

# ENGINE DRIVEN GRASS COLLECTION SYSTEM

Model# 752201, 752201-AM, 752202

PRO 2224

Briggs & Stratton 10HP Vanguard 752201 & 752201-AM Yanmar 7HP Diesel 752202



# **OPERATOR'S MANUAL**

ASSEMBLY • OPERATION • MAINTENANCE

MANUAL PART#: Q0059 Initial Release - Oct 2019

### **GRASS COLLECTION SYSTEM**

### **TABLE OF CONTENTS**

PAGE SECTION

	Safety	2	Length of Hose Adjustment	21
	Safety Alert Symbols	3	Upper Hose Installation	21
	Warranty	4	Lower Hose to Blower Cone Installation -	21
	•		Lower Hose to Boot Installation	
1	INTRODUCTION AND DESCRIPTION	5	Impeller Blade Removal/Replacement	22
	Introduction		Exploded Views & Parts List	
	Description	5	Overall Parts List	
			Safety Decals	34
Ш			OPERATING INSTRUCTIONS	
	Mower Preparations		General Safety	
	Link Plates Assy & Installation		Operation & Tips On Mowing	35
	Base Frame 3-Pt Hitch Installation		Disengagement Of The PTO Assembly	
	Engine Mount Arm Assy Installation	9	Unloading The Collection System	35
			MAINTENANCE	35-36
	Throttle Kit Assy & Installation		Maintenance Checklist	
	Wiring Kit Assy & Installation		Lubrication	
	Door Rod Pivot Assy & Installation		PARTS AND SERVICE	
	Latch Handle Assy Installation		Parts And Service Information	
	Latch Rod Assy & Installation		Torque Specifications	
	Inlet, Inlet Ring & Debris Deflector Inst		Troubleshooting	38
	Sight Glass Kit Installation	20		

### **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.

SECTION

**13.** Wear eye protection to prevent debris from getting into your eyes.

**PAGE** 

### **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.

Black letters on **ORANGE** 

It may also be used to alert against unsafe practices.



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

### A. WHAT IS UNDER WARRANTY?

PECO extends the following warranties to the original purchaser of each new PECO consumer product subject to the following limitations.

- **1. PRODUCT WARRANTY:** Any part of any consumer product, which is defective in material or workmanship as delivered to the purchaser will be repaired or replaced, as PECO elects, without charge for parts or labor, if the defect appears within 12 months from the date of delivery of the product to the original purchaser. ALL DEFECTIVE PARTS MUST BE RETURNED TO PECO FOR INSPECTION TO DETERMINE VALIDITY OF WARRANTY CLAIMS. Freight and mailing will be borne by the customer.
- **2. PARTS REPLACED DURING WARRANTY:** Any new PECO 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 within 90 days or before the expiration of the original warranty period, whichever is later.
- **3. COMMERCIAL USE:** Products put to personal use around a single household or residence is considered 'Residential'; Products put to any business use (agricultural, commercial, or industrial) or used at multiple locations is considered 'Commercial.' Products designated as 'Commercial' are warrantied for 12 months from the date of delivery of the product to the original purchaser when used for in commercial applications. Products designated as 'Residential' are warrantied for 90 days from the date of delivery of the product to the original purchaser when in commercial applications.

### **B. SECURING WARRANTY ADJUSTMENTS**

Call PECO for Return Authorization. Damaged or broken parts other than engines or batteries, must be returned to New PECO, Inc. at 10 Walden Drive, Arden, NC 28704 before any warranty adjustment can be authorized. At the time of requesting warranty adjustment, the purchaser must present evidence of the date of delivery of the product. The purchaser shall pay any charge for the product to and from Arden, NC.

### C. ITEMS NOT COVERED BY PECO WARRANTY

Engines and batteries attached to PECO products are covered under a separate warranty by the respective manufacturer.

### D. UNAPPROVED ALTERATION OR MODIFICATION

All obligations of New PECO, Inc. under this warranty shall be terminated if products are altered or modified in ways not approved by New PECO, Inc.

### **E. ACCIDENTS AND NORMAL MAINTENANCE**

The warranty covers only defective material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper use or abuse of products. The cost of normal maintenance and normal replacement of service items such as belts, cutting blades, hoses, etc., which are not defective shall be paid for by the purchaser.

### F. NO REPRESENTATIONS ADDITIONAL WARRANTIES. DISCLAIMER

Neither New PECO, Inc. nor any company affiliated with it 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.

## G. PRODUCTS USED FOR RENTAL OR LEASE PURPOSES ARE WARRANTIED FOR 45 DAYS FROM DATE OF ORIGINAL SALE ONLY

### H. 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 PECO be liable for special incidental or consequential damages.

### 1. NO SERVICE CENTER WARRANTY

The selling Service Center 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 dealer has no authority to make any representation or promise on behalf of PECO or to modify the terms of this warranty in any way.

### **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**

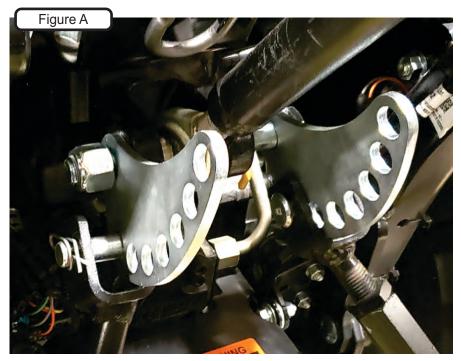
The grass collection system is designed for turf maintenance where there is a need to collect the grass clippings as the mower cuts the turf. It is also used for picking up leaves in pre-season and post-season cleanup. The engine/blower/blade assembly, is mounted on the right side of the unit. The blower draws grass clippings from the discharge area of the cutter deck up and back to the aluminum container mounted to a three-point hitch at 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 easily pull and raise the lift handle. Using the lift handle, the operator releases the rear door, the container pivots towards the ground, and the clippings are dumped.

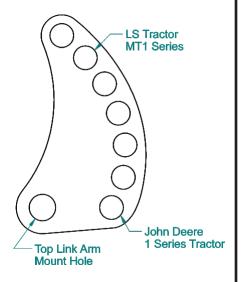


### **Section II - INSTALLATION FOR USE**

### **Mower Preparations**

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



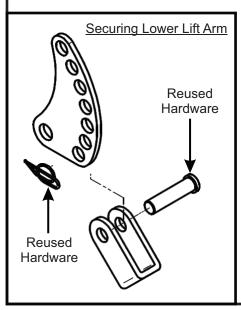


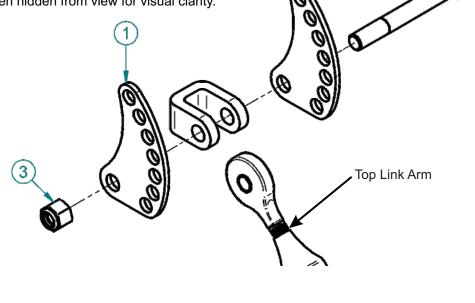
The Mount Brackets are designed to accommodate a range of lower lift arm positions. Rotate the Mount Brackets so that your lower lift arms are aligned and positioned to the mounting holes of the Mount Brackets. The lower lift arms should be positioned so that the collection unit will be sitting up right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

### Figure B

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

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

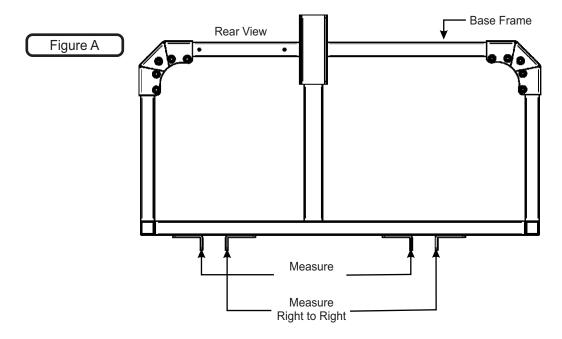




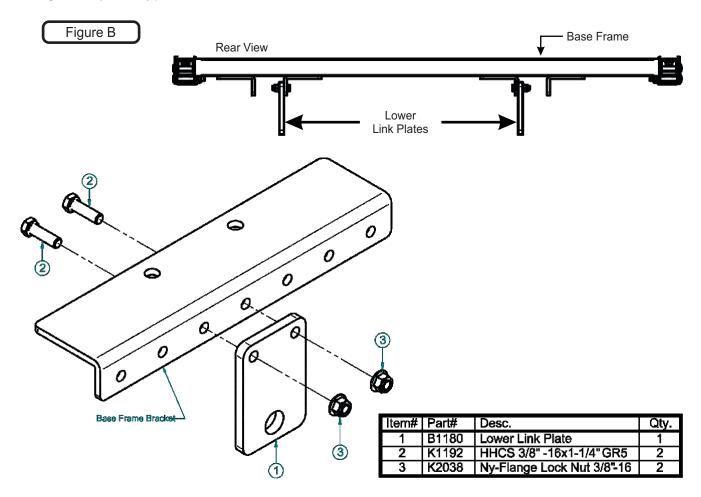
### **Link Plates Assembly & Installation**

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

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



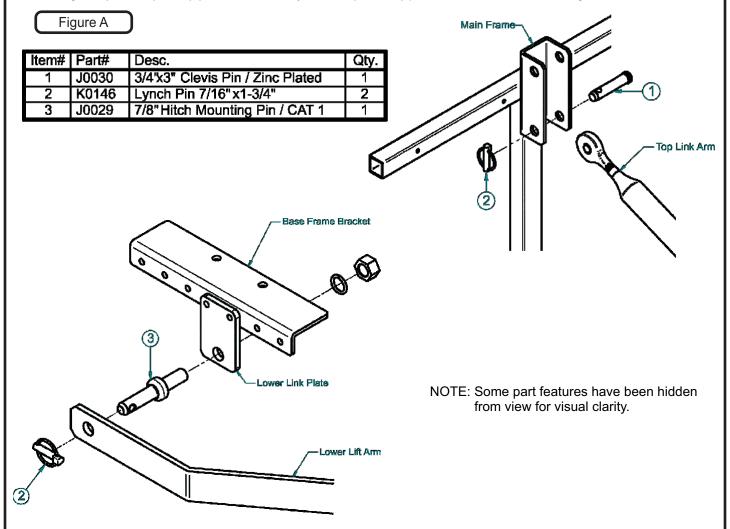
Align the holes of the Lower Link Plates (Item #1) to the second set of holes from the rear of the Base Frame Bracket. Refer to figure B. Secure the Lower Link Plates with (2) 3/8"-16 x 1-1/4" Hex Bolts (Item #2) and (2) 3/8"-16 Flange Nuts (Item #3) per Link Plate.



