

***BigDog® X Series
Bac-Vac™
OPERATOR'S MANUAL***

EXCEL

INDUSTRIES

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Hustler Turf Equipment

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200 South Ridge Road

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Hesston, Kansas

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67062-2097

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GENERAL INFORMATION

To The New Owner

The purpose of this manual is to assist owners and operators in maintaining and operating the BigDog® Mowers X Series BAC-VAC™. Please read it carefully; information and instructions furnished can help you achieve years of dependable performance.

Using This Manual

General operation, adjustment and maintenance guidance is outlined for both the experienced and novice BigDog® Mowers user. Operating conditions vary considerably and cannot all be addressed individually. Through experience, however, operators should find no difficulty in developing good operating skills suitable to most conditions.

Directions used in this manual, for example RIGHT or LEFT, refer to directions when in operator position and facing forward, unless otherwise stated.

Photographs and illustrations used were current at the time of printing, but subsequent production changes may cause your machine to vary slightly in detail. BigDog® Mowers reserves the right to redesign and change the machine as deemed necessary, without notification. If a change has been made to your machine which is not reflected in this operator's manual, or the parts manual, see your BigDog® Mowers Dealer for current information and parts.

Warranty Registration

Your BigDog® Mowers Dealer must register this attachment on-line within **ten (10) days** following date of purchase to validate your warranty protection. As the new equipment owner, you should confirm that your BigDog® Mowers Dealer has registered your attachment with BigDog® Mowers.

Be sure to register the mower plus each attachment that displays a model and serial identification number plate with BigDog® Mowers.

IMPORTANT: Any unauthorized modification, alteration, or use of non-approved attachments voids the warranty and releases BigDog® Mowers from any liability arising from subsequent use of this equipment. Do not use or operate any attachment which is not approved by BigDog® Mowers.

Parts and Service

Use original BigDog® Mower replacement parts only. These parts are available through your local BigDog® Mower Dealer. To obtain prompt, efficient service, always provide the following information when ordering parts:

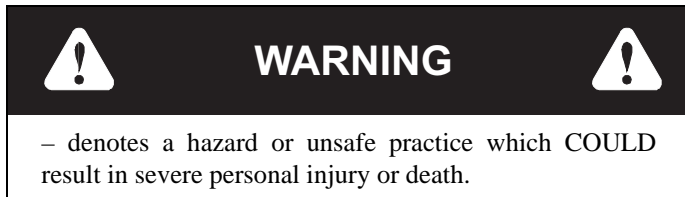
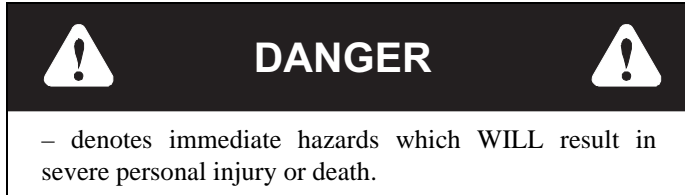
1. Correct part description.
2. Correct part number.
3. Correct model number.
4. Correct serial number.

All warranty repair and service must be handled through an authorized BigDog® Mower Dealer. Arrangements should be made through your local service center.

SAFETY PRECAUTIONS



This safety alert symbol is used to call attention to a message intended to provide a reasonable degree of **PERSONAL SAFETY** for operators and other persons during the normal operation and servicing of this equipment.



This manual uses two other words to highlight information. **IMPORTANT** calls attention to special mechanical information and **NOTE** emphasizes general information worthy of special attention.

All operators and mechanics should read this manual, and be instructed about safe operating and maintenance procedures.

Improper use or maintenance by the operator or owner can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety alert symbol “▲”, which means DANGER or WARNING - “personal safety instructions.” Failure to comply with the instructions may result in personal injury or death.

Incorrect usage of this attachment may result in severe injury. Personnel operating and maintaining it should be trained in the proper use and should read the manuals completely and thoroughly before attempting to set-up, operate, adjust, or service this mower.

