

ENGINE DRIVEN - DEBRIS COLLECTION SYSTEM Model# TL-14

Truck Loader

TL-14 Briggs & Stratton 14HP Vanguard

OPERATOR'S MANUAL

ASSEMBLY • OPERATION • MAINTENANCE

MANUAL PART#: Q0504

Rev 2.1 - Nov 2021

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SAFETY

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

SAFETY

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

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

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

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

Safety Alert Symbol



This Safety Alert Symbol means: **"ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!"** This symbol is used to call attention to safety precautions that Should be followed by the operator to avoid accidents. When you see this symbol, carefully read the message that follows and heed its advice. Failure to comply with safety precautions could result in death or serious bodily injury.

Safety Signs

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



White letters on RED

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



Black letters on **ORANGE**



Black letters on YELLOW

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

This signal word indicates a potentially hazardous situation which, if not

It may also be used to alert against unsafe practices.

avoided, will result in minor or moderate injury.

It may also be used to alert against unsafe practices.

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PECO LIMITED WARRANTY FOR NEW PRODUCTS

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

A. ITEMS COVERED UNDER WARRANTY

- 1. PRODUCT WARRANTY Any part or parts which are deemed defective in material or workmanship, as delivered to the original purchaser, will either be repaired or replaced, as New PECO, Inc. elects, without charge for parts or labor, if the defect appears within 12 months from the date of purchase of the product to the Original Purchaser.
- 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 <u>Sales@lawnvac.com</u>.

Section I - INTRODUCTION AND DESCRIPTION

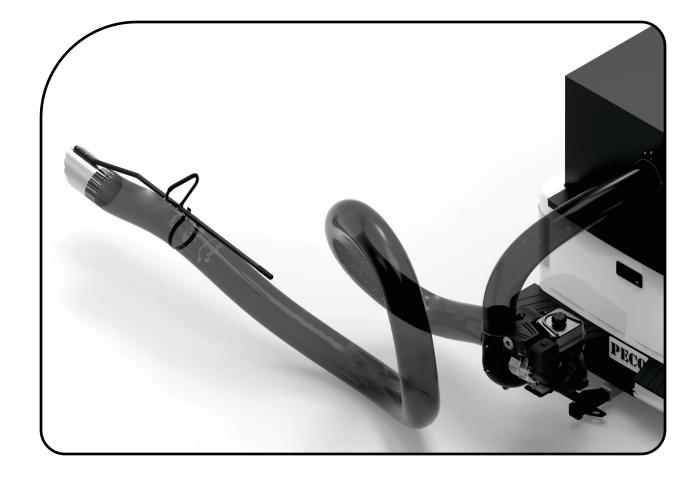
Introduction

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 common debris you may find on your lawn. The manuals are provided to give you the necessary instructions to properly mount, operate and maintain the collection system. 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 debris collection system is designed for picking up leaves in pre-season and post-season clean-up. The blower draws debris from the nozzle of the collection system back to your container. The engine/blower/blade assembly is mounted on to the rear end of the truck. The operator can engage the engine/blower/blade assembly by starting the engine.

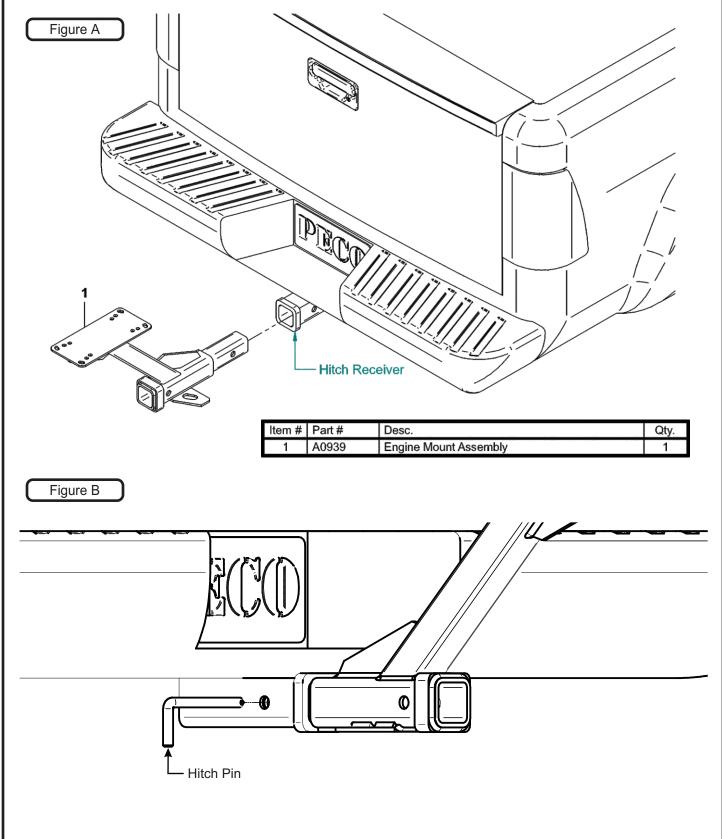


Engine Mount Assembly Installation

To install the Engine Mount Assembly (Item #1). Insert the hitch of the Engine Mount Assembly into the hitch receiver of your truck. Refer to Figure A.

