



# PTO DRIVEN - GRASS COLLECTION SYSTEM

Model Year: 2018 - Newer

**RZ Series**  
48", 54" & 61" DECKS



**Model# 56120901, 56120902, 56120903 & 56120904**

## **OPERATOR'S MANUAL**

**ASSEMBLY • OPERATION • MAINTENANCE**

MANUAL PART#: Q0562

Initial Release - Sept 2021

# GRASS COLLECTION SYSTEM

## TABLE OF CONTENTS

SECTION	PAGE	SECTION	PAGE
Safety	2	Top Assy to Upper Frame Assy Installation	21
Safety Alert Symbols	3	Inlet Installation	21
Warranty	4	Hinge Kit Assy Installation	22
I INTRODUCTION AND DESCRIPTION	5	Even Bag Fill Adjustment	22
Introduction	5	Bag Assembly	23
Description	5	Bag Assembly Installation	23
II INSTALLATION FOR USE	6	Length of Hose Adjustment	24
Preparation Of Mower	6-7	Upper Hose Installation	24
Side Frame Bracket Installation	7	Lower Hose to Blower Cone Installation	24
Rear Frame Bracket Installation	8	Lower Hose to Boot Installation	24
Frame Connector Installation	9	Wire Harness Installation	25-28
Exhaust Diverter Installation	9	Impeller Blade Removal/Replacement	29-30
Lower Mount Tube / Heat Deflector Installation	10	Weight Kit Installation	31
Upper Frame Assembly Installation	10	Exploded Views & Parts List	32-45
Mount Plate Installation	11	Overall Parts List	46-49
Mount Plate Spacer Installation	11	Safety Decals	50
Top & Bottom Bracket / Mount Arm Installation	12	III OPERATING INSTRUCTIONS	51
Mount Arm / Gusset Installation	12	General Safety	51
Mount Arm / Tube Assembly Installation	13	Operation & Tips On Mowing	51
Drive Assembly Installation	14	Disengagement Of The PTO Assembly	51
Handle Extension Kit Installation	14	Unloading The Collection System	51
Belt Installation & Adjustment	15	IV MAINTENANCE	51
Drive Assembly Installation	16-17	Maintenance Checklist	51-52
Drive Assembly & Belt Installation	18	Lubrication	52
Blower Cone Installation	19	V PARTS AND SERVICE	52
Boot Kit Assembly Installation	20	Parts And Service Information	52
		Torque Specifications	53
		Troubleshooting	54
		Notes	55

## SAFETY

1. Read the operator's manual carefully and familiarize yourself with the proper use of your attachment. Do not allow anyone who is not acquainted with the Safety Instructions to use your attachment.
2. Know the controls and how to stop them quickly. READ THE OPERATOR'S MANUAL!
3. Do not allow children to operate the machine. Do not allow adults to operate it without proper instruction.
4. Be especially watchful of children and pets entering into the area while operating.
5. Keep your eyes and mind on your machine while mowing or operating your attachment. Don't let others distract you.
6. Do not attempt to operate your machine when not in the driver's seat.
7. Always shut off blades and engine when emptying the container.
8. Stop machine, shut off deck attachment, set parking brake, shut off engine and remove ignition key before removing clogs, removing or replacing hose, boot, blower cone, or performing any maintenance.
9. Mow across the face of slopes (not more than 10 degrees); never up and down the face.
10. It is recommended that the container be emptied when half full while operating on slopes. Start mowing on slopes when the container is empty.
11. Inspect your lawn and remove any foreign objects before mowing. Never deliberately run the mower across any foreign object.
12. Wear hearing protection.
13. Wear eye protection to prevent debris from getting into your eyes.

# SAFETY

**WARNING!** NEVER operate the mower unless the discharge guard and either the deflector assembly or the vacuum collector adapter are fastened securely in place.

**WARNING!** Do not work around the mower deck boot or the blower area until you are certain that the mower blades and the blower impeller have stopped rotating.

**WARNING!** To avoid serious injury, perform maintenance on the vacuum collector; **ONLY AFTER STOPPING THE MOWER'S ENGINE AND WAITING FOR ALL MOVING PARTS TO COME TO A COMPLETE STOP.** Set the parking brake. Always remove the ignition key before beginning maintenance.

**WARNING!** For your own personal safety, **ALWAYS mow ACROSS the face of slopes and NEVER UP and DOWN the face. NEVER attempt to mow excessively steep slopes, and use caution when turning on any slope.**

## Safety Alert Symbol



This Safety Alert Symbol means: **“ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!”**

This symbol is used to call attention to safety precautions that should be followed by the operator to avoid accidents. When you see this symbol, carefully read the message that follows and heed its advice. Failure to comply with safety precautions could result in death or serious bodily injury.

## Safety Signs

The signal words **DANGER**, **WARNING**, and **CAUTION** are used on the equipment safety signs. These words are intended to alert the viewer to the existence and the degree of hazard seriousness.



White letters on **RED**

This signal word indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.



Black letters on **ORANGE**

This signal word indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

It may also be used to alert against unsafe practices.



Black letters on **YELLOW**

This signal word indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury.

It may also be used to alert against unsafe practices.

# PECO LIMITED WARRANTY FOR NEW PRODUCTS

New PECO, Inc. extends the following warranties to the ORIGINAL PURCHASER of each New PECO, Inc. consumer product purchased from one of our Dealers or directly from New PECO, Inc., subject to the following limitations:

## **A. ITEMS COVERED UNDER WARRANTY**

1. **PRODUCT WARRANTY** – Any part or parts which are deemed defective in material or workmanship, as delivered to the original purchaser, will either be repaired or replaced, as New PECO, Inc. elects, without charge for parts or labor, if the defect appears within 12 months from the date of purchase of the product to the Original Purchaser.
2. **PARTS REPLACED DURING WARRANTY** – Any New PECO, Inc. part which is furnished in performance of this warranty and is defective in material or workmanship as delivered to the purchaser will be repaired or replaced, as New PECO, Inc. elects, before the expiration of the original warranty period.

## **B. WARRANTY DISTINCTIONS**

1. **RESIDENTIAL** - Products put to a personal use around a single household or residence are considered Residential. Products designated as “Residential” are warranted for 12 months from the date of purchase of the product, to the ORIGINAL PURCHASER with proof of purchase, when used for or in residential applications.
2. **COMMERCIAL** – Products put to any business use (agricultural, commercial or industrial) or used at multiple locations are considered Commercial. Products designated as “Commercial” are warranted for 12 months from the date of purchase of the product, to the ORIGINAL PURCHASER with proof of purchase, when used for or in commercial applications. Products designated as “Residential” are warranted for 90 days from the date of purchase of the product, to the ORIGINAL PURCHASER with proof of purchase, when used for or in Commercial applications.
3. **RENTAL** – Products used for Rental or Lease Purposes are warranted for 45 days from date of purchase of the product, to the ORIGINAL PURCHASER with proof of purchase, when used for or in a rental business.

## **C. ITEMS NOT COVERED BY NEW PECO WARRANTY**

1. **ENGINES & BATTERIES:** Engines and Batteries attached to New PECO, Inc. products are covered under their respective separate manufacturer warranties and those companies must be contacted directly to file a warranty claim. Briggs & Stratton: [https://www.briggsandstratton.com/na/en\\_us/support/warranty.html](https://www.briggsandstratton.com/na/en_us/support/warranty.html)
2. **UNAPPROVED ALTERATION OR MODIFICATION:** All obligations of New PECO, Inc. under this warranty shall be terminated if products are altered or modified in any way not approved by New PECO, Inc.
3. **ACCIDENTS & NORMAL MAINTENANCE:** This warranty covers ONLY manufacturers defective material and workmanship. It does not cover depreciation or damage caused by normal wear & tear, accident, improper maintenance, misuse or abuse of products. New PECO, Inc. products must be operated and maintained in accordance with the instructions furnished in the manuals. The cost of normal maintenance and normal replacement of service items such as belts, cutting blades, hoses, bags, etc., which are not defective shall be paid for by the purchaser.
4. **NO SERVICE CENTER WARRANTY:** The selling Service Center/Dealer makes no warranty on his own on any item warranted by New PECO, Inc. unless he delivers to purchaser a separate written warranty certificate specifically warranting the item. The Service Center or Dealer has no authority to make any representation or promise on behalf of New PECO, Inc. or to modify the terms of the original warranty in any way.
5. **NO REPRESENTATIONS ADDITIONAL WARRANTIES, DISCLAIMER:** Neither New PECO, Inc. nor any company affiliated with New PECO, Inc. makes any warranties, representations or promises as to the quality of performance of its products other than those set forth herein. Except as described above, New PECO, Inc. makes no other warranties **AND SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES OF FITNESS AND MERCHANTABILITY.**
6. **REMEDIED EXCLUSIVE:** The only remedies the purchaser has in connection with the breach or performance of any warranty on New PECO, Inc. consumer products are set forth above. In no event will New PECO, Inc. be liable for special incidental or consequential damages.

Warranty service is available through your local authorized service dealer or distributor. If you do not know the dealer or distributor in your area, search by your zip code on [www.lawnvac.com](http://www.lawnvac.com) or contact our Sales Department at New PECO, Inc. 800-438-5823 or email [Sales@lawnvac.com](mailto:Sales@lawnvac.com).

# Section I - INTRODUCTION AND DESCRIPTION

## Introduction

We are pleased to have you as a PECO customer. Your collection system has been designed to give you a low maintenance, simple, and effective way to collect the grass clippings from your mower. This manual is provided to give you the necessary instructions to properly mount, operate and maintain the collection system on your mower. Please read this manual thoroughly. Understand what each control is for and how to use it. Observe all safety decal precautions on the machine and noted throughout the manual.

**NOTE:** All references made to right, left, front, rear, top or bottom are as viewed from the normal operator's position on the mower.

## Description

The grass collection system is designed for turf maintenance where there is a need to collect the grass clippings as the mower cuts the turf. It is also used for picking up leaves in pre-season and post-season clean-up. The blower, mounted on the right side of the unit, uses a belt and gearbox system from the engine PTO shaft. Drive train protection comes through belt slippage. The blower draws grass clippings from the discharge area of the cutting deck back to the collection bags at the rear portion of the mower frame. The operator can engage the blower with a toggle switch (PTO-X Model) or by throwing the engagement lever (PTO-R Model) mounted on the right side of the operator. Once the collection bags are full with clippings, it can be easily released for dumping.



**Note:** There are different installation instructions between the drive types. Installations for specific units will be specified under the current section heading or where needed as:

PTO-R

or

PTO-X

The PTO-R & PTO-X will also share similar installation instructions. These instructions will not have any specification.

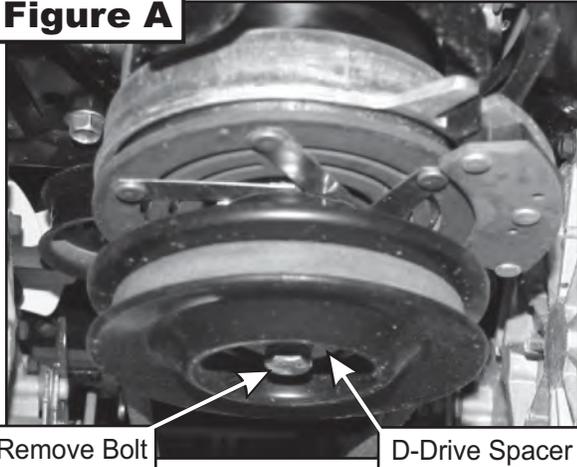
## Section II - INSTALLATION FOR USE

### Preparation Of Mower

**NOTE:** The mower deck PTO belt must be removed from the electric clutch before continuing with the installation. Refer to your mower's owner's manual for instructions on PTO belt removal.

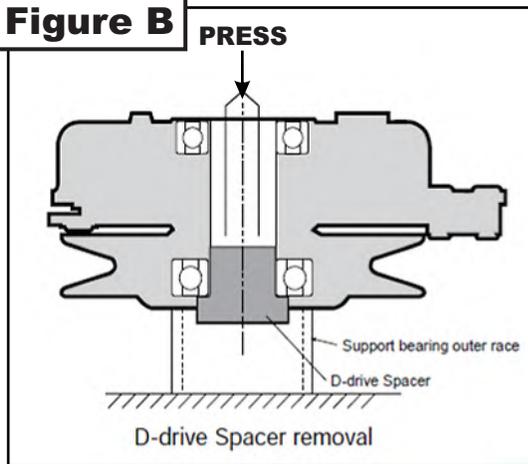
From the underside of the engine, disconnect the wiring harness attached to the electric clutch. Remove the bolt and electric clutch from the mower. Refer to Figure A.

**Figure A**

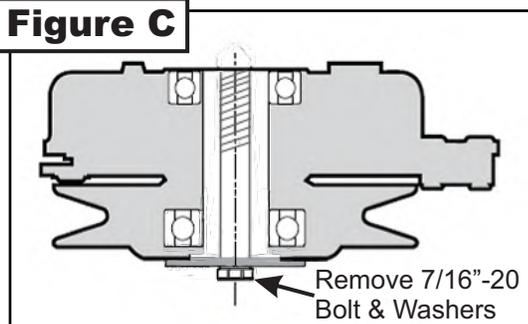


Upon removal of clutch determine if your mower is equipped with a D-drive spacer. If so, then proceed to Figure B. If your mower is equipped with bolt, fender and lock washer without D-drive spacer proceed to Figure C. Remove the D-drive spacer using an arbor press or equivalent. On removal, adjacent bearing OUTER race must be supported or bearing damage may occur. Refer to Figure B.

**Figure B**

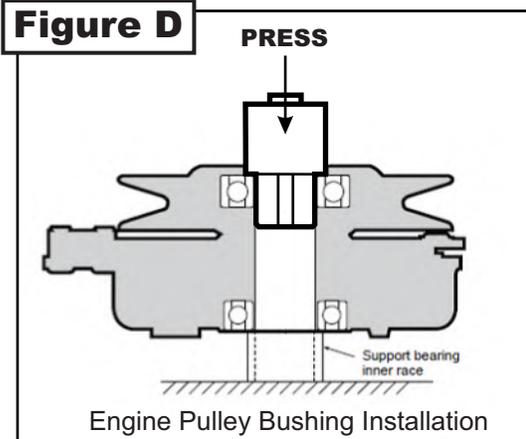


**Figure C**



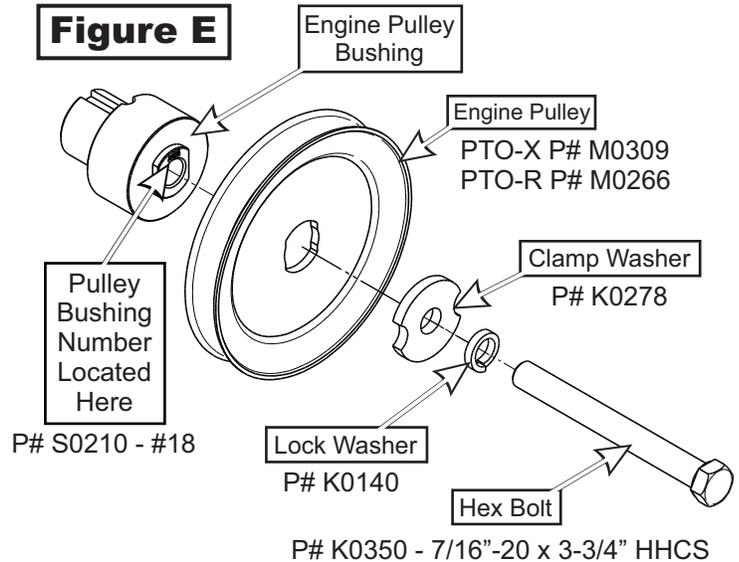
The engine pulley assembly must be installed using an arbor press or equivalent. During installation, opposite bearing inner race must be supported or bearing damage may occur. Refer to Figure D.

**Figure D**



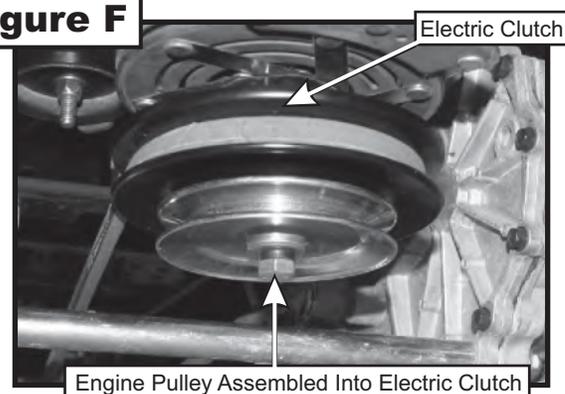
Once the Engine Pulley Bushing is installed, reattach the clutch assembly & deck PTO belt to the mower and then review Figure E.

**Figure E**



To assemble and fasten the Engine Pulley, align the Engine Pulley Bushing to the mower's clutch pulley and fasten using (1) Clamp Washer, (1) Lock Washer, and (1) Hex Bolt. Torque the bolt to 55 ft./lbs. The added pulley will power the collection system and should resemble Figure F when installed.

**Figure F**



## Preparation of Mower (cont.)

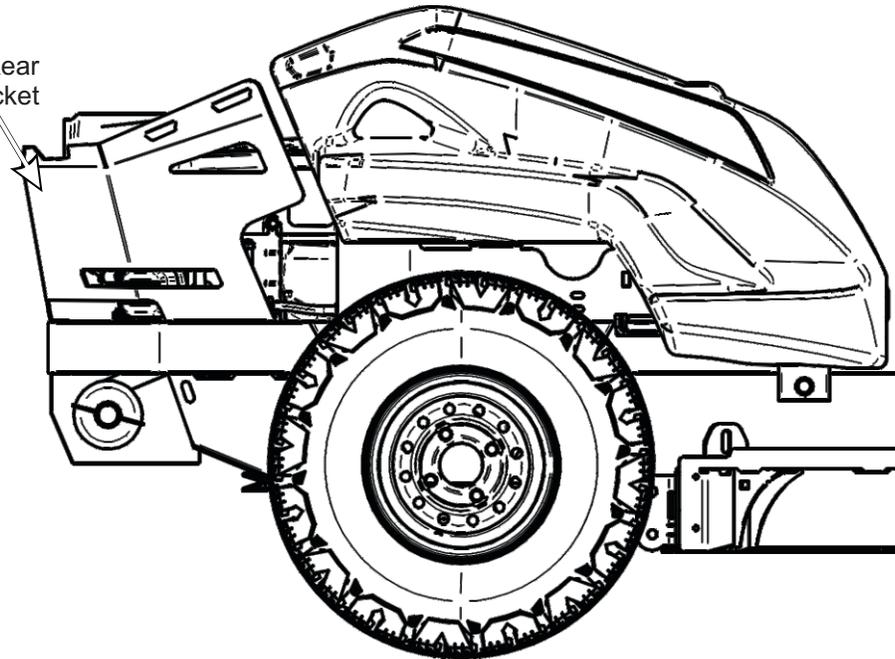
Before the installation of your grass collection unit, remove the mower's rear bumper bracket for the installation of your Collection Unit.

Note: Some parts and part features have been hidden from view for visual clarity.

**Figure G**

Right Side View

Remove Rear  
Bumper Bracket



## Side Frame Bracket Installation

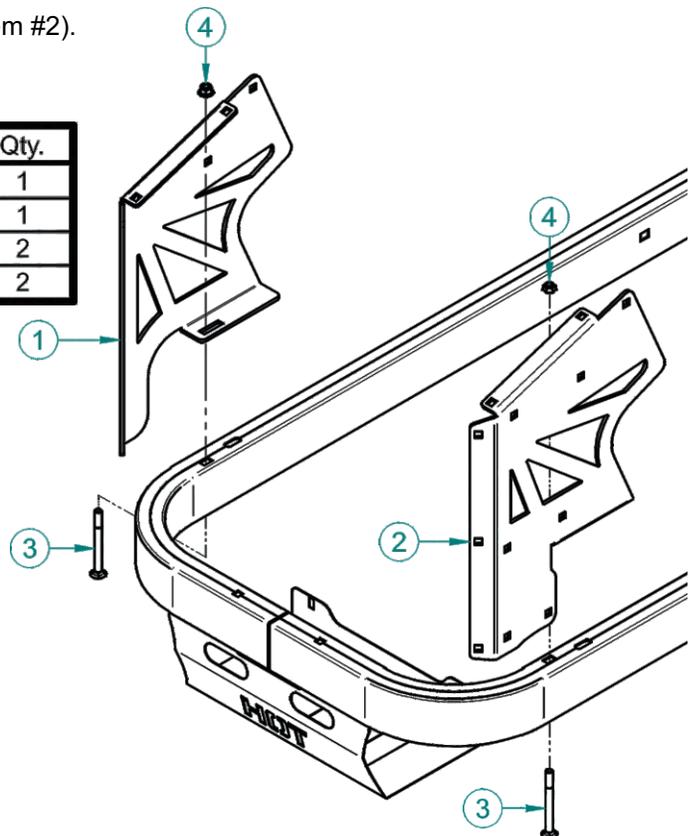
Position the Left Frame Bracket (Item #1) onto the top left side of the mower's rear frame bumper aligning the bottom mount hole to the one on top of the bumper. Refer to Figure A below. Next, Secure the Left Frame Bracket by using (1) 3/8"-16 x 4" Carriage Bolt (Item #3) and (1) 3/8"-16 Ny-Flange Lock Nut (Item #4).

Repeat the same procedure for the Right Frame Bracket (Item #2).

Figure A

Item #	Part #	Desc.	Qty.
1	B2028	Lt. Frame Brkt.	1
2	B2029	Rt. Frame Brkt.	1
3	K1495	3/8"-16 x 4" Carriage Bolt / GR5	2
4	K2038	Ny-Flange Lock Nut 3/8"-16	2

Note: Some parts and part features have been hidden from view for visual clarity.

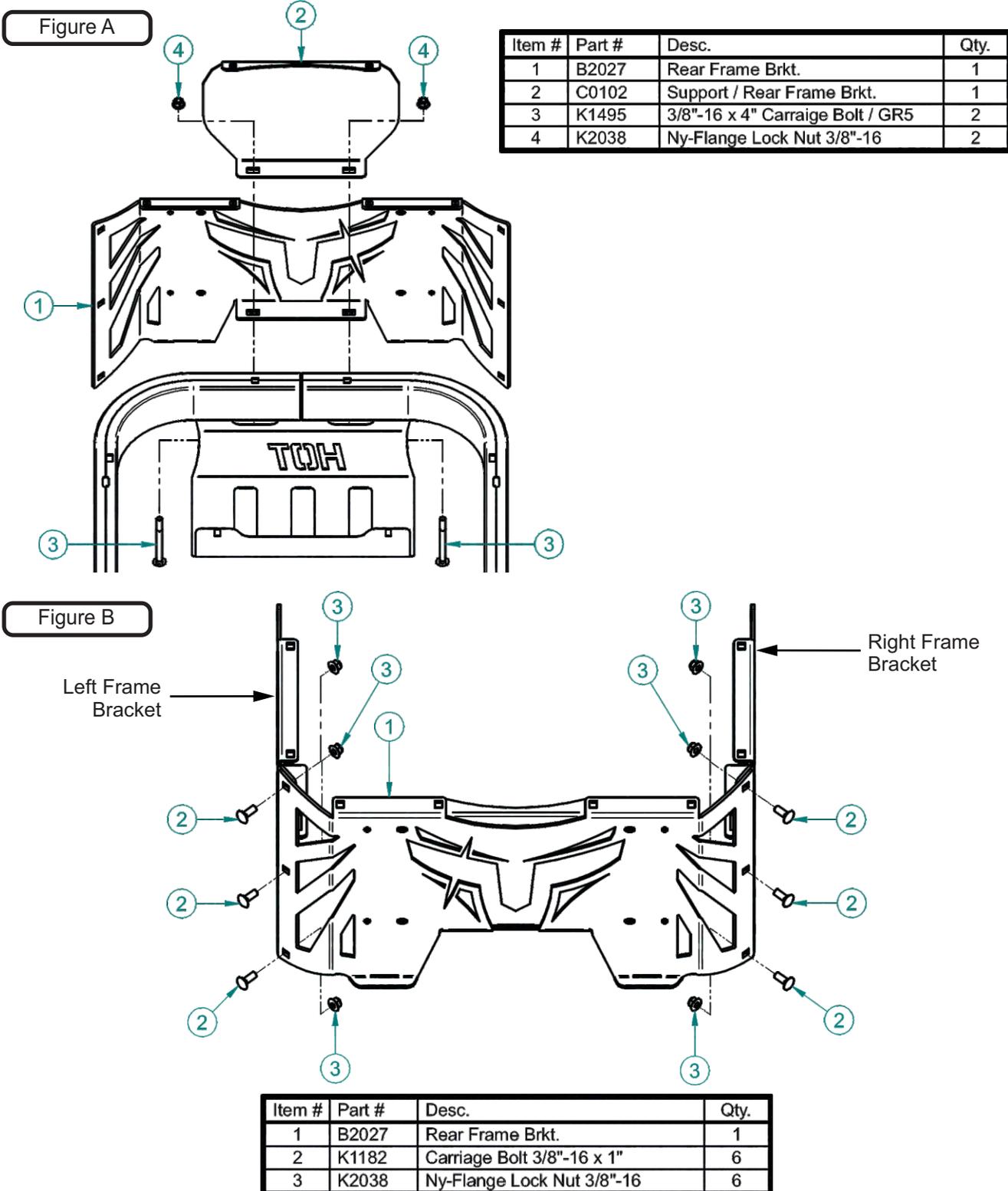


## Rear Frame Bracket Installation

Position the Rear Frame Bracket (Item #1) and the Support / Rear Frame Bracket (Item #2) over the mower's bumper and align the bottom (2) bolt holes over the (2) holes of the mower's bumper. Refer to Figure A. Next, secure the Rear Frame Bracket in place by using (2) 3/8"-16 x 4" Carriage Bolts (Item #3) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4).

Once the Rear Frame Bracket (Item #1) is secured the Rear Frame Bracket should be aligned with both the Left & Right Frame Bracket, refer to Figure B. Secure the Rear Frame Bracket to both of these Side Frame Brackets by using (3) 3/8"-16 x 1" Carriage Bolts (Item #2) and (3) 3/8"-16 Ny-Flange Lock Nuts (Item #3) PER side. Refer to Figure B.

**Note:** Some parts and part features have been hidden from view for visual clarity.



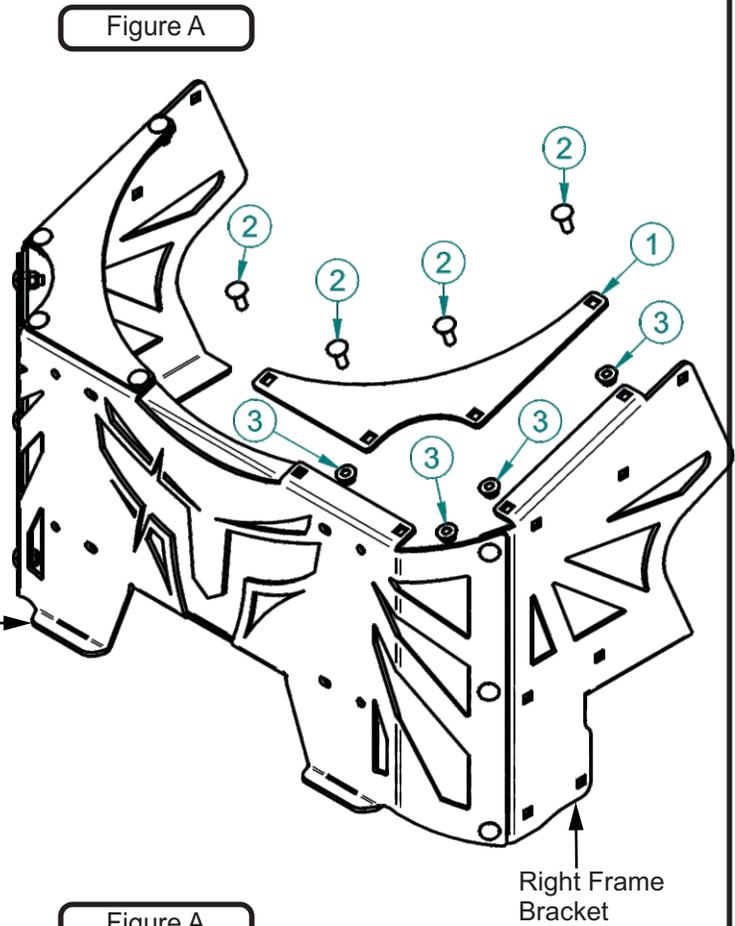
## Frame Connector Installation

To install the Frame Connector (Item #1), position the Frame Connector over the Rear Frame Bracket and Right Frame Bracket aligning the bolt holes to those of the (2) Frame Brackets. Secure the Frame Connector by using (4) 3/8"-16 x 1" Carriage Bolt (Item #2) and (4) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Refer to Figure A.