Safe Operation and Service Precautions

- ▲ Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by the manufacturer.
- ▲ Always stop on level ground, disengage the deck clutch, place the steering control levers in the park brake position, stop the mower's engine and remove the ignition key before leaving the operator's seat for any reason including unclogging the chute.
- ▲ Always be aware of any obstructions, especially small children, when backing or unloading the hopper.
- ▲ Always keep safety shields and covers in place, except for servicing.

- ▲ Never work on the blower assembly or the mower deck when the mower's engine is running.
- ▲ Never operate machine with the hopper in the open position except for unloading.
- ▲ Never attempt high speed maneuvering in crowded or congested areas.
- ▲ Always operate with the complete BAC-VAC™ system, mulching system or side discharge chute in place and in the lowest position.
- ▲ Always keep clear of the mower blades and attachments during their operation.
- ▲ Turn off the blades when not mowing.
- ▲ Stop the engine before removing the BAC-VAC™ or unclogging the discharge chute. Never clear the discharge chute with the engine running. Turn off the engine and be sure the blades have stopped before cleaning. Use a probe to clear a plugged discharge area. **Never use your hand!**
- ▲ **Clean flammable material from the machine. Prevent fires by keeping the engine compartment, exhaust area, battery, fuel line, fuel tank and operator's station clean of accumulated trash, grass clippings, and other debris. Always clean up spilled fuel and oil.**
- ▲ Grass collection system components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts when necessary.
- ▲ Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Always disengage the blades and wait for them to stop before crossing gravel drives, walks or roads.

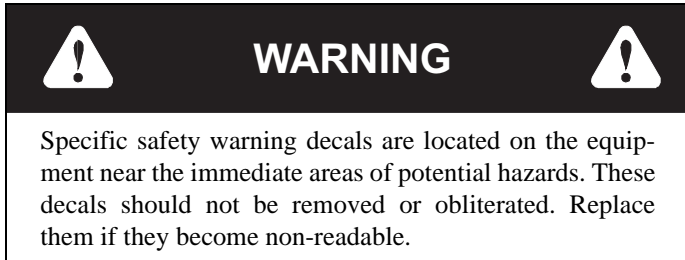
Safety and Instruction Decals

The decals are designed to give the operator brief information needed in the daily operation and service of the mower. These decals are not intended to be used in place of this manual but instead are to be used as an extension of this manual. These decals should not be removed or obliterated. Replace these decals if they become unreadable.

- It is the **owner's responsibility** to make certain that the operators and mechanics read and understand this manual and all decals before operating this mower.
- It is also the **owner's responsibility** to make certain that the operators and mechanics are qualified and physically able individuals, properly trained in the operation of this equipment.
- All operators and mechanics must become familiar with the safe operation of the equipment, operator controls and decals.
- Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.
- The owner/user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

- The owner should also ensure that the operators/mechanics know that they are responsible for their own safety as well as the safety of other persons within the vicinity. **Remember**, the operator is responsible for accidents or hazards occurring to other people or their property.

The following illustrations show the various safety decals that are located on the mower. A brief explanation, for those requiring one, is shown to help the operator understand the meanings of these decals.



WARNING: Thrown objects!
Part Number 601624



- Never operate the mower deck with side deflector damaged, altered, removed or in raised position, except when the entire grass catcher attachment or mulching system is being used.

Part Number 601837



DANGER:
Rotating blades, pulleys & belts

- Keep hands, feet and clothing away.
- Keep shields or covers in place while the machine is in operation.

Part Number 602758



- Read the Operator's Manual before attempting to operate this machine.
- Wear ear protection, eye protection and safety shoes when operating this equipment.

Part Number 602757



DANGER:
Rotating impeller

- Keep hands, feet and clothing away.
- Keep shields or covers in place while the machine is in operation.
- Stop the engine, remove the ignition key.
- Engage the park brake.
- Use a probe to clear debris from the blower assembly. Remove blower chute to clear debris from chute.
- Never engage the mower deck unless the entire grass catcher attachment is properly installed.

Part Number 603940



WARNING
Crushing body

- Stay clear of the raised hopper door.
- Never get between the hopper door and the hopper container.
- Do not reach or climb into the hopper.
- Never reach into the hopper door opening or the hopper door linkage area.

Part Number 603967



WARNING
Crushing hand or foot

- Never reach into the crushing danger zone.
- Keep hands and feet away.

