# ESTATE SERIES/PASTURE VAC COLLECTION SYSTEM

Model# 793603, 793604, 703602 & 703603



**36** Cu. Ft. **Estate Series** 793603 Briggs & Stratton 6.5 HP Vanguard 793604 Briggs & Stratton 10 HP Vanguard

**36** Cu. Ft. **Pasture Vac** 703602 Briggs & Stratton 6.5 HP Vanguard 703603 Briggs & Stratton 10 HP Vanguard

# **OPERATOR'S MANUAL**

ASSEMBLY • OPERATION • MAINTENANCE

MANUAL PART#: Q0573

Initial Release - Nov 2020

# **GRASS COLLECTION SYSTEM**

## TABLE OF CONTENTS

## SECTION

#### PAGE SECTION

#### PAGE

	Safety2 Safety Alert Symbols3 Warranty4
I	INTRODUCTION AND DESCRIPTION5 Introduction5 Description5
11	INSTALLATION FOR USE       6         Tilt Base Frame Assembly Installation       6         Wheel Installation       6         Latch Assembly Installation       7         Box Bottom & Front Panel Installation       8         Box Side Panel Installation       9         Door Rail Assembly Installation       10         Support Rail Installation       11         Screen Frame Assembly Installation       12         Box Top Panel Installation       12         Box Top Panel Installation       13         Inlet Cone Installation       14         Door & Hinge Assembly Installation       15         Door Tension Rod Assembly Installation       17         Inlet Arm Assembly Installation       17         Inlet Arm Assembly Installation       18         Tongue Assembly Installation       19         V       PAR         Engine Support Arm Assembly Installation       20
	Engine Stay Plate Installation 20 Ball Clevis Assembly Installation 21

Engine Installation22Tongue Assembly Installation22Hose Hanger Installation23Universal Battery Kit Installation24-25Wiring Kit Installation26-27Impeller Blade Removal/Replacement28Blower Cone Installation29Upper Hose Installation29Lower Hose to Blower Cone Installation29Lower Hose to Blower Cone Installation29Wand Kit Installation30Exploded Views & Parts List31-37Overall Parts List38-43Safety Decals44OPERATING INSTRUCTIONS45General Safety45
General Safety 45
Operation & Tips On Mowing45
Disengagement Of The PTO Assembly 45
Unloading The Collection System 45
MAINTENANCE45 Maintenance Checklist45
PARTS AND SERVICE 46
Parts And Service Information46
Torque Specifications 47
Troubleshooting 48

#### 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.
- **2 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

It may

It may also be used to alert against unsafe practices.

avoided, could result in death or serious injury.



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.

3

## 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

- 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.
- 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

- 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

- 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: <u>https://www.briggsandstratton.com/na/en\_us/support/warranty.html</u>
- 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 <u>www.lawnvac.com</u> or contact our Sales Department at New PECO, Inc. 800-438-5823 or email Sales@lawnvac.com.

# **Section I - INTRODUCTION AND DESCRIPTION**

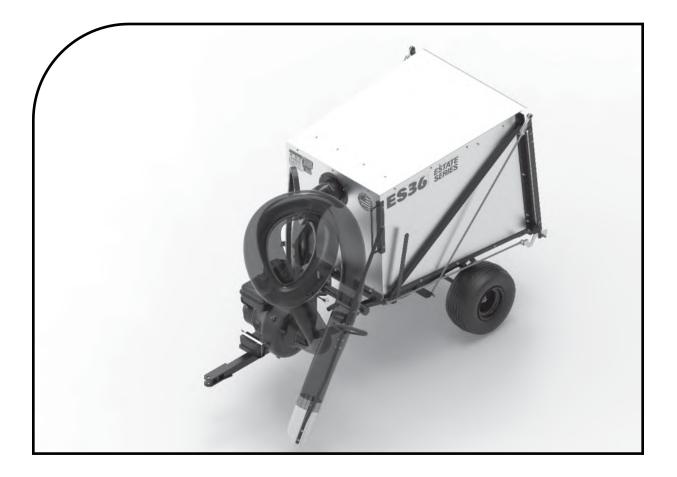
#### Introduction

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 engine/blower/blade assembly, is mounted on the right side of the unit. The blower draws grass clippings from the discharge area up and back to the container mounted to the rear of the mower. The operator can engage the engine/blower/blade assembly by starting the engine. Once the container is full of clippings, the operator can then release the door latch and easily lift the handle to dump.



Note: Additional Instructions are included for Pasture Vac Units. Pasture Vac Units may also share similar instructions with the Estate Series. Installations for specific units will be specified under the current section heading.

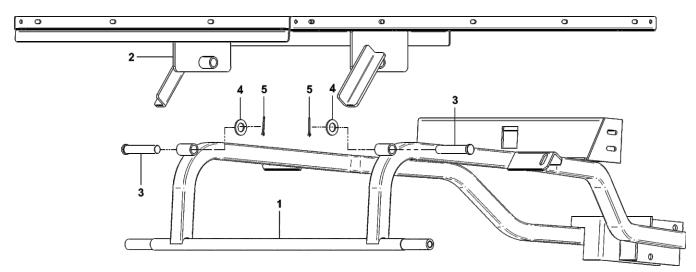
# **Section II - INSTALLATION FOR USE**

#### **Tilt Base Frame Assembly Installation**

To install the Tilt Base Frame Assembly (Item #2), position the Tilt Base Frame Assy between the Chassis Frame Assembly (Item #1) and use (1) Tilt Rod (Item #3) to mount the Tilt Base Frame Assy. Secure the Tilt Rod by using (1) 3/4" Flat Washer (Item #4) and (1) Cotter Pin (Item #5) on each side of the Tilt Rod. Refer to Figure A below.

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

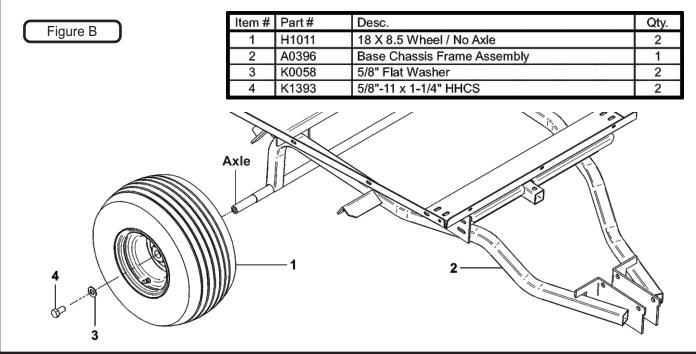
Item #	Part #	Desc.	Qty.
1	A0396	Base Chassis Frame Assembly	1
2	A0132	Box Frame	1
3	K0123	3/4" x 4" Clevis Pin	2
4	K0061	3/4" Flat Washer / 1.486 OD x .810 ID x .147 T	2
5	K0085	.125 OD x 1.50 Cotter Pin	2



#### **Wheel Installation**

Figure A

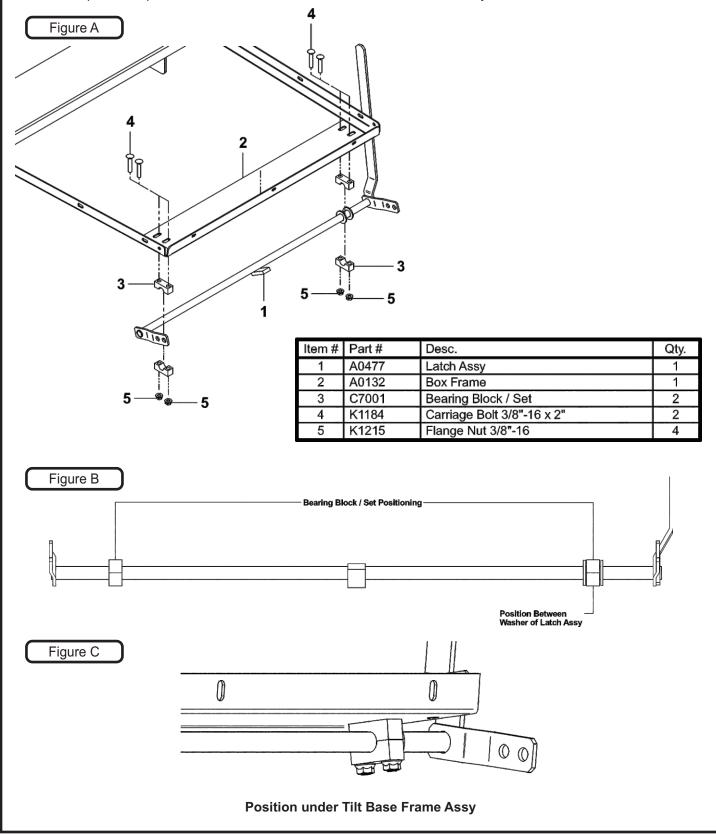
To install the (2) Wheels (Item #2), lift the Chassis Frame Assy (Item #1) up enough to place and position the (2) Wheels onto either side of the axle of the Chassis Frame Assy. Secure each Wheel by using (1) 5/8"-11 x 1-1/4" HHCS (Item #3) and (1) 5/8" Flat Washer (Item #4) per Wheel. Refer to Figure B below.



#### Latch Assembly Installation

Before installing the Latch Assembly (Item #1), position the (2) Bearing Block / Sets (Item #3) over the Latch Assy and make sure that (1) Bearing Block / Set is set between and resting on the washers of the Latch Assy, refer to Figure B. Position the pre-assembled parts under the Box Frame Assembly (Item #2) aligning the bolt holes of the Bearing Block / Sets to those of the Box Frame Assy, Refer to Figure A and Figure C.

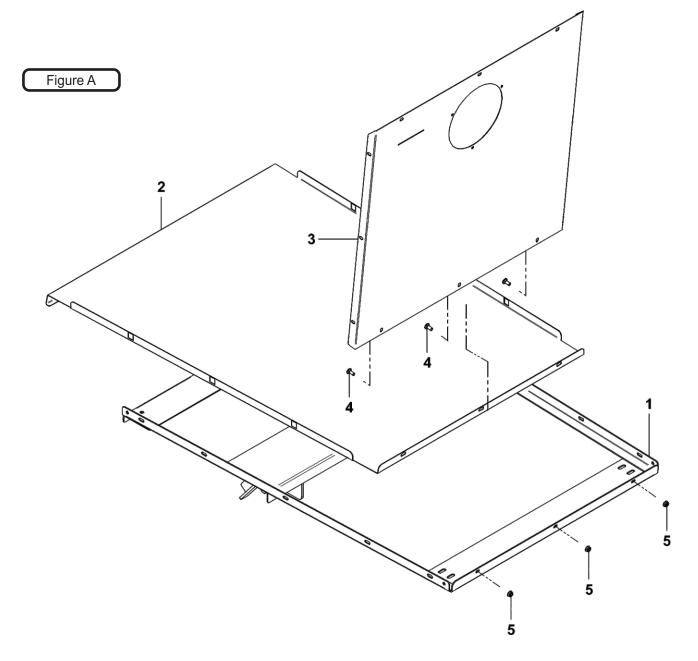
Secure all parts by using (2) 3/8"-16 x 2" Carriage Bolts (Item #4) and (2) 3/8"-16 Flange Nuts (Item #5) per Bearing Block / Set. Refer to Figure A.



#### **Box Bottom & Front Panel Installation**

Set the Bottom Panel (Item #2) onto the Box Frame Assembly (Item #1) aligning the mount holes of the Bottom Panel to those of the Box Frame Assy, refer to Figure A. Next, Position the Front Panel (Item #3) upright and on top of the Bottom Panel. Align the bottom front set of mount holes of the Front Panel to those on the Bottom Panel.

Loosely secure the Front Panel by using (4) 5/16"-18 x 3/4" Carriage Bolts (Item #4) and (4) 5/16"-18 Flange Nuts (Item #5), see Figure A. Keep hardware relatively loose for the next step.



