

# PTO-X / ENGINE DRIVEN - GRASS COLLECTION SYSTEM

**MODEL YEAR: 2020-Newer** 



Z-Master 4000 Series

22651201 PTO-X 22651202 Briggs & Stratton 6.5HP V



# OPERATOR'S MANUAL

ASSEMBLY • OPERATION • MAINTENANCE

MANUAL PART#: Q0581 Initial Release- June 2021

# **GRASS COLLECTION SYSTEM**

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#### SAFETY

Troubleshooting -----

- **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.
- 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.



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

White letters on RED



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 **ORANGE** 



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.

Black letters on YELLOW

#### 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: <a href="https://www.briggsandstratton.com/na/en\_us/support/warranty.html">https://www.briggsandstratton.com/na/en\_us/support/warranty.html</a>
- 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 ADDITONAL 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 <a href="www.lawnvac.com">www.lawnvac.com</a> or contact our Sales Department at New PECO, Inc. 800-438-5823 or email 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. The manuals are 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 cleanup. 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 mounted on the control panel to the right of the operator. Once the bags are full with clippings, they can be easily released for dumping.



**Engine Driven Unit Shown Above** 

Note: Installations for specific units will be specified at the top right of the current section heading or where needed as:



Text with instructions for a specific unit will be highlighted, with respect, to the color identified above as such: **PTO-X Drive** & **Engine Drive**.

PTO-X Units may also share similar instructions with the Engine Drive Units. The units sharing the same instructions will not have any specification under the section heading or highlighted within the text.

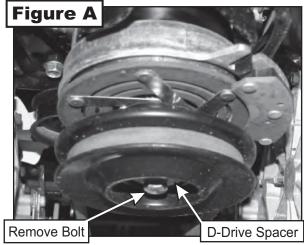
## **Section II - INSTALLATION FOR USE**



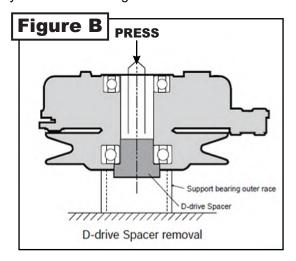
#### **Preparation Of Mower**

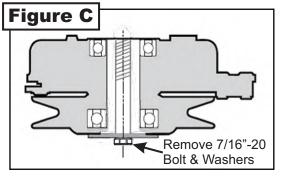
**NOTE:** The mower deck PTO belt must be removed from the electric clutch before continuing with the installation. Refer to your mower's owner's manual for instructions on PTO belt removal.

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.

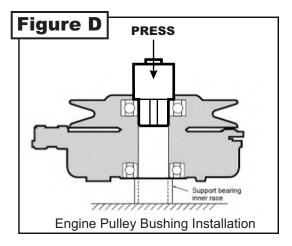


Upon removal of clutch determine if your mower is equipped with a D-drive spacer. If so, then proceed to Figure B. If your mower is equipped with bolt, fender and lock washer without D-drive spacer proceed to Figure C. Remove the D-drive spacer using an arbor press or equivalent. On removal, adjacent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

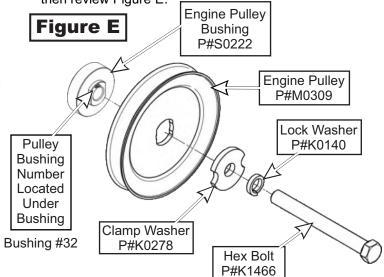




The engine pulley assembly must be installed using an arbor press or equivalent. During installation, opposite bearing inner race must be supported or bearing damage may occur. Refer to Figure D.

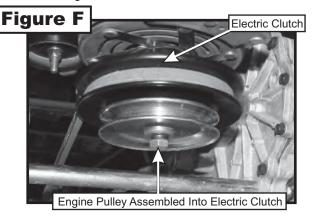


Once the Engine Pulley Bushing is installed, reattach the clutch assembly & deck PTO belt to the mower and then review Figure E.



7/16"-20 x 2-1/4" HHCS

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.



#### **Rear Frame Bracket Installation**

Before installing the Rear Frame Bracket (Item #1), first remove the (2) existing fasteners from the mower's rear bumper, see Figure A. Once removed, align the Rear Frame Bracket (Item #1) to the mower's rear bumper bolt holes. Secure the Rear Frame Bracket by using (4) 5/16"-18 x 1" Carriage Bolts (Item #2) & (4) 5/16"-18 Ny-Flange Lock Nuts (Item #3), see Figure B.

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

Figure A

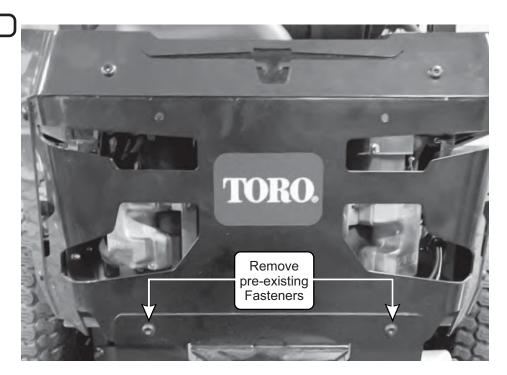
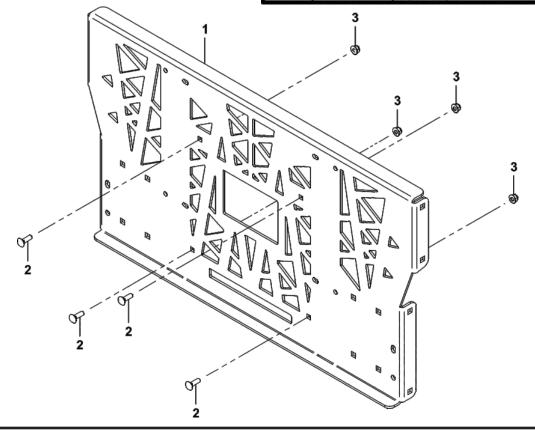


Figure B

Item #	Part #	Desc.	Qty.
1	B2119	Rear Frame Brkt.	1
2	K1144	5/16"-18 x 1" Carriage Bolt	4
3	K2516	Ny-Flange Lock Nut 5/16"-18	4



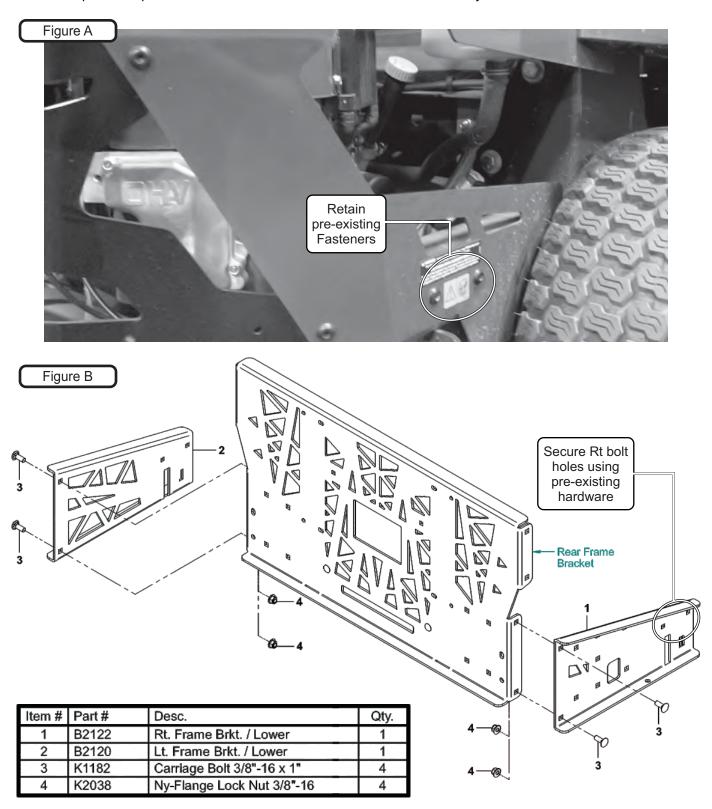
#### **Lower Frame Bracket Installation**

First, remove and set aside the (2) set of fasteners on the bottom right side of the mower. Refer to Figure A.

Next, align the left most bolt holes of the Lower Rt. Frame Bracket (Item #1) to the lower right bolt holes of the Rear Frame Bracket. Then, secure the Lower Rt Frame Bracket by using (2) 3/8"-16 x 1" Carriage Bolts (Item #3) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4). Refer to Figure B.

Finally, secure the (2) far right bolt holes of the Lower Rt Frame Bracket by using the previously removed fasteners. Repeat the procedures for the Lower Lt Frame Bracket (Item #2) on the opposite side. Refer to Figure B.

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

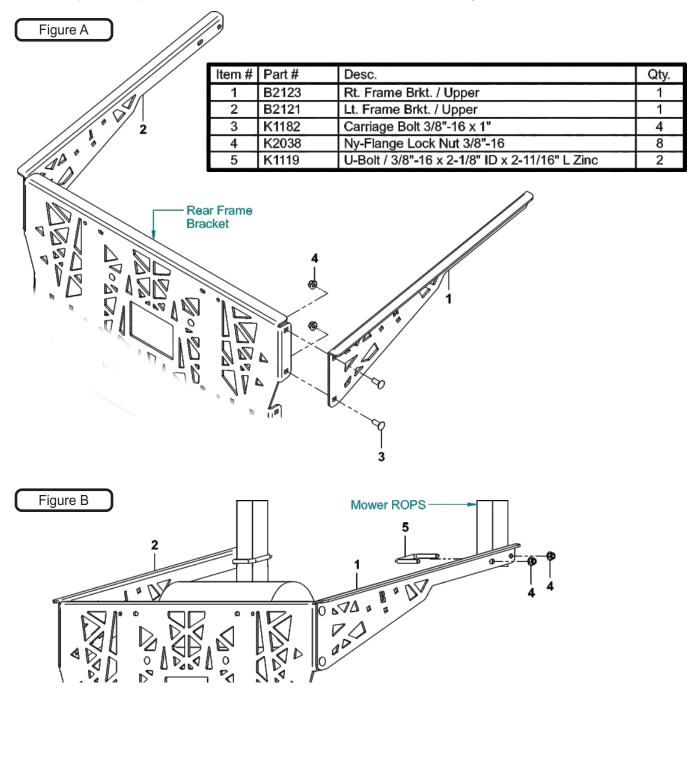


#### **Upper Frame Bracket Installation**

First, align the left most bolt holes of the Upper Right Frame Bracket (Item #1) to the upper right bolt holes of the Rear Frame Bracket. Then, secure the Upper Rt Frame Bracket to the Rear Frame Bracket relatively loose by using (2) 3/8"-16 x 1" Carriage Bolts (Item #3) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4). Refer to Figure A.

Next, align the (2) right most bolt holes of the Upper Rt Frame Bracket between the mower's ROPS. Finally, secure the right side of the Upper Rt Frame Bracket by using (1) 3/8"-16 U-Bolt (Item #5) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4). Tighten all hardware at this time. Repeat the procedures for the Upper Left Frame Bracket (Item #2) on the opposite side. See Figure B.

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



#### **Frame Gusset Installation**

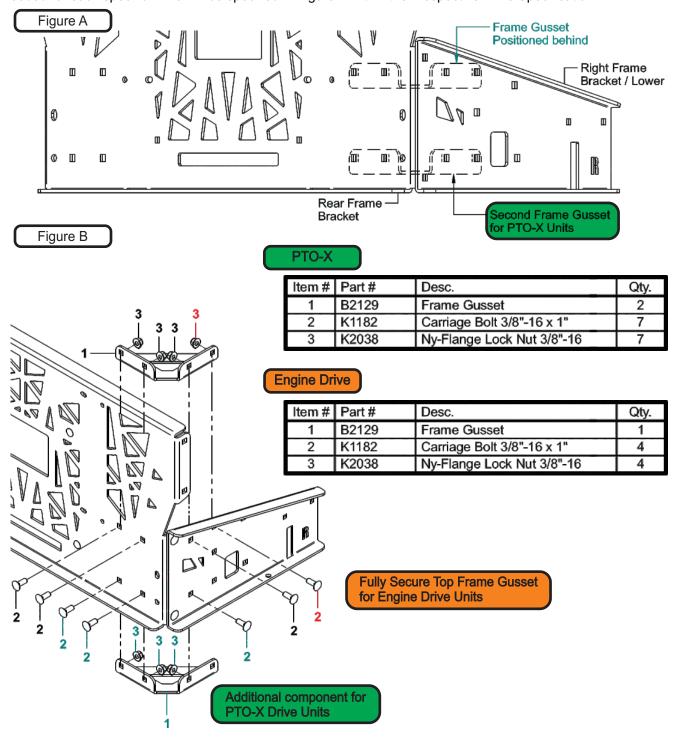
Position the Frame Gusset (Item #1) behind the Rear Frame Bracket & Lower Right Frame Bracket aligning the bolt holes of the Frame Gusset to the top bolt holes of those on the Rear Frame Bracket & Lower Right Frame Bracket. Refer to Figure A.

