

Cub Cadet®

**PTO GRASS
COLLECTION
SYSTEM**

DESIGNED FOR:

CUB CADET

2010-2013 MODEL YEAR

Z FORCE S - COMMERCIAL

48", 60" - COMMERCIAL SERIES

MODEL# 59A30034150



OPERATOR'S MANUAL

ASSEMBLY • OPERATION • MAINTENANCE

RESIDENTIAL BAGGING SYSTEM

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SAFETY

1. Read the operator's manual carefully and familiarize yourself with the proper use of your attachment. Do not allow anyone who is not acquainted with the Safety Instructions to use your attachment.
2. Know the controls and how to stop quickly. **READ THE OPERATOR'S MANUAL!**
3. Do not allow children to operate the vehicle. Do not allow adults to operate it without proper instruction.
4. Be especially watchful of children and pets darting into the area while operating.
5. Keep your eyes and mind on your unit while mowing or operating your attachment. Don't let others distract you.
6. Do not attempt to operate your unit or mower when not in the driver's seat.
7. Always stop unit when emptying the container.
8. Stop unit, shut off deck attachment, set parking brake, shut off mower engine and remove spark plug wire before removing clogs, removing or replacing hose, boot, blower cone, or performing any maintenance.
9. Mow across the face of slopes (not steeper than 10 degrees); never up and down the face.
10. It is recommended that the container be kept only half full when negotiating any 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 ear protection if the noise level is offensive.
13. Wear eye protection to prevent debris from damaging your eyes.

SAFETY

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

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

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

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

Safety Alert Symbol



This Safety Alert Symbol means: **“ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!”**

This symbol is used to call attention to safety precautions that should be followed by the operator to avoid accidents. When you see this symbol, carefully read the message that follows and heed its advice. Failure to comply with safety precautions could result in death or serious bodily injury.

Safety Signs

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



White letters on **RED**

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



Black letters on **ORANGE**

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

It may also be used to alert against unsafe practices.



Black letters on **YELLOW**

This signal word indicates a potentially hazardous situation exist which, if not avoided, will result in minor or moderate injury.

It may also be used to alert against unsafe practices.

PECO LIMITED WARRANTY FOR NEW PRODUCTS

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, 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 & DESCRIPTION

1-1 Introduction

Your grass collection system has been designed to give you a low maintenance, simple, and effective way to collect the grass clippings from your mower. This manual is provided to give you the necessary instructions to properly mount and operate 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.

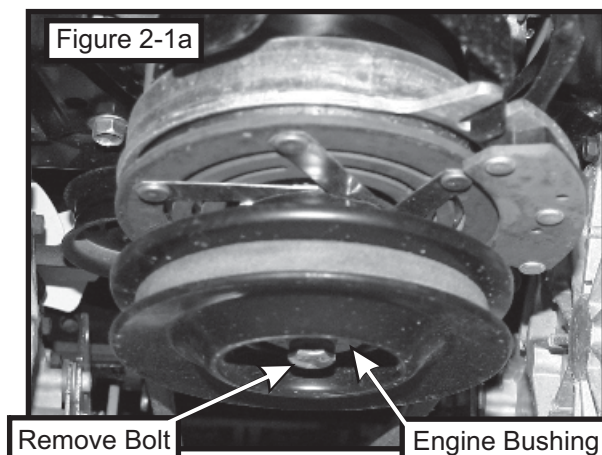
1-2 Description

The grass collection system is designed for turf maintenance where there is a need to collect the grass clippings as the mower cuts the turf. It is also used for picking up leaves in pre-season and post-season clean-up. The blower, mounted on the right side of the unit, uses a belt and gearbox system from the engine PTO shaft. Drive train protection comes through belt slippage. The blower draws grass clippings from the discharge area of the cutting deck back to the (2) - 4 cubic foot collection bags P#(G0003) at the rear portion of the mower frame. The operator can engage the blower with a spring-lock engagement handle on the right side of the unit. Once the bags are full with clippings, they can be easily released for dumping.

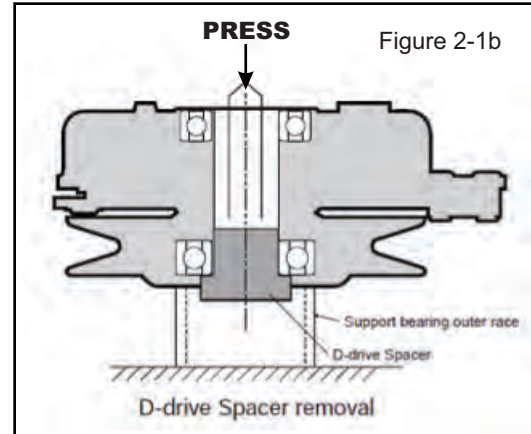
Section II INSTALLATION FOR USE

2-1 Preparation Of Mower

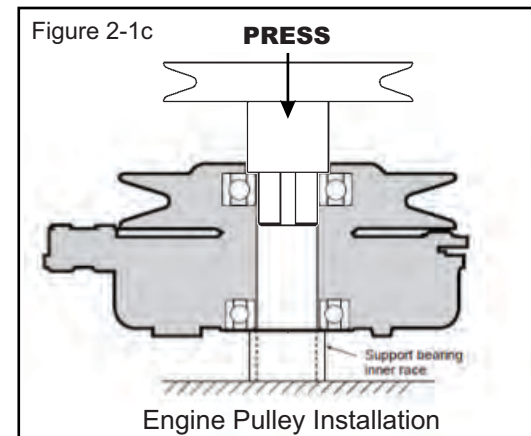
From the underside of the engine, disconnect the wiring harness attached to the electric clutch. Remove the bolt and electric clutch from the mower. Refer to Figure 2-1a.



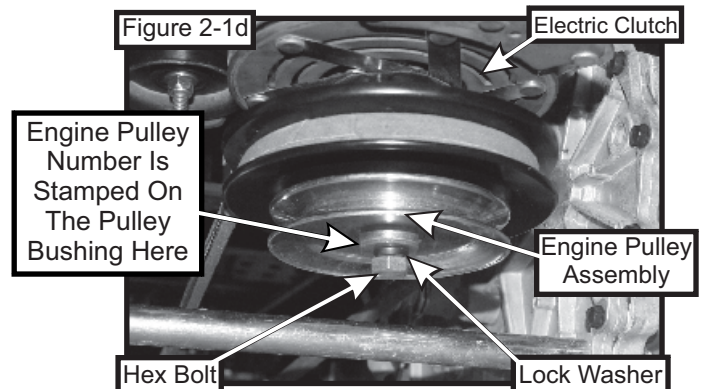
Remove the D-drive spacer using an arbor press or equivalent. On removal, adjacent bearing OUTER race must be supported or bearing damage may occur. Refer to Figure 2-1b.



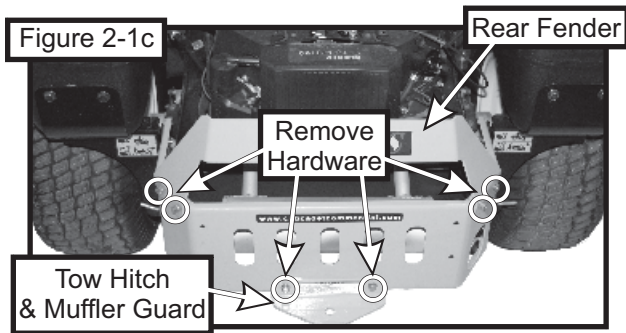
The engine pulley assembly must be installed using an arbor press or equivalent. Upon Installation, opposite bearing inner race must be supported or bearing damage may occur. Refer to Figure 2-1c.



Use engine pulley assembly #12 P#(A0728) for 48" decks, and engine pulley assembly #4 P#(A0540) for 60" decks. Fasten the engine pulley to the electric clutch assembly using (1) 7/16" hi-collar lock washer P#(K0140) and (1) 7/16"-20 x 5" HHCS P#(K0018) as shown in Figure 2-1d. The added pulley will power the collection system. Torque the bolt to 55 ft./lbs. Re-connect the wiring harness to the electric clutch.

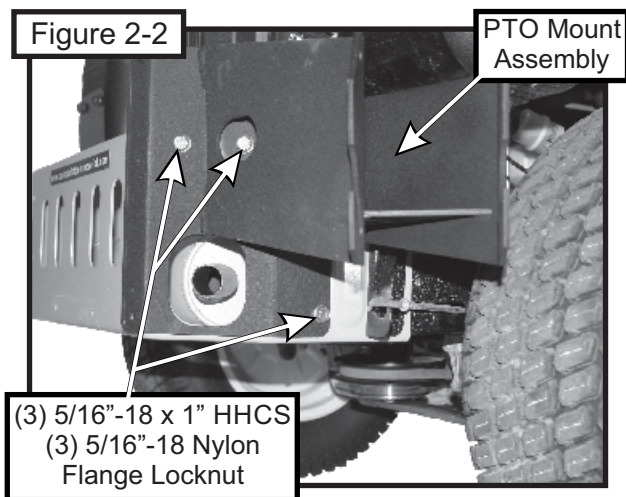


Remove the rear fender, tow hitch plate, muffler guard and hardware as shown in Figure 2-1c.



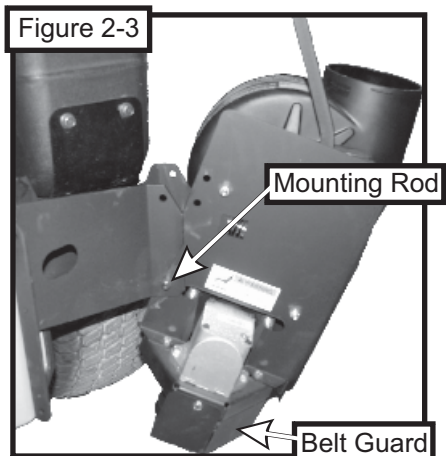
2-2 PTO Mount Assembly Installation

Secure the PTO mount assembly P#(A1794) to the rear frame of the mower using (3) 5/16"-18 x 1" HHCS P#(K1154) and (3) 5/16"-18 nylon flange locknuts P#(K2516) as shown in Figure 2-2.



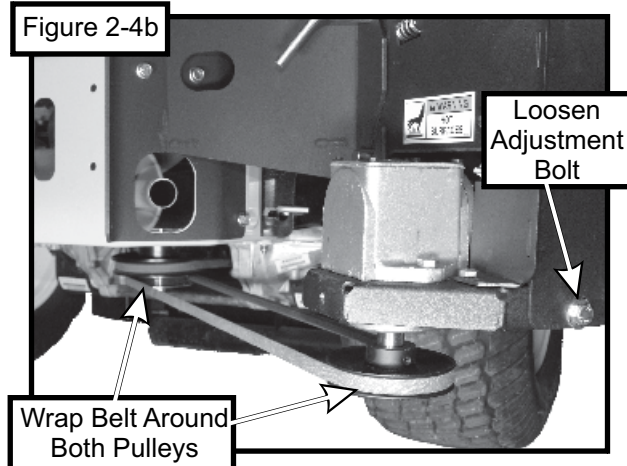
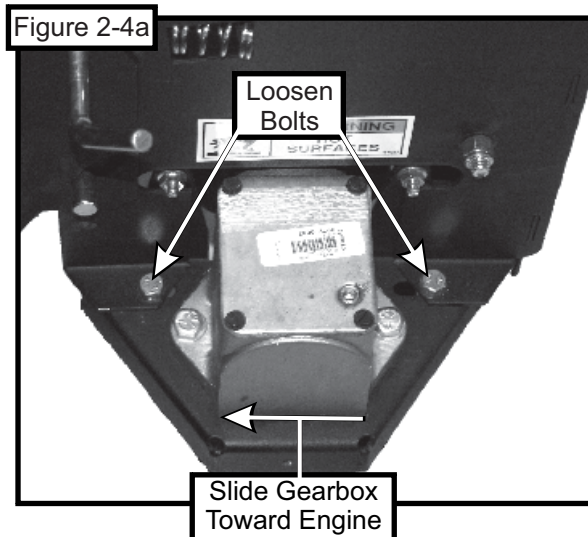
2-3 PTO Assembly Installation

Insert the mount rod on the PTO assembly P#(A1132), into the mounting slots on the PTO mount assembly P#(A1794), as shown in Figure 2-3. Remove the (3) 1/4"-20 x 1/2" HHSTS P#(K0353) from the belt guard in preparation for the belt installation.