**Note:** Some parts and part features have been hidden from view for visual clarity.

Item #	Part #	Desc.	Qty.
1	B2034	Frame Connector	2
2	K1182	Carriage Bolt 3/8"-16 x 1"	8
3	K2038	Ny-Flange Lock Nut 3/8"-16	8

Rear Frame Bracket



Right Frame Bracket

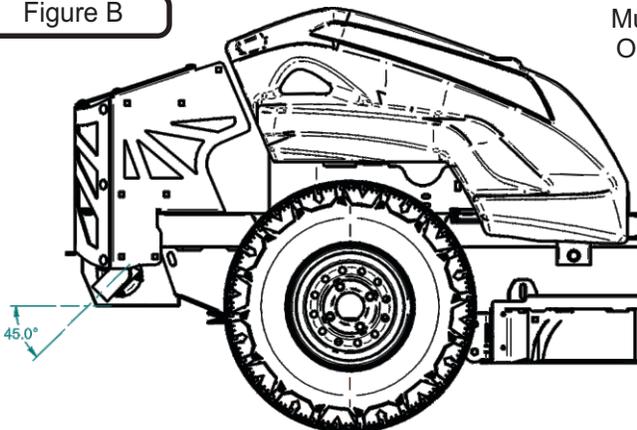
## Exhaust Diverter Installation

Depending on your mower's engine option, the Mower's Muffler Outlet can be 1-3/8" or 1-1/2" outside diameter. Using a tape measure or caliper, and only when the muffler is not hot, determine the correct size. Once determined, select the proper Exhaust Diverter (Item #1) and Exhaust Clamp (Item #2) combination from the chart below. Install by sliding the corresponding Exhaust Clamp over the Exhaust Diverter and then both over the Mower's Muffler Outlet (Figure A) until seated and positioned at 45 degrees as shown in Figure B. Secure the Exhaust Diverter by tightening the Exhaust Clamp U-Bolt. Check that the Exhaust Diverter is not loose before proceeding.

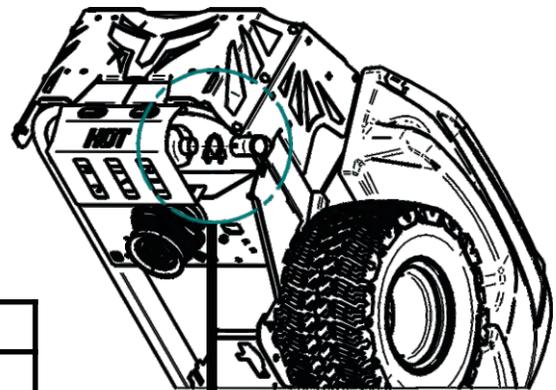
**Note:** Some parts and part features have been hidden from view for visual clarity.

Muffler Outlet Size	Exhaust Diverter	Exhaust Clamp
1-3/8"	J0296	X1046
1-1/2"	J0296	X1064

Figure B



Mower's Muffler Outlet



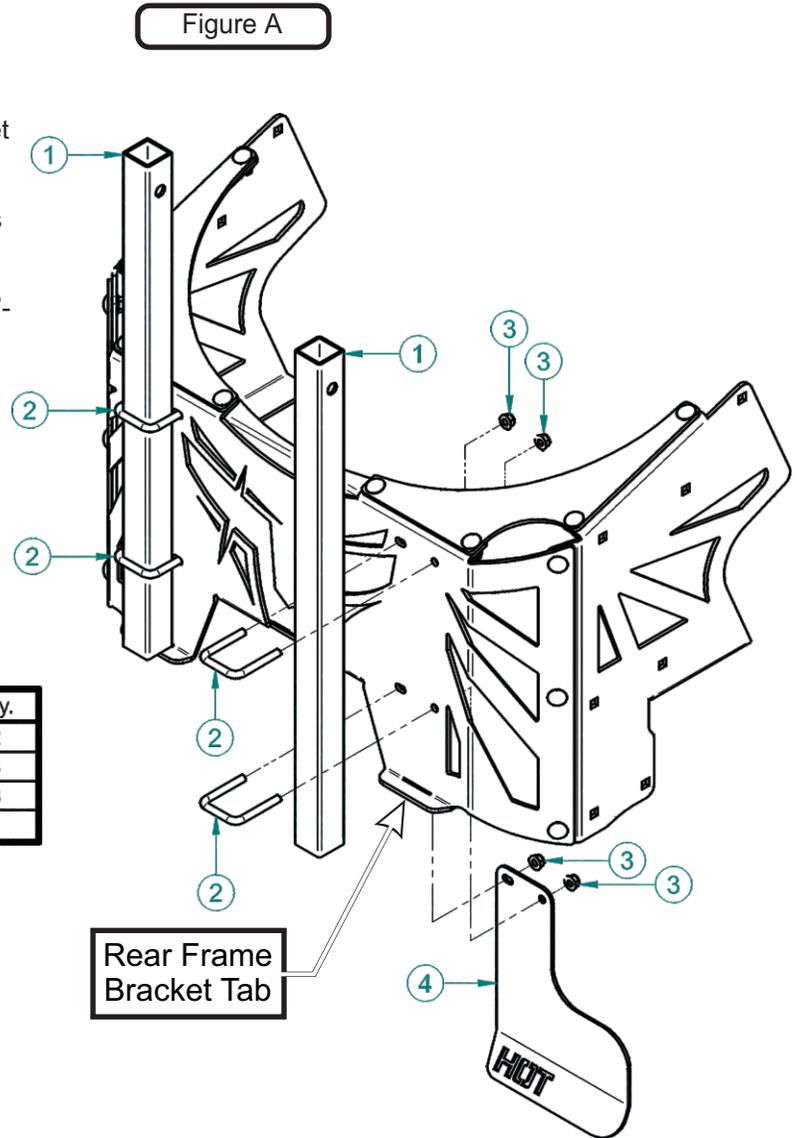
#1 Exhaust Diverter

#2 Exhaust Clamp

## Lower Mount Tube / Heat Deflector Installation

Position each Lower Mount Tube (Item #1) as shown allowing it to rest on the Rear Frame Bracket tab. Secure the left Lower Mount Tube to the Rear Frame Bracket using (2) 5/16"-18 x 2" x 1-3/4" U-Bolt (Item #2) and (4) 5/16"-18 Ny-Flange Locknuts (Item #3). Secure the right Lower Mount Tube and the Heat Deflector (Item #4) as shown using (2) 5/16"-18 x 2" x 1-3/4" U-Bolt (Item #2) and (4) 5/16"-18 Ny-Flange Locknuts (Item #3). Refer to Figure A.

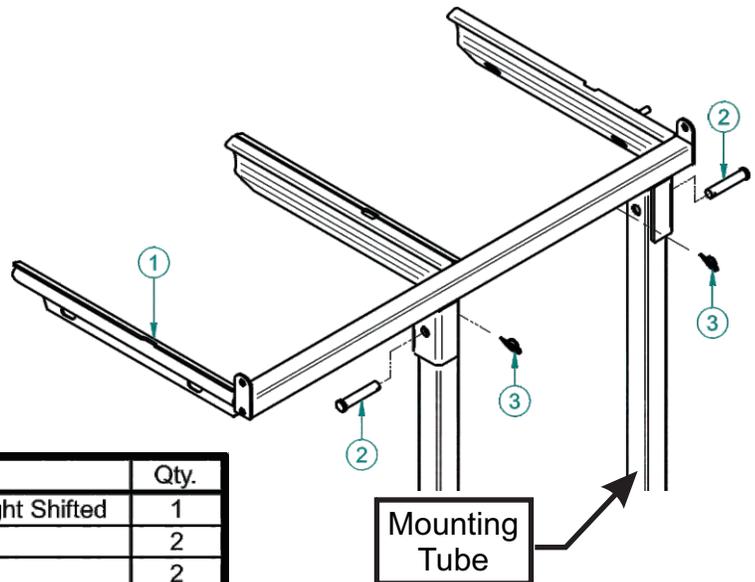
Item #	Part #	Desc.	Qty.
1	B0752	Lower Mount Tube / 25"	2
2	K1098	U-Bolt / 5/16"-18 x 2-3/8" x 1-3/4"	4
3	K2516	Ny-Flange Lock Nut 5/16"-18	8
4	C0104	Heat Deflector	1



## Upper Frame Assembly Installation

Position the Upper Frame Assembly (Item #1) above the Lower Mount Tubes as shown in Figure A. Slide the Upper Frame Assembly down onto the Lower Mount Tubes and secure using (1) Clevis Pins (Item #2) and (1) Rue Ring Cotter Pin (Item #3) PER Tube. Refer to Figure B.

Figure A



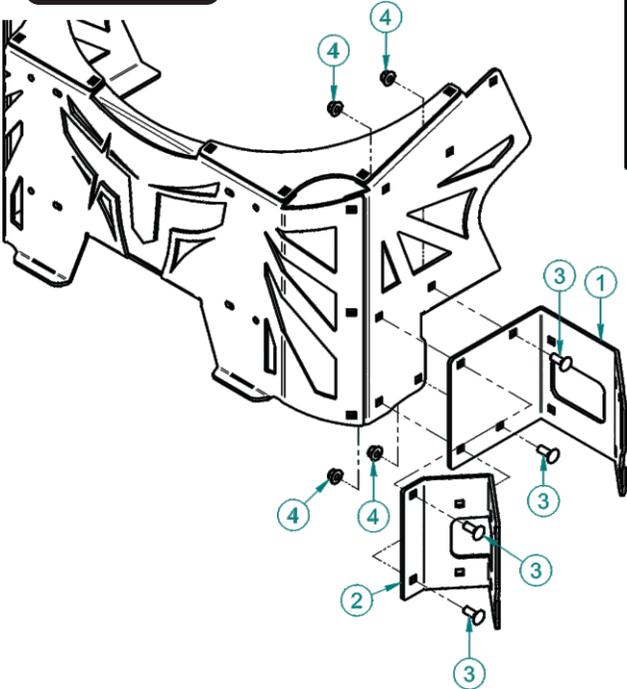
Item #	Part #	Desc.	Qty.
1	A2301	Upper Frame Assy / P2B+ Gen. 2 / Right Shifted	1
2	K0133	Clevis Pin 1/2" x 2-1/2"	2
3	K1437	Rue Ring Cotter Pin	2

### Mount Plate Installation

Install the Top Bracket / Mount Arm (Item #2) and Bottom Bracket / Mount Arm (Item #3) by positioning and aligning their rear bolt holes to those on the Right Frame Bracket (Item #1), refer to Figure A. Secure the Top Bracket & Bottom Bracket by using (2) 3/8"-16 x 1" Carriage Bolts (Item #4) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #5) PER Bracket. Refer to Figure A.

**Note:** Leave the Hardware relatively loose until the end.

Figure A



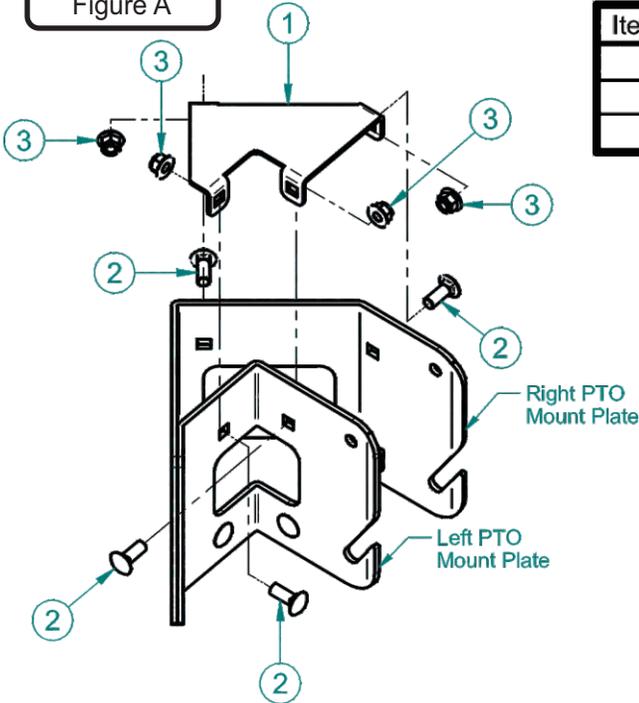
Item #	Part #	Desc.	Qty.
1	B2054	Right PTO Mount Plate	1
2	B2055	Left PTO Mount Plate	1
3	K1182	Carriage Bolt 3/8"-16 x 1"	4
4	K2038	Ny-Flange Lock Nut 3/8"-16	4

### Mount Plate Spacer Installation

Align the Mount Arm / Gusset (Item #1) to the mount holes of the Top Bracket (Item #2) and Bottom Bracket (Item #3). Secure the Mount Arm / Gusset relatively loose by using (5) 3/8"-16 x 1" Carriage Bolts (Item #4) and (5) 3/8"-16 Ny-Flange Lock Nuts (Item #5). Refer to Figure A.

**Note:** Some parts and part features have been hidden from view for visual clarity.

Figure A



Item #	Part #	Desc.	Qty.
1	B2057	PTO Mount Plate Spacer	2
2	K1182	Carriage Bolt 3/8"-16 x 1"	4
3	K2038	Ny-Flange Lock Nut 3/8"-16	4

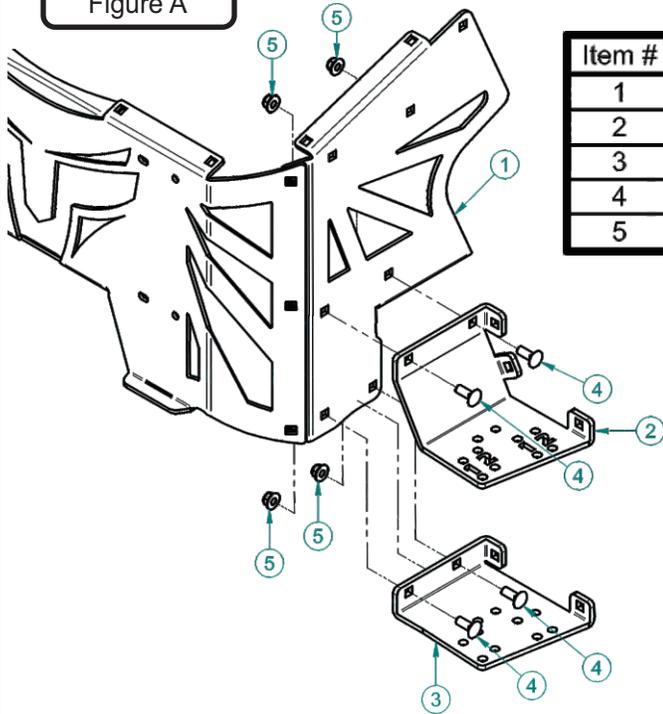
## Top & Bottom Bracket / Mount Arm Installation

PTO-X

Install the Top Bracket / Mount Arm (Item #2) and Bottom Bracket / Mount Arm (Item #3) by positioning and aligning their rear bolt holes to those on the Right Frame Bracket (Item #1), refer to Figure A. Secure the Top Bracket & Bottom Bracket by using (2) 3/8"-16 x 1" Carriage Bolts (Item #4) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #5) PER Bracket. Refer to Figure A.

**Note:** Leave the Hardware relatively loose until the end.

Figure A



Item #	Part #	Desc.	Qty.
1	B2029	Rt. Frame Brkt.	1
2	B2032	Mount Arm / Top Brkt.	1
3	B2033	Mount Arm / Bottom Brkt.	1
4	K1182	Carriage Bolt 3/8"-16 x 1"	4
5	K2038	Ny-Flange Lock Nut 3/8"-16	4

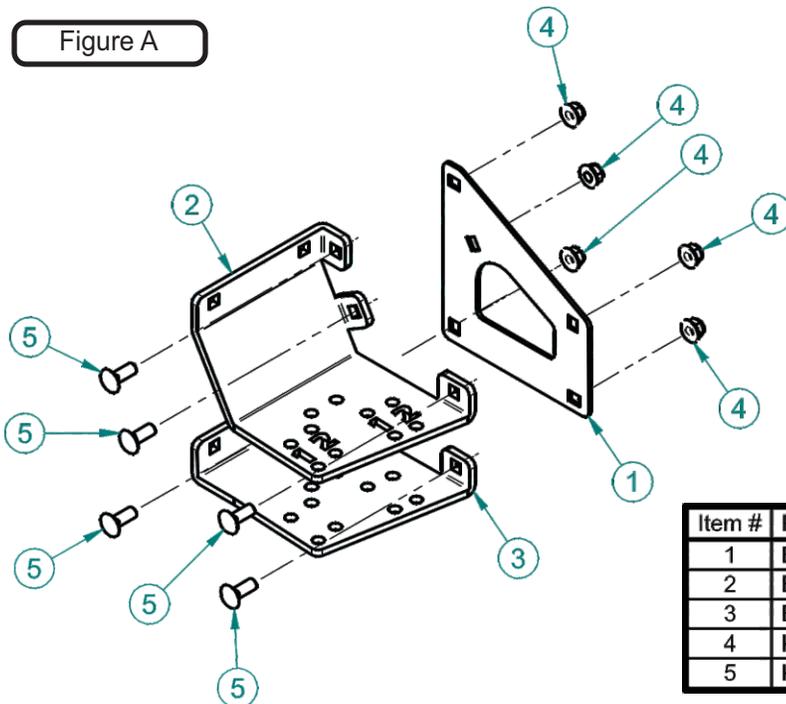
## Mount Arm / Gusset Installation

PTO-X

Align the Mount Arm / Gusset (Item #1) to the mount holes of the Top Bracket (Item #2) and Bottom Bracket (Item #3). Secure the Mount Arm / Gusset relatively loose by using (5) 3/8"-16 x 1" Carriage Bolts (Item #4) and (5) 3/8"-16 Ny-Flange Lock Nuts (Item #5). Refer to Figure A.

**Note:** Some parts and part features have been hidden from view for visual clarity.

Figure A



Item #	Part #	Desc.	Qty.
1	B2037	Mount Arm / Gusset	1
2	B2032	Mount Arm / Top Brkt.	1
3	B2033	Mount Arm / Bottom Brkt.	1
4	K2038	Ny-Flange Lock Nut 3/8"-16	5
5	K1182	Carriage Bolt 3/8"-16 x 1"	5

## Mount Arm / Tube Assembly Installation

Figure B

The set of bolt holes designated with a '1' are used to position and secure the Mount Arm / Tube Assembly (Item #1) for the RZ Mower models. Refer to Figure B.

Before installing the Mount Arm / Tube Assembly (Item #1), install a Stop Bolt by placing (1) 3/8"-16 x 3-1/2" HHCS (Item #2) through both the Top Bracket and Bottom Bracket Mount Arm. Then secure the bolt by using (1) 3/8"-16 Ny-Flange Lock Nut (Item #3). Refer to Figure A and Figure B.

Place the Mount Arm / Tube Assembly (Item #1) between the Top Bracket and Bottom Bracket. Make sure the back of the Mount Arm / Tube is resting against the stop bolt previously installed. Position the Mount Arm / Tube Assembly between the (4) bolt holes and position (4) 3/8"-16 x 3-1/2" HHCS (Item #2) through both Brackets to better position the Mount Arm / Tube Assembly.

Secure the (4) 3/8"-16 x 3-1/2" HHCS by using (4) 3/8"-16 Ny-flange Lock Nuts (Item #3). Refer to Figure A.

**Note:** Some parts and part features have been hidden from view for visual clarity.

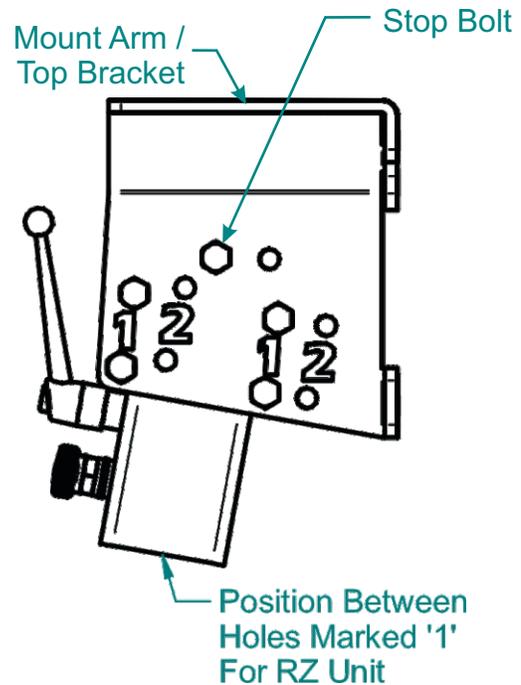
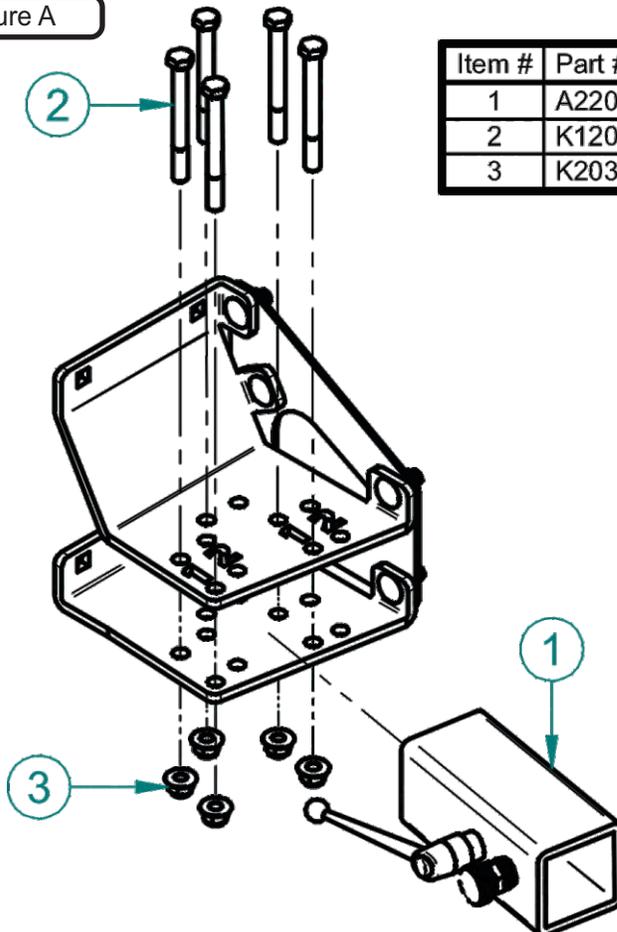


Figure A



Item #	Part #	Desc.	Qty.
1	A2207	Receiver Tube Assy. / Mount Arm	1
2	K1200	3/8"-16 x 3.5" HHCS G5	5
3	K2038	Ny-Flange Lock Nut 3/8"-16	5

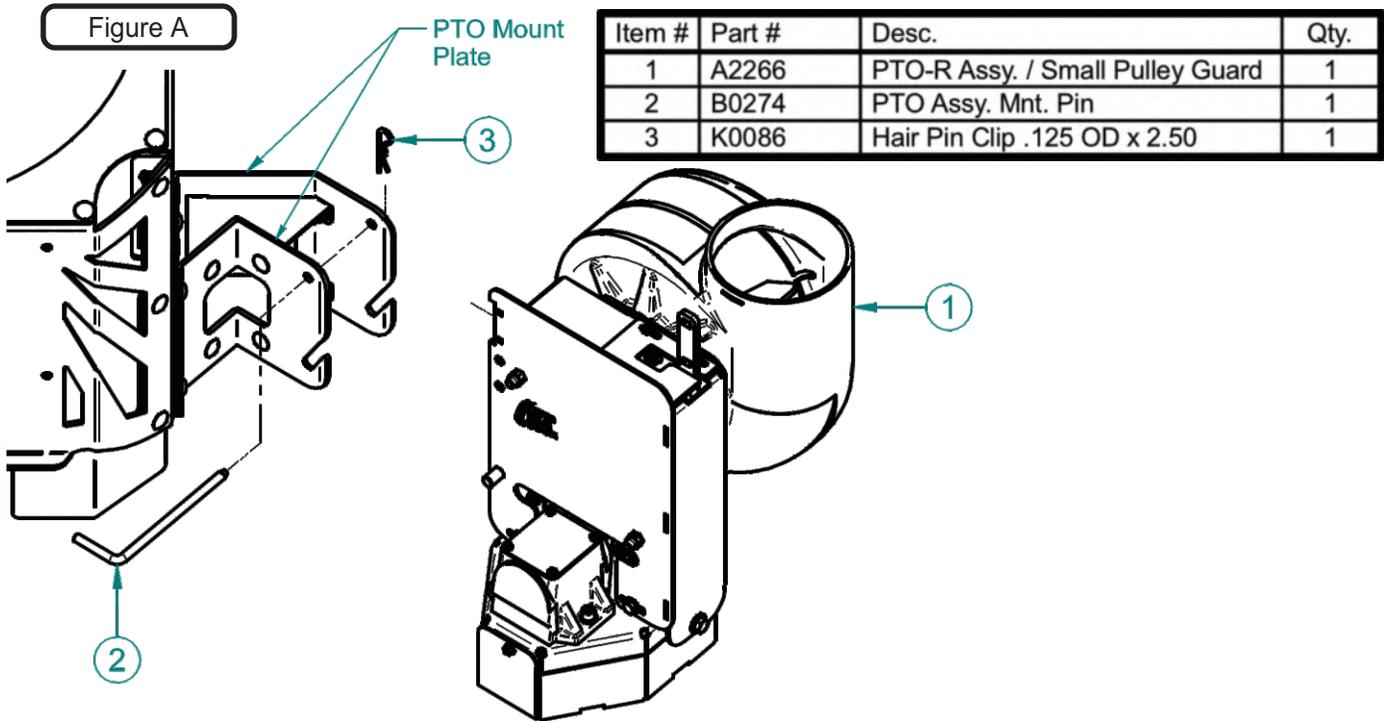
**NOTE:** After Installing The Mount Arm / Tube Assembly tighten ALL hardware including the hardware that were left relatively loose at the beginning of the installation.

## Drive Assembly Installation

PTO-R

Locate the PTO mounting slots on both the Left & Right PTO Mount Plates. Insert the pivot rod of the PTO-R Assembly (Item #1) into the mounting slots and align the PTO Mount hole of the PTO-R Assembly to the (2) mount holes of the PTO Mount Plates. Secure the PTO-R Assembly by using (1) PTO Mount Pin (Item #2) and (1) Hair Pin Clip (Item #3). Refer to Figure A below.

Note: Some parts and part features have been hidden from view for visual clarity.