Item #	Part #	Desc.	Qty.
1	A0132	Box Frame	1
2	C1179	Box Bottom	1
3	C1181	Box Front	1
4	K1142	5/16"-18 x 3/4" Carriage Bolt	2
5	K1178	Flange Nut 5/16"-18	3

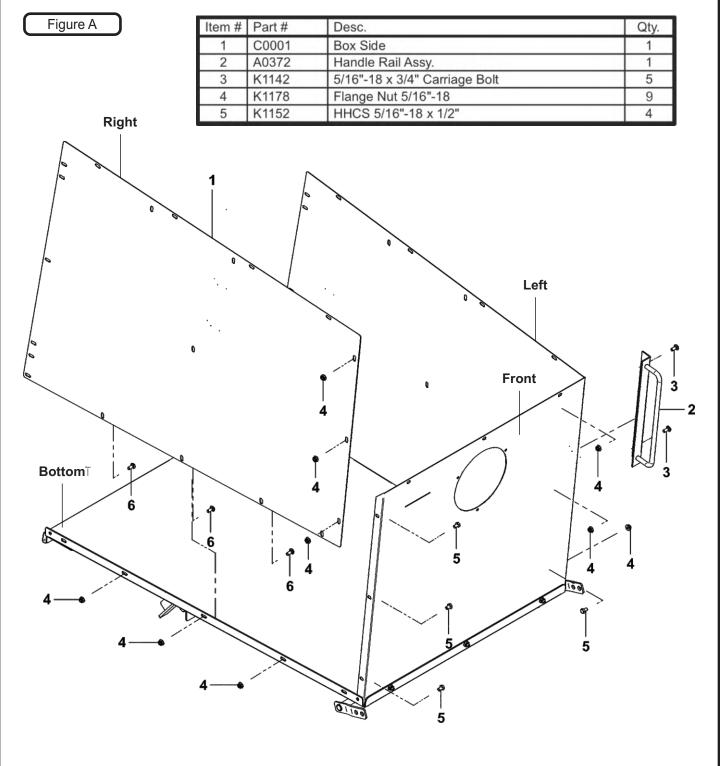
#### **Box Side Panel Installation**

Place (1) Box Side Panel (Item #1) on either side of the Front Panel. Make sure the Side Panel is on the inside of the Front Panel and Bottom Panel. Align all mount holes of these parts.

When securing the right Side Panel along the upright side with the Front Panel, use (3) 5/16"-18 x 1/2" HHCS (Item #5) and (3) 5/16"-18 Flange Nuts (Item #4). Along the bottom, use (3) 5/16"-18 x 3/4" Carriage Bolts (Item #3) and (3) 5/16"-18 Flange Nuts (Item #4). Refer to Figure A. Be sure to secure the Side Panel relatively loose.

When securing the left Side Panel, utilize the same hardware to secure the bottom side. Before securing the upright side, attach (1) Handle Rail Assembly (Item #2) and then secure the left side by using (2) 5/16"-18 x 3/4" Carriage Bolts (Item #3), (1) 5/16"-18 x 1/2" HHCS (Item #5) and (3) 5/16"-18 Flange Nuts (Item #4). Refer to Figure A. Be sure all hardware are relatively loose for the next step.

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



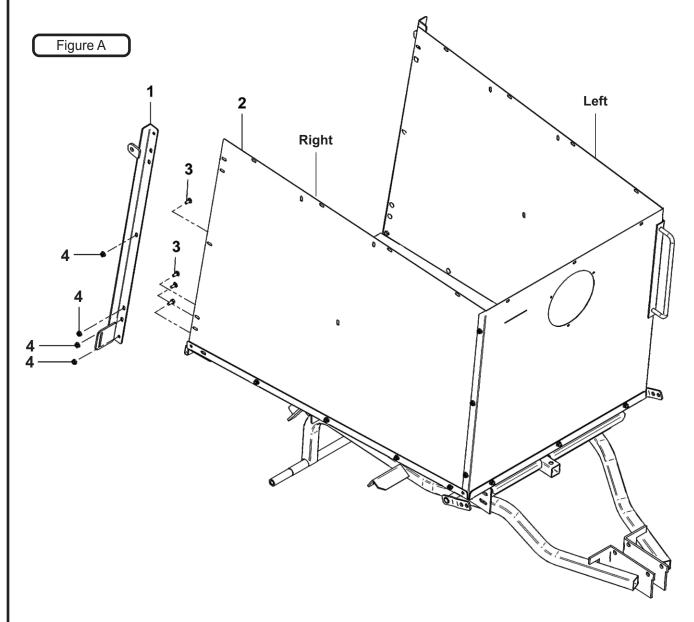
9

#### **Door Rail Assembly Installation**

Position the Right Door Rail Assembly (Item #1) onto the right Side Panel aligning all bolt holes to those of the Side Panel. For this step, the top (2) bolt holes will remain open and not use any hardware.

Secure the Right Vertical Rail Assy relatively loose by using (4) 5/16"-18 x 3/4" Carriage Bolt (Item #3) and (4) 5/16"-18 Flange Nut (Item #4) on the lower (4) bolt holes. Refer to Figure A.

Repeat the same procedure for the Left side. Make sure all hardware are secured relatively loose.



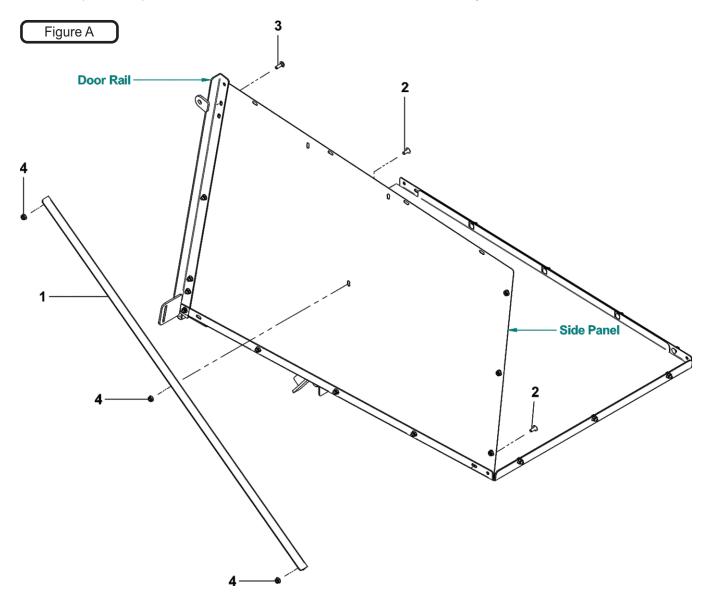
Item #	Part #	Desc.	Qty.
1	A0158	Right Side Door Rail Assy	1
2	C0001	Box Side	1
3	K1142	5/16"-18 x 3/4" Carriage Bolt	4
4	K1178	Flange Nut 5/16"-18	4

#### **Support Rail Installation**

Position the Side Support Rail (Item #1) over the Door Rail Assembly and Side Panel aligning the bolt holes of these parts. Refer to Figure A.

Secure the Side Support Rail relatively loose by using (2) 5/16"-18 x 3/4" Carriage Bolts (Item #2) on the middle and bottom mount holes of the Support Rail, (1) 5/16"-18 x 1" Carriage Bolts (Item #3) on the top mounting hole of the rail and (3) 5/16"-18 Flange Nuts (Item #4). Refer to Figure A.

Repeat the same procedure for the other side. Make sure all hardware are secured relatively loose.

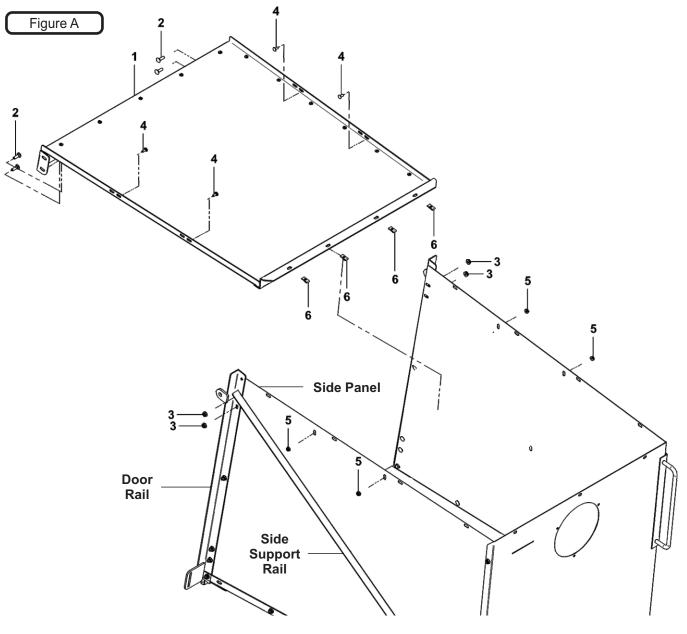


Item #	Part #	Desc.	Qty.
1	B5263	Box Side Support Rail	1
2	K1142	5/16"-18 x 3/4" Carriage Bolt	2
3	K1144	5/16"-18 x 1" Carriage Bolt	1
4	K1178	Flange Nut 5/16"-18	3

#### **Screen Frame Assembly Installation**

Before Installing the Screen Frame Assembly (Item #1), place (4) Large Tinnerman Clips (Item #6) over the (4) mount holes on the front of the Screen Frame Assembly. Remove and set aside the top set of hardware, (1) 5/16"-18 x 1" Carriage Bolt and (1) 5/16"-18 Flange Nuts, securing the Door Rail / Side Support Rail on both sides from the previous step as well.

Position the Screen Frame Assembly (Item #1) towards the rear aligning the rear (2) mount holes to the mount holes of the Door Rail and Side Panel on both sides. Secure the Screen Frame Assy relatively loose by using (4) 5/16"-18 x 1" Carriage Bolt (Item #2), (4) 5/16"-18 Flange Nuts (Item #3), (4) 1/4"-20 x 5/8" Carriage Bolts (Item #4) and (4) 1/4"-20 Flange Nuts (Item #5), refer to Figure A.



Item #	Part #	Desc.	Qty.
1	A0469	Screen Frame Assembly	1
2	K1144	5/16"-18 x 1" Carriage Bolt	2
3	K1178	Flange Nut 5/16"-18	4
4	K1010	1/4"-20 x 5/8" Carriage Bolt	4
5	K1126	Flange Nut 1/4"-20	4
6	K0068	Tinnerman Clip / Large	4

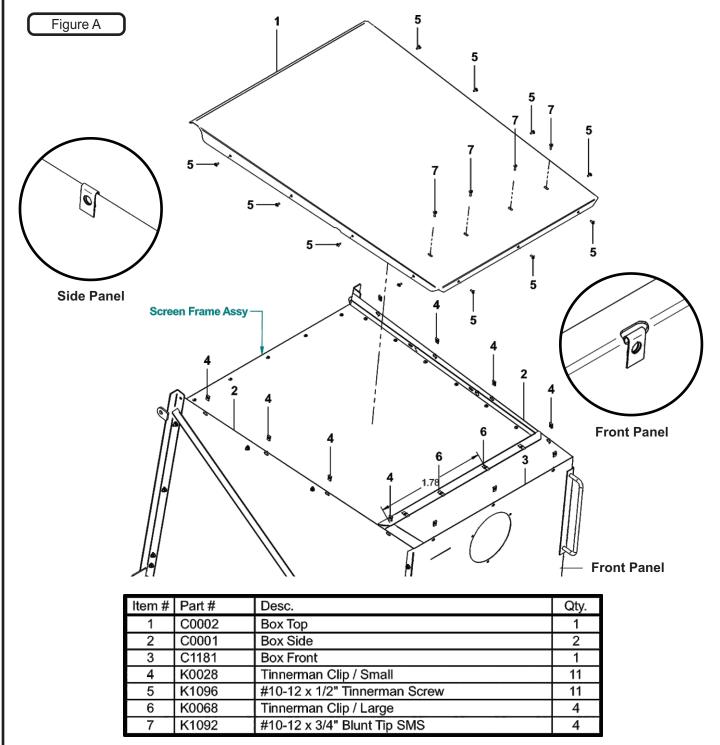
#### **Box Top Panel Installation**

Start by placing (11) Small Tinnerman Clips (Item #4) along the top of the Side Panels (Item #2) and Front Panel (Item #3), see Figure A.

Secure the Top Panel (Item #1) over the Front Panel and Side Panel by using (8) Tinnerman Screws (Item #4) along the sides of the Top Panel. Then align the front mount holes of the Top Panel to the Front Panel and secure the Top Panel by using (3) #10-12 x 1/2" Tinnerman Screws along the front.

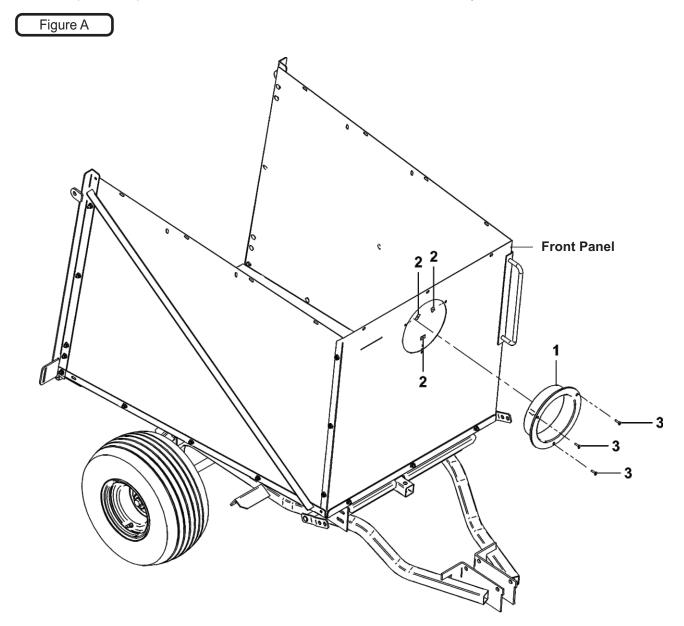
Secure the Top Panel to the Screen Frame Assembly by using (4) #10-12 x 3/4" Tinnerman Screws (Item #7) on top, see Figure A.