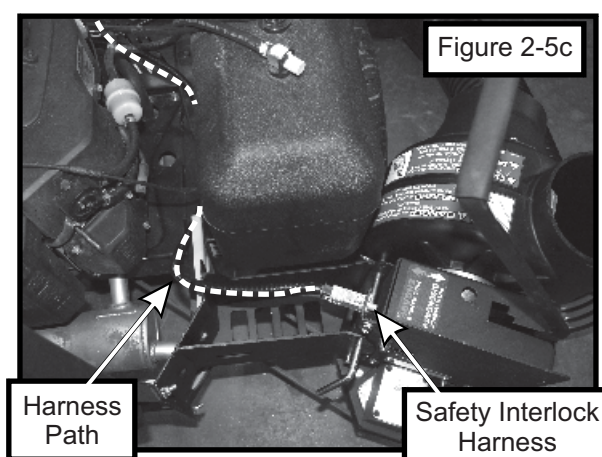
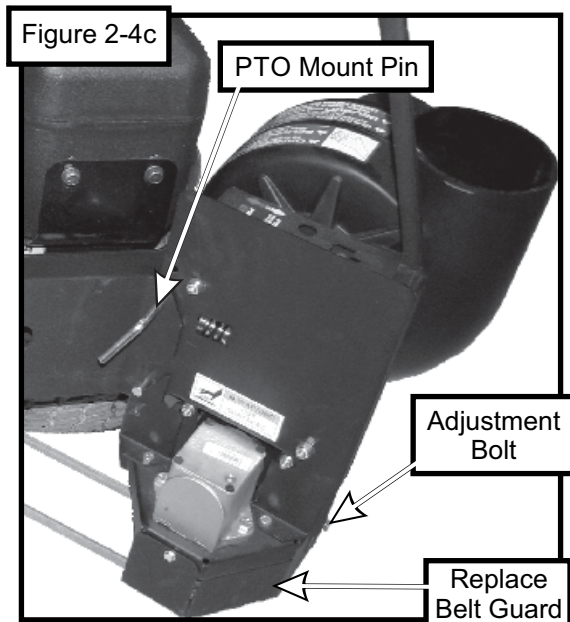


2-4 Belt Installation/Removal and Adjustment

Installation/Removal: With the PTO mount pin P#(B0274) removed, loosen the (4) 5/16"-18 x 3/4" HHCS P#(K1153) that secure the gear box to the PTO assembly. Loosen the adjustment bolt (1) 3/8"-16 x 2" hex bolt P#(K0348). Slide the gearbox towards the mower until there is enough clearance for the kevlar belt to slide over both the engine and gearbox pulleys. Install the A68K kevlar belt P#(M0272). Insert the PTO mount pin P#(B0274), and secure the pin with (1) hair pin clip P#(K0086). Refer to Figures 2-4a and 2-4b.



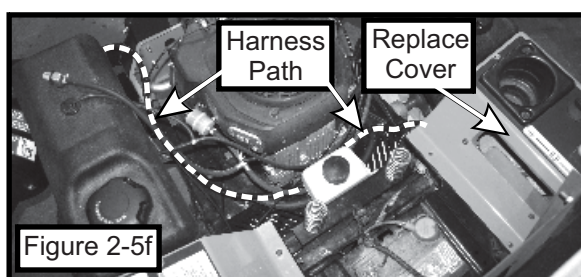
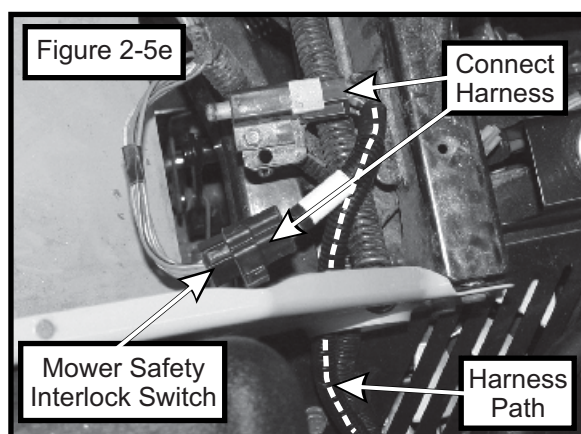
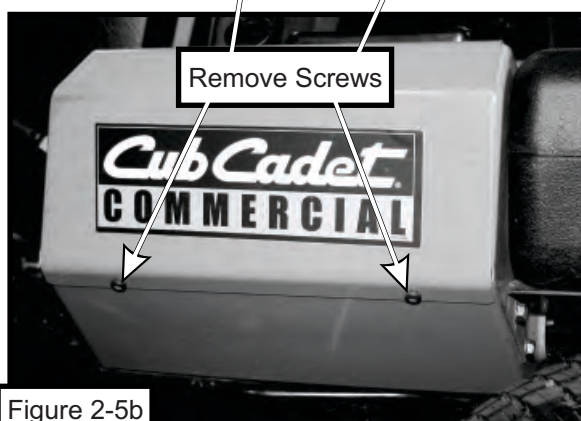
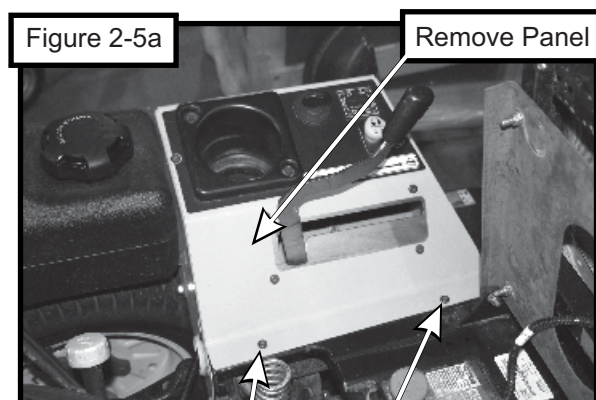
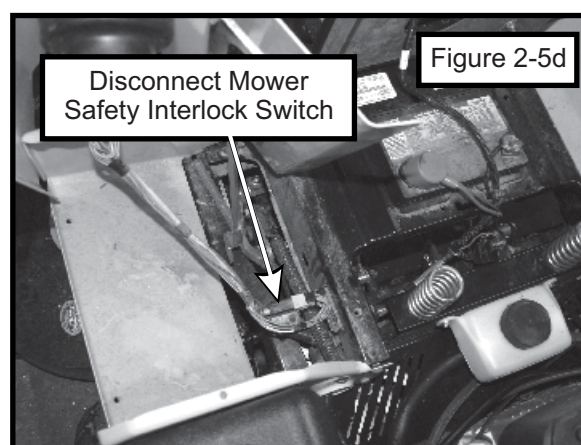
Adjustment: To adjust the belt tension, turn the adjustment bolt clockwise until there is 1" of deflection, with 10-11lbs of pressure applied to the center of the belt. When the belt has the proper tension, tighten the (4) 5/16"-18 x 3/4" HHCS that secure the gear box to the PTO assembly. Replace the belt guard and (3) 1/4"-20 x 1/2" HHSTS. Refer to Figure 2-4c.



2-5 Safety Interlock Harness

Installation

Remove the panel shown in Figure 2-5a. There are (4) screws that secure the panel to the mower.

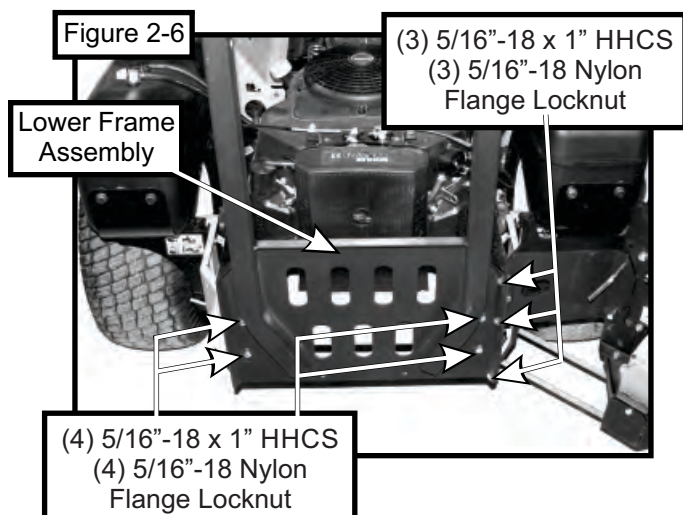


Locate the safety interlock harness P#(P0208) located on the PTO assembly. This harness will need to be connected to the mower safety interlock switch, and then secured to the mower frame with the zip ties P#(J0245) included in the mount kit hardware bag. See page 21 for the safety interlock wiring harness schematic diagram.

2-6 Lower Frame Assembly

Installation

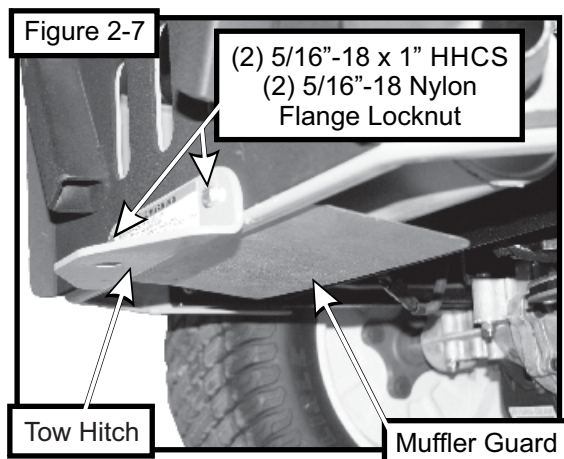
Secure the lower frame assembly P#(A1119) to the rear frame of the mower using (4) 5/16"-18 x 1" HHCS P#(K1154) and (4) 5/16"-18 nylon flange locknuts P#(K2516). Then secure the lower frame assembly to the PTO mount assembly P#(A1794) using (3) 5/16"-18 x 1" HHCS P#(K1154) and (3) 5/16"-18 nylon flange locknuts P#(K2516) as shown in Figure 2-6.



2-7 Muffler Guard And Tow Hitch

Installation

Replace the tow hitch and muffler guard removed in step 2-1. Secure with (2) 5/16"-18 x 1" HHCS P#(K1154) and (2) 5/16"-18 nylon flange locknuts P#(K2516) as shown in Figure 2-7.