Secure the Engine Mount Assembly by aligning the mounting holes of the Engine Mount Assembly to those of the hitch receiver. Use (1) hitch and (1) hitch pin that fits your truck to secure the Engine Mount Assembly. Refer to Figure B.

Note: Hitch and Hitch Pin is not included.

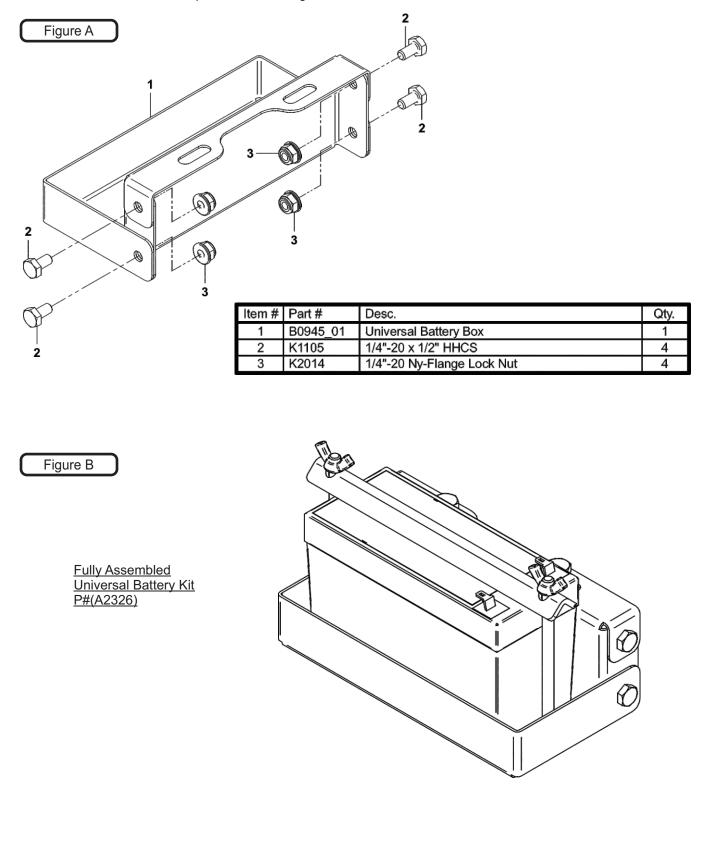


Universal Battery Kit Installation

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

First, make sure your bolt holes on each tab are aligned with the holes on the base body. Then secure the tabs to the body by using (4) 1/4"-20 x 1/2" HHCS (Item #2) and (4) 1/4"-20 Ny-Flange Lock Nuts (Item #3) on each tab. 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.

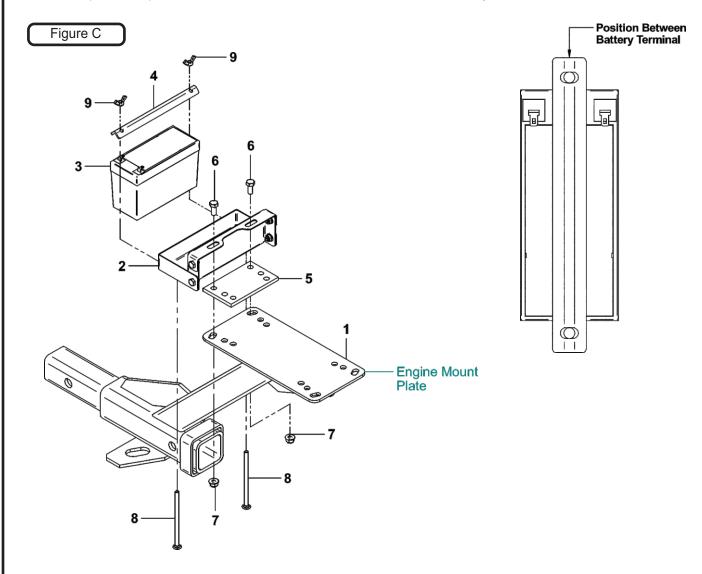


Universal Battery Kit Installation (Cont.)

Position the Battery Box (Item #2) over the Rubber Shock Absorber (Item #5) and over the Engine Mount Plate of the Engine Mount 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.