#### Tighten all hardware at this time.



#### **Inlet Cone Installation**

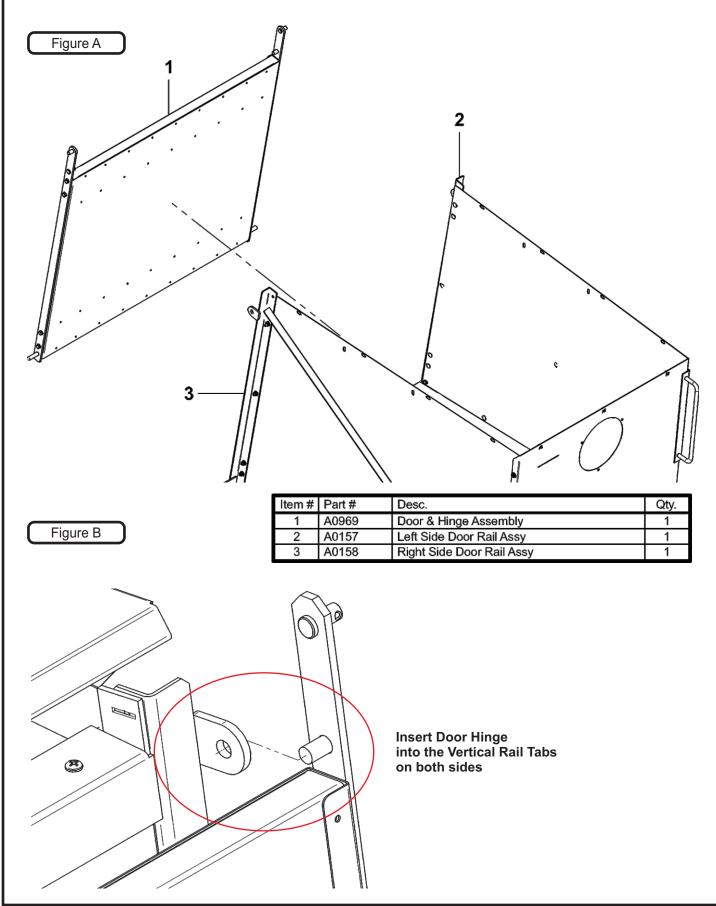
Position the Inlet Cone (Item #1) over the collection hole of the Front Panel and secure the Inlet Cone by using (3) Blunt Tip Screw (Item #3) and (3) Flat Tinnerman Nuts (Item #2).



Item #	Part #	Desc.	Qty.
1	E8004	Inlet Cone	1
2	K0029	#10-12 Flat Tinnerman Nut 3/4" x 1/2"	3
3	K1092	#10-12 x 3/4" Blunt Tip SMS	3

#### **Door & Hinge Assembly Installation**

Position Door & Hinge Assy (Item #1) back behind the trailer, see Figure A. Align the Door Hinge and insert the Door Hinge into the tabs of the Left and Right Door Rails (Item #2 & #3) on both sides. See Figure B.

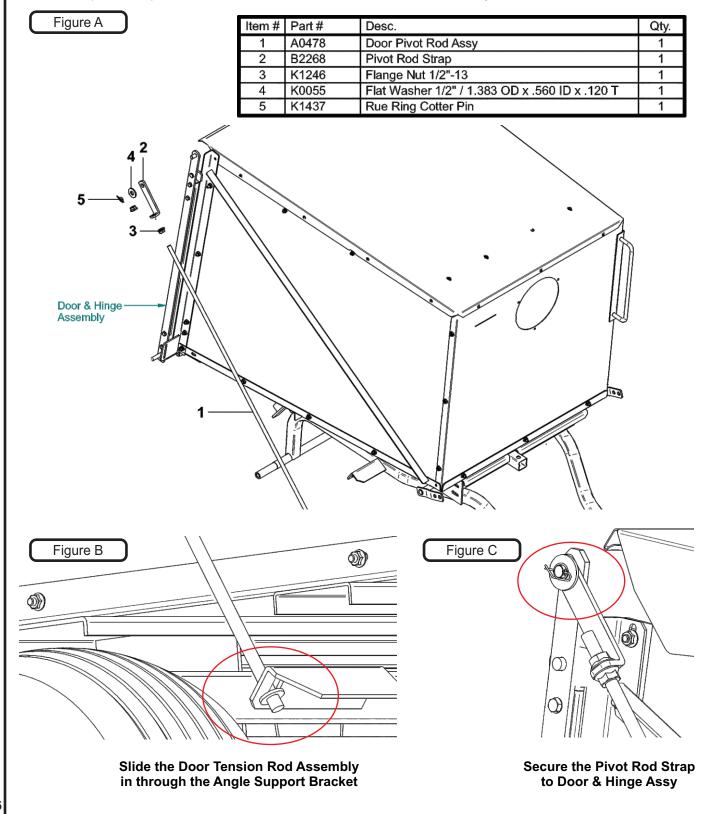


#### **Door Tension Rod Assembly Installation**

16

Slide the Door Tension Rod Assembly (Item #1) in through the Angle Support Bracket of the lower side of the trailer assembly, refer to Figure B. Next, install (1) Pivot Rod Strap (Item #2) onto the Door Tension Rod Assemblies (Item #1) by pre-threading (1) 1/2"-13 Flange Nut (Item #3) onto the Door Tension Rod. Then Secure the Pivot Rod Strap by first aligning the Pivot Rod Strap to the Door & Hinge Assembly and using (1) more 1/2"-13 Flange Nut on the top side of the Pivot Rod Strap. See Figure A.

Secure the Pivot Rod Strap to the Door & Hinge Assy using the Hinge of the Door Assy, see Figure C, and using (1) 1/2" Flat Washer (Item #4) and (1) Rue Ring Cotter Pin (Item #5) on both sides, refer to Figure A and Figure C.

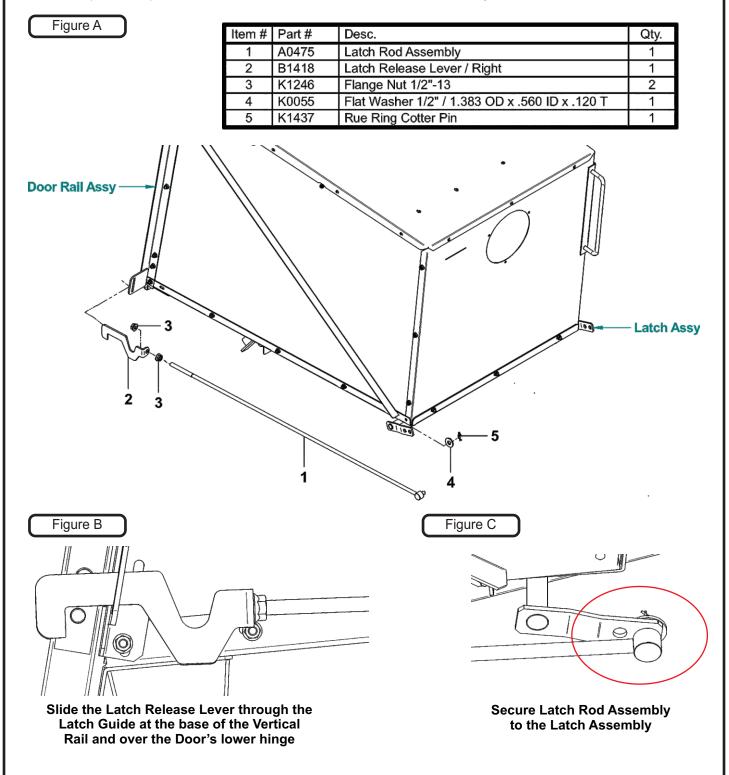


#### Latch Rod Assembly Installation

The following instructions are for the installation of the Latch Rod Assembly to the Right side of your collection unit. The instructions for the Left side is identical to those shown.

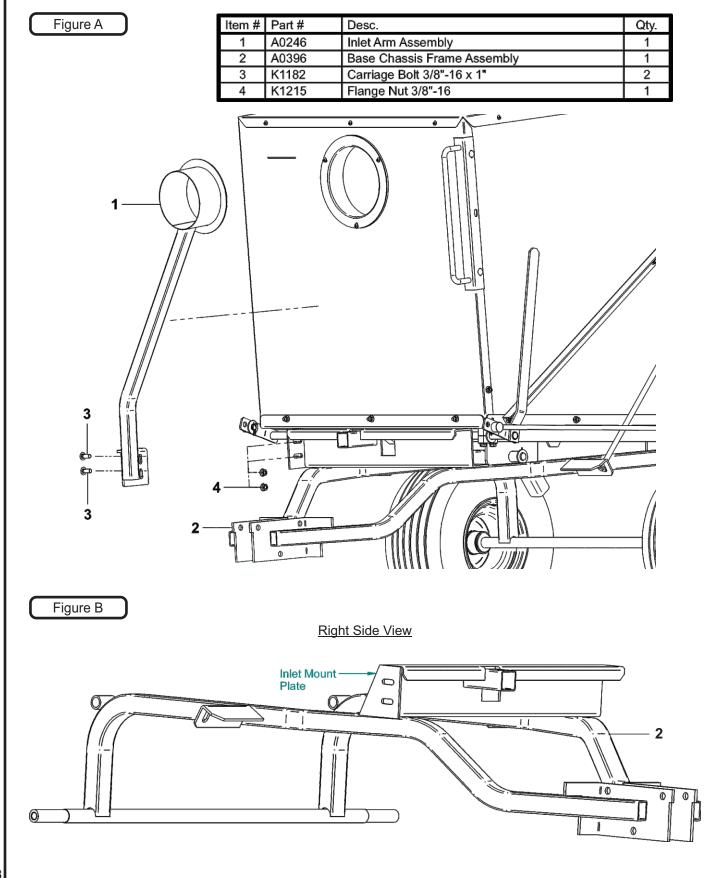
To install the Latch Rod Assembly (Item #1), first loosely install the Latch Rod Assy to the Right Latch Release Lever (Item #2) by using (2) 1/2"-13 Flange Nuts (Item #3). Insert the Latch Release Lever through the Latch Guide at the base of the Door Rail Assembly and over the Door's lower hinge. See Figure B.

Once positioned secure the front end of the Latch Rod Assy by to the Latch Assembly by using (1) 1/2" Flat Washer (Item #4) and (1) Rue Ring Cotter Pin (Item #5). See Figure A and Figure C. Repeat the procedures for the Left side.



#### **Inlet Arm Assembly Installation**

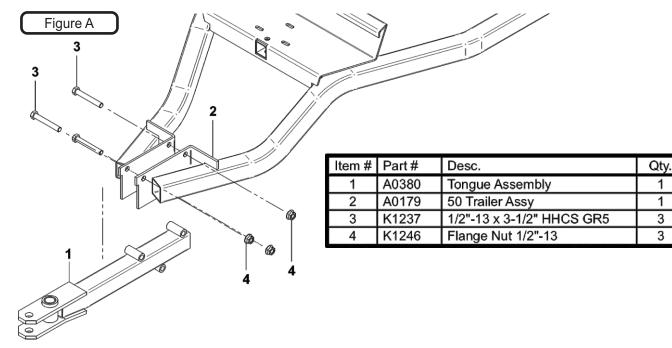
Position the Inlet Arm Assembly (Item #1) over the Chassis Frame Assembly's (Item #2) Inlet Mount Plate, see Figure A and Figure B. Secure the Inlet Arm Assy by using (2) 3/8"-16 x 1" Carriage Bolts (Item #3) and (2) 3/8"-16 Flange Nuts (Item #4). Refer to Figure A.



#### **Tongue Assembly Installation**

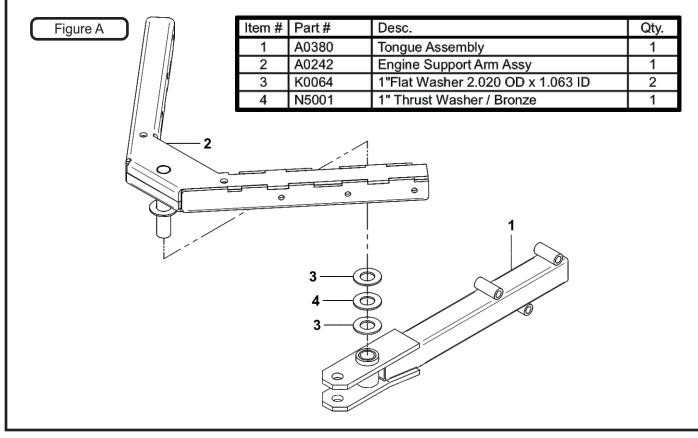
Position the Tongue Assembly (Item #1) between the Tongue Support Bracket of the 50 Trailer Assembly (Item #2) aligning the bolt holes of both parts. Secure the Tongue Assy by using (3) 1/2"-13 x 3-1/2" HHCS (Item #3) and (3) 1/2"-13 Flange Nuts (Item #4). See Figure A.

