



# PTO DRIVEN GRASS COLLECTION SYSTEM

Model# 751501

# PTO3B

Universal Category 1 - 3Pt Hitch Pro3 Bagger



## OPERATOR'S MANUAL

ASSEMBLY • OPERATION • MAINTENANCE

# GRASS COLLECTION SYSTEM

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## 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 warrantied 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 warrantied 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 warrantied 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 warrantied 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/blade assembly, is mounted on the right side of the unit. The blower draws grass clippings from the discharge area of the cutter deck back and up to the collection bags mounted to a three-point hitch at the rear of the mower. The operator can engage the blower/blade assembly by engaging the mower's rear PTO. Once the bags are full of clippings, they can be easily released for dumping.



**NOTE:** Text displayed in a colored box will specify the particular Tractor being referenced. See the example below.

**LS Tractor**

**John Deere**

**Kubota**

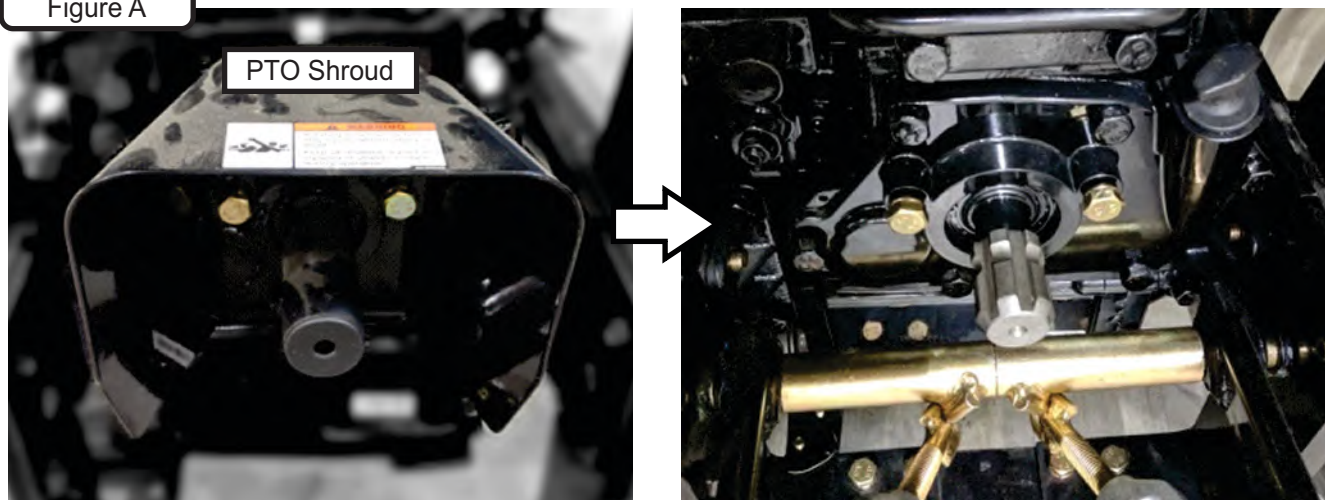
## Section II - INSTALLATION FOR USE

### Mower Preparations

**Note:** Read and review each step of this manual thoroughly. Review the instructions on Pg.18 carefully and be sure to understand the steps to properly adjust and run the PTO Slip Clutch to help prevent any damage.

Before the installation of your unit, if applicable, prepare your tractor by removing the PTO Shroud from the rear of the tractor. Refer to Figure A. This will allow for the installation of the PTO Slip Clutch.

Figure A

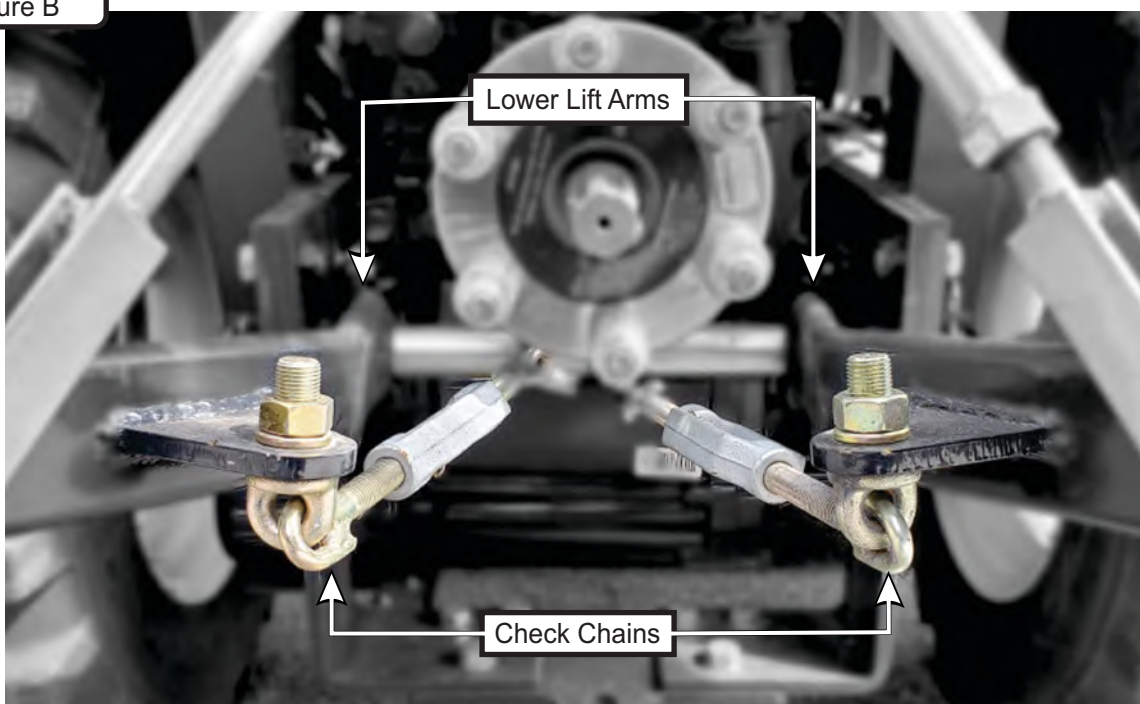


Next, check your tractor's check chain position. If the check chains are positioned between the tractor's lower lift arm, as depicted in Figure B, you'll need to reposition the (2) check chains.

For **Kubota BX80 Series** Tractors, refer to the instructions on the next page.

Reposition the (2) check chains by flipping them and moving them to the bottom of the tractor's lower lift arms attachment points. Refer to Figure B. This will provide room for the installation and adjustments of the PTO Slip Clutch from page 15.

Figure B





## Mower Preparations (Continued)

### For Kubota BX80 Series Tractors

Remove the rear bottom bracket, as shown in Figure C, underneath your tractor's PTO and set aside the hardware. Replace the removed bracket with the provided Check Chain Mount Bracket P#(B2092) as shown in Figure D.

Figure C

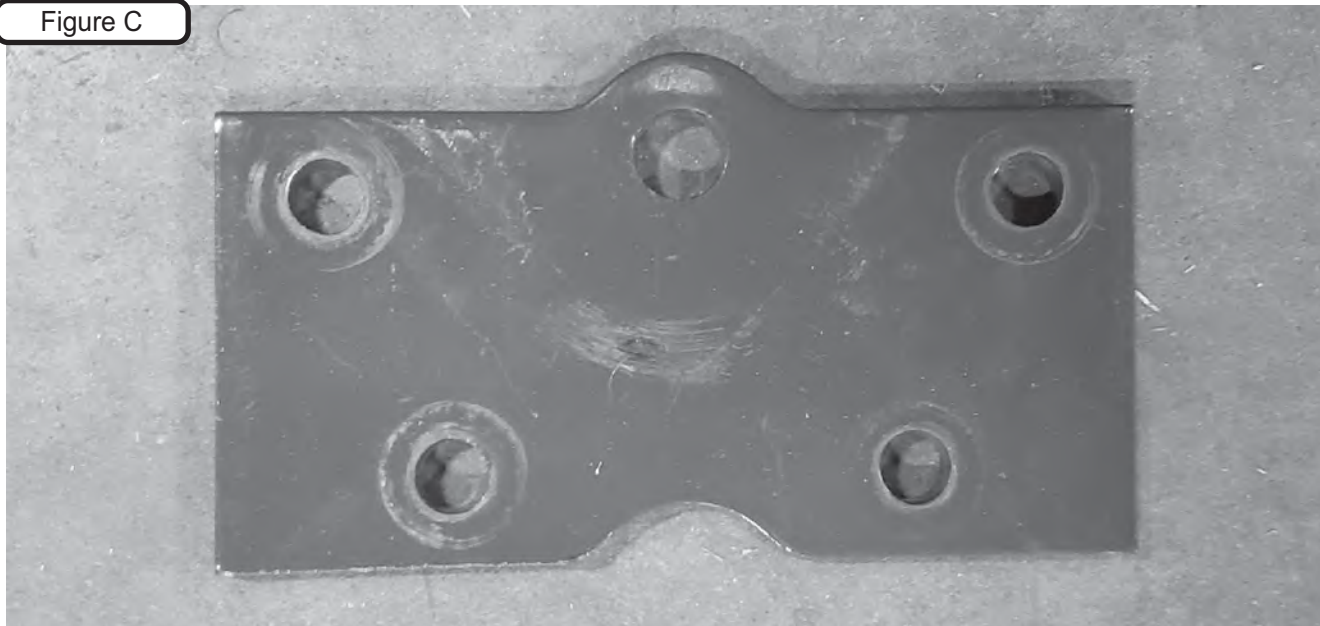
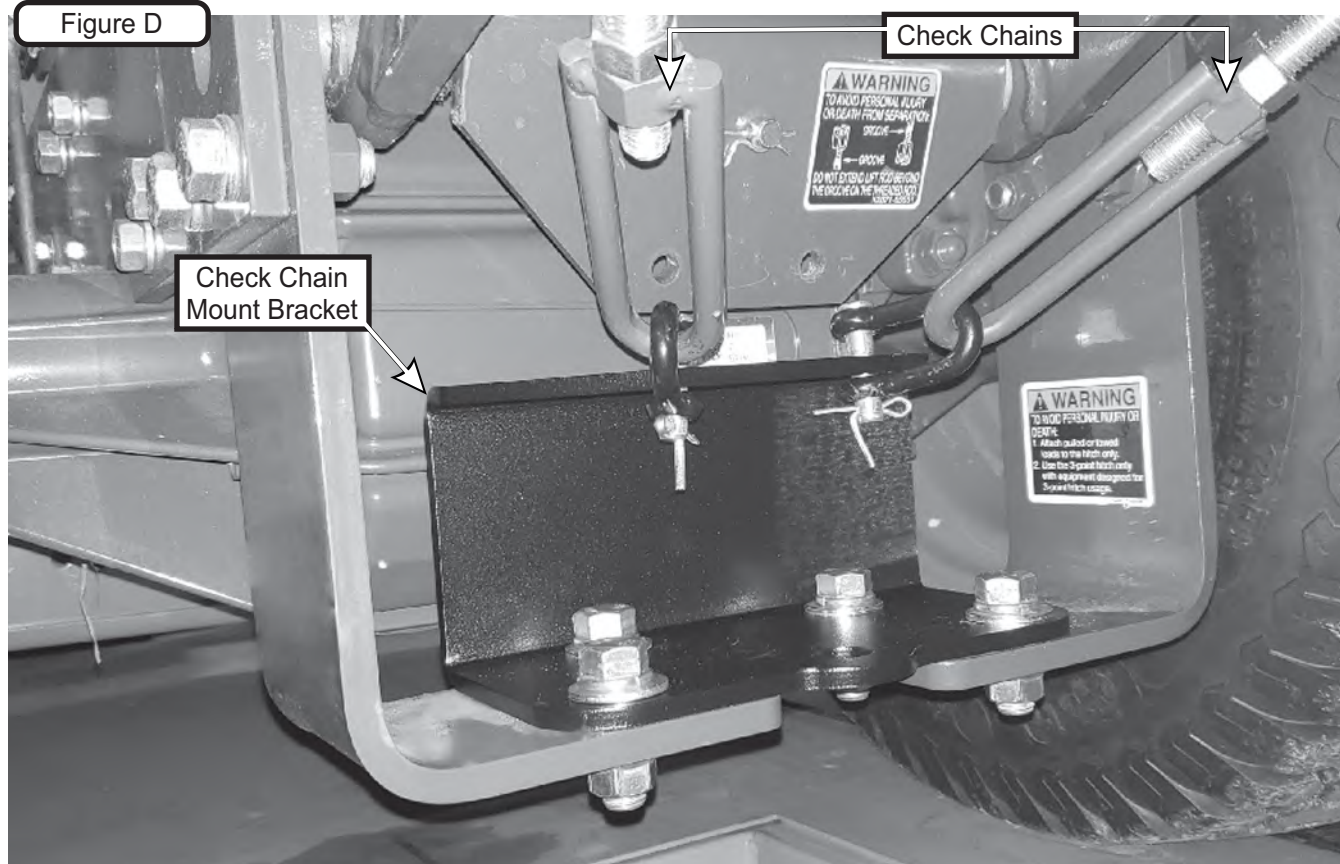


Figure D



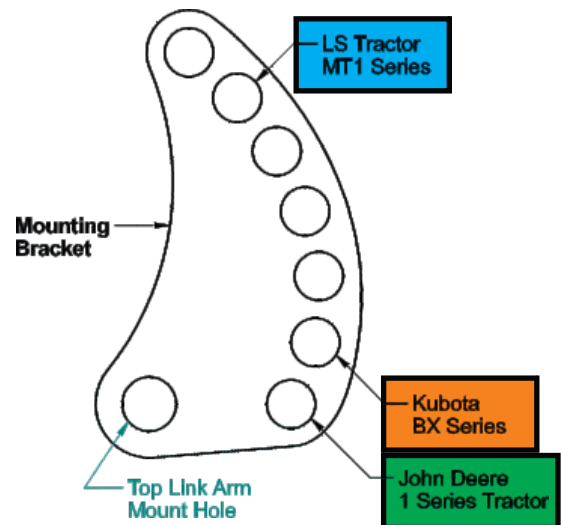
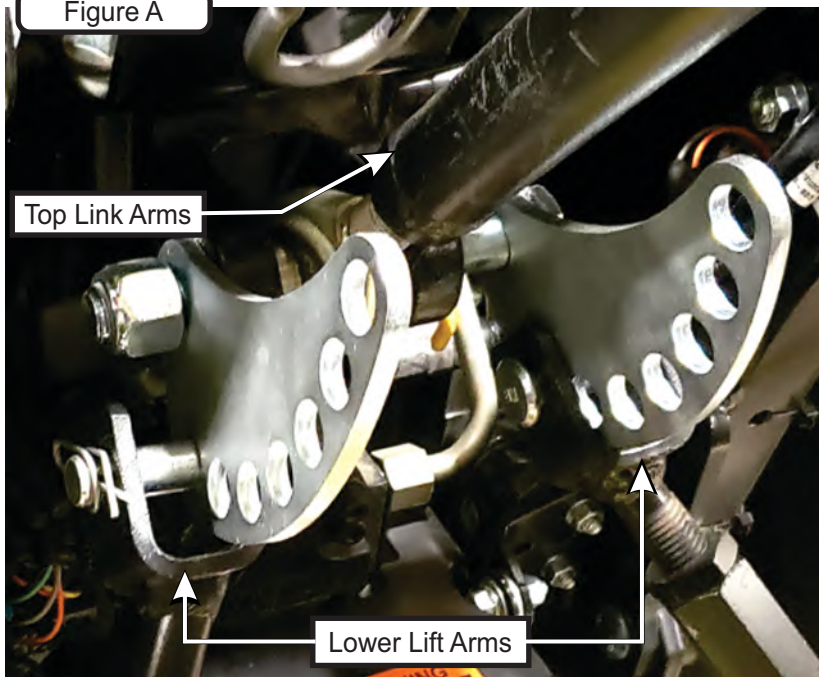
Reposition the (2) check chains from the rear of the tractor down onto the Check Chain Mount Bracket by flipping them and moving them down and securing them using the OEM hardware. Refer to Figure D.

Repositioning the check chains will provide room and clearance for the installation and adjustments of the PTO Slip Clutch from page 18.

## Mower Preparations (Continued)

Lastly, install (2) Mounting Brackets to the top link arm and lower lift arms. Refer to Figure A for the positioning of the Mounting Brackets. Secure the Mounting Brackets to the top link arm by using (1) 3/4"-10 x 6" HHCS (Item #2) and (1) 3/4" Nyloc Nut (Item #3). Refer to Figure B.

Figure A

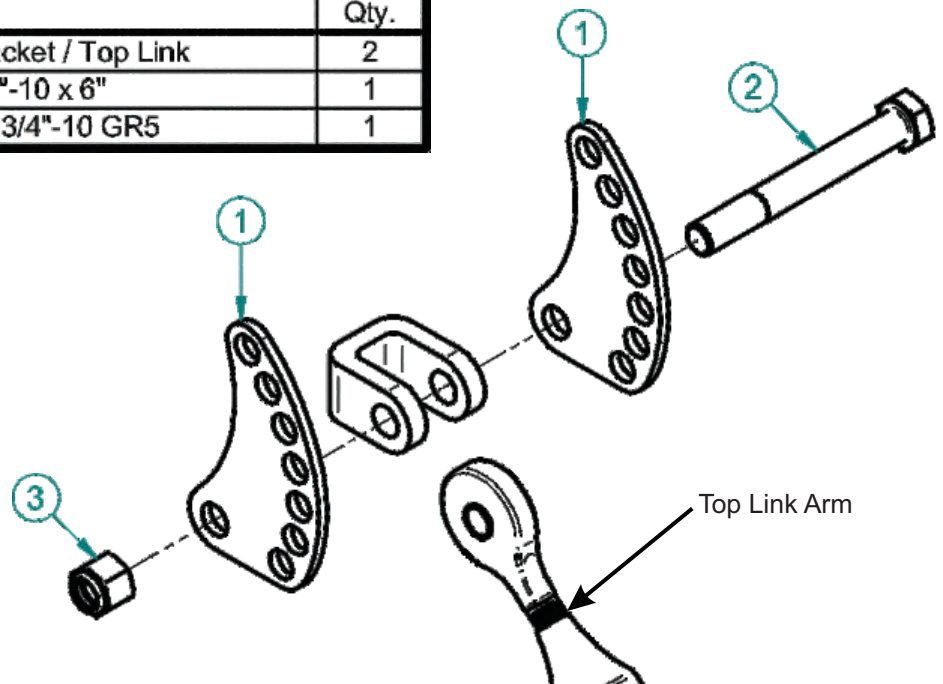
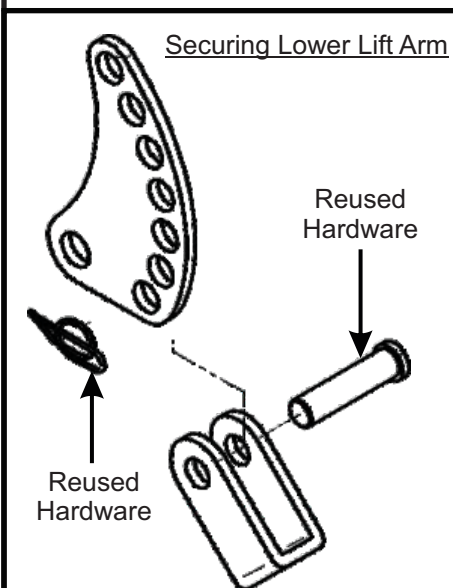


The Mount Brackets are designed to accommodate a range of lower lift arm positions. Rotate the Mount Brackets so that your lower lift arms are aligned and positioned to the mounting holes of the Mount Brackets. The lower lift arms should be positioned so that the collection unit will be sitting upright and perpendicular to the ground. Once the desired position is determined, secure the (2) lower lift arms to the Mounting Brackets by reusing the provided hardware. Refer to Figure B.