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



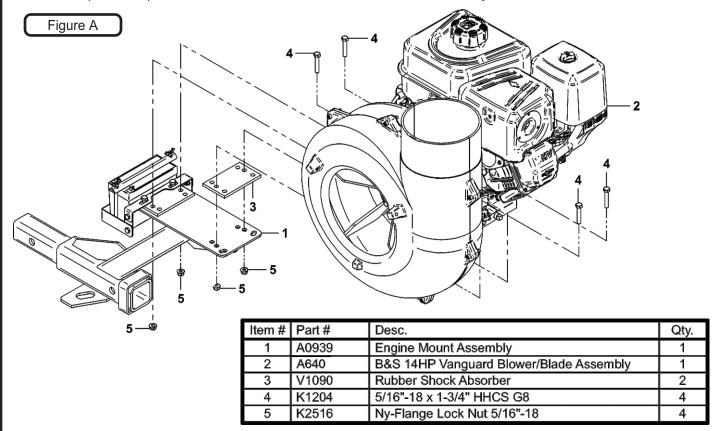
Item #	Part #	Desc.	Qty.
1	A0939	Engine Mount Assembly	1
2	B0945_01	Universal Battery Box	1
3	J1201	Power Sprayer Battery	1
4	C0118	Battery Clamp / Universal	1
5	V1090	RUBBER SHOCK ABSORBER	1
6	K1153	HHCS 5/16"-18 x 3/4"	2
7	K2516	Ny-Flange Lock Nut 5/16"-18	2
8	K1499	Carriage Bolt / 1/4"-20 x 4-1/2" All Thd.	2
9	K1129	1/4"-20 Wing Nut	2

Engine/Blower/Blade Assembly Installation

To install the Engine/Blower/Blade Assembly (Item #2) first, place another Rubber Shock Absorber (Item #3) on top of the Engine Mount Assembly (Item #1) aligning the bolt holes of the Shock Absorbers to those of the Engine Mount Assembly. See Figure A. Next, place the Engine Blower Blade Assembly (Item #2) on top of the Rubber Shock Absorbers on the Engine Mount Arm.

Finally, secure the Engine Blower Blade Assembly by using (4) 5/16"-18 x 1-3/4" HHCS (Item #4) and (4) 5/16"-18 Ny-Flange Lock Nuts (Item #5). Refer to Figure A.

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

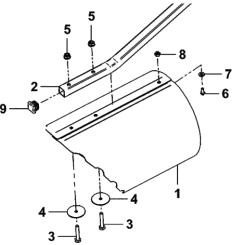


Nose Cone Installation

Secure the Rear End of the 8" Nose Cone (Item #1) by fastening the Top and Bottom of the Nose Cone using (1) 10-24 x 1/2" Phillips Screw (Item #7), (1) Flat Washer (Item #6) and (1) 10-24 Nyloc Nut (Item #8).

Next, align the bolt holes of the Lower Handle (Item #2) to those on Top of the Nose Cone (Item #1). Secure the Lower Handle by using (2) 1/4"-20 x 1-1/2" HHCS (Item #3), (2) Fender Washers (Item #4), and (2) 1/4" Ny-Flange Lock Nuts (Item #5). Insert the Square End Cap (Item #6) at the end of the Lower Handle to prevent debris from entering the Lower Handle. Refer to Figure A.

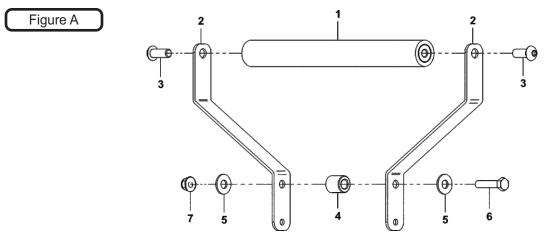
Figure E	3		
Item #	Part #	Desc.	Qty.
1	B2136	Nose Cone / 8"	1
2	B0762	Lower Handle	1
3	K1135	1/4"-20 X 1-1/2" HHCS	2
4	K0062	Fender Washer	2
5	K2014	1/4"-20 Ny-Flange Lock Nut	2
6	K1064	10-24 x 1/2" Phillips PHMS	1
7	K1467	Flat Washer M6 x 12mm OD	1
8	K1068	10-24 Nyloc Nut	1
9	V1170	Square End Cap	1



Handle Grip Assembly Installation

First, secure the Handle w/ Grip Assembly (Item #1) to the (2) Wand Handles (Item #2) relatively loose by using (2) 3/8"-16 x 1" Hex Drive Cap Screw (Item #3). Then install the Spacer Bushing (Item #4) between the (2) Wand Handles by using (2) 5/16" Flat Washers (Item #5), (1) 5/16"-18 x 1-1/2" HHCS (Item #6) and (1) 5/16"-18 Ny-Flange Lock Nuts (Item #7).