2-8 Upper Frame Assembly

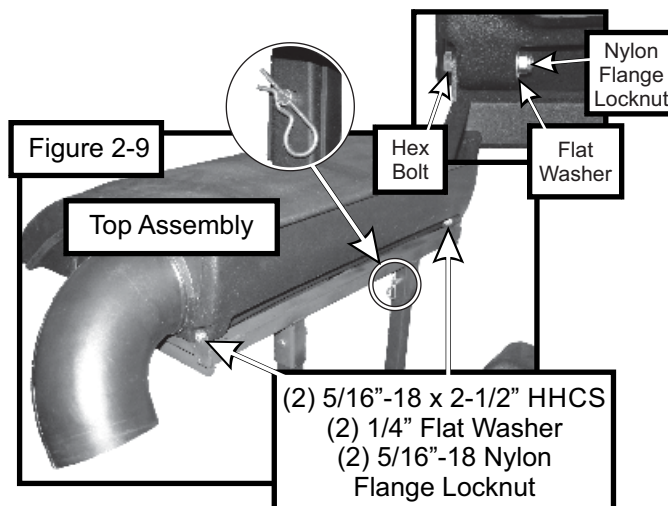
Installation

Lift the upper frame assembly P#(A1114) into position, and slide onto the lower frame assembly as shown in Figure 2-9 and secure with (2) 1/2" x 2-1/4" clevis pins P#(K0133) and (2) hair pin clips P#(K0088). **Note:** It is recommended that someone assist you when installing the upper frame assembly.

2-9 Top Assembly To Upper Frame

Assembly Installation

Position the top assembly P#(A1148) above the upper frame assembly as shown in Figure 2-9. Fasten the top assembly to the upper frame assembly using (2) 5/16"-18 x 2-1/2" HHCS P#(K0125), (2) 1/4" Flat Washer P#(K0037), and (2) 5/16"-18 nylon flange locknuts P#(K2516). Leave the locknuts slightly loose, to allow the top assembly to open and close easily. Refer to Figure 2-9 for hardware location.



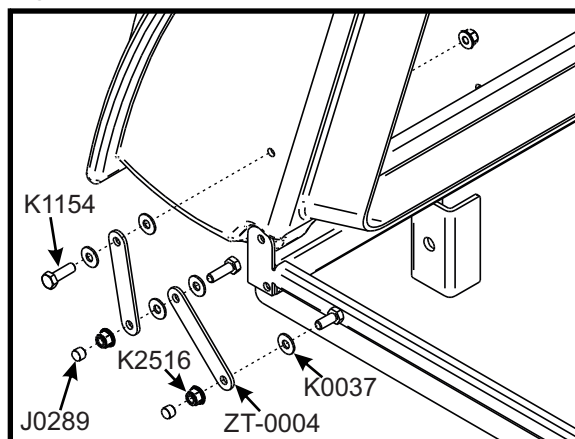
2-10 Inlet Installation

Insert the Inlet P#(V0019) into the hole on the top assembly from the inside and then snap the inlet into place. The inlet should pivot freely about the hole.

2-11 Hinge Kit Assembly Installation

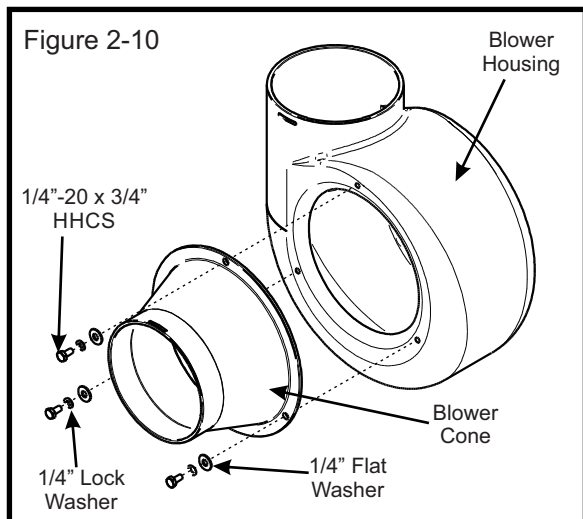
Assemble the hinge kit as shown in Figure 2-11, using (2) 5/16"-18 x 1" HHCS P#(K1154), (3) 5/16"-18 nylon flange locknuts P#(K2516), (5) 1/4" flat washers P#(K0037) and (2) swing arm brackets P#(ZT-0004). Place (1) vinyl cap P#(J0289) on the end of the hex bolts as shown in Figure 2-11. Leave the nuts loose enough to allow fluid movement of the top when opening and closing. When opened, the top should rest on the middle joint of the hinge allowing it to remain up.

Figure 2-11



2-10 Blower Cone Installation/Removal

Fasten the blower cone P#(V0016) to the blower housing located on the PTO assembly. Use (3) 1/4"-20 x 3/4" HHCS P#(K1222), (3) 1/4" lock washers P#(K0039), and (3) 1/4" flat washers P#(K0037) to secure the blower cone to the blower housing. Refer to Figure 2-10 for reference.

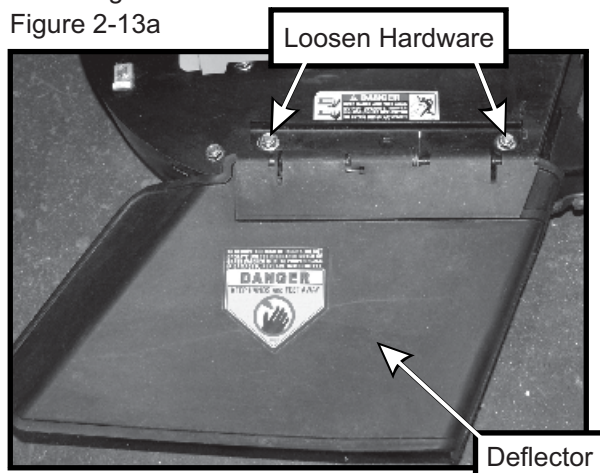


2-13 Boot To Mower Deck Installation

NOTE: The boot kit assembly is designed to fit the 48" and 60" deck. To ensure a snug fit between the boot and the mower deck, follow the instructions in this step thoroughly, and remove and tighten all hardware in the sequence specified.

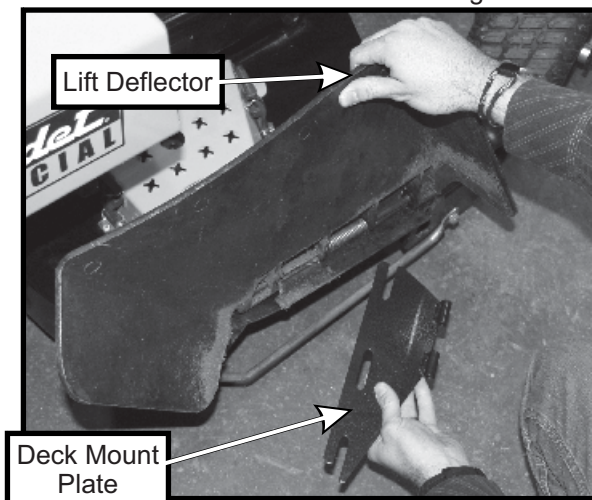
Loosen (**DO NOT REMOVE**) the deflector hardware shown in Figure 2-13a.

Figure 2-13a



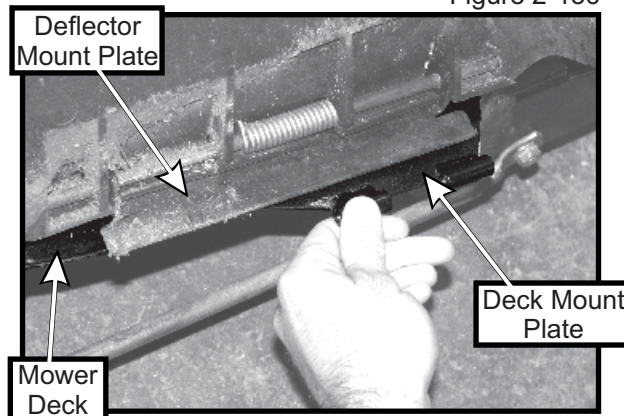
Locate the deck mount plate P#(A1120). Lift the deflector and position the deck plate as shown in Figure 2-13b.

Figure 2-13b



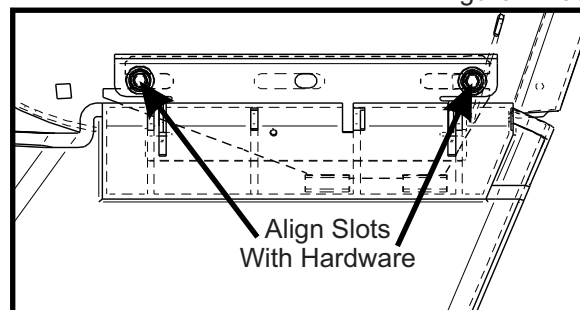
Insert the front portion of the deck mount plate between the deflector mount bracket and the mower deck. Align the front slot of the deck mount plate with the front set of hardware on the deflector. Slide the deck mount plate to the forwardmost position and insert the rear portion of the deck mount plate between the deflector mount plate and the mower deck. Align the rear slot in the deck mount plate with the rear set of hardware on the deflector. Refer to Figure 2-13c.

Figure 2-13c



Adjust the deck mount plate forwards/backwards so the both sets of hardware are inside the slots on the deck mount plate as shown in Figure 2-13d.

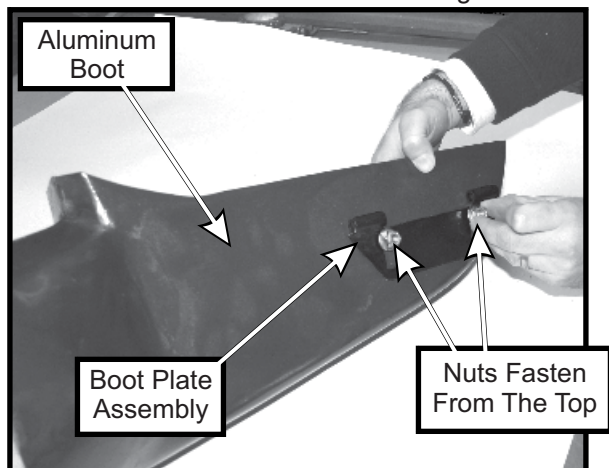
Figure 2-13d



Locate the aluminum boot P#(E0021) and the boot plate assembly P#(A1121). Secure the boot plate assembly to the boot as shown in Figure 2-13k, using (2) 3/8"-16 x 1" carriage bolts P#(K1182) and (2) 3/8"-16 nylon flange locknuts P#(K2038).

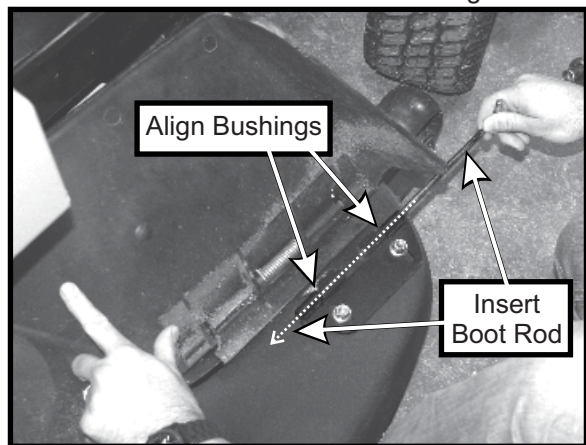
NOTE: Insert the carriage bolts from inside of the boot so that the threads are on top of the boot as shown in Figure 2-13e. This will prevent grass clipping from collecting on the bolt threads. **DO NOT TIGHTEN THE HARDWARE.**

Figure 2-13e



Position the boot as shown in Figure 2-13f. Align the bushing in the boot plate and the bushing in the deck mount plate. Insert the boot rod from the front of the boot as shown in the figure. Refer to Figure 2-13f.

Figure 2-13f



After the boot rod has been installed, slide the boot and boot plate assembly forward or backwards until a snug fit is achieved between the aluminum boot and the mower deck. To maximize the effectiveness of your collection system, you want to minimize any gaps between the boot and the mower deck. When correctly installed there should be no gaps on the top and back edge of the boot. Refer to Figure 2-13g.