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



#### **Engine Support Arm Assembly Installation**

Install the Engine Support Arm Assembly (Item #2) onto the Tongue Assembly (Item #1) by using (2) 1" Flat Steel Washer and (1) 1" Bronze Thrust Washer. See Figure B below.

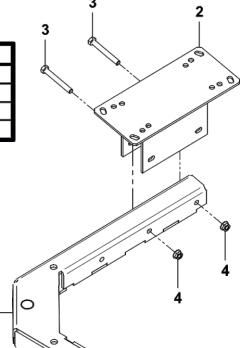


#### **Engine Mount Assembly Installation**

Position the Tongue Assembly (Item #1) between the Tongue Support Bracket of the 50 Trailer Assembly (Item #2) aligning the bolt holes of both parts. Secure the Tongue Assy by using (3) 1/2"-13 x 3-1/2" HHCS (Item #3) and (3) 1/2"-13 Flange Nuts (Item #4). See Figure A.

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

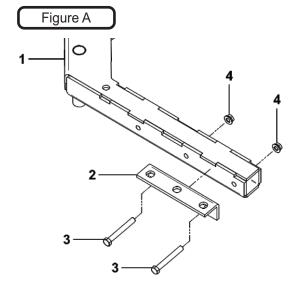
Item #	Part #	Desc.	Qty.
1	A0242	Engine Support Arm Assy	1
2	A0243	ENGINE MOUNT ASSY.	1
3	K1198	3/8"-16 X 3" HHCS	2
4	K1215	Flange Nut 3/8"-16	2



#### **Engine Stay Plate Installation**

Position the Engine Stay Plate (Item #2) to the Engine Support Arm Assembly (Item #1) and secure the Engine Stay Plate by using (2) 3/8"-16 x3" HHCS (Item #3) and (2) 3/8"-16 Flange Nuts (Item #4). Refer to Figure A.

The Engine Stay Plate can be positioned along the Engine Support Arm Assy to better secure the Engine Support Arm Assy on the next step.



Item #	Part #	Desc.	Qty.
1	A0242	Engine Support Arm Assy	1
2	B2285	Engine Stay Plate	1
3	K1198	3/8"-16 X 3" HHCS	2
4	K1215	Flange Nut 3/8"-16	2

#### **Ball Clevis Assembly Installation**

<u>Note:</u> The Ball Clevis Assembly (Item #3) will need to be secured onto the rear of your tractor. This may require you to drill a hole in your bumper to procure the securement. You'll need to first position the Ball Clevis Assembly and mark where it'll best fit your tractor. An ideal location would be one easily accessible, clear of obstruction and will not affect the performance of your unit or tractor structurally or functionally.

To install the Ball Clevis Assembly, first, thread (1) 5/8"-11 Hex Nut (Item #2) onto the Adjusting Rod (Item #1) then place the Adjusting Rod into the Ball Clevis Assembly (Item #3). Place the Ball Clevis (Item #6) at the rear end of the Ball Clevis Assy. Then, secure the Ball Clevis by using (1) 3/8"-16 x 2-1/4" HHCS (Item #7) and (1) 3/8"-16 Nyloc Nut (Item #8), refer to the Figure below.

Next, secure the Ball Clevis Assy to the Engine Stay Plate by using (1) Hair Pin Clip (Item #4) and (1) 1/2" Flat Washer (Item #5).

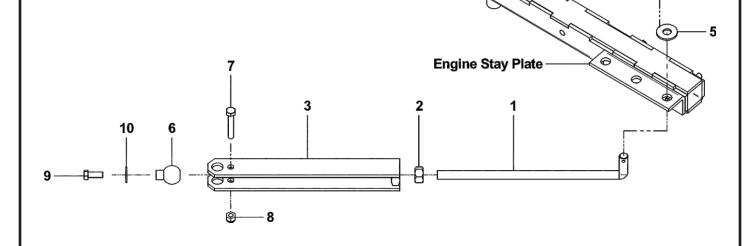
Finally, secure the Ball Clevis to the rear of your tractor using (1) 3/8"-16 x 1" HHCS (Item #9) and (1) 3/8" Flat Washer (Item #10).

The Ball Clevis Assy can be positioned along the Engine Stay Plate to better secure the Engine Support Arm.

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



Item #	Part #	Desc.	Qty.
1	B4319	5/8"-11 x 12" Adjusting Rod	1
2	K1254	5/8"-11 Hex Nut / GR 5 / Zinc	1
3	A0159	BALL CLEVIS ASSY.	1
4	K0088	Hair Pin Clip 5/32" x 2-5/8" L	1
5	K0055	Flat Washer 1/2" / 1.383 OD x .560 ID x .120 T	1
6	B0132	Ball Clevis	1
7	K1196	3/8"-16 x 2 1/4" HHCS	1
8	K1216	Nyloc Nut / 3/8"-16	1
9	K1191	HHCS 3/8"-16 x 1" GR5	1
10	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	1

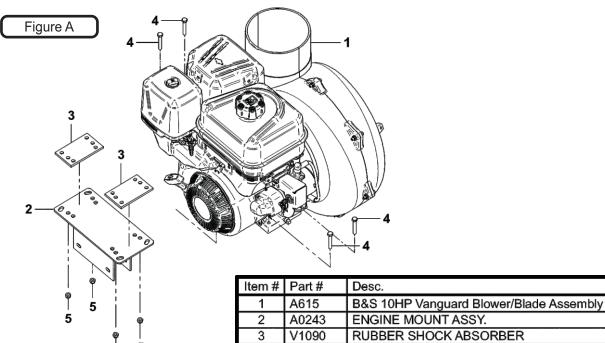


 $\circ$ 

#### **Engine Installation**

First, place (2) Rubber Shock Absorber (Item #3) on top of the Engine Mount Assembly (Item #2) aligning the bolt holes. Next, position the Engine Assembly (Item #1) on top of the Shock Absorbers aligning the bolt holes of all the parts. 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.



#### **Tongue Assembly Installation**

5

#### Pasture Vac Instructions

Position the Tongue Assembly (Item #1) between the Tongue Support Bracket of the 50 Trailer Assembly aligning the bolt holes of both parts. Secure the Tongue Assy by using (3) 1/2"-13 x 3-1/2" HHCS (Item #2) and (3) 1/2"-13 Flange Nuts (Item #3). See Figure B.

5/16"-18 x 2" All Thread HHCS

5/16"-18 Nyloc Nut

Qty.

1

1

4

4

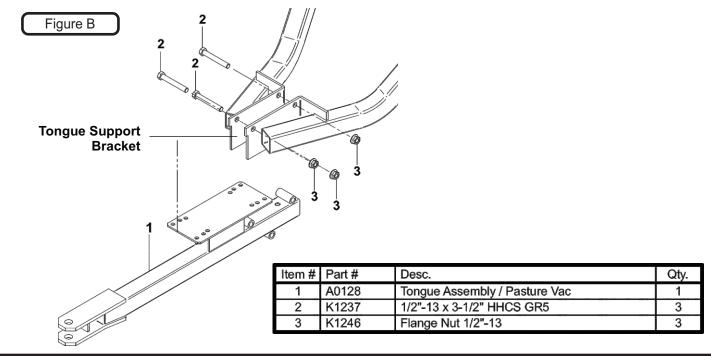
Note: Some parts and part features have been hidden from view for visual clarity.

4

5

K1159

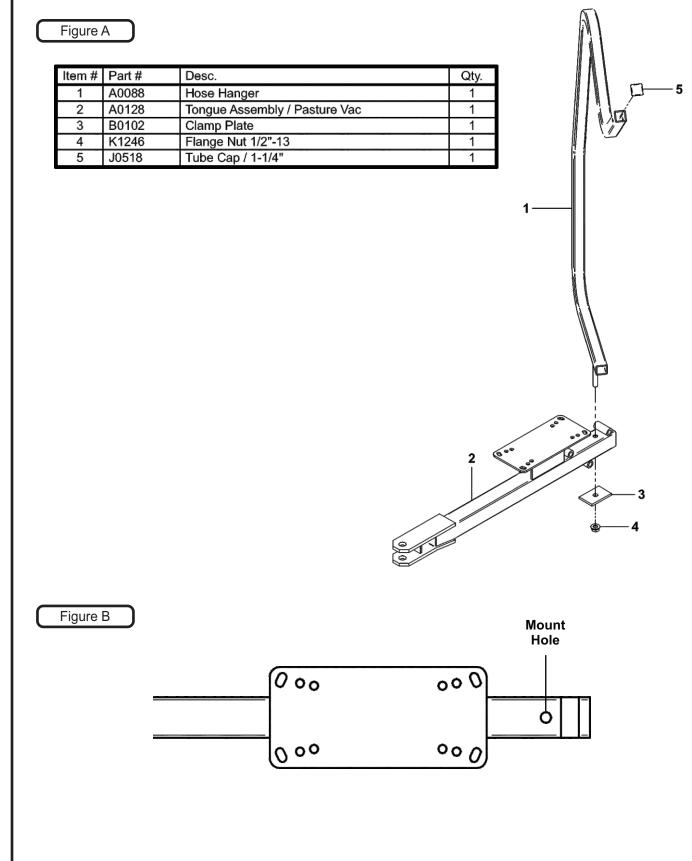
K1180



#### **Hose Hanger Installation**

Pasture Vac Instructions

Place the Hose Hanger (Item #1) into the mount hole of the Tongue Assembly (Item #2), see Figure B. Secure the Hose Hanger by using (1) Clamp Plate (Item #3) and (1) 1/2"-13 Flange Nut (Item #4). Once secured, close the top end of the Hose Hanger using (1) Tube Cap (Item #5). Refer to Figure A.



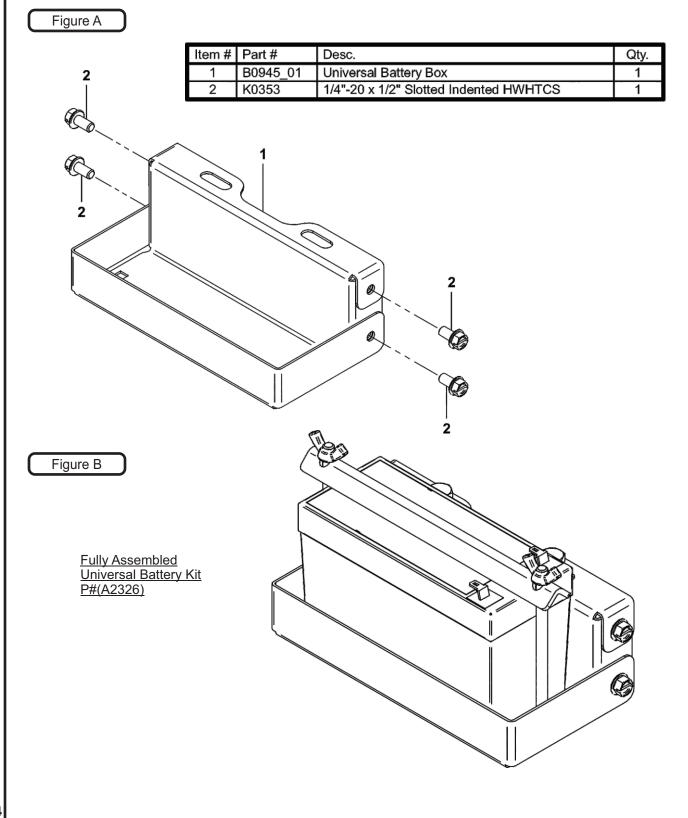
#### **Universal Battery Kit Installation**

#### Pasture Vac Instructions

Your Universal Battery Box (Item #1) will need to be assembled before installing the Universal Battery Kit P#(A2326).

First, make sure your screw holes on each tab are aligned with the holes of the base part. Then, using a 1/4"-20 x 1/2" Slotted Hex Washer Head Thread Cutting Screw (Item #2), screw in the sheet metal screw to secure each tab. Do this to all (4) tabs. Refer to Figure A below.