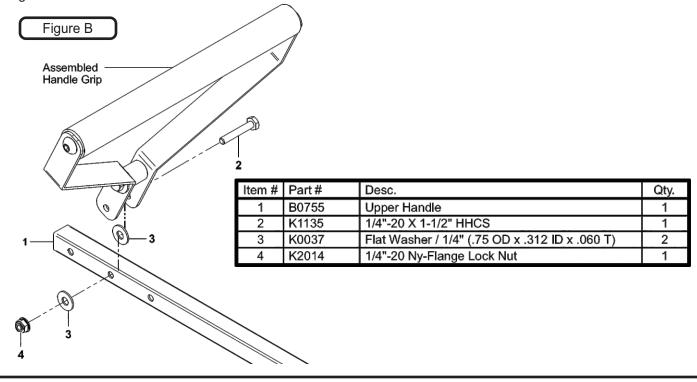
Leave all hardware relatively loose until after the Installation of the assembled Handle Grip.



Item #	Part #	Desc.	Qty.
1	A2337	Handle w/ Grip Assembly	1
2	B2098	Wand Handle	2
3	K1520	3/8"-16 x 1" Hex Drive Socket Cap Screw / Zinc	2
4	S3242	Spacer Bushing / .750 ID x .380 ID x .830 L	1
5	K0042	Flat Washer 5/16" / .875 OD x .380 ID x .075 T	2
6	K1157	5/16"-18 x 1-1/2" All Thread HHCS	1
7	K2516	Ny-Flange Lock Nut 5/16"-18	1

Secure the assembled Handle w/ Grip to the Upper Handle (Item #1) using (1) 1/4"-20 x 1-1/2" HHCS (Item #2), (2) 1/4" Flat Washers (Item #3) and (1) 1/4"-20 Nylon Flange Locknut (Item #4) as show in Figure B. Be sure to place the washers inside between the assembled Handle w/ Grip and the Upper Handle. The Handle Assembly can be fastened to any of the holes provided depending on the user's comfort.

Tighten all hardware at this time.



Upper & Lower Handle Assembly

Connect the Lower Handle (Item #2) to the Upper Handle (Item #3) by using (1) Handle Connector (Item #1). Secure the components by using (2) 1/4"-20 x 1-1/4" HHCS (Item #4) and (2) 1/4"-20 Nyloc Nuts (Item #5). See Figure A.

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

ure A		
Part #	Desc.	Qty.
B0763	Handle Connector	1
B0762	Lower Handle	1
B0755	Upper Handle	1
K1130	1/4"-20 X 1-1/4" HHCS GR8	2
K2014	1/4"-20 Ny-Flange Lock Nut	2
	Part # B0763 B0762 B0755 K1130	Part #Desc.B0763Handle ConnectorB0762Lower HandleB0755Upper HandleK11301/4"-20 X 1-1/4" HHCS GR8

Lower Hose & Hose Strap Assembly Installation

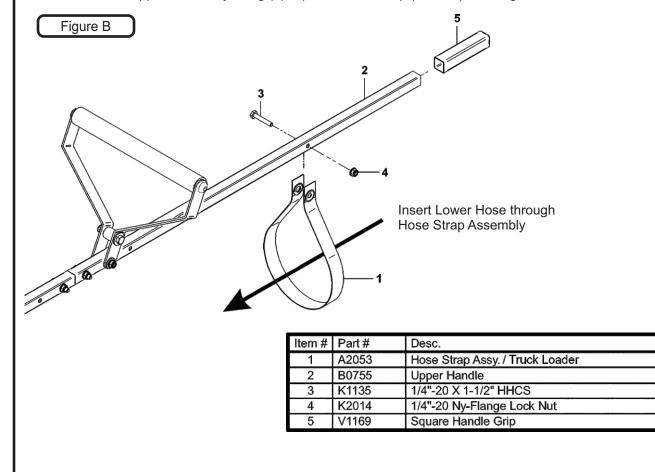
Secure Lower Hose P#(F0089) to Upper Handle (Item #1) using (1) Hose Strap Assembly (Item #1), (1) 1/4"-20 x 1-1/2" HHCS (Item #3), and (1) 1/4"-20 Nylon Flange Locknut (Item #4). Hose should hang freely without kinks. Close off the end of the Upper Handle by using (1) Square Handle Grip (Item #5). See Figure B.

5/2

3

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Qty.