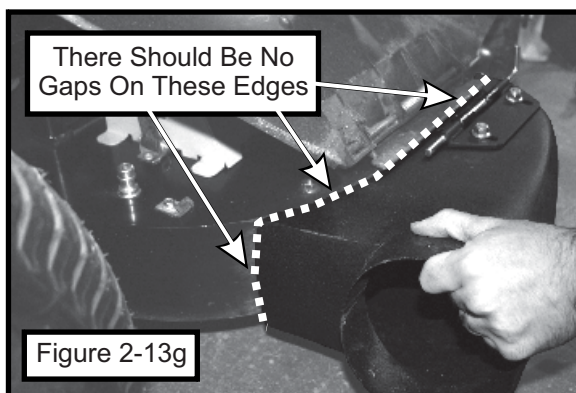


Figure 2-13g

Hold the boot in position so there are no gaps between the boot and the mower deck. Then proceed to tighten the deflector hardware shown in Figure 2-13h.

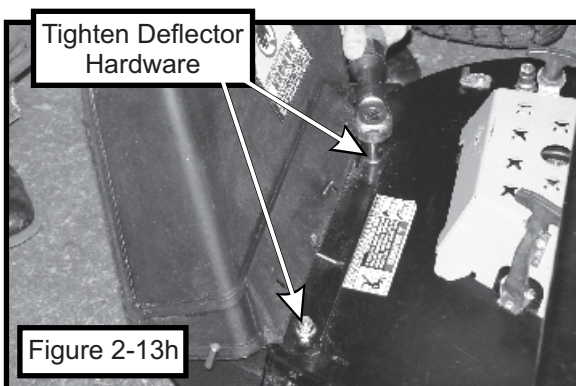


Figure 2-13h

Hold the boot in position so that there are no gaps between the boot and the mower deck. Then proceed to tighten the hardware on the boot plate as shown in Figure 2-13i.

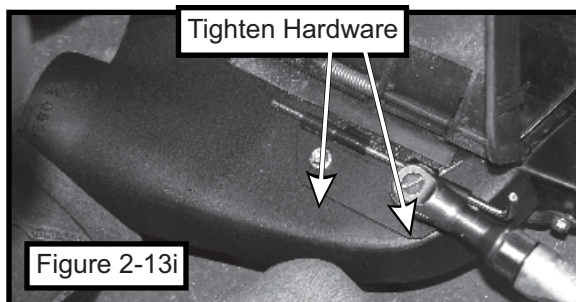


Figure 2-13i

Secure the boot rod using (1) hair pin clip P#(K0099) as shown in Figure 2-13j.

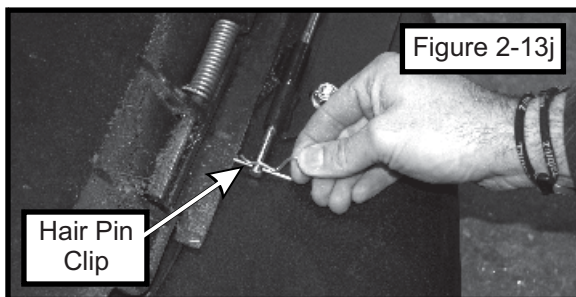


Figure 2-13j

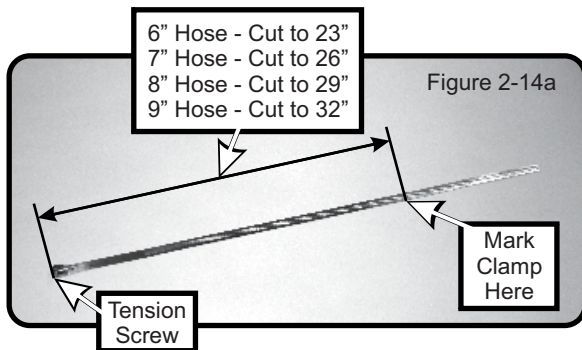
2-14 Hose Clamp Preparation



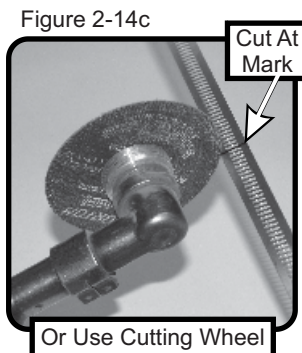
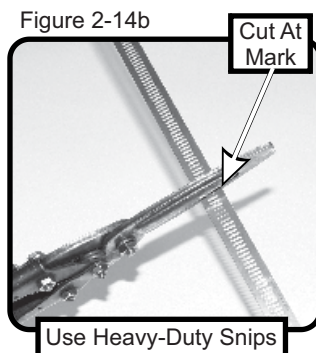
Note: To prevent injury, wear safety gear when cutting or grinding hose clamps.

The hose clamps P#(J1000), provided with your collection system, will fit hose sizes 6" through 9". The excess should be cut from the clamp prior to installing the hoses. Follow the steps listed to properly install the hose clamps to your collection system.

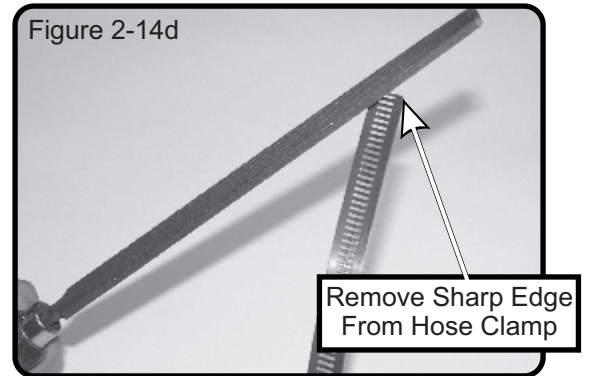
Step 1: Measure from hose clamp's fastening end (end with tension screw) to the dimension specified for your hose diameter and mark the clamp for cutting. Refer to Figure 2-14a.



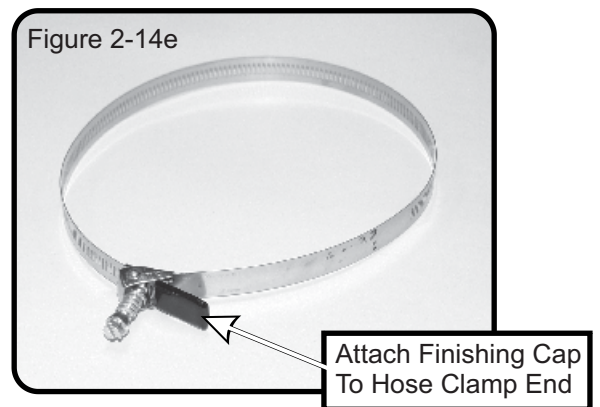
Step 2: See note on Caution above! Cut the hose clamp at mark determined from Step 1. It is recommended to use heavy-duty snips or a cutting wheel. Refer to Figure 2-14b and 2-14c.



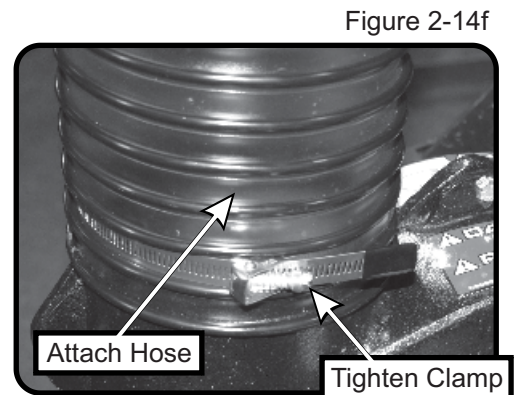
Step 3: Using a flat file or disc grinder, remove sharp edges from clamp cut in Step 2. Refer to Figure 2-14d.



Step 4: Loop previously cut hose clamp end under and through the clamp's tension screw. Next, slide one finishing cap P#(V0040) over cut end. Refer to Figure 2-14e.



Step 5: To clamp hose, first slide completed clamp assembly over hose end. Next, hold tension screw up while pulling clamp end to pre-tighten. Then, fold tension screw down and tighten using 5/16" socket or flat-head screw driver. See Figure 2-14f.



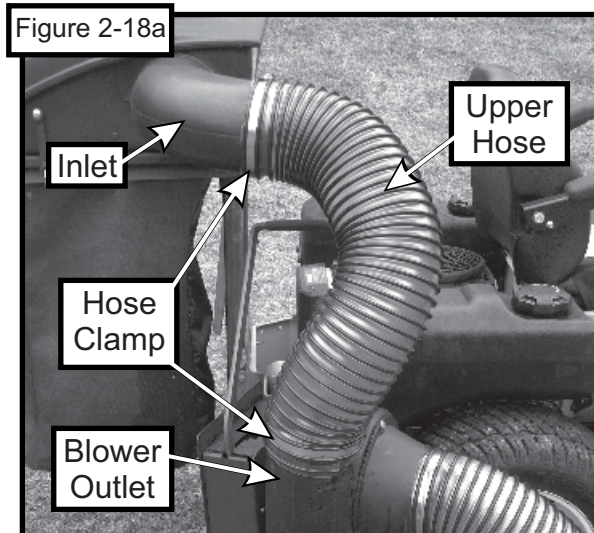
2-15 Length Of Hose Adjustment

The hoses in steps 2-16 and 2-17 must be cut to fit your machine. Follow steps 2-16 and 2-17. do not cut the hoses until you have tried to fit them on your machine. Remember that the hoses have to be long enough to adjust for the blower assembly's movement as well as allow for enough clamping surface between the inlet, blower assembly, and the deck boot.

Note: The upper hose should no shorter than 32".

2-16 Upper Hose Installation

Fasten the inlet to the plastic top by sliding the inlet from the inside of the top to the outside and lock into place. Slide a pre-assembled hose clamp P#(J1000) onto both ends of the 6" upper hose (Figure 2-18a). Then slide one end of the 6" hose onto the inlet. Make sure there is about a two-inch overlap between the hose end and the container inlet. Proceed to slide the opposite end of the 6" hose onto the outlet of the blower assembly. See (Figure 2-18) for details. Make sure both ends of the hose are clearly attached to the inlet and the blower assembly inlet. Tighten the hose clamps.