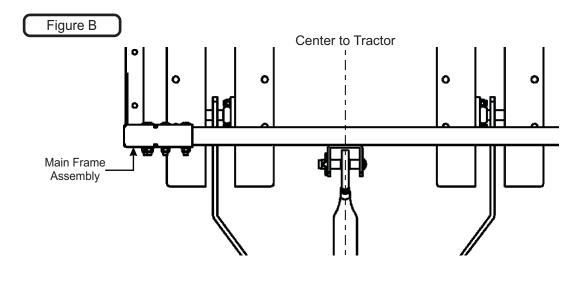
### **Base Frame 3-Pt Hitch Installation**

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

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



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



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

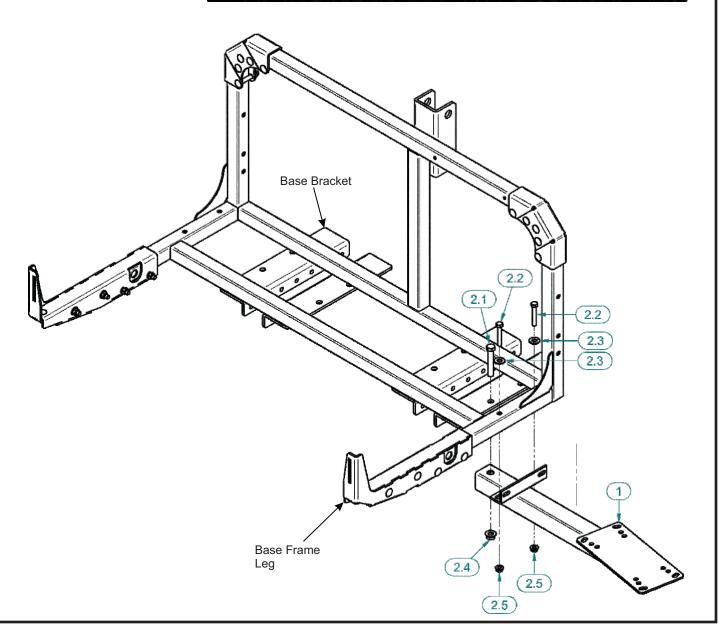
Place the Engine Mount Arm Assembly (Item #1) up under the Right side of the Base Frame Leg. Align the hole of the Base Bracket to the hole on the Engine Mount Arm Assembly. Loosely secure using (1) 1/2"-13 x 3" HHCS (Item #2.1) and (1) 1/2"-13 Flange Nut (Item #2.4). Refer to Figure A.

Align the holes on the Base Frame Leg to the slots of the Engine Mount Arm Assembly. Secure relatively loose using (2) 3/8"-16 x 2-1/4" HHCS (Item #2.2), (2) 3/8" Flat Washers (Item #2.3) and (2) 3/8"-16 Flange Nut (Item #2.5). Once secured, tighten all hardware at this time. Refer to Figure A.

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

Figure A

Item #	Part #	Desc.	Qty.
1	A0232	Engine Mnt Arm Assy	1
2	HB0807	HW Bag / Pro22 DFS / Amfortec	1
2.1	K1236	1/2"-13 x 3" HHCS	1
2.2	K1196	3/8"-16 x 2 1/4" HHCS	2
2.3	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	2
2.4	K1246	Flange Nut 1/2"-13	1
2.5	K1215	Flange Nut 3/8"-16	2



### **Engine/ Blower/ Blade Assembly Installation**

First position and place (2) Rubber Shock Absorbers (Item #3.1) on top of the Engine Mount Arm Assembly (Item #2).

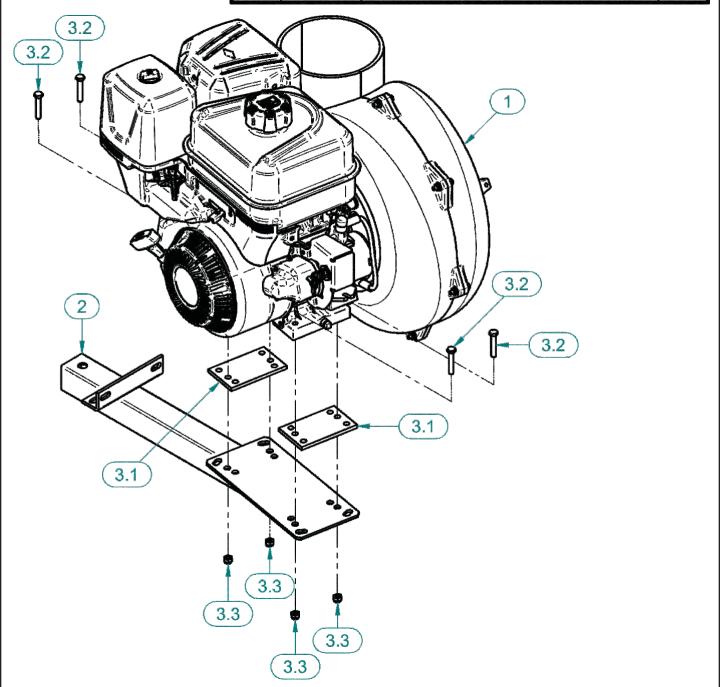
Next, Position the B&S 10HP Vanguard Blower/ Blade Assembly (Item #1) on top of the Rubber Shock Absorbers with the Blower facing towards the front of the tractor. Then, secure the B&S 10HP Vanguard Blower/ Blade Assy by using (4) 5/16"-18 x 1-3/4" HHCS GR5 (Item #3.2) and (4) 5/16"-18 Nyloc Nuts (Item #3.3). Refer to Figure A.

Be sure to torque the bolts to the specified torque listed at the end of this manual.

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

|--|

Item #	Part#	Desc.	Qty.
1	A615	B&S 10HP Vanguard Blower/Blade Assembly	1
2	A0232	Engine Mnt Arm Assy	1
3	HB0807	HW Bag / Pro22 DFS / Amfortec	1
3.1	V1090	RUBBER SHOCK ABSORBER	2
3.2	K1158	5/16"-18 x 1-3/4" HHCS GR. 5	4
3.3	K1180	5/16"-18 Nyloc Nut	4



### **Throttle Kit Assembly Installation**

To install the Throttle Cable Assembly (Item #2), locate the mounting slots on the Switch Plate of the Throttle Cable Assembly, refer to Figure A.

Align the mounting slots of the Switch Plate to the holes located on the Upper Crossbar - Base Frame Assembly. Secure the Switch Plate using (2) 1/4"-20 x 2-1/4" HHCS (Item #2.1) and (2) 1/4"-20 Flange Nut (Item #2.2) Refer to Figure B.

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

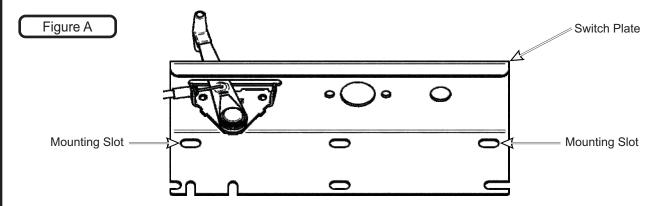
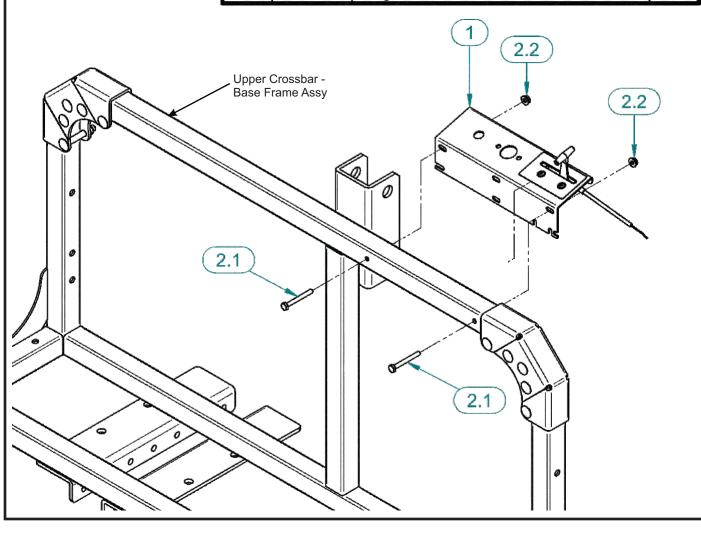


Figure	В

Item #	Part#	Desc.	Qty.
1	A1212	Throttle Cable Assembly	1
2	HB0807	HW Bag / Pro22 DFS / Amfortec	1
2.1	K1150	HHCS / 1/4"-20 x 2-1/4"	2
2.2	K1126	Flange Nut 1/4"-20	2



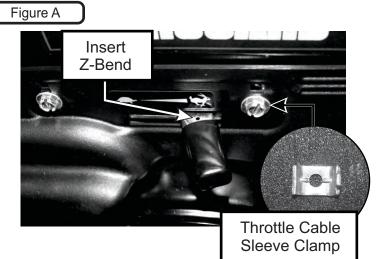
### **Throttle Kit Assembly Installation (Continued)**

### For the B&S 10HP Vanguard

To fasten the throttle cable end to the engine, place the throttle control lever into the "slow" position. Rotate the engine throttle lever to the "slow" position.