**NOTE:** Some part features have been hidden from view for visual clarity.

Figure B

Item #	Part #	Desc.	Qty.
1	B2014	Mount Bracket / Top Link	2
2	K0116	HHCS 3/4"-10 x 6"	1
3	K1433	Nyloc Nut 3/4"-10 GR5	1



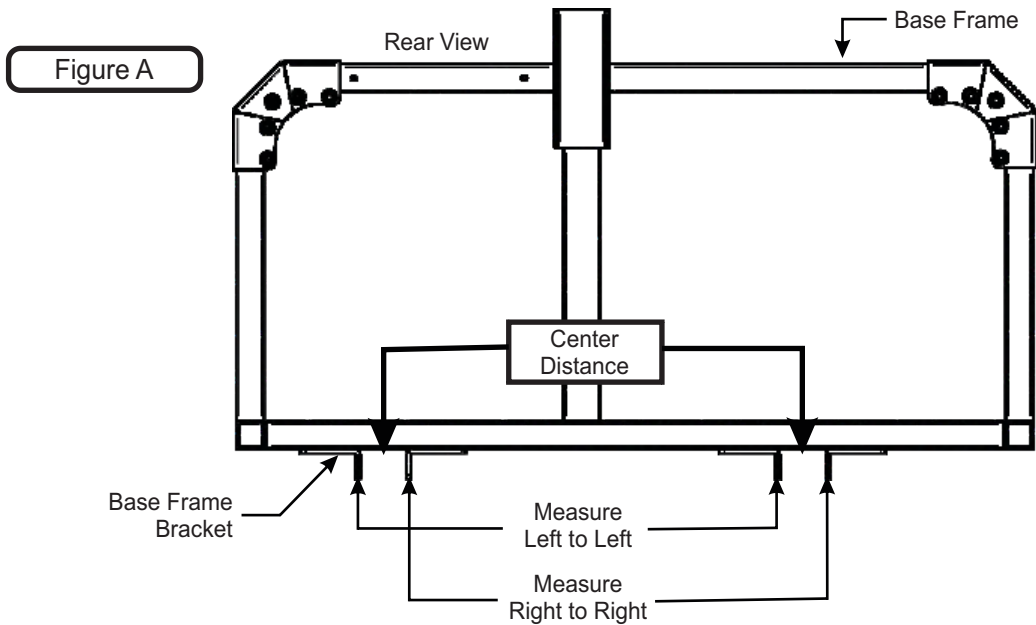
For Kubota BX80 Series, use (1) 3/4"-10 x 4" HHCS P#(K1500) for Item #2



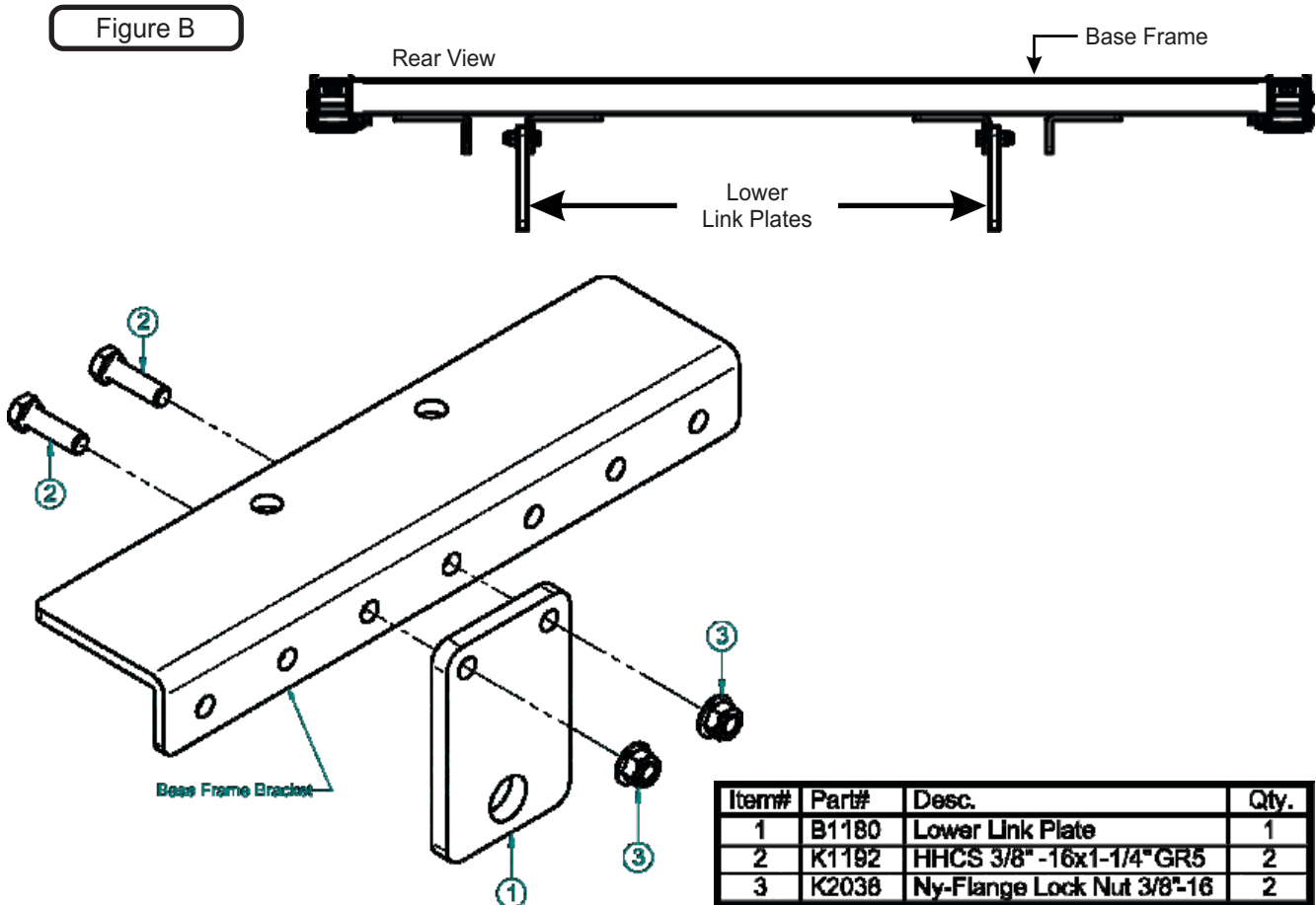
# Link Plates Assembly & Installation

To accommodate the Grass Collection System, adjust the lower lift arms of the three-point hitch. Viewing from the rear, measure either from the left to left of the Base Frame Brackets or the right to right of the Base Frame Brackets to find the center of distance. Refer to Figure A. Adjust the three-point hitch lower lift arms to the measured distance.

NOTE: Some part features have been hidden from view for visual clarity.



Align the holes of the Lower Link Plates (Item #1) to the second set of holes from the rear of the Base Frame Bracket. Refer to Figure B. Secure the Lower Link Plates with (2) 3/8"-16 x 1-1/4" Hex Bolts (Item #2) and (2) 3/8"-16 Flange Nuts (Item #3) per Link Plate.



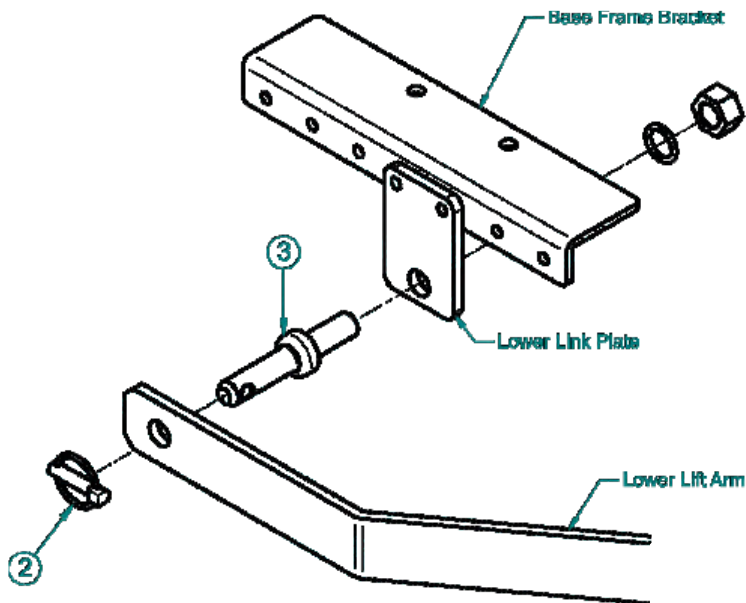
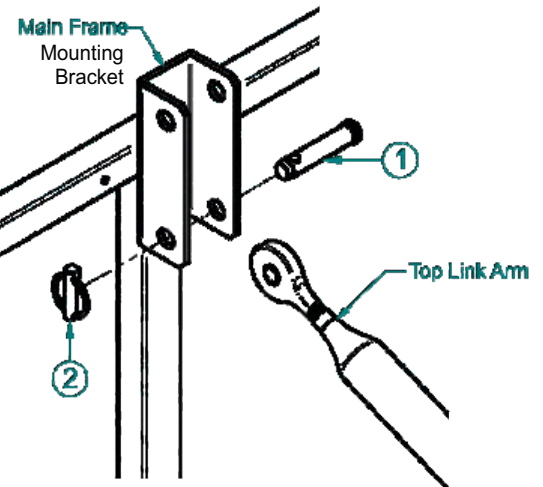
## Base Frame 3-Pt Hitch Installation

Raise the Box and Main Frame Assembly until the Mounting Bracket of the Main Frame Assembly aligns with the top link arm. Secure the top link hitch socket using (1) 3/4" x 3" Clevis Pin (Item #1) and (1) 7/16" x 1-3/4" Lynch Pin (Item #2). Refer to Figure A.

Align the lower lift arm to the outside of the Lower Link Plates and secure the lower lift arm by using (1) 7/8" Hitch Mounting Pin (Item #3) and (1) 7/16" x 1-3/4" Lynch Pin (Item #2) per lower lift arm. Refer to Figure A.

Figure A

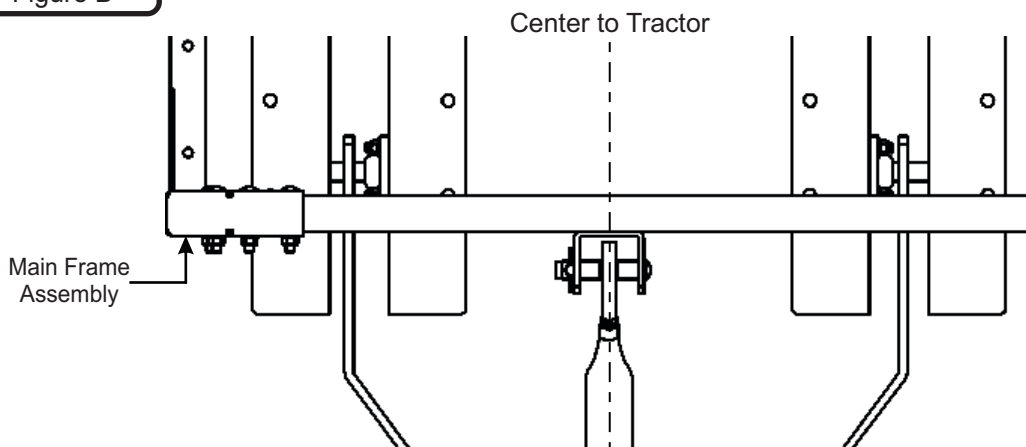
Item#	Part#	Desc.	Qty.
1	J0030	3/4"x3" Clevis Pin / Zinc Plated	1
2	K0146	Lynch Pin 7/16"x1-3/4"	2
3	J0029	7/8" Hitch Mounting Pin / CAT 1	1



NOTE: Some part features have been hidden from view for visual clarity.

Check that the Main Frame Assembly is centered with the Top Link Arm and that the Top Link Arm is centered to the tractor. Refer to Figure B.

Figure B

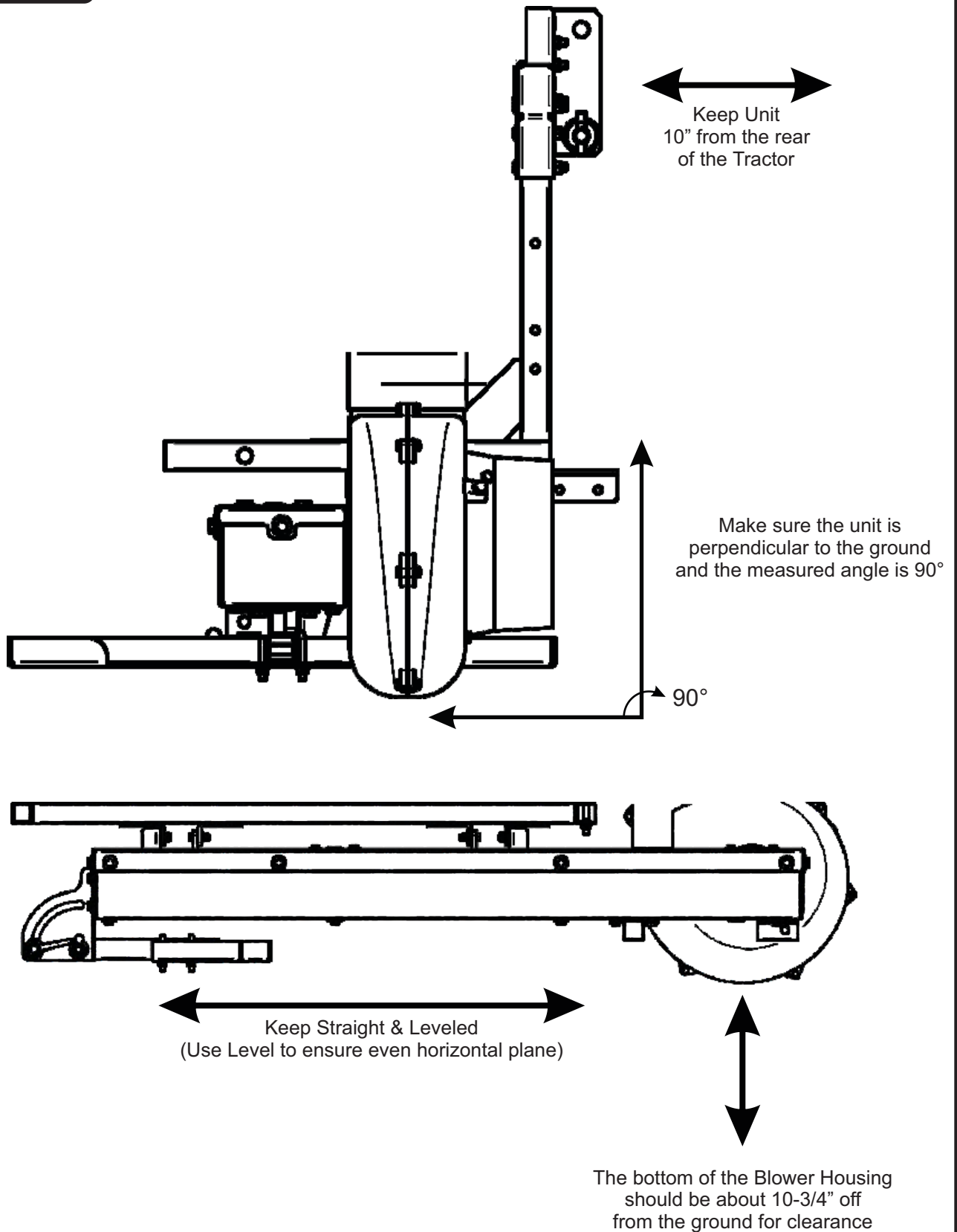


## Base Frame 3-Pt Hitch Installation (Continued)

Once the Top Link Arm and Lower Lift Arms have been secured, check the positioning of the unit and make adjustments as needed to ensure the unit is correctly positioned. Refer to Figure C for correct unit position.

NOTE: Some part features have been hidden from view for visual clarity.

Figure C



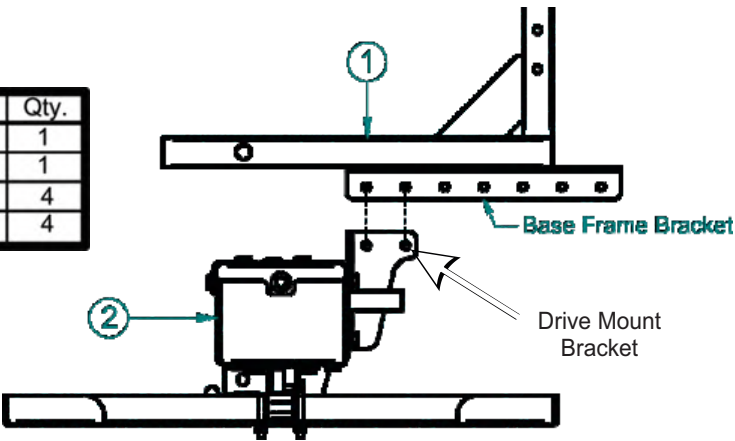
PTO Drive Assembly & Installation

Position the PTO Drive Assy (Item #2) under the Base Frame Assy (Item #1) and align the mounting holes of the Drive Mount Brackets to those of the front set, outermost Base Frame Bracket. Refer to Figure A & Figure B.

NOTE: Some part features have been hidden from view for visual clarity.

Figure A

Item#	Part#	Desc.	Qty.
1	A2234	Base Frame Assy / 3-Pt Hitch	1
2	A2280	5-Blade / PTO Drive Assy / 3-Pt Hitch	1
3	K1191	HHCS3/8"16x1" GR5	4
4	K2038	Ny-FlangeLockNut3/8"16	4



Secure the PTO Drive Assy to the Base Frame Assy by using (2) 3/8"-16" x 1" HHCS (Item #3) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4) per Drive Mount Bracket. Refer to Figure B.

Figure B

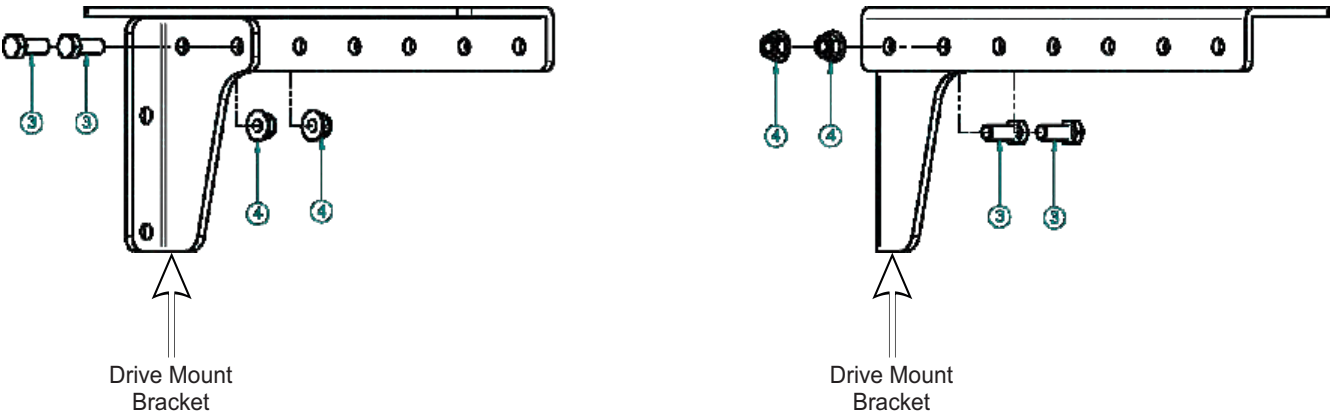
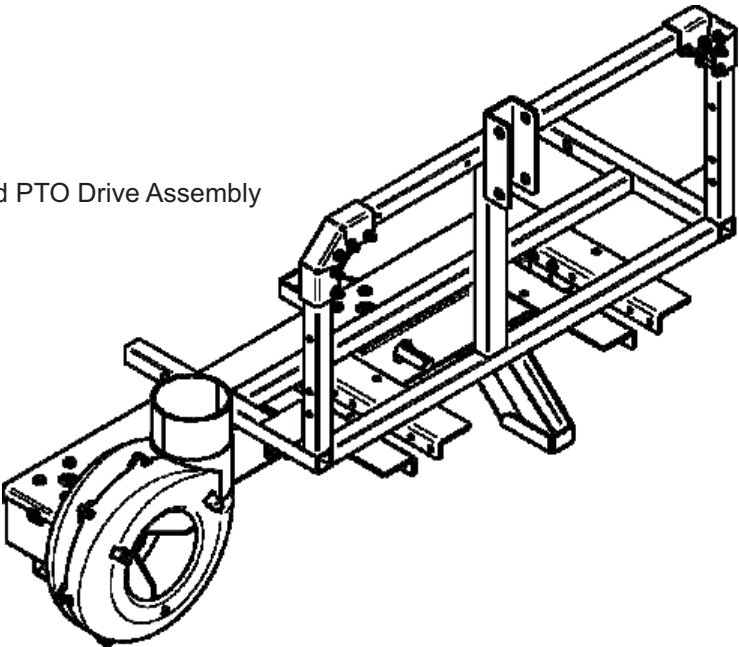


Figure C

Installed PTO Drive Assembly





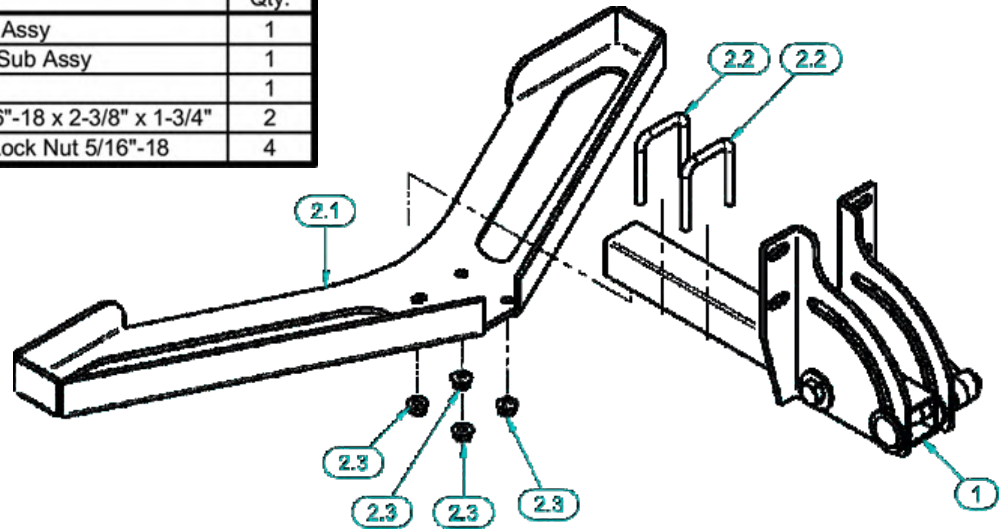
## PTO Drive Stand & Stand Foot Assembly

Install the Stand Foot Sub Assembly (Item #2) to the PTO Drive Stand Assembly (Item #1) by securing the Stand Foot (Item #2.1) to the Stand Pivot Assembly by using (2) 5/16" U-Bolt (Item #2.2) and (4) 5/16" Ny-flange Lock Nuts (Item #2.3). Refer to Figure A.