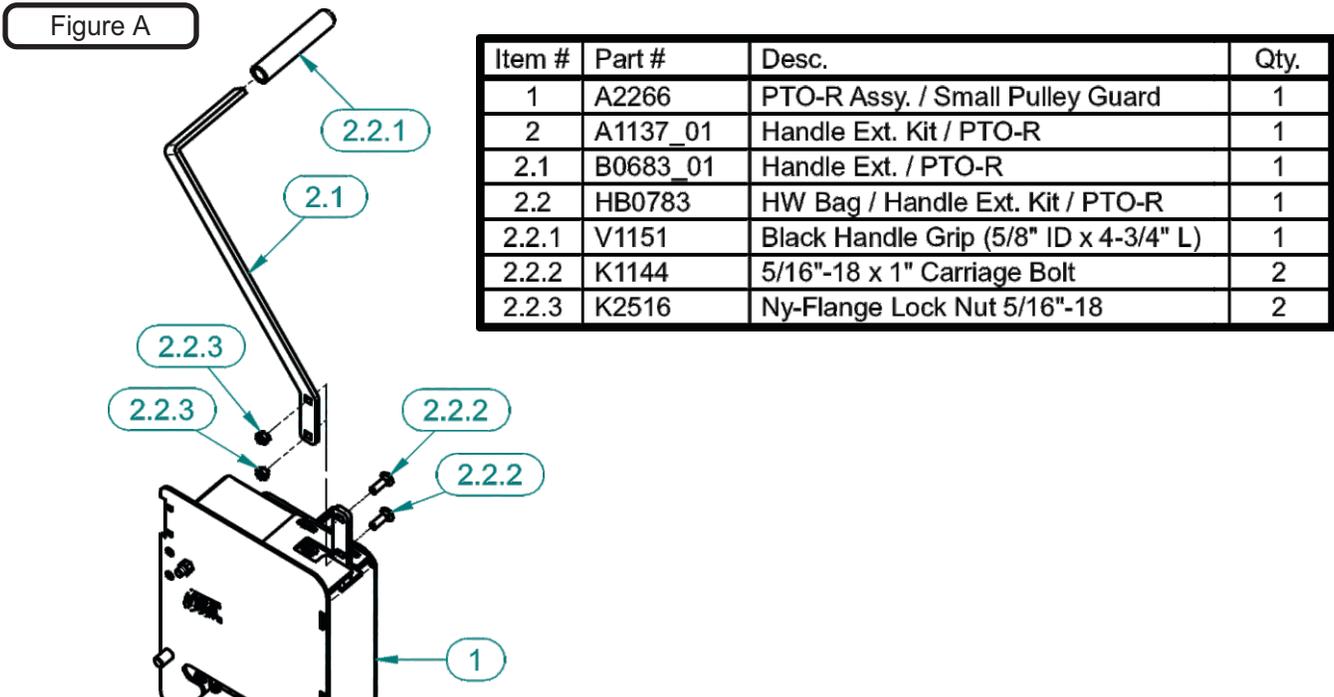


## Handle Extension Kit Installation

PTO-R

Align the (2) bolt holes of the Handle Extension (Item #2.1) to those on the base handle of the PTO-R Assembly (Item #1). Next, secure the Handle Extension by using (2) 5/16"-18 x 1" Carriage Bolts (Item #2.2.2) and (2) 5/16"-18 Ny-Flange Lock Nuts (Item #2.2.3). Finally, install the Handle Grip (Item #2.2.1) onto the top end of the Handle Extension. Refer to the Figure below.

Note: Some parts and part features have been hidden from view for visual clarity.

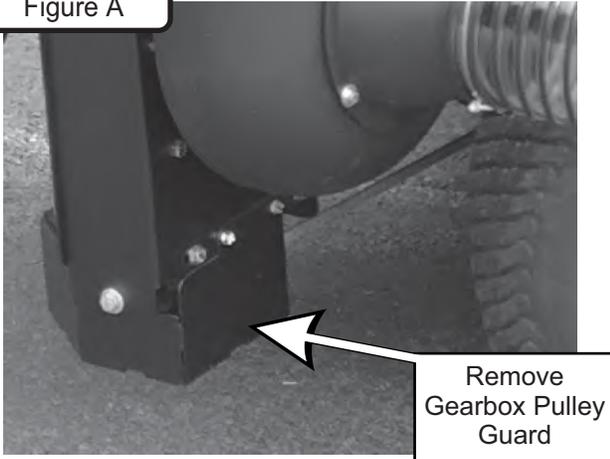


## PTO-R Belt Installation and Adjustment

PTO-R

Remove (3) 1/4"-20 x 1/2" HHSTS P#(K0353) from the gearbox pulley guard located on the bottom of the PTO assembly (Refer to Figure A).

Figure A



Loosen the (4) bolts P#(K1153), (2) on each side, that secure the gear box assembly to the PTO assembly P#(A2266) (Figure B and C).

Figure B

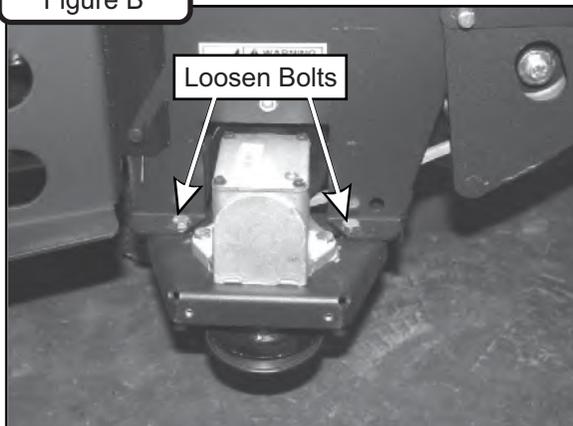
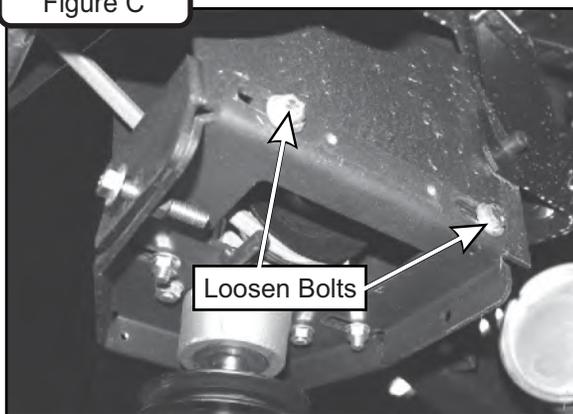
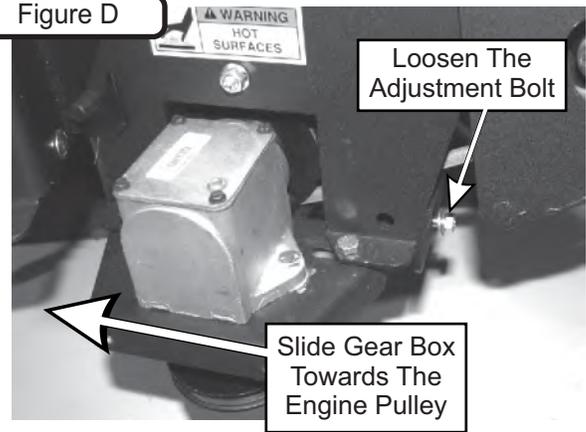


Figure C



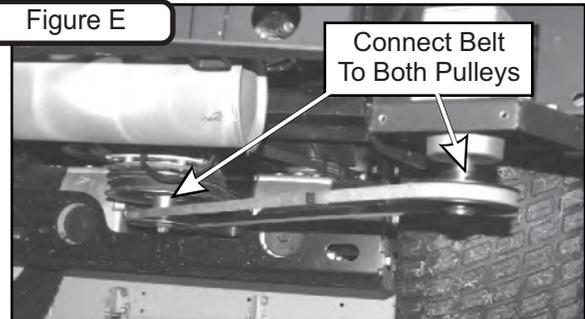
Loosen the adjustment bolt P#(K0348) until the gear box assembly is at its far left adjustment (the gear box is moved toward the mower's engine pulley). Refer to Figure D.

Figure D



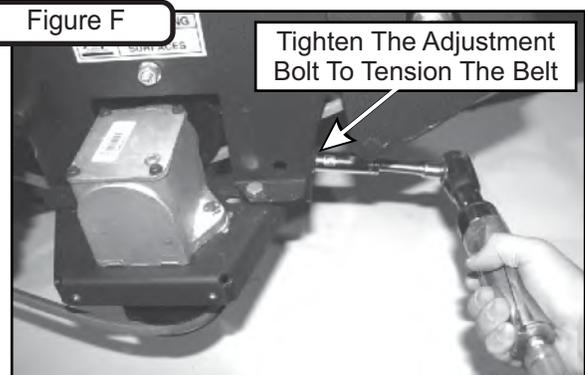
Connect the belt A61K P#(M0261) from the engine pulley to the lower gear box pulley (Figure E).

Figure E



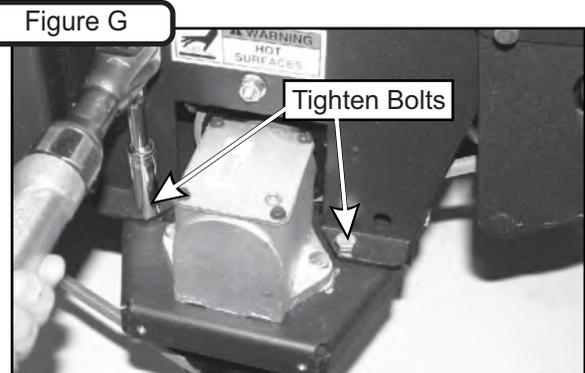
To tension the drive belt, turn the adjustment bolt clockwise (Figure F) until there is 1" of deflection, with 10-11 lbs. of pressure, at the center of the belt between the engine pulley and the gear box pulley.

Figure F



Once the correct tension of the belt is achieved, tighten the (4) bolts that secure the gear box assembly. Refer to Figure G. Replace the belt guard.

Figure G

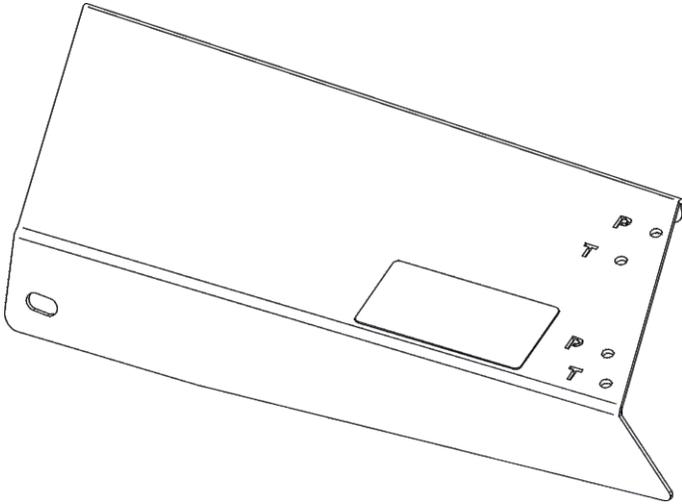


# PTO Drive Assembly

PTO-X

Once the Mount Arm Assembly is installed and secured to the mower, assemble the Drive Assembly P#(A2061\_02), Belt Guard Assembly P#(A2069\_02) & Idler Mount Assembly P#(A2067\_02).

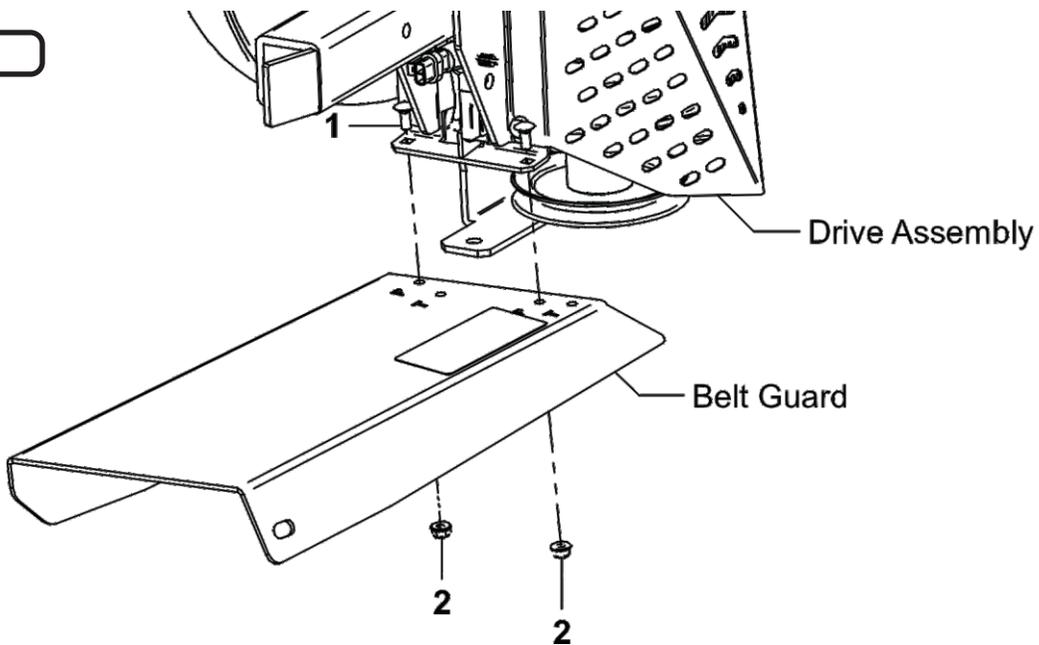
First, attach the Belt Guard Assembly P#(A2069\_02) to the Drive Assembly P#(A2061\_02) using (2) 1/4"-20 x 5/8" Carriage Bolts P#(K1010) and (2) 1/4"-20 Ny-Flange Lock Nuts P#(K2014). Refer to Figure A. **Leave Bolts Loose.**



### BELT GUARD ASSY. HOLES

Notice Marked Holes Below;  
For This Installation, Use Holes  
Marked With The Letter 'P'

Figure A



Item #	Part #	Desc.	Qty.
1	K1010	1/4"-20 x 5/8" Carriage Bolt	2
2	K2014	1/4"-20 Ny-Flange Lock Nut	2

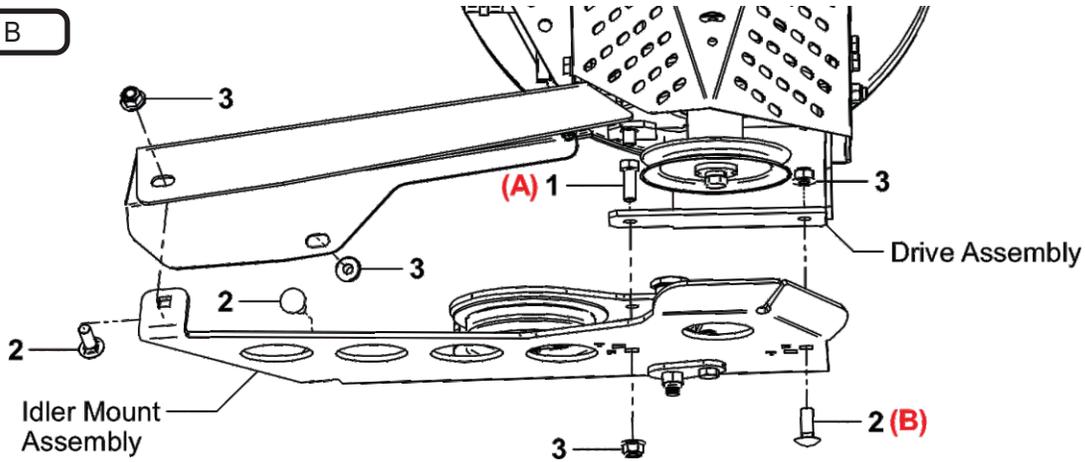
# PTO Drive Assembly (Continued)

Attach the Idler Mount Assembly P#(A2067\_02) to the Drive Assembly using (1) 3/8"-16 x 1" HHCS (A) (Item #1), (1) 3/8"-16 x 1" Carriage Bolt (B) (Item #2) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Refer to Figure B.

Leave Bolts Loose (Note: Orientation of bolts A & B.)

Next, secure the Idler Mount Assembly P#(A2067\_02) to the Belt Guard Assembly P#(A2069\_02) using (2) 3/8"-16 x 1" Carriage Bolts (Item #2) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Refer to Figures C & D. Tighten All Bolts.

Figure B



Item #	Part #	Desc.	Qty.
1	K1191	HHCS 3/8"-16 x 1" GR5	1
2	K1182	Carriage Bolt 3/8"-16 x 1"	3
3	K2038	Ny-Flange Lock Nut 3/8"-16	4

Figure C

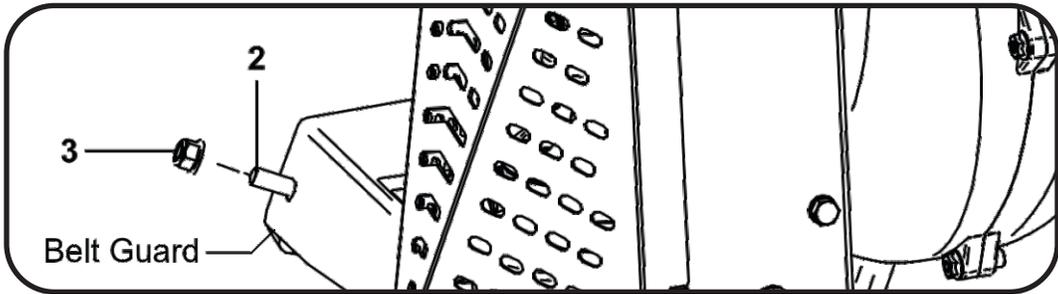
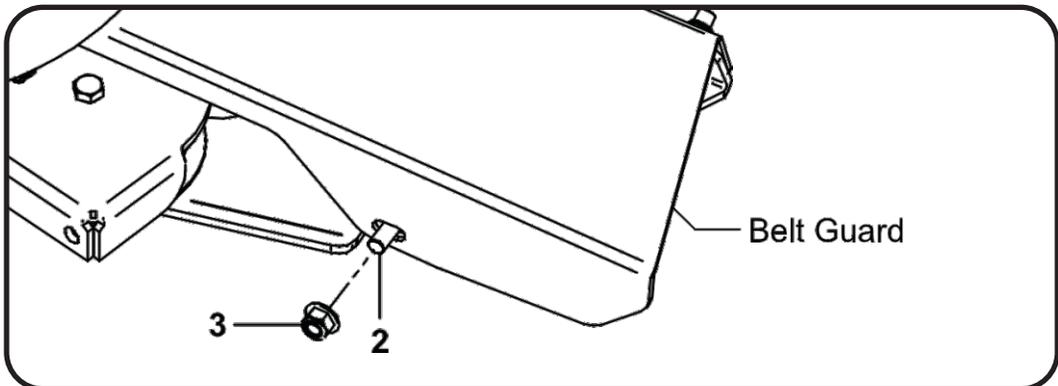


Figure D

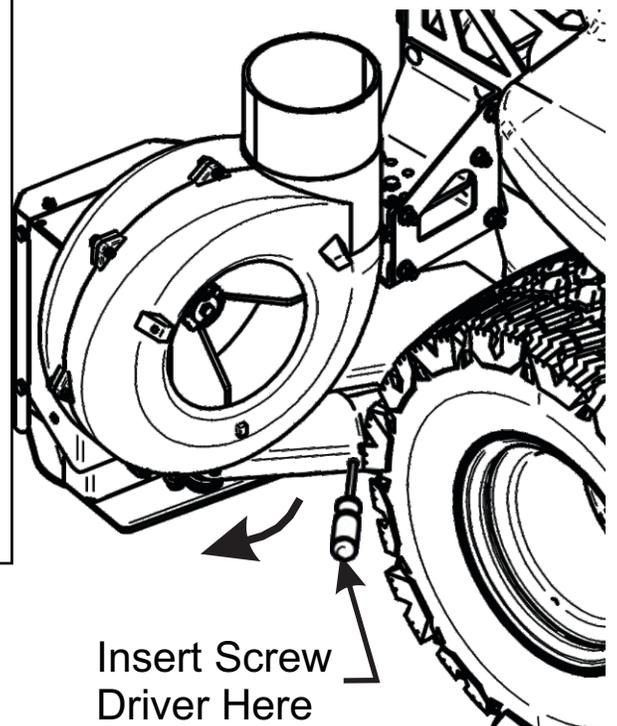
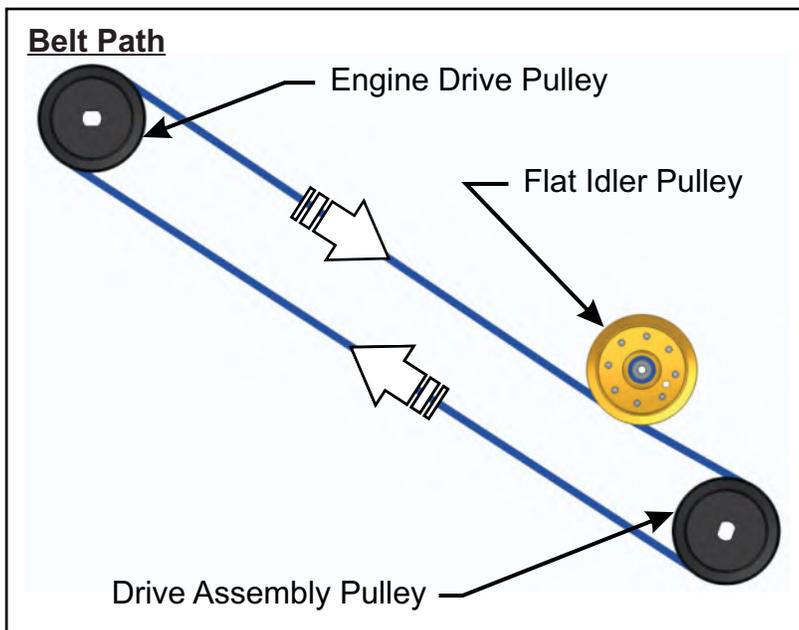
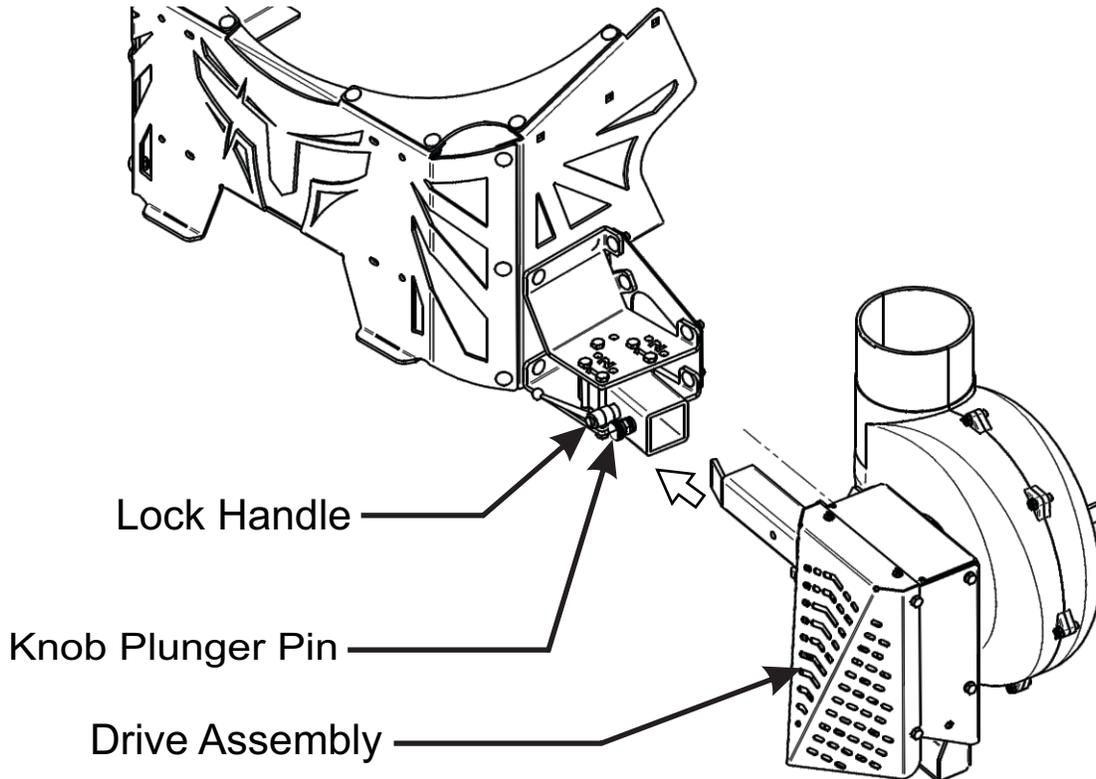


## Drive Assembly and Belt Installation

(Note: It is recommended that someone assist during this step.)

Insert the Drive Assembly into the receiver tube on the Mount Arm Assembly until the Knob Plunger Pin engages. Once in place, turn Lock Handle clockwise until tight. Next, feed the AK78 Belt P#(M0319) between the Belt Guard and the Idler Mount Assembly. Place belt around the Engine Drive Pulley on the underside of the mower. While one person inserts a screw driver (or similar tool) into the Idler Mount Assembly and rotates lever arm clockwise, enough to relieve all tension from belt, place belt around the Drive Assembly Pulley. Once the belt is in position, carefully release the tension to tighten belt.

Refer to the images below.

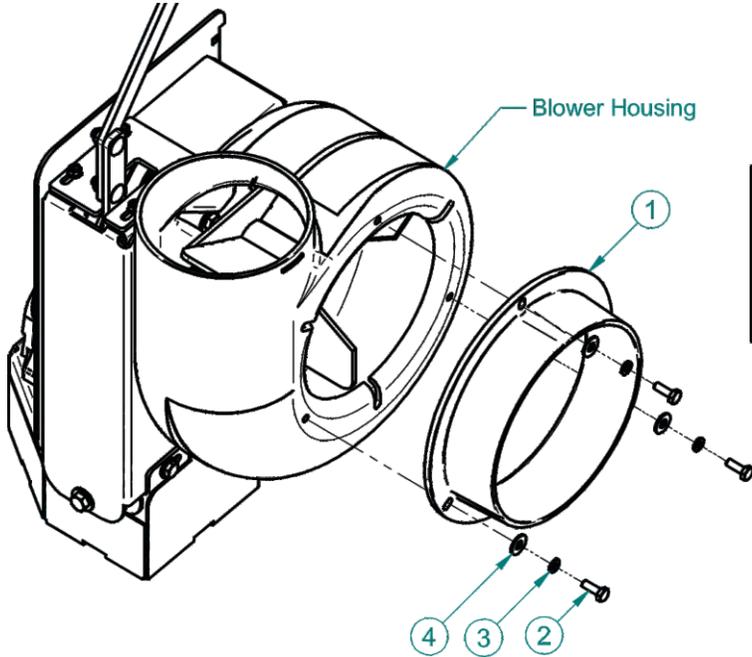


## Blower Cone Installation

Align the bolt holes of the 8" Blower Cone (Item #1) to the bolt holes located on the Blower Housing of the PTO Assembly. Secure the 8" Blower Cone to the Blower Housing by using (3) 1/4"-20 x 3/4" HHCS (item #2), (3) 1/4" Lock Washers (Item #3) and (3) 1/4" Flat Washers (Item #4). Refer to the Figure below.

Note: Some parts and part features have been hidden from view.

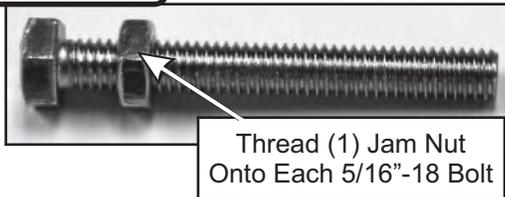
Figure A



Item #	Part #	Desc.	Qty.
1	E8004	Blower Cone	1
2	K1222	1/4"-20 X 3/4" HHCS	3
3	K0039	1/4" Lock Washer	3
4	K0037	Flat Washer / 1/4"	3

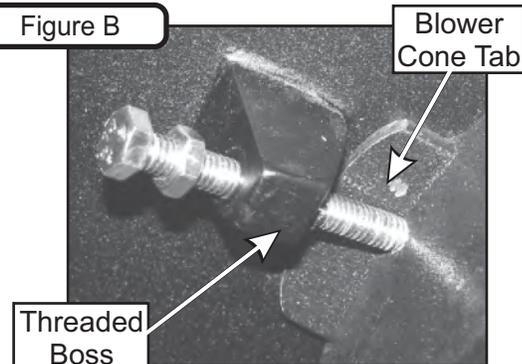
Thread (1) 5/16"-18 Jam Nut P#(K0120) onto each end of (2) 5/16"-18 x 2-1/2" HHCS P#(K0125) as shown in Figure A.

Figure A



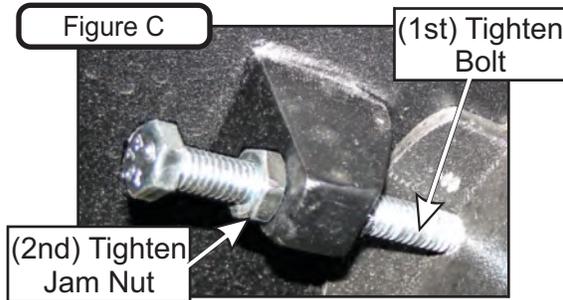
Now partially thread (1) bolt into each of the two threaded bosses located on the Blower Housing. Place 8" Blower Cone P#(E6009) so the two tabs line up with the bolts and tighten completely as shown in Figure B.