ASSEMBLY INSTRUCTIONS

These instructions apply to the assembly of the BigDog® Mowers BAC-VAC™ to a BigDog® X Series 52", 60" or 72" mower.

It is intended that these units be installed by trained BigDog® Mowers service personnel. If additional assistance is required, contact the BigDog® Mowers Customer Service Department.

Directions given in these instructions, for example LEFT and Right, refer to direction while seated on the mower.

Before proceeding, read through the following instructions to familiarize yourself with them, while at the same time identify and inventory kit parts supplied.

Unpack and inspect all parts. Notify the carrier of any shipping damages immediately.

Packing List - 932400 BigDog® Mowers X Series BAC-VAC™

Part No.	Description	Qty
550996	Blower assembly	1
N/A	Weight assembly	1
603935	Wiring harness	1
N/A	BAC-VAC™ assembly	1
N/A	Control panel	1
000331	Wire tie	7
086660	NT .375-16 HXZY NL	8
767954	FW .406 X .812 X .060 SAE	8
017616	CS .500-13 X 1.75 HX G5	2
767962	FW .531 X 1.063 X .090 SAE	22
008193	NT .500-13 HX G5 ZNYC	8
078386	FW .510 X 1.750 X .18 ZNYC	2
705954	CS .500-13 X 1.25 HX G5 ZN	12
604423	UB .375-16 X 2.00 X 4.50 SQ	4
053702	CE .620 X 3.0 X .15 X 2.84	2
704783	FW .625 X 1.50 X .105 ZN	4
023036	HP .148 X 2.690 ZN	2
603356	Flex tube	1
116739	LH mount	1
116740	RH mount	1
118243	Mount spacer	1
604577	Muffler extension 1.375"	1
769299	SC #10 X.750 PHILLIPS	1

Deck Adapter Kits

The following adapter kits must be used when mounting the BAC-VAC™ to a particular deck.

Deck Size	Adapter Kit P/N
52"	117658
60"	117659
72"	117660

Mower Deck Preparation

1. Park the mower on a flat surface. Always place the deck clutch switch in the disengaged position, place the steering control levers in the park brake position and shut off the ignition switch and remove the key from the switch. Disconnect the negative battery cable.
2. Remove the discharge chute and torsion spring.
NOTE: Retain these parts as they will be re-installed when the BAC-VAC™ is removed.
3. Release the deck drive belt tension.
4. Remove the existing spindle bolt and pulley from the center blade spindle.
Replace the pulley with the double pulley and place the new cup washer between the head of the new bolt and the drive pulley. Thread the cup washer and bolt assembly into the spindle shaft. Torque the bolt to 118 ft.-lbs. Refer to Figure 3-3, Figure 3-4 or Figure 3-5.
5. Attach the blower baffle to the deck. Refer to Figure 3-3, Figure 3-4 or Figure 3-5.
6. Assemble the blower mount to the blower assembly. Refer to Figure 3-3, Figure 3-4 or Figure 3-5.
7. Attach the blower assembly to the deck by inserting the rod through the discharge chute bracket and the blower mount and secure with a nut. Refer to Figure 3-3, Figure 3-4 or Figure 3-5.
8. Place the cutout template on the deck and mark the notch outline on the deck wall. Remove the template. Figure 3-1
9. Cut out the notch on the deck. Remove any sharp edges or burrs. Figure 3-1
10. **52" deck only** – Remove the existing idler sled from the deck. Unbolt the idler pulley and belt guide from the idler sled and attach them to the new idler sled. Figure 3-2
11. Slide the new idler sled assembly between the two deck slides. Figure 3-2
12. Place the new chain mount on the deck next to the center spindle doubler as shown. Using the anchor bracket as a drill guide, drill a .406" diameter hole in the deck. Figure 3-2
NOTE: New decks will have a pilot hole in this location.
13. Attach the spring anchor bracket to the deck as shown. Figure 3-2
14. Place the deck drive belt around the lower pulley of the double pulley. Confirm that the belt is properly routed and seated on all pulleys and idlers. Re-tension the deck