You can adjust the positioning of the Stand Foot to best suit your needs by loosening the U-Bolts and sliding the Stand Foot up and down then re-tightening the U-Bolts.

Figure A

Item #	Part #	Desc.	Qty.
1	A2237	Stand Pivot Assy	1
2	A2263	Stand Foot Sub Assy	1
2.1	B1900	Stand Foot	1
2.2	K1098	U-Bolt / 5/16"-18 x 2-3/8" x 1-3/4"	2
2.3	K2516	Ny-Flange Lock Nut 5/16"-18	4

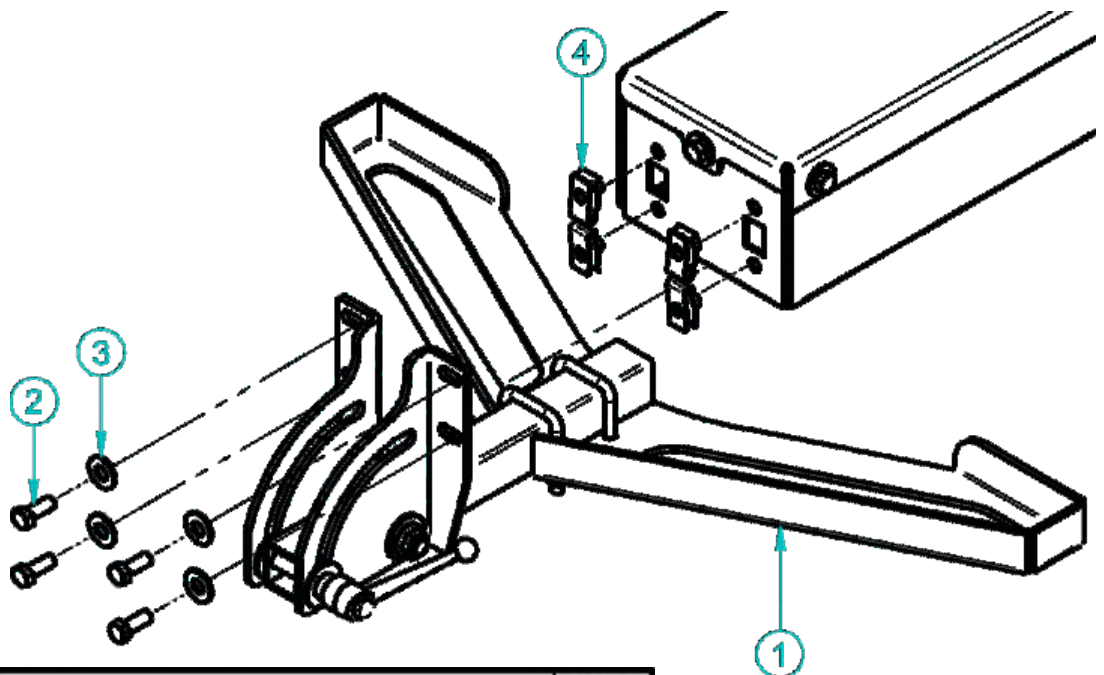


## PTO Drive Stand Assembly Installation

Install the PTO Drive Stand Assy (Item #1) by locating the (4) bolt holes on the left side of the PTO Drive Assy, if the (4) 3/8"-16 Clip Nuts (Item #4) are not in place, place the (4) 3/8"-16 Clip Nuts (Item #4) in position. Refer to Figure A. Align the PTO Drive Stand Assy with the bolt holes and Clip Nuts and secure the PTO Drive Stand Assy by using (4) 3/8"-16 x 1" GR5 HHCS (Item #2) and (4) 3/8" Flat Washers (Item #3). Refer to Figure B.

NOTE: Some part features have been hidden from view for visual clarity.

Figure B



Item #	Part #	Desc.	Qty.
1	A2237	Stand Pivot Assy	1
2	K1191	HHCS 3/8"-16 x 1" GR5	4
3	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	4
4	K0144	3/8"-16 Clip Nut	4

# Jack Stand Assembly & Installation

Your Collection Unit will include an A-Frame Jack (Item #1) with a Jack Foot and a separate Jack Stand Bracket (Item #2). Assemble the A-Frame Jack to the Jack Stand Bracket by using (3) 3/8"-16 x 1" GR5 HHCS (Item #3.1) and (3) 3/8"-16 Ny-Flange Lock Nuts (Item #3.2) from the Jack Stand HW Bag (Item #3). Refer to Figure A.

To secure your handle and prevent it from any potential damage, a Rubber Strap w/ S-Hook (Item #3.4) would need to be installed.

Position the Rubber Strap over the side bracket hole of the Jack Stand Bracket and secure it by using (1) 1/4"-20 x 1" Carriage Bolt (Item #3.3) and (1) 1/4"-20 Flange Nut (Item #3.5). Refer to Figure B.

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

Figure A

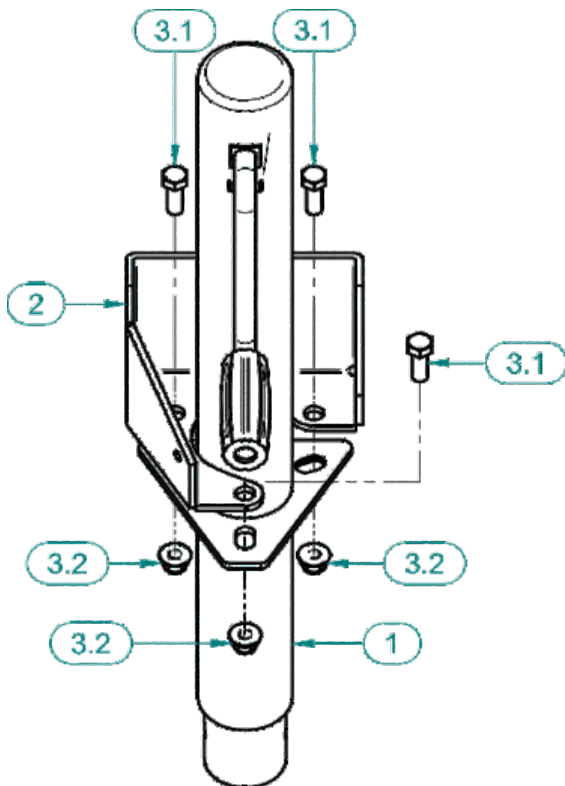
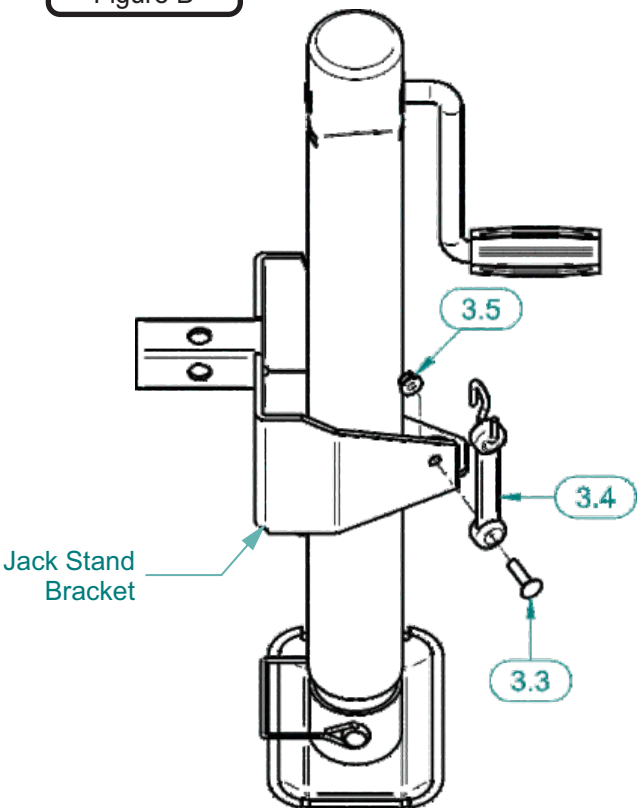


Figure B



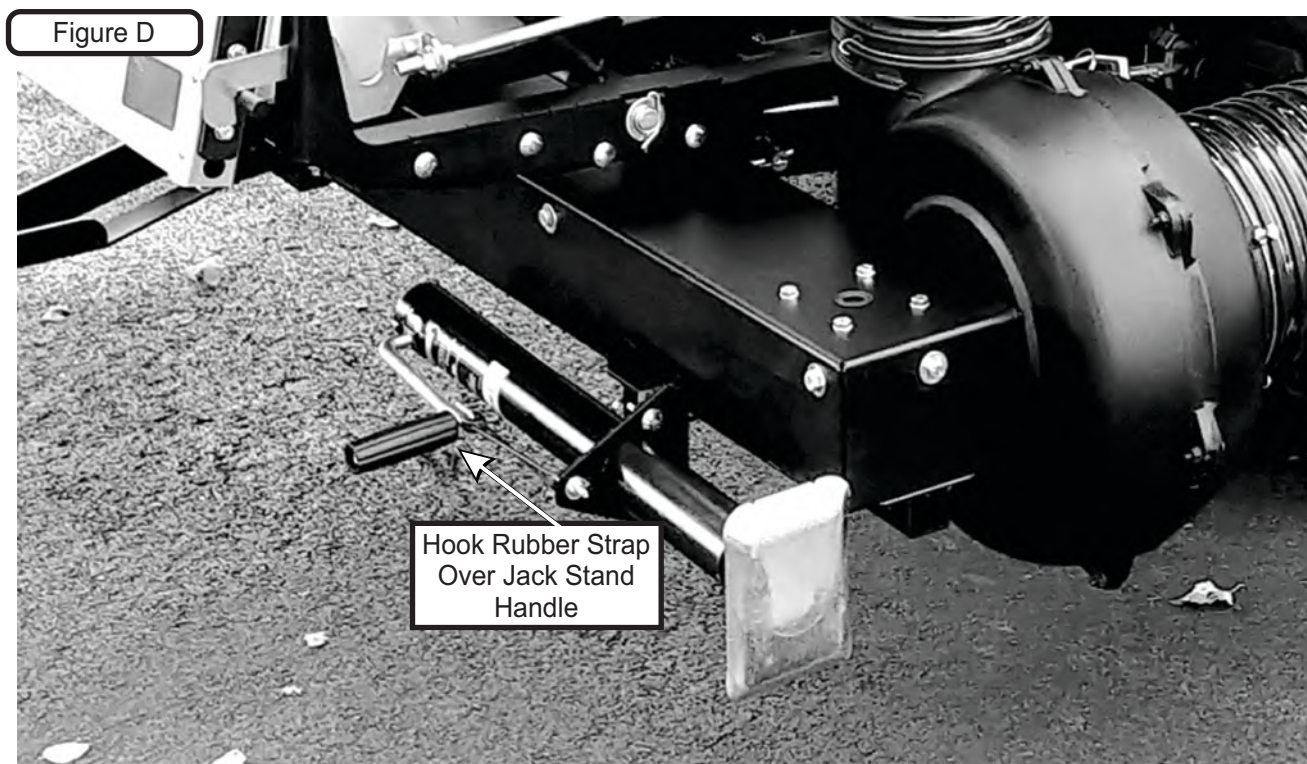
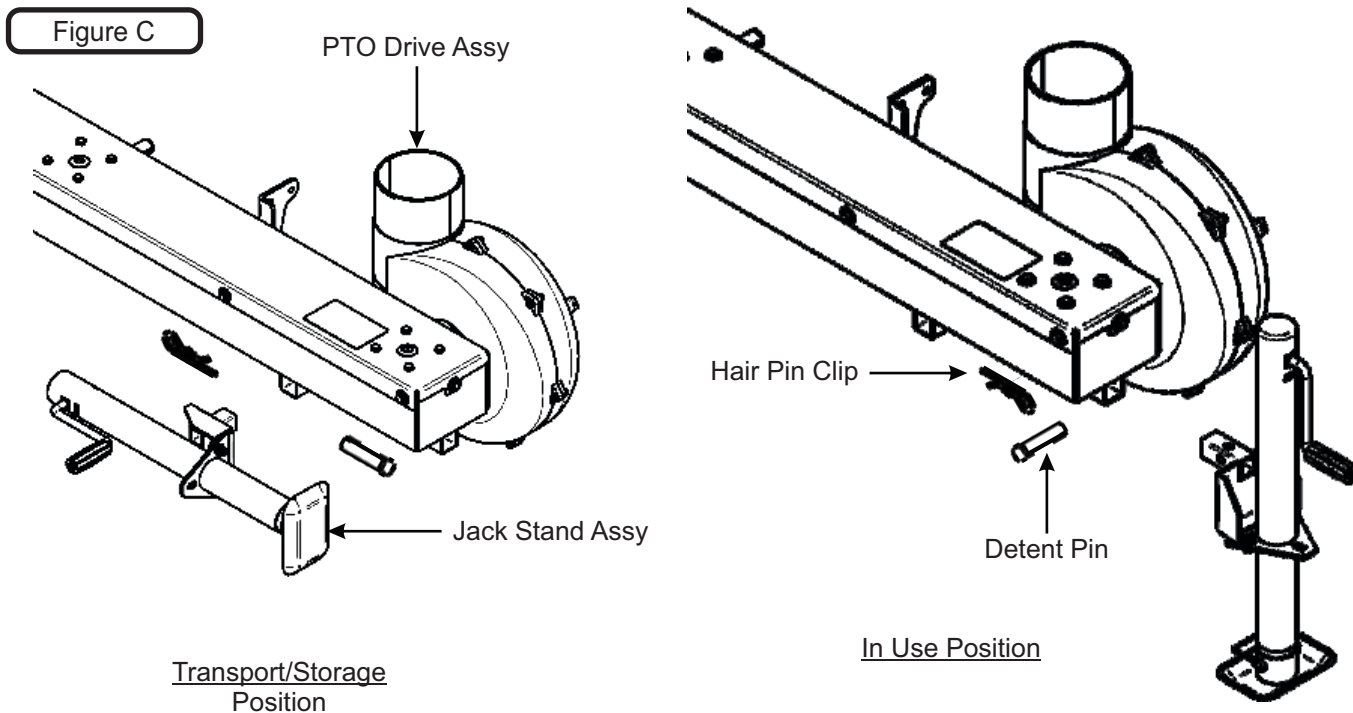
Item #	Part #	Desc.	Qty.
1	A2262	Jack Assy w/ Foot Plate	1
2	A2199	Jack Stand Bracket Weldment	1
3	HB0795	HW Bag / Jack Stand Kit / P3B & Pro22	1
3.1	K1191	HHCS 3/8"-16 x 1" GR5	3
3.2	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	3
3.3	K2038	Ny-Flange Lock Nut 3/8"-16	3
3.4	J4009	Short Rubber Strap w/ S-Hook	1
3.5	K1025	1/4"-20 x 1" Carriage Bolt	1
3.6	K1126	Flange Nut 1/4"-20	1

## Jack Stand Assembly & Installation (Cont.)

While not in use or being stored, turn the Jack Stand Assy horizontal and secure the Jack Stand Assy to the PTO Drive Assy using (1) Detent Pin (Item #4.4, Fig. A, Pg. 13) and (1) Hair Pin Clip (Item #4.5, Fig. A, Pg. 13).

When the Jack Stand Assy is going to be in use, turn the Jack Stand Assy Vertical and secure it to the Right Side of the PTO Drive Assy using (1) Detent Pin and (1) Hair Pin Clip. Be sure you're using the Jack Stand Assy on a leveled surface. Refer to Figure C.

To secure your handle horizontally and prevent it from any potential damage, strap the attached Rubber Strap to the Jack Stand Handle while being transported. Refer to Figure D.





## PTO Driveshaft Assembly Installation

It is recommended to lubricate the sliding members of the PTO Driveshaft and universal joints before assembly and installation. The universal joints can be found in between the Quick Connect Yoke as well as the Driveshaft Yoke. Refer to the Lubrication Instructions on page 43.

Your PTO Driveshaft Assembly will have a Driveshaft Guard included to protect both the user and the equipment from the environment. The Driveshaft Guard should spin freely from the Driveshaft Assembly and should provide a visual cue for rotating motion even after the machine has been shutoff. Operators should exercise caution while the PTO Driveshaft Assembly is still in motion.

The PTO Driveshaft Assembly may need to be cut to fit your tractor. Please refer to the diagram on the bottom of pg 16 for your specific tractor and the instructions included with your Driveshaft Assembly.

Once the PTO Drive Assy has been installed onto your collection unit, connect the Driveshaft P#(M0005) to the PTO Drive Assy Gearbox using (1) 1/4" Brass Key P#(K0074) and (1) 1" External Crescent Ring P#(J0031). Tighten the shaft clamping bolts to secure the Driveshaft. Refer to Figure B.

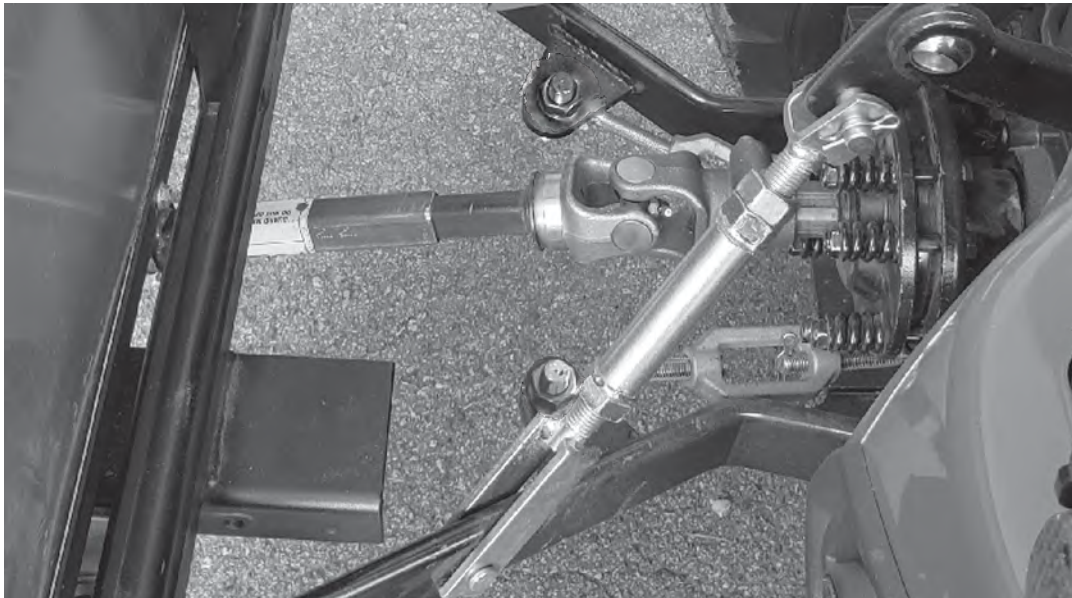
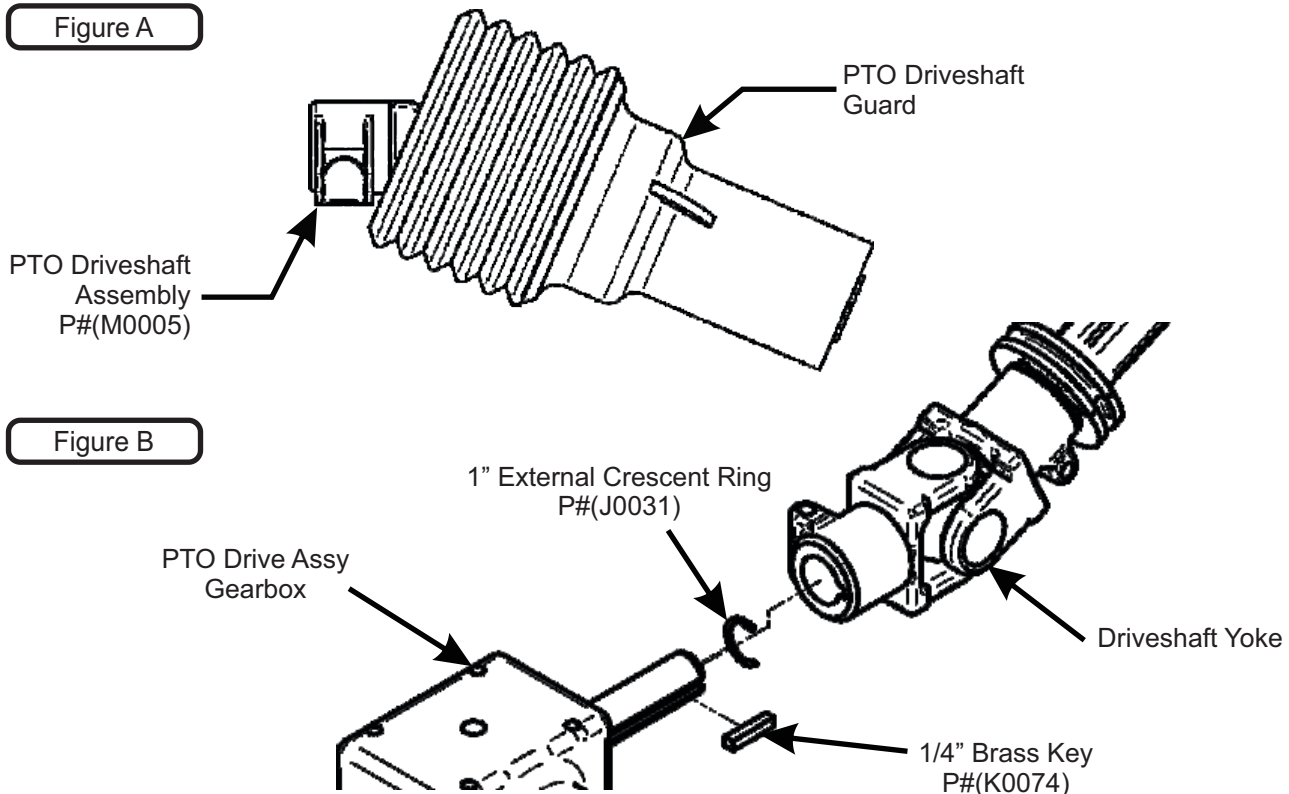


Figure A



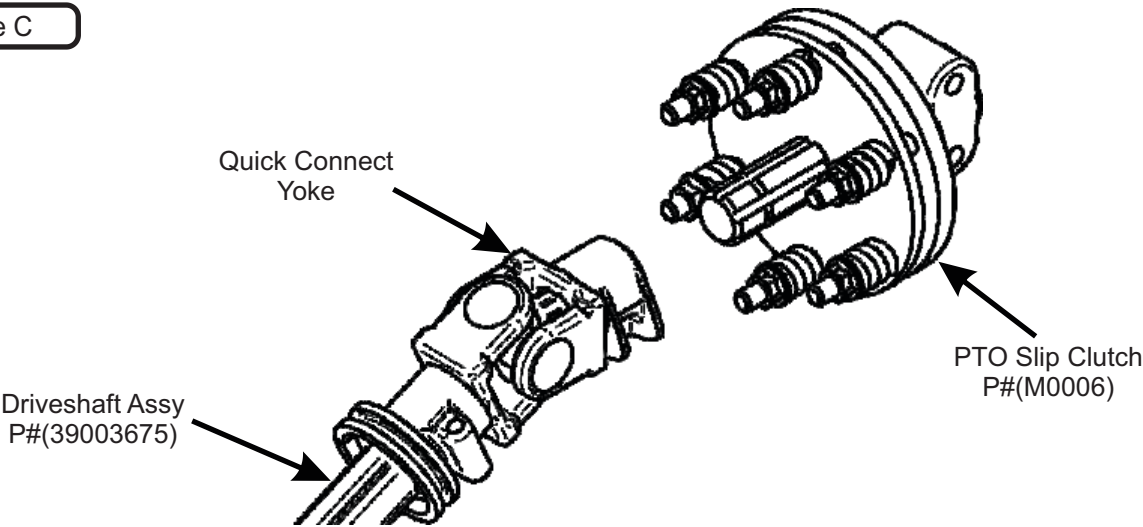


**PTO Driveshaft Assembly Installation (continued)**

Install the PTO Slip Clutch P#(M0006) onto the tractor's PTO and tighten the shaft clamping bolts to 75 ft/lbs to secure the PTO Slip Clutch. Next, Connect the Driveshaft from the PTO Drive Assy to the PTO Slip Clutch using the Quick Connect Yoke to secure the Driveshaft to the Slip Clutch. Refer to Figure C.