Figure B



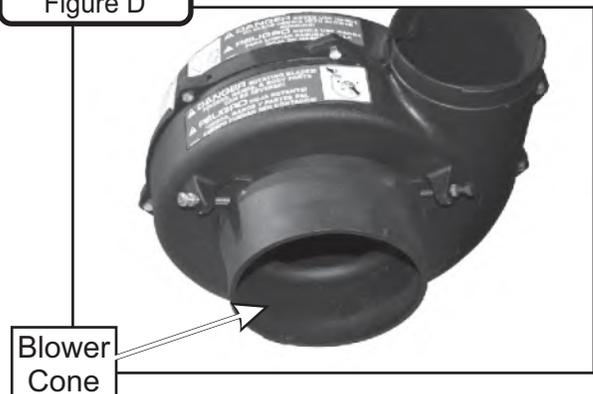
Once the (2) bolts are tight, tighten the Jam Nuts against the threaded boss as shown in Figure C.

Figure C



Refer to Figure D for proper Blower Cone installation reference.

Figure D

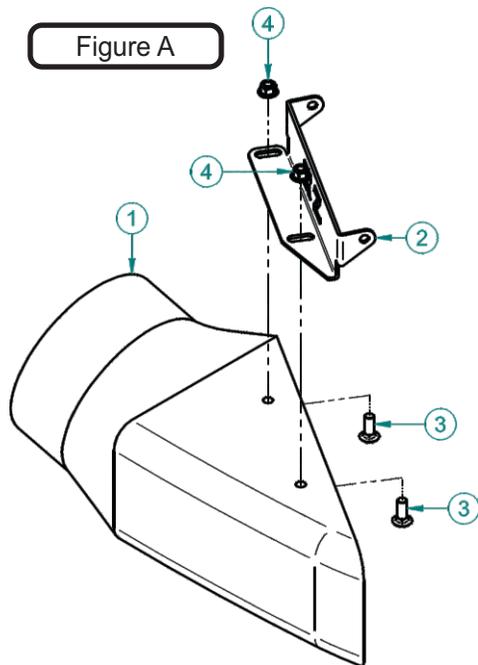


## Boot Kit Assembly Installation

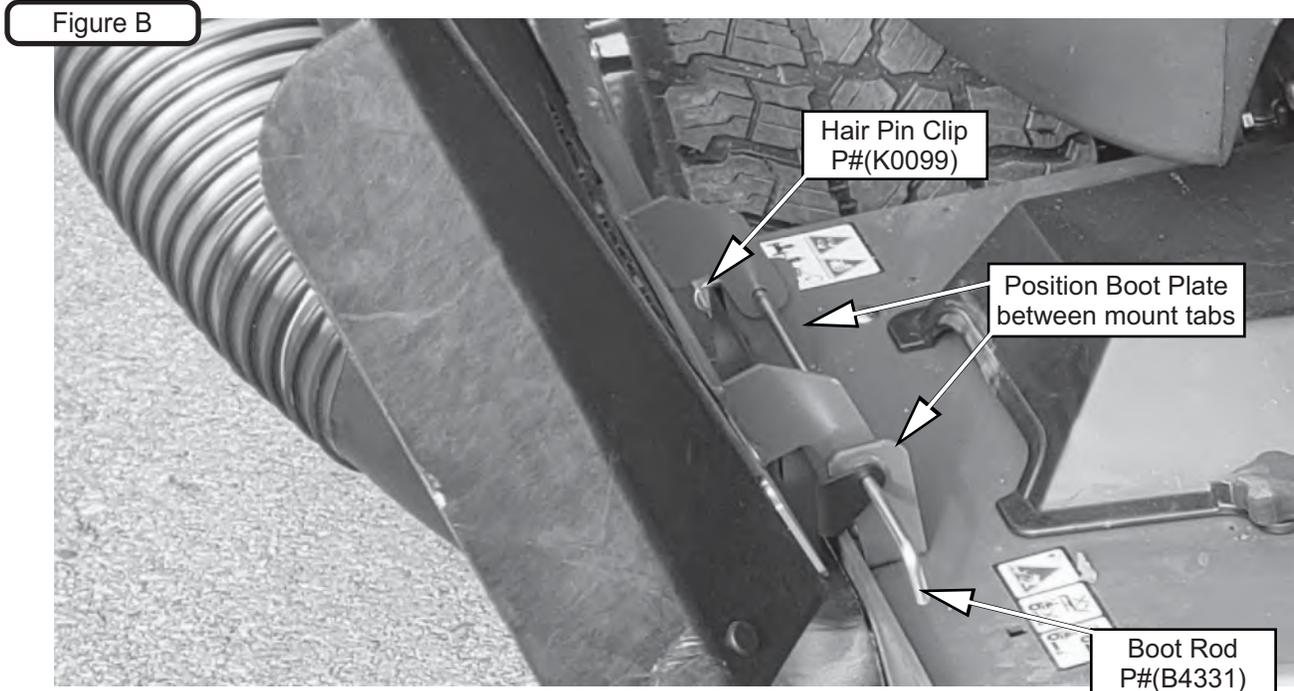
Before the installation of the Boot Kit, install the Boot Plate (Item #2) to the 8" Aluminum Boot (Item #1). Align the bolt holes of the Boot Plate to those of the Boot and loosely secure the Boot Plate by using (2) 3/8"-16 x 1" Carriage Bolts (Item #3) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4). Be sure to insert the Carriage Bolts from the bottom up as shown in Figure A. The hardware should be tightened after the Boot Kit is installed onto the mower.

To install the Boot Kit, first, remove the hardware securing the mower's discharge chute. Next, position the Boot over the deck opening and set the Boot Plate between the chute mount tabs. Then, secure the Boot Kit by passing (1) Boot Rod P#(B4331) through the discharge mount tabs and Boot Plate. Refer to Figure B. Finally, lock the Boot Rod in place by using (1) Hair Pin Clip P#(K0099).

**Note:** Some parts and part features have been hidden from view for visual clarity.



Item #	Part #	Desc.	Qty.
1	E0040	8" Aluminum Boot	1
2	B2035	Spartan RZ Boot Plate	1
3	K1182	Carriage Bolt 3/8"-16 x 1"	2
4	K2038	Ny-Flange Lock Nut 3/8"-16	2

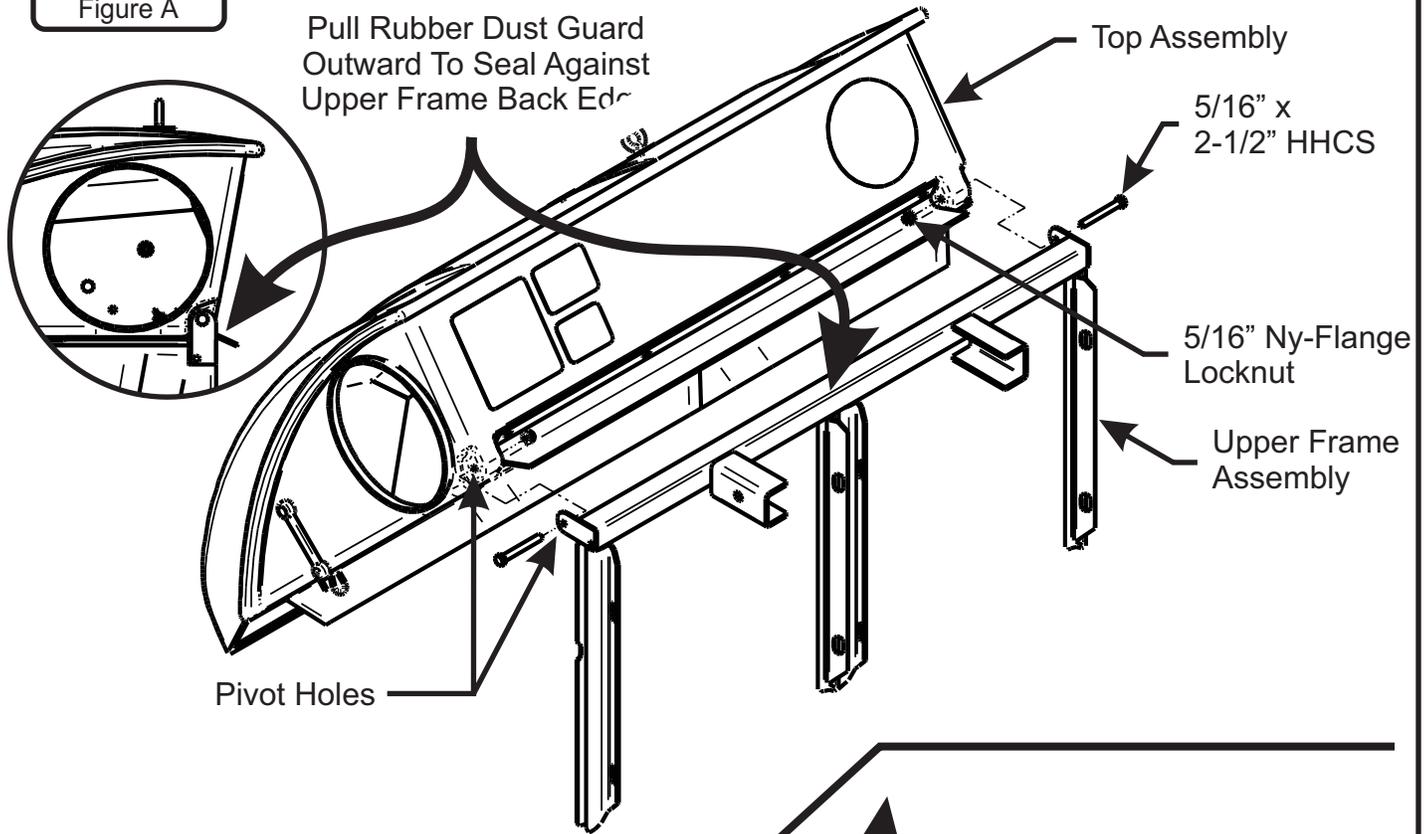


Once the Boot Kit is secured, adjust the Boot to make sure it fully covers the discharge area of the mower's deck and tighten all hardware at this time.

## Top Assembly To Upper Frame Assembly Installation

Align the Top Assembly Pivot Holes to the Upper Frame Assembly. See Figure A below. Before fastening, pull Rubber Dust Guard outward to seal against Upper Frame Assembly (towards the mower's operator seat). Fasten the Top Assembly to the Upper Frame Assembly using (2) 5/16"-18 x 2-1/2" HHCS P#(K0125) and (2) 5/16"-18 Ny-Flange Locknuts P#(K2516). Leave the Ny-Flange Locknuts slightly loose to allow the Top Assembly to open and close easily.

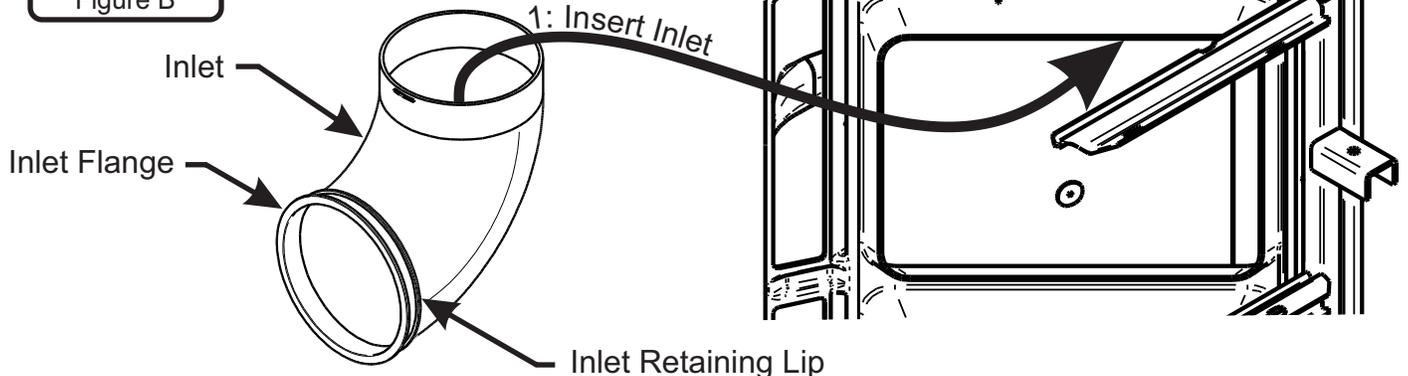
Figure A



## Inlet Installation

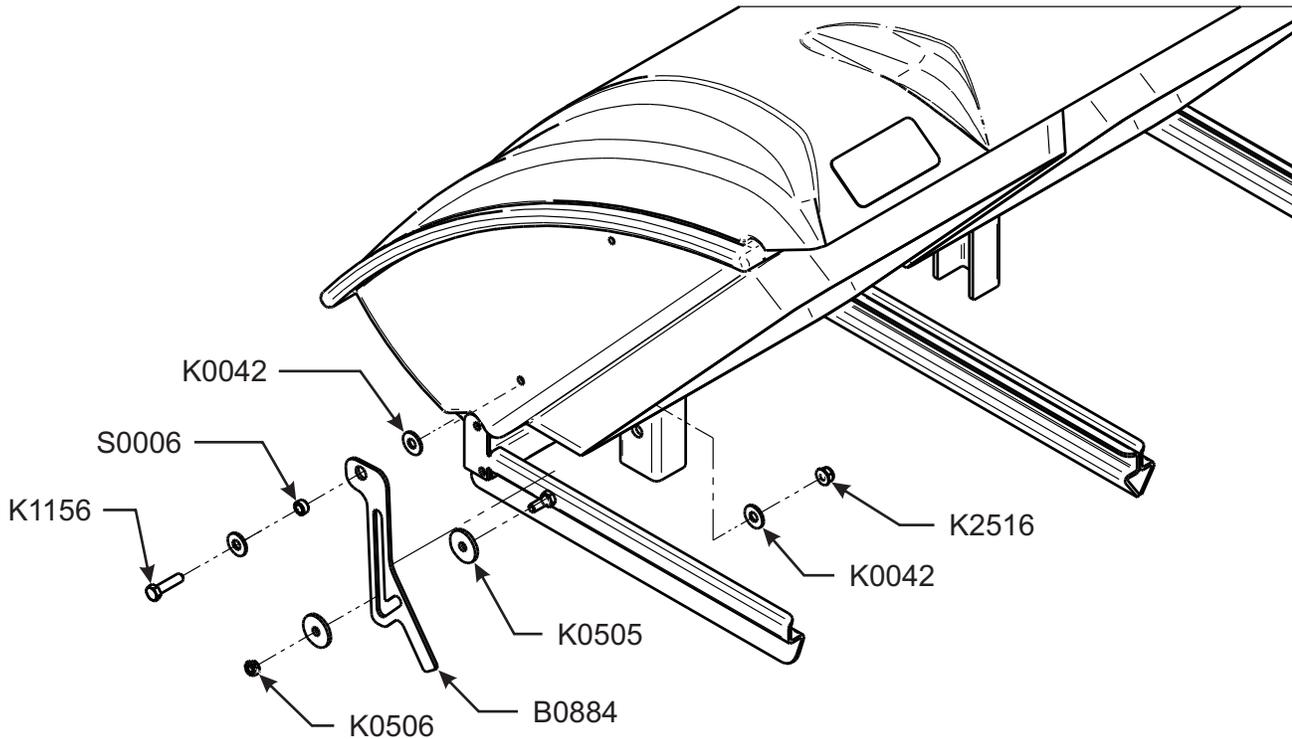
Position the Top Assembly on its side with the Inlet Hole facing up. See Figure B. 1: Insert the Inlet from inside the Top Assembly, up through the Inlet Hole, until the Inlet Retaining Lip meets the Inlet Hole. 2: Position the Inlet as shown in Figure B, then pull the Inlet until a portion of the Inlet Retaining Lip protrudes from the Inlet hole. 3: Next, lift the Inlet as shown in Figure B until all of the Inlet Retaining Lip protrudes from the Inlet Hole. Once installed, the Inlet should pivot freely about the Inlet Hole.

Figure B



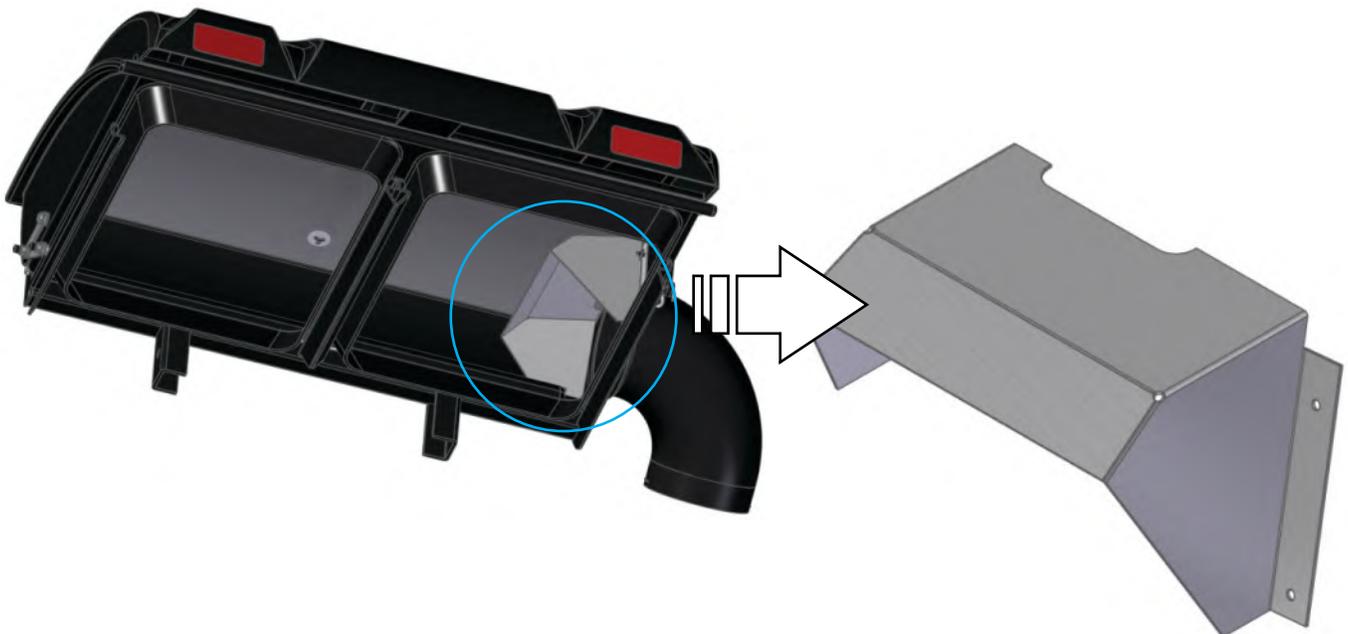
## Hinge Kit Assembly Installation

Assemble the Hinge Kit using (1) Latch Plate P#(B0884), (1) 5/16"-18 x 1-1/4" HHCS P#(K1156), (1) 5/16"-18 Ny-Flange Lock Nut P#(K2516), (3) 5/16" Flat Washers P#(K0042), (1) Latch Spacer P#(S0006), (2) Extra Heavy 5/16" Fender Washers P#(K0505) and (1) 5/16"-18 Lock Nut P#(K0506). Leave the nuts loose enough to allow fluid movement of the top when opening and closing. When opened, the top should rest in the Latch Plate Slot.



## Even Bag Fill Adjustment

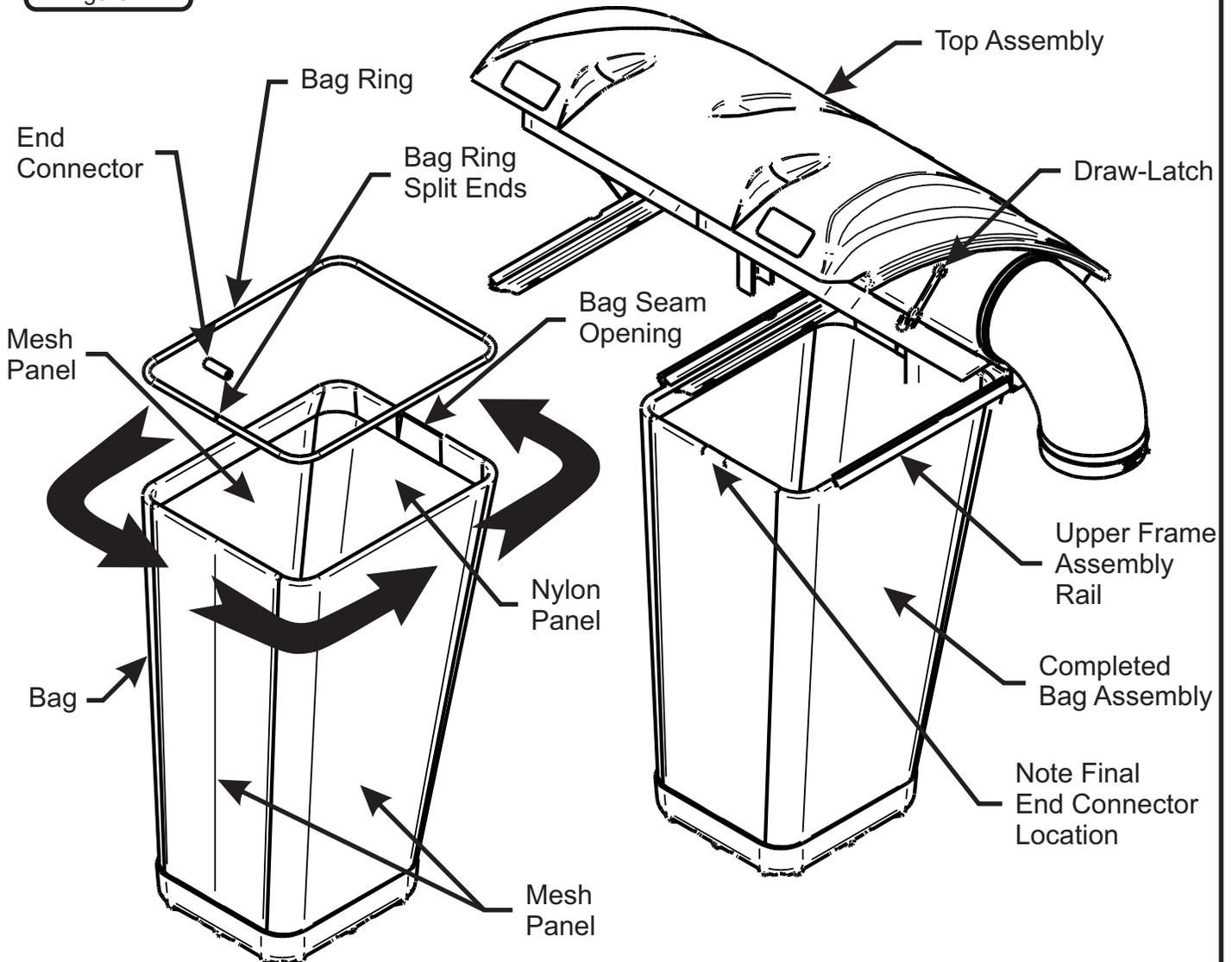
Flap can be adjusted Up/Down depending on mowing conditions. Adjust flap up to allow more dense material to reach left bag. Adjust flap down to allow less dense material to reach the right bag. Once adjusted properly, both bags should fill evenly, but may require further adjusting when mowing conditions change.



## Bag Assembly

First, take one of the Bag Ring Split Ends and insert it through the Bag Seam Opening. Next, rotate the Bag around the Bag Ring (1) full turn (360 degrees) until the Bag Ring Split Ends and the Bag Seam Opening are positioned on the same side. Then, connect the Bag Ring Split Ends using (1) End Connector. Last, rotate the Bag Ring and the End Connector Assembly (1/2") turn (180 degrees) to position the Connector opposite of the Bag Seam Opening. Note Final End Connector Location below in Figure A. Repeat for each Bag.

Figure A



## Bag Assembly Installation

Slide the Completed Bag Assembly into the Upper Frame Assembly Rails and close the Top Assembly. Fasten the Draw-Latch on either side to hold the bagger closed.

## Length Of Hose Adjustment

The hoses in the following steps must be cut to fit your machine. Do not cut the hoses until you have tried to fit them on your machine. Remember that the hoses need to be long enough to allow for the opening and closing of the collection system as well as allowing ample clamping surface between each component.

## Upper Hose Installation

Slide a Hose Clamp P#(J0060) over one end of the 6" Upper Hose. Secure this end of the 6" Upper Hose to the Blower Outlet. See Figure below for details. Secure opposite end of the 6" Upper Hose to the Inlet. Make sure both ends are securely fastened by tightening the Hose Clamp and rotating the Inlet Snap Fastener towards the hose to lock in place.

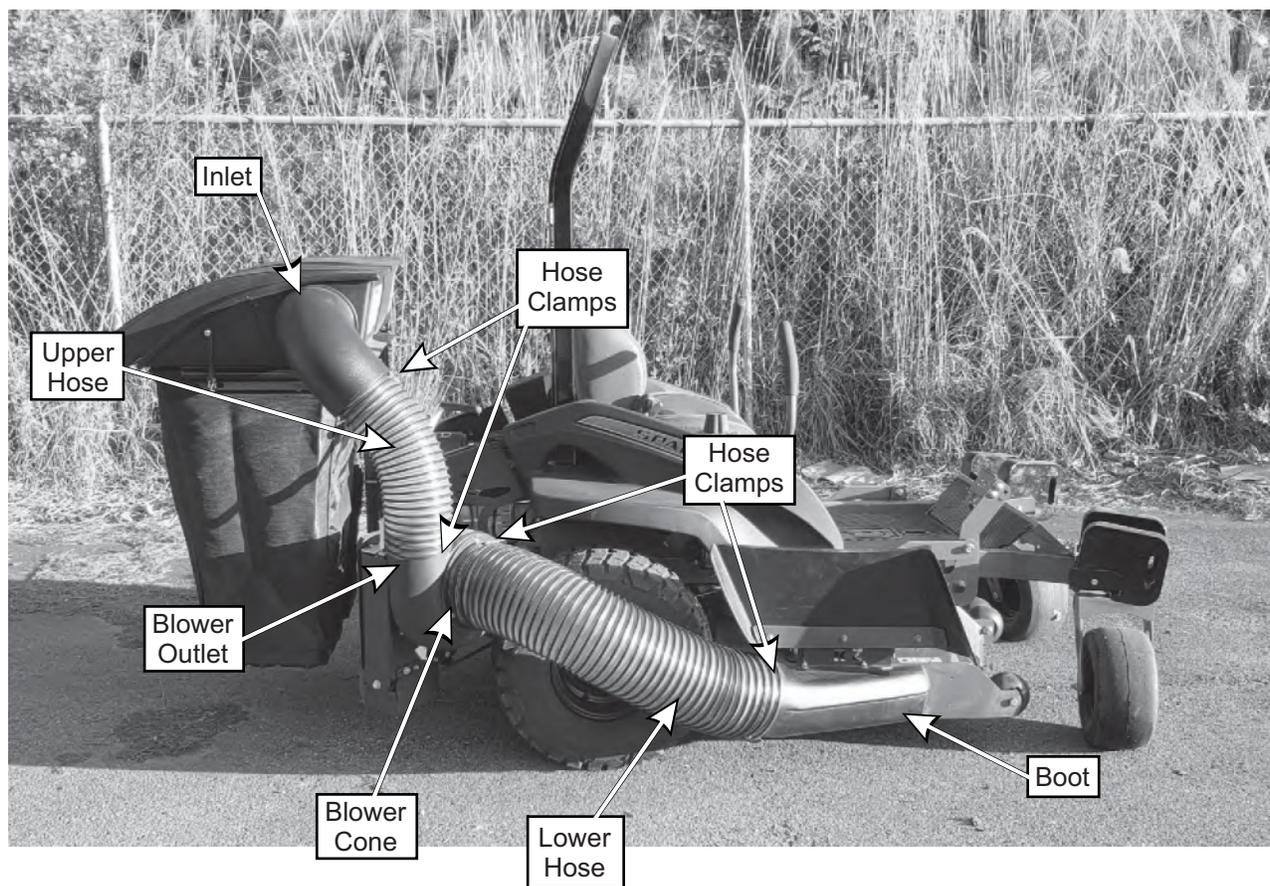
## Lower Hose To Blower Cone Installation

Slide a Hose Clamp P#(J0080) over both ends of the Lower Hose. Secure one end of the Lower Hose to the Blower Cone and fasten by tightening the Hose Clamp.