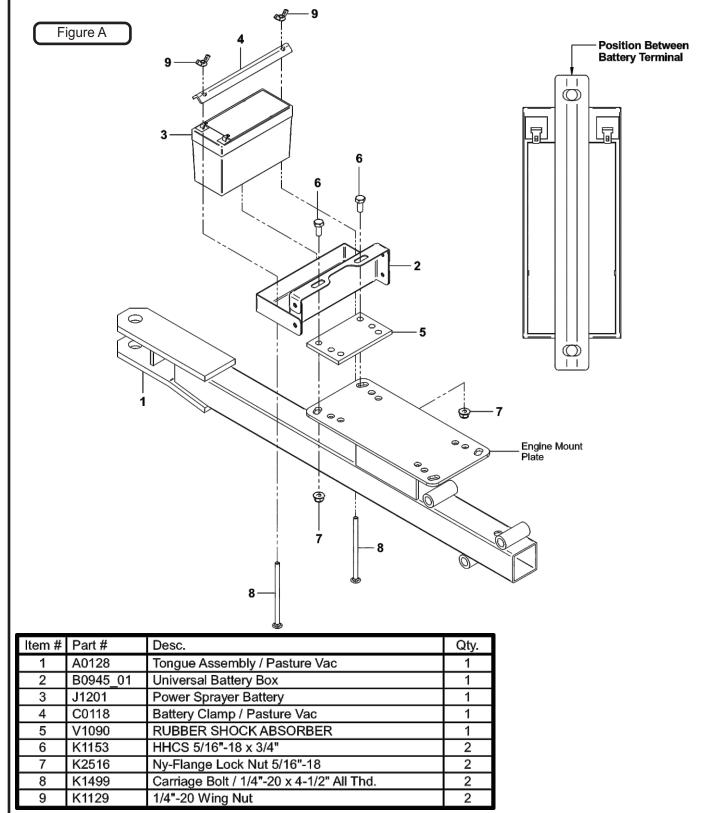
It is recommended to use an Impact Wrench along with a 3/8" Socket to secure each 1/4"-20 x 1/2" HWHTCS.



#### **Universal Battery Kit Installation (Cont.)**

Position the Battery Box (Item #2) over the Rubber Shock Absorber (Item #5) and over the Engine Mount Plate of the Tongue Assembly (Item #1). Secure the Battery Box by using (2) 5/16"-18 x 3/4" HHCS (Item #6) and (2) 5/16"-18 Ny-Flange Lock Nuts (item #7).

Next, place the Battery (Item #3) in the Battery Box and secure the Battery by using (1) Battery Clamp (Item #4), (2) 1/4"-20 x 4-1/2" Carriage Bolts (Item #8) and (2) 1/4"-20 Wing Nuts (Item #9). Be Sure the Battery Clamp is positioned between the battery's positive (+) and negative (-) terminal to prevent any possibility of the battery to arc. Refer to the Figure Below.



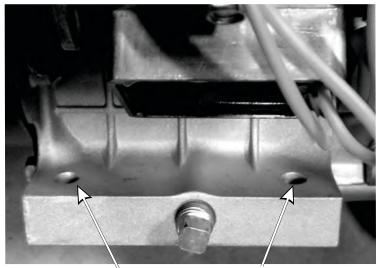
#### **Wiring Harness Installation**

To connect the Wiring Kit (P#A2152), connect the 4 gage Red Wire (P#P0620) to the positive (+) terminal of the starter solenoid on the engine. Route the Red Wire from the solenoid to the positive (+) terminal of the battery.

Connect the 4 gage Black Wire (P#P0621) to one of the mounting bolt holes located on the bottom of the engine. Route the black wire from the bolt hole to the negative (-) terminal of the battery. Refer to Figure B.

Once the wires are properly routed, test start the engine. If working properly, secure the wiring with the provided Zip Ties (P#J0245).

# 10HP / 14HP / 16HP Vanguard

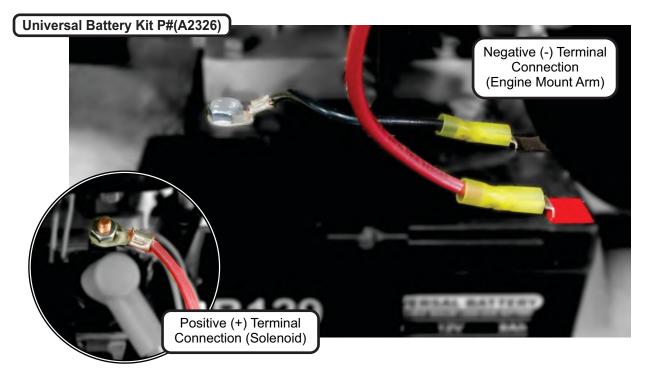


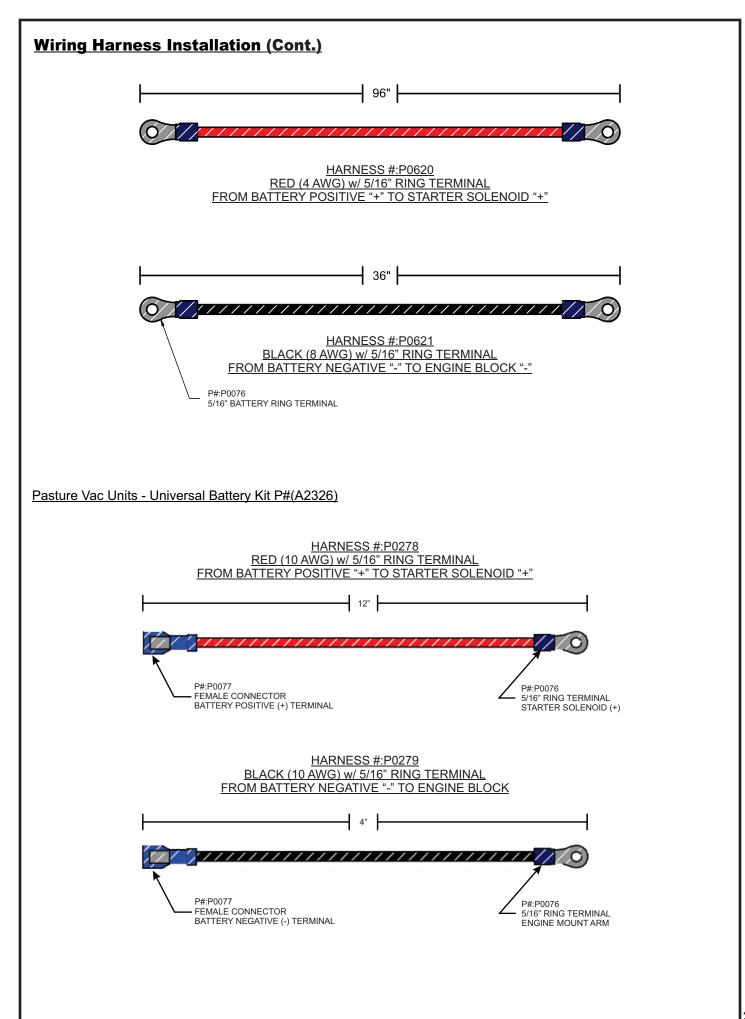
Negative (-) Terminal Connection (Engine Block)

Pasture Vac Instructions

To connect the Wiring Harness, connect the 10 gage Red Wire P#(P0278) from the positive (+) terminal of the battery to the positive (+) terminal of the starter solenoid located on the front end of the engine. Then connect the 10 gage Black Wire P#(P0279) from the negative (-) terminal of the battery to one of the mounting bolt holes located on the bottom of the engine or one of the bolt holes located on the Engine Mount Arm.

Refer to the Figure Below

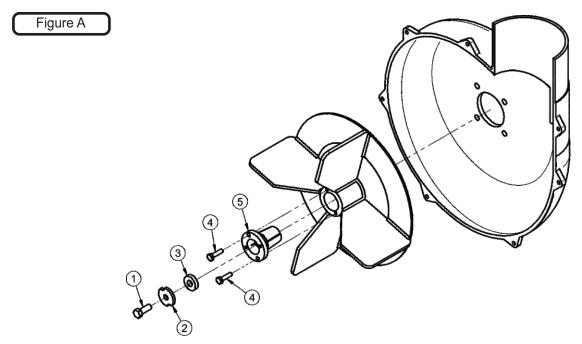




#### Impeller Blade Removal/Replacement

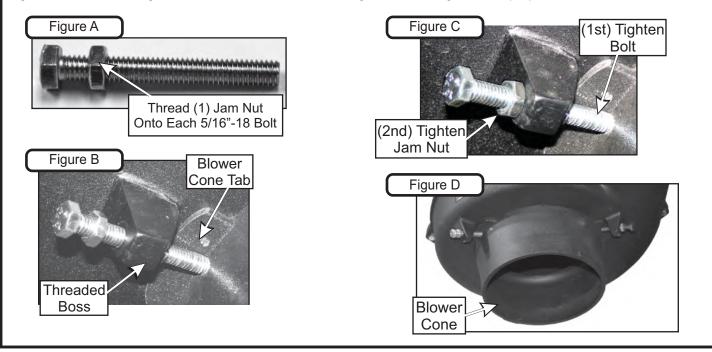
**To Remove:** First remove the 3/8"-24 x 1" GR8 HHCS P#(K0003) **(#1)**, 3/8" Double Indented Washer P#(K0284) **(#2)** and (1) Tapered Washer P#(K0277) **(#3)** from the Taper-Lock Bushing P#(S4302) **(#5)**. Next remove the (2) 1/4"-20 x 1" HHCS P#(K1225) **(#4)** and place them into the threaded 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.

<u>To Replace</u>: Firstly, start by applying anti-seize to the  $3/8"-24 \times 1"$  GR8 HHCS (#1) and set it aside. Then, 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)  $1/4"-20 \times 1"$  HHCS (#4), (1) Tapered Washer (#3), (1) 3/8" Double Indented Washer (#2), and (1)  $3/8"-24 \times 1"$  GR8 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.



#### **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), refer to Figure A. Next, partially thread (1) bolt into each of the two threaded bosses located on the Blower Housing. Position the Blower Cone so the tabs line up with the bolts and tighten completely, refer to Figure B. Once the (2) bolts are tight, tighten the Jam Nuts against the threaded boss, refer to Figure C. See Figure D for proper Blower Cone installation.

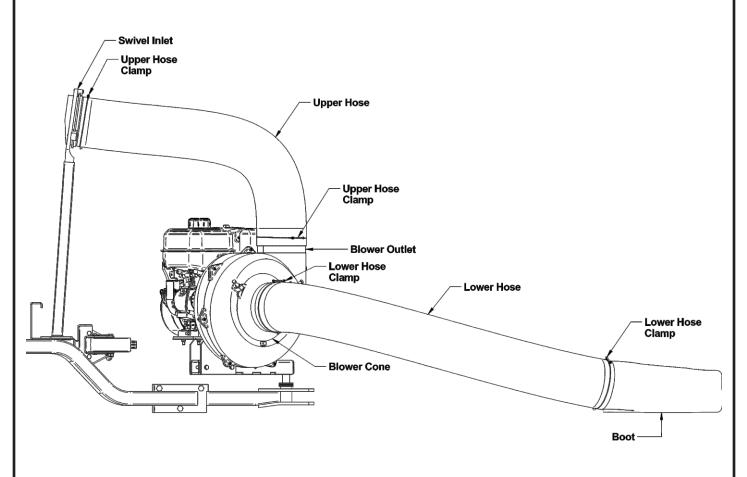


#### Length Of Hose Adjustment

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) / P#(J0070) over one end of the 6" or 7"Upper Hose. Secure this end of the Upper Hose to the Blower Outlet. See Figure below for details. Secure opposite end of the Upper Hose to the Swivel Inlet. Make sure both ends are securely fastened by tightening the Hose Clamp.



Additional Instructions for Estate Series

#### **Lower Hose To Blower Cone Installation**

Slide a Hose Clamp P#(J0070) 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.