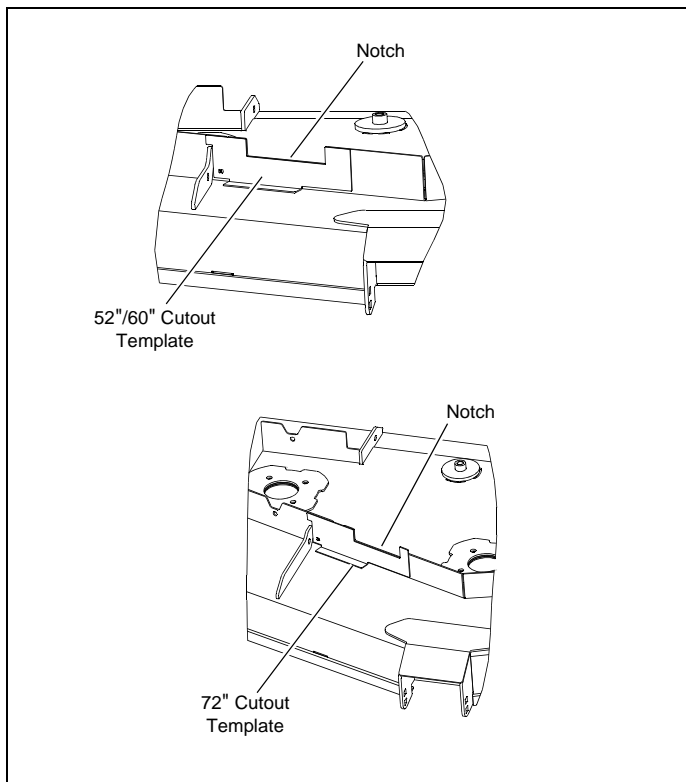


Figure 3-1

drive belt using the spring anchor bracket. Tension the belt per the tensioning instructions found in the mower's *General Service Manual*.

15. Install and route the blower belt around the blower pulleys and the upper pulley on the double pulley. This belt is self-tensioning. Figure 3-6

16. Remove the front right side deck lift chain and attach the rigid link to the deck lift arm. Refer to Figure 3-3, Figure 3-4 or Figure 3-5.

Position the center drive bracket on the deck as shown and attach it and the rigid link to the deck.

NOTE: The rigid link must move freely in the top slot and rotate freely in the bottom hole.