## Lower Hose To Boot Installation

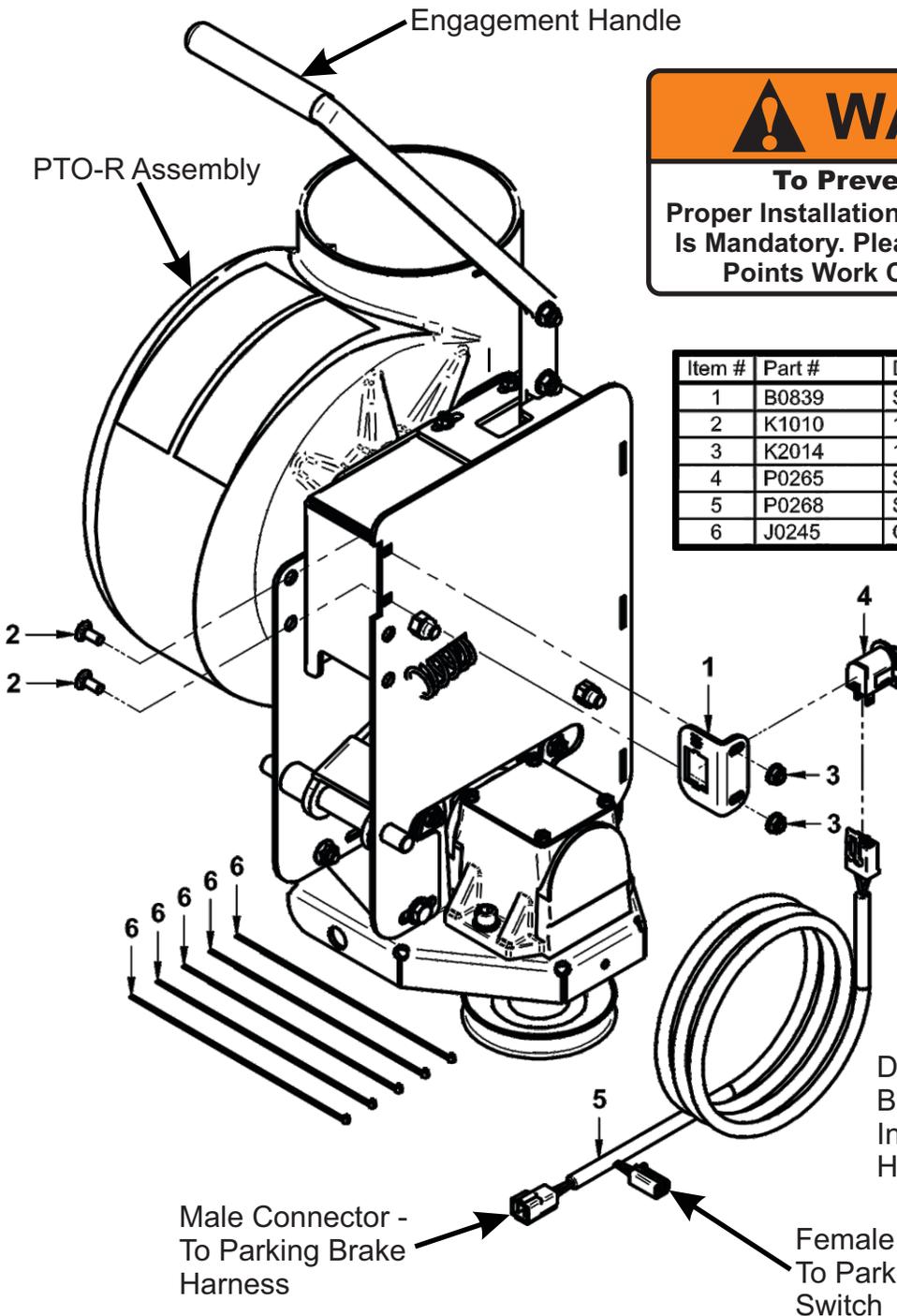
Take the unattached end of the Lower Hose and secure it to the circular end of the Boot and fasten by tightening the Hose Clamp.

Tip: Before securing Hose Clamp fully, rotate Lower Hose counter-clockwise (away from yourself) approximately 1" to aid in retaining Boot to mower deck.



**Wire Harness Installation**

To install the wire harness, insert the Snap-Mount Switch (Item #4) into the Switch Mount Bracket (Item #1) until the Switch clicks into place. Position the Switch & Bracket over the holes located in the PTO-R Assembly as shown below in Figure A. Fasten using (2) 1/4"-20 x 5/8" Carriage Bolts (Item #2) & (2) 1/4"-20 Ny-Flange Lock Nuts P#(Item #3). Connect the Safety Interlock Harness (Item #5) to the Snap-Mount Switch (Item #4). Locate the mower's parking brake switch, forward and to the right of the clutch, and disconnect mower's parking brake harness from the switch. Route the Safety Interlock Harness to the mower's parking brake switch where the harness is clear of pinch points, the mower's muffler/exhaust or any moving object. Connect the Male end of the Safety Interlock Harness to the mower's parking brake switch. Connect the Female end of the Safety Interlock Harness to the mower's parking brake harness. Again, verify the routing of the harness and bundle any excess harness in a suitable location. Use the provided Cable Ties (Item #6) to secure the routing of the Safety Interlock Harness. To test the functionality of the Safety Interlock Harness; First, start the mower. Next, engage the PTO-R Assembly using the Engagement Handle. Last, get up from the mower's operator seat. The mower's engine should shut off meaning everything is connected correctly. If not, turn off the mower, disengage the PTO-R Assembly, review the information above and check all connections.



**WARNING**

**To Prevent Serious Injury- Proper Installation Of Safety Interlock Harness Is Mandatory. Please Check That All Interlock Points Work Correctly Once Installed.**

Item #	Part #	Desc.	Qty.
1	B0839	Switch Mount Bracket	1
2	K1010	1/4"-20 x 5/8" Carriage Bolt	2
3	K2014	1/4"-20 Ny-Flange Lock Nut	2
4	P0265	Snap-Mount Switch / NC	1
5	P0268	Safety Interlock Harness	1
6	J0245	Cable Tie / 8"	5

Disconnect Mower's Parking Brake Safety Switch & Interconnect Safety Interlock Harness

Male Connector - To Parking Brake Harness

Female Connector - To Parking Brake Switch

**Wire Harness Installation**

**! WARNING**

**To Prevent Serious Injury- Proper Installation Of Safety Interlock Harness Is Mandatory. Please Check That All Interlock Points Work Correctly Once Installed.**

Before installing the PTO Switch Plate, install the PTO Rocker Switch P#(P0293) by positioning it over the Switch Plate and firmly pressing the Rocker Switch down until it is seated in place.

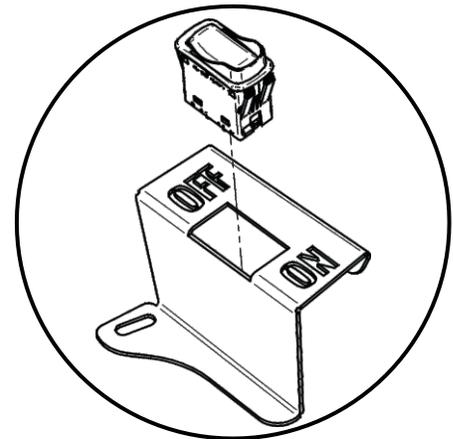
Be sure the 'FAN' Symbol is positioned to the 'ON' side of the PTO Switch Plate. Refer to Figure A.

Once installed, connect the Wire Harness' (2) Female Switch Disconnects to the PTO Rocker Switch P#(P0293). Refer to Figure B for the Wire Harness components.

To install the PTO Switch Plate P#(B2038), (#1) remove the corner screw securing the control panel cover and set it aside.

Next, (#2) lift the control panel and (#3) place the PTO Switch Plate under the control panel. (#4) Align the slot with the corner mount hole and secure the Switch Plate by using the previously removed hardware.

Refer to Figure A below.



Install Rocker Switch to Switch Plate

Figure A

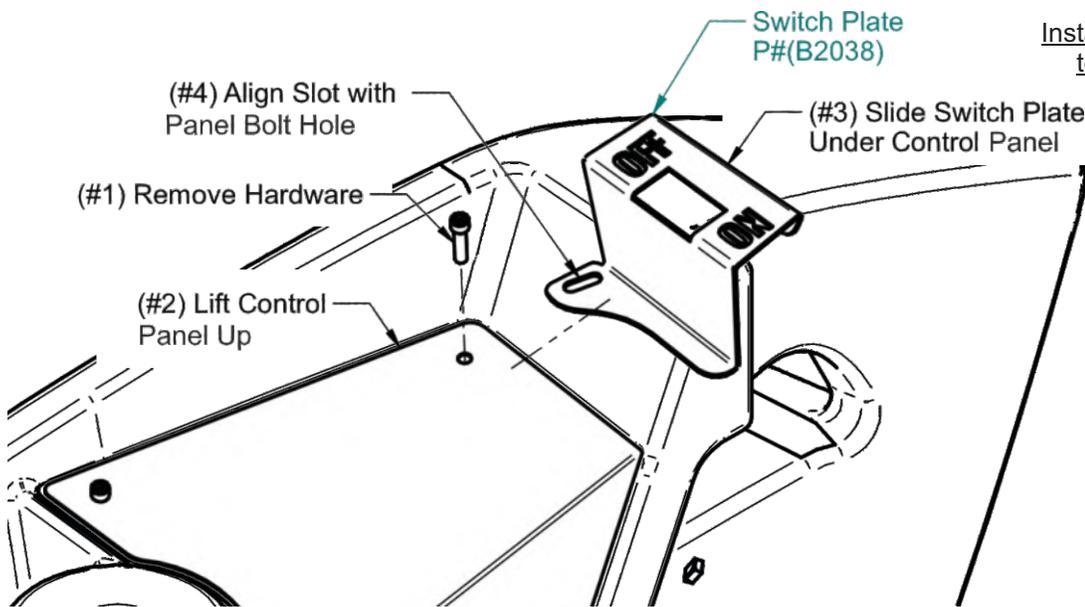
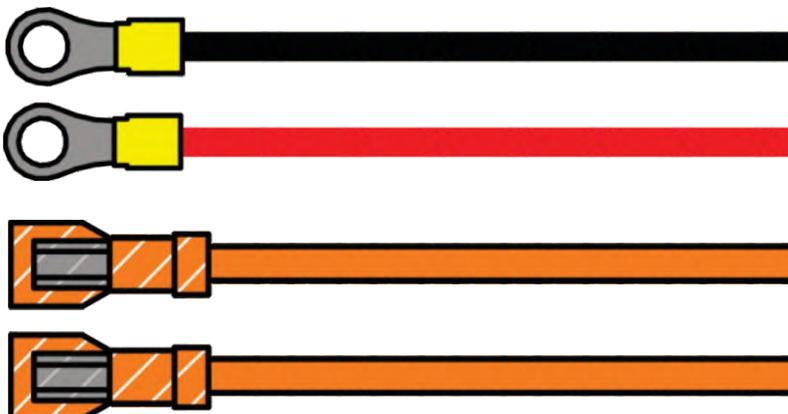


Figure B



Negative Lead (-) to Negative Terminal (-)

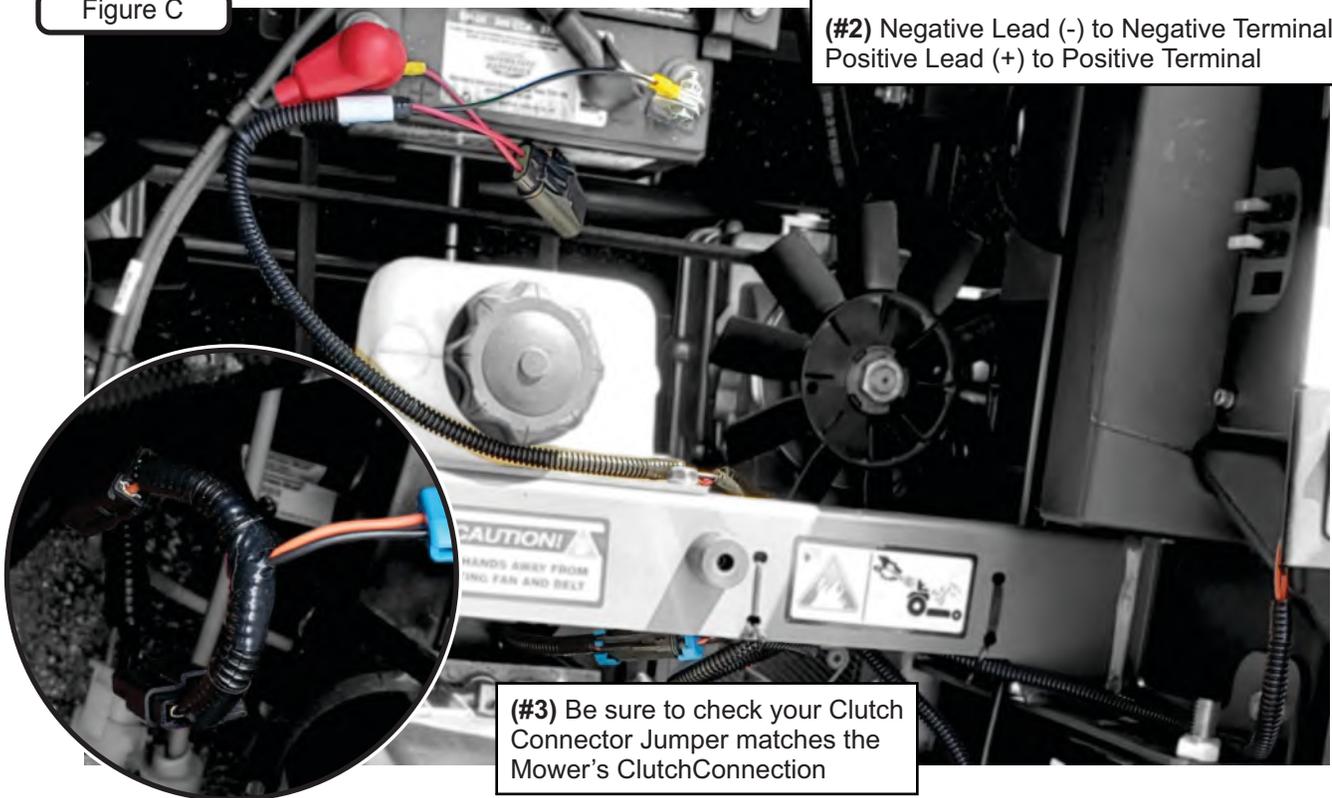
Positive Lead (+) to Positive Terminal (+)

(2) Female Switch Disconnects to PTO Rocker Switch

Next, route the (#2) Negative Lead (-) and the Positive Lead (+) of the Wire Harness P#(P0298) to the negative & positive terminal of the mower's battery. Refer to Figure B for the Wire Harness components, refer to Figure C on the next page for the Wire Harness to mower connection.

Route the Wire Harness back towards the engine and disconnect the mower's clutch connector and (#3) interconnect it with the Wire Harness' Clutch Connection Jumper. Refer to Figure C. Be sure to identify and pick the correct Jumper depending on your mower's clutch connection type. Refer to the Wiring Diagram on Page 24 for the Connection Jumper Types.

Figure C



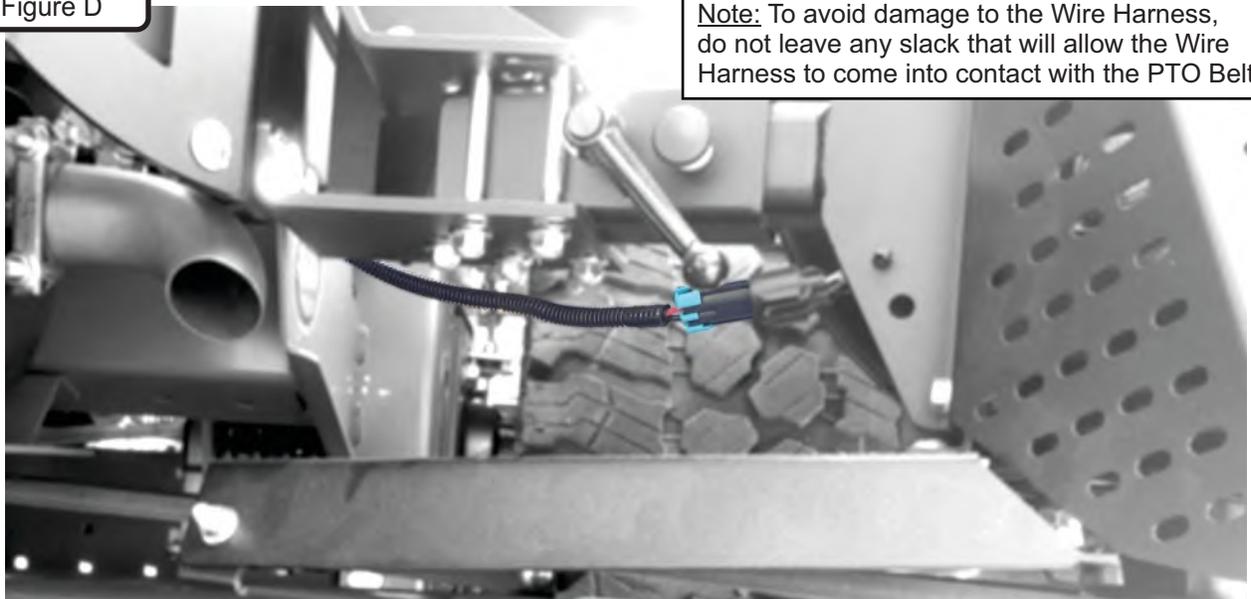
(#2) Negative Lead (-) to Negative Terminal  
Positive Lead (+) to Positive Terminal

(#3) Be sure to check your Clutch Connector Jumper matches the Mower's Clutch Connection

Finally, route the Wire Harness back towards the rear of the mower positioning the Wire Harness under the Bottom Bracket / Mount Arm. Then connect the Wire Harness to the PTO Unit. Refer to Figure D.

**Note:** It is recommended to secure the Wire Harness to the mower by using the included Cable Ties P#(J0245) once you have the Wire Harness installed. Be sure the Wire Harness is routed so that it does not obstruct the seat as it is being lowered down or any part of the mower that may damage the Harness.

Figure D



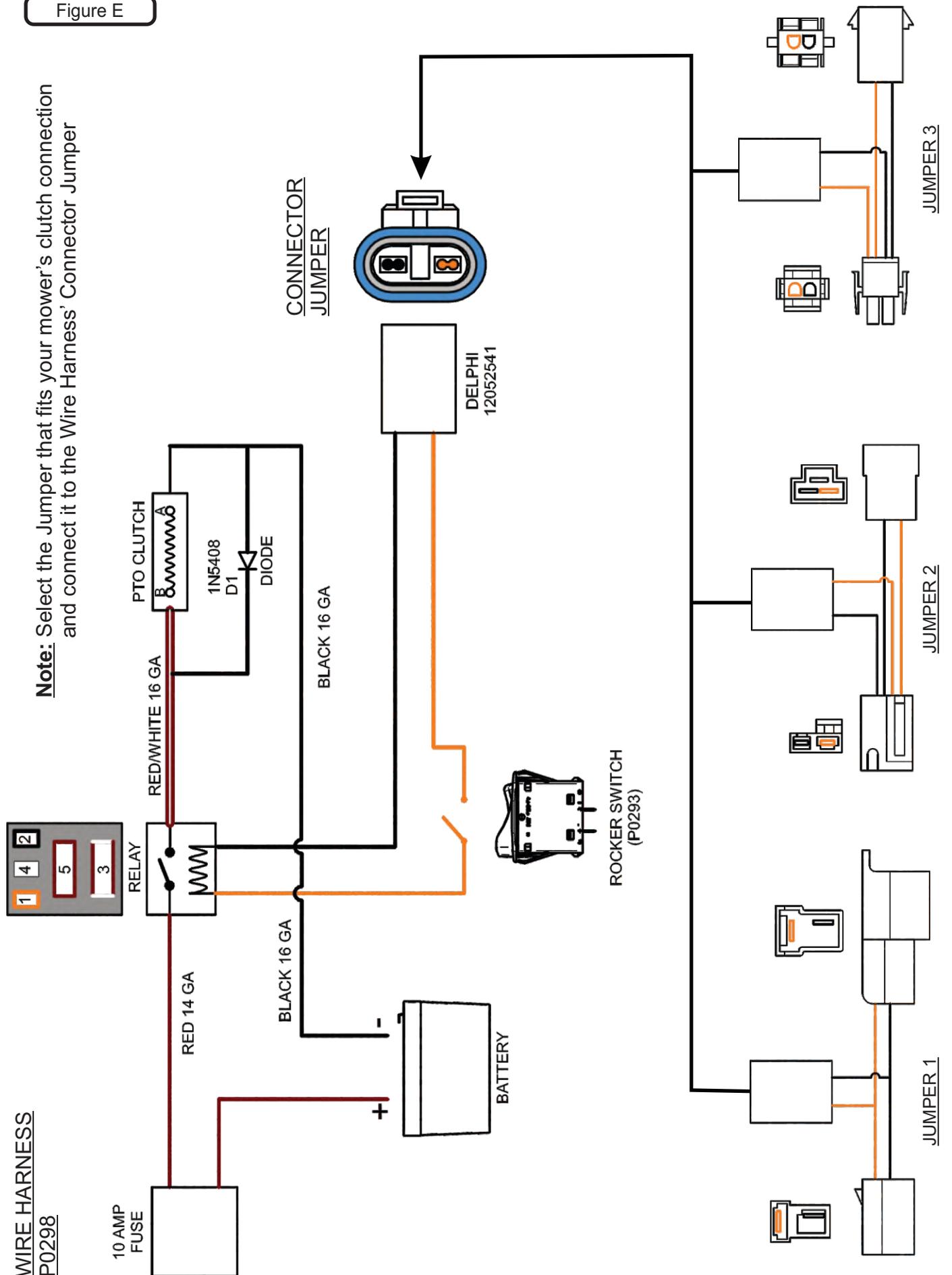
**Note:** To avoid damage to the Wire Harness, do not leave any slack that will allow the Wire Harness to come into contact with the PTO Belt

# Wire Harness Installation (Continued)

PTO-X

Figure E

**Note:** Select the Jumper that fits your mower's clutch connection and connect it to the Wire Harness' Connector Jumper



# Impeller Blade Removal/Replacement

## 3-Blade Impeller

**To Remove:** To access the impeller blade, remove the Blower Cone and Blower Cone Hardware from the Blower Housing (Item#1). Remove the 5/16"-24 x 1-1/4" LH HHCS (Item#3) and (1) Washer (Item#4) (Refer to Figure A). Insert (1) 1/2"-13 x 1" Hex Bolt into the threads on the Impeller Blade (Refer to Figure B). Tighten the Hex Bolt until the Impeller Blade breaks free from the PTO Shaft. Remove the Impeller Blade Assembly (Item#2) from the PTO Shaft. Remove the Key (Item#5) from the PTO shaft.

**To Replace:** Insert the Key (Item#5) into the keyway slot on the PTO Shaft. Align the keyway slot on the Bushing of the Impeller Blade Assembly with the Key on the PTO Shaft and insert the Impeller Blade onto the PTO Shaft. Secure the Impeller Blade with (1) 5/16"-24 x 7/8" LH HHCS (Item#3) and (1) Washer (Item#4) (Refer to Figure A). Replace the Blower Cone and Blower Cone Hardware.

Note: Figure A is portraying a cross section view of the PTO Blower Housing.

Figure A

Item #	Part #	Desc.	Qty.
1	V0015	Blower Hsg.	1
2	A1839	3-Blade Impeller Assy.	1
3	K1171	HHCS / 5/16"-24 LH x 1-1/4" / G5 w/ Patch Coating	1
4	K1446	PTO Housing Washer	1
5	J0254	Key / 3/16" x 3/16" x 3/4"	1

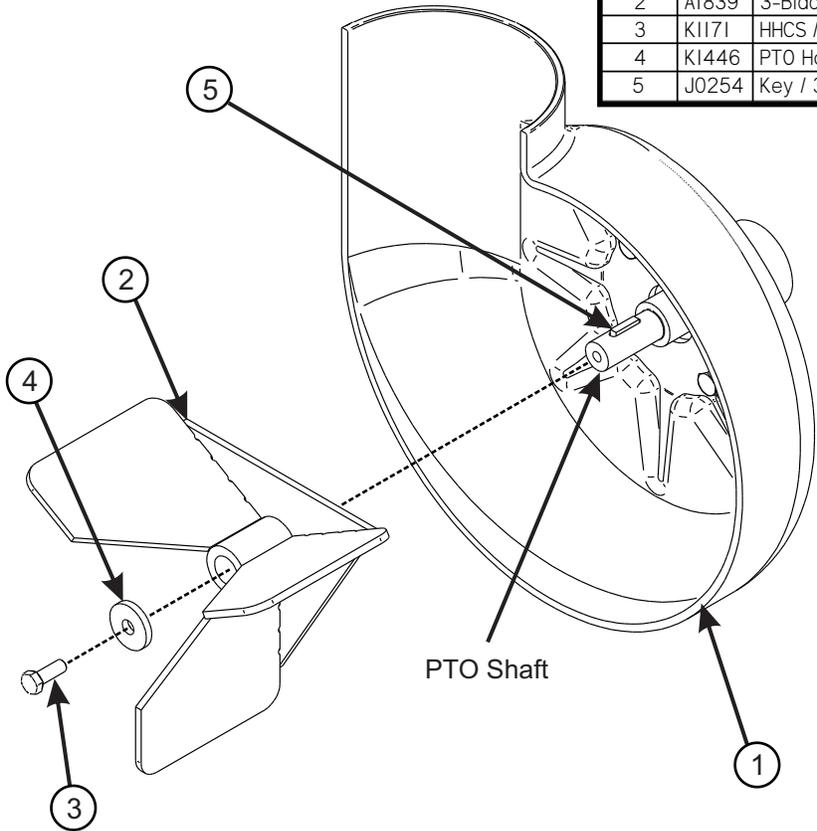
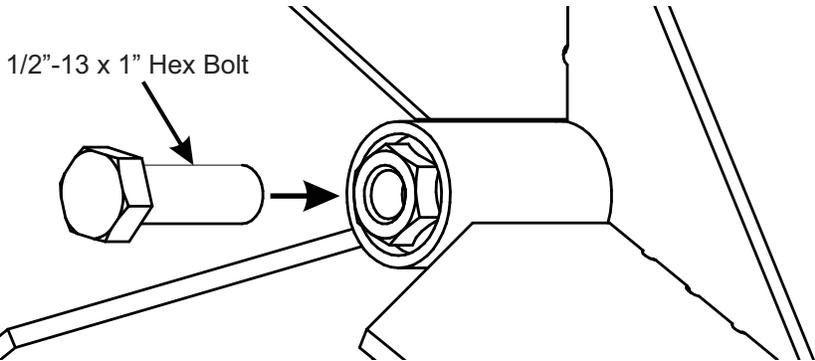


Figure B



## Impeller Blade Removal/Replacement (cont.)

PTO-X

### 4-Blade Impeller

**To Remove:** First remove the 5/16"-24 x 1" HHCS P#(K0428) (#1), Taper Lock Bushing Washer P#(K0284) (#3), (2) 5/16 Flat Wahers P#(K0042) and Spacer Bushing P#(S0159) (#4) from the Taper-Lock Bushing P#(S0157) (#5). Next remove the (2) 1/4"-20 x 1" HHCS (#2) and place them into the threaded holes of the Taper-Lock Bushing (#5). Gradually thread each bolt evenly into the Taper-Lock Bushing, forcing the blade to break-away from the Taper-Lock Bushing. If the Impeller will not move, carefully hit the base of the Impeller, between each vein, with a hammer, then try again.

**To Replace:** Place Impeller Blade over the engine shaft. Slide the Taper-Lock Bushing (#5) on to the engine shaft and into the Impeller Blade, aligning the **non-threaded** holes of the Taper-Lock Bushing to the threaded holes of the Impeller Blade. Fasten by using (2) 1/4"-20 x 1" HHCS (#2), (1) Spacer Bushing (#4) (1) Taper-Lock Bushing Washer (#3), and (1) 5/16"-24 x 1" HHCS (#1). Torque to the proper specifications in the torque chart on the back of this manual. Next, rotate the Impeller Blade to ensure that the blade is clear of contact on all sides of the blower housing.