NOTE: Some part features have been hidden from view for visual clarity.

Figure C



**PTO Driveshaft Length Diagram**

Refer to the Diagram below for the Driveshaft length cut specific to your tractor. Once your Driveshaft length is determined, please follow the cut instructions included with your Driveshaft Assembly.

If your specific tractor is not listed, please follow the cutting instructions included with your Driveshaft Assembly.

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



Tractor Type	"A" Length of Driveshaft w/ Quick Connect Yoke	"B" Length of Driveshaft w/ Drive Connect Yoke
LS Tractor MT1 Series	5"	5"
John Deere 1 Series	5"	5"
Kubota BX80 Series	4-3/4"	4-3/4"

## PTO Slip Clutch Adjustments

The PTO Slip Clutch will need to be adjusted and set initially before regular use. It is best to set up the PTO Slip Clutch with the Unit fully installed on the tractor and in conditions which approximate to the normal work the machine will experience.

First, back each of the (6) nuts off by (2) turns. Then run the tractor, at a low RPM, along with your Grass Collection Unit for a short period or distance and check for slippage. To check for slippage, mark both outer discs with a visible marker using a straight edge, then run the PTO and check the alignment of the (2) or more lines afterwards to see if they are still aligned or misaligned. A mismatched line suggests that there was slippage with the Clutch. If slippage occurs then tighten each tension bolt up (1) turn evenly to all (6) nuts and run the PTO again for a short period or distance. Repeat this procedure until there is only a slight slip to the Slip Clutch, about 1/2" slippage between the two discs.

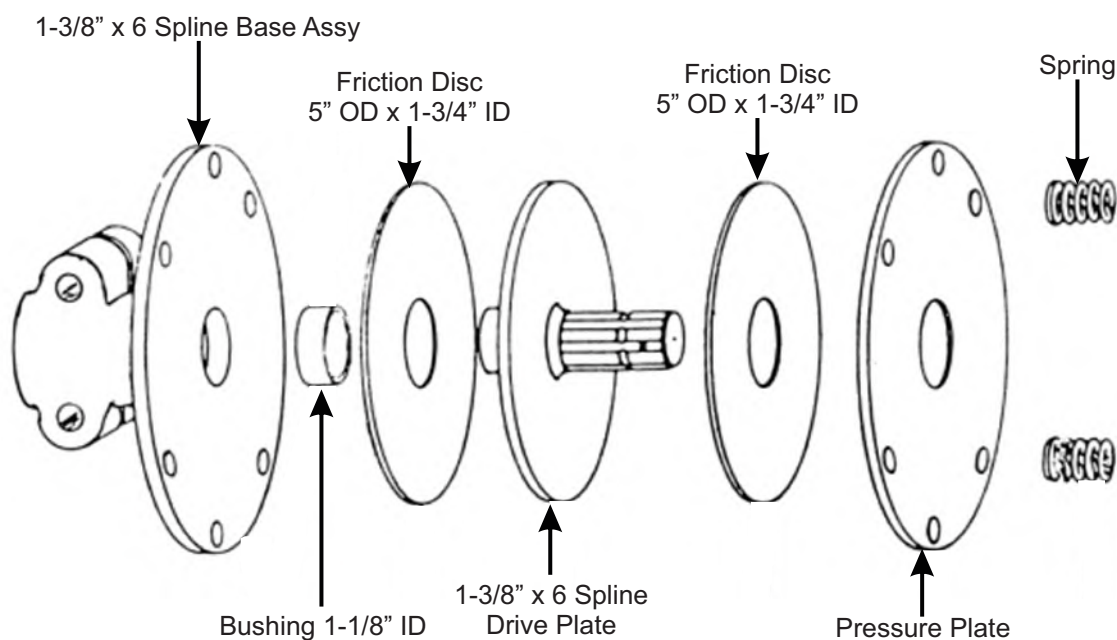
Before each use, engage the PTO at a low RPM and then gradually increase the PTO to a higher RPM.

To maintain and keep the PTO Slip Clutch functioning properly, release the springs completely and polish the pressure plate of the PTO Slip Clutch after the first 6 months of use and occasionally check the wear of the PTO Slip Clutch thereafter. Refer to Figure A below for the full breakdown of your PTO Slip Clutch.

**NOTE:** Loose bolts indicates stripped splines.

Tighten shaft clamping bolts to 75 ft/lbs every 40 hrs

Figure A



## Mount Tube Installation

Position (1) Tube Mount Bracket (Item# 3) to the top frame of the Base Frame Assy (Item# 1) either to the far right or left of the Base Frame Assy. Refer to Figure A. Secure the Tube Mount Bracket relatively loose by using (2) 5/16"-18 U-Bolts (Item# 4) and (2) 5/16"-18 Ny-Flange Lock Nuts (Item# 5) on to the (2) lower set of bolt holes, refer to Figure B for visual clarity. Repeat the procedure for the second Tube Mount Bracket on the other side of the Base Frame Assy.

Next, position (1) 13.75" Mount Tube (Item# 2) on top of the Base Frame Assy and in between the Tube Mount Bracket. Secure the Mount Tube relatively loose by using (1) 5/16"-18 U-Bolt (Item# 4) and (1) 5/16"-18 Ny-Flange Lock Nut (Item# 5). Repeat Procedure for the second Mount Tube.

Before tightening the hardware to fully secure the Tube Mount Brackets and Mount Tubes, position the Right Mount Tube & Tube Mount Bracket about 13-11/32" from the right side of the Base Frame Assy. Once positioned, tighten the hardware. Position the Left Mount Tube & Tube Mount Bracket about 13-11/16" from the Right Mount Tube. Once positioned, tighten the hardware. Refer to Figure B.

Figure A

Item #	Part #	Desc.	Qty.
1	A2234	Base Frame Assy / 3-Pt Hitch	1
2	B1904	Mount Tube / 13.75"	2
3	B1905	Tube Mount Bracket	2
4	K1098	U-Bolt / 5/16"-18 x 2-3/8" x 1-3/4"	6
5	K2516	Ny-Flange Lock Nut 5/16"-18	12

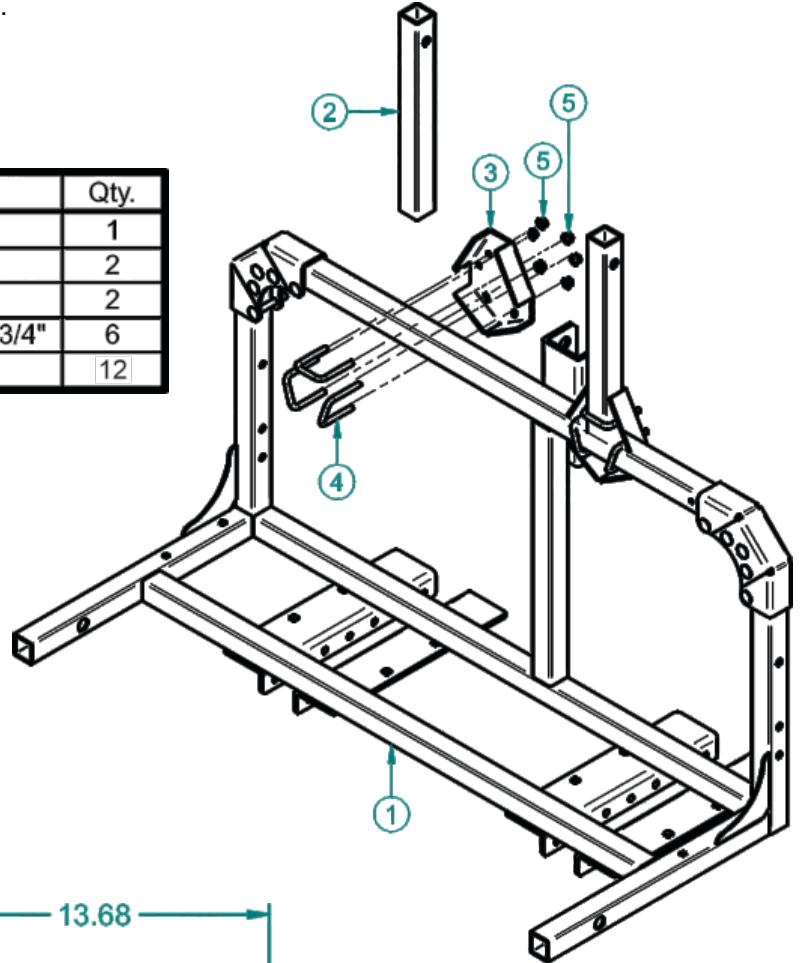
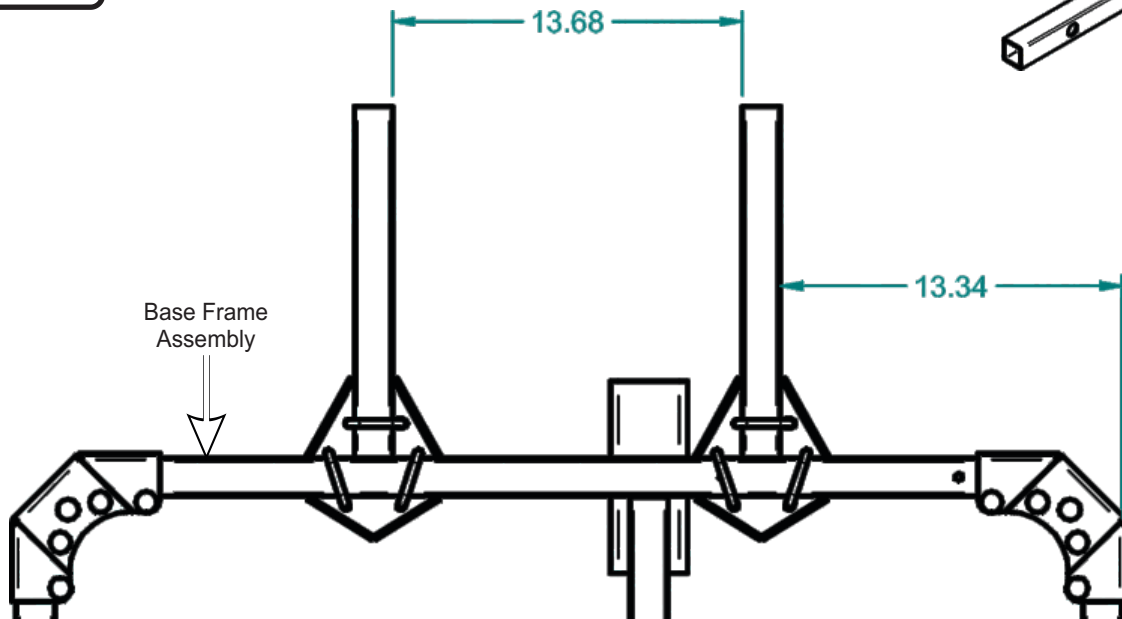


Figure B

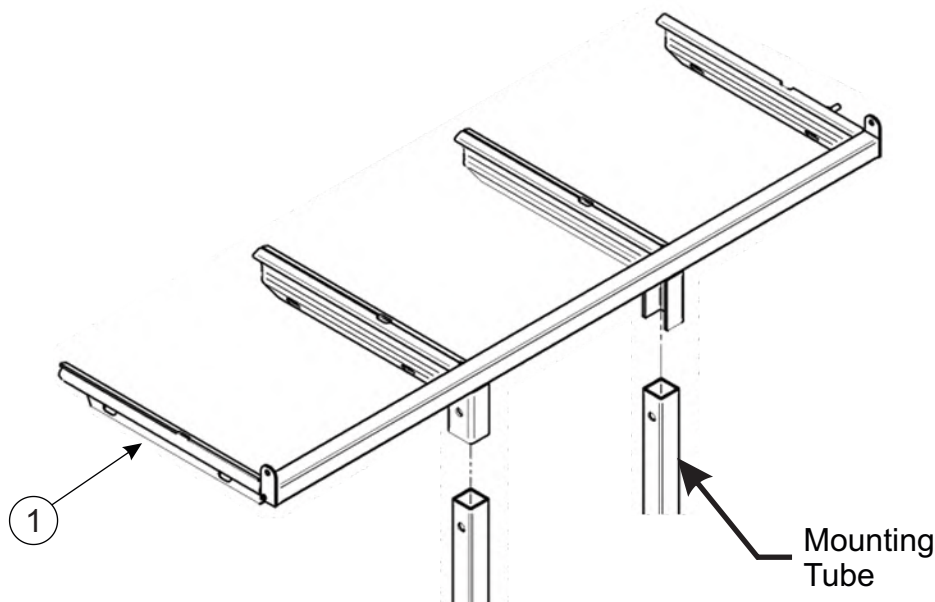


# Upper Frame Assembly Installation

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 (2) Clevis Pins (Item #2) and (2) Rue Ring Cotter Pin Clips (Item #3). Refer to Figure B.

Once the Upper Frame Assembly is secured, tighten the hardware for the Lower Mount Tubes at this time.

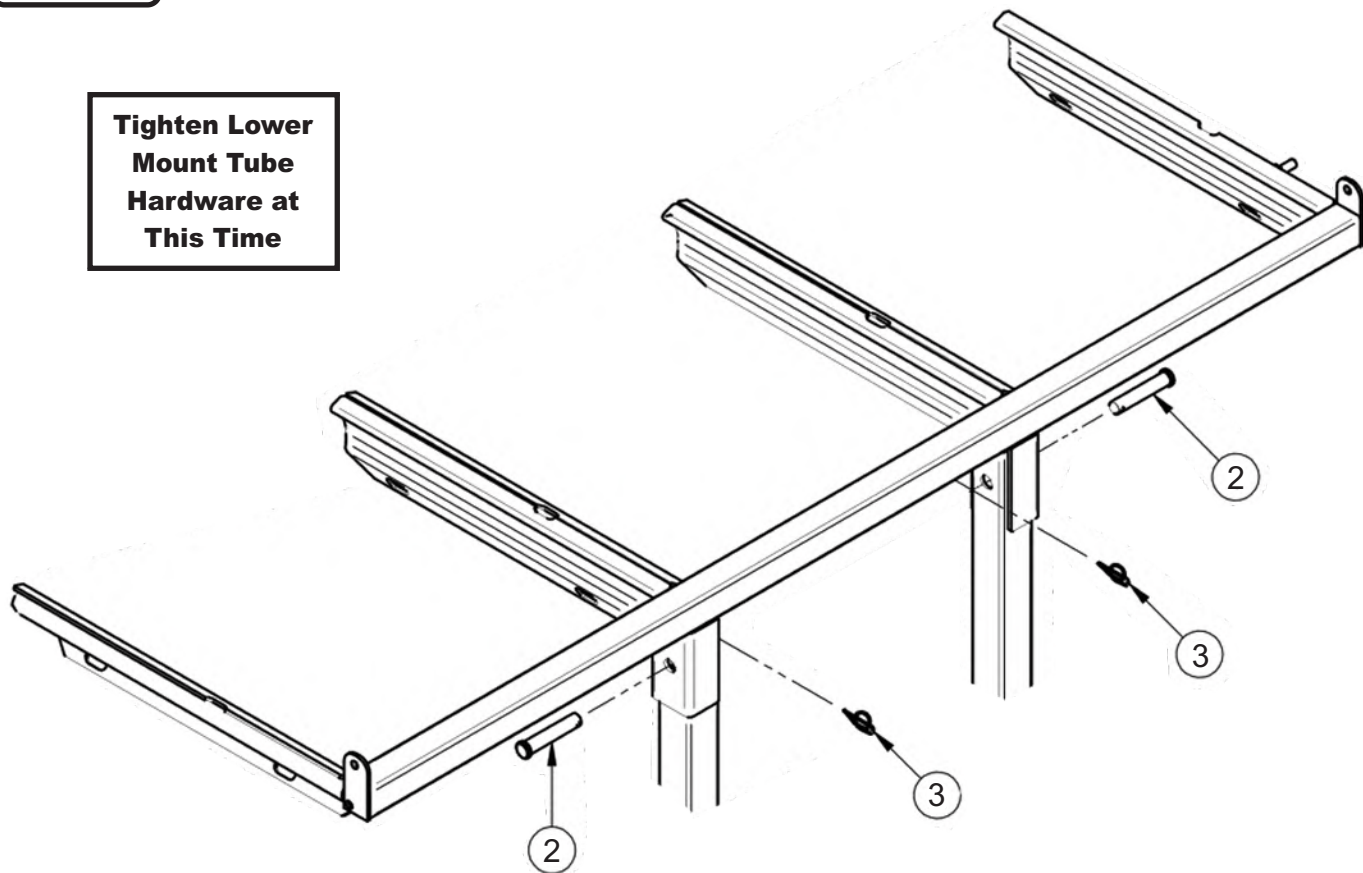
Figure A



Item #	Part #	Desc.	Qty.
1	A2068	Upper Frame Assembly P3B Generic Gen 2	1
2	K0133	Clevis Pin 1/2" x 2-1/2"	2
3	K1437	Rue Ring Cotter Pin	2

Figure B

**Tighten Lower  
Mount Tube  
Hardware at  
This Time**

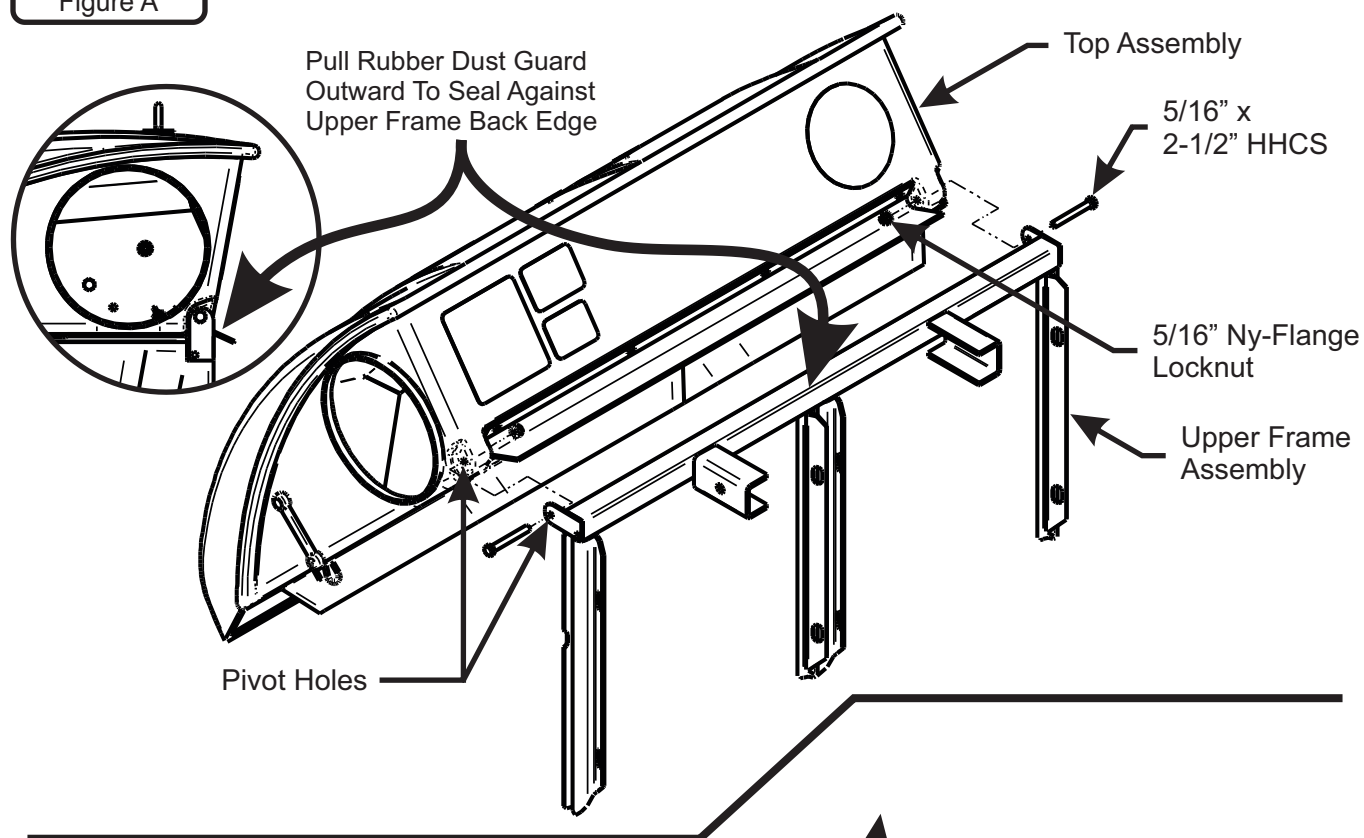




## Top Assembly To Upper Frame Assembly Installation

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.