Remove the screw on the engine next to the "fast" position of the throttle lever. Attach (1) Throttle Cable Sleeve Clamp, oriented with bent tab up and facing the engine, using the 10-32 x 3/4" HHCS provided in the engine hardware. Insert the "Z" bend into the hole in the throttle lever. Clamp the throttle cable sleeve to the engine and tighten. Refer to the Figure A below.

Rotate the throttle control lever into the "fast" position to check for proper installation.





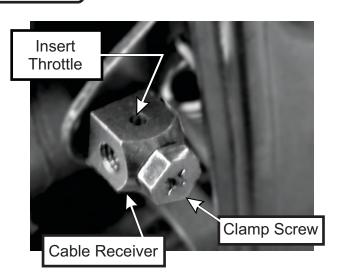
### For the Yanmar 7HP

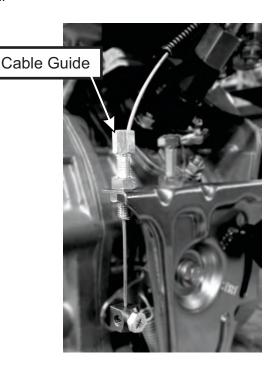
To fasten the throttle cable end to the engine, locate the throttle cable guide and receiver on the front of the engine. Refer to Figure B below.

Remove the clamp screw on the throttle cable receiver. Insert the throttle cable in through the top side of the throttle cable guide down into the hole located on top of the throttle cable receiver. Replace the clamp screw and tighten. Refer to Figure B below.

Rotate the throttle control lever to check for proper installation.







### **Wiring Kit Assembly Installation**

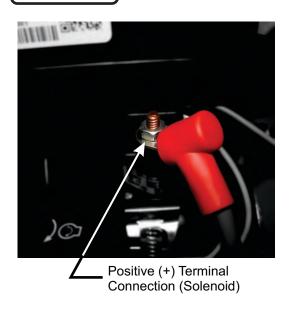
To connect the Wiring Kit (P#A2152), connect the 4 gage Red Wire (P#P0620) to the positive (+) terminal of the starter solenoid on the engine. Route the Red Wire from the solenoid to the positive (+) terminal of the battery.

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.

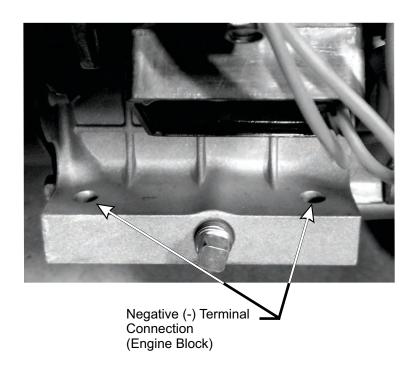
Refer to the Figures below for your respective engine.

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

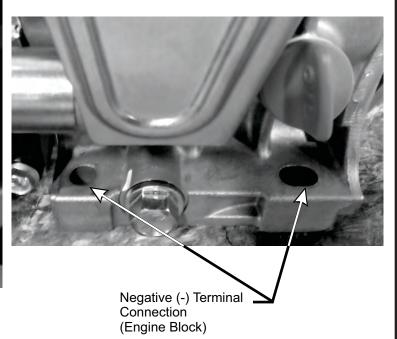
### 10HP Vanguard

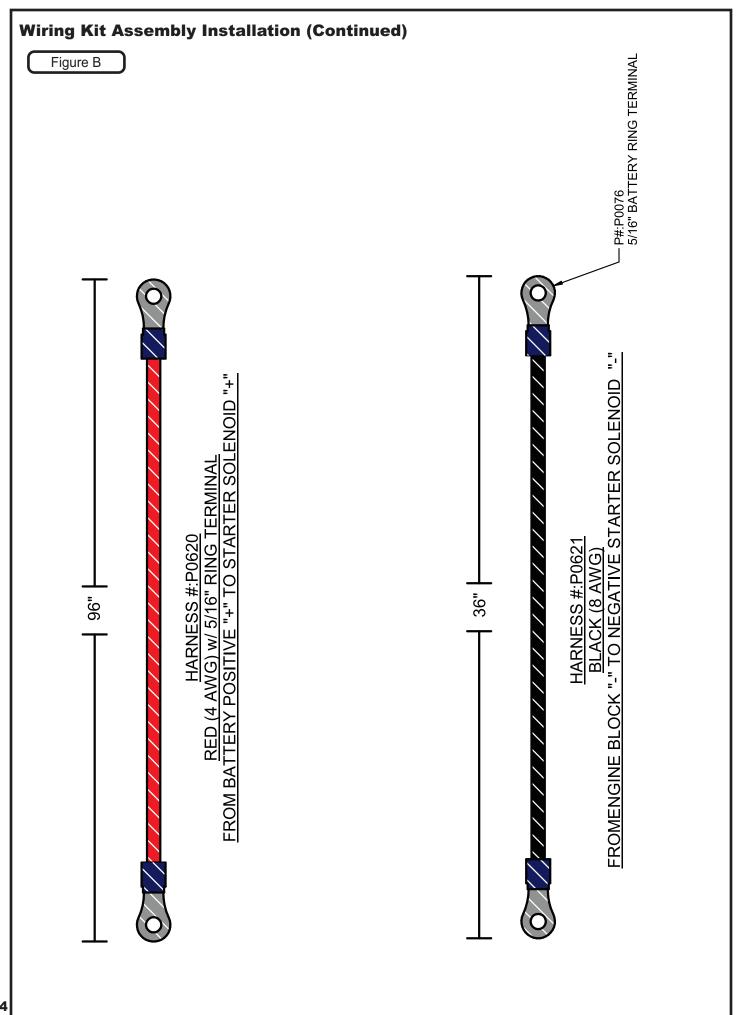


Positive -



### **7HP Yanmar**

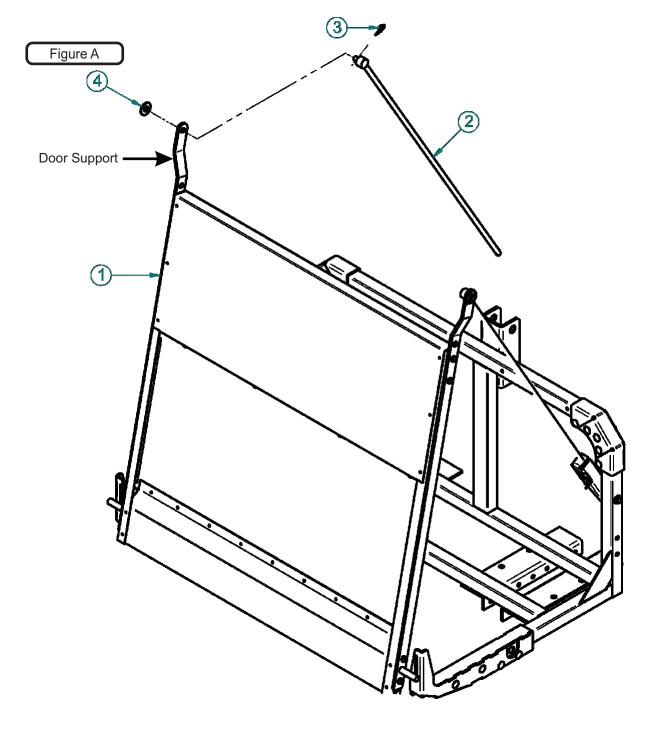




### **Door Rod Pivot Assembly & Installation**

Install the Door Rod Assembly (Item #2) to the Door Assembly (Item #1) by inserting the top end of the Door Rod Assy into the hole of the Door Support of the Door Assy. Secure the Door Rod Assy by using (1) Rue Ring Cotter Pin (Item #3) and (1) 1/2" Flat Washer (Item #4) per Door Rod Assy. Refer to Figure A below.

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



Item #	Part#	Desc.	Qty.
1	A0191	Door Assembly	1
2	A0476	Door Rod Assy.	1
3	K1437	Rue Ring Cotter Pin	1
4	K0055	Flat Washer 1/2" / 1.383 OD x .560 ID x .120 T	1

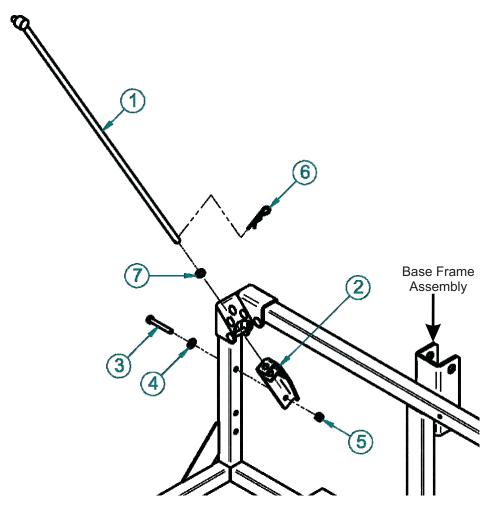
### **Door Rod Pivot Assembly & Installation (Continued)**

Next, assemble the Door Rod Pivot to the Base Frame Assembly by placing the straight end of the Door Rod Assembly (Item #1) through the Door Rod Pivot (Item #2). Secure each Door Rod Assy to the Door Rod Pivot with (1) 1/8" Hair Pin Clip (Item #6) and (1) 1/2" Flat Washer (Item #7). Refer to B.