Secure the Frame Gusset by using (3) 3/8"-16 x 1" Carriage Bolts (Item #2) and (3) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Refer to Figure B.

For Engine Driven Units, only the top Frame Gusset is needed and will be fully secured during this step.

For <u>PTO-X Drive Units</u>, a second Frame Gusset needs to be installed below the top Frame Gusset. Repeat the same procedures for the second bottom Frame Gusset. Refer to Figure A & Figure B. The Frame Gussets for the <u>PTO-X</u> <u>Drive Units</u> will be fully secured during the PTO Mount Arm Installation on page 11.

<u>Note:</u> Some parts and part features have been hidden from view for visual clarity. The total amount of components needed for each specific Drive will be specified in Figure B within their respective Drive Specification.



#### **PTO Mount Arm Installation**

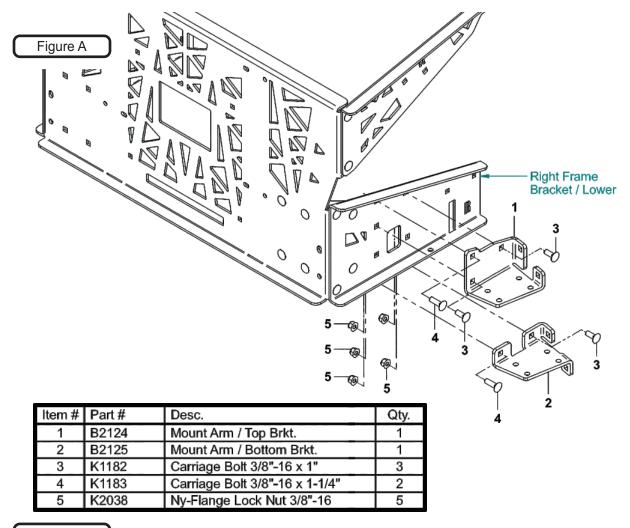


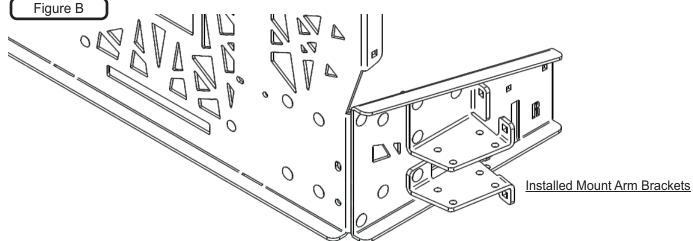
#### **PTO-X Unit Instructions**

Position the Mount Arm / Top Bracket (Item #1) to the top center set of bolt holes. Secure the Mount Arm / Top Brkt, relatively loose, by using (2) 3/8"-16 x 1" Carriage Bolts (Item #3), (1) 3/8"-16 x 1-1/4" Carriage Bolts (Item #4) and (3) 3/8"-16 Ny-Flange Lock Nuts (Item #5). Refer to Figure A & Figure B below.

Position the Mount Arm / Bottom Bracket (Item #2) to the lower center set of bolt holes. Secure the Mount Arm / Bottom Brkt, relatively loose, by using (1) 3/8"-16 x 1" Carriage Bolts (Item #3), (1) 3/8"-16 x 1-1/4" Carriage Bolts (Item #4) and (2) 3/8"-16 Ny-Flange Lock Nuts. Refer to Figure A & Figure B below. Keep the hardware relatively loose until after the installation of the Mount Arm Gusset on pg 12.

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

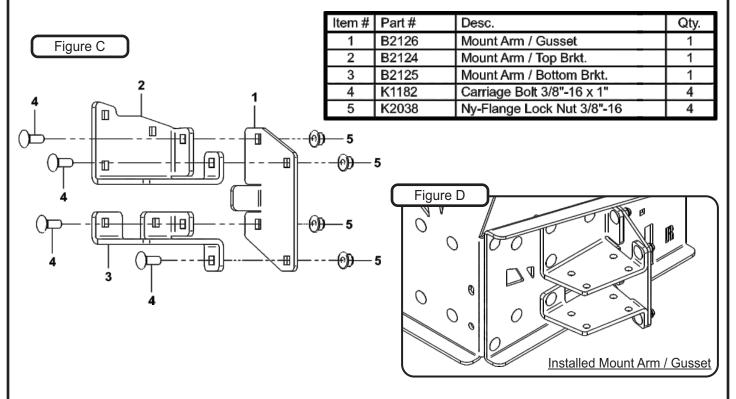




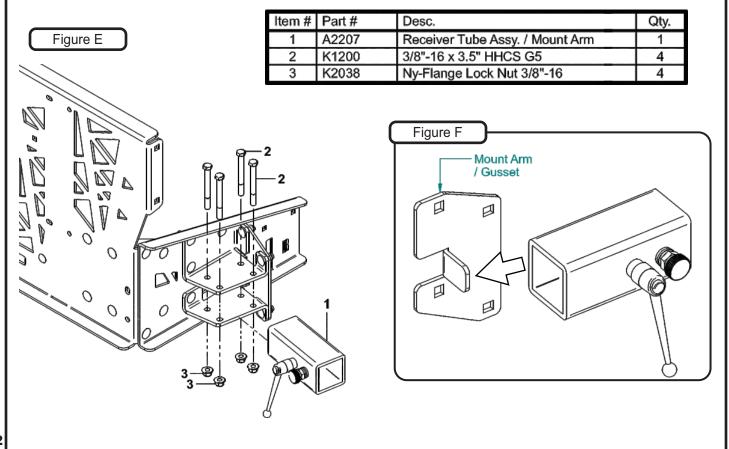
#### **PTO Mount Arm Installation (Continued)**



Position the Mount Arm / Gusset (Item #1) to the right of the Mount Arm / Top Bracket (Item #2) and Mount Arm / Bottom Bracket (Item #3). See Figure C. Secure the Mount Arm / Gusset, by using (4) 3/8"-16 x 1" Carriage Bolts (Item #4) and (4) 3/8"-16 Ny-Flange Lock Nuts (Item #5). Refer to Figure C & Figure D below.



Place the Receiver Tube Assembly (Item #1) between the Top & Bottom Mount Arm Brackets, see Figure E. Position the Receiver Tube Assy back onto the tab of the Mount Arm Gusset and between the bolt holes of the Top & Bottom Mount Arm Bracket, see Figure E and Figure F. Secure the Receiver Tube Assy by using (4) 3/8"-16 x 3.5" HHCS (Item #2) and (4) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Refer to Figure E.

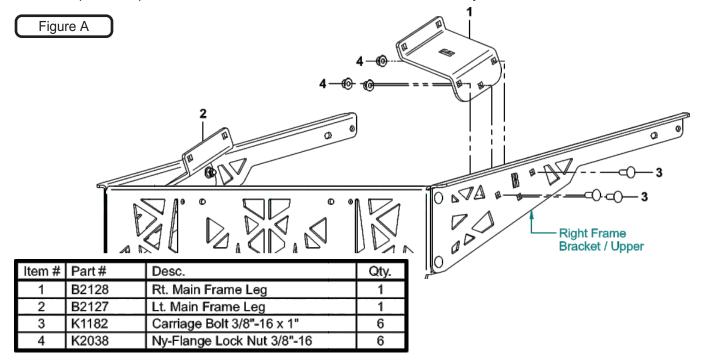


#### **Main Frame Leg Installation**

To install the Right Main Frame Leg (Item #1), position the Right Main Frame Leg to the inside of the Upper Right Frame Bracket. Align the bolt holes of the Right Main Frame Leg to those on the Upper Right Frame Bracket. See Figure A. Secure the Right Main Frame Leg by using (3) 3/8"-16 x 1" Carriage Bolts (Item #3) and (3) 3/8"-16 Ny-Flange Lock Nuts (Item #4). See Figure A.

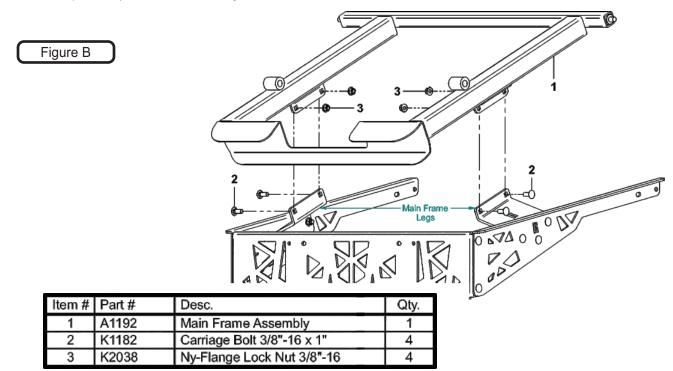
Repeat the same procedures for the installation of the Left Main Frame Leg (Item #2).

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



#### **Main Frame Assembly Installation**

To install the Main Frame Assembly (Item #1), position the Main Frame Assy between both the Left & Right Main Frame Legs as shown in Figure A. Align the mounting holes of the Main Frame Assy to those on the Main Frame Legs and secure the Main Frame Assy by using (2) 3/8"-16 x 1" Carriage Bolts (Item #2) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3) PER side. See Figure A.



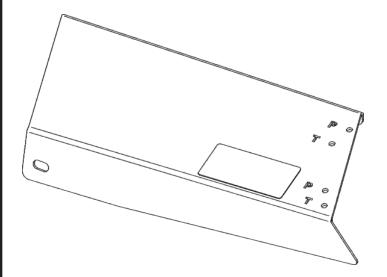
#### **PTO Drive Assembly**



#### **PTO-X Unit Instructions**

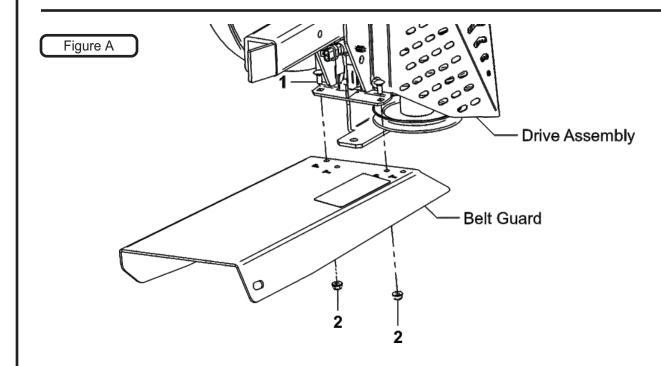
Once the Mount Arm Assembly is installed and secured to the mower, assemble the Drive Assembly P#(A2061\_02), Belt Guard Assembly P#(A2069\_02) & Idler Mount Assembly P#(A2067\_02).

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'



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

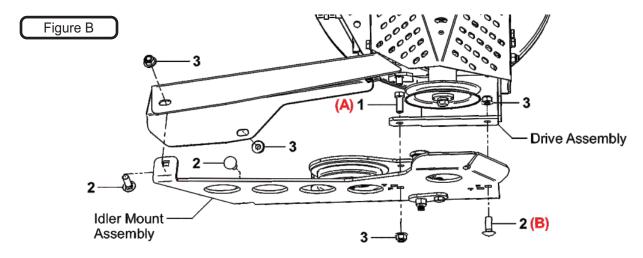
#### **PTO Drive Assembly (Continued)**



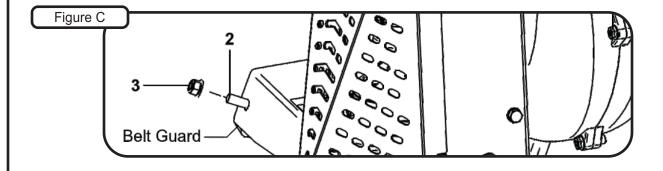
Attach the Idler Mount Assembly P#(A2067\_02) to the Drive Assembly using (1) 3/8"-16 x 1" HHCS (A) (Item #1), (1) 3/8"-16 x 1" Carriage Bolt (B) (Item #2) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Refer to Figure B.