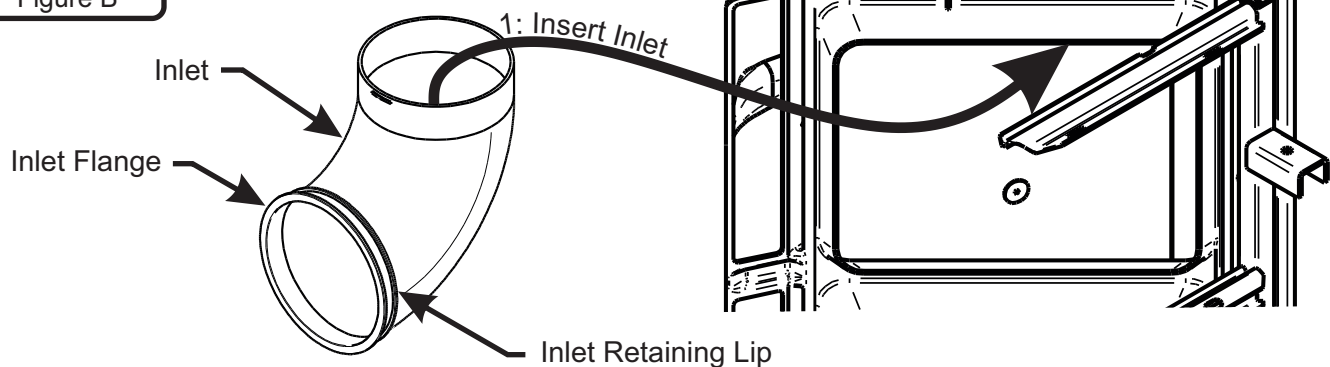
Figure A



## Inlet Installation

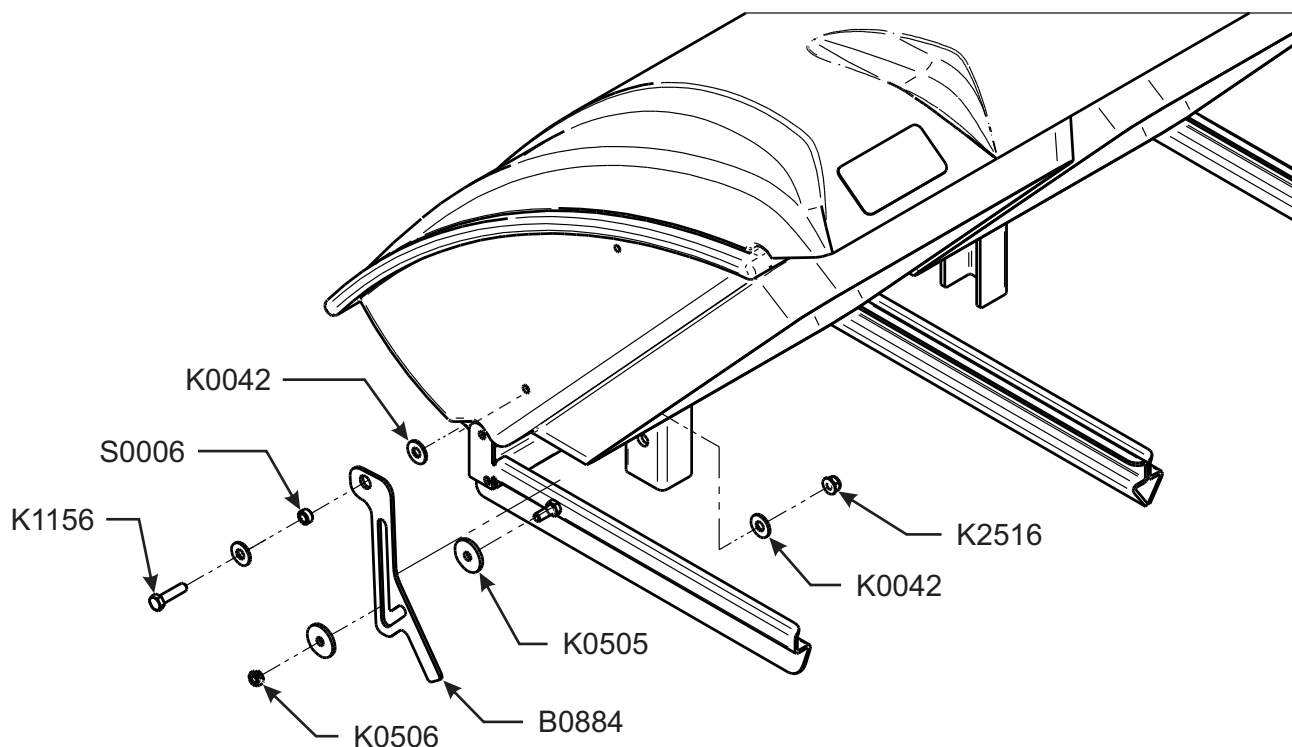
Position the Top Assembly on its side with the Inlet Hole facing up. See Figure B. 1: Insert the Inlet from inside the Top Assembly, up through the Inlet Hole, until the Inlet Retaining Lip meets the Inlet Hole. 2: Position the Inlet as shown in Figure B, then pull the Inlet until a portion of the Inlet 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



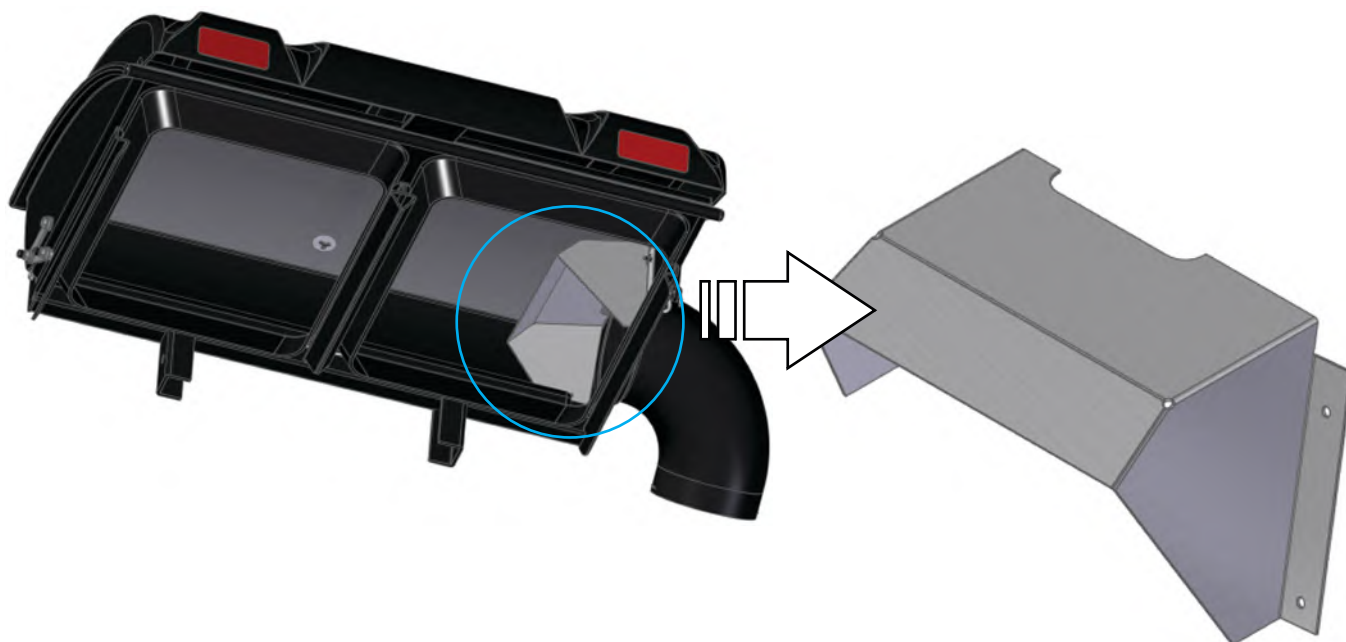
## Hinge Kit Assembly Installation

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

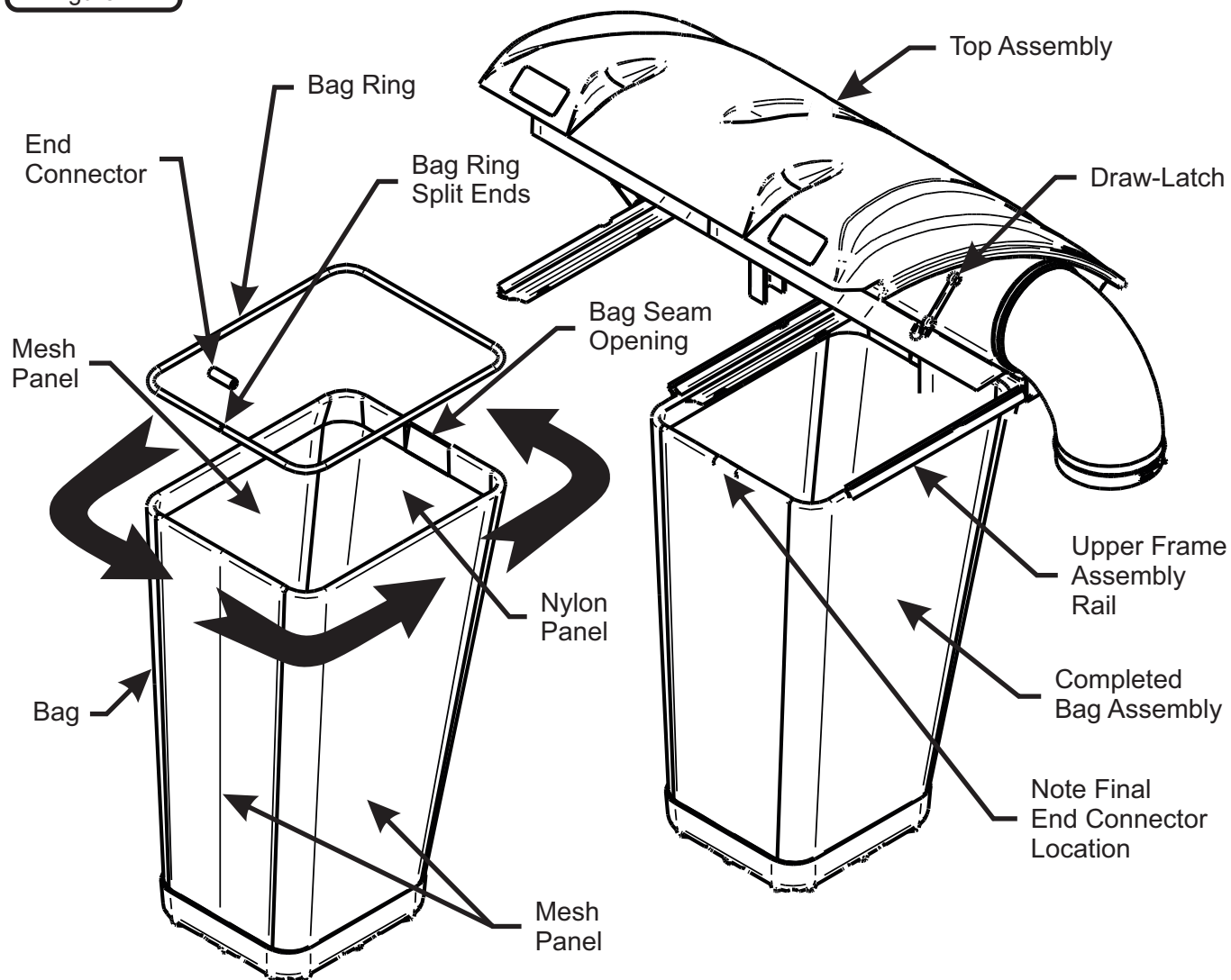
Flap can be adjusted Up/Down depending on mowing conditions. Adjust flap up to allow more dense material to reach left bag. Adjust flap down to allow less dense material to reach the right bag. Once adjusted properly, both bags should fill evenly, but may require further adjusting when mowing conditions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

## Slow Moving Vehicle Label Installation

The Slow Moving Vehicle (SMV) Label will need to be visible from the back of your tractor if you're required to have one. If the Collection Unit is obstructing the SMV Label from view, the SMV Label will need to be repositioned. To reposition the SMV Label that came with your tractor, first, install the SMV Sign Mount (Item #1) to the base of the Main Frame Assy of your grass collection unit.

Align the bolt holes of the SMV Sign Mount (Item #1) to those located on top of the Main Frame Tube. Secure the SMV Sign Mount to the Main Frame Tube by using (2) 3/8"-16 x 2-1/2" HHCS (Item #3.1), (2) 3/8" Flat Washers (Item #3.3) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3.2). Refer to Figure A.

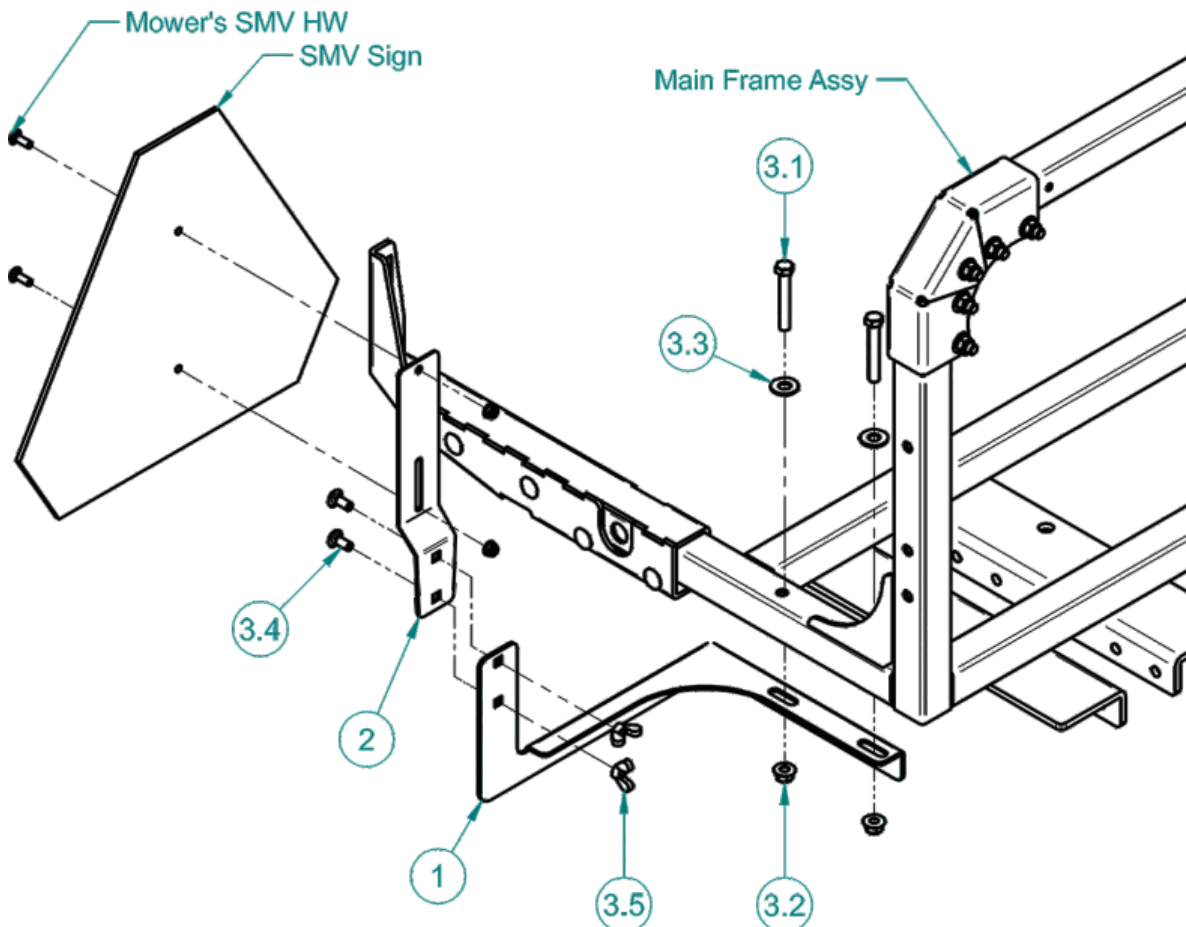
Next, install the Safety Triangle Mount (Item #2) to the SMV Sign Mount by using (2) 5/16"-18 x 3/4" Carriage Bolts (Item #3.4) and (2) 5/16"-18 Wing Nuts (Item #3.5). Refer to Figure A.

Once the Safety Triangle Mount is secured, mount your SMV Sign to the Safety Triangle Mount by using the mower's SMV hardware that was initially used to secured the SMV Sign. Refer to Figure A.

NOTE: Some features have been hidden from view for visual clarity

Figure A

Item #	Part #	Desc.	Qty.
1	B1927	SMV Sign Mount	1
2	B2022	Safety Triangle Mount	1
3	HB0789	HW Bag / SMV Sign Mount Kit / LS Tractor	1
3.1	K1197	3/8"-16 X 2 1/2" HHCS	2
3.2	K2038	Ny-Flange Lock Nut 3/8"-16	2
3.3	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	2
3.4	K1142	5/16"-18 x 3/4" Carriage Bolt	2
3.5	K0141	Wing Nut 5/16"-18 Zinc	2





## 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#(J0070) over both ends of the 7" Upper Hose. Secure one end of the Upper Hose to the Inlet and Blower Outlet. Fasten the Hose by tightening the Hose Clamps.

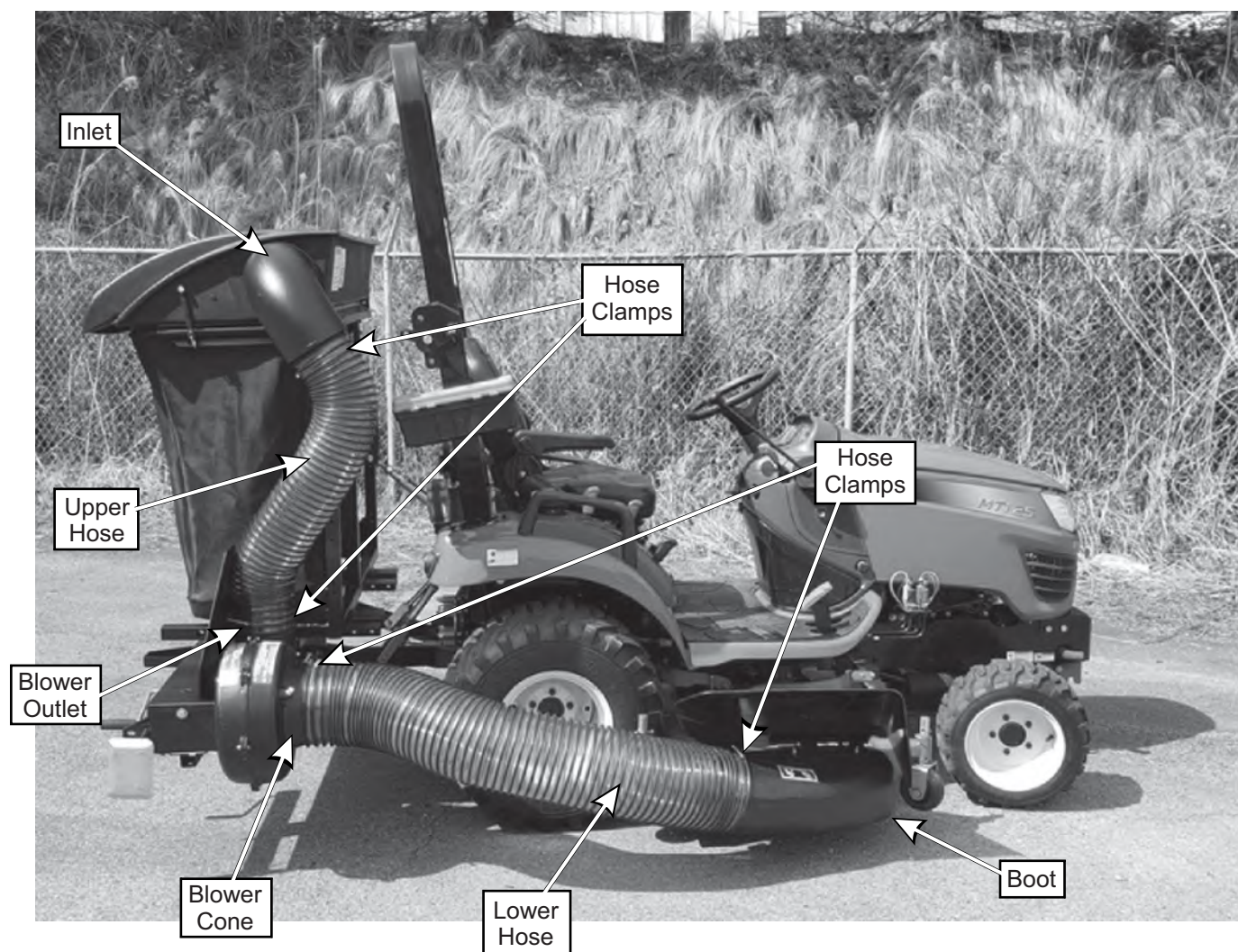
## Lower Hose To Blower Cone Installation

Slide a Hose Clamp, P#(J0070) or P#(J0080), over both ends of the, 7" or 8", Lower Hose. Secure one end of the Lower Hose to the Blower Cone. Fasten the Hose 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.