Align the bolt holes of the Door Rod Pivot to the holes on the Base Frame Assy and secure the Door Rod Pivot by using (1) 3/8" x 2-1/2" HHCS (Item #3), (1) 3/8" Flat Washer (Item #4) and (1) 3/8"-16 Nyloc Nut (Item #5). Refer to Figure B below.

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

Figure B

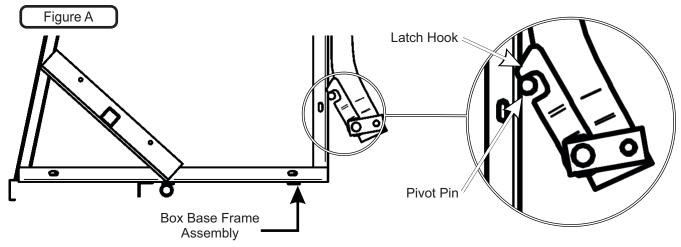


Item #	Part #	Desc.	Qty.
1	A0476	Door Rod Assy.	1
2	B1931	Linkage Bracket Right	1
3	K1197	3/8"-16 X 2 1/2" HHCS	1
4	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	1
5	K1216	Nyloc Nut / 3/8"-16	1
6	K1437	Rue Ring Cotter Pin	1
7	K0027	Flat Washer 1/2" / .787 OD x .512 ID x .090 T	1

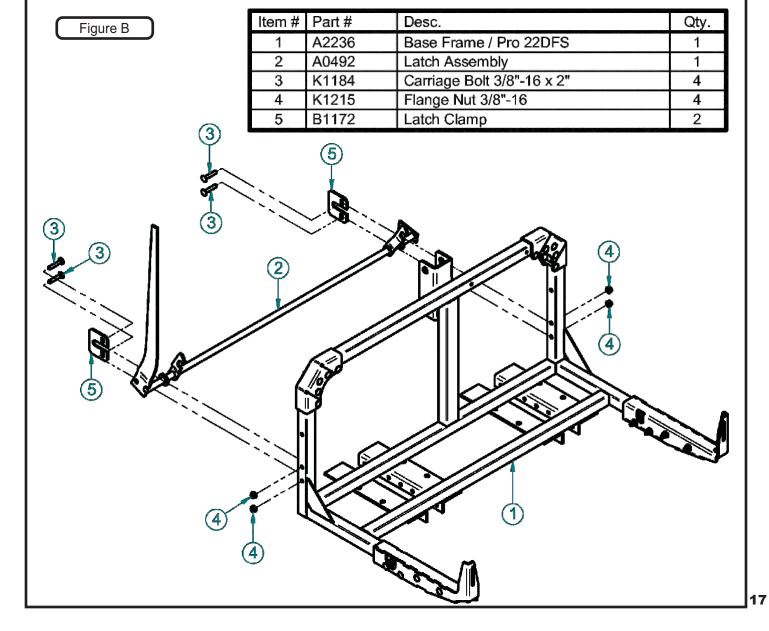
### **Latch Handle Assembly Installation**

Align and set the Latch Hook of the Latch Assembly (Item #2) to the Pivot Pin of the Box Base Frame Assembly. Refer to Figure A.

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



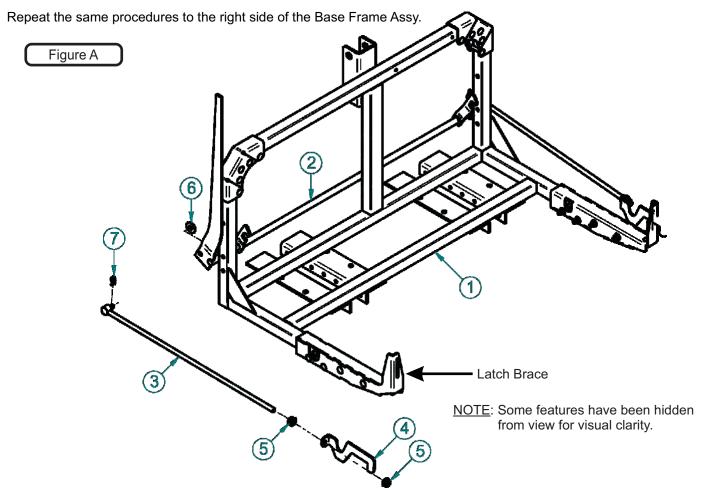
Secure the Latch Assy to the Base Frame (Item #1) by positioning the Latch Assembly between (2) Latch Clamps (Item #5) on the left and right side of the Base Frame. Fasten the Latch Clamp to the Base Frame Assy by using (2) 3/8"-16 x 2" Carriage Bolts (Item #3) and (2) 3/8"-16 Flange Nuts (Item #4) per side. Refer to Figure B.



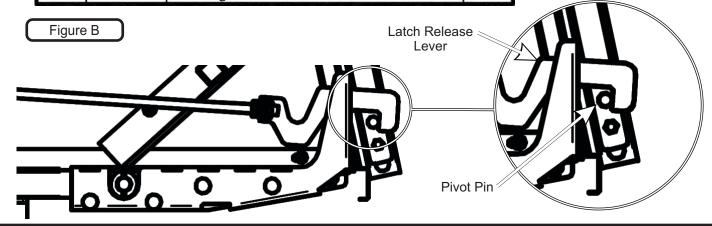
### **Latch Rod Assembly & Installation**

Align and position the Latch Rod Assembly (Item #3) into the Handle of the Latch Assembly (Item #2). Secure the Latch Rod Assy by using (1) Rue Ring Cotter Pin (Item #7) and (1) 1/2" Flat Washer (Item #6).

Next, position the Latch Release Lever through the of the Base Frame Assembly (Item #1) and over the Pivot Pin of the Door Assy. Secure the Latch Release Lever to the Latch Rod Assy by using (2) 1/2"-13 Flange Nuts (Item #5). Refer to Figures A and Figure B below.

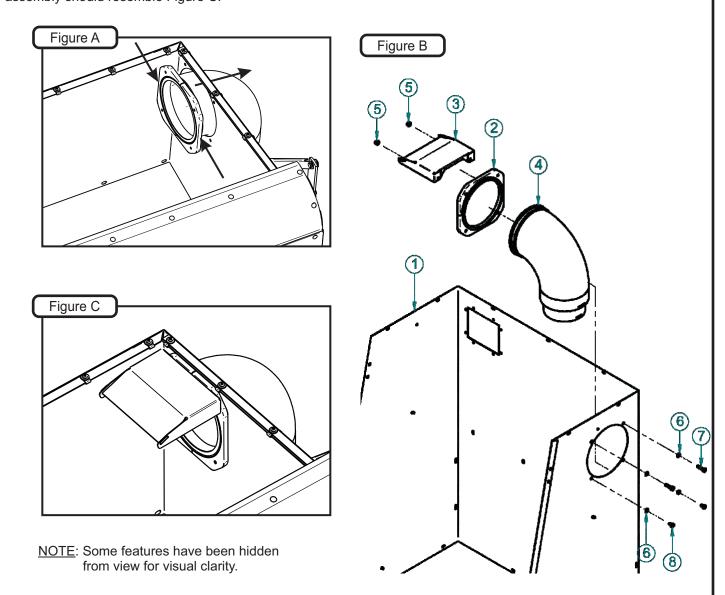


Item #	Part#	Desc.	Qty.
1	A2236	Base Frame / Pro 22DFS	1
2	A0492	Latch Assembly	1
3	A0366	Latch Rod Assembly	1
4	B1418	Latch Release Lever	1
5	K1246	Flange Nut 1/2"-13	1
6	K0055	Flat Washer 1/2" / 1.383 OD x .560 ID x .120 T	1
7	K1437	Rue Ring Cotter Pin	1



### Inlet, Inlet Ring & Debris Deflector Installation

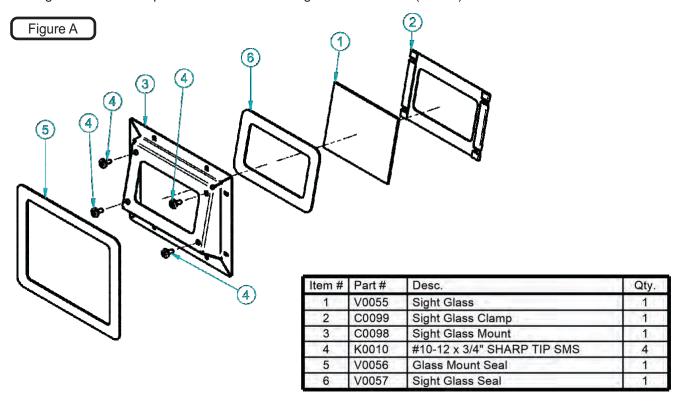
Open box door. From inside box, slide Inlet (Item #4) halfway into inlet hole (See Figure A). Take each half of the Inlet Ring (Item #2) and attach around matching groove in Inlet (Item #4). Slide Inlet (Item #4) & Inlet Ring (Item #2) against inlet hole and align four holes. Fasten Inlet Ring (Item #2) bottom holes using (2) 5/16" IT Tooth Lock Washers (Item #6) & (2) 5/16"-18 x 1/2" HHCS (Item #8) (See Figure B). Fasten Inlet Ring (Item #1) top holes using (2) 5/16" IT Tooth Lock Washers (Item #6) & (2) 5/16"-18 x 1-1/4" HHCS (Item #7). Slide Debris Deflector (Item #3) over inside top bolt threads (Item #7). Fasten Debris Deflector (Item #3) using (2) 5/16"-18 Ny-Flange Lock Nuts (Item #5). Final assembly should resemble Figure C.