2-17 Lower Hose To Blower Cone

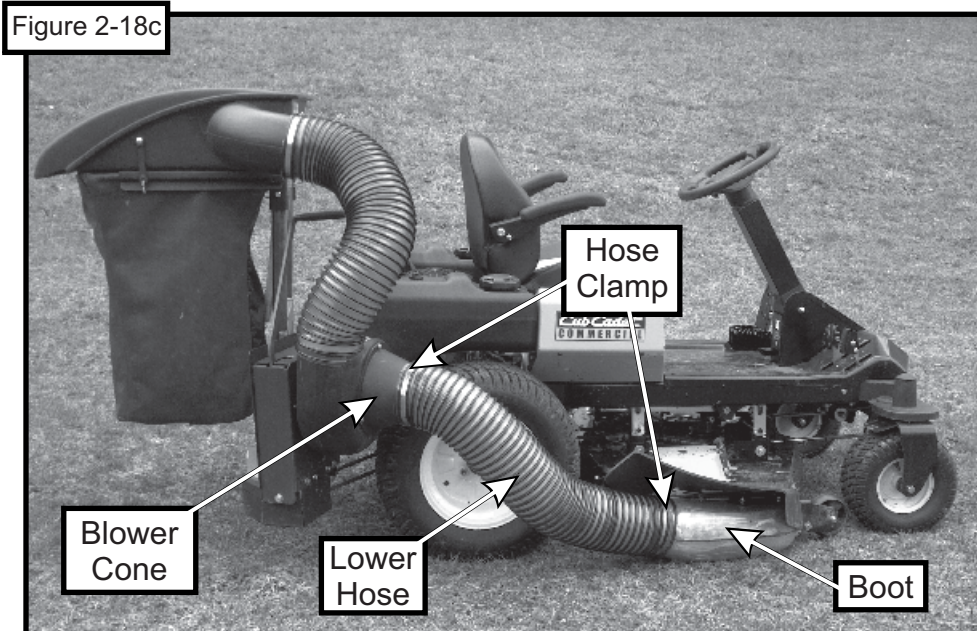
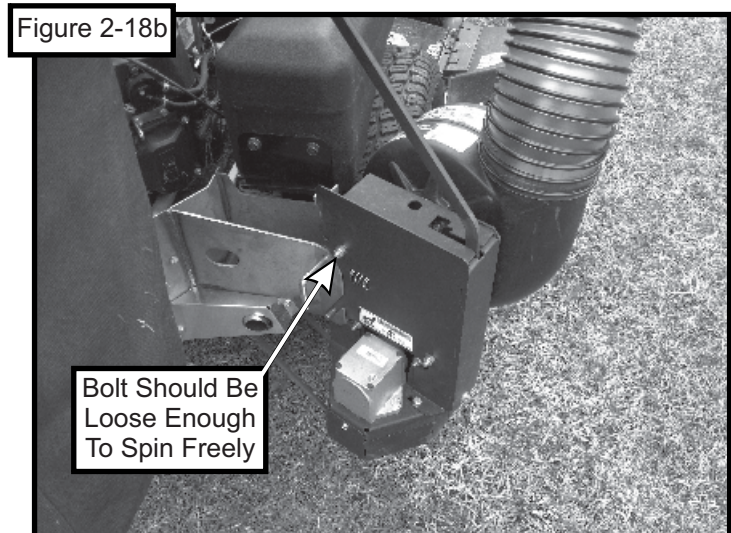
Installation

Slide a pre-assembled hose clamp P#(J1000) over both ends of the lower hose. Then proceed to slide the lower hose onto the blower cone. Tighten the hose clamp. The assembly should look like Figure 2-18c.

2-18 Lower Hose To Boot Installation

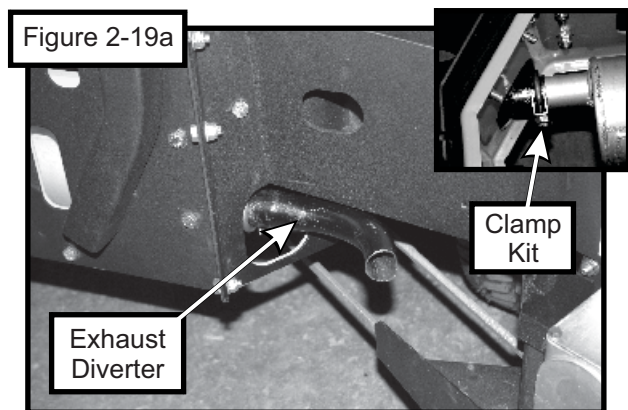
Take the unattached end of the lower hose and slide it over the circular end of the boot. Use the lower hose clamp to secure the hose to the boot (Figure 2-18c). Tip: Before securing clamp rotate hose counter-clockwise (away from yourself) approximately 1" to aid in retaining boot to mower deck.

Note: If the impeller blades continue to spin after the PTO has been disengaged, make sure the bolt shown in Figure 2-18b is not too tight. The bolt should be able to spin freely.

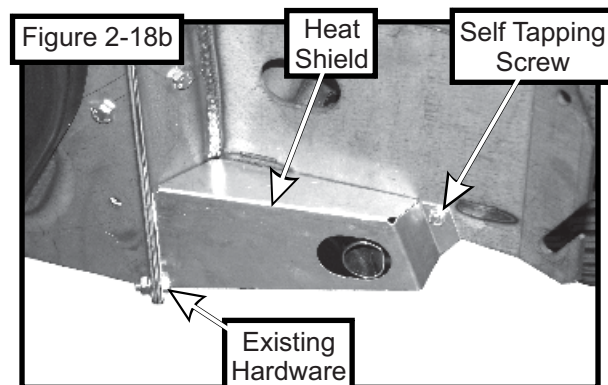


2-19 Exhaust Diverter & Heat Shield Installation

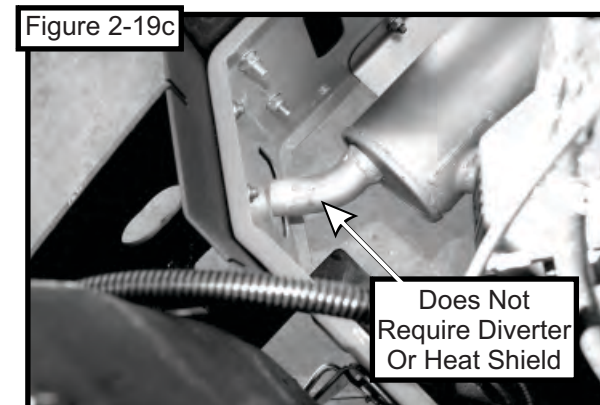
An exhaust diverter and heat shield will need to be used on all engines that exhaust to the side of the mower. Insert (1) exhaust diverter P#(B0693) onto the muffler and secure with (1) exhaust clamp kit P#(X1025). Leave exhaust clamp kit hardware finger tight until the heat shield is installed. Refer to Figure 2-19a.



Remove the bottom hex bolt and nut from the PTO mount plate assembly. Position the heat shield as shown, and adjust the angle of the exhaust diverter if necessary, to look like Figure 2-19b. Tighten the exhaust clamp kit hardware. Secure the heat shield using existing hardware and (1) 1/4"-20 x 1/2" self tapping screw P#(K0353).



NOTE: Units with angled muffler options **DO NOT** require an exhaust diverter or heat shield.



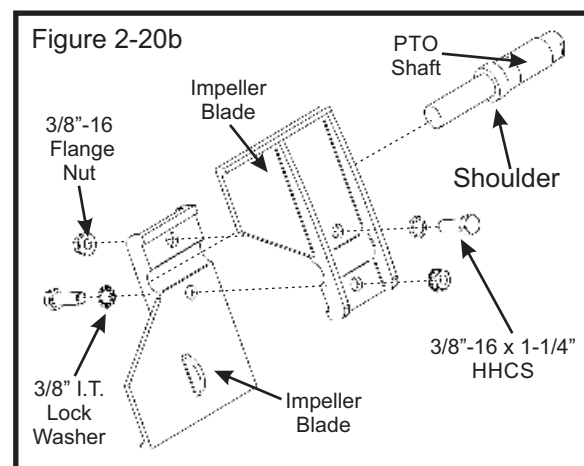
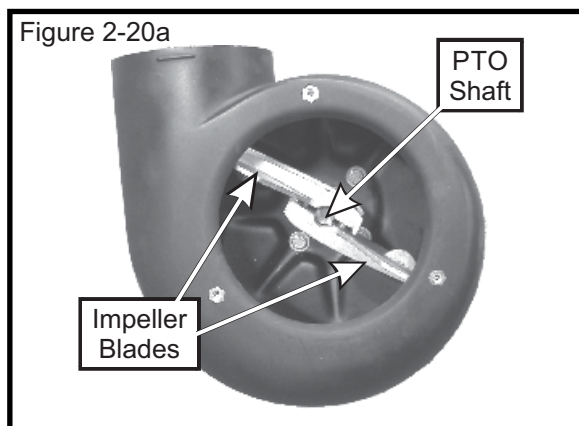
2-20 Impeller Blade Removal/Replacement



BEFORE REMOVING/REPLACING THE IMPELLER BLADES, BE SURE THE MOWER IS TURNED OFF, THE PTO ASSEMBLY IS DISENGAGED AND THE NEGATIVE CABLE IS REMOVED FROM THE BATTERY. FAILURE TO DO SO MAY RESULT IN SEVERE INJURY OR DEATH.

Remove the blower cone P#(V0016) from the blower housing located on the PTO assembly P#(A1132). With the blower cone removed, you will have access to the impeller blades P#(E7003A). Refer to Figure 2-20a.

Remove the (2) 3/8"-16 x 1-1/4" HHCS P#(K1192), (2) 3/8" I.T. lock washer P#(K0049), and (2) 3/8"-16 flange nut P#(K1215) that secure the (2) impeller blades P#(E7003) to the PTO shaft P#(B0460). Inspect impeller blades and replace if necessary. When replacing the impeller blades, run the impeller blades to the shoulder of the PTO shaft before tightening hardware. Refer to Figure 2-20b for reference.

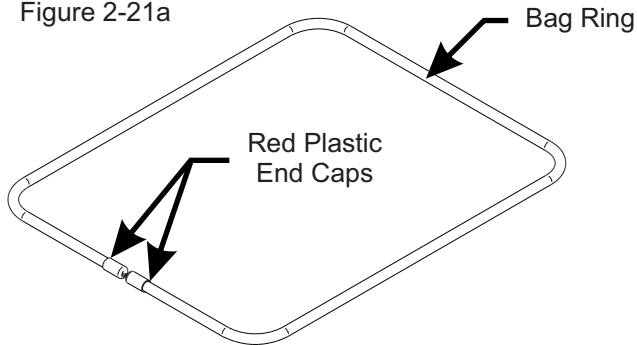


2-21 Installation/Removal Of Collection Bags

IMPORTANT!

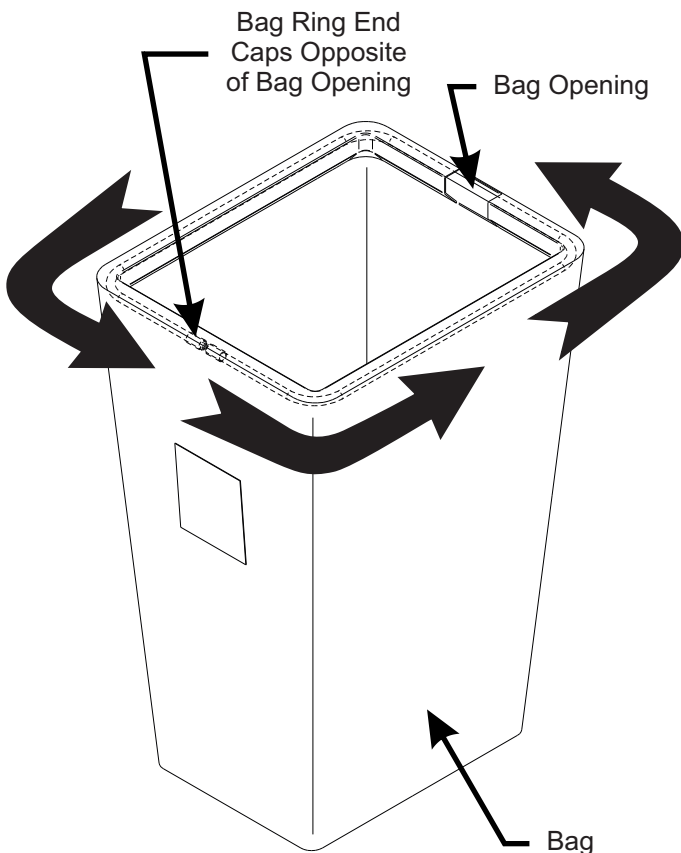
To prevent bag wear, install (2) red plastic end caps P#(J0274), as shown in Figure 2-21a, on each bag ring before installing bags.