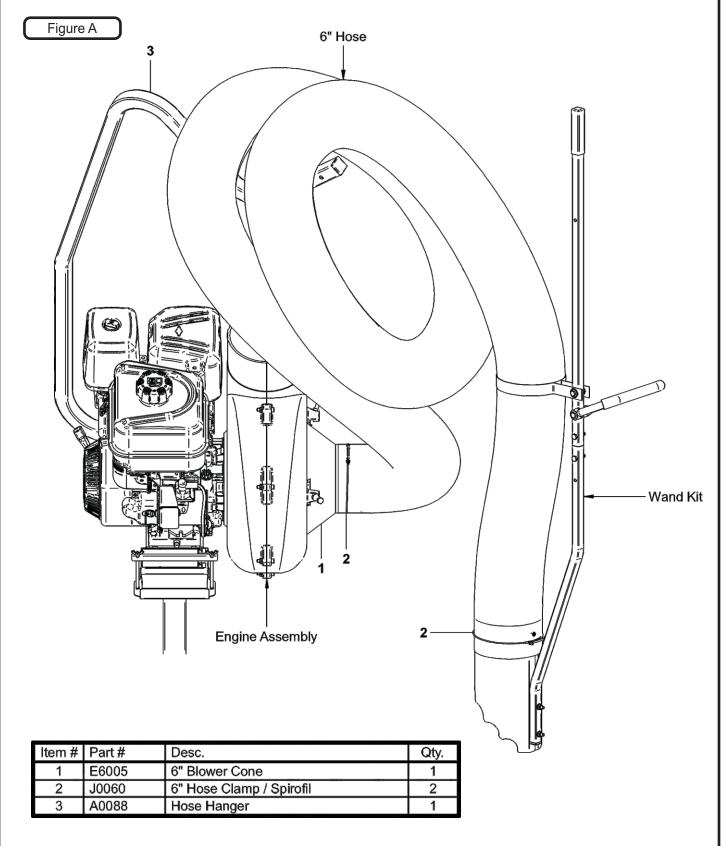
Tip: Before securing Hose Clamp fully, rotate Lower Hose counter-clockwise (away from yourself) approximately 1" to aid in retaining Boot to mower deck.

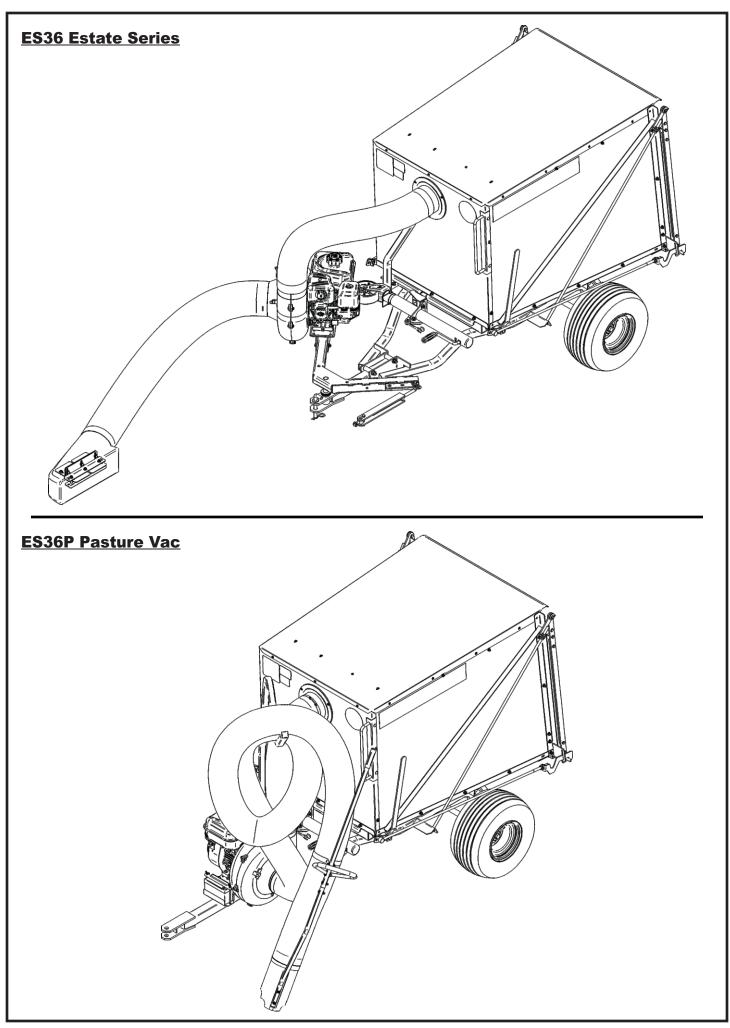
#### **Wand Kit Installation**

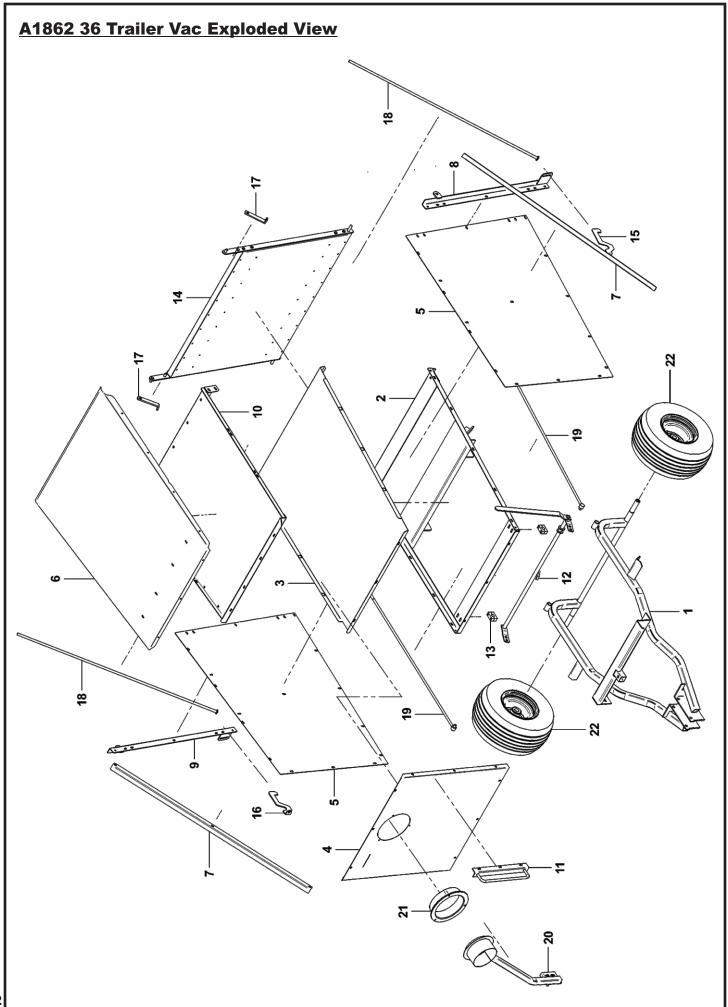
#### Pasture Vac Instructions

Install one end of the 6" Hose over the Blower Cone (Item #1) by using (1) 6" Hose Clamp (Item #2). Secure the other end over the Nose Cone of the Wand Kit by using (1) 6" Hose Clamp (Item #2). Refer to Figure A.

Once installed, the 6" Hose can be stored by wrapping it around the Hose Hanger (Item #3) as shown in Figure A.

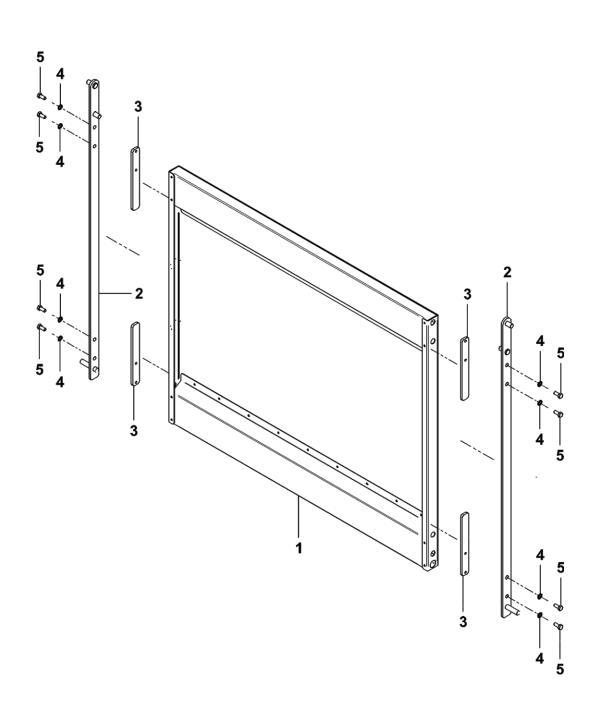




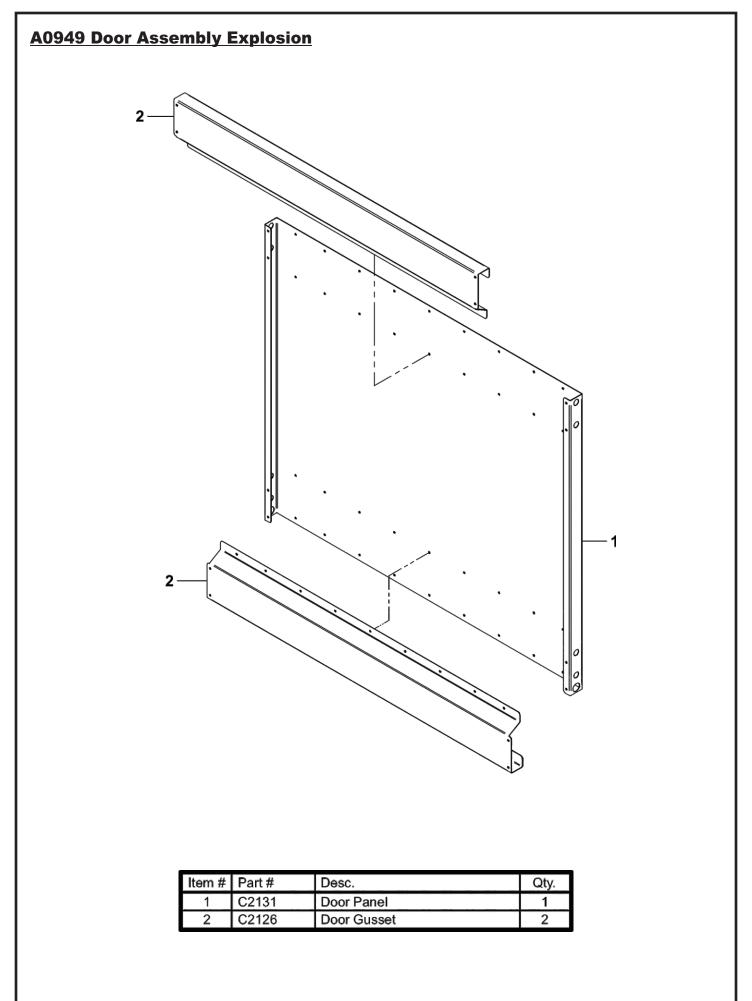


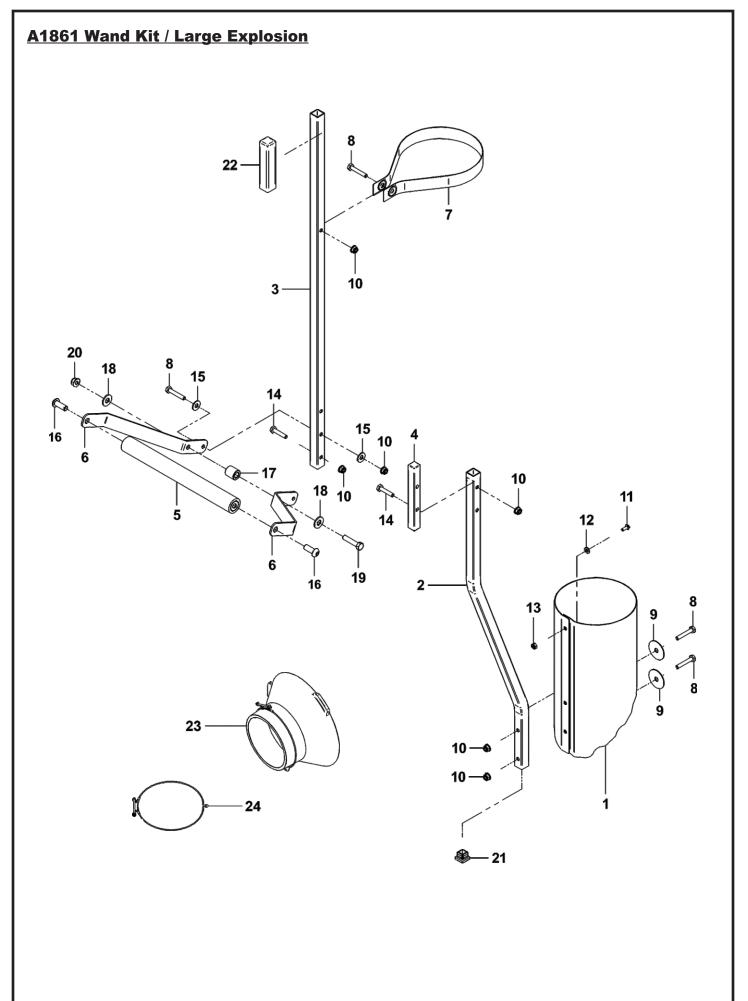
Item #	Part #	Desc.	Qty.
1	A0396	Base Chassis Frame Assembly	1
2	A0132	Box Frame	1
3	C1179	Box Bottom	1
4	C1181	Box Front	1
5	C0001	Box Side	2
6	C0002	Вох Тор	1
7	B5263	Box Side Support Rail	2
8	A0157	Left Side Door Rail Assy	1
9	A0158	Right Side Door Rail Assy	1
10	A0469	Screen Frame Assembly	1
11	A0372	Handle Rail Assy.	1
12	A0477	Latch Assy	1
13	C7001	Bearing Block / Set	2
14	A0969	Door & Hinge Assembly	1
15	B1418L	Latch Release Lever / Left	1
16	B1418	Latch Release Lever / Right	1
17	B2268	Pivot Rod Strap	2
18	A0478	Door Pivot Rod Assy	2
19	A0475	Latch Rod Assembly	2
20	A0246	Inlet Arm Assembly	1
21	E8004	Blower Cone	1
22	H1011	18 X 8.5 Wheel / No Axle	2