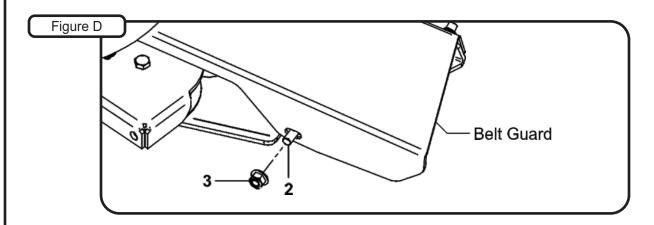
Leave Bolts Loose (Note: Orientation of bolts A & B.)

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.



Item # Part # Desc.		Qtv.	
ICIII #			ωιy.
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





#### **Drive Assembly and Belt Installation**

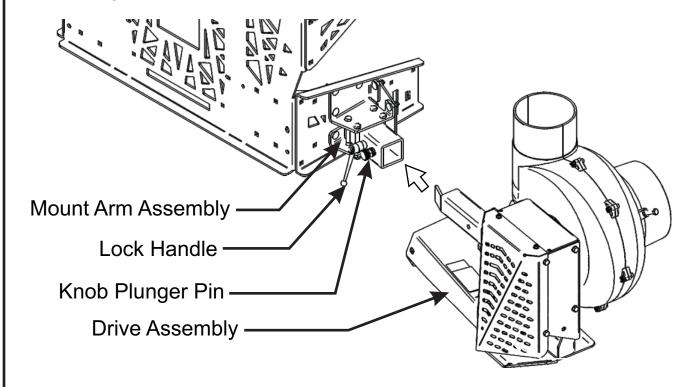


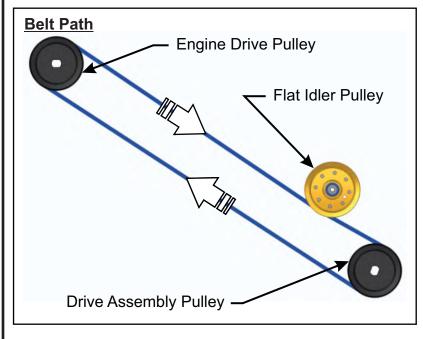
#### PTO-X Unit Instructions

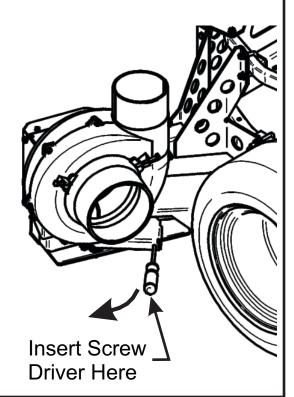
(Note: It is recommended that someone assist during this step.)

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 AK77 Belt P#(M0318) 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.

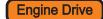
Refer to the images below.







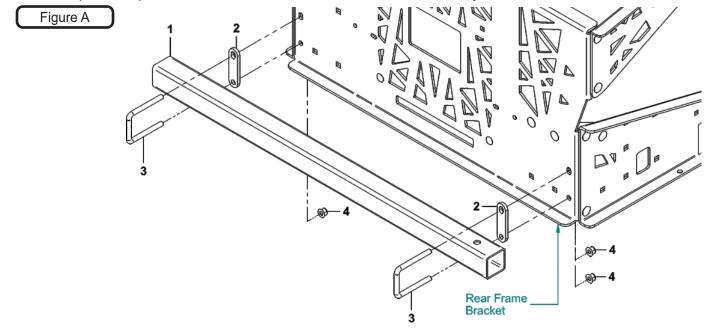
#### **Engine Mount Arm Assembly & Installation**



#### **Engine Driven Unit Instructions**

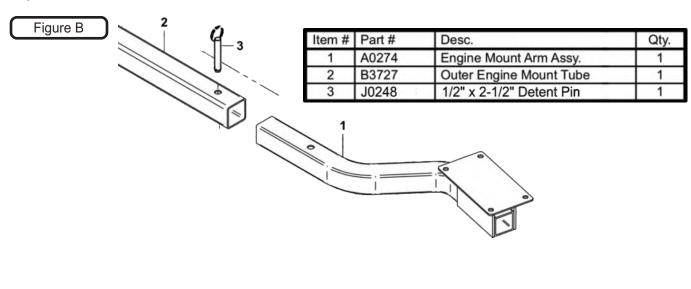
Position the Outer Engine Mount Tube (Item #1) above the tab of the Rear Frame Bracket aligning the Outer Tube between the two sets of mount holes as shown in Figure A. Secure the Outer Engine Mount Tube, relatively loose, by using (2) 3/8"-16 x 2-1/8" U-Bolts (Item #2) and (4) 3/8"-16 Ny-Flange Lock Nuts (Item #3). Once secured, adjust the Outer Engine Mount Tube positioning by moving it to the right until the right edge protrudes no more than 2-1/2" from the side of the Rear Frame Bracket. Once adjusted, tighten all hardware.

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



Item #	Part #	Desc.	Qty.
1	B3727	Outer Engine Mount Tube	1
2	B2204	Engine Mount Arm Spacer	2
3	K1460	U-Bolt 3/8-16 X 2-1/8 X 3-3/8	2
4	K2038	Ny-Flange Lock Nut 3/8"-16	4

Insert the Engine Mount Arm Assembly (Item #1) into the Outer Engine Mount Tube (Item #2) and position the mounting pin hole between the two parts. Secure the Engine Mount Arm Assy by using (1) Detent Pin (Item #3). Refer to Figure B below.



#### **Engine Drive Assembly Installation**

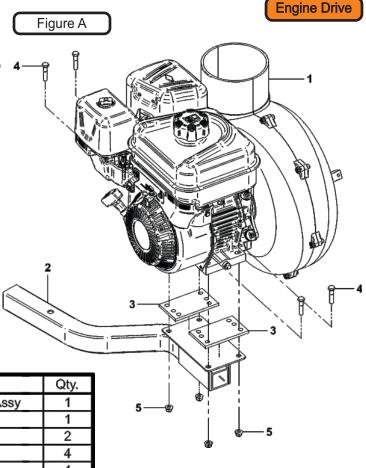
#### **Engine Driven Unit Instructions**

First, place (2) Rubber Shock Absorbers (Item #3) on top of the Engine Mount Arm Assembly (Item #2) aligning the bolt holes of the Rubber Shock Absorbers to those on the Engine Mount Arm Assy.

Next, position and place the 6.5HP Engine Assembly (Item #1) on top of the Shock Absorbers aligning the bolt holes of all the components.

Finally, secure the Engine by using (4) 5/16"-18 x 2" HHCS (Item #4) and (4) 5/16"-18 Nyloc Nuts (Item #5). Refer to Figure A.

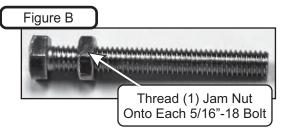
Note: Some parts and part features have been hidden from view for visual clarity.



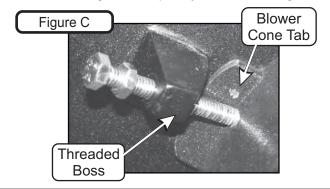
Item #	Part #	Desc.	Qty.
1	A639	BR6.5V Engine/Blower/Blade Assy	1
2	A0274	Engine Mount Arm Assy.	1
3	V1090	RUBBER SHOCK ABSORBER	2
4	K1159	5/16"-18 x 2" All Thread HHCS	4
5	K1180	5/16"-18 Nyloc Nut	4

#### **Blower Cone Installation**

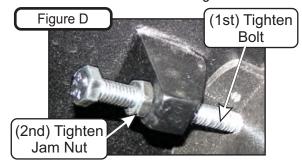
Thread (1) 5/16"-18 Jam Nut P#(K0120) onto each end of (2) 5/16"-18 x 2-1/2" HHCS P#(K0125) as shown in Figure B.



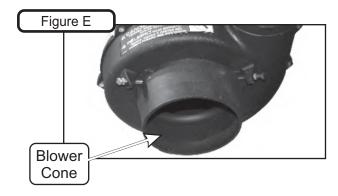
Now partially thread (1) bolt into each of the two threaded bosses located on the Blower Housing. Place 8" Blower Cone P#(E6009) so the two tabs line up with the bolts and tighten completely as shown in Figure C.



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



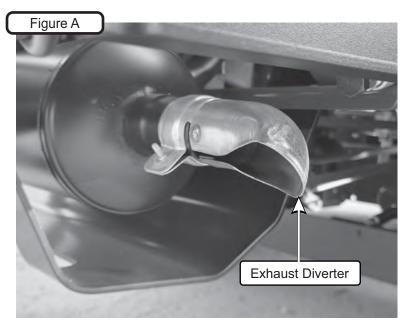
Refer to Figure E for proper Blower Cone installation reference.

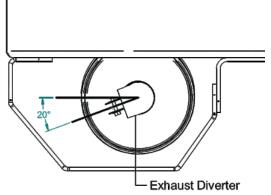


#### **Exhaust Diverter Installation**

This Exhaust Diverter P#(J0150) is used to divert the mower's exhaust directly away from your Drive unit to prevent any damage that may occur. Position and install the Exhaust Diverter P#(J0150) onto the end of the exhaust of your mower, make sure the Exhaust Diverter is angled 20° down and away from the mower, see Figure A below.

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

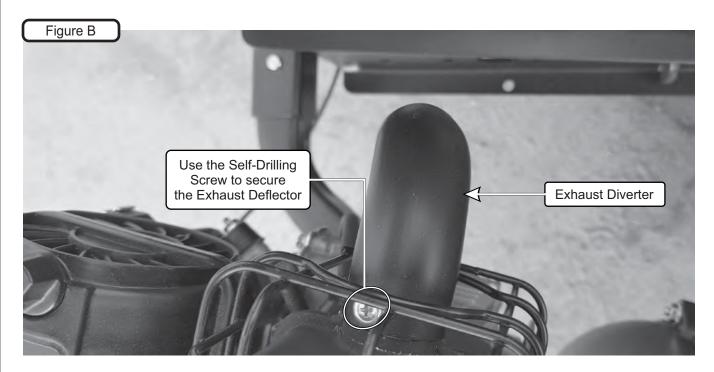




**Engine Drive** 

This Exhaust Diverter P#(J0251) is used to divert the exhaust directly away from the mower to prevent any damage that may occur. Position and install the Exhaust Deflector P#(J0251) onto the end of the exhaust of the Engine Drive Assembly, make sure the Exhaust Deflector is pointed downwards.

Secure the Exhaust Deflector onto the Exhaust by using (1) Self-Drilling Screw P#(K1504), see Figure B below.



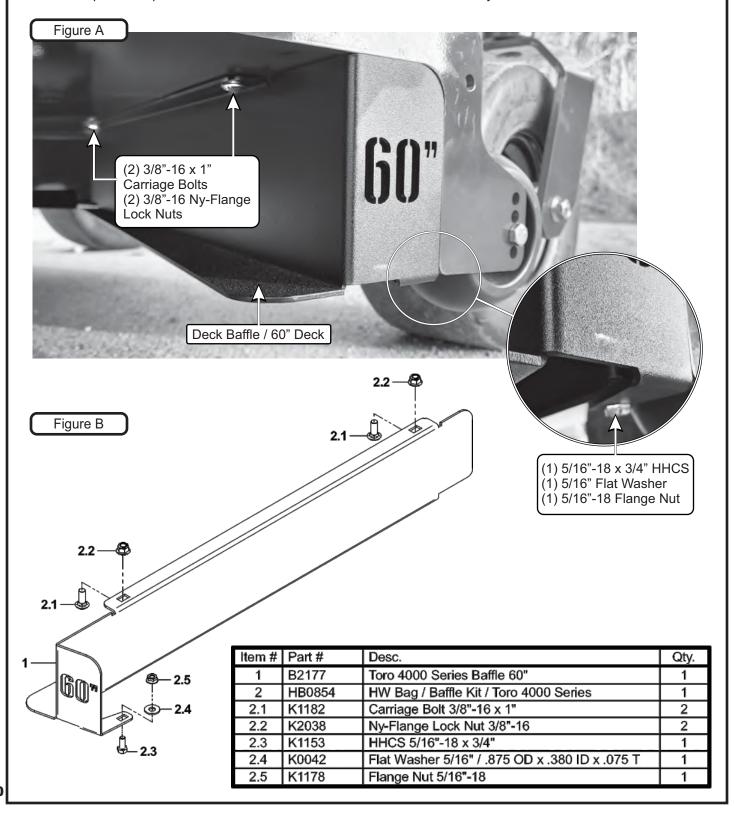
#### **Deck Baffle Installation**

Your unit will need to install a Deck Baffle (Item #1) to prevent any build up of grass clippings or to prevent any discharge / blowout from the front of your Aluminum Boot.