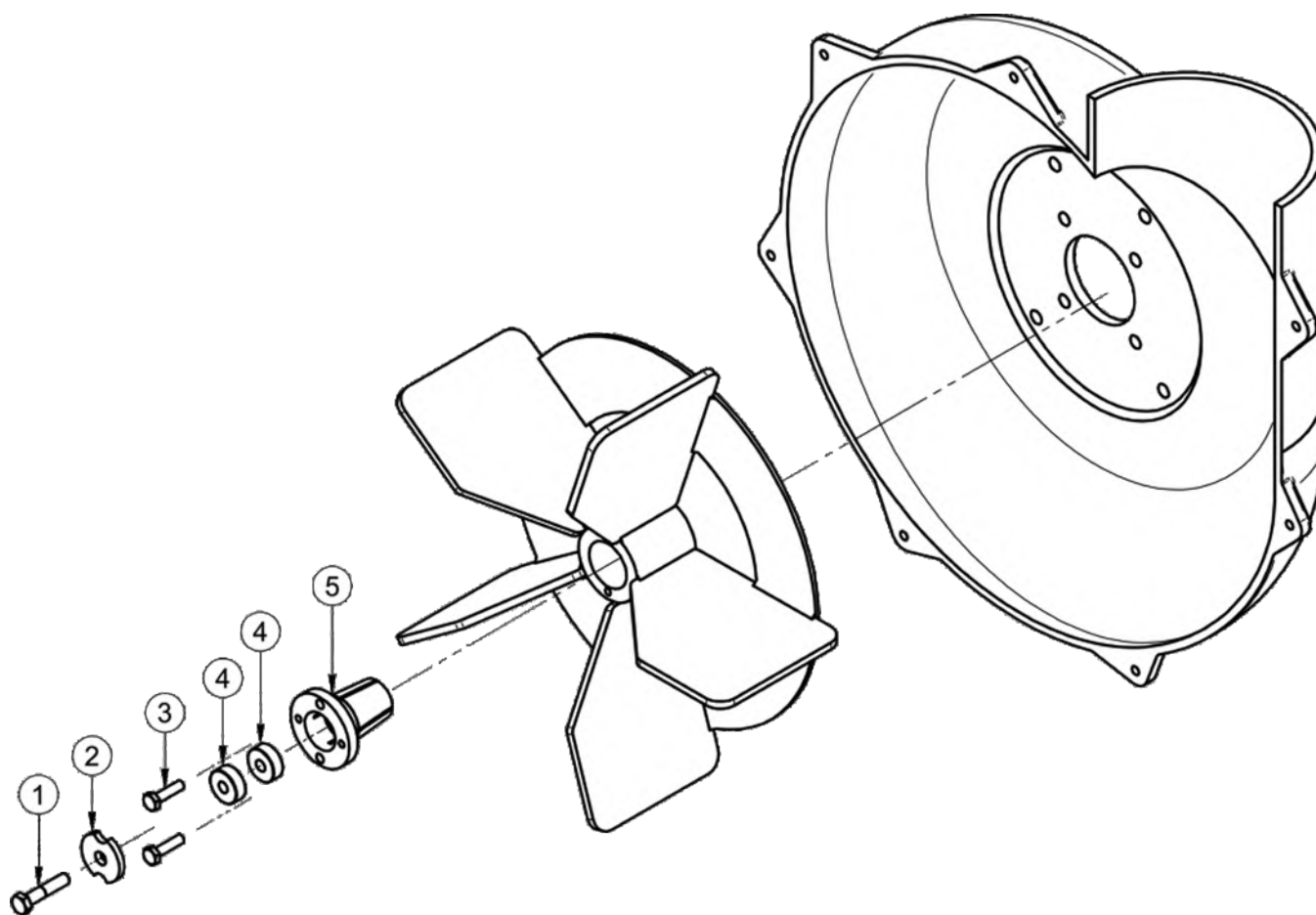


## Impeller Blade Removal/Replacement

**To Remove:** First remove the 7/16"-20 x 1" HHCS P#(K1394) (#1), 7/16" Double Indented Washer P#(K0278) (#2) and (2) 3/8" x 15/16" Bushing P#(S0159) (#4) from the Taper-Lock Bushing P#(S4302) (#5). Next remove the (2) 1/4"-20 x 1" HHCS (#3) 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:** Firstly, apply anti-seize to the 7/16"-20 x 1" HHCS (#1). Next, place the 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 (#3), (2) 3/8" x 15/16" Bushing P#(S0159) (#4), (1) 7/16" Double Indented Washer (#2), and (1) 7/16"-20 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.



## PTO Drive System Diagram

Never engage the PTO unit at full speed. The PTO unit should only be engaged at idle speeds, then gradually increased to the desired speed. Refer to Figure A for the PTO Drive System Diagram and Figure B for the directional rotation of each gearbox shaft.

NOTE: Some features have been hidden from view for visual clarity

Figure A

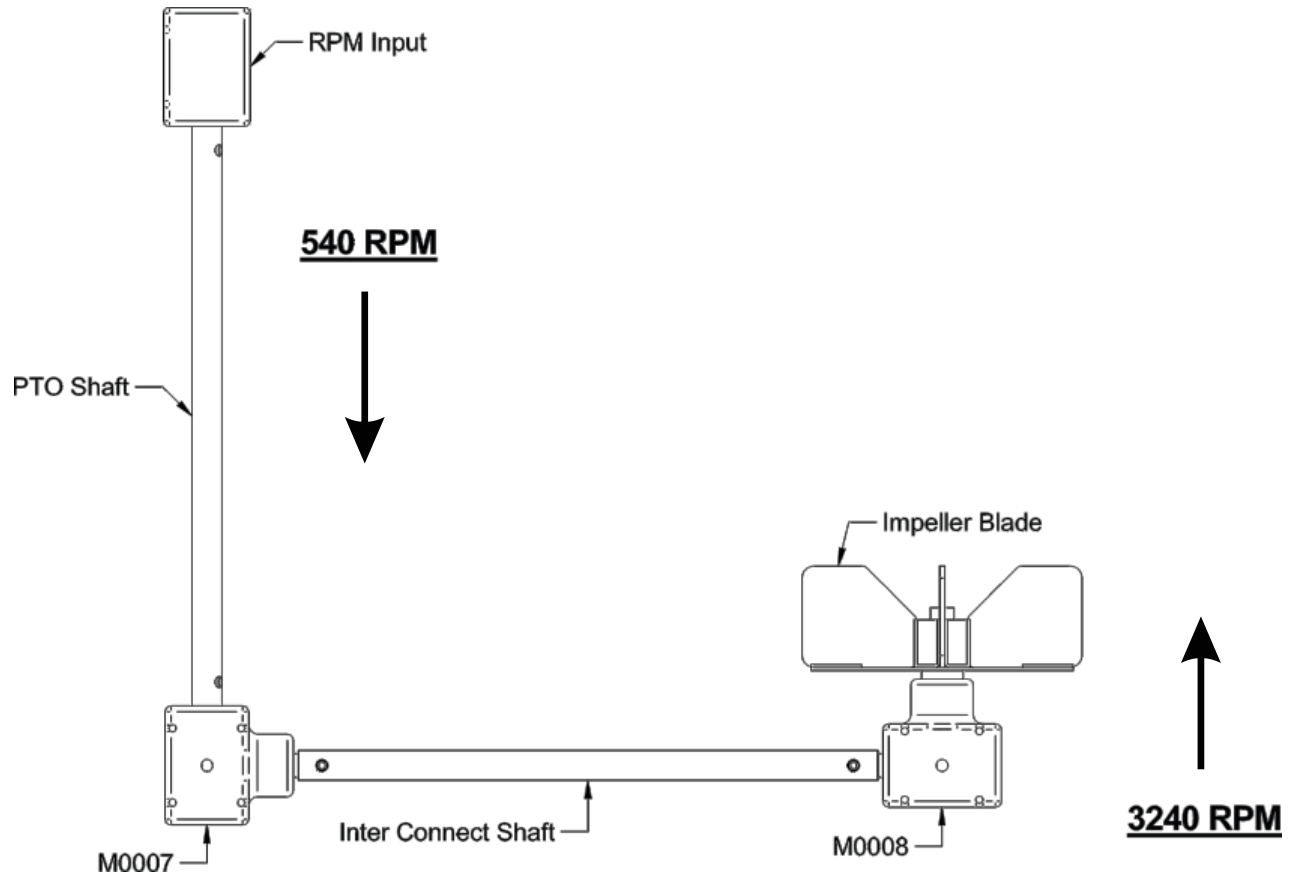
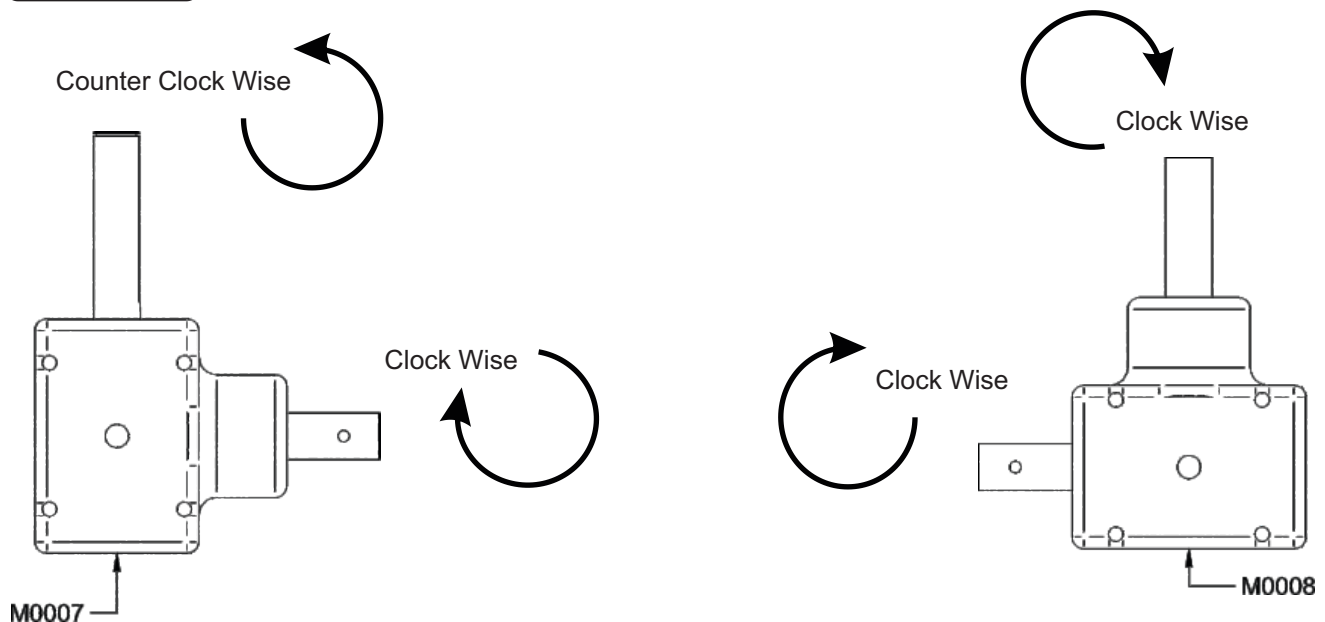
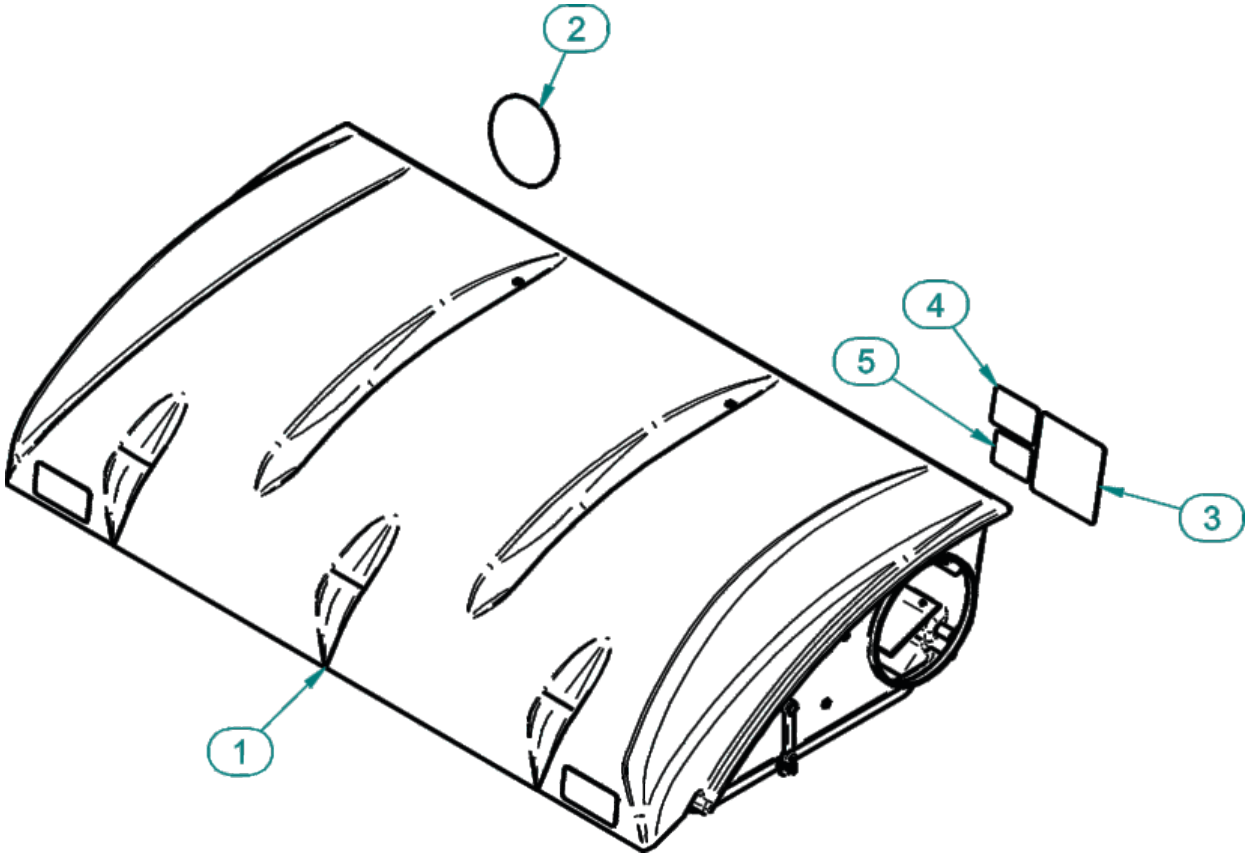


Figure B



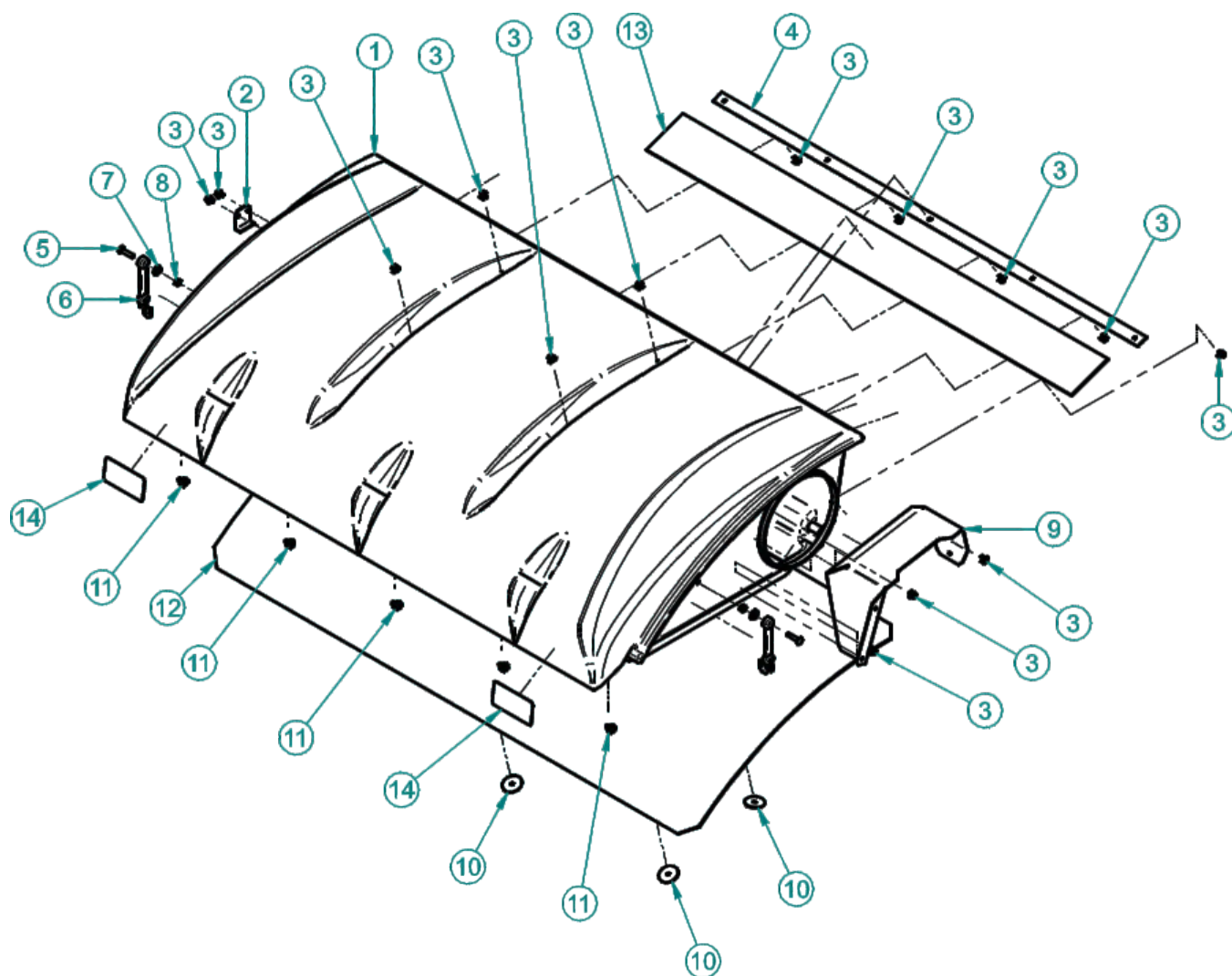
**A1157 Pro3B Standard Top Exploded View**



Item #	Part #	Desc.	Qty.
1	A2223	Top Assy. / P3B / Base Model	1
2	R0022	Decal / Built In The USA / Lg	1
3	R1069	Decal / Warning - Turn Off Blower	1
4	R1054	Decal / Important Check Hoses	1
5	R1051	Decal / Warning - Use Hearing Protection	1