## A0969 Door & Hinge Assembly Explosion



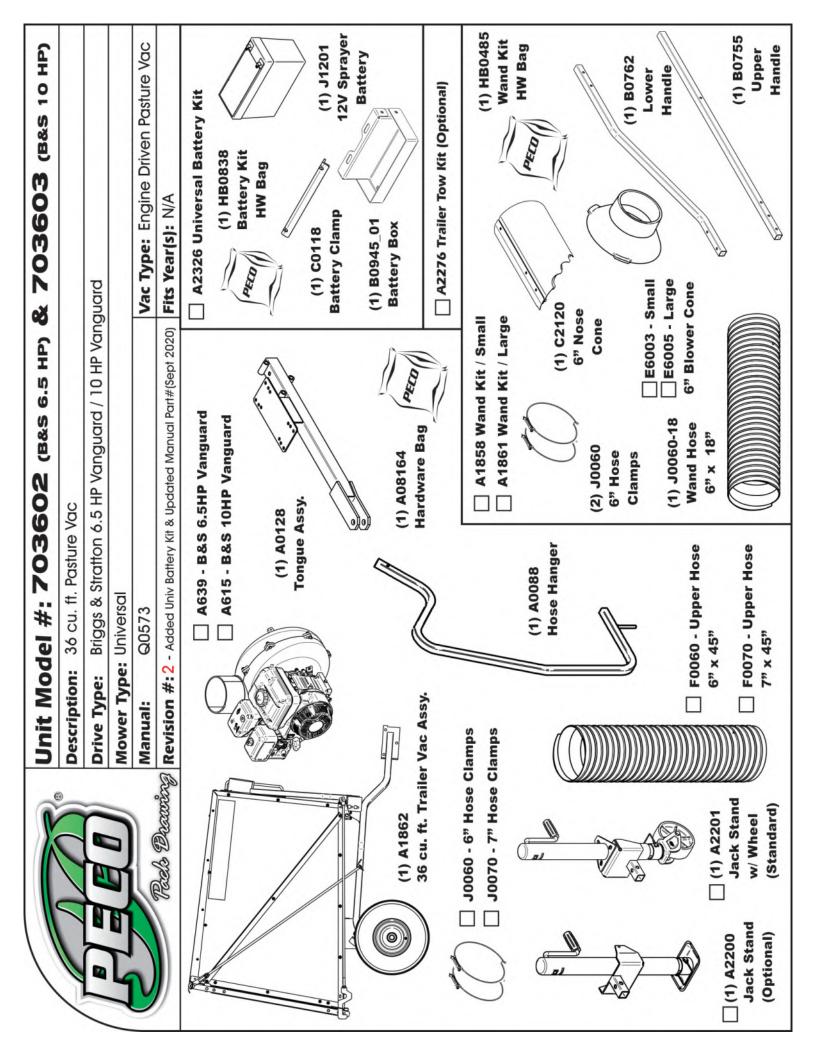
Item #	Part #	Desc.	Qty.
1	A0949	Door Assembly	1
2	A0474	Door Hinge Rod Assy	2
3	B2377	Hinge Support Strap	4
4	K0044	I/T Tooth Lock Washer 5/16"	8
5	K1153	HHCS 5/16"-18 x 3/4"	8

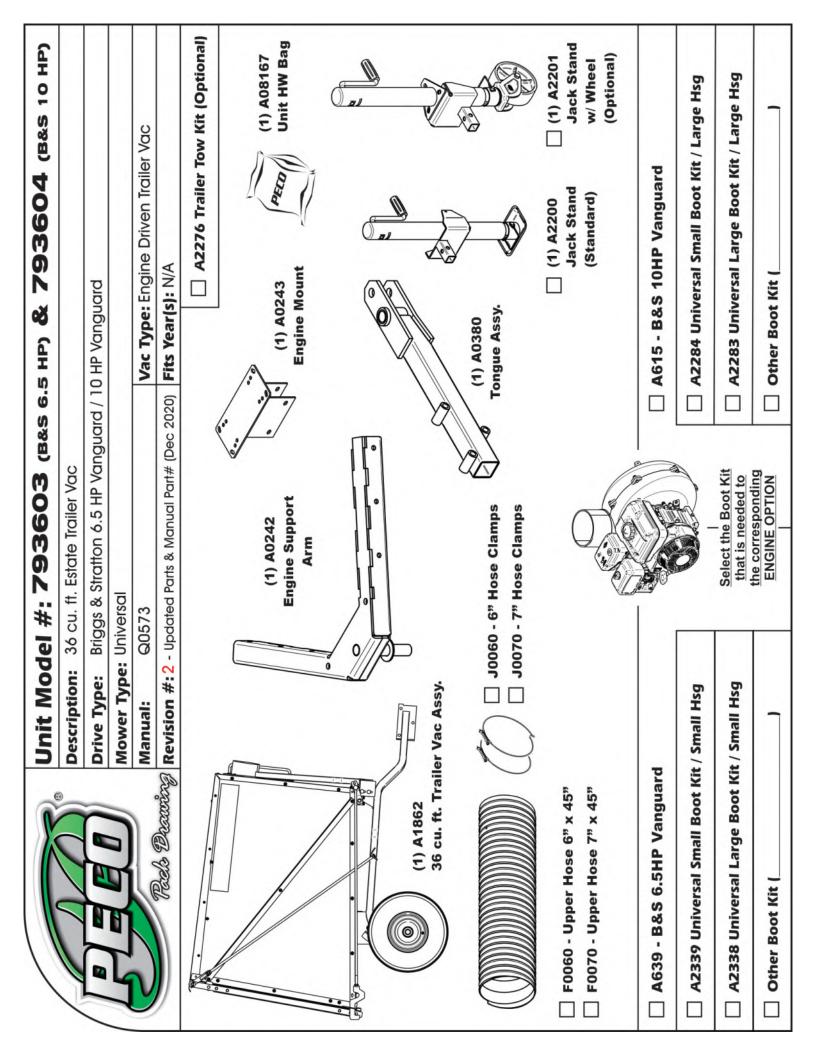


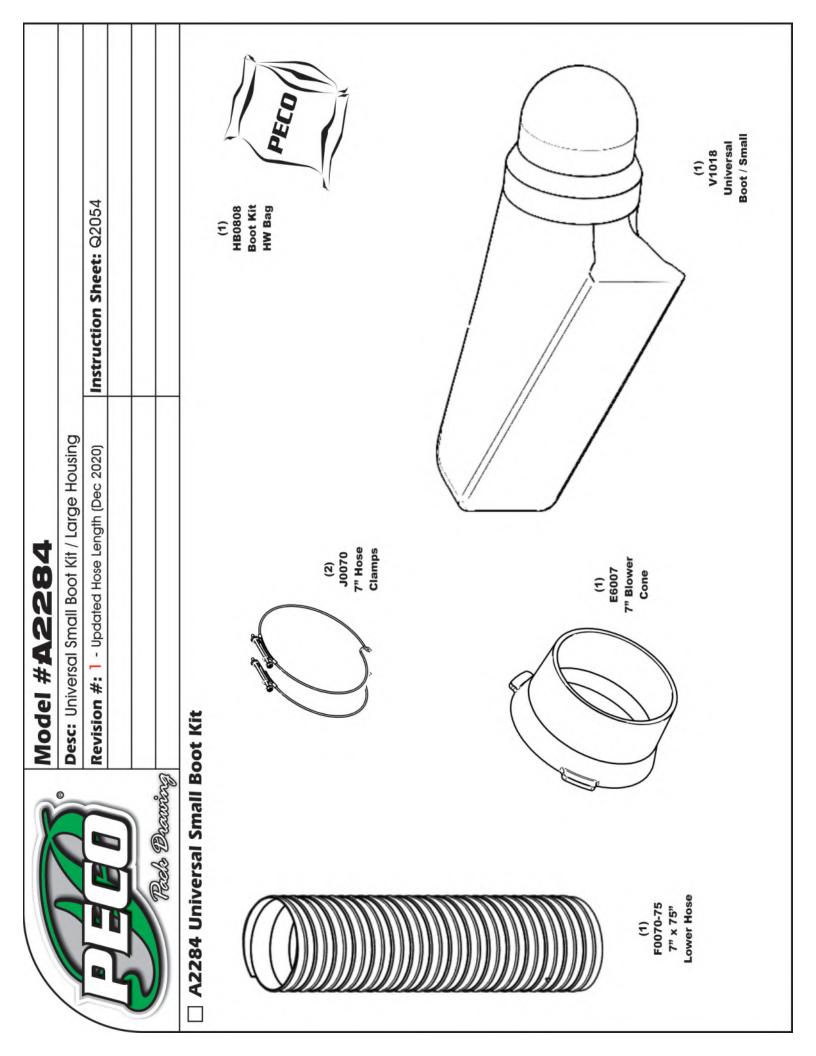


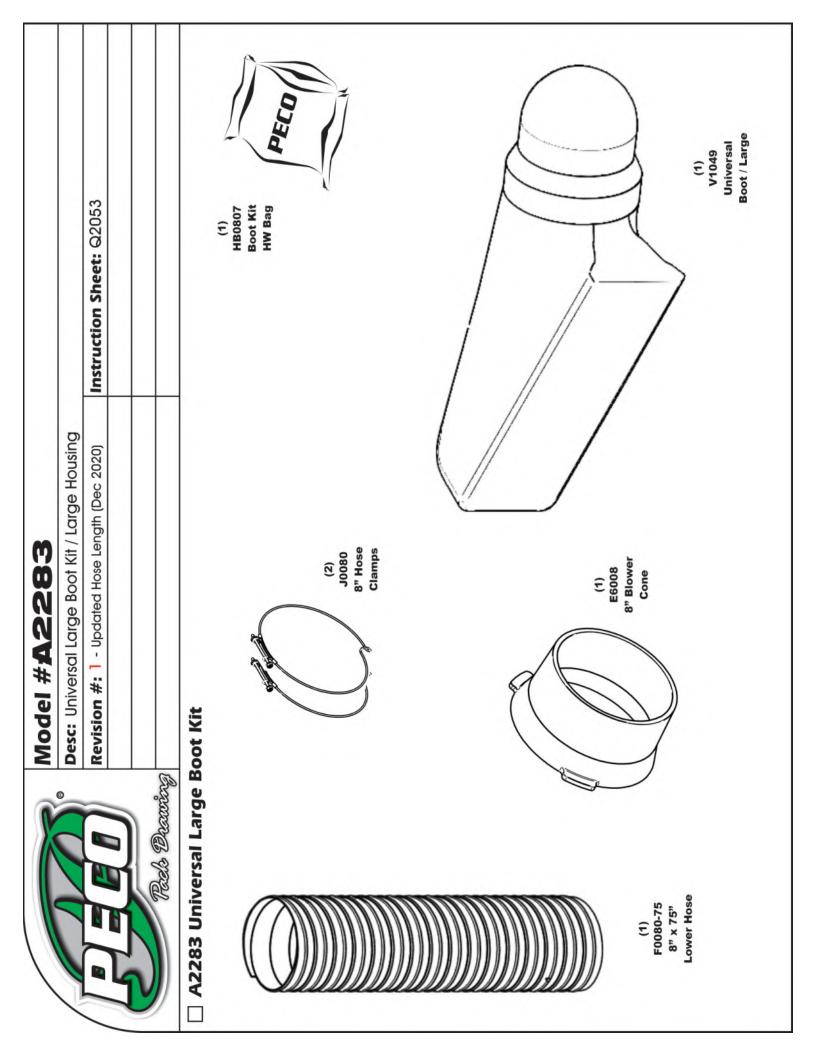
## A1861 Wand Kit / Large Exploded Parts List