With your mower deck lifted, position the Deck Baffle (Item #1) under the Deck with the side face of the baffle relatively flushed to the side of the deck.

Align the bolt holes of the Deck Baffle with the bolt holes on the deck and secure the Deck Baffle using (2) 3/8"-16 x 1" Carriage Bolts (Item #2.1), (2) 3/8"-16 Ny-Flange Lock Nuts (Item #2.2), (1) 5/16"-18 x 3/4" HHCS (Item #2.3), (1) 5/16" Flat Washer (Item #2.4), and (1) 5/16"-18 Flange Nut (Item #2.5). Refer to Figure A and Figure B.

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



#### **Boot Kit Installation**

First, remove the mower's deck discharge chute deflector fasteners and set the discharge chute deflector aside. Then, secure the Boot Plate (Item #2) to the Aluminum Boot (Item #1) using (2) 3/8"-16 x 1" Carriage Bolts (Item #4.1) and (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4.2), see Figure B. Leave the hardware loose until the boot plate has been attached to the mower deck.

Next, align the Boot Plate, discharge chute deflector and deck as shown in Figure A. Insert (1) Boot Rod (Item #3) through the Boot Plate, discharge chute deflector and deck mount tabs. Secure the Boot Rod using (1) Hair Pin Clip (Item #4.3). See Figure A and Figure B.

Finally, with the Carriage Bolts still loose, adjust the position of the boot so that there is no gap between the mower deck and the boot. Once adjusted, tighten all hardware at this time.

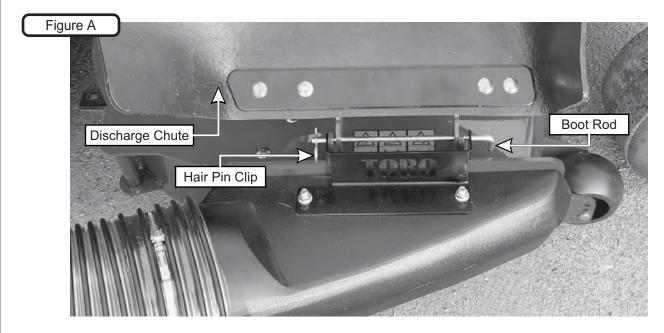
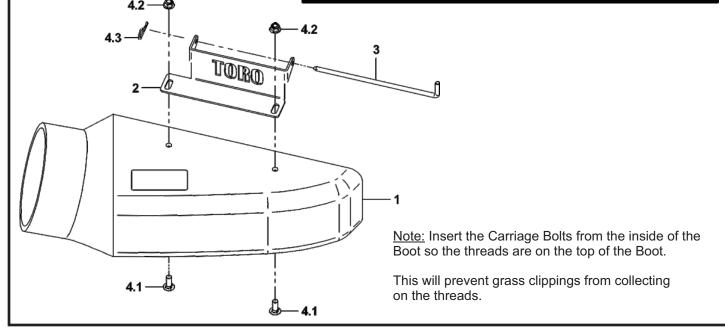


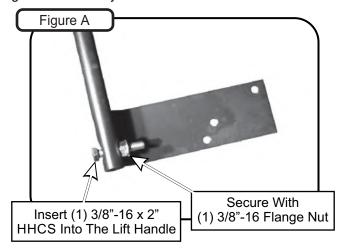
Figure B

Item #	Part #	Desc.	Qty.
1	E0032A	Modified E0032	1
2	B2198	Boot Plate / Toro 4000 Series	1
3	B0244	Boot Rod	1
4	HB0688	HW Bag / Boot Kit	1
4.1	K1182	Carriage Bolt 3/8"-16 x 1"	2
4.2	K2038	Ny-Flange Lock Nut 3/8"-16	2
4.3	K0099	Hair Pin Clip 3/32"	1

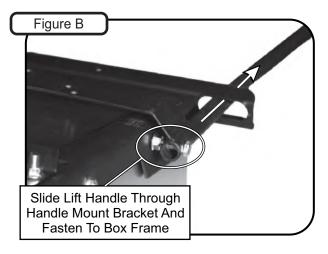


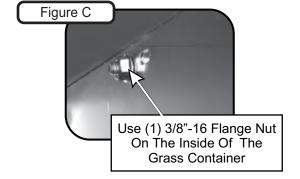
#### **Lift Handle Installation**

NOTE: Before continuing the Lift Handle installation, have someone assist you in turning the Box Assembly upside down. Insert (1) 3/8"-16 x 2" HHCS P#(K1208) into the Lift Handle P#(A0897), and secure with (1) 3/8"-16 Flange Nut P#(K1215). Thread the flange nut onto the bolt upside down, as shown in Figure A. Do not tighten the nut fully at this time.

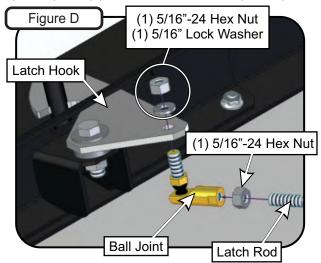


Slide the Lift Handle through the slot on the Handle Mount Bracket. Insert the Lift Handle into the Box Frame as shown in Figure B, and secure using (1) 3/8"-16 Flange Nut P#(K1215) on the inside of the Box as shown in Figure C. Now test the movement of the handle. It should have full-range of movement in the slot. If the handle does not have full-range of movement, adjust the 3/8"-16 Flange Nut from step A. Once achieved, tighten the fasteners.

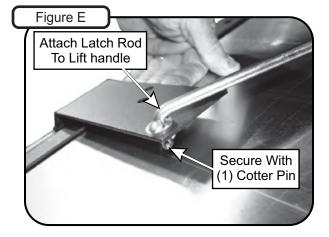


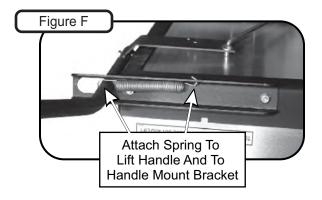


Fasten the Ball Joint P#(K1442) to the end of the Latch Rod P#(A2107). Thread (1) 5/16"-24 Hex Nut P#(K1444) all the way down onto the Latch Rod then tighten the Ball Joint to approximately half-way down the threads on the Latch Rod. Readjust the Hex Nut so it'll be right under the Ball Joint. Attach the Ball Joint to the Latch Hook as shown in Figure D, using (1) 5/16"-24 Hex Nut P#(K1444) and (1) 5/16" Lock Washer P#(K0043).



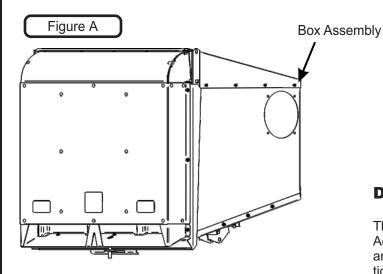
Attach the other end of the Latch Rod to the Lift Handle, as shown in Figure E. Attach one end of the Spring P#(J0176) to the Lift Handle and the other end of the Spring to the Handle Mount Bracket as shown in Figure F. Adjust the Ball Joint up or down on the Latch Rod threads until the Latch Hook closes completely. After adjusting the Latch Hook, secure the Latch Rod to the Lift Handle using (1) Cotter Pin P#(K0094).

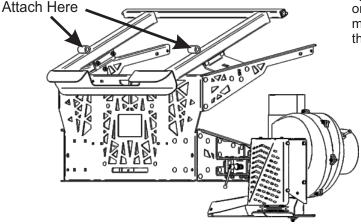


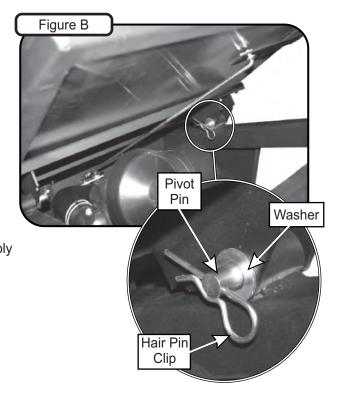


#### **Aluminum Box Assembly Installation**

**NOTE:** It is recommended that two extra people assist in mounting the Box Assembly. Two can lower the Box onto the frame while the third person inserts the Pivot Pins P#(K0172) through the holes. Insert the Pins from the outside to the inside. Secure with (1) 5/8" Washer P#(K0058) and (1) 5/32" x 2-5/8" Hair Pin Clip P#(K0088) per Pivot Pin (Figure B). Reattach the bottom ends of the door opening linkages to the Main Frame by using (1) Rue-Ring Cotter Pin P#(K1437) per side. To test the functionality of the dump mechanism, pull the Lift Handle away from the unit, and lift upward. The Door of the Box Assembly should open and the Box should pivot clockwise towards the ground.

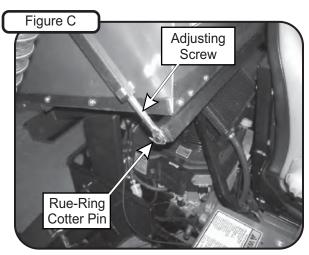






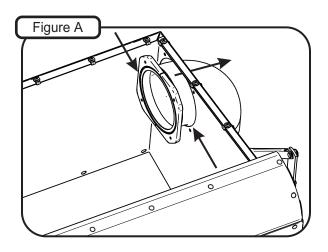
#### **Dump Mechanism Adjustment**

The mechanism may be adjusted in three places, at the Adjusting Screw P#(K1435), at the Latch Hook Pivot Bolt and the linkage Ball Joint. To change the door closure tightness, thread the Adjusting Screw (Figure C) in or out or by adjusting the Latch Hook Pivot Bolt within its' mounting slot. To adjust the Latch Hook closure angle, thread the Linkage Ball Joint in or out.



#### Inlet, Inlet Ring & Debris Deflector Installation

Open box door. From inside box, slide Inlet (Item #3) halfway into inlet hole (See Figure A). Take each half of the Inlet Ring (Item #1) and attach around matching groove in Inlet (Item #3). Slide Inlet (Item #3) & Inlet Ring (Item #1) against inlet hole and align four holes. Fasten Inlet Ring (Item #1) bottom holes using (2) 5/16" IT Tooth Lock Washers (Item #4) & (2) 5/16"-18 x 1/2" HHCS (Item #6) (See Figure B). Fasten Inlet Ring (Item #1) top holes using (2) 5/16" IT Tooth Lock Washers (Item #4) & (2) 5/16"-18 x 1-1/4" HHCS (Item #5). Slide Debris Deflector (Item #2) over inside top bolt threads (Item #5). Fasten Debris Deflector (Item #3) using (2) 5/16"-18 Ny-Flange Lock Nuts (Item #7). Final assembly should resemble Figure C.



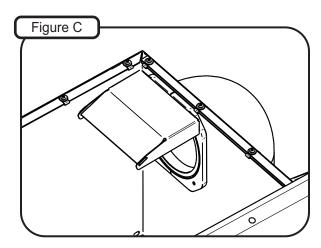
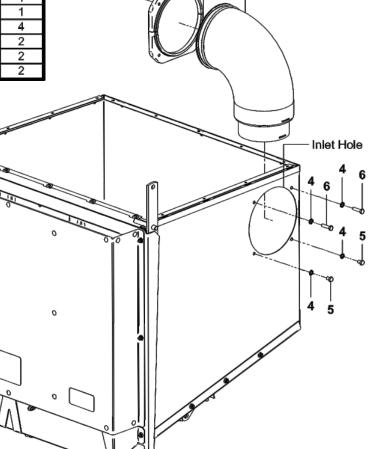


Figure B

Item #	Part #	Desc.	Qty.
1	C0074	Inlet Ring	1
2	C0088	Debris Deflector	1
3	V0025	Universal Inlet / 6" & 7"	1
4	K0044	I/T Tooth Lock Washer 5/16"	4
5	K1152	HHCS 5/16"-18 x 1/2"	2
6	K1156	5/16"-18 x 1-1/4" HHCS	2
7	K2516	Ny-Flange Lock Nut 5/16"-18	2

Open Box Door to Install Inlet, Inlet Ring & Debris Deflector



Note: Box Top & Screen Removed in Figure for visual clarity.