## Weight Kit Installation

NOTE: This Assembly Installation is intended for the Right Caster of the mower. Repeat for the Left Caster.

Position the Dual Weight Bracket Base (Item#1) under the caster tubing w/ opening towards caster fork. Next, position the Weight Bracket Clamp (Item#2) on top of caster tubing w/ opening towards caster fork.

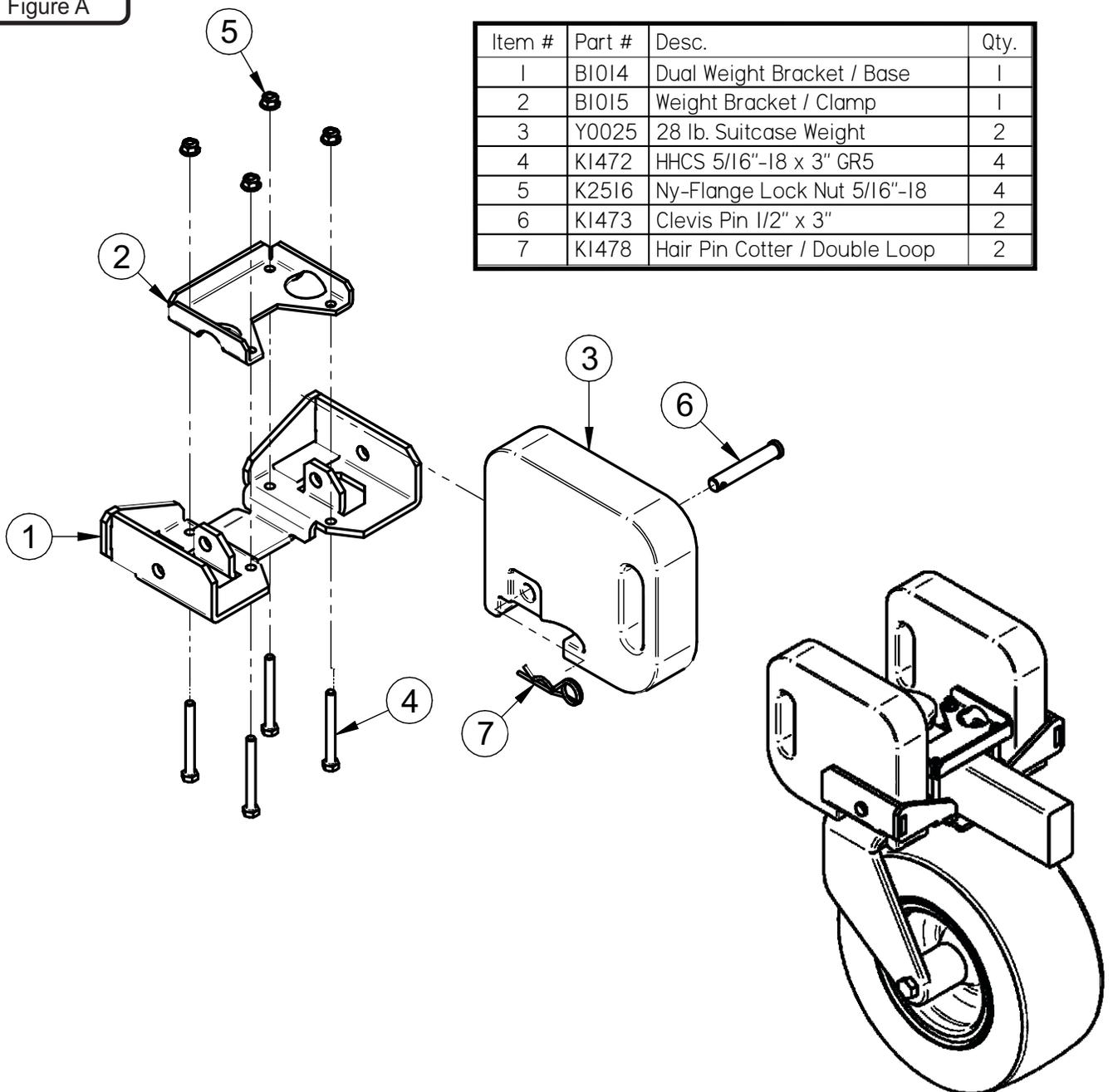
Align the (4) holes of the Weight Bracket Clamp (Item#2) to the holes in the Dual Weight Bracket Base (Item#1). Loosely fasten the Weight Bracket Clamp (Item#2) to the Weight Bracket Base (Item#1) using (4) 5/16"-18 x 3" Bolts (Item#4) & (4) 5/16"-18 Ny-Flange Lock Nuts (Item#5).

Position the Weight Bracket Base and the Weight Bracket Clamp assembly along the caster tubing to prevent interference from caster forks or any other objects. Tighten the fasteners in an 'X' pattern until assembly is firmly clamped to caster tubing. Do not over tighten which may result in bending Weight Bracket Clamps (Item#3).

To Install the Weights, insert (1) Weight (Item#3) Into the Weight Bracket Base (Item#2) & align the holes of the Weight w/ the holes of the Weight Bracket Base (Item#2). Fasten the Weight (Item#1) to the Weight Bracket Base Using (1) Clevis Pin (Item#6) & (1) Hair Pin Clip (Item#7) per weight. Repeat for additional Weights.

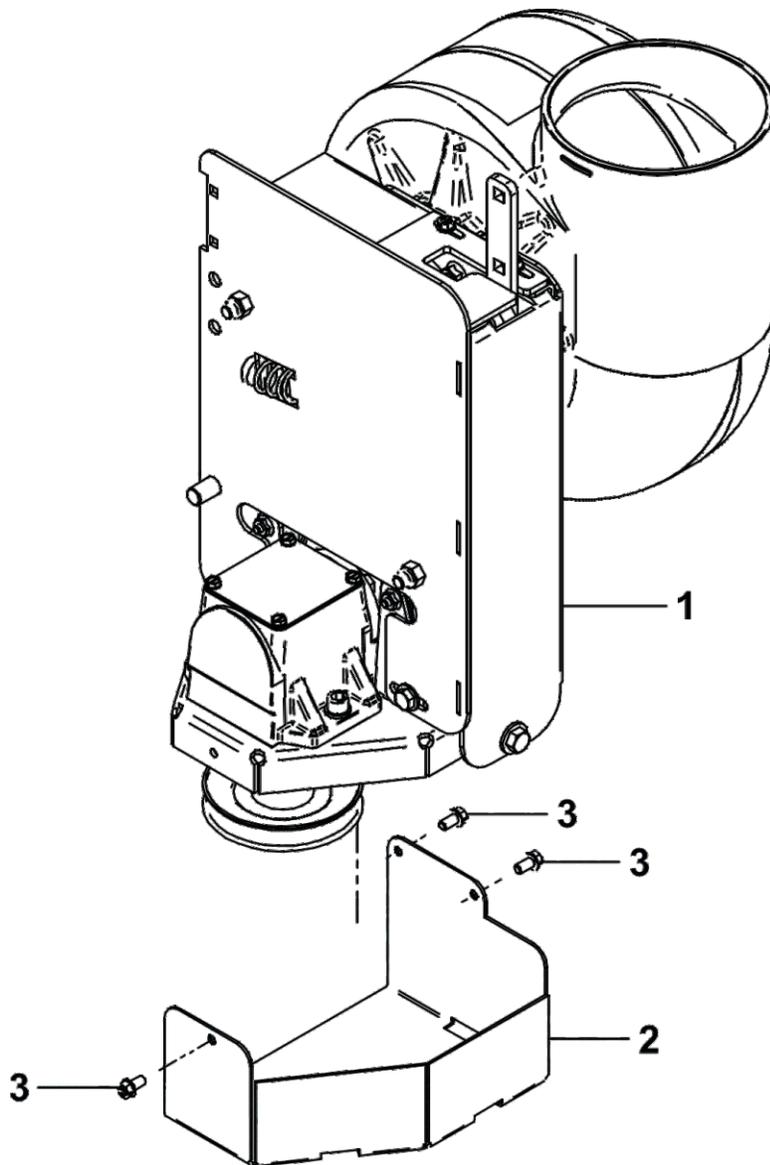
Refer to the Figure Below.

Figure A

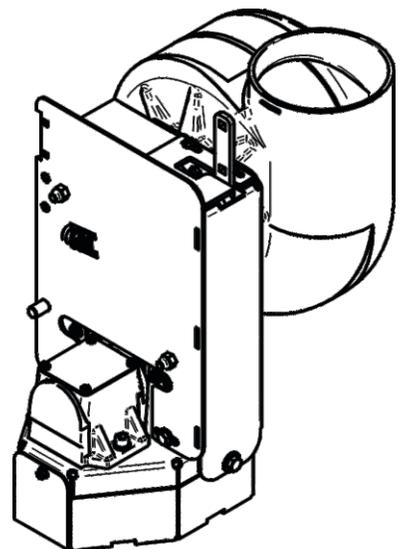


Item #	Part #	Desc.	Qty.
1	B1014	Dual Weight Bracket / Base	1
2	B1015	Weight Bracket / Clamp	1
3	Y0025	28 lb. Suitcase Weight	2
4	K1472	HHCS 5/16"-18 x 3" GR5	4
5	K2516	Ny-Flange Lock Nut 5/16"-18	4
6	K1473	Clevis Pin 1/2" x 3"	2
7	K1478	Hair Pin Cotter / Double Loop	2

# A2266 PTO-R Assembly / Small Pulley Guard Exploded Parts View



Item #	Part #	Desc.	Qty.
1	A2194_01	PTO-R Base Assy. / Bearing Handle	1
2	B0478	Small Pulley Guard / PTO-R	1
3	K0353	HWHTCS 1/4"-20 x 1/2"	3

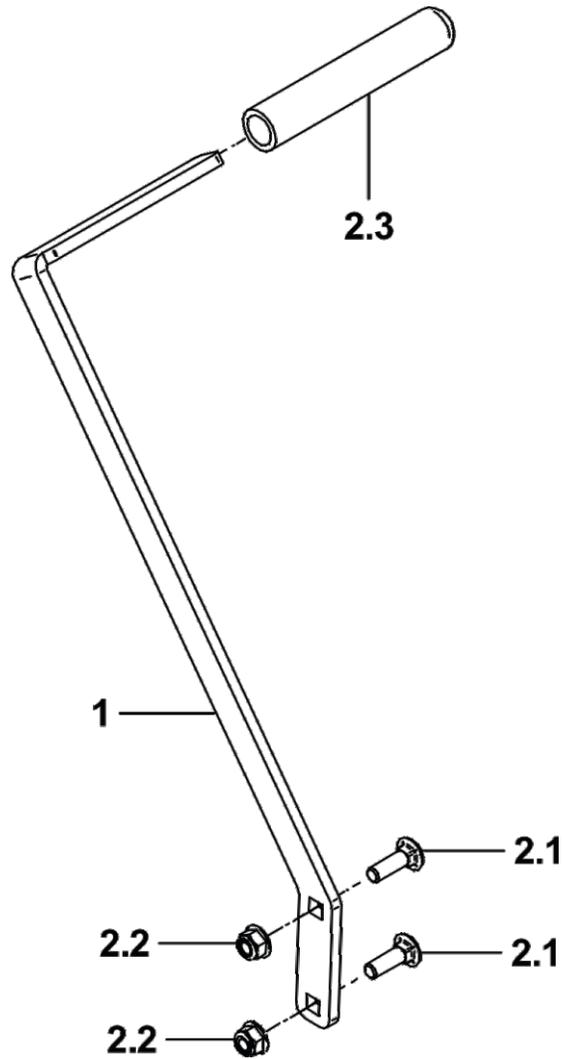




## A2194 01 PTO-R Base Assembly Exploded Parts List

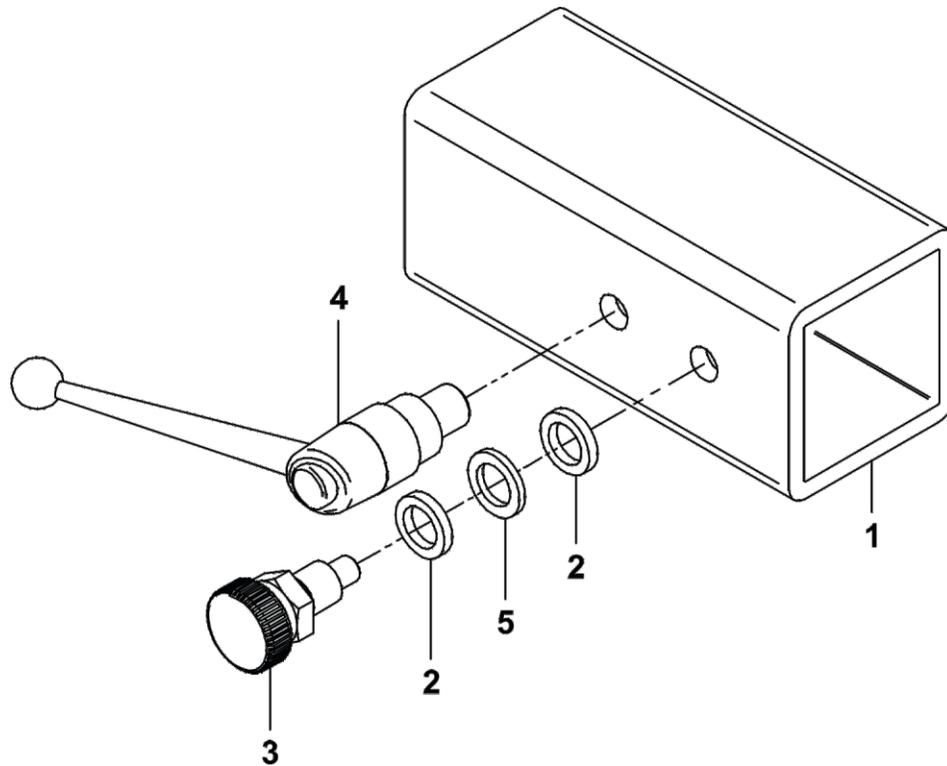
Item #	Part #	Desc.	Qty.
1	M0266	A-Section Pulley / 4.25 OD	1
2	K1446	PTO Housing Washer	2
3	K1190	HHCS / 3/8"-16 x 3/4"	1
4	V0015	Blower Hsg.	1
5	A0429	Gear Box Assy.	1
5.1	A0431	Gearbox	1
5.2	A0498	Pulley Assy. / Gear Box	2
5.3	K0360	Snap Ring / 7/8" Shaft	2
5.4	J0272	Woodruff Key #9	2
5.5	K0035	Set Screw 5/16"-18 x 1/4" Cup Point	2
6	A1004	PTO Shaft Assy.	1
6.1	E0015	Housing / PTO Shaft	1
6.2	N0147	Bearing (2.0472 OD, 0.9843 ID, 0.5906 W)	1
6.3	B0460	PTO Shaft	1
6.4	N0165	Bearing (1.875 OD, .875 ID, .500 W)	1
7	A1003	PTO Base Plate Assy.	1
8	K1153	HHCS 5/16"-18 x 3/4"	4
9	K1178	Flange Nut 5/16"-18	4
10	K0309	3/8"-16 x 1-1/4" SHCS	2
11	K1215	Flange Nut 3/8"-16	6
12	K0037	Flat Washer / 1/4" (.75 OD x .312 ID x .060 T)	4
13	K1150	HHCS / 1/4"-20 x 2-1/4"	2
14	K1126	Flange Nut 1/4"-20	4
15	K1202	HHCS / 3/8"-16 x 4-1/2" / G5	2
16	K1216	Nyloc Nut / 3/8"-16	2
17	K0348	HHCS / 3/8"-16 x 2" All Thread	1
18	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	8
19	K0353	HWHTCS 1/4"-20 x 1/2"	4
20	J0303	Spring	1
21	K1192	HHCS 3/8"-16 x 1-1/4" GR5	4
22	M0267	Kevlar Belt / A28K	1
23	K0048	Lock Washer 3/8"	3
24	B0505	Mount Rod	1
25	B0506_01	Lt. PTO Arm	1
26	B0642_01	Mount Bracket / Blower Hsg.	1
27	B0643_01	Rt. PTO Arm	1
28	B0739	Stiffener Plate / Blower Hsg.	1
29	K0070	Flat Washer (1.295 OD x .881 ID x .020 T)	1
30	A1839	3-Blade Impeller Assy.	1
31	J0254	Key / 3/16" x 3/16" x 3/4"	1
32	K1171	HHCS / 5/16"-24 LH x 1-1/4" / G5 w/ Patch Coating	1
33	B1875	Belt Tension Adjust Bracket	1
34	N0148	Bearing (1.625 OD, 0.750 ID, 0.4375 W)	1
35	S0021	Flange Bushing / Bearing	1
36	B1897	Base Handle	1
37	K2516	Ny-Flange Lock Nut 5/16"-18	1
38	K1146	5/16"-18 x 1-1/4" Carriage Bolt	1
39	S0229	Spacer Bushing	1

**A1137 01 PTO-R Handle Extension Assembly Exploded Parts View**



Item #	Part #	Desc.	Qty.
1	B0683_01	Handle Ext. / PTO-R	1
2	HB0783	HW Bag / Handle Ext. Kit / PTO-R	1
2.1	K1144	5/16"-18 x 1" Carriage Bolt	2
2.2	K2516	Ny-Flange Lock Nut 5/16"-18	2
2.3	V1151	Black Handle Grip (5/8" ID x 4-3/4" L)	1

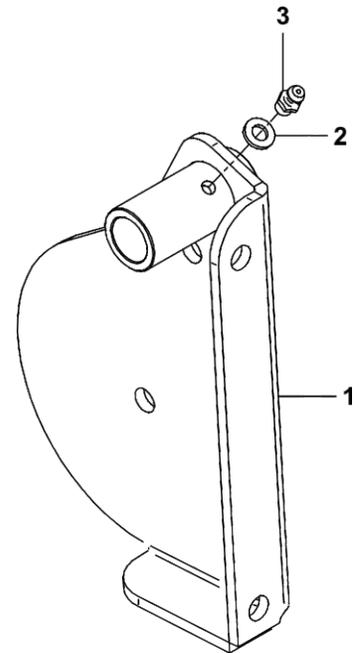
## A2207 PTO-X Mount Arm / Tube Assembly Exploded Parts View



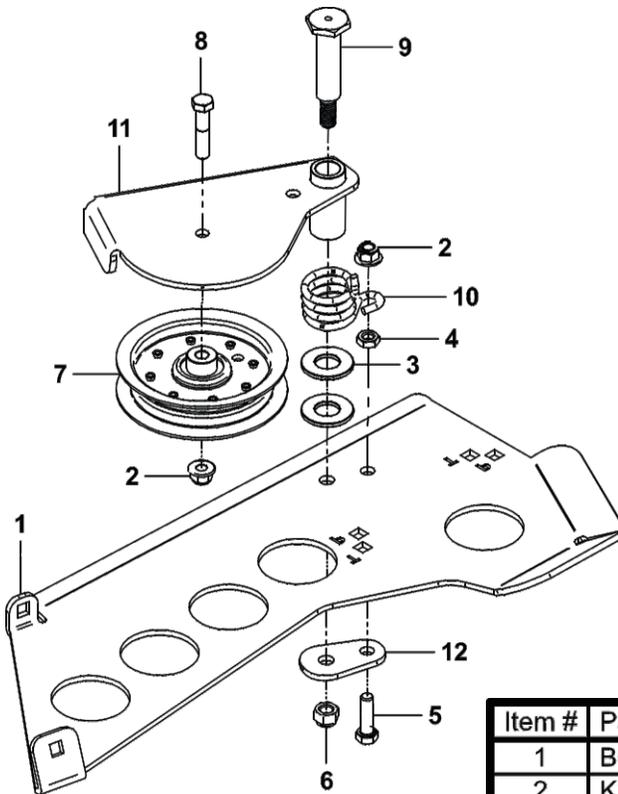
Item #	Part #	Desc.	Qty.
1	B0931	Tube / Mount Arm	1
2	J0013	Nylon Flat Washer 1/2" x .750" OD Grade 6/6	2
3	J0020	Knob Plunger Pin 1/2"-13	1
4	J0009	Adjustable Handle 1/2"-13 x .59 Male	1
5	K0027	Flat Washer 1/2" / .787 OD x .512 ID x .090 T	1

## A2092 Idler Arm Assembly

Item #	Part #	Desc.	Qty.
1	A2070_01	Idler Arm Weldment	1
2	K1467	Flat Washer M6 x 12mm OD	1
3	J0801	1/4"-28 Zirc Fitting	1



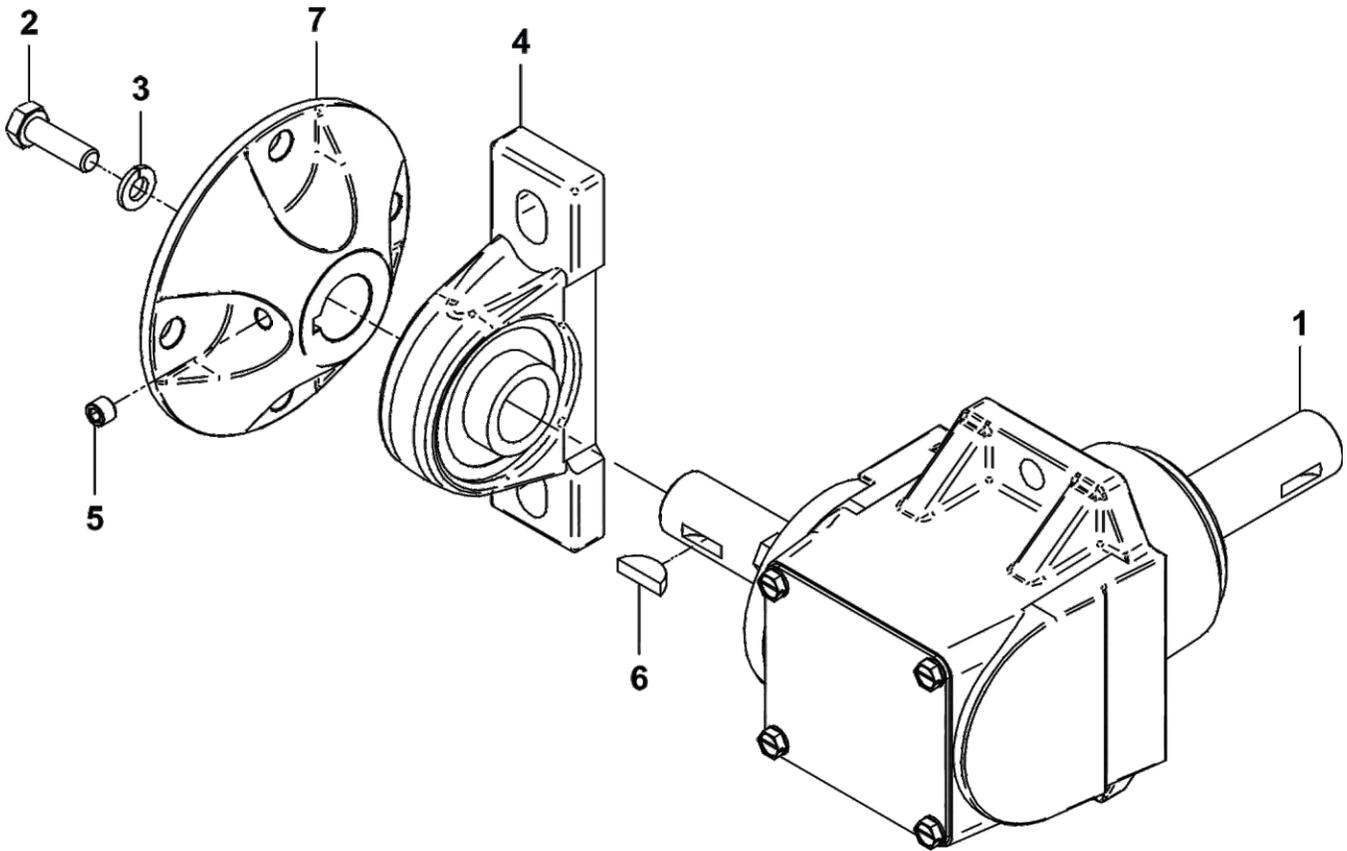
## A2067 02 Idler Mount Assembly



Item #	Part #	Desc.	Qty.
1	B0958_02	Idler Mnt Pl	1
2	K2038	Ny-Flange Lock Nut 3/8"-16	2
3	K1463	Flat Washer .720 ID x 1.500 OD x .250 T	2
4	K1219	Jam Nut 3/8"-16	1
5	K1192	HHCS 3/8"-16 x 1-1/4" GR5	1
6	K0329	Nylock Nut 7/16"-14 GR8	1
7	M0003	Idler Pulley	1
8	K1462	HHCS 3/8"-16 x 1-3/4" GR8	1
9	K1464	Shoulder Bolt 7/16"-14 / Idler	1
10	J0024	Torsion Spring	1
11	A2092	Idler Arm Assy.	1
12	B0974	Idler Base Plate	1

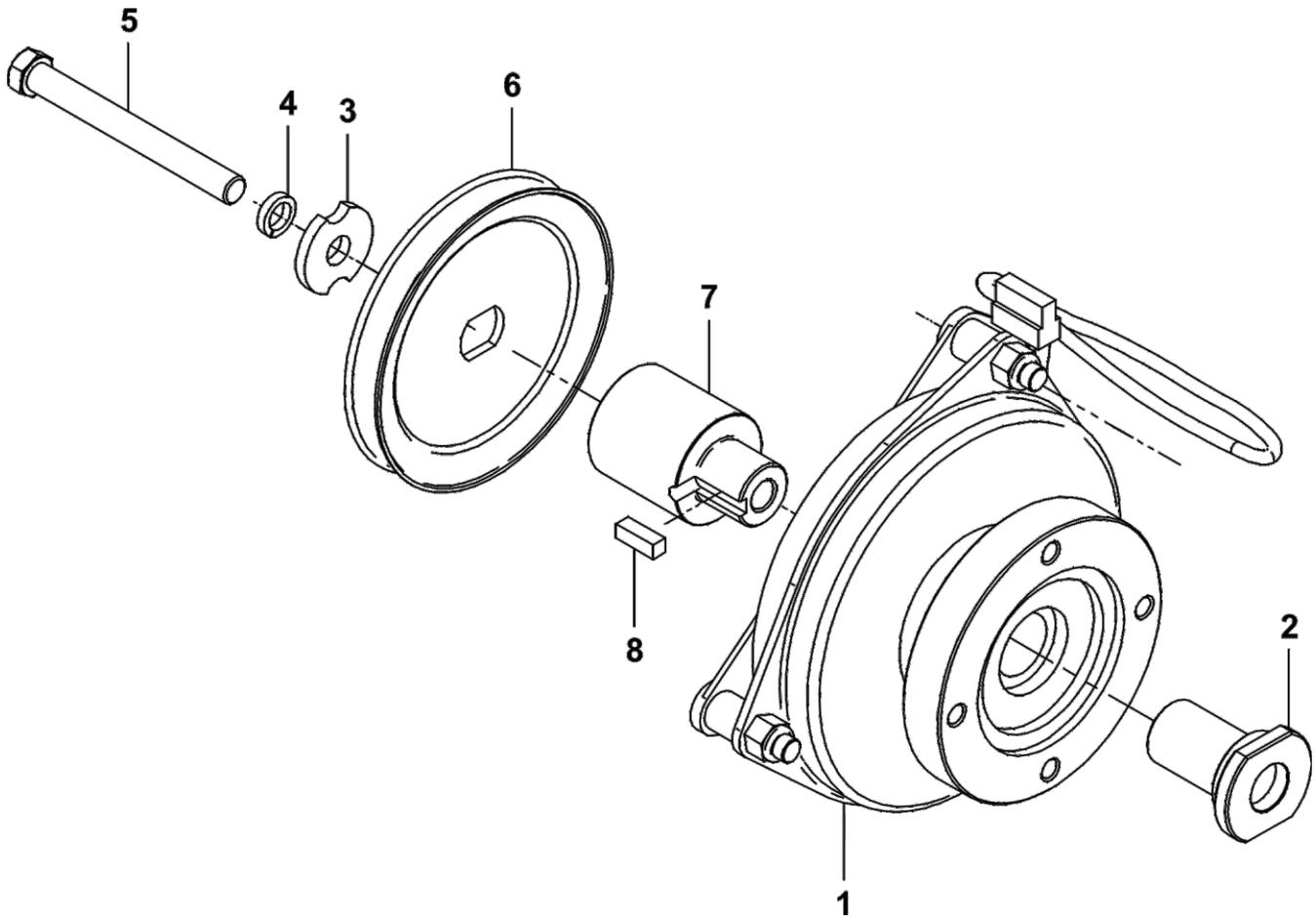
# A2058 Gearbox Sub-Assembly

Item #	Part #	Desc.	Qty.
1	M0002	Gearbox	1
2	K0428	HHCS 5/16"-24 x 1" GR8	1
3	K0043	Lock Washer 5/16"	1
4	N0002	Pillow Block Bearing 7/8"	1
5	K0035	Set Screw 5/16"-18 x 1/4" Cup Point	1
6	J0272	Woodruff Key #9	1
7	A2048	Clutch Flange	1