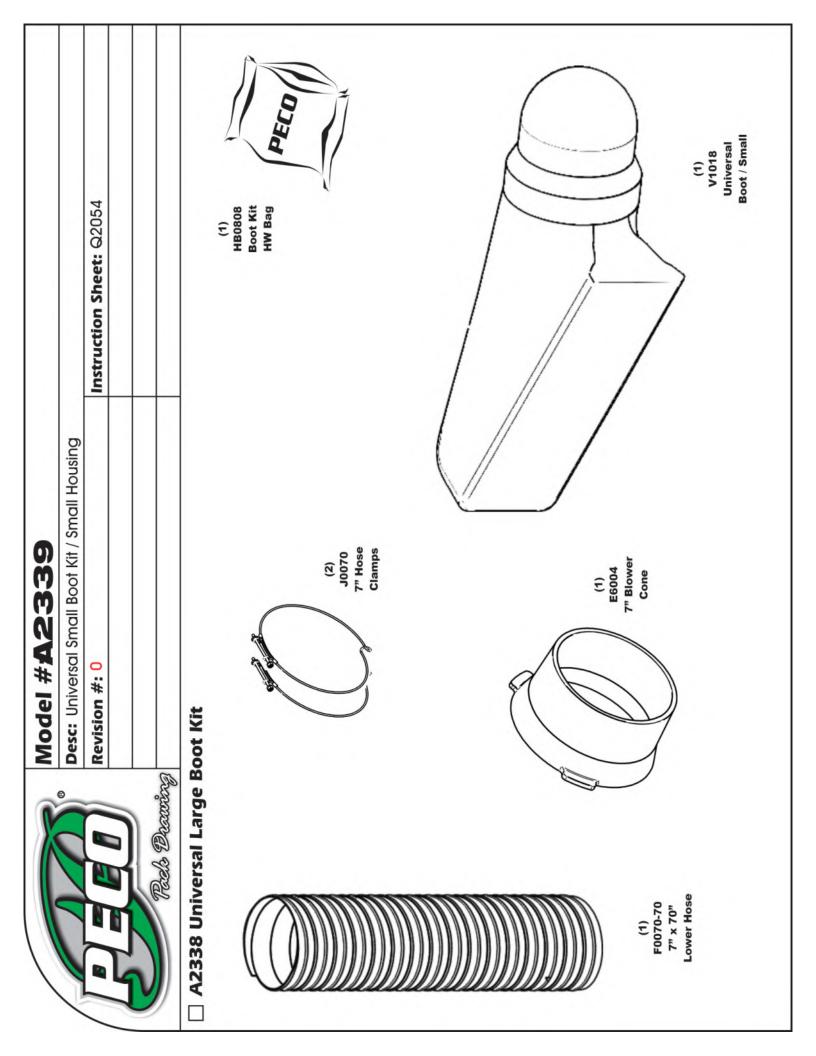
Item #	Part #	Desc.	Qty.
1	C2120	Nose Cone / 6"	1
2	B0762	Lower Handle	1
3	B0755	Upper Handle	1
4	B0763	Handle Connector	1
5	A2337	Handle w/ Grip Assembly	1
6	B2098	Wand Handle	2
7	A1860	Hose Strap Assy. 1" x 24"	1
8	K1135	1/4"-20 X 1-1/2" HHCS	4
9	K0041	5/16" FENDER WASHER 1.505 OD x .345 ID x .048 T	2
10	K2014	1/4"-20 Ny-Flange Lock Nut	6
11	K1064	10-24 x 1/2" Phillips PHMS	1
12	K1467	Flat Washer M6 x 12mm OD	1
13	K1068	10-24 Nyloc Nut	1
14	K1130	1/4"-20 X 1-1/4" HHCS GR8	2
15	K0037	Flat Washer / 1/4" (.75 OD x .312 ID x .060 T)	2
16	K1520	3/8"-16 x 1" Hex Drive Socket Cap Screw / Zinc	2
17	S3242	Spacer Bushing / .750 ID x .380 ID x .830 L	1
18	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	2
19	K1157	5/16"-18 x 1-1/2" All Thread HHCS	1
20	K2516	Ny-Flange Lock Nut 5/16"-18	1
21	V1170	Square End Cap	1
22	V1169	Square Handle Grip	1
23	E6005	6" Blower Cone	1
24	J0060	6" Hose Clamp / Spirofil	2

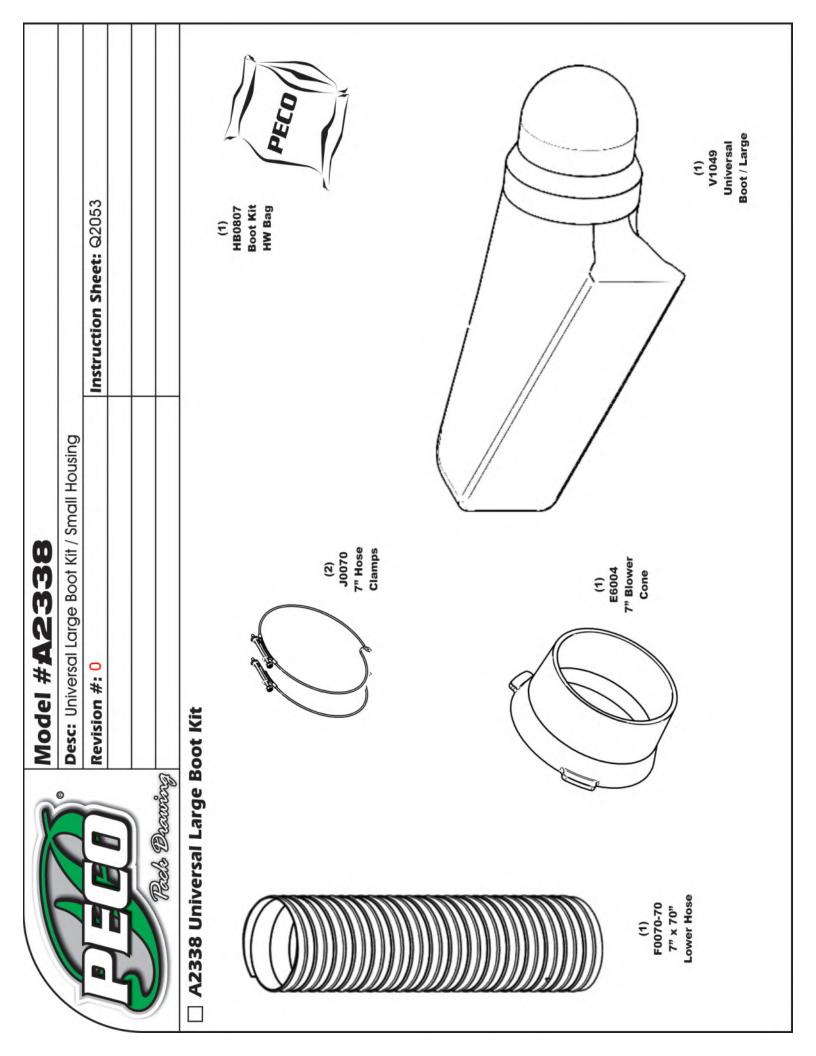












## SAFETY DECALS

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 # R0025 Danger - Rotating Blades

Danger - Keep Hands

Clear

## 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**

- 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 blower, engage the parking brake and turn the mower off. Check the upper hose, lower hose, top screen and boot for 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 5 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.

## **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.
- B. Disengage the mower deck.
- C. Adjust the throttle of the engine down to idle.
- D. Release the Latch Assembly using the Latch Handle at the side of the container.
- E. Loosen the Swivel Inlet from the container.
- F. Use the Handle Rail Assembly to tilt and rotate the container back. The container will then release its contents.
- G. Once the contents of the container have fallen out, the container is ready to move back into its normal operating position. With the handle in the 'open' position, lift the handle up until it completely latches and stops. This will place the container back into the collection position.

**NOTE:** Do not allow the container 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.
- Make sure all shields are in place and in good condition. Repair or replace any missing or damaged shields.
- 4. Listen for abnormal sounds, which might indicate loose parts, damaged bearings, or other damage. Correct any deficiency before continuing operation.
- 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 with genuine PECO parts.

#### After Each Use:

- 1. Clean all debris from machine especially from the container, and off of safety decals. Replace any missing or illegible decals.
- 2. Clean all debris from the container screen.
- Inspect unit for worn or damaged components. Repair or replace before the next use. Any replacement component installed during repair shall include the components current safety decal specified by the manufacturers to be affixed to the component.

## 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**

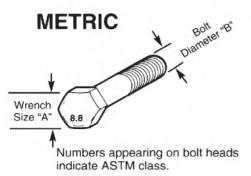
Unit Model Number:		
Unit Engine Size:		
Unit Serial Number:		
Date of purchase://		
Dealer/Distributor Name:		
Address:	State:	_Zip:
Phone Number:		

New PECO, Inc. 10 Walden Dr | Arden, North Carolina 28704 Phone: 1-800-438-5823 | 828-684-1234 Fax: 828-684-0858 Email: <u>peco@lawnvac.com</u> Website: www.lawnvac.com

## TORQUE SPECIFICATIONS

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

Bolt Head	I Markings	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)
	SAE Grade 2 (No Dashes)	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)
A		7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
CX	SAE Grade 5 (3 Dashes) Bolt Piameter B Diameter B SAE Grade 8 (6 Dashes)	7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
Q		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
rench ce "A"		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
Т		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



**AMERICAN** 

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

roper 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)

# Troubleshooting

2017 (v1.0)

# **Collection System Performance**

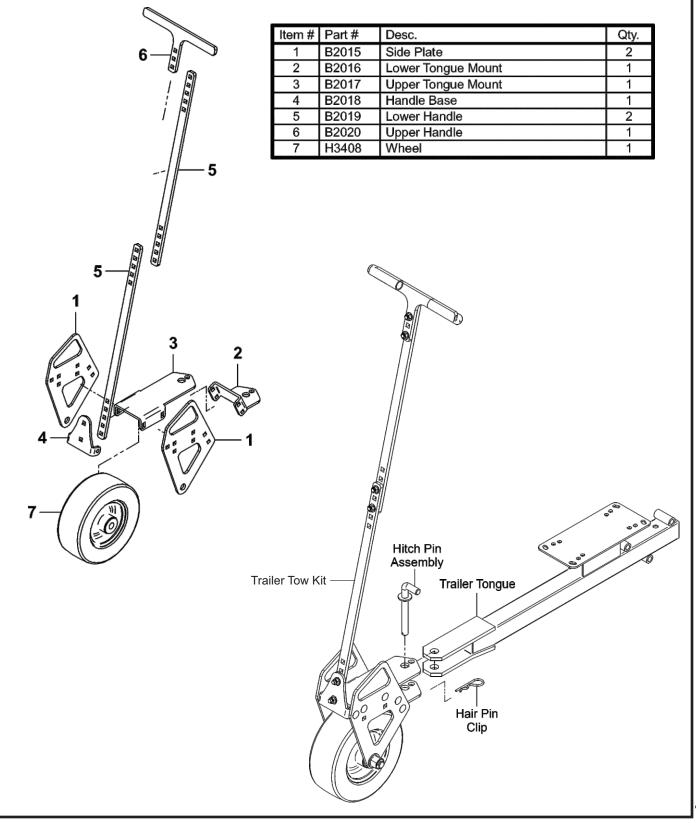
Problem	Possible Cause	<b>Corrective Action</b>	
	Cutting blades are bent or unbalanced	Install new cutting blade	
Abnormal Vibration	• Loose blower pulley or pulley assembly	• Tighten the pulley	
	Impeller blade out of balance	Contact dealer to replace	
	Low engine speed	<ul> <li>Always operate collection system at full throttle</li> </ul>	
Reduced collection system performance	<ul> <li>Plugged screen</li> </ul>	<ul> <li>Remove debris, leaves, or grass clippings from the screet</li> </ul>	
	Loose belt	Replace/tighten belt	
	Full collection bags	• Empty the collection bags	
	Collection bags are too full	Dump more frequently	
	Low engine speed	<ul> <li>Always operate collection system at full throttle</li> </ul>	
	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	<ul> <li>Adjust the pulley and tighten belts</li> </ul>	
	Collection bags are too full	Dump more frequently	
Debris blowout	<ul> <li>Plug/clog in the collection system</li> </ul>	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	

### **Additional Options**

#### A2276 - Trailer Tow Kit

The Trailer Tow Kit P#(A2276) is designed to allow your Trailer Vac Unit to be moved and maneuvered around easily without a tractor creating a stand alone unit. This will also allow for an easy storage or transportation of your Trailer Vac Unit when not being used.

Simply attach the Trailer Tow Kit to your Trailer's Tongue Assembly by aligning the mountings holes and using (1) Hitch Pin Assembly P#(A0342) and (1) Hair Pin Clip P#(K0088) as seen below.





New PECO, Inc. 10 Walden Dr | Arden, North Carolina 28704 Phone: 1-800-438-5823 | 828-684-1234 Fax: 828-684-0858 Email: <u>peco@lawnvac.com</u> Website: www.lawnvac.com