#### **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

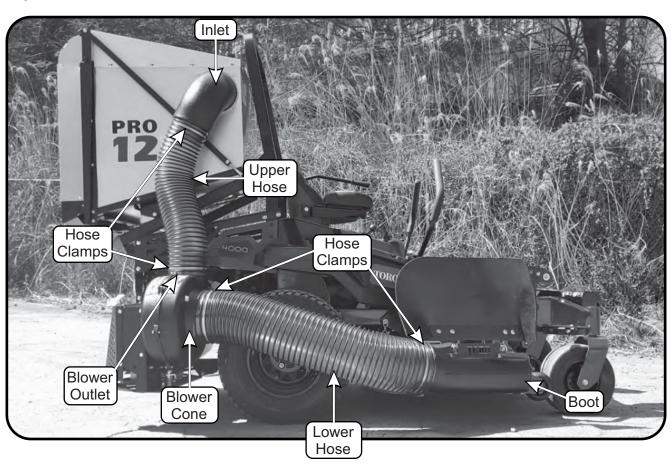
Slide a Hose Clamp P#(J0080) over both ends of the Lower Hose. Secure one end of the Lower Hose to the Blower Cone and fasten by tightening the Hose Clamp.

#### **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.

#### **Engine Driven Unit Shown Below**



#### **Wire Harness Installation**



First, install the PTO Rocker Switch (Item #2) by positioning it over the Switch Mount Plate (Item #1) and firmly pressing the Rocker Switch down until it is seated in place (Refer to Figure A). Next, connect the Wire Harness' (2) Female Switch Disconnects (Refer to Figure A) to the

**WARNING** 

To Prevent Serious Injury-

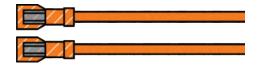
Proper Installation Of Safety Interlock Harness Is Mandatory. Please Check That All Interlock Points Work Correctly Once Installed.

PTO Rocker Switch. See Figure E on Page 28 for complete Wiring Diagram.

Then, position the PTO Switch Mount onto the panel Right of the Operator's seat. Refer to Figure B. Note the locations of the (2) bolt holes of the Switch Plate and the (2) bolt holes on the panel Right of the Operator's seat.

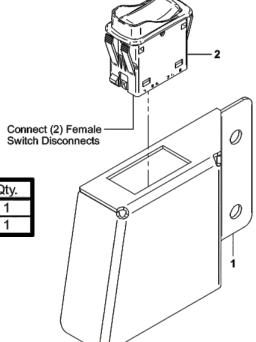
Finally, secure the PTO Switch Mount by using (2) 5/16"-18 x 3/4" HHCS P#(K1153) and (2) 5/16"-18 Nyloc Nuts P#(K1180). See Figure B.

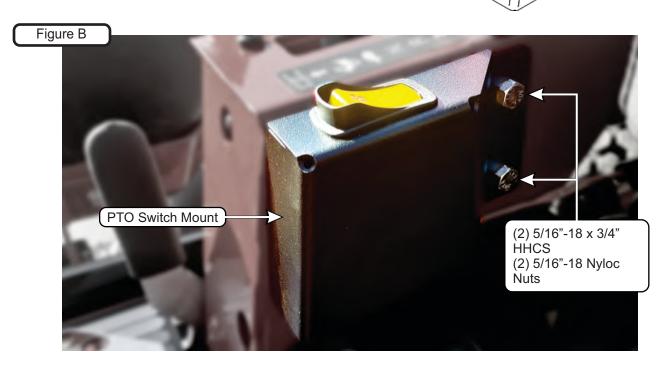




(2) Female Switch Disconnects to PTO Rocker Switch

Item #	Part #	Desc.	Qty.
1	B2040	Switch Mount/ Toro	1
2	P0293	PTO Engagement Rocker Switch	1

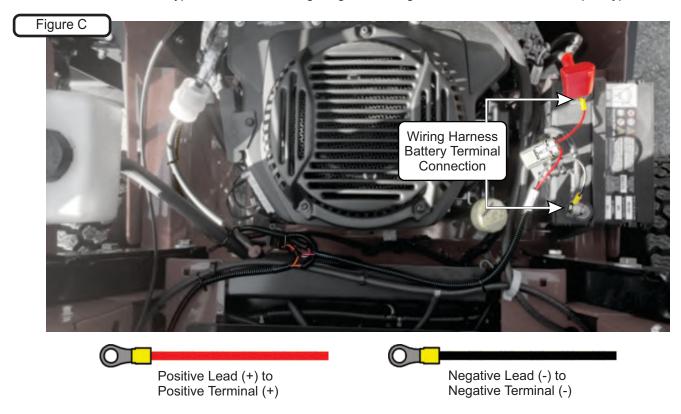




#### **Wire Harness Installation (Continued)**

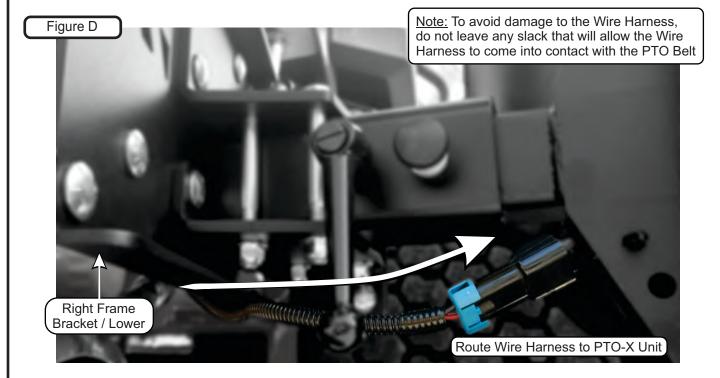
PTO-X

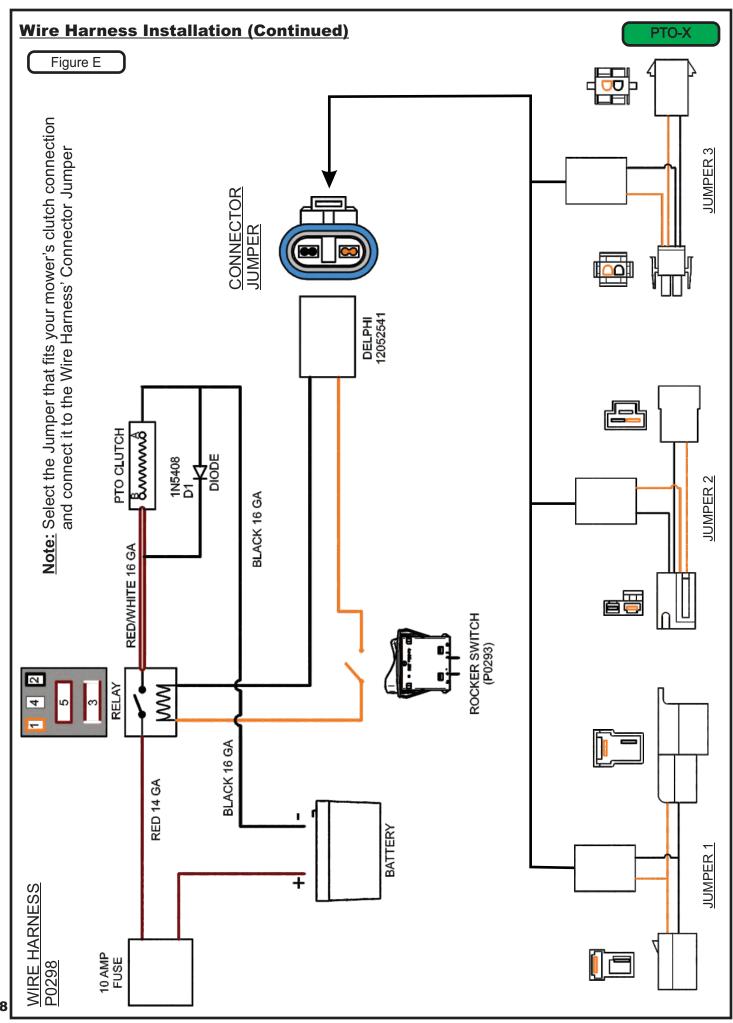
Next, route the Negative Lead (-) and the Positive Lead (+) of the Wire Harness P#(P0298) (Refer to Figure C) to the negative & positive terminal of the mower's battery. Then, disconnect the mower's clutch connector and interconnect with the Wire Harness' Clutch Connection Jumper. Be sure to identify and pick the correct Jumper depending on your mower's clutch connection type. Refer to the Wiring Diagram on Page 28 for the Connection Jumper Types.



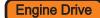
Finally, route the Wire Harness back towards the rear of the mower positioning the Wire Harness under the Right Frame Bracket / Lower. Then connect the Wire Harness to the PTO Unit. Refer to Figure D.

<u>Note</u>: It is recommended to secure the Wire Harness to the mower by using the (8) 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.





#### **Throttle Kit Installation**



**Engine Driven Unit Instructions** 

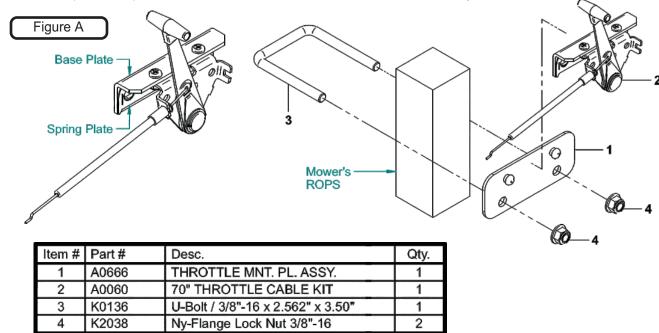
The Throttle Kit is installed on the right side ROPS above of the Right Frame Bracket / Upper, see Figure B.

Place the 3/8"-16 U-Bolt (Item #3) onto the right side ROPS with the threads facing out away from the side of the mower. Next slide on the Throttle Mount Plate Assembly (Item #1) with the rivets also facing outward away from the side of the mower. Secure the Throttle Mount Plate Assy to the ROPS by using (2) 3/8"-16 Ny-Flange Lock Nuts (Item #4). Refer to Figure A.

With the Throttle Cable Kit facing back towards the Mower's rear, place the Throttle Base Plate over the rivets, slide the Throttle Cable Kit to the right, moving the smaller end of the slot over the rivets. When positioned correctly, the Throttle Spring Plate will snap into place, see Figure A.

To remove the Throttle Cable Kit, lift the Throttle Spring Plate and slide the Throttle Kit to the left.

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





#### **Throttle Kit Installation (Continued)**



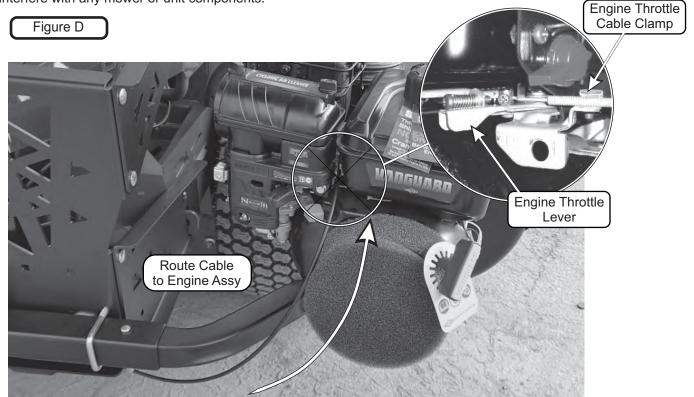
With your Throttle Kit installed, you'll need to route the cable of the Throttle Kit back towards the rear of the Mower. Refer to Figure C below.



Next, bring the Cable out from under the Rear Frame Bracket & Engine Mount Arm up to the Engine/Blower/Blade Assembly. See Figure D.

Finally, place the Throttle control lever into the "STOP" position. Rotate the Engine's throttle lever to the "STOP" position. Thread the wire end of the Throttle Cable into the Engine's throttle lever eyelet and tighten the screw. Fasten the throttle cable sleeve to the clamp on the Engine throttle. See Figure D.

Rotate the throttle control lever into the "fast" position to check for proper installation. Make sure the Cable does not interfere with any mower or unit components.