Item#	Part#	Desc.	Qty.
1	A0163	Aluminum Box Assembly	1
2	C0074	Inlet Ring	1
3	C0088	Debris Deflector	1
4	V0025	Universal Inlet / 6"& 7"	1
5	K2516	Ny-Flange Lock Nut 5/16"-18	2
6	K0044	I/T Tooth Lock Washer 5/16"	4
7	K1156	5/16"-18x1-1/4" HHCS	2
8	K1152	HHCS 5/16"-18x1/2"	2

### Sight Glass Kit Installation

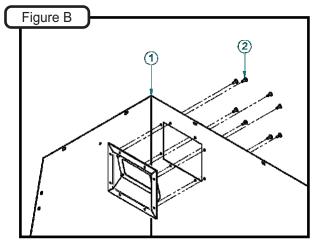
Refer to Figure A for the complete breakdown of the Sight Glass Kit Part#(A2229).



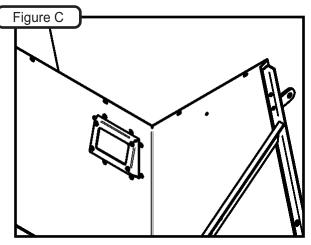
Open the Aluminum Box door. From inside of the Box, slide the assembled Sight Glass Kit into the window in the rear. Align the 8 screw holes of the Sight Glass Kit to those on the Aluminum Box and fasten the Sight Glass Kit to the Aluminum Box by using (8) #10-12 x 3/4" Sheet Metal Screws (Item #2). Refer to Figure B.

Refer to Figure C for the completed installation of the Sight Glass Kit.

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



Viewed from the inside of the box.



Viewed from the left rear side of the box.

Item #	Part #	Desc.	Qty.
1	C1168_01	Box Back & Sides	1
2	K0010	#10-12 x 3/4" SHARP TIP SMS	8

### **Length Of Hose Adjustment**

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

### **Upper Hose Installation**

Slide a Hose Clamp P#(J0070) over one end of the 7" Upper Hose. Secure this end of the 7" Upper Hose to the Blower Outlet. See Figure below for details. Secure opposite end of the 7" 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.

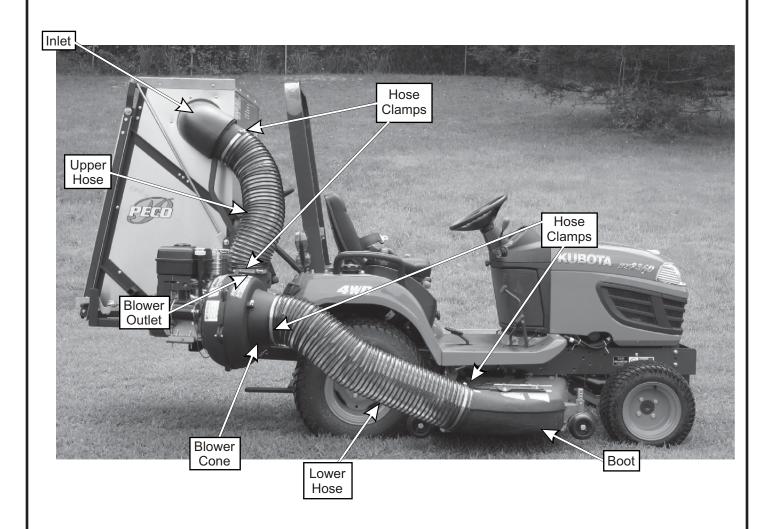
# Lower Hose To Blower Cone Installation

Slide a Hose Clamp P#(J0080) over both ends of the 8" 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.

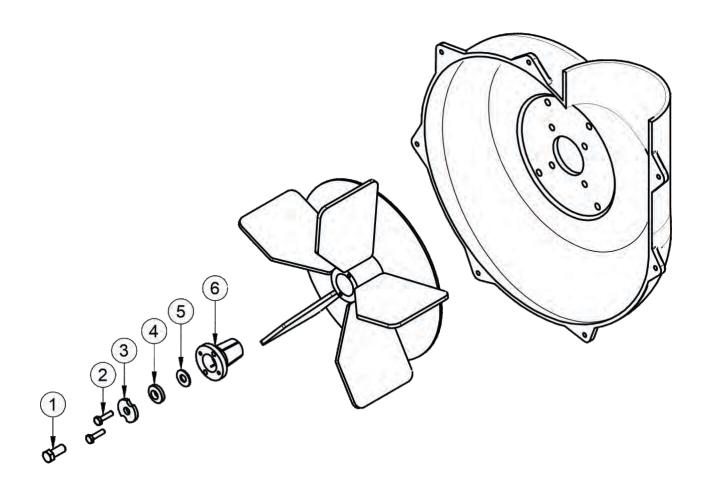
Tip: Before securing Hose Clamp fully, rotate Lower Hose counter-clockwise (away from yourself) approximately 1" to aid in retaining Boot to mower deck.

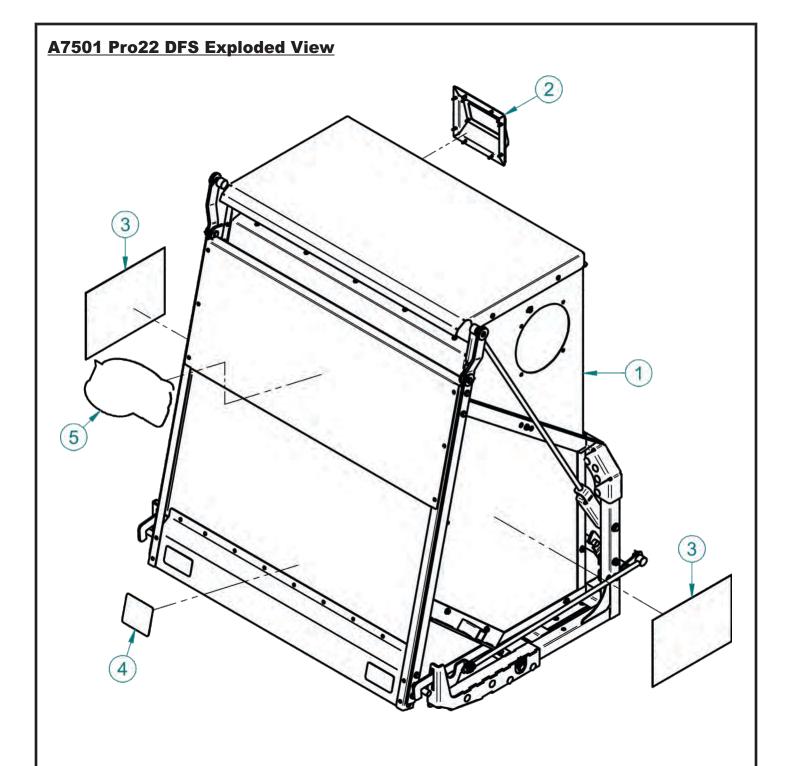


### Impeller Blade Removal/Replacement

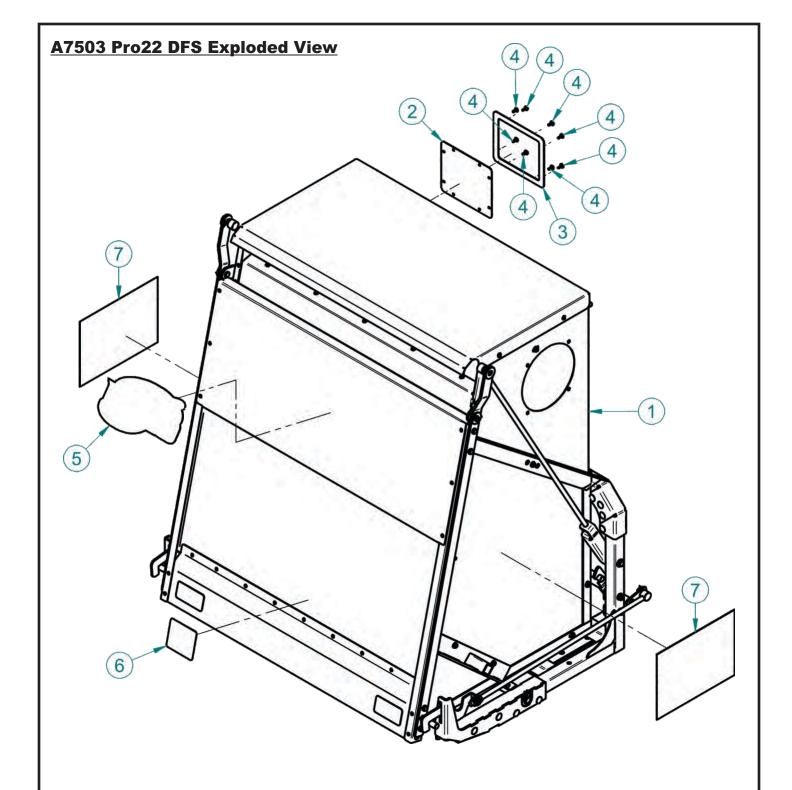
To Remove: First remove the 7/16"-20 x 1" HHCS P#(K1394) (#1), 7/16" Double Indented Washer P#(K0278) (#3), (1) Tapered Washer P#(K0277) (#4) and (1) 3/8" Flat Washer P#(K0047) (#5) from the Taper-Lock Bushing P#(S4302) (#6). Next remove the (2) 1/4"-20 x 1" HHCS (#2) and place them into the threaded 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>: Firstly, apply anti-seize to the 7/16"-20 x 1" HHCS (#1). Next, place the Impeller Blade over the engine shaft. Slide the Taper-Lock Bushing (#6) on to the engine shaft and into the Impeller Blade, aligning the non-threaded holes of the Taper-Lock Bushing to the threaded holes of the Impeller Blade. Fasten by using (2) 1/4"-20 x 1" HHCS (#2), (1) 3/8" Flat Washer (#5), (1) Tapered Washer (#4), (1) 7/16" Double Indented Washer (#3), and (1) 7/16"-20 x 1" HHCS (#1). Torque to the proper specifications 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.