17. Attach the center drive cover. Refer to Figure 3-3, Figure 3-4 or Figure 3-5.

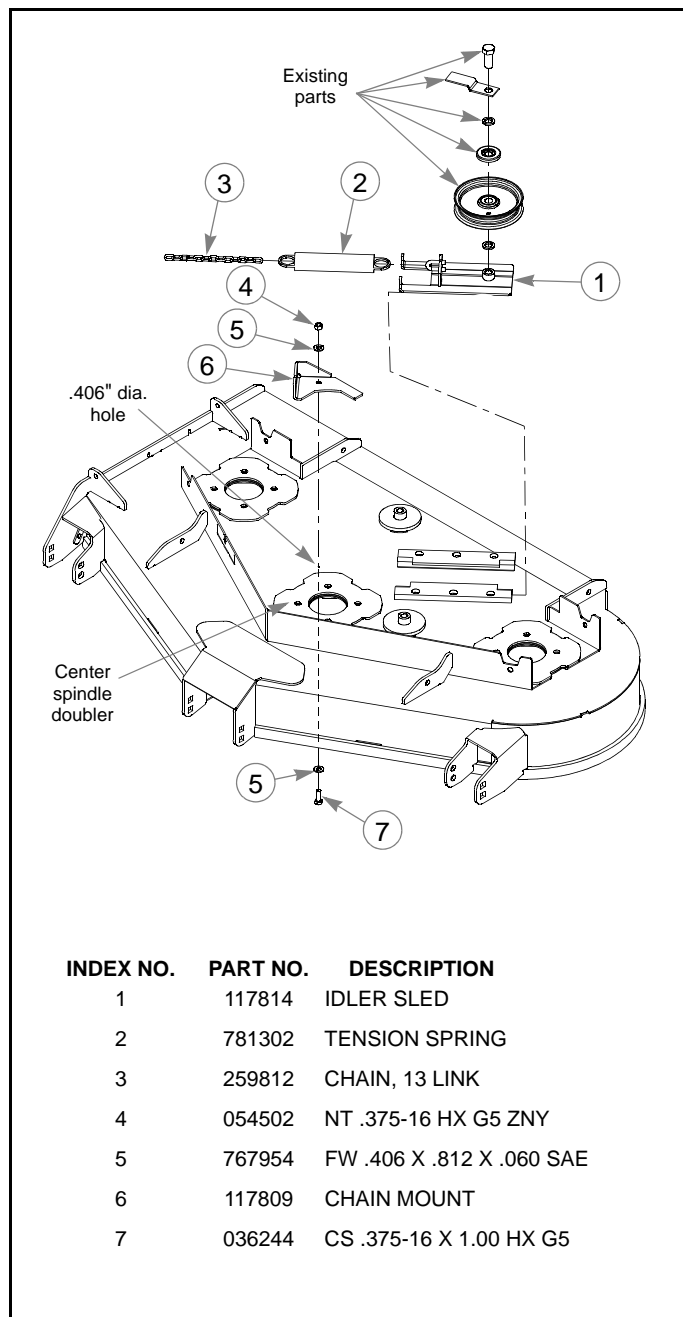
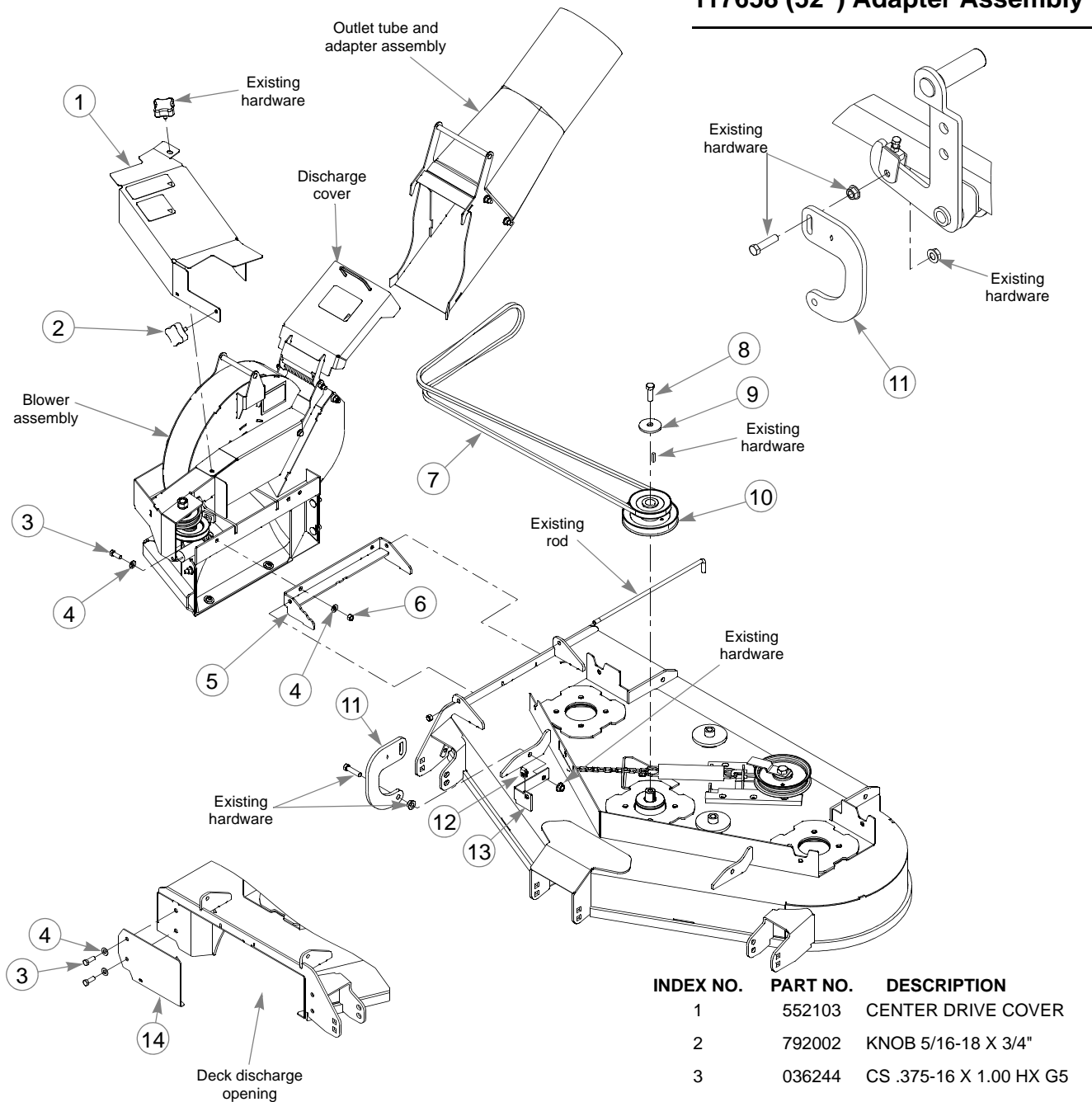