Figure 2-21a



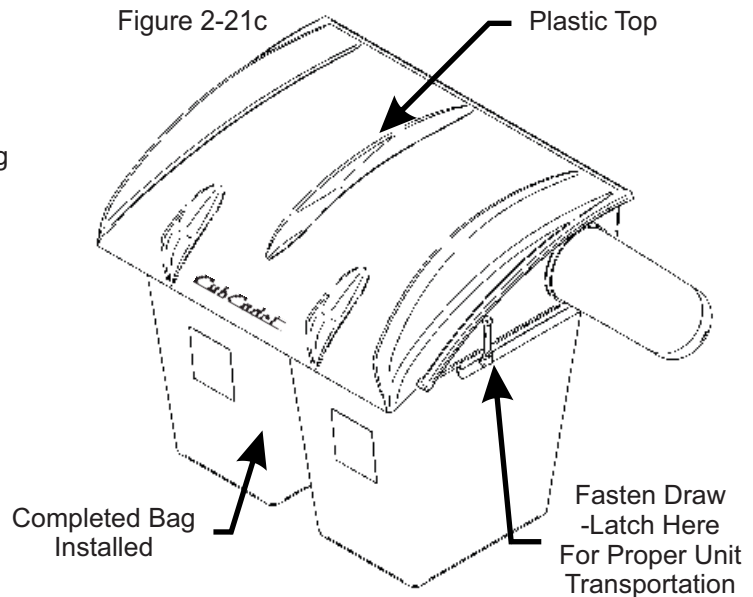
To install the bag onto the bag ring, place the seam openings of the bag onto the bag ring openings and turn the bag one full turn (360°) so the plastic end caps are located opposite to the opening in the bag (Figure 2-21b). Do this for each bag.

Figure 2-21b



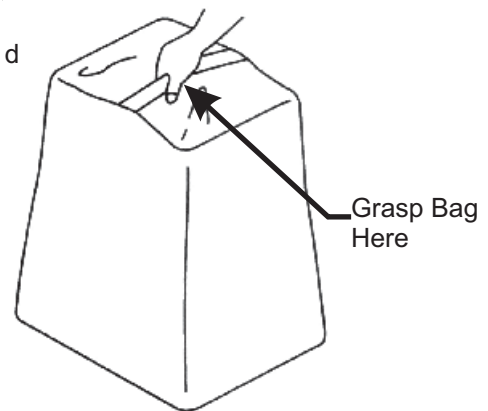
Install the completed assemblies onto the support frame and close the plastic top. Fasten the draw-latches to hold the plastic top closed (Figure 2-21c).

Figure 2-21c



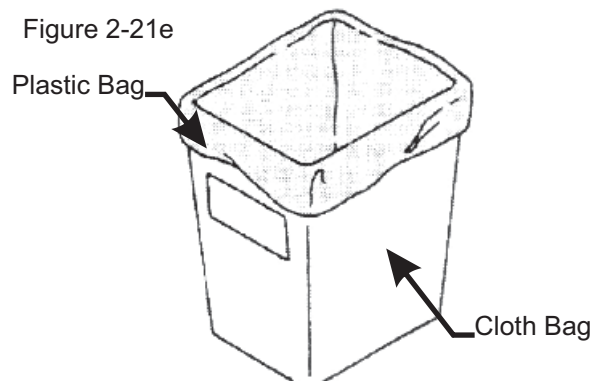
To empty the bag, first unlatch and lift top, next remove the bag and bag ring by sliding rearward, then grasp the loop on the bottom of the bag, and last turn it upside down to empty the collected debris (Figure 2-21d). Repeat for the other bag. Reinstall both bags, line with plastic bags if desired, close the plastic top and reattach the draw latches.

Figure 2-21d



Plastic lawn and leaf bags, 33 gallon size, may be used inside the cloth bags. Be sure to leave enough plastic bag hanging over the frame so the plastic bags can be twist tied before emptying (Figure 2-21e).

Figure 2-21e



SECTION III OPERATING INSTRUCTIONS

3-1 General Safety

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

3-2 Operation And Tips On Mowing

- A. Perform BEFORE EACH USE the maintenance list in paragraph 4-1.
- B. Start mower.
- C. With the mower at high idle speed, engage the mower deck.
- D. While seated in the operator's seat, pull the engagement handle of the PTO assembly towards the operator's seat until the handle slides into position in the retaining slot. With the PTO assembly engaged, 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 (Section 3-3), 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.

3-3 Disengagement Of The PTO Assembly

A. To disengage the PTO assembly, slide the engagement handle out of the retaining slot and push the engagement handle away from the operator's seat.

WARNING: The PTO assembly blades will continue to spin. DO NOT TOUCH the PTO assembly, pulleys, or the belt until the tractor is turned off. DO NOT adjust the belt tension until the mower is turned off. Refer to section 2-4 of the manual.

3-4 Unloading The Collection System

NOTE: To determine when the collection bags are full, follow the following steps:

- A. Stop the forward movement of the mower.
- B. Disengage the mower deck.
- C. Disengage the PTO assembly.
- D. Engage the parking brake.
- E. Once the parking brake has been engaged, then and only then, walk behind the mower and check the collection bags by first unhooking the rubber strap with S-hook that secures the plastic top, then lift the plastic hood. Load in bags should not exceed the height of the installed bag.
- F. To remove the bags from the frame slide bags out and turn bags over to deposit clippings.
- G. Slide empty bags back onto the frame and secure plastic top with the rubber strap with S-hook.

NOTE: Do not allow collection bags to become over-filled as potential damage may occur to your equipment. Also, be sure to clean the hood screen as needed.

SECTION IV MAINTENANCE

4-1 Maintenance Checklist

Before each use:

1. Check blades and spindles to be sure that no foreign objects, such as wire or steel strapping bands, are wrapped around them.
2. Inspect blades for wear. Replace if necessary. If it is necessary to sharpen the blades, remove the blades from the spindles before sharpening. DO NOT sharpen blades while still attached to the mower.

3. Make sure all shields are in place and in good condition. Repair or replace any missing or damaged shields.
4. Perform lubrication per paragraph 4-2.
5. Listen for abnormal sounds, which might indicate loose parts, damaged bearings, or other damage. Correct any deficiency before continuing operation.
6. 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.
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. Check belt for proper tension.

4-2 Lubrication

NOTE: Use only white lithium based grease for lubrication of the shaft on the blower assembly.

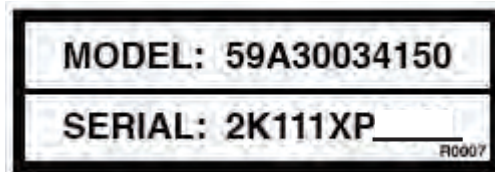
1. On initial use: Grease the fitting on the blower shaft.
2. Every 25 hours of use: Re-grease the grease fitting.
3. Every 200 hours of use: Check oil levels in gear box. Oil in gear box should cover the gears. If not, fill using an EP90 weight oil. 6oz. will fill the gear box from empty.

SECTION V PARTS AND SERVICE

5-1 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 PECO Inc. and include the following information on the chart below.

THE SERIAL NUMBER PLATE
IS LOCATED ON THE TOP
ASSEMBLY



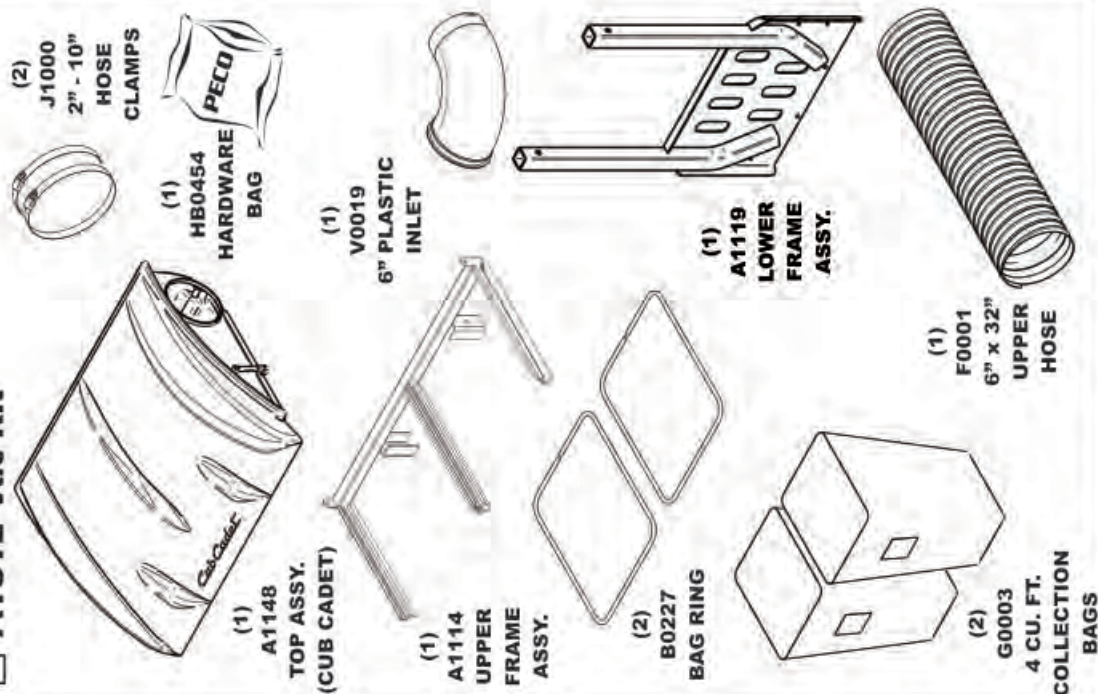
WRITE THE MODEL AND
SERIAL NUMBER IN THE
BOX TO THE LEFT
FOR FUTURE REFERENCE.