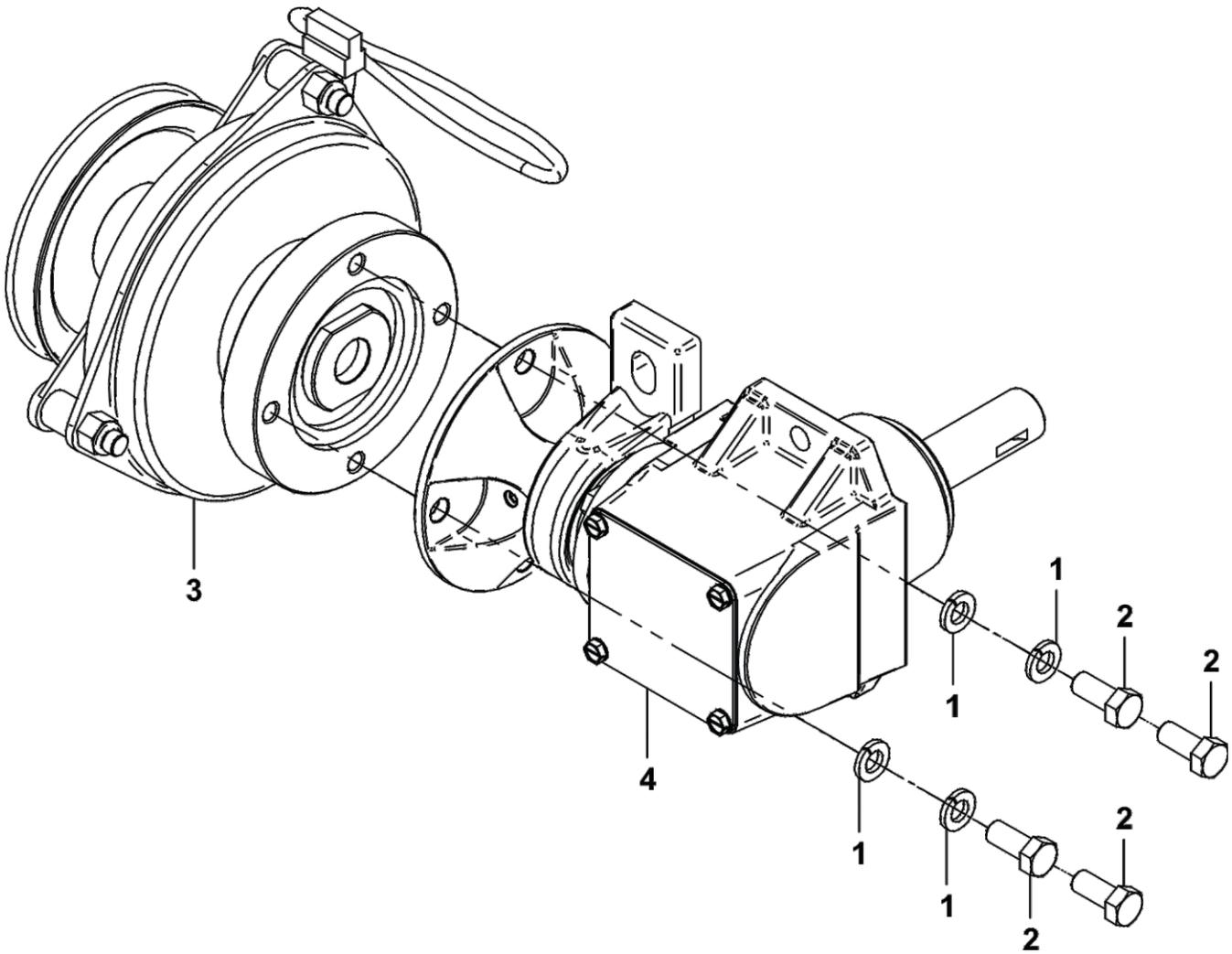
## A2059 01 Clutch Sub-Assembly

Item #	Part #	Desc.	Qty.
1	M0001	Electric Clutch	1
2	S0007	Clutch Shaft	1
3	K0278	Double Indented Washer 7/16" / 1.375 OD x .440 ID x .179 T	1
4	K0140	Lock Washer 7/16" / High-Collar Helical Spring	1
5	K0359	HHCS / 7/16"-20 x 3.50" w/ Patch	1
6	M0309	A-Section Pulley / 4.75 OD (PTO-X)	1
7	S0221	Eng. Pulley Bushing #27	1
8	K0076	Key 1/4" x 3/4" Long	1



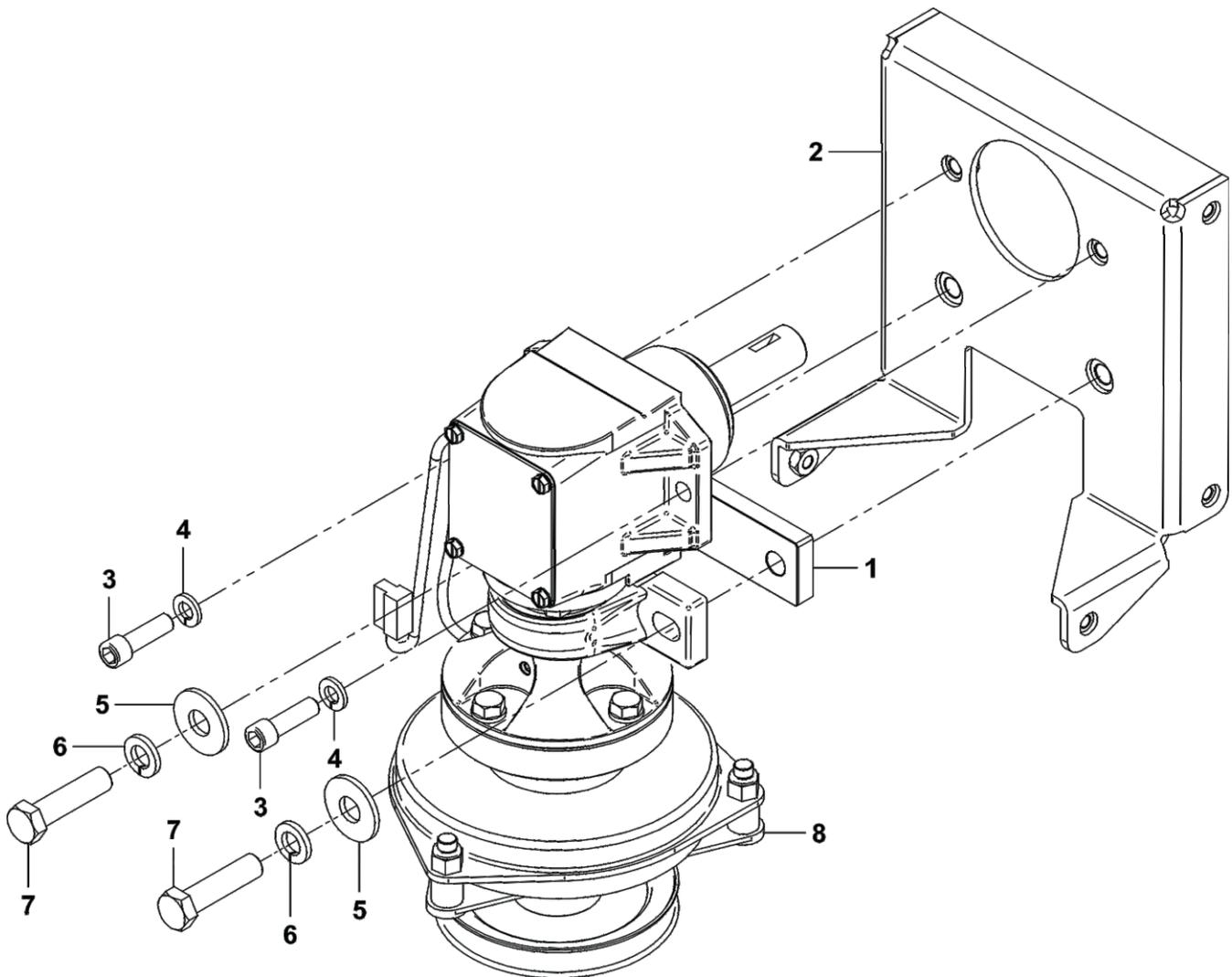
# A2057 01 Drive Assembly Exploded Parts View

Item #	Part #	Desc.	Qty.
1	K0048	Lock Washer 3/8"	4
2	K0343	HHCS 3/8"-16 x 7/8" GR8	4
3	A2059_01	Clutch Sub-Assy	1
4	A2058	Gearbox Sub-Assy	1



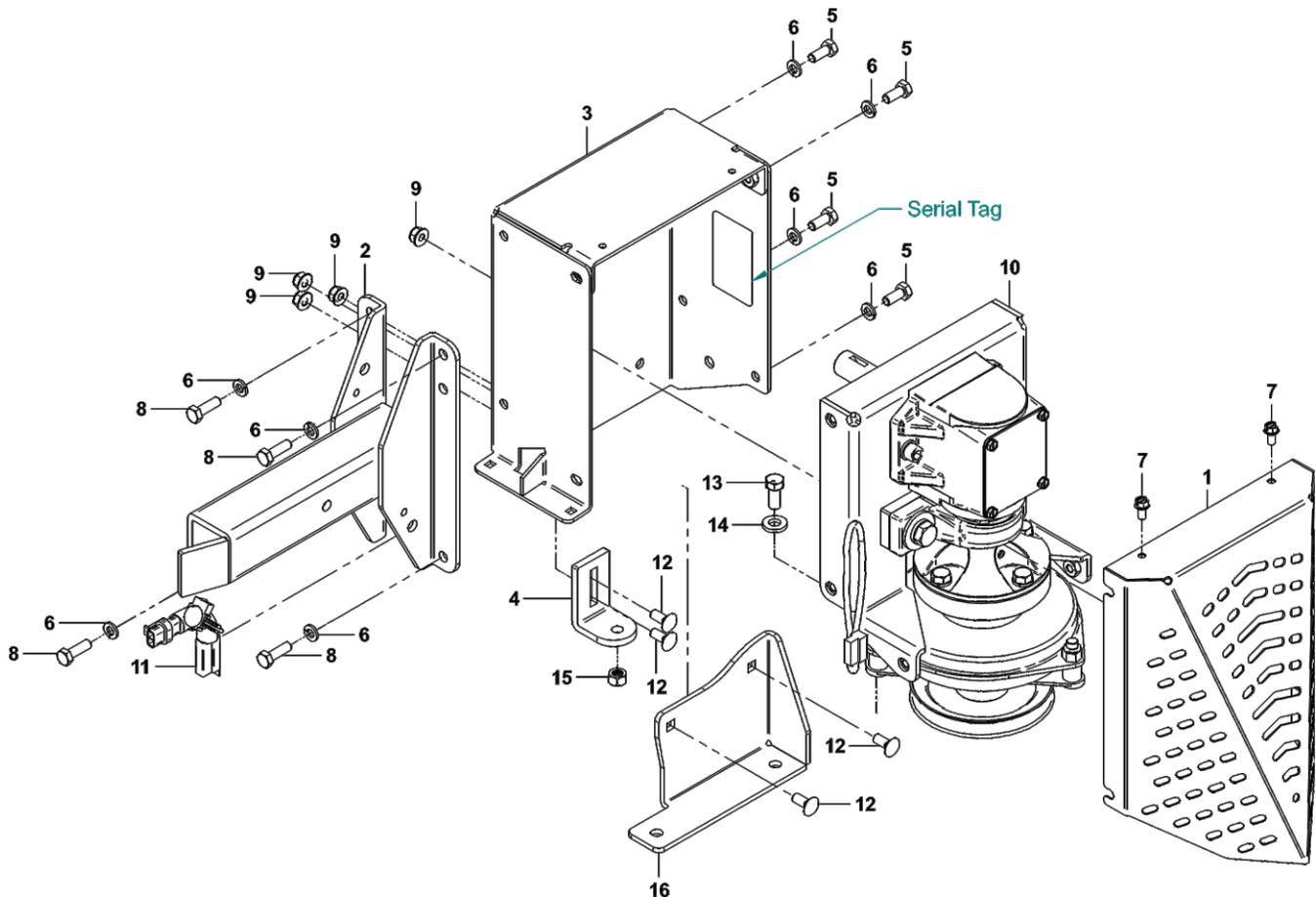
## A2060 01 Mounted Drive Assembly

Item #	Part #	Desc.	Qty.
1	B0940	Spacer Plate	1
2	A2034	Drive Mnt Assy	1
3	K0309	3/8"-16 x 1-1/4" SHCS	2
4	K0048	Lock Washer 3/8"	2
5	K0055	Flat Washer 1/2" / 1.383 OD x .560 ID x .120 T	2
6	K0056	Lock Washer 1/2"	2
7	K1234	HHCS 1/2"-13 x 2"	2
8	A2057_01	Drive Assy	1



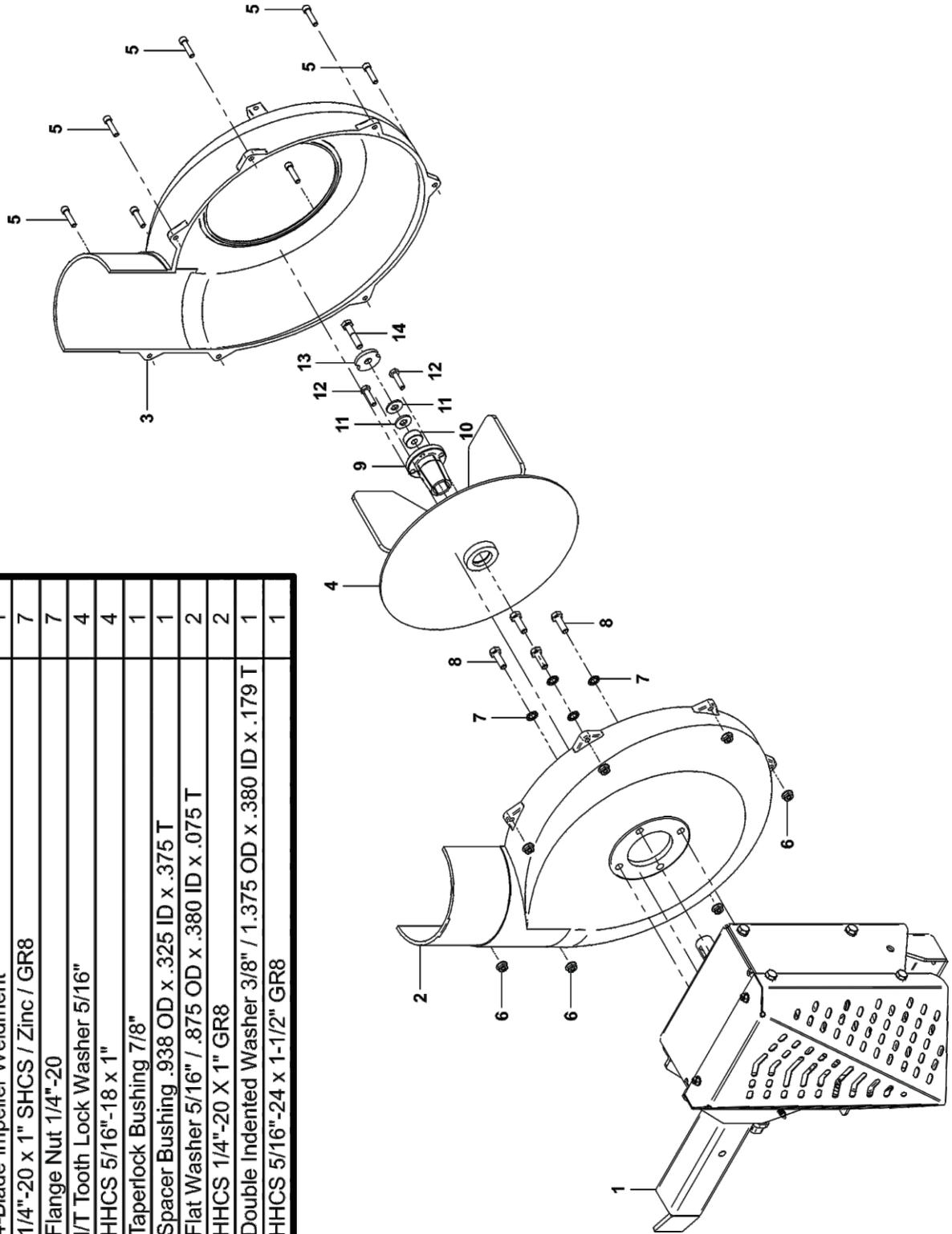
# A2039 02 Base Drive Assembly

Item #	Part #	Desc.	Qty.
1	B0938_01	Drive Guard	1
2	A2032	Drive Arm Assy	1
3	A2035_02	Housing Mnt Assy	1
4	B0942_02	Anti-Rotation Brkt	1
5	K1153	HHCS 5/16"-18 x 3/4"	4
6	K0043	Lock Washer 5/16"	8
7	K0353	HWHTCS 1/4"-20 x 1/2"	2
8	K1154	HHCS 5/16"-18 x 1"	4
9	K2516	Ny-Flange Lock Nut 5/16"-18	4
10	A2060_01	Mounted Drive Assy	1
11	P0271	Quick Connect Wire Harness	1
12	K1142	5/16"-18 x 3/4" Carriage Bolt	4
13	K0343	HHCS 3/8"-16 x 7/8" GR8	1
14	K1477	Flat Washer / 3/8" / .406 ID x .812 OD x .125 Thk	1
15	K1476	Reverse Lock Nut / 3/8"-16 Grade C	1
16	B1100	Idler Assy Mount Plate	1

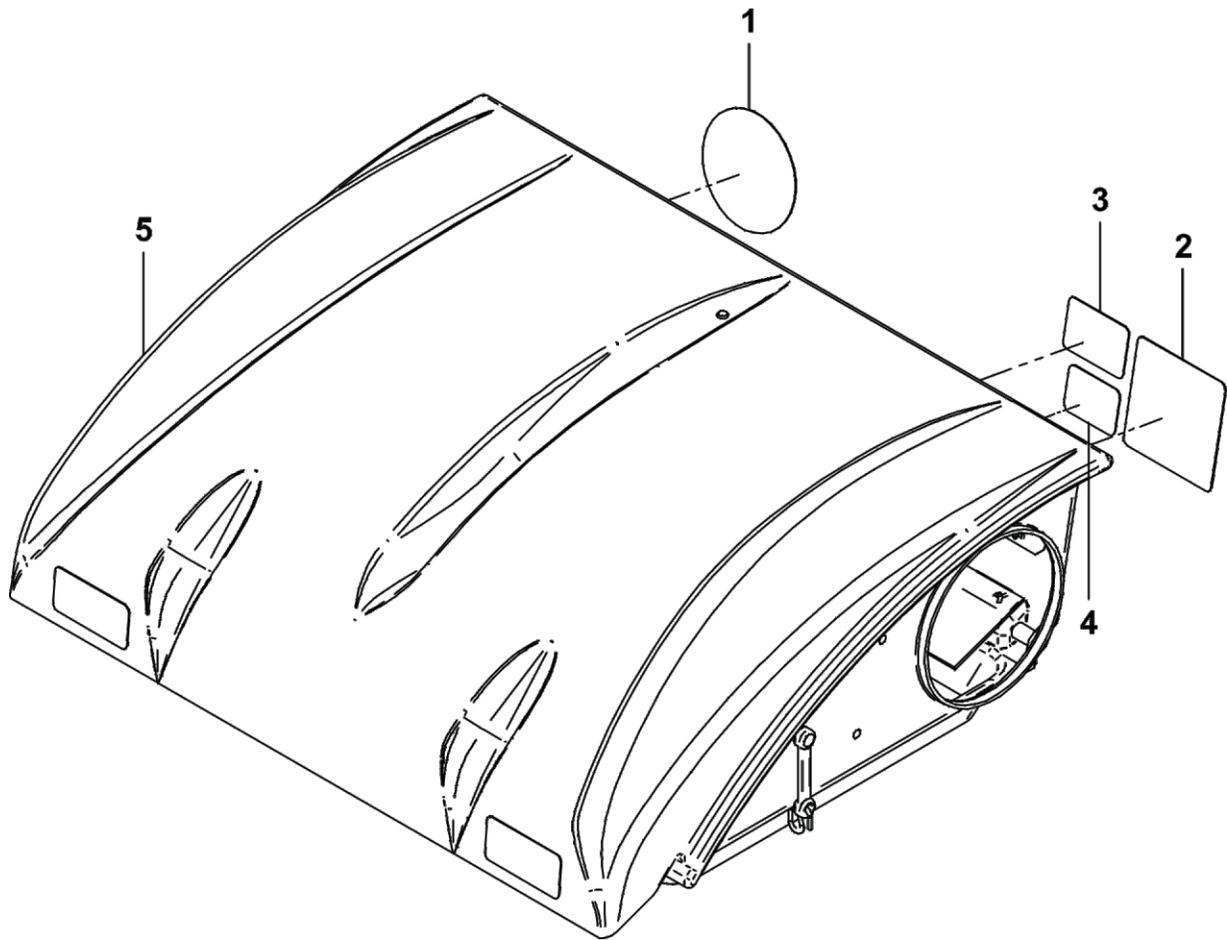


# A2061 02 Drive Assembly / 4-Blade Impeller

Item #	Part #	Desc.	Qty.
1	A2039_02	Drive Assy / Base	1
2	E4052B	Blower Hsg Back	1
3	E4052F	Blower Hsg Front	1
4	A0645	4-Blade Impeller Weldment	1
5	K1401	1/4"-20 x 1" SHCS / Zinc / GR8	7
6	K1126	Flange Nut 1/4"-20	7
7	K0044	I/T Tooth Lock Washer 5/16"	4
8	K1154	HHCS 5/16"-18 x 1"	4
9	S0157	Taperlock Bushing 7/8"	1
10	S0159	Spacer Bushing .938 OD x .325 ID x .375 T	1
11	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	2
12	K1225	HHCS 1/4"-20 X 1" GR8	2
13	K0284	Double Indented Washer 3/8" / 1.375 OD x .380 ID x .179 T	1
14	K1465	HHCS 5/16"-24 x 1-1/2" GR8	1

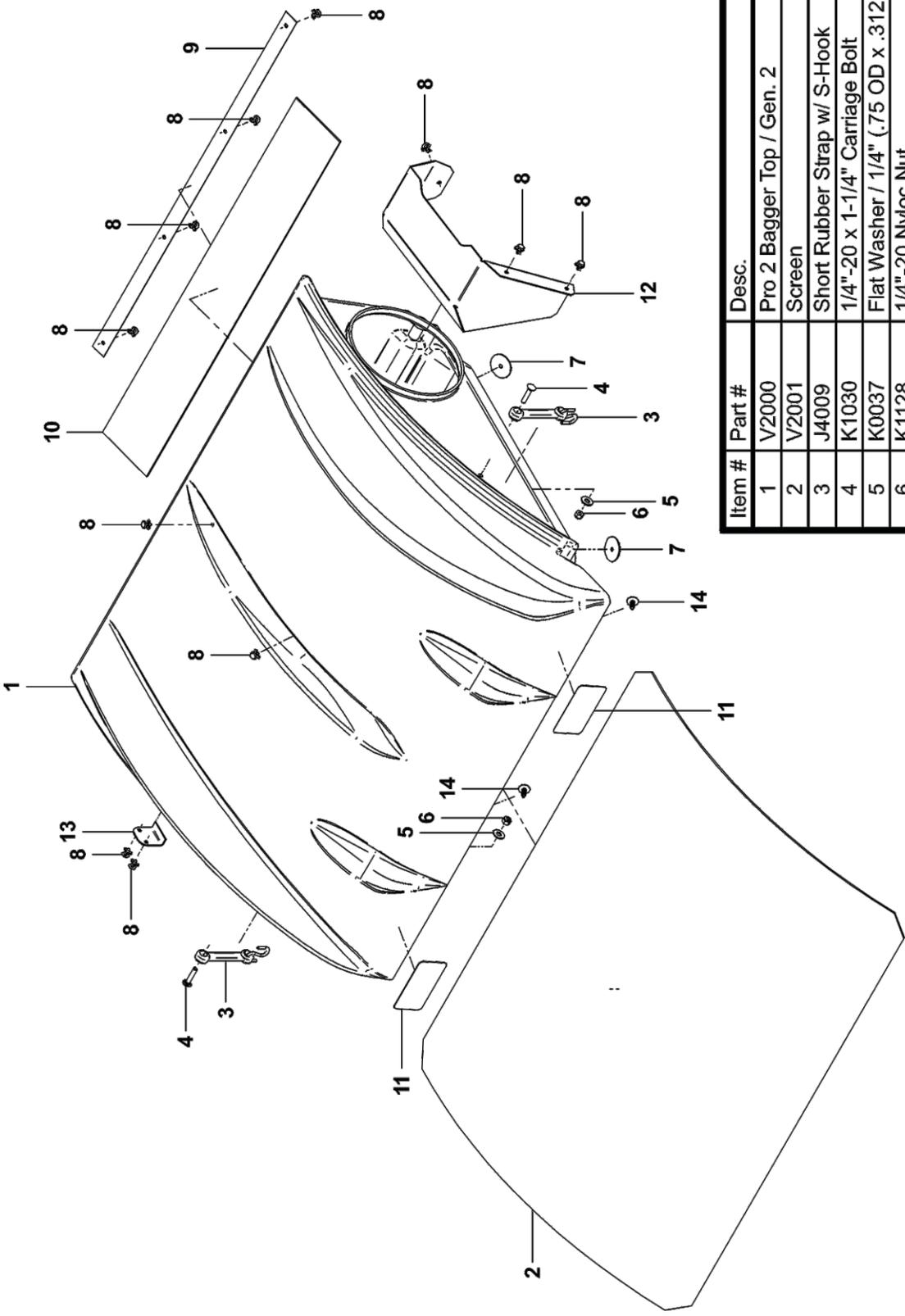


**A2101 Top Assembly / Standard  
Exploded Parts View**



Item #	Part #	Desc.	Qty.
1	R0022	Decal / Built In The USA / Lg	1
2	R1069	Decal / Warning - Turn Off Blower	1
3	R1054	Decal / Important Check Hoses	1
4	R1051	Decal / Warning - Use Hearing Protection	1
5	A2222	Top Assy / P2B+ Gen. 2 / Base Model	1

# A2222 Top Assembly / Base Exploded Parts View



Item #	Part #	Desc.	Qty.
1	V2000	Pro 2 Bagger Top / Gen. 2	1
2	V2001	Screen	1
3	J4009	Short Rubber Strap w/ S-Hook	2
4	K1030	1/4"-20 x 1-1/4" Carriage Bolt	2
5	K0037	Flat Washer / 1/4" (.75 OD x .312 ID x .060 T)	2
6	K1128	1/4"-20 Nyloc Nut	2
7	K0062	Fender Washer / .230 ID x 1.500 OD / Zinc	2
8	K0114	Black Plastic Rivet	11
9	C0067	Dust Guard Mt. Brkt.	1
10	V1117	Dust Guard	1
11	R1057	Decal / 2" x 4" Red Reflector	2
12	C0026	Grass Deflector	1
13	B0676	Hinge Stop Pl.	1
14	K1265	Black Panel Retainer	2

# Unit Model #: 56120901

Mower: Spartan

Owner's Manual: Q0562

Mower Type: RZ

Deck Size: 48"

Vac Type: P2B+ (9 Cu. Ft.)