1

1

1

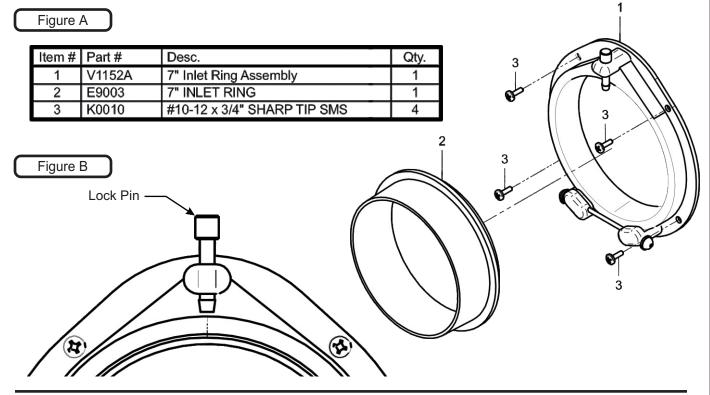
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Inlet Ring Assembly Installation

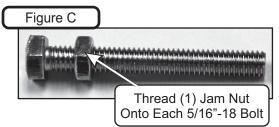
To Install the Inlet Ring Assembly (Item #1), first make sure a 7" hole has been cutout on the panel of your collection box. Align the Inlet Ring Assembly to the box and secure the Inlet Ring Assembly using (4) #10-12 x 3/4" Sheet Metal Screws (Item #3). Refer to Figure A.

Next, Adjust the Lock Pin of the Inlet Ring Assembly to insert the 7" Inlet Ring (Item #2) (Figure A) and secure the Inlet Ring to the Assembly by readjusting the Lock Pin. Refer to Figure B.

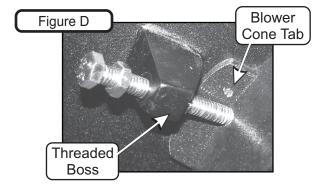


Blower Cone Installation

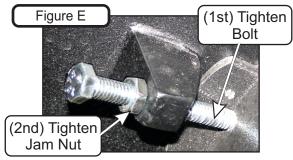
Thread (1) 5/16"-18 Jam Nut P#(K0120) onto each end of (2) 5/16"-18 x 2-1/2" HHCS P#(K0125) as shown in Figure B.



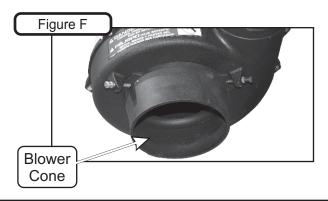
Now partially thread (1) bolt into each of the two threaded bosses located on the Blower Housing. Place 8" Blower Cone P#(E6009) so the two tabs line up with the bolts and tighten completely as shown in Figure C.



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



Refer to Figure E for proper Blower Cone installation reference.



Length Of Hose Adjustment

The hoses in the following steps must be cut to fit your system. Do not cut the hoses until you have tried to fit them on to your system. 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

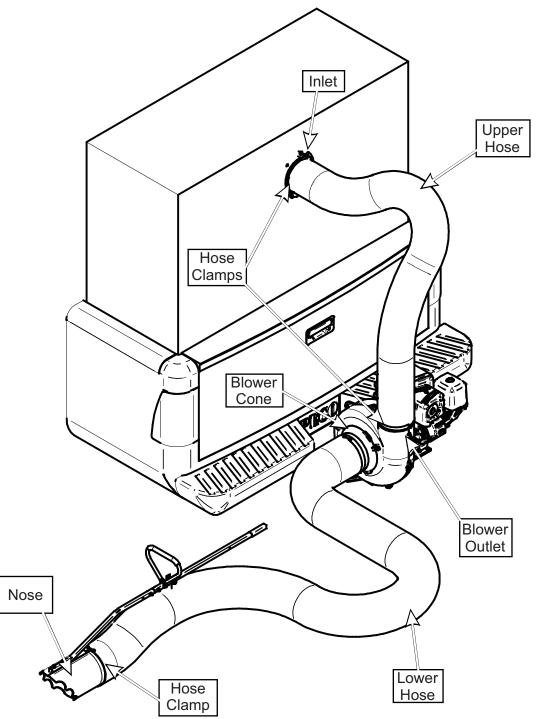
Slide a Hose Clamp P#(J0070) over one end of the 7" Upper Hose. Secure this end of the 7" Upper Hose to the Blower Outlet. See Figure below for details. Secure opposite end of the 7" Upper Hose to the Inlet. Make sure both ends are securely fastened by tightening the Hose Clamp.