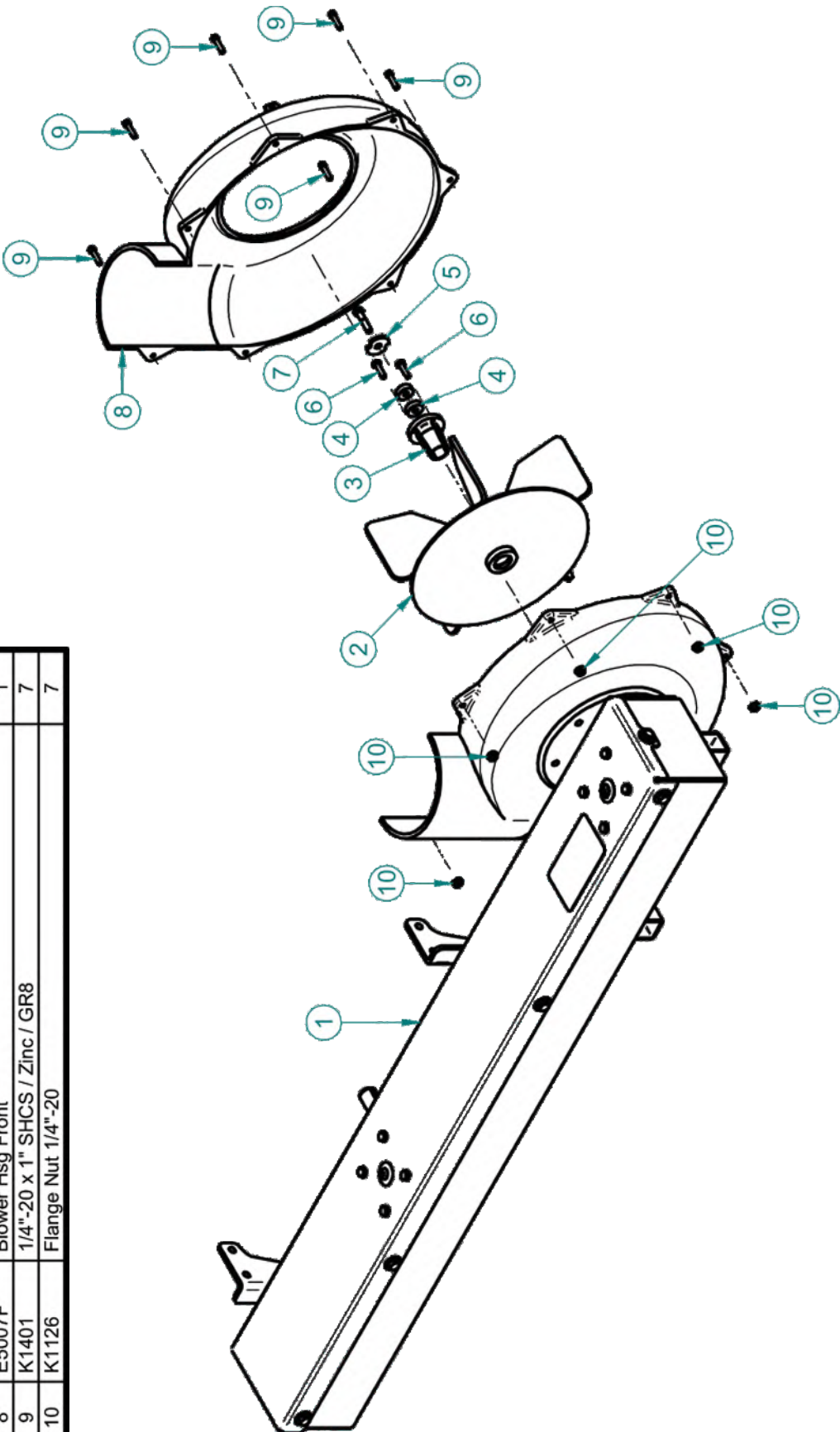
## A2223 Top Assy / Base Model Exploded View



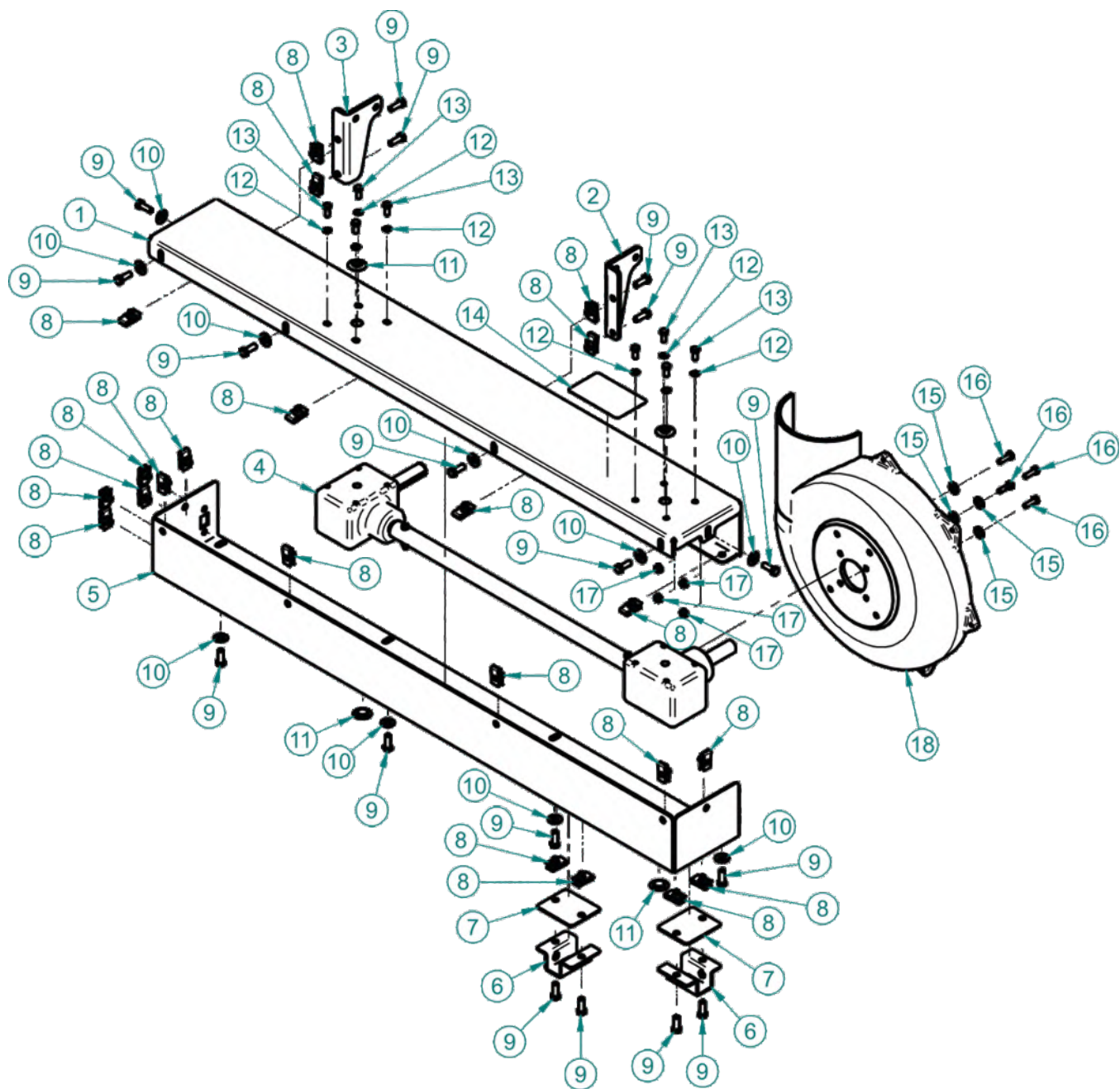
Item #	Part #	Desc.	Qty.
1	V0022	Pro 3 Bagger Top	1
2	B0676	Hinge Stop Pl.	1
3	K0114	Black Plastic Rivet	14
4	C0069	Dust Guard Brace	1
5	K1030	1/4"-20 x 1-1/4" Carriage Bolt	2
6	J4009	Short Rubber Strap w/ S-Hook	2
7	K0037	Flat Washer / 1/4" (.75 OD x .312 ID x .060 T)	2
8	K1128	1/4"-20 Nyloc Nut	2
9	C0026	Grass Deflector	1
10	K0062	Fender Washer / .230 ID x 1.500 OD / Zinc	4
11	K1265	Black Panel Retainer	5
12	V1120	Black Plastic Screen	1
13	V1118	Dust Guard	1
14	R1057	Decal / 2" x 4" Red Reflector	2

A2280 5-Blade Impeller Drive Assy Exploded View

Item #	Part #	Desc.	Qty.
1	A2279	PTO Drive Assy / 3-Pt Hitch / 5-Blade	1
2	A0644	5-Blade / Impeller	1
3	S4302	TAPER-LOCK BUSHING	1
4	S0159	Spacer Bushing .938 OD x .325 ID x .375 T	2
5	K0284	Double Indented Washer 3/8" / 1.375 OD x .380 ID x .179 T	1
6	K1225	HHCS 1/4"-20 X 1" GR8	2
7	K1465	HHCS 5/16"-24 x 1-1/2" GR8	1
8	E5007F	Blower Hsg Front	1
9	K1401	1/4"-20 x 1" SHCS / Zinc / GR8	7
10	K1126	Flange Nut 1/4"-20	7

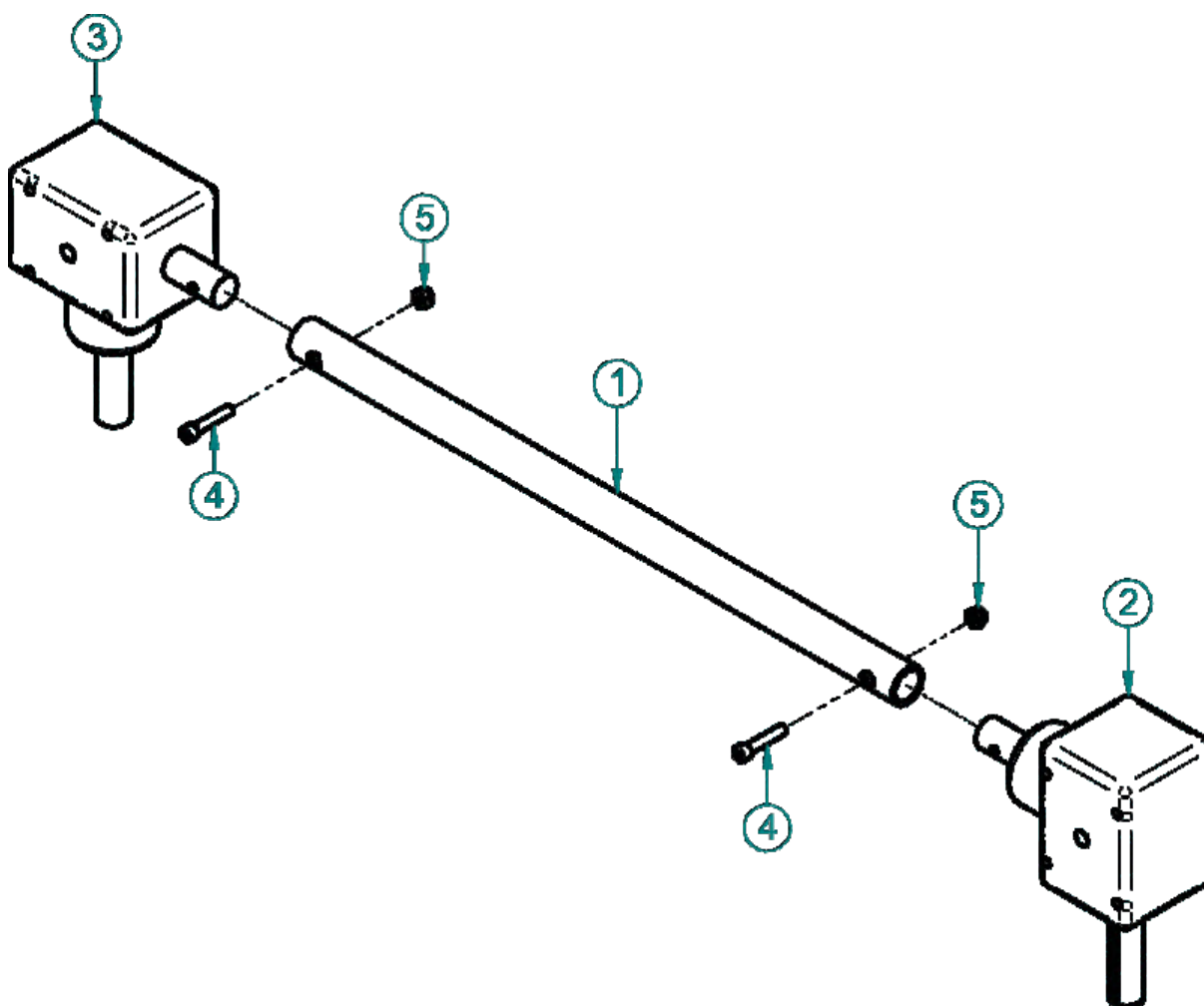


## A2279 PTO Drive Assy Exploded View



Item #	Part #	Desc.	Qty.
1	B1889	Drive Housing Top	1
2	B1892	Drive Mount Bracket Left	1
3	B1891	Drive Mount Bracket Right	1
4	A2238	PTO Inter Connect Shaft Sub Assy	1
5	B1890	Drive Housing Bottom	1
6	B1898	Jack Mount	2
7	B1919	Jack Bracket Plate	2
8	K0144	3/8"-16 Clip Nut	22
9	K1191	HHCS 3/8"-16 x 1" GR5	18
10	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	10
11	V0054	BP-3/4 PE-LD01 PLUG	4
12	K0044	I/T Tooth Lock Washer 5/16"	8
13	K1153	HHCS 5/16"-18 x 3/4"	8
14	R0045	Decal / Danger - Rotating Driveline	1
15	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	4
16	K1154	HHCS 5/16"-18 x 1"	4
17	K2516	Ny-Flange Lock Nut 5/16"-18	4
18	E5007B	Blower Hsg Back	1

## A2238 PTO Inter Connect Shaft Sub Assy Exploded View

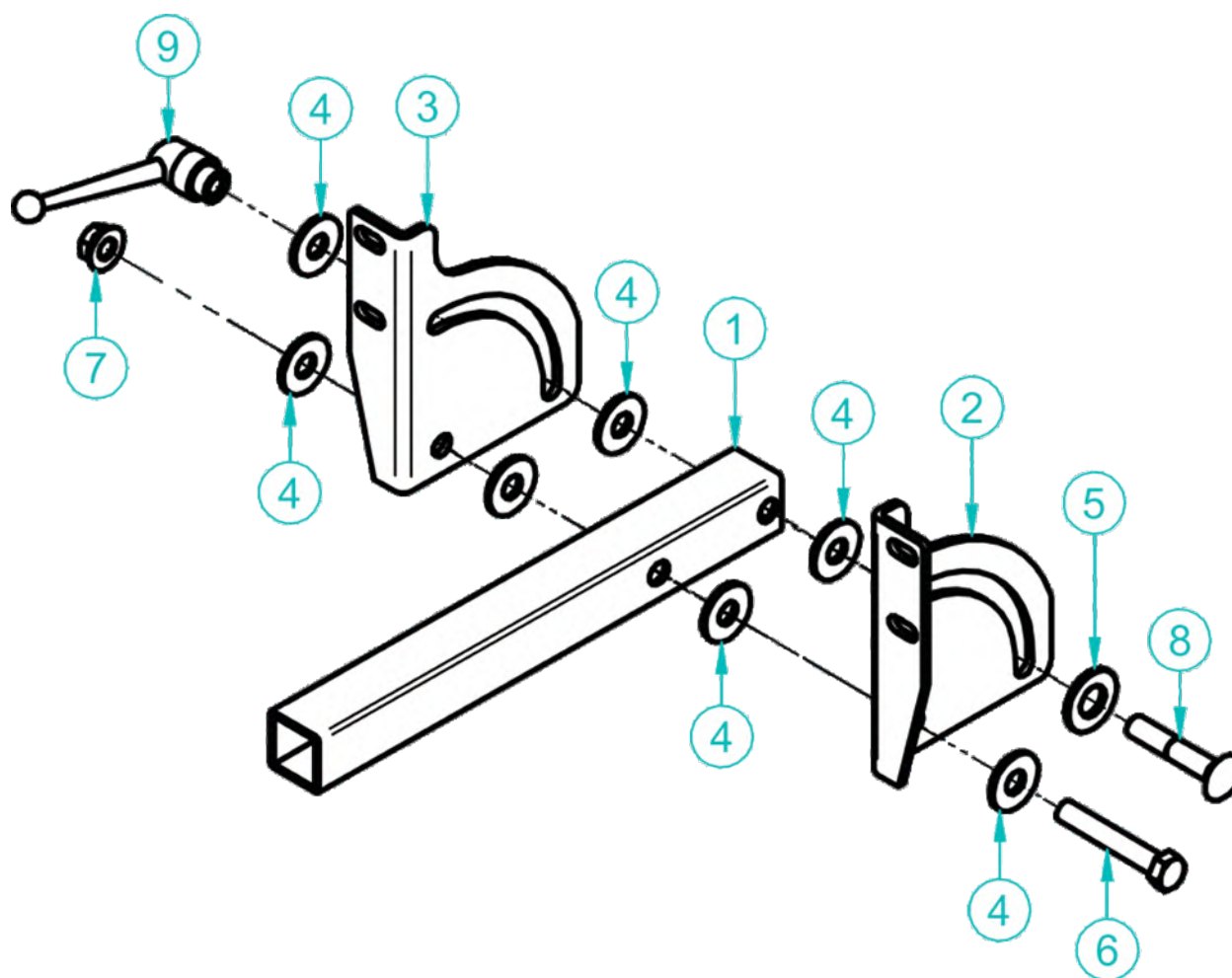


Item#	Part#	Desc.	Qty.
1	B1888	PTO Inter Connect Shaft	1
2	M0007	#952200 Pro22 Gearbox	1
3	M0008	#952192 Pro22 Gearbox	1
4	K0404	5/16"-18x1-1/2" SHCS	2
5	K1180	5/16"-18 Nyloc Nut	2

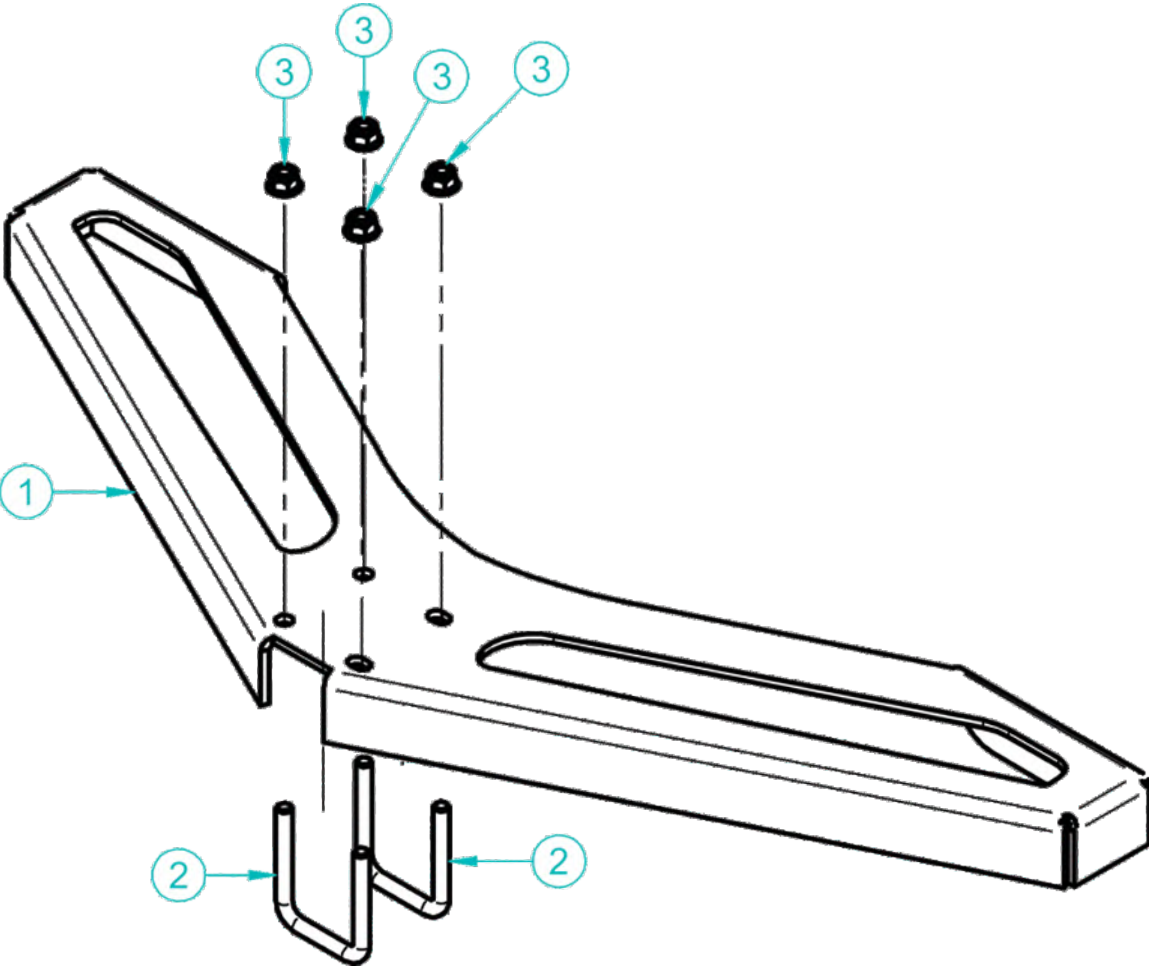


## A2237 PTO Drive Stand Assy Exploded View

Item #	Part #	Desc.	Qty.
1	B1899	Stand Tube	1
2	B1876	Stand Pivot Bracket Left	1
3	B1896	Stand Pivot Bracket Right	1
4	K0055	Flat Washer 1/2" / 1.383 OD x .560 ID x .120 T	7
5	K1236	1/2"-13 x 3" HHCS	1
6	K2012	1/2"-13 Ny-Flange Lock Nut	1
7	K1051	1/2"-13 x 2-3/4" Carriage Bolt	1
8	J0012	Adjustable Handle 1/2"-13 Female	1
9	K1463	Flat Washer .720 ID x 1.500 OD x .250 T	1