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

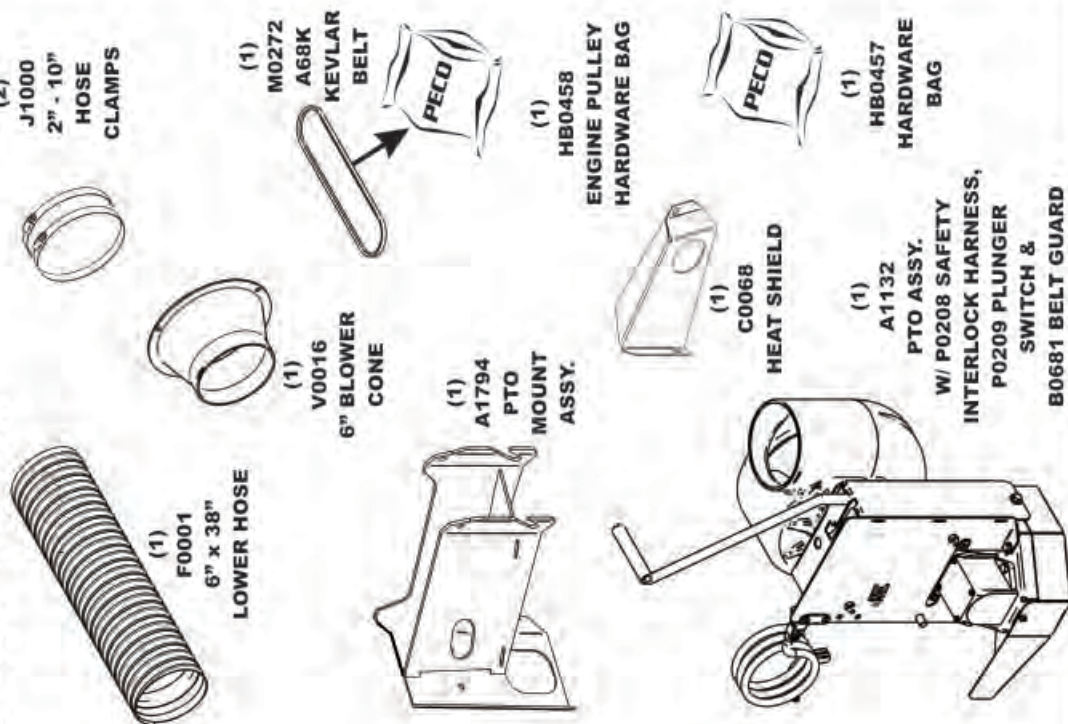
CUB CADET Z FORCE S - COMMERCIAL

PART LIST REFERENCE SHEET 59A30034150

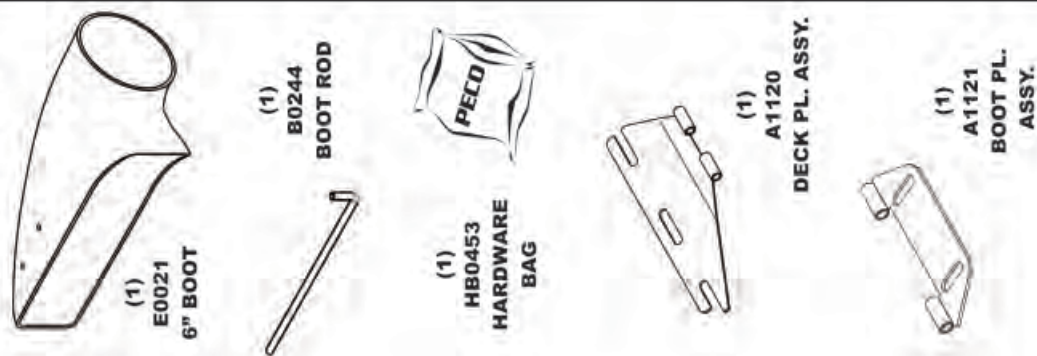
□ A1812 Vac Kit



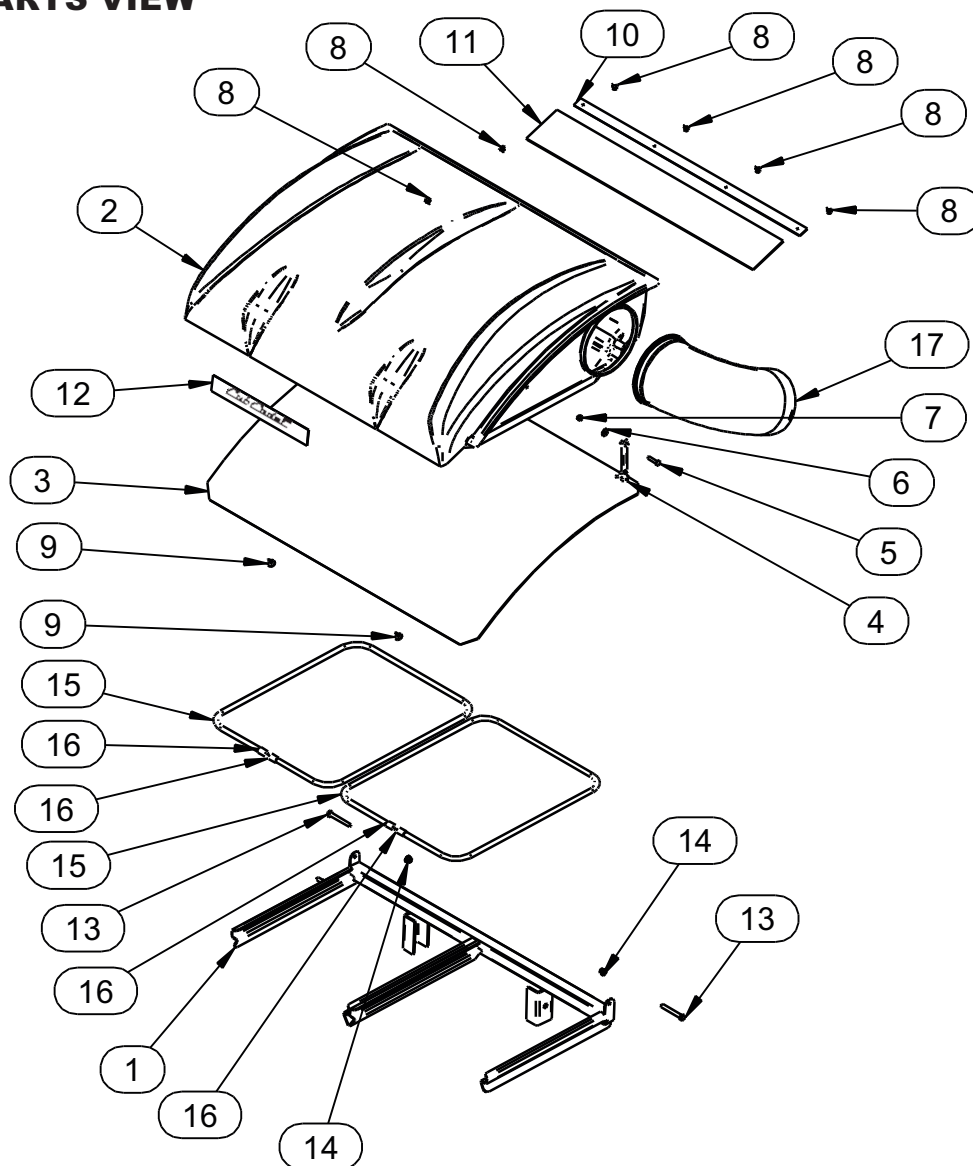
□ A1813 Mount Kit



□ A1811 Boot Kit

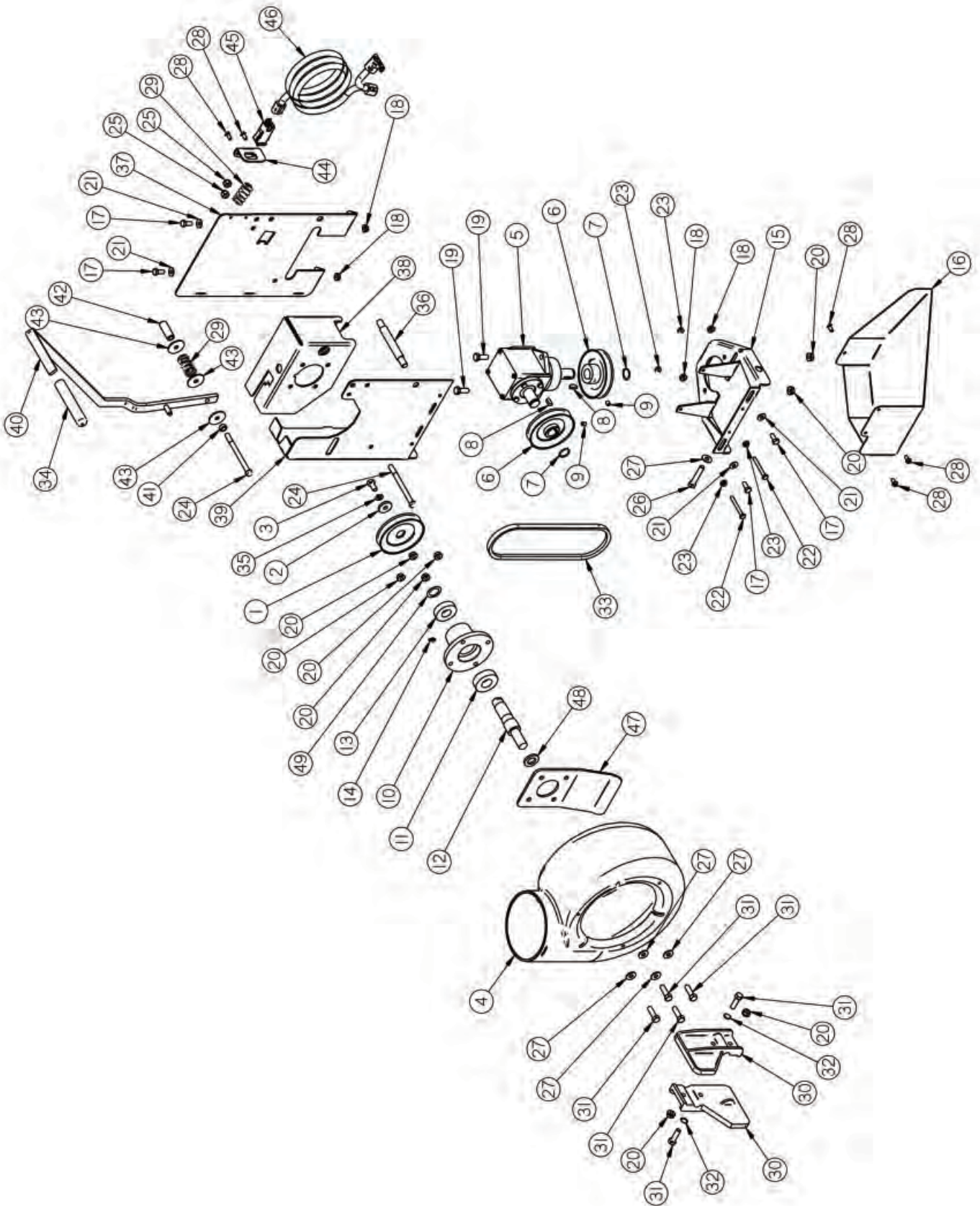


A1148 TOP ASSEMBLY
A1114 UPPER FRAME ASSEMBLY
EXPLODED PARTS VIEW



Item #	Doc #	Title	Qty
1	A1114	2 BAG FRAME ASSY	1
2	V0017	PRO 2 BAGGER TOP	1
3	V0018	SCREEN	1
4	J4009	SHORT RUBBER STRAP W/ S HOOK	1
5	K1030	1/4"-20 x 1-1/4" CARRIAGE BOLT	1
6	K0037	1/4" FLAT WASHER .75 OD x .314 ID x .060 T	1
7	k1128	1/4"-20 NYLOC NUT	1
8	K0114	BLACK PLASTIC RIVET	6
9	K1265	BLACK PANEL RETAINER	2
10	C0067	DUST GUARD BRACE	1
11	V1117	DUST GUARD	1
12	R0006	CUB CADET LOGO	1
13	K0125	5/16"-18 x 2-1/2" ALL THREAD HHCS	2
14	K2516	5/16"-15 NYLON FLANGE LOCKNUT	2
15	B0227	BAG RING	2
16	j0274	BAG RING END CAP	4
17	V0019	INLET	1