Lower Hose To Blower Cone Installation

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

Lower Hose To Wand Installation

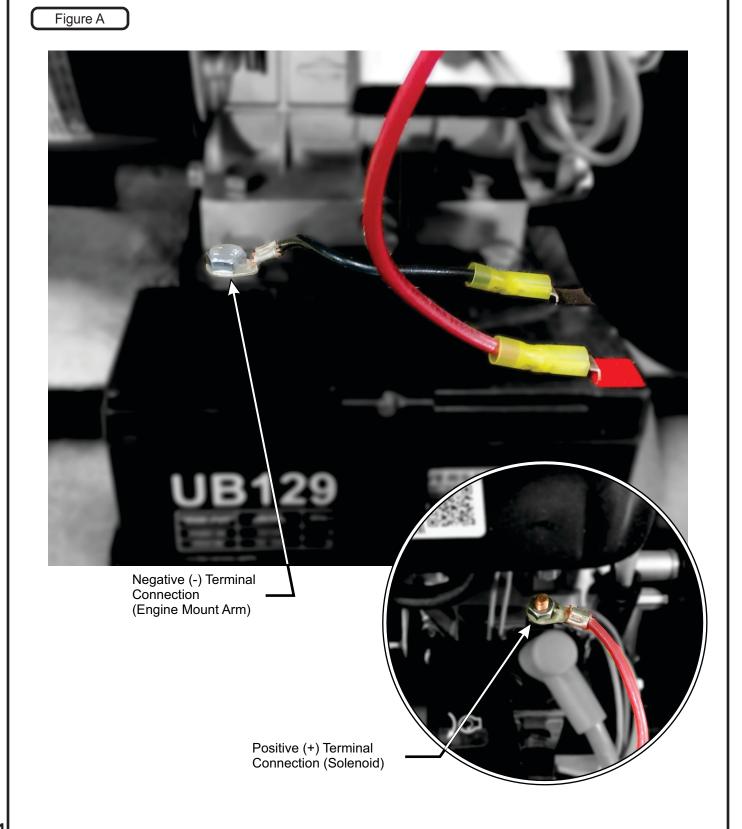
Take the unattached end of the Lower Hose and secure it to the end of the Nose Cone and fasten by tightening the Hose Clamp.

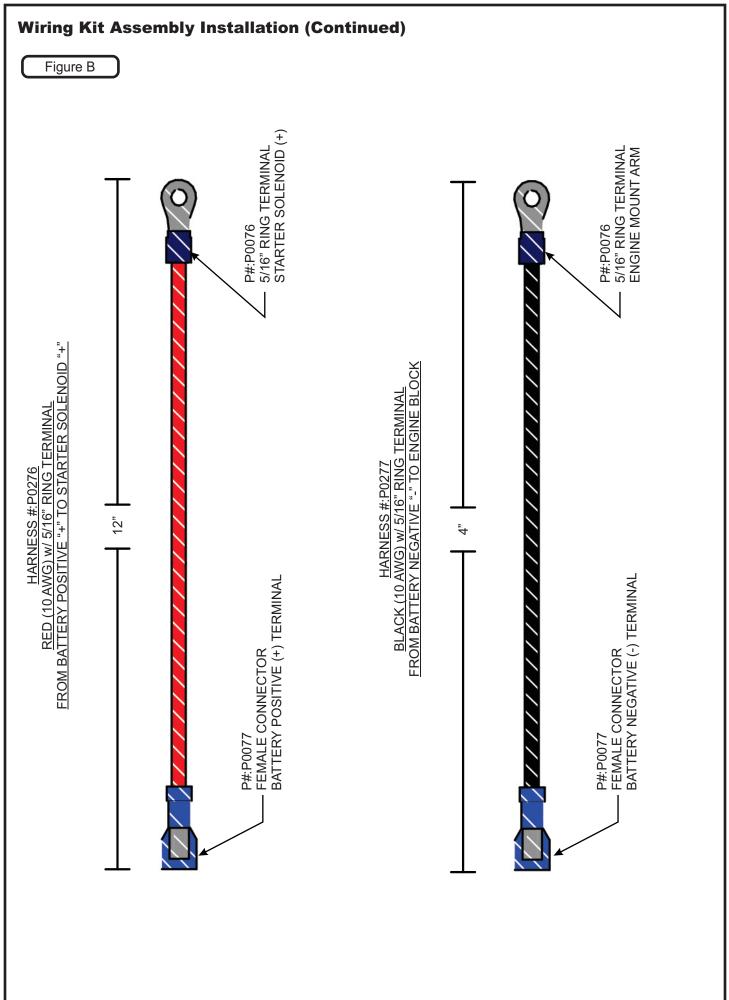


Wiring Harness Installation

To connect the Wiring Harness, connect the (P#:P0276) 10 gage Red Wire to the positive (+) terminal of the starter solenoid located on the front end of the engine. Route the Red Wire from the solenoid to the positive (+) terminal of the battery. Refer to Figure A.

Connect the (P#:P0277) 10 gage Black Wire 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. Route the black wire from the bolt hole to the negative (-) terminal of the battery. Refer to Figure A.