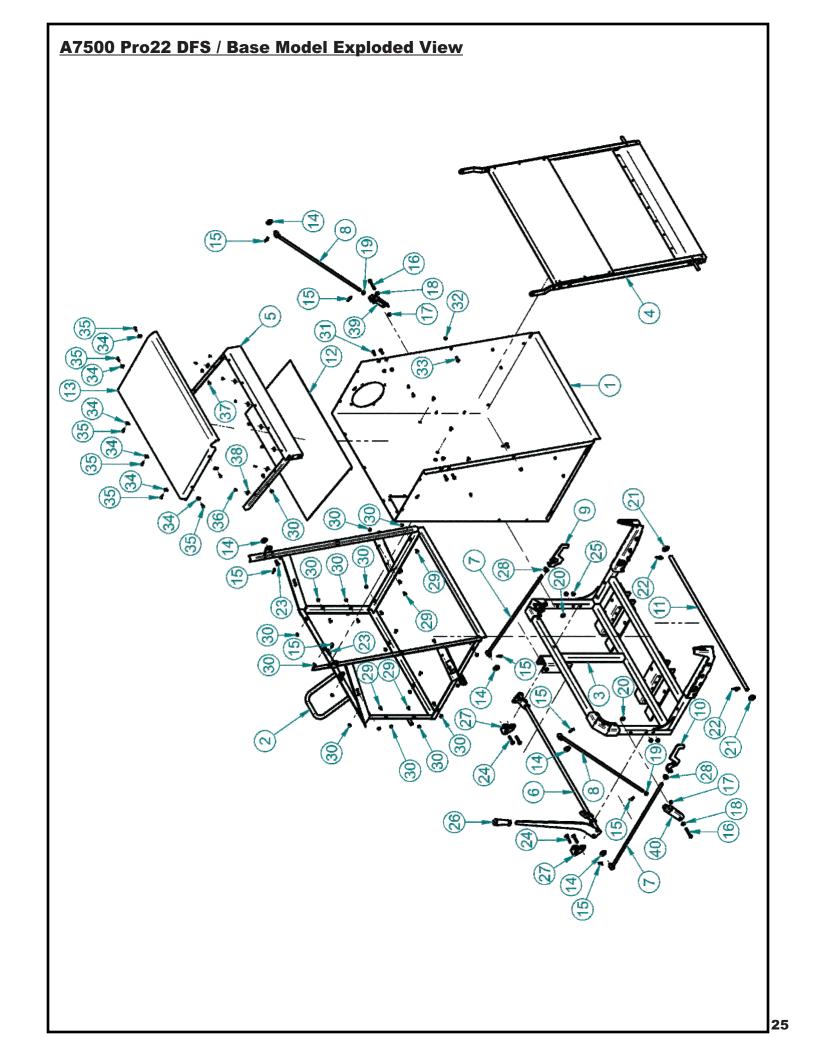




Item #	Part #	Desc.	Qty.
1	A7500	Pro 22DFS / Base Model	111
2	A2229	Sight Glass Kit	1
3	R0033	Decal / Pro22 Logo	2
4	R1053	Decal / Caution	1
5	R2003	Decal / PECO Logo	1

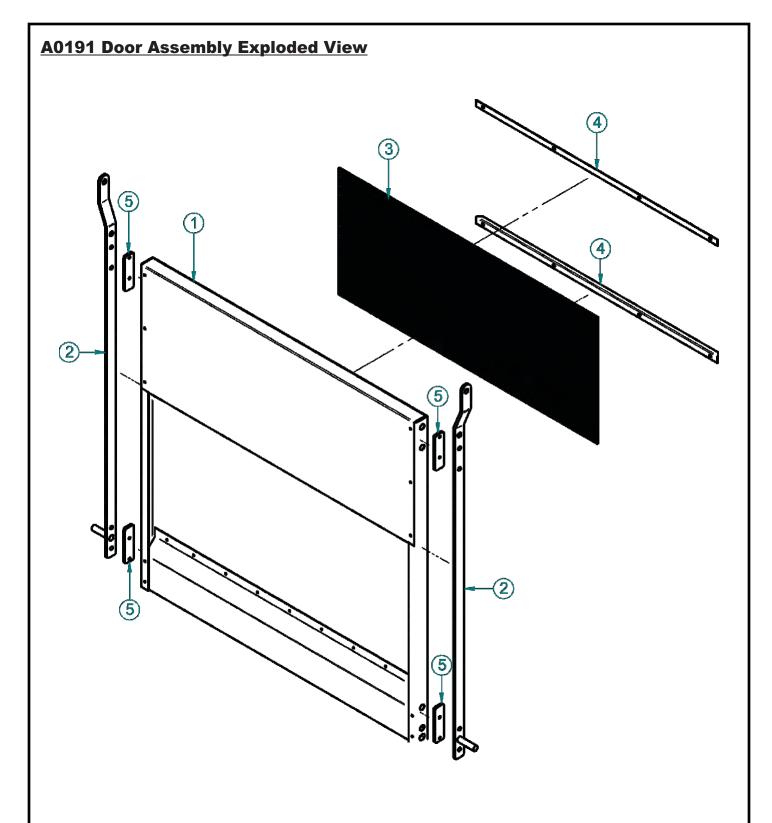


Item#	Part #	Desc.	Qty.
1	A7500	Pro 22DFS / Base Model	1
2	C0101	Pro 22 Shipping Window Cover	1
3	V0056	Glass Mount Seal	1
4	K0010	#10-12 x 3/4" SHARP TIP SMS	8
5	R2003	Decal / PECO Logo	1
6	R1053	Decal / Caution	1
7	R0033	Decal / Pro22 Logo	2