Deck Type:

Drive Type: PTO-R Driven

Revision #: 0

Fits Year[s]: 2019 & Newer



<p><input type="checkbox"/> <b>A2307 Vac Kit</b></p> <p>(1) HB0822 Vac Kit HW Bag</p> <p>(1) V0025 6" &amp; 7" Inlet</p> <p>(1) A2101 Top Assy</p> <p>(2) B0227 Bag Ring</p> <p>(1) A2301 Upper Frame Assy.</p> <p>(2) G0013 4 Cu. Ft. Collection Bags w/out Labels</p> <p>(2) B0752 Lwr. Mint. Tubes (25")</p>	<p><input type="checkbox"/> <b>A2308 Mount Kit</b></p> <p>(1) B2028 Left Frame Bracket</p> <p>(1) B2029 Right Frame Bracket</p> <p>(1) B2027 Rear Frame Bracket</p> <p>(2) B2034 Frame Connector</p> <p>(1) C0102 Frame Support</p> <p>(1) B2055 Left PTO Mount Plate</p> <p>(1) B2054 Right PTO Mount Plate</p> <p>(2) J0080 8" Hose Clamps</p> <p>(1) E8004 8" Blower Cone</p> <p>(1) F0060-18 6" x 18" Upper Hose</p> <p>(1) F0080-37 8" x 37" Lower Hose</p> <p>(1) HB0830 Safety Interlock Kit</p> <p>(1) A2266 Drive Assy W/ 3-Blade Impeller</p> <p>(1) A1137_01 Handle Ext Kit</p> <p>(1) B2057 PTO Mount Plate Spacer</p> <p>(1) C0104 Exhaust Deflector</p> <p>(1) M0261 A61K Belt</p> <p>(1) HB0823 Mount Kit HW Bag</p> <p>(1) HB0824 Engine Pulley HW Bag</p>	<p><input type="checkbox"/> <b>A2309 Boot Kit</b></p> <p>(1) HB0453 Boot Kit HW Bag</p> <p>(1) B2035 RZ Boot Plate</p> <p>(1) E0040 8" Boot</p> <p>(1) B4331 Boot Rod</p>	<p><input type="checkbox"/> <b>A2121 Dual Weight Kit / Single Caster</b></p> <p>(1) Y0025 28 lb. Weight</p> <p>(2) B1015 Weight Bracket</p> <p>(1) HB0687 Hardware Bag</p> <p>(1) B1014 Dual Weight Bracket Base</p>	<p><input type="checkbox"/> <b>A2121 Dual Weight Kit / Single Caster</b></p> <p>(1) Y0025 28 lb. Weight</p> <p>(2) B1015 Weight Bracket</p> <p>(1) HB0687 Hardware Bag</p> <p>(1) B1014 Dual Weight Bracket Base</p>
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# Unit Model #: 56120902

Mower: Spartan

Owner's Manual: Q0562

Mower Type: RZ

Deck Size: 54" & 61"

Vac Type: P2B+ (9 Cu. Ft.)

Deck Type:

Drive Type: PTO-R Driven

Revision #: 0

Fits Year(s): 2019 & Newer



<p><input type="checkbox"/> <b>A2307 Vac Kit</b></p> <p>(1) HB0822 Vac Kit HW Bag</p> <p>(1) V0025 6" &amp; 7" Inlet</p> <p>(1) A2101 Top Assy</p> <p>(2) B0227 Bag Ring</p> <p>(1) A2031 Upper Frame Assy.</p> <p>(2) G0013 4 Cu. Ft. Collection Bags w/out Labels</p> <p>(2) B0752 Lwr. Mint. Tubes (25")</p>	<p><input type="checkbox"/> <b>A2308 Mount Kit</b></p> <p>(1) B2028 Left Frame Bracket</p> <p>(1) B2029 Right Frame Bracket</p> <p>(1) B2027 Rear Frame Bracket</p> <p>(2) B2034 Frame Connector</p> <p>(1) C0102 Frame Support</p> <p>(1) B2055 Left PTO Mount Plate</p> <p>(1) B2054 Right PTO Mount Plate</p> <p>(2) J0080 6" Hose Clamps</p> <p>(2) J0080 8" Hose Clamps</p> <p>(1) E8004 6" x 18" Upper Hose</p> <p>(1) E8004 8" Blower Cone</p> <p>(1) HB0830 Safety Interlock Kit</p> <p>(1) A2266 Drive Assy W/ 3-Blade Impeller</p> <p>(1) A1137_01 Handle Ext Kit</p> <p>(1) B2057 PTO Mount Plate Spacer</p>	<p><input type="checkbox"/> <b>A2310 Boot Kit</b></p> <p>(1) HB0453 Boot Kit HW Bag</p> <p>(1) B2035 RZ Boot Plate</p> <p>(1) B4331 Boot Rod</p> <p>(1) E0042 8" Boot</p>	<p><input type="checkbox"/> <b>A2121 Dual Weight Kit / Single Caster</b></p> <p>(1) Y0025 28 lb. Weight</p> <p>(2) B1015 Weight Bracket</p> <p>(1) HB0687 Hardware Bag</p> <p>(1) B1014 Dual Weight Bracket Base</p>	<p><input type="checkbox"/> <b>A2121 Dual Weight Kit / Single Caster</b></p> <p>(1) Y0025 28 lb. Weight</p> <p>(2) B1015 Weight Bracket</p> <p>(1) HB0687 Hardware Bag</p> <p>(1) B1014 Dual Weight Bracket Base</p>
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# Unit Model #: 56120903

Mower: Spartan

Owner's Manual: Q0562

Mower Type: RZ

Deck Size: 48"

Vac Type: P2B+ (9 Cu. Ft.)

Deck Type:

Drive Type: PTO-X Driven

Revision #: 0

Fits Year(s): 2018 & Newer



**A2307 Vac Kit**

- (1) HB0822 Vac Kit HW Bag
- (1) V0025 6" & 7" Inlet
- (1) A2101 Top Assy
- (2) B0227 Bag Ring
- (1) A2031 Upper Frame Assy.
- (2) G0013 4 Cu. Ft. Collection Bags w/out Labels
- (2) B0752 Lwr. Mint. Tubes (25")

**A2312 Mount Kit**

- (1) B2029 Right Frame Bracket
- (1) M0319 Engine Pulley HW Bag
- (1) AK78 Belt
- (1) HB0826 Engine Pulley HW Bag
- (1) HB0825 Mount Kit HW Bag
- (1) HB0827 Wire Harness HW Bag
- (1) C0102 Frame Support
- (1) A2067\_02 Idler Mount Assy.
- (1) B2037 Mount Arm / Gusset
- (1) A2207 Mount Arm / Tube Assy.
- (1) B2028 Left Frame Bracket
- (1) B2027 Rear Frame Bracket
- (2) J0060 6" Hose Clamps
- (2) J0080 8" Hose Clamps
- (1) B2032 Top / Mount Arm
- (1) B2033 Bottom / Mount Arm
- (1) E6009 8" Blower Cone
- (1) A2061\_02 Drive Assy W/ 4-Blade Impeller
- (1) C0104 Exhaust Deflector
- (1) F0060-18 6" x 18" Upper Hose
- (1) A2069\_02 Belt Guard Assy.
- (1) F0080-37 8" x 37" Lower Hose

**A2309 Boot Kit**

- (1) HB0453 Boot Kit HW Bag
- (1) B2035 RZ Boot Plate
- (1) E0040 8" Boot
- (1) B4331 Boot Rod

**A2121 Dual Weight Kit / Single Caster**

- (1) HB0687 Hardware Bag
- (2) Y0025 28 lb. Weight
- (1) B1015 Weight Bracket Clamp
- (1) B1014 Dual Weight Bracket Base

**A2121 Dual Weight Kit / Single Caster**

- (1) HB0687 Hardware Bag
- (2) Y0025 28 lb. Weight
- (1) B1015 Weight Bracket Clamp
- (1) B1014 Dual Weight Bracket Base



# Unit Model #: 56120904

Mower: Spartan

Owner's Manual: Q0562

Mower Type: RZ

Deck Size: 54" & 61"

Vac Type: P2B+ (9 Cu. Ft.)

Deck Type:

Drive Type: PTO-X Driven

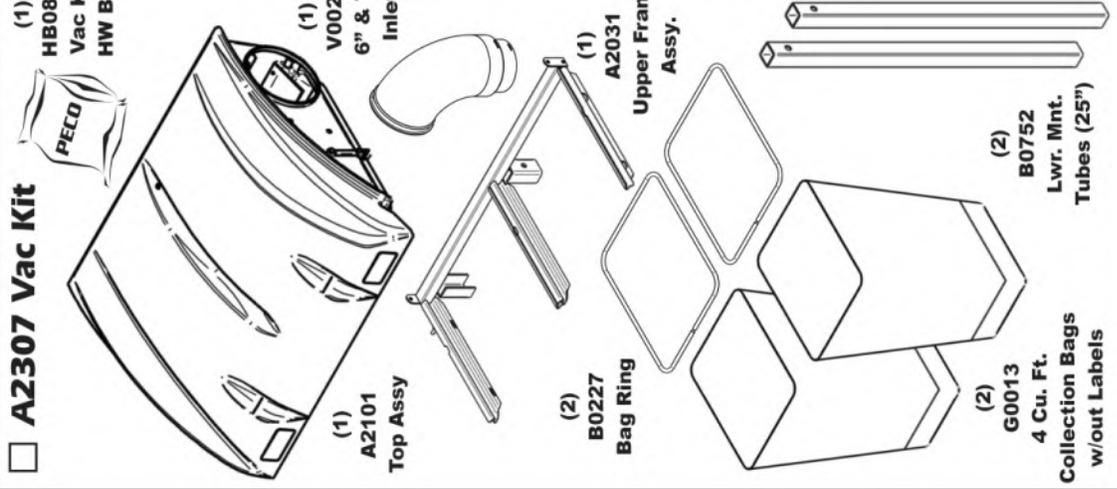
Revision #: 0

Fits Year(s): 2018 & Newer



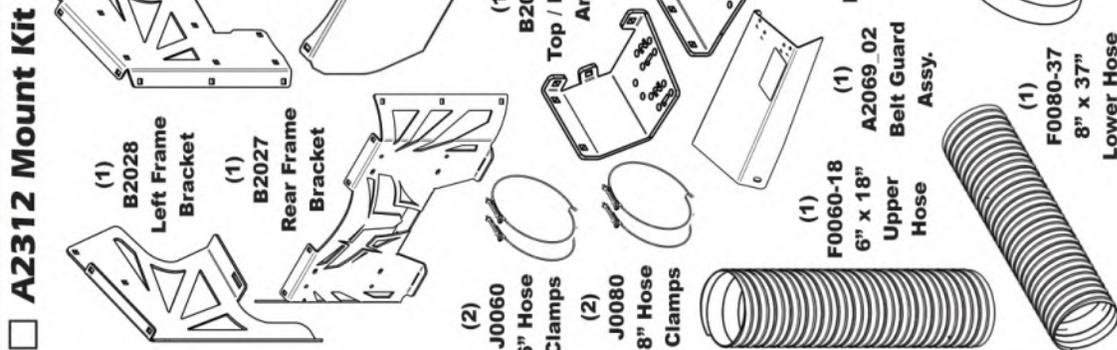
**A2307 Vac Kit**

- (1) HB0822 Vac Kit HW Bag



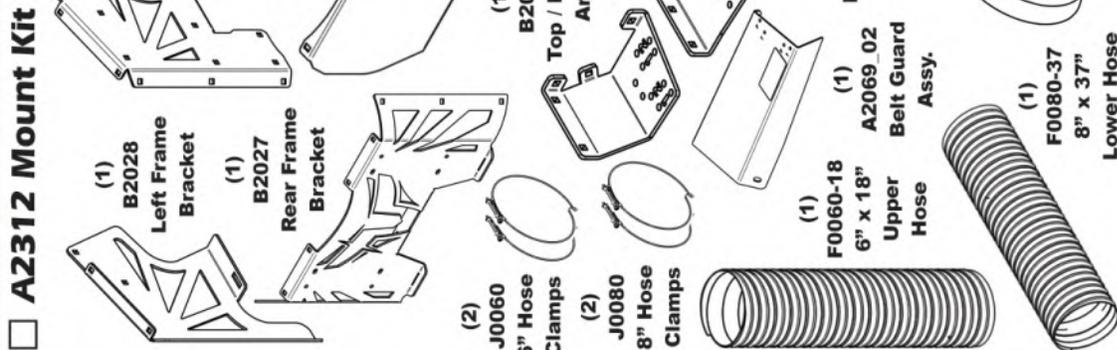
**A2121 Dual Weight Kit / Single Caster**

- (1) A2101 Top Assy
- (2) B0227 Bag Ring
- (2) G0013 4 Cu. Ft. Collection Bags w/out Labels
- (2) B0752 Lwr. Mint. Tubes (25")
- (1) V0025 6" & 7" Inlet
- (1) A2031 Upper Frame Assy.



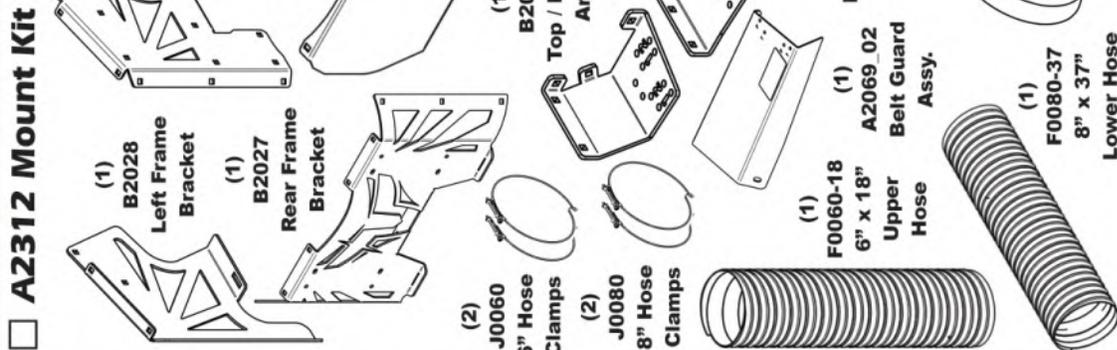
**A2312 Mount Kit**

- (1) B2028 Left Frame Bracket
- (1) B2027 Rear Frame Bracket
- (1) B2029 Right Frame Bracket
- (2) B2034 Frame Connector
- (1) C0102 Frame Support
- (1) A2067\_02 Idler Mount Assy.
- (1) B2032 Top / Mount Arm
- (1) B2037 Mount Arm / Gusset
- (1) C0104 Exhaust Deflector
- (1) E8004 8" Blower Cone
- (1) A2061\_02 Drive Assy W/ 4-Blade Impeller
- (1) F0060-18 6" x 18" Upper Hose
- (1) A2069\_02 Belt Guard Assy.
- (1) F0080-37 8" x 37" Lower Hose
- (2) J0060 6" Hose Clamps
- (2) J0080 8" Hose Clamps
- (1) M0319 AK78 Belt
- (1) HB0826 Engine Pulley HW Bag
- (1) HB0825 Mount Kit HW Bag
- (1) HB0827 Wire Harness HW Bag
- (1) A2207 Mount Arm / Tube Assy.



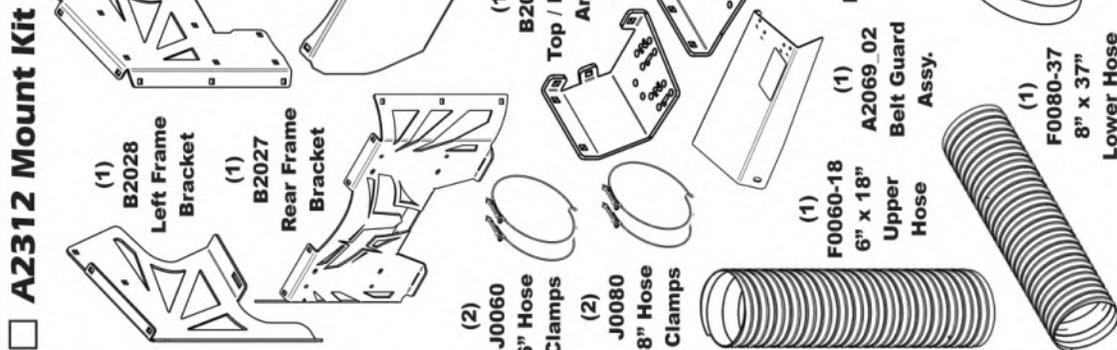
**A2310 Boot Kit**

- (1) HB0453 Boot Kit HW Bag
- (1) B2035 RZ Boot Plate
- (1) E0042 8" Boot
- (1) B4331 Boot Rod



**A2121 Dual Weight Kit / Single Caster**

- (1) HB0687 Hardware Bag
- (1) B1014 Dual Weight Bracket Base
- (2) Y0025 28 lb. Weight
- (1) B1015 Weight Bracket Clamp



**A2121 Dual Weight Kit / Single Caster**

- (1) HB0687 Hardware Bag
- (1) B1014 Dual Weight Bracket Base
- (2) Y0025 28 lb. Weight
- (1) B1015 Weight Bracket Clamp

## SAFETY DECALS

To promote safe operation, New PECO, Inc. supplies safety decals on all products manufactured. Damage can occur to safety decals either through shipment, use or reconditioning. Contact your local Service Center for replacement decals.



Part# R1070  
PECO Logo



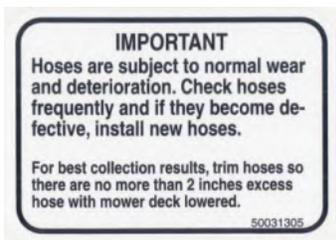
Part# R0022  
Designed & Built  
In The USA



Part #: R2007  
Danger - Never Use Hands



Part #: R2008  
Danger - Rotating Blades



Part #: R1054  
Important - Hose Wear



Part #: R1057 - (2)  
Red Reflectors



Part #: R1069  
Warning - Turn Off Blower



Part # R0024  
Danger - Keep Hands  
Clear



Part #: R1051  
Warning - Hearing Protection



Part # R0025  
Danger - Rotating  
Blades

## SECTION III OPERATING INSTRUCTIONS

### General Safety

Only qualified people familiar with this operator's manual and the mower's operator's manual should operate this machine.

### Operation And Tips On Mowing

- A. Perform BEFORE EACH USE the maintenance list referenced in Section IV.
- B. Start mower.
- C. With the mower at high idle speed, engage the mower deck.
- D. While seated in the operator's seat, move Bagger PTO switch to the on position. With the PTO assembly engaged, you can proceed to operate the control levers of the mower.

**NOTE:** If the collection system does not appear to be collecting the grass clippings, disengage the deck and PTO assembly, then, engage the parking brake and turn the mower off. Check upper and lower hoses for any clogs.

To obtain the maximum effectiveness from your collection system, the tips listed below should be followed:

- \* Watch your speed- Normal conditions will allow a speed of up to approximately 4 mph, but thick, heavy damp conditions will require reduced ground speed.
- \* Mow with sharp blades- A sharp blade cuts cleaner.
- \* Wet grass and leaves will decrease effectiveness and will increase horsepower requirements.
- \* Mow at higher cutting heights- Remove and mulch no more than 2" of grass length with each mowing. (Experts recommend not cutting off more than 1/3 of the grass blade length at any given time.)
- \* Mow twice, at different height settings, (high, then low), if grass is extra tall.
- \* Remember that horsepower requirements will vary with the mowing conditions such as type and height of turf grass, moisture content, amount of leaves, whether the terrain is flat or hilly, etc.

### Disengagement Of The PTO Assembly

- A. To disengage the PTO assembly, move Bagger PTO switch to the off position.

**WARNING:** The PTO assembly blades will continue to spin. DO NOT TOUCH the PTO assembly, pulleys, or the belt until the tractor is turned off. DO NOT adjust the belt tension until the mower is turned off. Refer to the Belt Installation section of the manual.

### Unloading The Collection System

**NOTE:** To determine when the collection bags are full, follow the following steps:

- A. Stop the forward movement of the mower.
- B. Disengage the mower deck.
- C. Disengage the PTO assembly.
- D. Engage the parking brake.
- E. Once the parking brake has been engaged, then and only then, walk behind the mower and check the collection bags by first unhooking the rubber strap with S-hook that secures the plastic top, then lift the plastic hood. Load in bags should not exceed the height of the installed bag.
- F. To remove the bags from the frame, slide bags out and turn bags over to deposit clippings.
- G. Slide empty bags back onto the frame and secure plastic top with the rubber strap with S-hook.

**NOTE:** Do not allow collection bags to become over-filled as potential damage may occur to your equipment. Also, be sure to clean the hood screen as needed.

## SECTION IV MAINTENANCE

### Maintenance Checklist

Before each use:

1. Check blades and spindles to be sure that no foreign objects, such as wire or steel strapping bands, are wrapped around them.
2. Inspect blades for wear. Replace if necessary. If it is necessary to sharpen the blades, remove the blades from the spindles before sharpening. DO NOT sharpen blades while still attached to the mower.

3. Make sure all shields are in place and in good condition. Repair or replace any missing or damaged shields.
4. Perform lubrication per instructions.
5. Listen for abnormal sounds, which might indicate loose parts, damaged bearings, or other damage. Correct any deficiency before continuing operation.
6. With the engine off, engage the blower assembly. Check the belt tension and inspect the pulley belt for cracks or tears.
7. Check for wear or deterioration of the upper or lower hoses. If there are any portions of the hose that have been torn or worn through, replace immediately.

After Each Use:

1. Clean all debris from machine especially from the container, underneath the belt shields, and safety decals. Replace any missing or illegible decals.
2. Inspect the unit for worn or damaged components. Repair or replace before the next use. Any replacement component installed during repair shall include the component's current safety decal specified by the manufacturers to be affixed to the component.
3. Under normal usage, the bag material is subject to deterioration and wear and should therefore be frequently checked for necessary replacement. Any replacement bag should be checked to ensure compliance with the original manufacturer's recommendations or specifications.
4. Check belt for proper tension.

## Lubrication

Gearbox:

**NOTE:** The gearbox is filled with 6.0 oz. of Mobilube HD Plus 80W-90 oil and permanently sealed. There is no need for scheduled lubrication. The oil level should only be checked if a leak is observed or if a change in gearbox noise is noticed.

Operators are recommended to check for leaks weekly, if a leak is observed, both the gasket and the seals are recommended to be replaced.

Replace the oil using 5.5 oz. of the recommended Mobilube HD Plus 80W-90 oil. Be sure to not overfill.

Blower Assembly:

**NOTE:** The following is for older PTO models that contain a greaseable zerk fitting. Newer models contain maintenance-free bearings and are without a greasable fitting.

1. On initial use: Grease the fitting on the blower shaft.
2. Every 25 hours of use: Re-grease the grease fitting.

**NOTE:** Use only white lithium based grease for lubrication of the shaft on the blower assembly.

## SECTION V - PARTS & SERVICE

### Parts And Service Information

Collection system owners should record the name and telephone number of their Service Center. Your Service Center will be happy to supply replacement parts, accessories, and do any service or repairs to your collection system. If for any reason your Service Center is unable to service your collection system or supply replacement parts, contact New PECO, Inc. and include the following information on the chart below.

### DOCUMENT THE FOLLOWING INFORMATION FOR FUTURE REFERENCE

**Unit Model Number:** \_\_\_\_\_

**Unit Engine Size:** \_\_\_\_\_

**Unit Serial Number:** \_\_\_\_\_

**Date of purchase:** \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**Dealer/Distributor Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Phone Number:** \_\_\_\_\_

**New PECO, Inc.**

**10 Walden Dr | Arden, North Carolina 28704**

**Phone: 1-800-438-5823 | 828-684-1234**

**Fax: 828-684-0858**

**Email: [peco@lawnvac.com](mailto:peco@lawnvac.com)**

**Website: [www.lawnvac.com](http://www.lawnvac.com)**

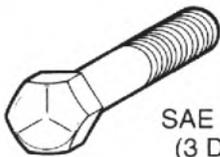
# TORQUE SPECIFICATIONS

Proper torque for American fasteners used on Peco equipment.  
Recommended Torque in Foot Pounds (Newton Meters).\*

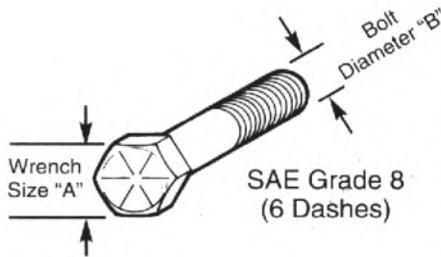
## AMERICAN Bolt Head Markings



SAE Grade 2  
(No Dashes)



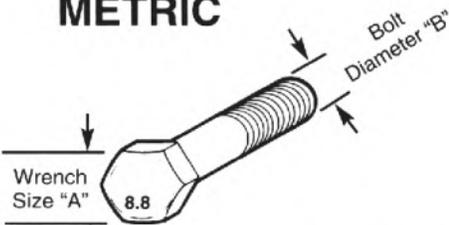
SAE Grade 5  
(3 Dashes)



SAE Grade 8  
(6 Dashes)

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144 (195)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288(1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

## METRIC



Numbers appearing on bolt heads indicate ASTM class.

Proper torque for metric fasteners used on Peco equipment.  
Recommended torque in foot pounds (newton Meters).\*

WRENCH SIZE (mm) "A"	BOLT DIA. (mm) "B"	ASTM 4.6	ASTM 8.8	ASTM 9.8	ASTM 10.9
8	5	1.8 (2.4)		5.1 (6.9)	6.5 (8.8)
10	6	3 (4)		8.7 (12)	11.1 (15)
13	8	7.3 (10)		21.1 (29)	27 (37)
16	10	14.5 (20)		42 (57)	53 (72)
18	12	25 (34)	74 (100)	73 (99)	93 (126)
21	14	40 (54)	118 (160)	116 (157)	148 (201)
24	16	62 (84)	167 (226)	181 (245)	230 (312)
30	20	122 (165)	325 (440)		449 (608)
33	22		443 (600)		611 (828)
36	24	211 (286)	563 (763)		778 (1054)
41	27		821 (1112)		1138 (1542)
46	30	418 (566)	1119 (1516)		1547 (2096)

\*Use 75% of the specified torque value for plated fasteners. Use 85% of the specified torque values for lubricated fasteners.

# Troubleshooting

2017 (v1.0)

## Collection System Performance

<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Abnormal Vibration	<ul style="list-style-type: none"> <li>• Cutting blades are bent or unbalanced</li> <li>• Loose blower pulley or pulley assembly</li> <li>• Impeller blade out of balance</li> </ul>	<ul style="list-style-type: none"> <li>• Install new cutting blade</li> <li>• Tighten the pulley</li> <li>• Contact dealer to replace</li> </ul>
Reduced collection system performance	<ul style="list-style-type: none"> <li>• Low engine speed</li> <li>• Plugged screen</li> <li>• Loose belt</li> <li>• Full collection bags</li> </ul>	<ul style="list-style-type: none"> <li>• Always operate collection system at full throttle</li> <li>• Remove debris, leaves, or grass clippings from the screen</li> <li>• Replace/tighten belt</li> <li>• Empty the collection bags</li> </ul>
Blower and hoses plugging too frequently	<ul style="list-style-type: none"> <li>• Collection bags are too full</li> <li>• Low engine speed</li> <li>• Grass is too wet</li> <li>• Grass is too long</li> <li>• Ground speed is too fast</li> <li>• Worn belt</li> <li>• Loose belt</li> </ul>	<ul style="list-style-type: none"> <li>• Dump more frequently</li> <li>• Always operate collection system at full throttle</li> <li>• Cut grass when it is dry</li> <li>• Cut the grass several times</li> <li>• Drive slower at full throttle</li> <li>• Replace belt</li> <li>• Adjust the pulley and tighten belts</li> </ul>
Debris blowout	<ul style="list-style-type: none"> <li>• Collection bags are too full</li> <li>• Plug/clog in the collection system</li> <li>• Ground speed is too fast</li> </ul>	<ul style="list-style-type: none"> <li>• Dump more frequently</li> <li>• Clean the collection system</li> <li>• Drive more slowly at full throttle</li> </ul>
Impeller doesn't rotate freely	<ul style="list-style-type: none"> <li>• Plug in the blower housing</li> <li>• Worn impeller blade</li> <li>• Shaft bearings bad/failing</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the blower housing</li> <li>• Contact dealer to replace</li> <li>• Contact dealer to replace</li> </ul>

**Notes**



**New PECO, Inc.**  
**10 Walden Dr | Arden, North Carolina 28704**  
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