#### Impeller Blade Removal/Replacement

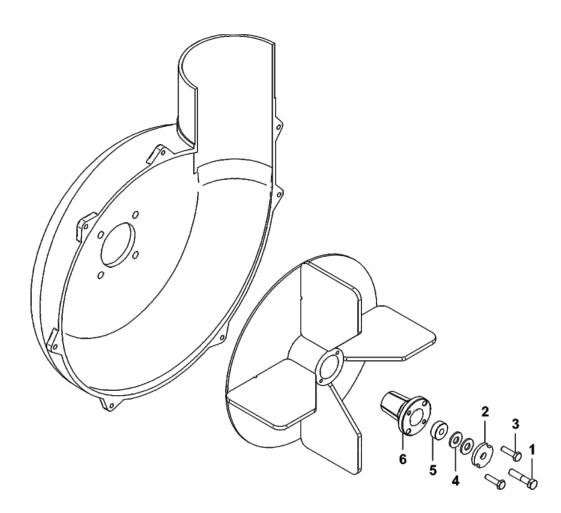
**To Remove:** First, remove the 5/16"-24 x 1-1/2" HHCS P#(K1465) **(#1)**, Double Indented Washer P#(K0284) **(#2)**, (2) 5/16" Flat Wahers P#(K0042) **(#4)** and Spacer Bushing P#(S0159) **(#5)** from the Taper-Lock Bushing P#(S0157) **(#6)**.

Next, remove the (2) 1/4"-20 x 1" HHCS **(#3)** and place them into the threaded holes of the Taper-Lock Bushing **(#6)**. 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.

<u>To Replace</u>: First, place the Impeller Blade over the engine shaft. Slide the Taper-Lock Bushing **(#6)** onto 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.

Then, fasten the Impeller Blade by using (2) 1/4"-20 x 1" HHCS (#3), (1) Spacer Bushing (#5), (1) Double Indented Washer (#2), and (1) 5/16"-24 x 1-1/2" HHCS (#1). Torque bolts to their proper specifications as listed in the Torque Chart on the back of this Manual.

Finally, rotate the Impeller Blade to ensure that the blade is clear of contact on all sides of the Blower Housing. If there is interference, remove the Taper-Lock Bushing, reposition the Impeller Blade further from the Blower Housing, retighten the hardware, and then check for clearance.



Item #	Part #	Desc.	Qty.
1	K1465	HHCS 5/16"-24 x 1-1/2" GR8	1
2	K0284	Double Indented Washer 3/8" / 1.375 OD x .380 ID x .179 T	1
3	K1225	HHCS 1/4"-20 X 1" GR8	2
4	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	2
5	S0159	Spacer Bushing .938 OD x .325 ID x .375 T	1
6	S0157	Taperlock Bushing 7/8"	1

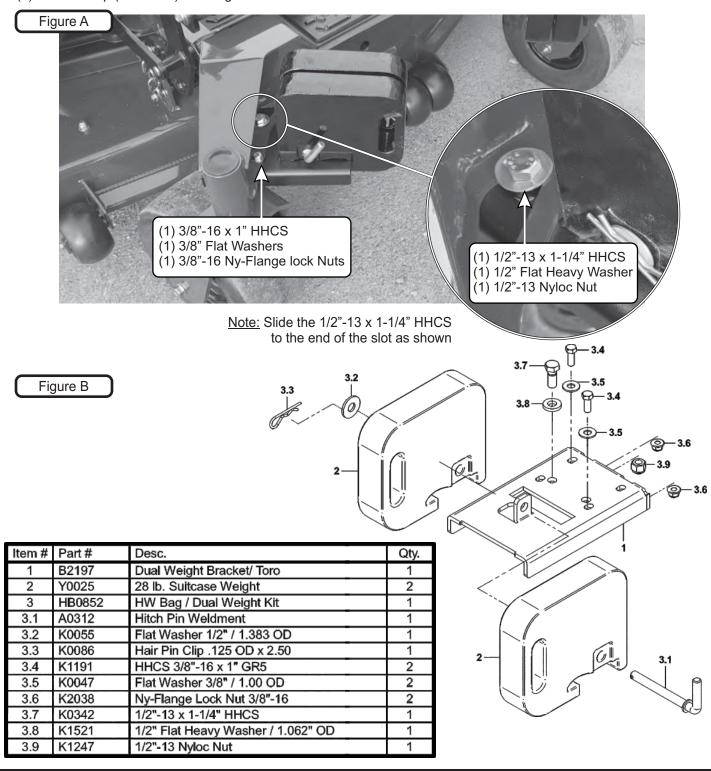
#### **Dual Weight Kit Installation**

Installation on Right Caster

Position the Dual Weight Bracket (Item #1) under the caster as seen in Figure A. Align the (3) holes of the Dual Weight Bracket (Item #1) to the holes in the caster.

Fasten the Weight Bracket to the caster using (2) 3/8"-16 x 1" HHCS (Item #3.4), (2) 3/8" Flat Washers (Item #3.5), (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3.6), (1) 1/2"-13 x 1-1/4" HHCS (Item #3.7), (1) 1/2" Flat Heavy Washer (Item #3.8) & (1) 1/2"-13 Nyloc Nut (Item #3.9). One set of 3/8" fasteners in the front right and one set of 3/8" fasteners in the rear, behind the caster. See Figure A & Figure B.

Insert (2) Weights (Item #2) Into the Weight Bracket & align the mount hole of the Weights w/ the hole on the Weight Bracket tab. Fasten the Weight to the Weight Bracket using (1) Clevis Pin (Item #3.1), (1) 1/2" Flat Washer (Item #3.2) & (1) Hair Pin Clip (Item #3.3). See Figure B.



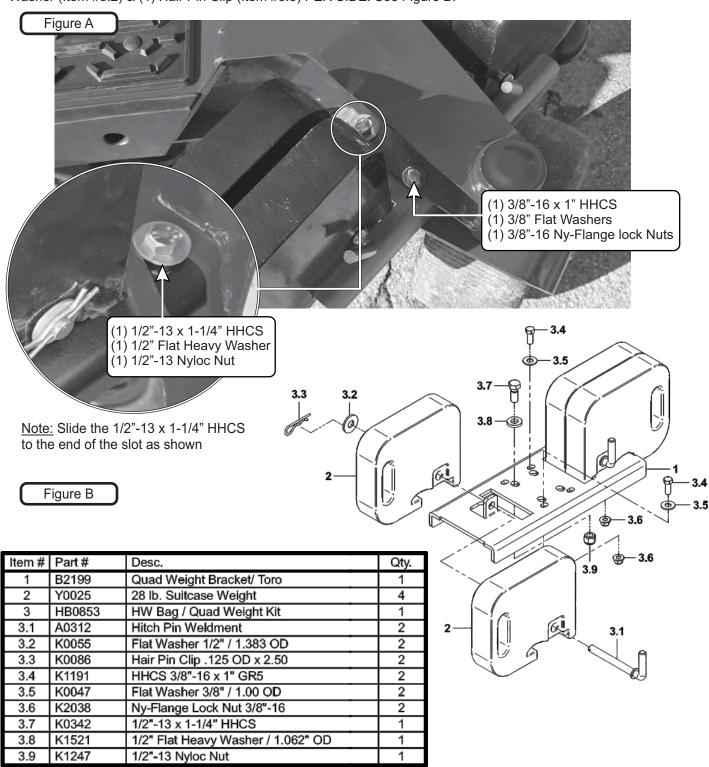
#### **Quad Weight Kit Installation**

#### Installation on Left Caster

Position the Quad Weight Bracket (Item #1) under the caster as seen in Figure A. Align the (3) holes of the Dual Weight Bracket (Item #1) to the holes in the caster.

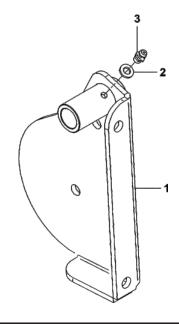
Fasten the Weight Bracket to the caster using (2) 3/8"-16 x 1" HHCS (Item #3.4), (2) 3/8" Flat Washers (Item #3.5), (2) 3/8"-16 Ny-Flange Lock Nuts (Item #3.6), (1) 1/2"-13 x 1-1/4" HHCS (Item #3.7), (1) 1/2" Flat Heavy Washer (Item #3.8) & (1) 1/2"-13 Nyloc Nut (Item #3.9). One set of 3/8" fasteners in the front right and one set of 3/8" fasteners in the rear, behind the caster. See Figure A & Figure B.

Insert (2) Weights (Item #2) Into the front of the Quad Weight Bracket & align the mount hole of the Weights w/ the hole on the Weight Bracket tab. Fasten the Weight to the Weight Bracket using (1) Clevis Pin (Item #3.1), (1) 1/2" Flat Washer (Item #3.2) & (1) Hair Pin Clip (Item #3.3) PER SIDE. See Figure B.



# **A2092 Idler Arm Assembly**

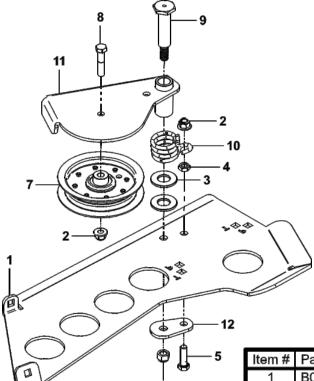




Item #	Part #	Desc.	Qty.
1	A2070_01	Idler Arm Weldment	1
2	K1467	Flat Washer M6 x 12mm OD	1
3	J0801	1/4"-28 Zirc Fitting	1

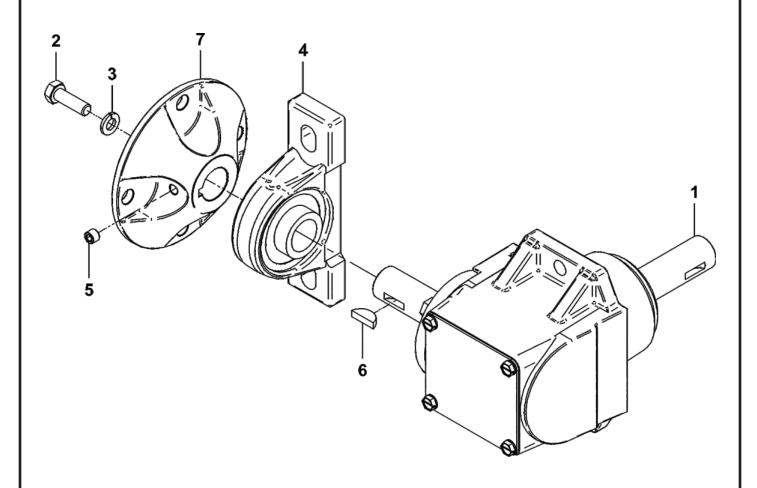
# **A2067\_02 Idler Mount Assembly**

PTO-X



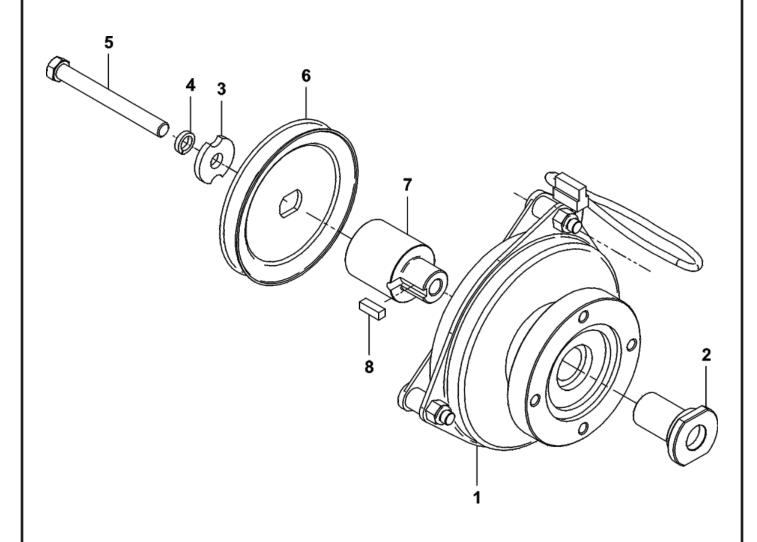
Item #	Part#	Desc.	Qty.
1	B0958_02	Idler Mnt PI	1
2	K2038	Ny-Flange Lock Nut 3/8"-16	2
3	K1463	Flat Washer .720 ID x 1.500 OD x .250 T	2
4	K1219	Jam Nut 3/8"-16	1
5	K1192	HHCS 3/8"-16 x 1-1/4" GR5	1
6	K0329	Nylock Nut 7/16"-14 GR8	1
7	M0003	Idler Pulley	1
8	K1462	HHCS 3/8"-16 x 1-3/4" GR8	1
9	K1464	Shoulder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