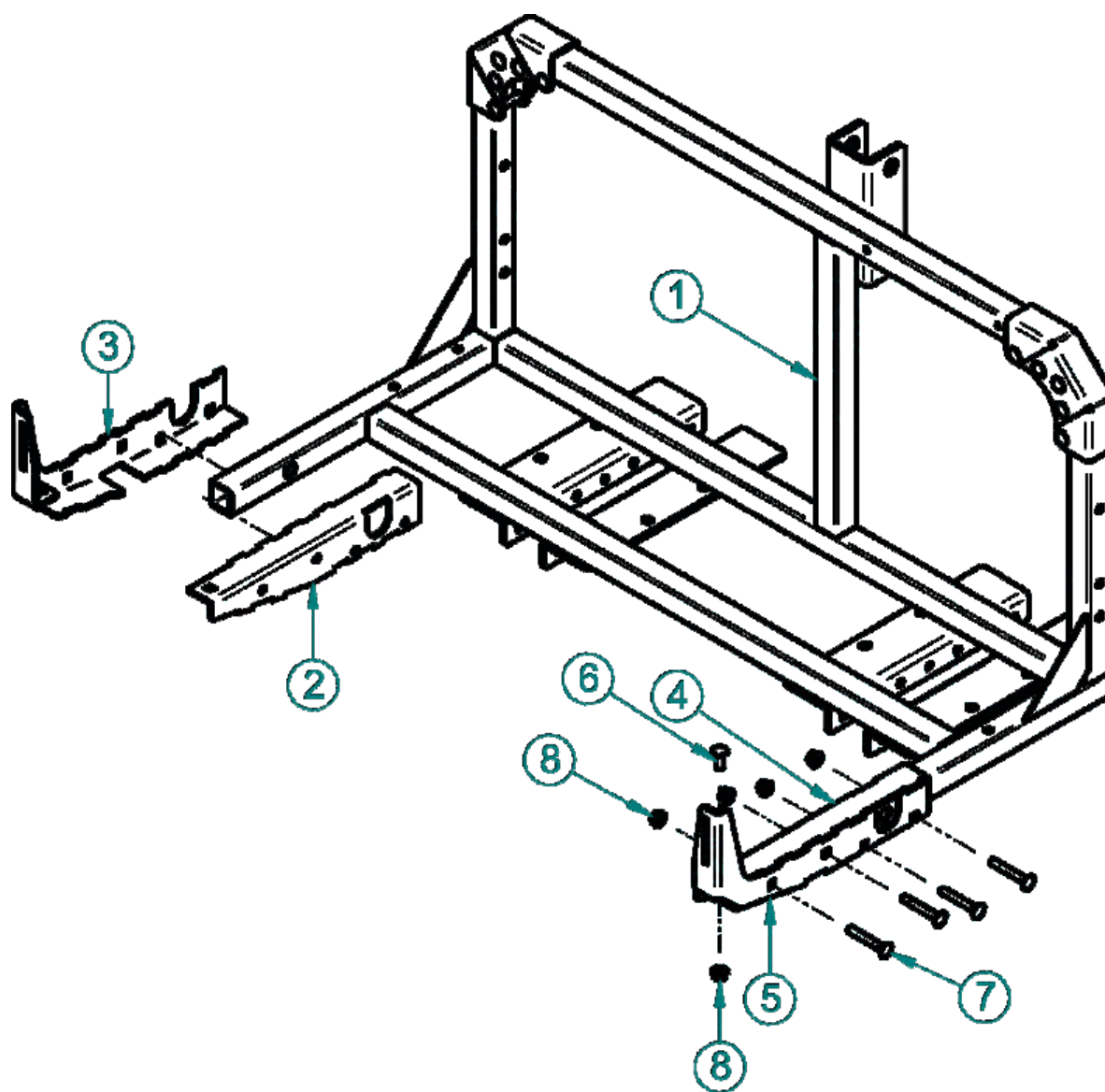


**A2263 Stand Foot Sub-Assy Exploded View**



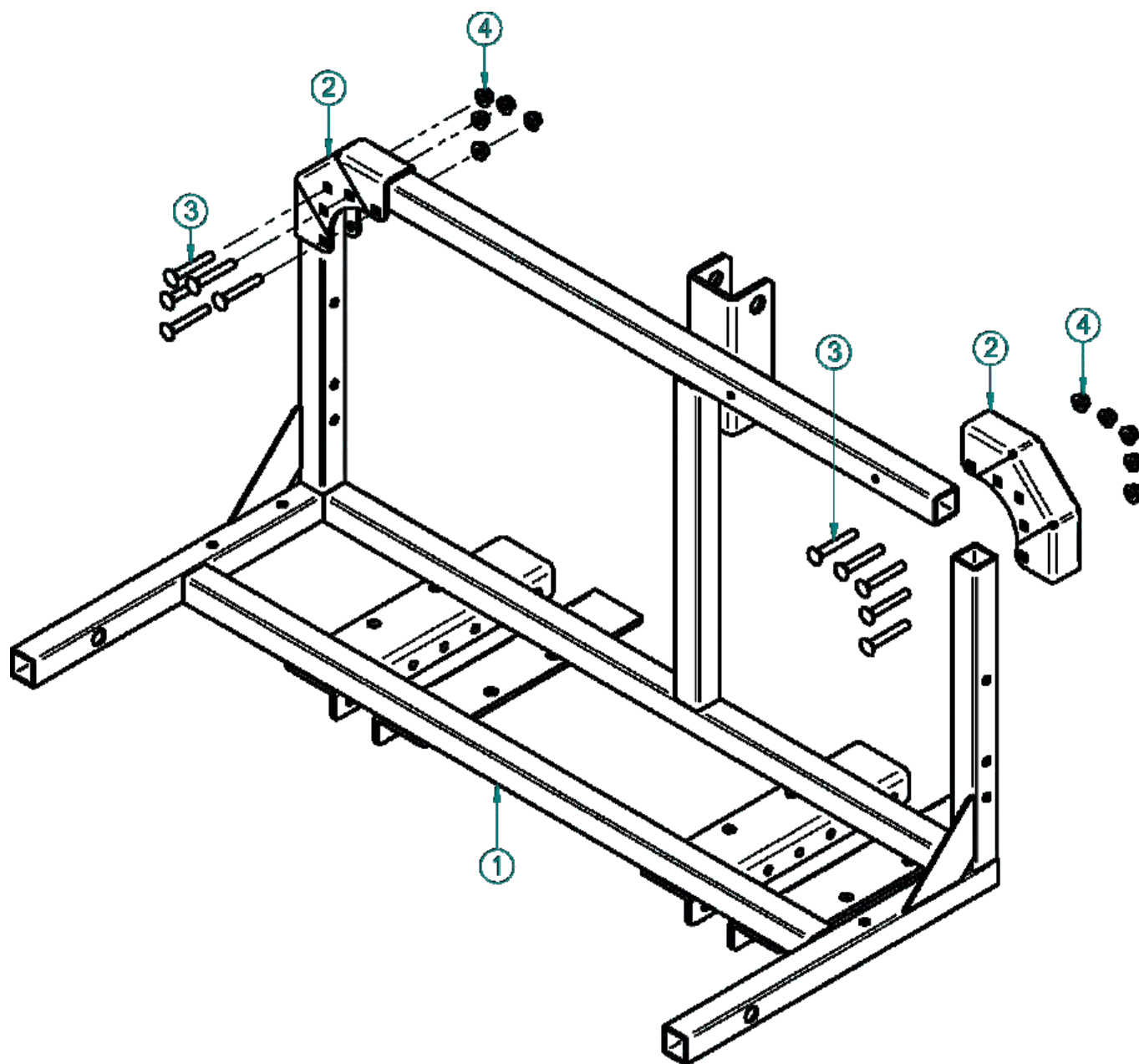
Item #	Part #	Desc.	Qty.
1	B1900	Stand Foot	1
2	K1098	U-Bolt / 5/16"-18 x 2-3/8" x 1-3/4"	2
3	K2516	Ny-Flange Lock Nut 5/16"-18	4

## A2236 Base Frame Assy / Pro 22 Exploded View



Item#	Part#	Desc.	Qty.
1	A2234	Base Frame Assy / 3-Pt Hitch	1
2	B1908L	Latch Brace / Top / Left	1
3	B1909L	Latch Brace / Bottom / Left	1
4	B1908R	Latch Brace / Top / Right	1
5	B1909R	Latch Brace / Bottom / Right	1
6	K1182	Carriage Bolt 3/8"-16x1"	2
7	K1186	3/8"-16 x 2-1/2" Carriage Bolt	8
8	K2038	Ny-Flange Lock Nut 3/8"-16	10

## A2234 Base Frame Assy / 3-Pt Hitch Exploded View



Item#	Part#	Desc.	Qty.
1	A0090_01	Base Frame / Weldment	1
2	B1901	Upright Clamp / Base Frame	2
3	K1186	3/8"-16x2-1/2" Carriage Bolt	10
4	K2038	Ny-Flange Lock Nut 3/8"-16	10





# Unit Model #: 751501

**Mower:** Sub-Compact Tractors

**Owner's Manual:** Q0555

**Mower Type:** Cat 1 3Pt Hitch

**Deck Size:** Choose Boot Kit Below

**Vac Type:** Pro3B (15 Cu. Ft.)

**Deck Type:**

**Drive Type:** PTO Driven

**Revision #:** 1 - Updated Mount Kit - Oct 2020

**Fits Year(s):**

## ☐ A2289 Vac Kit

(1) A1157  
Standard  
Top Assy

(1) A2234  
Base Frame  
Assy

(2) B1904  
13.75" Mount  
Tubes

(1) A2068  
Upper  
Frame Assy.

(1) V0025C  
Plastic  
Inlet

(1) B2022  
Safety  
Triangle  
Mount

(1) F0070-36  
7" x 36"  
Upper Hose

(2) B1905  
Tube Mount  
Brace

(1) B1927  
SMV Sign  
Mount

(2) J0070  
7" Hose  
Clamps

## ☐ A2281 Mount Kit

(1) HB0806  
Mount Kit  
Hardware  
Bag

(2) B1180  
Lower Link  
Plates

(1) A2199  
Jack Stand  
Bracket

(1) B2092  
Check Chain  
Mount

(1) A2237  
PTO Drive  
Stand  
Sub Assy

(1) M0006  
PTO Slip  
Clutch

(1) A2263  
Stand Foot  
Sub Assy

(1) A2262  
Jack Stand  
w/ Foot Assy

(1) M0005  
PTO Driveshaft  
Assy / Uncut

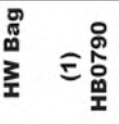
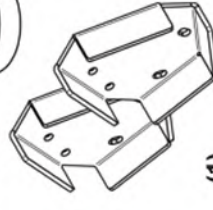
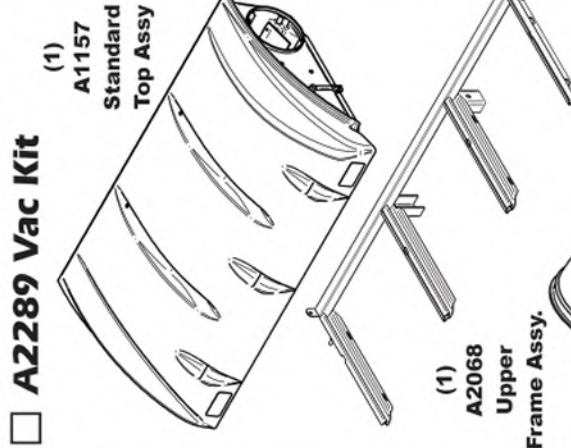
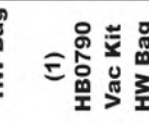
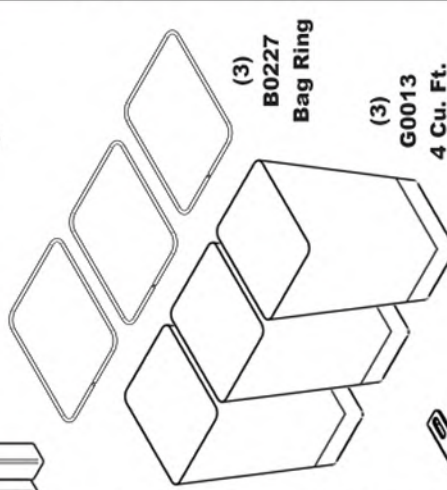
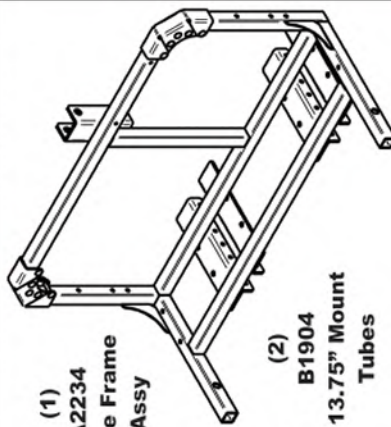
(1) A2280  
Drive Assy.  
w/ 5-Blade  
Impeller

☐ A2283 Large Universal Boot Kit

☐ A2284 Small Universal Boot Kit

☐ Other Boot Kit ( )

Select the Boot Kit  
That is needed

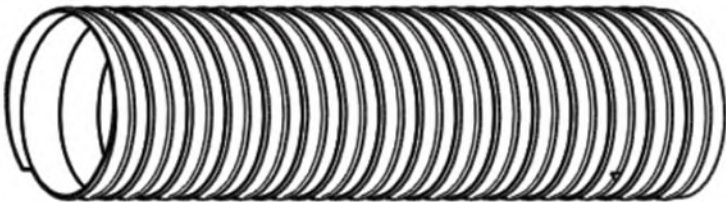




Unit Model #: **A2283**

Mower:	Owner's Manual: Q2053
Mower Type:	
Deck Size:	Vac Type: Pro22 (22 Cu. Ft.)
Deck Type:	Drive Type: PTO Driven
Revision #: 0	Fits Year(s):

☐ **A2283 Universal Boot Kit / Large**



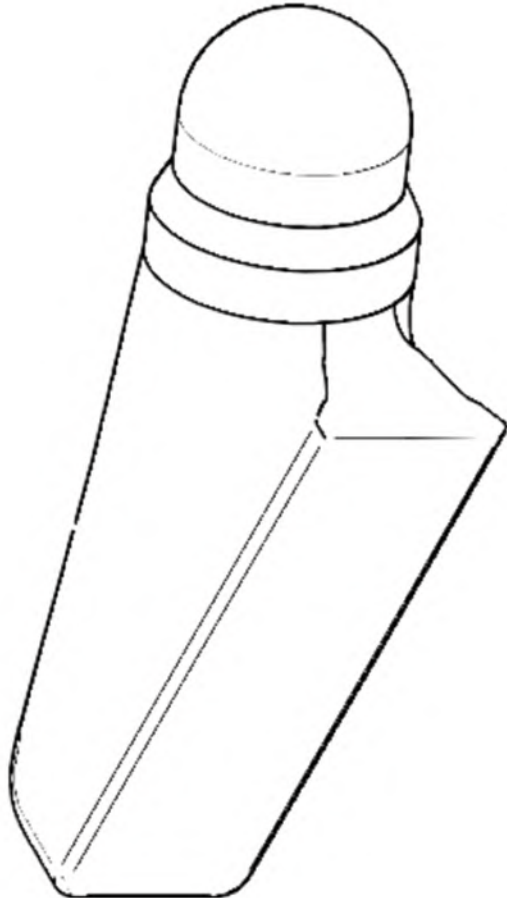
(1)  
F0080-70  
8" x 70"  
Lower Hose



(2)  
J0080  
8" Hose  
Clamps



(1)  
HB0807  
Boot Kit  
HW Bag



(1)  
V1049  
Universal  
Boot / Large





Unit Model #: **A2284**

Mower:

Owner's Manual: Q2054

Mower Type:

Vac Type: Pro22 (22 Cu. Ft.)

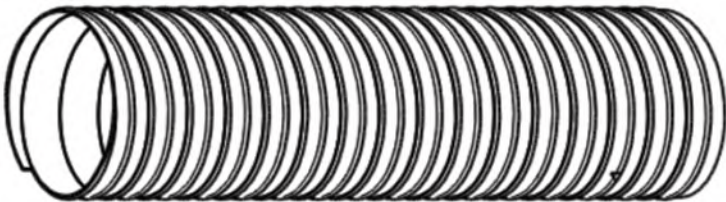
Deck Size:

Drive Type: PTO Driven

Deck Type:

Fits Year(s):

Revision #: 0

☐ **A2284 Universal Boot Kit / Small**


(1)  
F0070-70  
7" x 70"  
Lower Hose



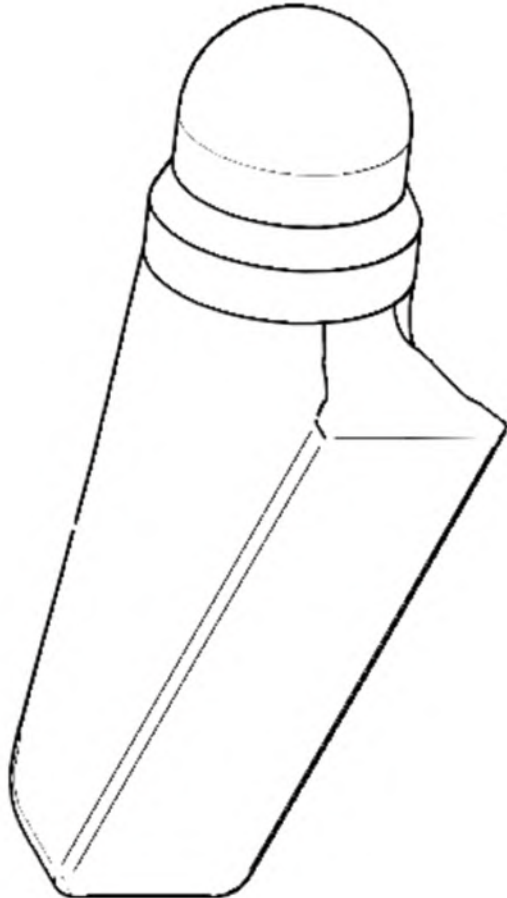
(2)  
J0070  
7" Hose  
Clamps



(1)  
HB0808  
Boot Kit  
HW Bag



(1)  
E6007  
7" Blower  
Cone



(1)  
V1018  
Universal  
Boot / Small

## 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



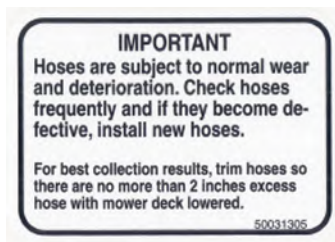
Part# R0022  
Designed & Built  
In The USA



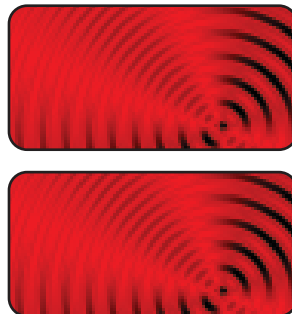
Part #: R2007  
Danger - Never Use Hands



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 tractor.
- C. While seated in the operator's seat, and the tractor at a low idle speed, engage the tractor's PTO switch.
- D. Gradually increase the tractor's idle speed from low to high.
- E. With the tractor at a high idle speed, engage the mower deck.
- F. With the PTO assembly engaged, you can proceed to operate the control levers of the tractor.

**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 the tractor's PTO switch to the off position.

**WARNING:** DO NOT TOUCH the PTO assembly until the tractor is turned off.

#### Unloading The Collection System

**NOTE:** Collection system blower will have an audible change in tone when the collection system is full. Load in bags should not exceed the height of the installed bag.

- A. Stop the forward movement of the tractor.
- B. Disengage the mower deck.
- C. Disengage the PTO assembly.
- D. Engage the parking brake.
- E. Once the parking brake has been engaged, release the rubber strap with the S-hook that secures the plastic top, then lift the plastic hood.
- 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 the collection unit to become over-filled as potential damage may occur to your equipment.

## 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. 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 any 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 collection unit is subject to deterioration and wear and should therefore be frequently checked for necessary part replacements. Any replacement parts should be checked to ensure compliance with the original manufacturer's recommendations or specifications.

## Lubrication

Gearbox:

**NOTE:** The gearboxes are designed to be maintenance-free. 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 by removing the Plastic Plug on top of the PTO Drive Assy, then remove the socket head set screw of the gearbox. **DO NOT OVERFILL!**

## 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)**

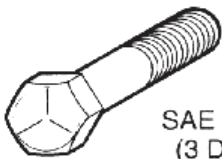
# TORQUE SPECIFICATIONS

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

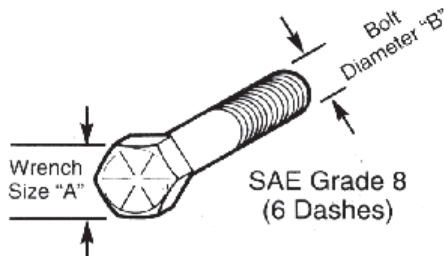
## AMERICAN Bolt Head Markings



SAE Grade 2  
(No Dashes)



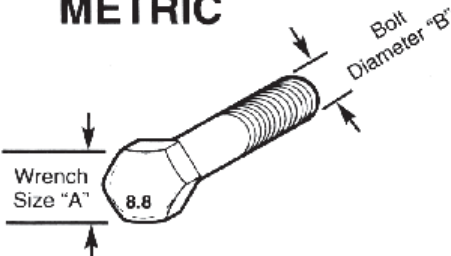
SAE Grade 5  
(3 Dashes)



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 Collection System Performance

2017 (v1.0)

Problem	Possible Cause	Corrective Action
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>





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