex Bolt	12
37P	7100	5" Pulley - Includes (3) H-1025 & (3) 6012	3
37P	7101	Bearing with Set Screw	3
H	7410	Hub/Shaft Seal	6
37P	7150	Bearing Housing	3
H	V1032	Bolt 3/8-24 x1	6
31P	V7206NG	Front Roller End Caps	6
31P	V7208	Solid Front Roller Axle	3
31P	V7209NG	Solid Front Roller Tube	3
21P	GCC-09 B3R	Triple Lip Roller Bearing	6
31A	V7219-1	Flanged Bearing Assembly - Includes (18) 31A-V7219 RSM	6
H	V8000	5/16 - 18 x 3/4 Socket Head Cap Screw	6
H	V8001	5/16 Hi Collar Lock Washer	6
H	V8002	3/8 - 16 x 1/4 Flat Point Set Screw	6
H	V8003	10 - 32 x 3/16 Flat Point Set Screw	6
H	V8004	5/16 - 18 x 1/2 Hex Bolt Grd 5	6
H	V8005	Ball Spring Plunger	6
31A	VR-001-1	Vibe Shaft Assembly Only	3
31P	VR-002	Eccentric Shaft cover	3
31P	VR-003A	Variable Outboard Eccentric Weight A	3
31P	VR-003B	Variable Outboard Eccentric Weight B	3
31P	VR-004	Variable Inboard Eccentric Weight	6
31P	VR7002-1	Black Belt Guard	3
31P	VR7CWB	Black Counter Weight	3
30S	Manual Vibe V	Vibe V Owner/Operator Manual	1
21P	GCC-129	12mm Snap Ring	3

Upgrade Kit Installation Instructions

Nylon Composite Flanged Bearings/Large RSM Kit (Vibe Kit 1)

1. Turn the True-Surface® Roller over, so it is resting on the hood with the roller tube (30A-09-16) facing upward. *Note: It will be easier to work on the unit if the lifting hardware is removed.*
2. Remove the belt guard (31P-VR7002-1) from the True-Surface® Roller.
3. Remove the drive belt (37P-7121).
4. Remove the 5" pulley (37P-7100) and the 2" pulley (37P-1024).
5. Remove the two 5/16" bolts (H-1001) keeping the flange mounted drive shaft bearing (37P-7102) attached.
6. Remove the three 1/4" bolts (H-1003) attaching the hood to the endplate. Then remove the two 3/8" bolts (H-1100) that attach the endplate to the frame.
7. Remove the 5/16" bolt (H-V1032) attaching the axle to the endplate.
8. Remove the endplate by sliding it away from the frame and the roller tube.
9. Remove the roller tube from the unit.
10. Loosen the set screws on the bearing (37P-7101) that secure the spline coupler (37P-7001, 7001JD or 7001E322) into the bearing housing (37P-7150), and then remove the spline shaft.
11. Remove the bearing housing (37P-7150) and then replace it with the new notched bearing housing (37P-7150) included in the kit. *Note: The new bearing housing has two scalloped relief points. Make sure one is lined up, so the new flanged bearing rubber shock mount (37P-V7219RSM) will not touch the bearing housing.*
12. Remove the current flange bearings (30A-1016-2) from the endplates by removing the 5/16" serrated flange nuts on the outside of the endplate.
13. Install the new flanged bearings (31A-V7219-1), mounting them to the endplate using the new 5/16" serrated flange nuts included. Remember, when mounting the flange, don't over-tighten the flange nuts, which could twist the rubber shock mounts (31A-V7219RSM).
14. Reverse steps 10 through 1.
15. Repeat this process for the remaining two units.

Solid Stainless Steel Front Roller (Vibe Kit 2)

1. Remove the 1/4" bolt that attaches the axle stabilizer (37P-7009) to the frame.
2. Remove the two 5/16" bolts that hold the axle (37P-7006) in place, making the removal of the current caster bar assembly from the unit possible.
3. Using a 3/8" drill bit, drill out the current two axle bolt holes for the new 3/8" bolts (H-V1032) that will hold in the new solid front roller (31A-V7207NG).
4. Install the new solid front roller (31A-V7207NG) with the 3/8" bolts (H-V1032) included.
5. Repeat the process for the remaining two units.

Upgrade Kit Installation Instructions Continued

Select-A-Vibe™ Dial (Vibe Kit 3)