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

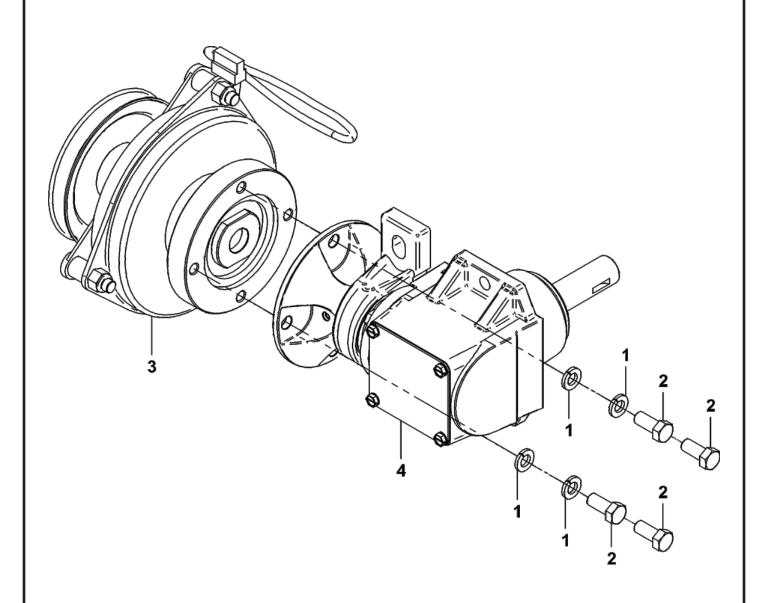


# **A2059 01 Clutch Sub-Assembly**

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

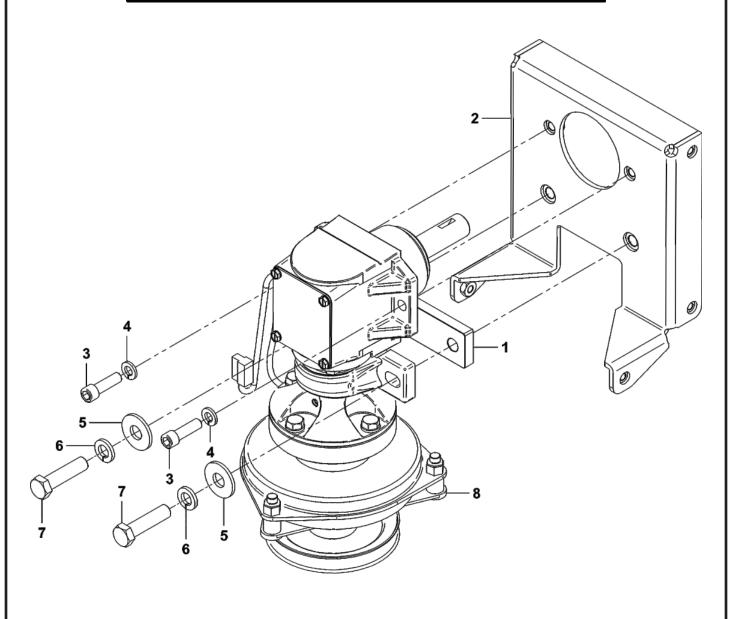


Item #	Part #	Desc.	Qty.
1	K0048	Lock Washer 3/8"	4
2	K0343	HHCS 3/8"-16 x 7/8" GR8	4
3	A2059_01	Clutch Sub-Assy	1
4	A2058	Gearbox Sub-Assy	1

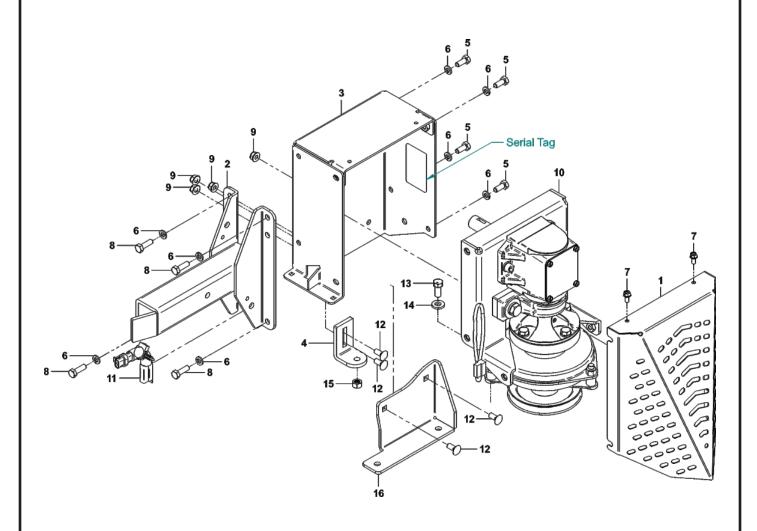


#### **A2060\_01 Mounted Drive Assembly**

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



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



E4052B E4052F

A2039

Part#

A0645

K1401 K1126

9

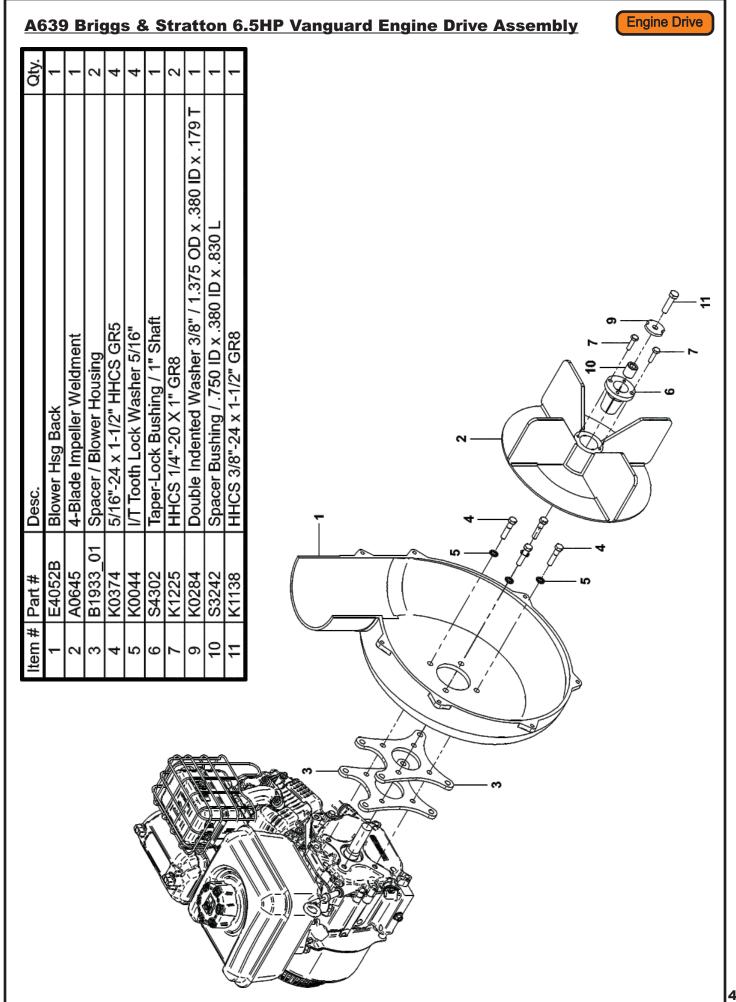
K0044 K1154

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S0159 K0042 K1225 K0284 K1465

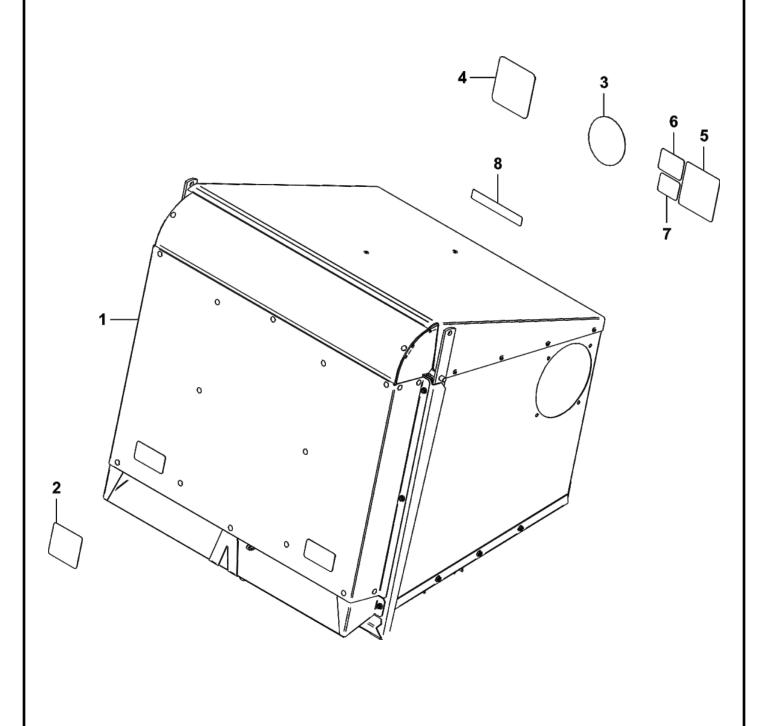
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S0157



#### A2100 6512 Box Assembly / Standard Model Exploded Parts View

Item #	Part #	Desc.	Qty.
1	A2226	6512 Box Assy. / Base Model	1
2	R1053	Decal / Caution	1
3	R0022	Decal / Built In The USA / Lg	1
4	R0026	Decal / Operation	1
5	R1069	Decal / Warning - Turn Off Blower	1
6	R1054	Decal / Important Check Hoses	1
7	R1051	Decal / Warning - Use Hearing Protection	1
8	R1055	Decal / To Dump Grass	1

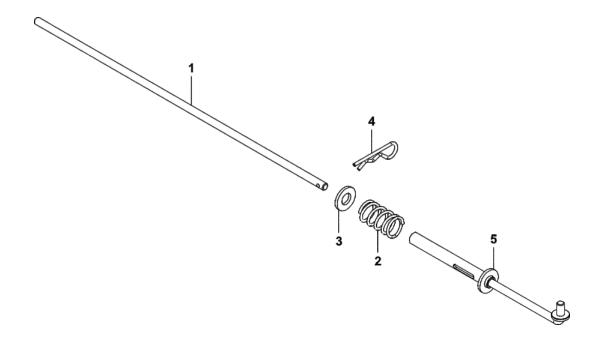


# A2226 6512 Box Assembly / Base Model **Exploded Parts View** 24 21 28 27 Ż 23

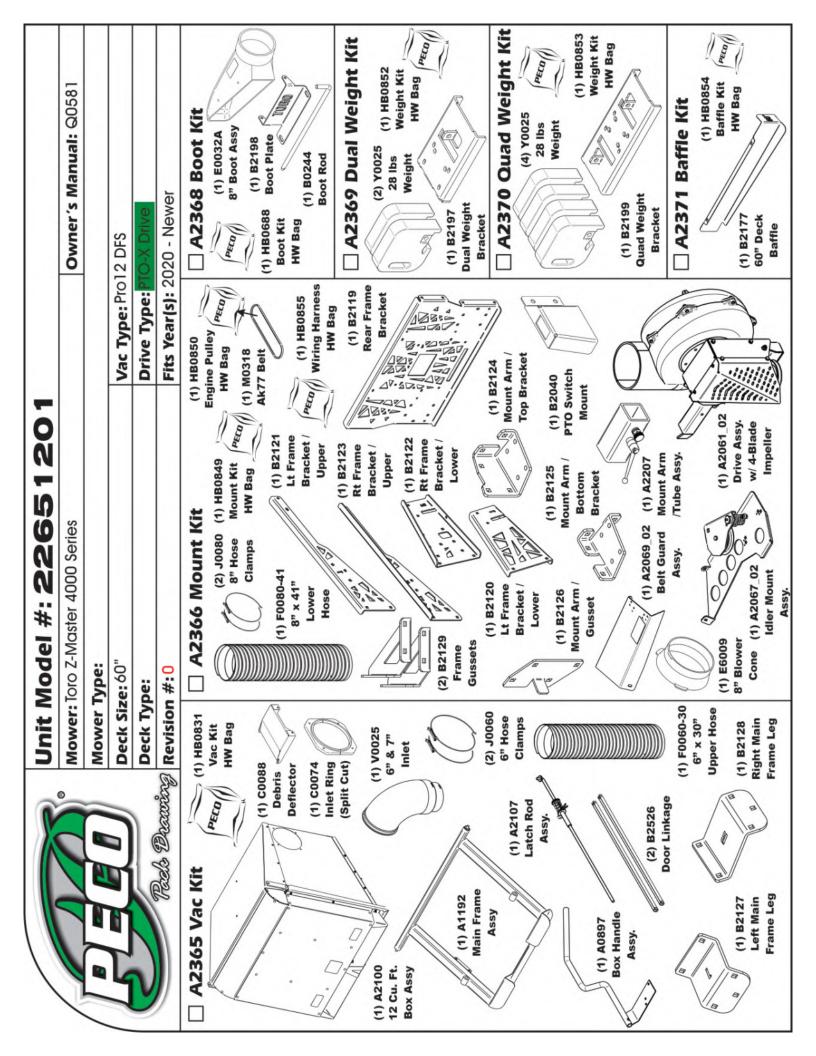
## A2226 6512 Box Assembly / Base Model Exploded Parts List