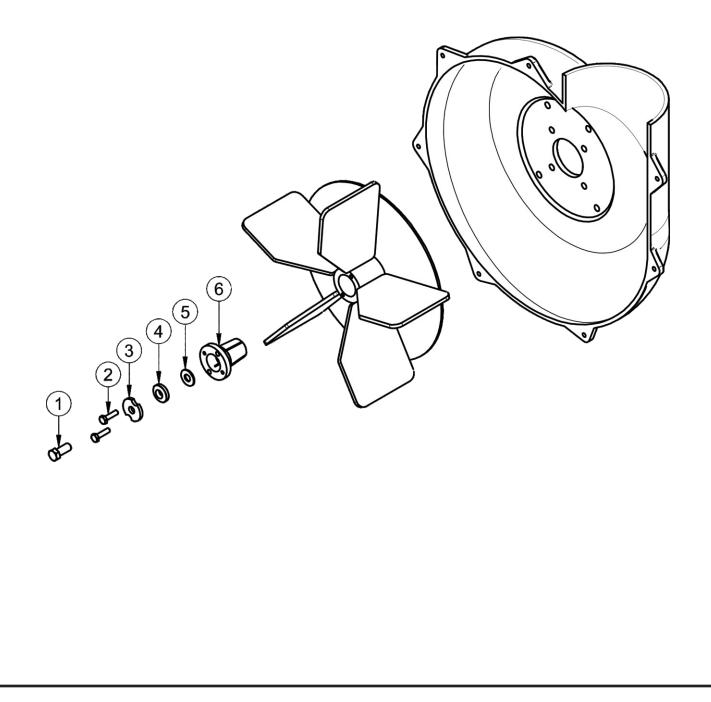


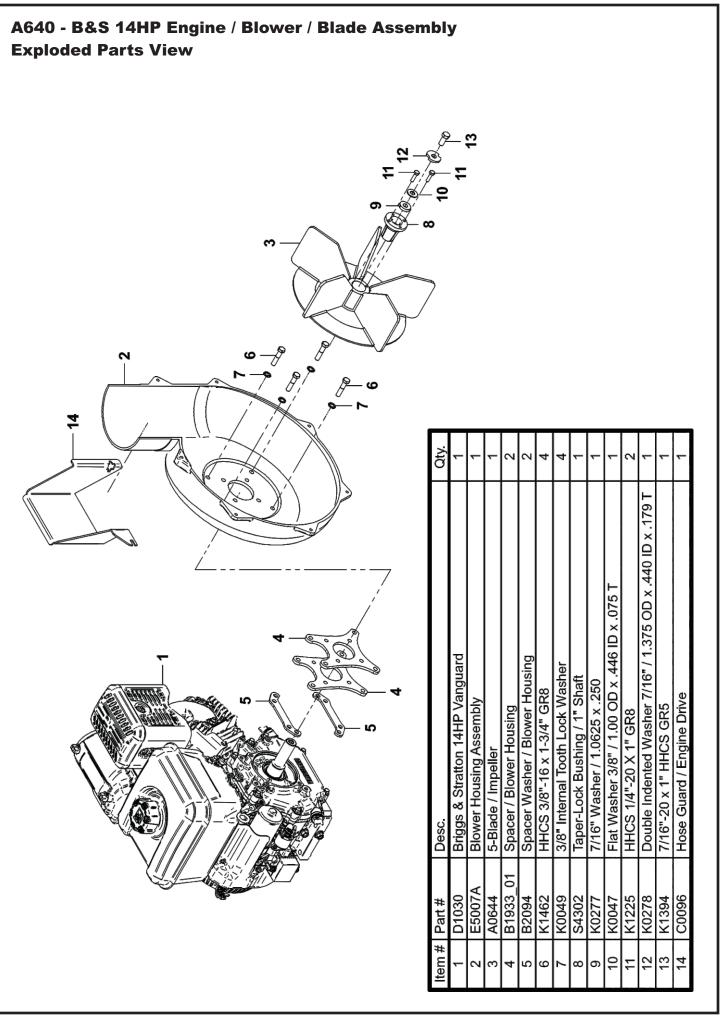
Impeller Blade Removal/Replacement

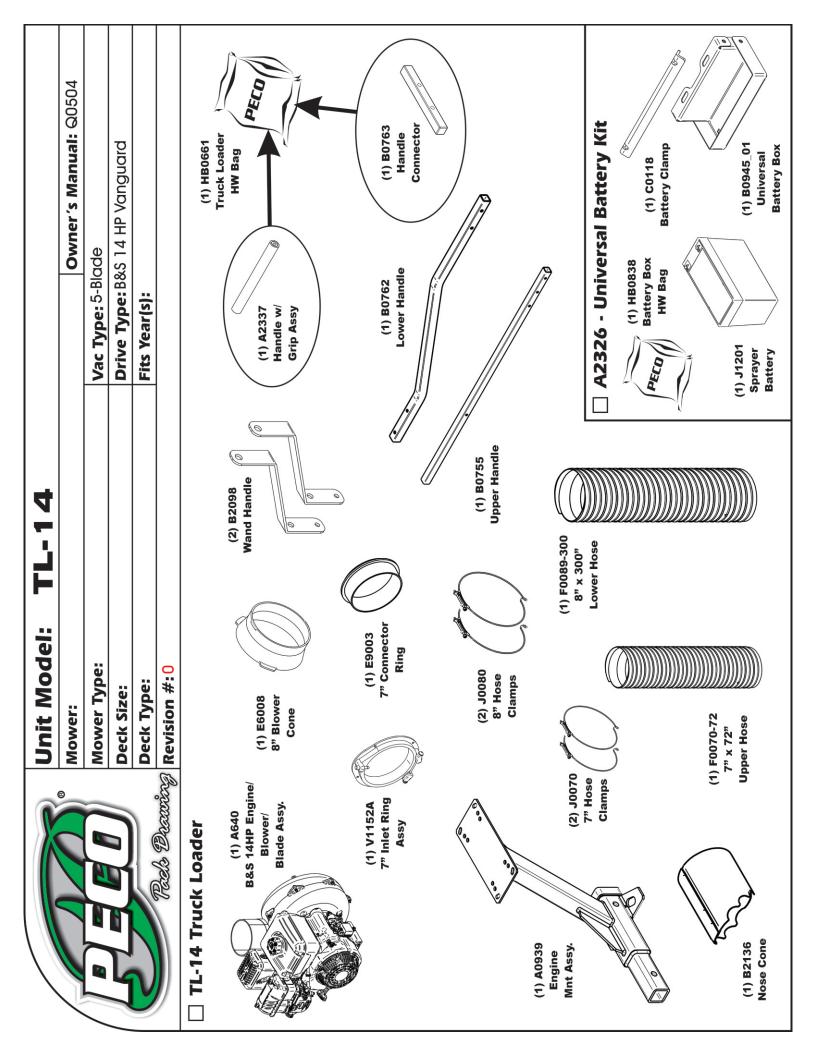
To Remove: First remove the 7/16"-20 x 1" HHCS **(#1)**, 7/16" Double Indented Washer P#(K0278) **(#3)**, (1) Tapered Washer P#(K0277) **(#4)** and (1) 3/8" Flat Washer P#(K0047) **(#5)** from the Taper-Lock Bushing P#(S4302) **(#6)**. Next remove the (2) 1/4"-20 x 1" HHCS **(#2)** and place them into 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.

To Replace: Place 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. Next, rotate the Impeller Blade to ensure that the blade is clear of contact on all sides of the blower housing.

NOTE: Some parts and part features have been hidden from view for visual clarity. The figure below depicts a general assembly and disassembly of a 5-Blade Impeller, please refer to Pages <u>17</u> or <u>18</u> for the specific hardware associated with your Engine Drive.







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 #: R2007 Danger - Never Use Hands





Part #: R2008 Danger - Rotating Blades



Rotating blades! Stop engine before removing or cleaning this chute. Keep hands and feet clear!

Part #: R4008 Caution - Rotating Blades



Part #: R0022 Designed & Built In The USA

SECTION III OPERATING INSTRUCTIONS

General Safety

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

Operation And Tips

Perform BEFORE EACH USE the maintenance list referenced in Section IV.

NOTE: If the collection system does not appear to be collecting any debris, turn the engine off. Check the 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.
- * Wet grass and leaves will decrease effectiveness and will increase horsepower requirements.

Disengagement

Shut off the engine by turning the key switch to the OFF position to disengage the Blower/Blade Assembly. Refer to your engine's owner's manual for proper

WARNING: The Blower assembly blades will continue to spin. DO NOT TOUCH the Blower assembly until it has completely STOPPED spinning.

Unloading The Collection System

NOTE: Please refer to your container's manual for proper unloading procedures.

Before unloading your container, be sure the engine is turned OFF and the Blower/Blade Assembly has COMPLETELY STOPPED moving.

NOTE: Do not allow your collection 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.