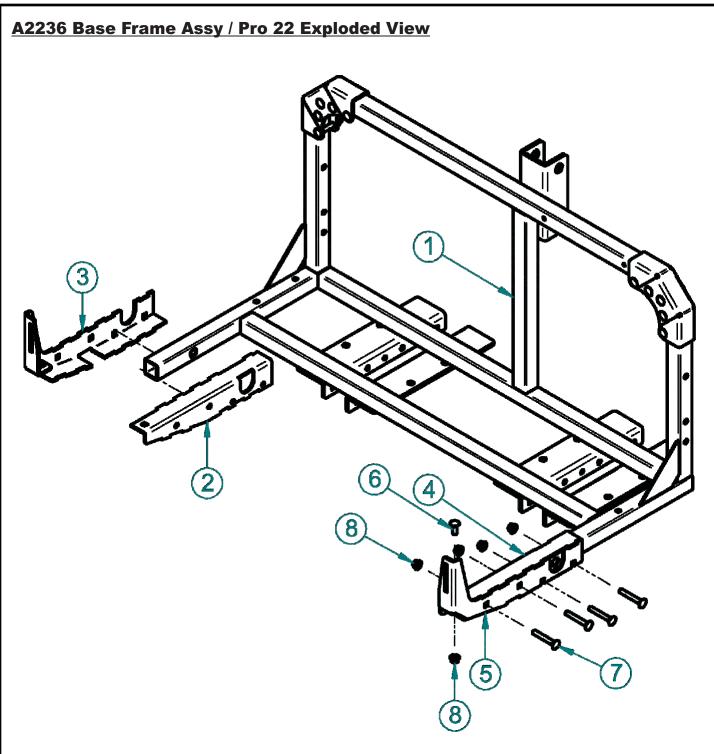


### A7500 Pro22 DFS / Base Model Exploded Parts List

Item #	Part #	Desc.	Qty.
1	A0163_01	Aluminum Box Assembly	1
2	A0135	Box Base Frame	1
3	A2236	Base Frame / Pro 22DFS	1
4	A0191	Door Assembly	1
5	A0953	Screen Frame	1
6	A0492	Latch Assembly	1
7	A0366	Latch Rod Assembly	2
8	A0476	Door Rod Assy.	2
9	B1418	Latch Release Lever	1
10	B1418	Latch Release Lever	1
11	B4274	Pivot Rod	1
12	B8131	Screen	1
13	C1167	Box Top	1
14	K0055	Flat Washer 1/2" / 1.383 OD x .560 ID x .120 T	6
15	K1437	Rue Ring Cotter Pin	8
16	K1197	3/8"-16 X 2 1/2" HHCS	2
17	K1216	Nyloc Nut / 3/8"-16	2
18	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	2
19	K0027	Flat Washer 1/2" / .787 OD x .512 ID x .090 T	2
20	K0047	Flat Washer 3/8" / 1.00 OD x .446 ID x .075 T	2
21	K0061	3/4" FLAT WASHER 1.486 OD x .810 ID x .147 T	2
22	K1404	3/4" Rue Ring	2
23	K1418	Linkage Pin	2
24	K1184	Carriage Bolt 3/8"-16 x 2"	4
25	K1215	Flange Nut 3/8"-16	4
26	J0522	HANDLE GRIP, ROUND BLACK .800 ID	1
27	B1172	Latch Clamp	2
28	K1246	Flange Nut 1/2"-13	4
29	K1010	1/4"-20 x 5/8" Carriage Bolt	20
30	K1126	Flange Nut 1/4"-20	22
31	K1154	HHCS 5/16"-18 x 1"	4
32	K2516	Ny-Flange Lock Nut 5/16"-18	6
33	K1144	5/16"-18 x 1" Carriage Bolt	2
34	K0028	Tinnerman Clip / Small	7
35	K1092	#10-12 x 3/4" Blunt Tip SMS	7
36	K1096	#10-12 x 1/2" Tinnerman Screw	9
37	K1005	1/4"-20 x 1/2" Carriage Bolt	2
38	K0029	#10-12 Flat Tinnerman Nut 3/4" x 1/2"	9
39	B1910	Linkage Bracket Left	1
40	B1931	Linkage Bracket Right	1
41	R1057	Decal / 2" x 4" Red Reflector	2
42	R1069	Decal / Warning - Turn Off Blower	1
43	R1054	Decal / Important Check Hoses	1
44	R1051	Decal / Warning - Use Hearing Protection	1
45	R0022	Decal / Built In The USA / Lg	1



ltem#	Part#	Desc.	Qty.
1	A0269	Door Subassembly	1
2	A0473	Door Hinge Support	2
3	B8121	Door Mesh Screen	1
4	C2104	Door Screen Reinforcement	2
5	B2173	Hinge Brace Plate	4

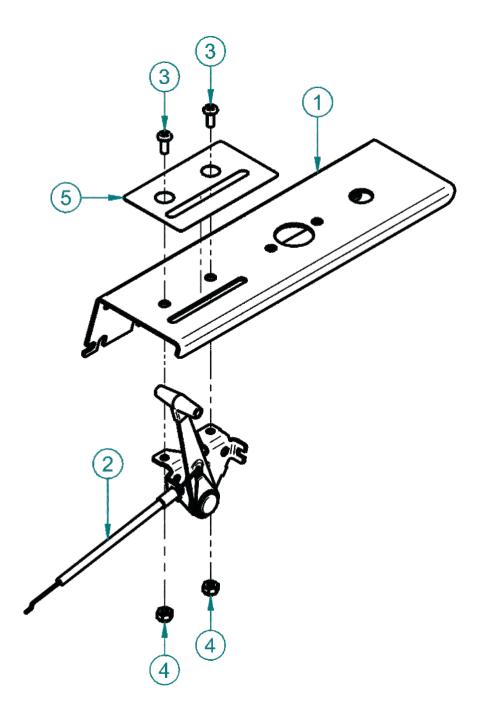


Item#	Part#	Desc.	Qty.
1	A2234	Base Frame Assy / 3-Pt Hitch	1
2	B1908L	Latch Brace / Top / Left	1
3	B1909L	Latch Brace / Bottom / Left	1
4		Latch Brace / Top / Right	1
5	B1909R	Latch Brace / Bottom / Right	1
6	K1182	Carriage Bolt 3/8"-16x1"	2
7	K1186	3/8"-16 x 2-1/2" Carriage Bolt	8
8	K2038	Ny-Flange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

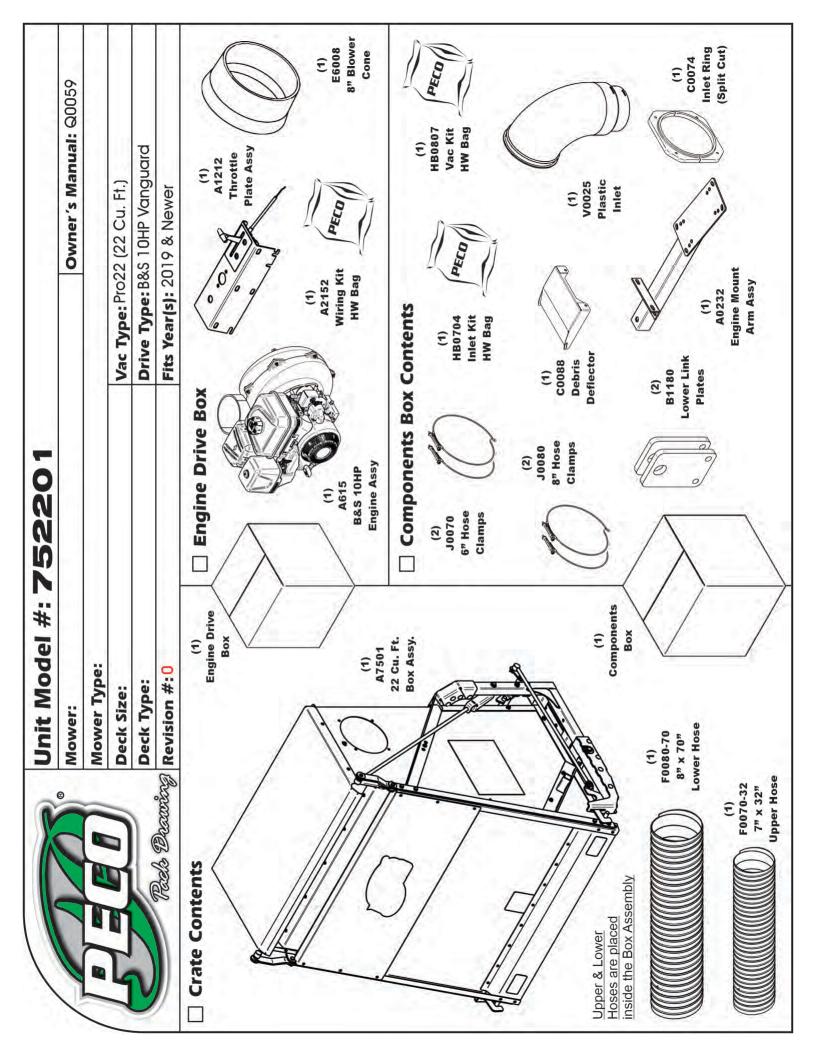
# **A2234 Base Frame Assy / 3-Pt Hitch Exploded View**

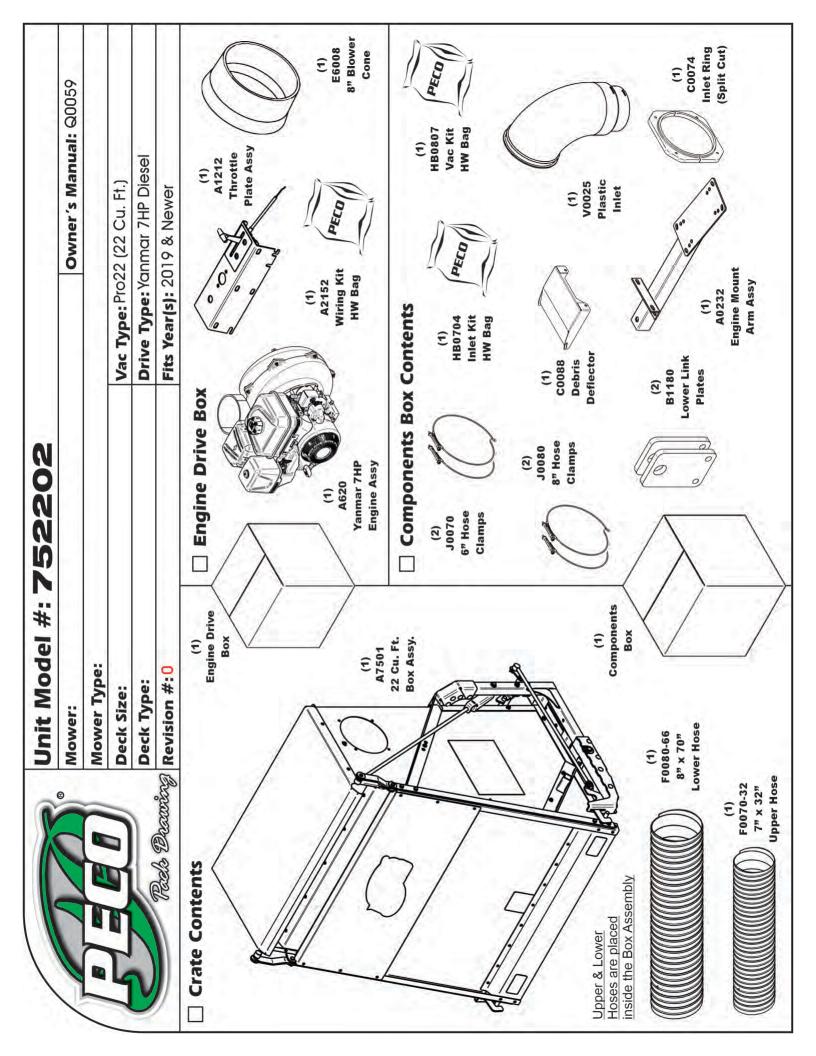
Item#	Part#	Desc.	Qty.
1	A0090_01	Base Frame / Weldment	1
2	B1901	Upright Clamp / Base Frame	2
3	K1186	3/8"-16x2-1/2" Carriage Bolt	10
4	K2038	Ny-Flange Lock Nut 3/8"-16	10