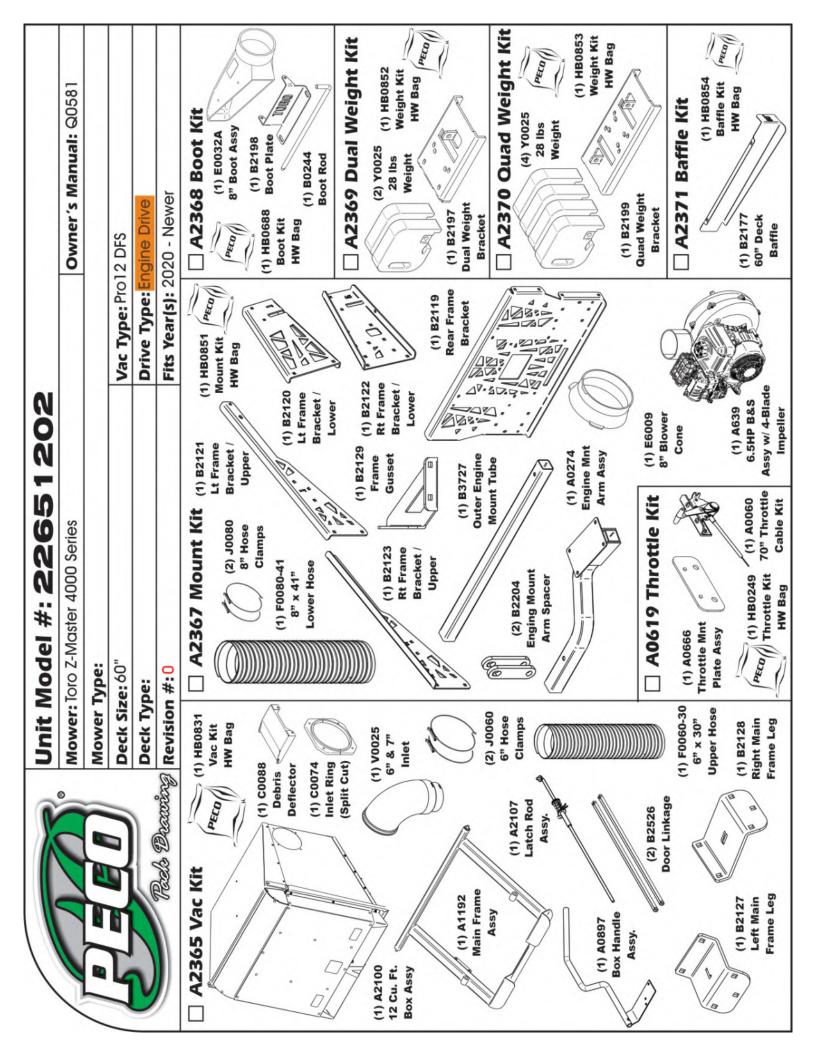
Item #	Part #	Desc.	Qty.
1	B1750	Base Frame	1
2	B1727	Base Frame Pivot Mount	1
3	B1574	Pivot Bracket	2
4	C0024	Box Bottom	1
5	C0080	Box Back & Sides	1
6	C0081	Box Top	1
7	A0938	Frame Weldment / Box Opening	1
8	V1131	12 Box Door	1
9	A0738	Frame Weldment / Door Stiffener	1
10	B1730	Latch Handle Mount Bracket	1
11	B0996	Latch Hook	1
12	C0075	Dust Diverter	1
13	V0051	Dust Flap	1
14	B3688	Upper Door Member	1
15	C0076	Left Dust Diverter Brace	1
16	C0077	Right Dust Diverter Brace	1
17	C0079	Right Outer Dust Flap Brace	1
18	C0078	Left Outer Dust Flap Brace	1
19	B0991	Dust Diverter Guard Bracket	1
20	A2104	Latch Mount Plate Assy.	1
21	V0052A	Dust Seal / Top Sides	1
22	V0052B	Dust Seal / Long Door Sides	2
23	B1006	Dust Flap Stiffener	1
24	B1007	Screen Clamp Strip / Side	2
25	C0087	Screen Support	1
26	V0052C	Dust Seal / Short Door Sides	2
27	B1008	Screen Clamp Strip / Rear Door	1
28	B8113	Screen / Steel Wire Mesh	1
29	B2021	Box Stop / 6512	1

#### **A2107 Latch Rod Assembly**



Item #	Part #	Desc.	Qty.
1	B1000	Latch Rod / Hook Side	1
2	J0303	Spring	1
3	K0400	1/2" Flat Washer 1.084 OD x .528 ID x .120 T	1
4	K0086	Hair Pin Clip .125 OD x 2.50	1
5	A2106	Latch Rod Weldment	1





#### 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# R0022 Designed & Built In The USA



TO CLEAR DEBRIS WITH BLOWER RUNNING!

PELIGRO NUNCA USE MANOS
PARA LINPIAR BASURA CON LA
HOJA EN MARCHA!

Part #: R2007 Danger - Never Use Hands

A DANGER ROTATING BLADES!
FINGERS, HANDS, & BODY PARTS
CAN BE SEVERED!
A PELIGRO HOJA ROTANTE!





Part #: R2008 Danger - Rotating Blades

#### **IMPORTANT**

Hoses are subject to normal wear and deterioration. Check hoses frequently and if they become defective, install new hoses.

For best collection results, trim hoses so there are no more than 2 inches excess hose with mower deck lowered.

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 & Tips On Mowing**

#### PTO-X

- 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.

#### **Engine Drive**

- A. Perform BEFORE EACH USE the maintenance list. referenced in Section IV.
- B. Start the engine/blower/blade assembly.
- B. Start mower.
- C. With the mower at high idle speed, engage the mower deck.
- D. 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 Drive 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

#### PTO-X

A. To disengage the PTO assembly, move PTO Rocker Switch to the off position.

**WARNING:** DO NOT TOUCH the PTO assembly, pulleys, or the belt 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.

- A. Stop the forward movement of the mower, engage the parking brake.
- B. Disengage the mower deck.
- C. Disengage the **PTO Drive** / set the throttle of the Engine Drive down to idle.
- D. 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.
- E. To remove the bags from the frame, slide bags out and turn bags over to deposit clippings.
- F. 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 overfilled 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:

- Check blades and spindles to be sure that no foreign objects, such as wire or steel strapping bands, are wrapped around them.
- 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.
- 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.
- 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:

- Clean all debris from machine especially from the container, underneath the belt shields, and safety decals. Replace any missing or illegible decals.
- 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. 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.
- 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 <u>not</u> overfill.

Blower Assembly:

**NOTE:** The following is for older PTO models that contain a greaseable zirc 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**

bearer bistributor Hainer	 
Dealer/Distributor Name:	
Date of purchase://	
Unit Serial Number:	
Unit Engine Size:	 
Unit Model Number:	 

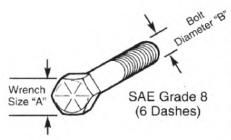
#### **TORQUE SPECIFICATIONS**

#### **AMERICAN**

**Bolt Head Markings** 



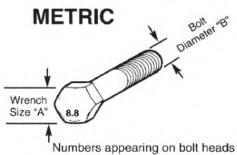




Proper toque for American fasteners used on Peco equipment.

Recommended Torque in Foot Pounds (Newton Meters).\*

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)



Numbers appearing on bolt heads indicate ASTM class.

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

Proper torque for metric fasteners used on Peco equipment.

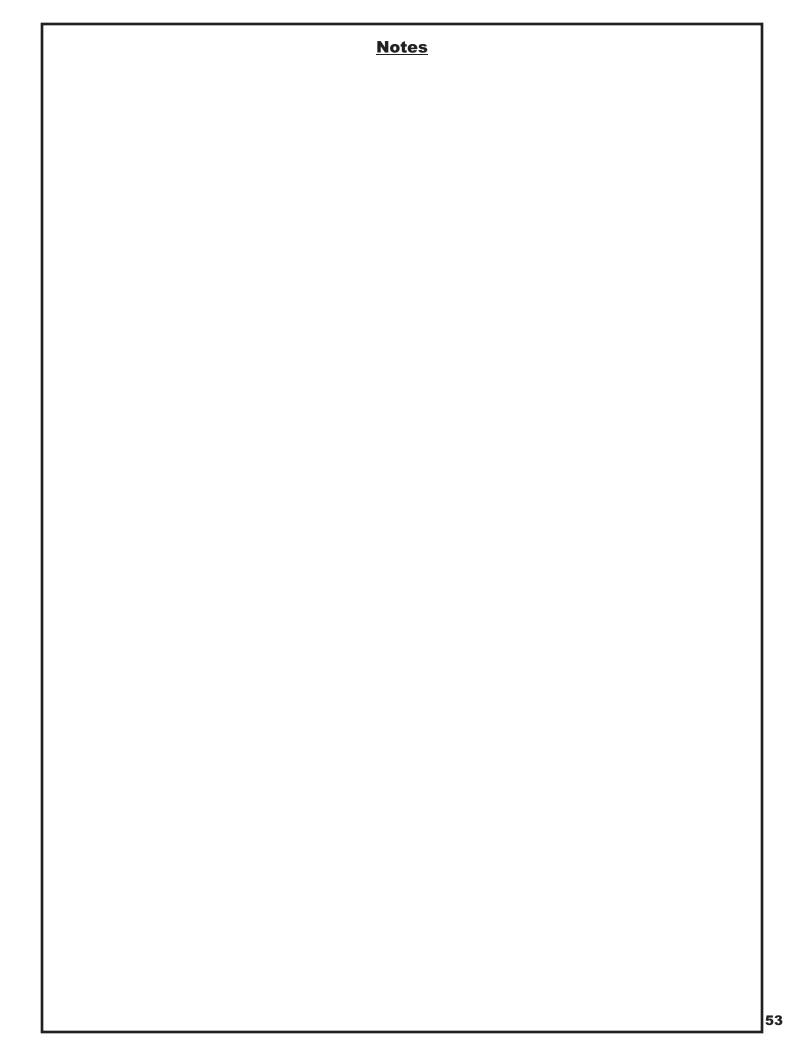
Recommended torque in foot pounds (newton Meters).\*

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

2017 (v1.0)

# Troubleshooting 20 Collection System Performance

Problem	Possible Cause	Corrective Action
	Cutting blades are bent or unbalanced	Install new cutting blade
Abnormal Vibration	Loose blower pulley or pulley assembly	Tighten the pulley
	Impeller blade out of balance	Contact dealer to replace
	Low engine speed	Always operate collection system at full throttle
Reduced collection system performance	Plugged screen	Remove debris, leaves, or grass clippings from the screen
	Loose belt	Replace/tighten belt
	Full collection bags	Empty the collection bags
	Collection bags are too full	Dump more frequently
	Low engine speed	Always operate collection system at full throttle
	Grass is too wet	Cut grass when it is dry
Blower and hoses plugging too frequently	Grass is too long	Cut the grass several times
	Ground speed is too fast	Drive slower at full throttle
	Worn belt	Replace belt
	Loose belt	Adjust the pulley and tighten belts
	Collection bags are too full	Dump more frequently
Debris blowout	Plug/clog in the collection system	Clean the collection system
	Ground speed is too fast	Drive more slowly at full throttle
	Plug in the blower housing	Clean the blower housing
Impeller doesn't rotate freely	Worn impeller blade	Contact dealer to replace
	Shaft bearings bad/failing	Contact dealer to replace





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Fax: 828-684-0858

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Website: <a href="mailto:www.lawnvac.com">www.lawnvac.com</a>