- 3. 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.
- 5. 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, and safety decals. Replace any missing or illegible decals.
- 2. Inspect the unit for worn or damaged components. Repair or replace before the next use. Any replacement component installed during repair shall include the component's current safety decal specified by the manufacturers to be affixed to the component.
- 3. Under normal usage, the collection unit is subject to deterioration and wear and should therefore be frequently checked for necessary replacements per original manufacturer's 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:		
N	New PECO, Inc.	
	Arden, North Carolina 28704	
Phone: 1-800	0-438-5823 828-684-1234	
Fa	ix: 828-684-0858	
Email:	<u>peco@lawnvac.com</u>	
Website	e: www.lawnvac.com	

TORQUE SPECIFICATIONS

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

Bolt Hea	d 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)
		1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
	SAE Grade 2 (No Dashes)	1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
	(140 Dashes)	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
	SAE Grade 5	7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233
	(3 Dashes)	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
	الم عد	1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569
	Diameter "B" SAE Grade 8	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
nch "A"		1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (138
	(6 Dashes)	1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288(174
Т		1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (195
		1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (246
		1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (272
		2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (322
		2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (367
		2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (428
		2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (482

Wrench Size "A" Numbers appearing on bolt heads indicate ASTM class.

AMERICAN

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

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

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

<u>Notes</u>



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