A1132 PTO ASSEMBLY **EXPLODED PARTS VIEW**

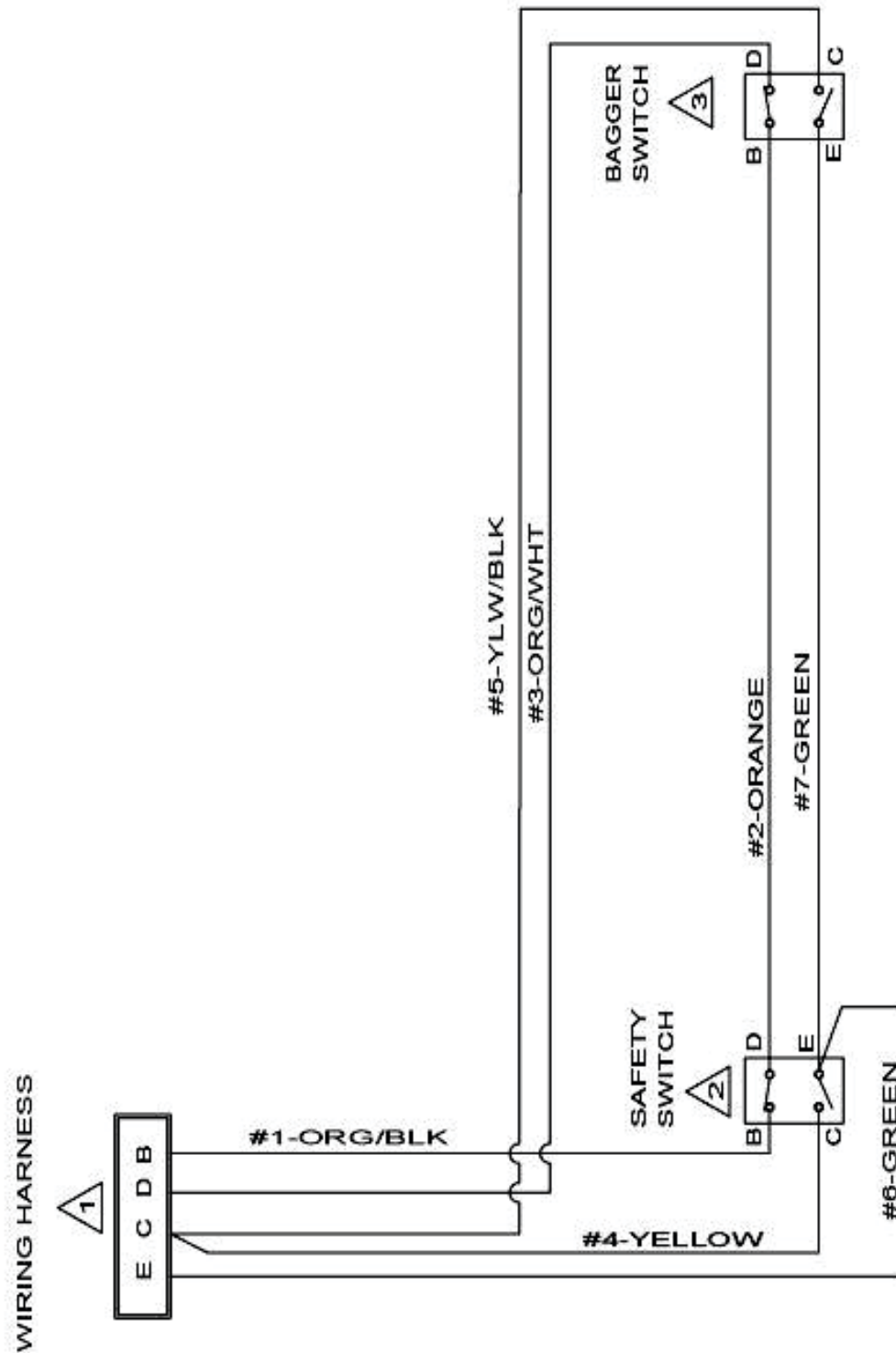


A1132 PTO ASSEMBLY

EXPLODED PARTS VIEW DESCRIPTION

Item #	Doc #	Title	Qty
1	M0266	'A' PULLEY FOR DECK DRIVE PTO	1
2	K1446	1.187 OD x .380 ID x .187 WASHER	1
3	k1190	3/8"-16 x 3/4" HHCS	1
4	V0015	BLOWER HSG.	1
5	A0431	GEAR BOX	1
6	A0498	PULLEY ASSY. FOR GEAR BOX	2
7	K0360	7/8" SNAP RING	2
8	J0272	#9 WOODRUFF KEY	2
9	K0035	5/16-18 SET SCREW	2
10	E0015	PTO SHAFT HOUSING	1
11	n0147	BEARING 2.0472 OD, 0.9843 ID, 0.5906 W (6205RS PEER)	1
12	B0460	PTO SHAFT	1
13	N0165	BEARING	1
14	J0801	1/4"-28 ZIRC FITTING	1
15	A1003	BASE PLATE ASSY.	1
16	B0681	GEAR BOX PULLEY GUARD	1
17	K1153	5/16"-18 x 3/4" HHCS	4
18	K1178	5/16"-18 FLANGE NUT	4
19	k1191	3/8"-16 x 1" HHCS	2
20	K1215	3/8"-16 FLANGE NUT	8
21	K0037	1/4" FLAT WASHER .75 OD x .314 ID x .060 T	4
22	k1150	1/4"-20 x 2-1/4" HHCS	2
23	K1126	1/4"-20 FLANGE NUT	4
24	K1202	3/8"-16 x 4-1/2" HHCS G5	2
25	k1216	3/8"-16 NYLOC NUT	2
26	K0348	3/8"-16 x 2" ALL THREAD HHCS	1
27	k0042	5/16" FLAT WASHER .875 OD x .380 ID x .075 T	5
28	K0353	1/4"-20 x 1/2" HHSTS	5
29	J0303	SPRING	2
30	E7003	IMPELLER BLADE	2
31	K1192	3/8"-16 x 1-1/4" HHCS	6
32	K0049	3/8" INTERNAL LOCK WASHER	2
33	M0267	A28K KEVLAR BELT	1
34	V1151	5/8" ID x 4-3/4" BLACK HANDLE GRIP	1
35	K0048	3/8" LOCK WASHER	1
36	B0505	PTO ARM MNT. ROD	1
37	B0506	LT. PTO ARM	1
38	B0642	BLWR. MNT. BRKT.	1
39	B0643	RT PTO ARM	1
40	A1137	PTO HANDLE ASSY	1
41	B0510	SPACER BUSHING	1
42	B0511	SPACER BUSHING	1
43	K0403	WASHER 1-1/2" OD x 3/8" ID	3
44	B0682	SWITCH MOUNT BRACKET	1
45	P0209	PLUNGER SWITCH	1
46	P0208	SAFETY INTERLOCK HARNESS	1
47	B0739	Blower Hsg. Stiffener Pl.	1
48	S0002	Blade Shaft Spacer	1
49	K0070	Flat Washer SS	1

P0208
Safety Interlock
Wiring Harness



SAFETY DECALS

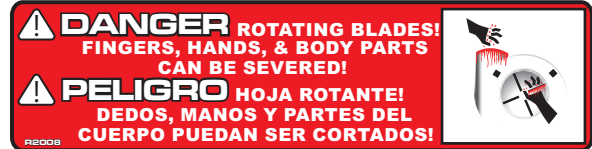
To promote safe operation, PECO Inc. supplies safety decals on all products manufactured. Damage can occur to safety decals either through shipment, use or reconditioning. Contact your local Service Center for replacement decals.



Part #: R0006
Cub Cadet
Logo



Part #: R2007
Never Use Hands Label



Part #: R2008
Rotating Blades Label



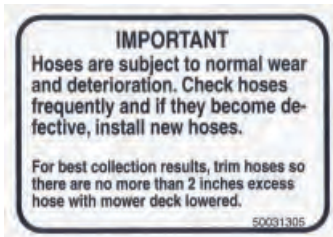
Part #: R1100
Engage-Disengage Label



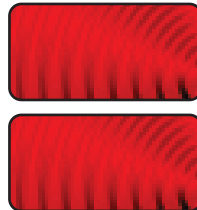
Part #: R4037
Warning: Hot Surface Label



Part #: R1065
Made In America Label



Part #: R1054
Important Label



Part #: R1057 - (2)



Part #: R1052
Small Warning: Turn Off Blower Label



Part #: R1069
Warning: Turn Off Blower Label



Part #: R4015
Danger: Rotating Blades Label



Part #: R1051
Warning: Hearing Protection Label



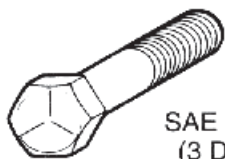
Part #: R4008
Caution: Rotating Blades Label

TORQUE SPECIFICATIONS

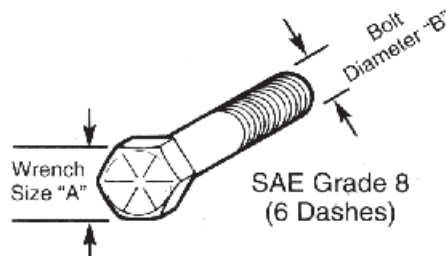
AMERICAN Bolt Head Markings



SAE Grade 2
(No Dashes)



SAE Grade 5
(3 Dashes)

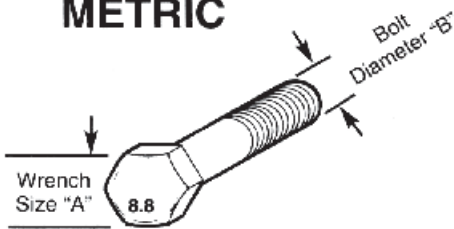


SAE Grade 8
(6 Dashes)

Recommended Torque in Foot Pounds (Newton Meters).*

WRENCH SIZE (IN.) "A"	BOLT DIAMETER (IN.) "B" AND THREAD SIZE	SAE GRADE 2	SAE GRADE 5	SAE GRADE 8
7/16	1/4 - 20 UNC	6 (7)	8 (11)	12 (16)
7/16	1/4 - 28 UNF	6 (8)	10 (13)	14 (18)
1/2	5/16 - 18 UNC	11 (15)	17 (23)	25 (33)
1/2	5/16 - 24 UNF	13 (17)	19 (26)	27 (37)
9/16	3/8 - 16 UNC	20 (27)	31 (42)	44 (60)
9/16	3/8 - 24 UNF	23 (31)	35 (47)	49 (66)
5/8	7/16 - 14 UNC	32 (43)	49 (66)	70 (95)
5/8	7/16 - 20 UNF	36 (49)	55 (75)	78 (106)
3/4	1/2 - 13 UNC	49 (66)	76 (103)	106 (144)
3/4	1/2 - 20 UNF	55 (75)	85 (115)	120 (163)
7/8	9/16 - 12 UNC	70 (95)	109 (148)	153 (207)
7/8	9/16 - 18 UNF	79 (107)	122 (165)	172 (233)
15/16	5/8 - 11 UNC	97 (131)	150 (203)	212 (287)
15/16	5/8 - 18 UNF	110 (149)	170 (230)	240 (325)
1-1/8	3/4 - 10 UNC	144 (195)	266 (360)	376 (509)
1-1/8	3/4 - 16 UNF	192 (260)	297 (402)	420 (569)
1-5/16	7/8 - 9 UNC	166 (225)	430 (583)	606 (821)
1-5/16	7/8 - 14 UNF	184 (249)	474 (642)	668 (905)
1-1/2	1 - 8 UNC	250 (339)	644 (873)	909 (1232)
1-1/2	1 - 12 UNF	274 (371)	705 (955)	995 (1348)
1-1/2	1 - 14 UNF	280 (379)	721 (977)	1019 (1381)
1-11/16	1-1/8 - 7 UNC	354 (480)	795 (1077)	1288 (1745)
1-11/16	1-1/8 - 12 UNF	397 (538)	890 (1206)	1444 (1957)
1-7/8	1-1/4 - 7 UNC	500 (678)	1120 (1518)	1817 (2462)
1-7/8	1-1/4 - 12 UNF	553 (749)	1241 (1682)	2013 (2728)
2-1/16	1-3/8 - 6 UNC	655 (887)	1470 (1992)	2382 (3228)
2-1/16	1-3/8 - 12 UNF	746 (1011)	1672 (2266)	2712 (3675)
2-1/4	1-1/2 - 6 UNC	870 (1179)	1950 (2642)	3161 (4283)
2-1/4	1-1/2 - 12 UNF	979 (1327)	2194 (2973)	3557 (4820)

METRIC



Numbers appearing on bolt heads indicate ASTM class.

Recommended torque in foot pounds (newton Meters).*

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

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



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