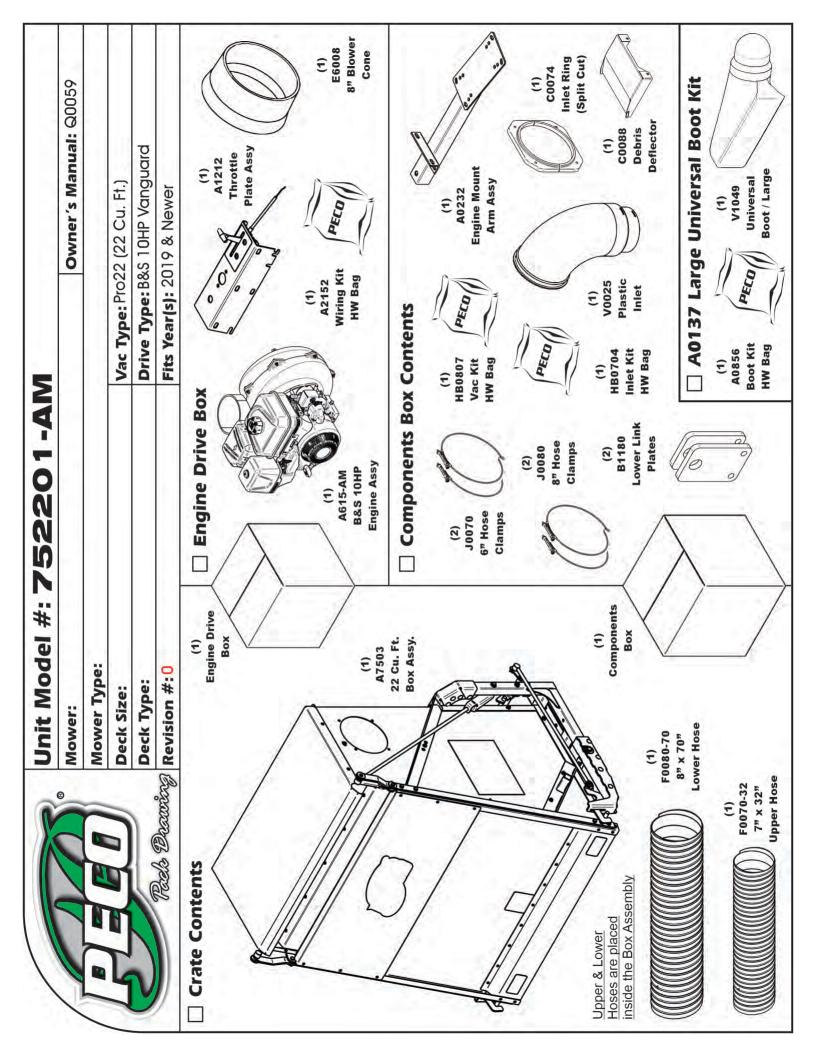
### **A1212 Throttle Plate Assembly Exploded View**



Item #	Part #	Desc.	Qty.
1	B1400	Universal Switch Plate	1
2	J0269	70" THROTTLE CABLE	1
3	K1064	10-24 x 1/2" Phillips PHMS	2
4	K1068	10-24 Nyloc Nut	2
5	R4066	Decal / Throttle Plate	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



DANGER NEVER USE HANDS
TO CLEAR DEBRIS WITH BLOWER
RUNNING!
PELIGRO NUNCA USE MANOS

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

Part #: R2007 Danger - Never Use Hands





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.

50031305

Part #: R1054 Important - Hose Wear





Part #: R1057 - (2) Red Reflectors



- TURN OFF BLOWER AND MOWER ENGINE BEFORE DISMOUNTING OR REMOVING AND CLEANING SCREENS, HOSES, CONE OR DISCHARGE CHUTES.
- TURN OFF BLOWER BEFORE DUMPING DEBRIS.
- KEEP HANDS AND BODY CLEAR OF MOVING PARTS WHEN DUMPING CONTAINER.
- \*USE CAUTION IN TURNING AND BACKING MOWER.

Part #: R1069 Warning - Turn Off Blower



Part # R0024 Danger - Keep Hands Clear



Part #: R1051 Warning - Hearing Protection



Part # R0025 Danger - Rotating Blades

# SECTION III OPERATING INSTRUCTIONS

### **General Safety**

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

### **Operation And Tips On Mowing**

- A. Perform BEFORE EACH USE the maintenance list referenced in Section IV.
- B. Start the engine/blower/blade assembly.
- C. Start mower.
- D. With the mower at high idle speed, engage the mower deck.
- E. While seated in the operator's seat, adjust the Throttle speed. With the engine blower assembly engaged and throttle speed adjusted you can proceed to operate the control levers of the mower.

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

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

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

### **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. Engage the parking brake.
- E. Once the parking brake has been engaged, reach back and release the collection unit's latch handle.
- F. Pivot the collection unit back using the dump handle to dump the clippings.
- G. Pull the dump handle back up to place the collection unit back to its original position and re-latch the latch handle to secure the collection unit.

**NOTE:** Do not allow the collection unit to become overfilled 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.
- 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 damages. 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:

- 1. 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 and should therefore be frequently checked for necessary replacement. Any replacement parts should be checked to ensure compliance with the original manufacturer's recommendations or specifications.

### **SECTION V - PARTS & SERVICE**

### **Parts And Service Information**

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

### **DOCUMENT THE FOLLOWING INFORMATION FOR FUTURE REFERENCE**

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

New PECO, Inc. 10 Walden Dr | Arden, North Carolina 28704 Phone: 1-800-438-5823 | 828-684-1234

Fax: 828-684-0858
Email: peco@lawnvac.com
Website: www.lawnvac.com

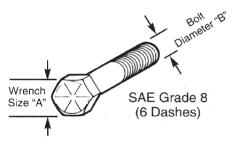
### **TORQUE SPECIFICATIONS**

### **AMERICAN**

**Bolt Head Markings** 

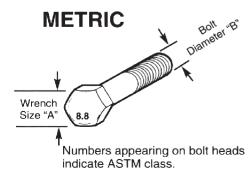






Proper toque for American fasteners used on Peco equipment. Recommended Torque in Foot Pounds (Newton Meters).\*

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 ŲNC	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)



\*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.

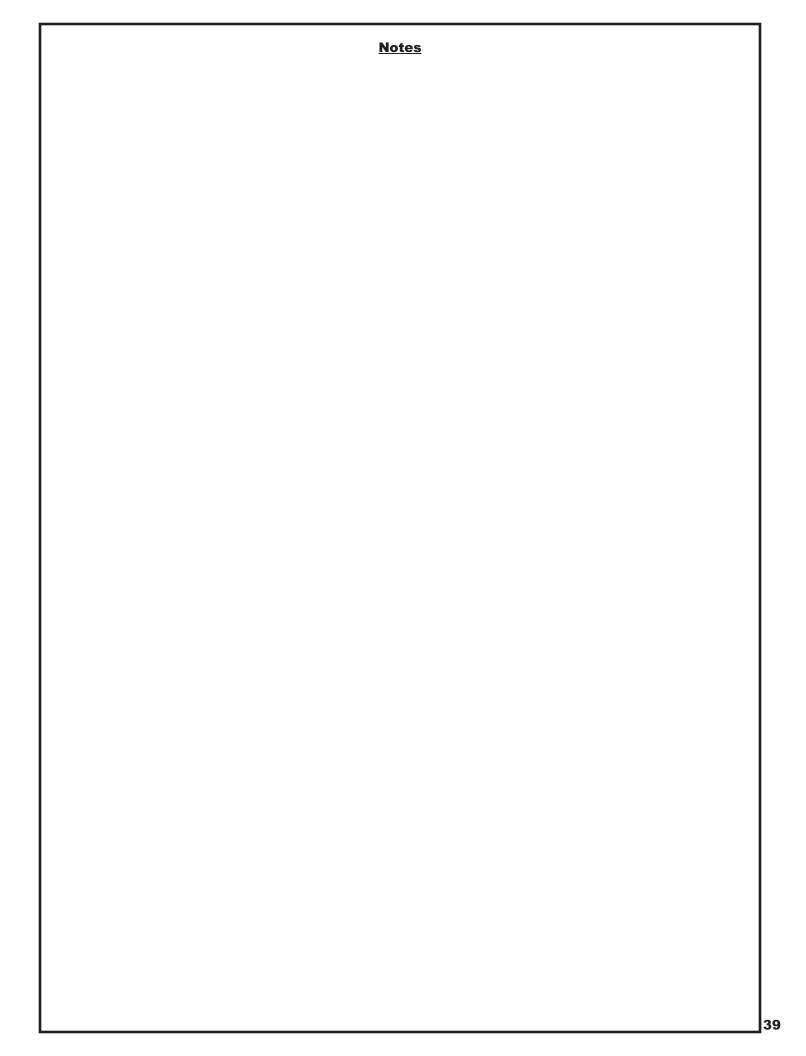
Recommended torque in foot pounds (newton Meters).\*

		<u>'</u>			
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 **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	Clean the collection system			
	<ul><li>system</li><li>Ground speed is too fast</li></ul>	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			





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