1. Turn the True-Surface® Roller over so it is resting on the hood with the roller tube (30A-09-16) facing up.
Note: It will be easier to work on the unit if all the lifting hardware is removed
2. Remove the ¼” bolt that attaches the axle stabilizer (37P-7009) to the frame. Then remove the two 5/16” bolts that hold the axle in place, allowing the complete removal of the current wheel bar assembly.
3. With a 3/8” drill bit, drill out the two holes through which the 5/16” bolts go to hold the wheel bar axle in place.
4. Remove the belt guard (31P-VR7002-1) from the unit.
5. Remove the drive belt (37P-7121).
6. Remove the 5” pulley (37P-7100) and the 2” (37P-1024) pulley.
7. Remove the two 5/16” bolts (H-1001) that attach the bearing (37P-7102).
8. Remove the three ¼” bolts (H-1003) attaching the hood (37P-7003R/G) to the endplate (37P-7011R/G/B). Then remove the two 3/8” bolts (H-1100) that attach the endplate to the frame (37P-7004).
9. Remove the endplate by sliding it away from the frame and roller tube (30A-09-16).
10. Remove the roller tube from the unit. You will need to replace the current eccentric shaft with the new vibe shaft (31A-VR-001-1) included.
 - a. Remove the non-drive side hub (30A-09-002N). Using a large punch or small rod drive the hub plug out of the hub.
 - b. Remove the drive side hub (30A-09-001).
 - c. Press your current eccentric shaft out of the roller tube, or use a rubber mallet to drive out the shaft from the pulley end of the shaft.
 - d. Remove the remaining shaft bearing (37P-1023) from the roller tube and replace it with the new shaft bearing (37P-1023) included in the upgrade kit.
 - e. Install the new vibe shaft (31A-VR-001-1), inserting the longer end of the shaft in first, either by pressing it into place or use a rubber mallet to drive it into place. Install the snap ring (37P-1014) included to keep the bearing (37P-1023) from sliding on the shaft. Make sure the bearing did not move itself while you were installing shaft. If it did move, use a rubber mallet to tap the shaft and bearing back into place.
 - f. Install one of your hubs (30A-09-001) and the new seals.
 - g. Install the other bearing (37P-1023) by sliding it over the end of the shaft and then using the four 5/16” x 1-3/4” flat head screws included and your other hub carefully seat the bearing into place. Once the bearing is in place, remove the hub, and install the snap ring that keeps the bearing in place on the shaft.
 - h. Install the other hub with the 5/16” x 3/4” flat head screws and then install the new seal (H-7410).
 - i. When the rest of the upgrade is completed, the tube is now ready to be installed.
11. Loosen the set screws on the bearing (37P-7101) that secures the spline coupler (37P-7001) in the bearing housing (37P-7150), and then remove the spline shaft (37P-7007).
12. Remove the bearing housing (37P-7150), and replace it with the new bearing housing included in the kit.
Note: The new bearing housing has two scalloped relief points in it. Make sure one of them lined up so the new flange bearings rubber shock mounts (31A-V7219RSM) will not touch the bearing housing.
13. Remove the current flange bearings (30A-1016-2) from the endplates by removing the 5/16” serrated flange nuts on the outside of the endplate.
14. Install the new flanged bearings (31A-V7219-1) by mounting them to the endplate (37P-7011R/G/B) using the new 5/16” serrated flange nuts included. Remember, when mounting the flange, do not over tighten the flange nuts and twist the rubber mounts (see page 12).
15. Reverse steps 11 through 7.
16. Install the new solid front roller (31A-V7207NG) using the 3/8” bolts (H-V1032) and the lock washers (H-1010) included with the roller. The bolts will go through the holes drilled out earlier and will thread into the solid front roller axle.

17. Install the short key and 2" pulley. Then install the snap ring included in the groove closest to the pulley. Pull the pulley up tight to this snap ring, and then tighten the set screw.
18. Lightly anti-seize the dimpled area on the shaft, then install the outboard eccentric weight marked "A" (31P-VR-003A) – line up the roman numeral V with the line on the end of the shaft. Install another snap ring in the last groove on the shaft. You should be able to leave the ball spring plunger in its set position to install the weight. The ball spring plunger is the screw that is in line with number V. Now, tighten the set screw opposite the ball spring plunger.
19. Install your new key (H-1025) and 5" pulley (37P-7100), line it up with your 2" pulley (37P-1024), and tighten the set screw (H-6012) – when lined up with the 2" pulley, the hub of the 5" pulley will probably rest against the bearing (37P-7102). Next, reinstall the belt (37P-7121).
20. Install the black belt guard (31P-VR7002-1) included with the kit.
21. On the other end of the shaft, install a snap ring (37P-1014) in the groove closest to the hub. Lightly anti-seize the dimpled area of the shaft, then install the outboard eccentric weight (31P-VR-003B) marked "B". Line up roman numeral V with the line on the end of the shaft, then tighten the set screw opposite the ball spring plunger. Install another snap ring in the last groove on the shaft.
22. Install the eccentric shaft cover (31P-VR-002) included with the two 5/16" x 1/2" screws (H-V8004) and lock washers (H-1013) included.
23. Repeat this process for the remaining two units.

TURFLINE, INC.
WARRANTY REGISTRATION
1-800-443-8506

MACHINE: TRUE-SURFACE® Vibe V Vibratory Green Rolling System. (US PATENT NO 5,261,213)

MODEL: _____ SERIAL NUMBER: _____

DEALER PURCHASE INFORMATION

The undersigned dealer warrants that the above-described machine was carefully inspected, adjusted and prepared for delivery before delivery to the purchaser; that both the operation and maintenance of the machine were explained to the purchaser; that a copy of the Owner's Instructional Manual was given to the purchaser and his attention called to our warranty and any operating instructions included in the manual.

DEALER: _____ STATE: _____

SALES REP: _____ DATE: _____

COURSE INFORMATION:

The undersigned purchaser certifies that the operation and maintenance of the above described machine has been explained to him; acknowledges receipt of a copy of the Owner's Instructional Manual and our Warranty Policy printed on page 6.

Course Name: _____

Superintendent: _____

Address: _____

City: _____

State: _____ Zip/Postal Code: _____

Country: _____ Date: _____

Please fax or mail a copy to:

Turflin, Inc
Warranty Department
712 Jefferson Street, Suite A
Moscow Mills, MO 63362
Fax: 1-636-356-1218



*Thank You for Purchasing the
True-Surface® Vibe V Vibratory
Greens Rolling System!*



Manufactured by:

Turflin, Inc
712 Jefferson St. Suite A
Moscow Mills, MO 63362
1-800-443-8506
+1-636-356-1210

www.true-surface.com



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