Figure 3-2

WARNING

Do not operate the deck without the discharge chute or complete BAC-VAC™ system in place.

117658 (52") Adapter Assembly



INDEX NO.	PART NO.	DESCRIPTION
1	552103	CENTER DRIVE COVER
2	792002	KNOB 5/16-18 X 3/4"
3	036244	CS .375-16 X 1.00 HX G5
4	767954	FW .406 X .812 X .060 SAE
5	117783	BLOWER MOUNT
6	054502	NT .375-16 HX G5 ZNY
7	604728	BELT A SEC 100" EL
8	074252	CS .500-13 X 1.50 HX G5
9	752386	CW .515 X 2.25 X .204 BLK
10	603310	54" DOUBLE DRIVE
11	117791	RIGID LINK
12	601069	CN .312-18 X .20 MAX THK
13	115773	CENTER DRIVE BRACKET
14	117696	BAFFLE
15	117806	52" CUTOUT TEMPLATE (NOT SHOWN)

Figure 3-3

117659 (60") Adapter Assembly

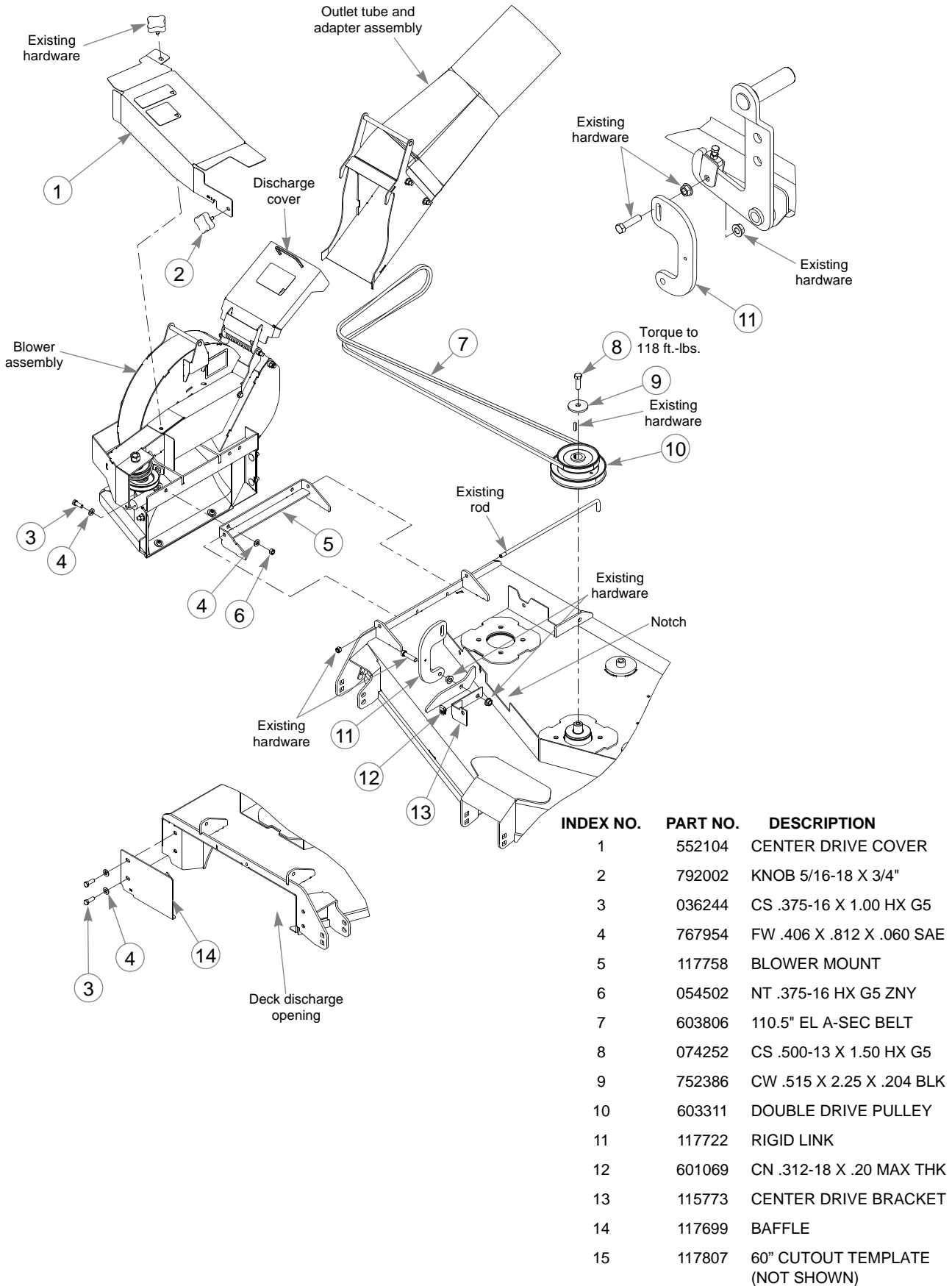


Figure 3-4

117660 (72") Adapter Assembly

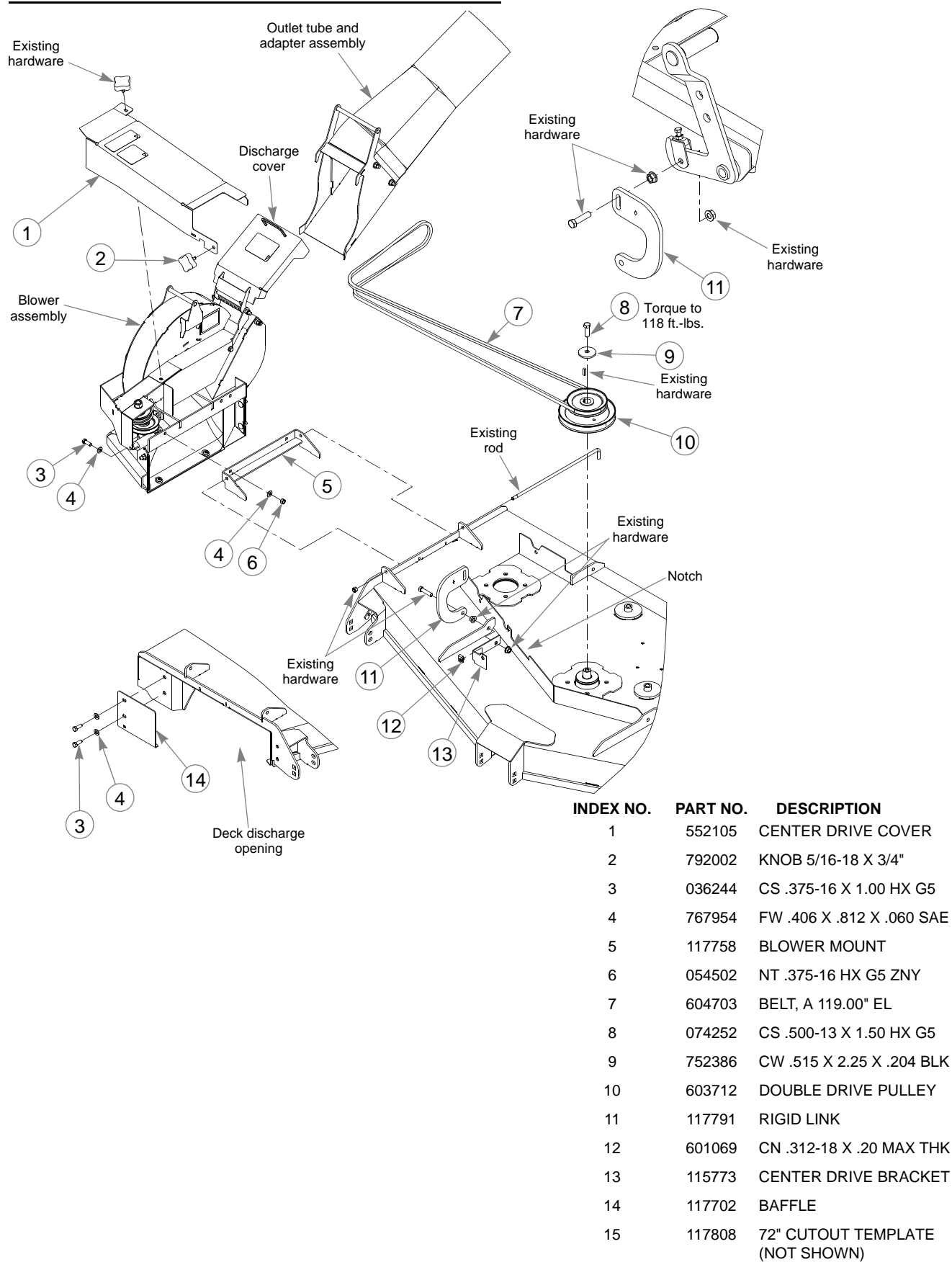


Figure 3-5

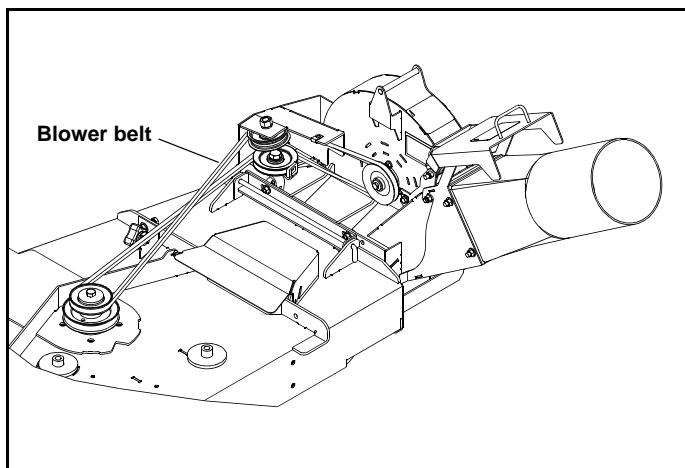


Figure 3-6

Mower Preparation

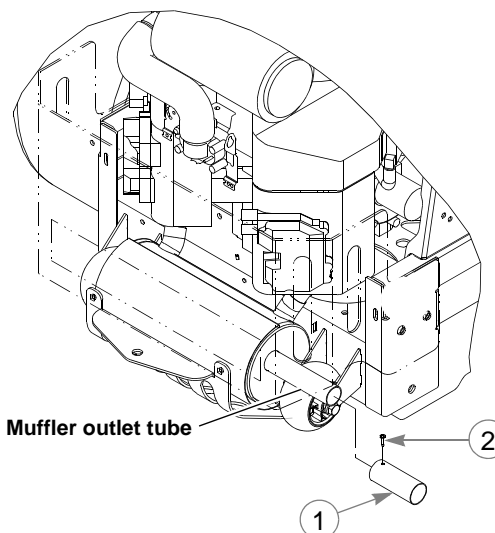


WARNING



Allow the engine and muffler to cool before assembling the unit to the mower.

1. Attach the correct muffler extension to the muffler outlet tube using the self tapping screw shown. Figure 3-7
IMPORTANT: Tailpipe and tailpipe extension become very hot during operation. These parts must not be allowed to contact the catcher shell during operation or while the mower is hot.
2. Remove the two cap screws that attach the left side of the

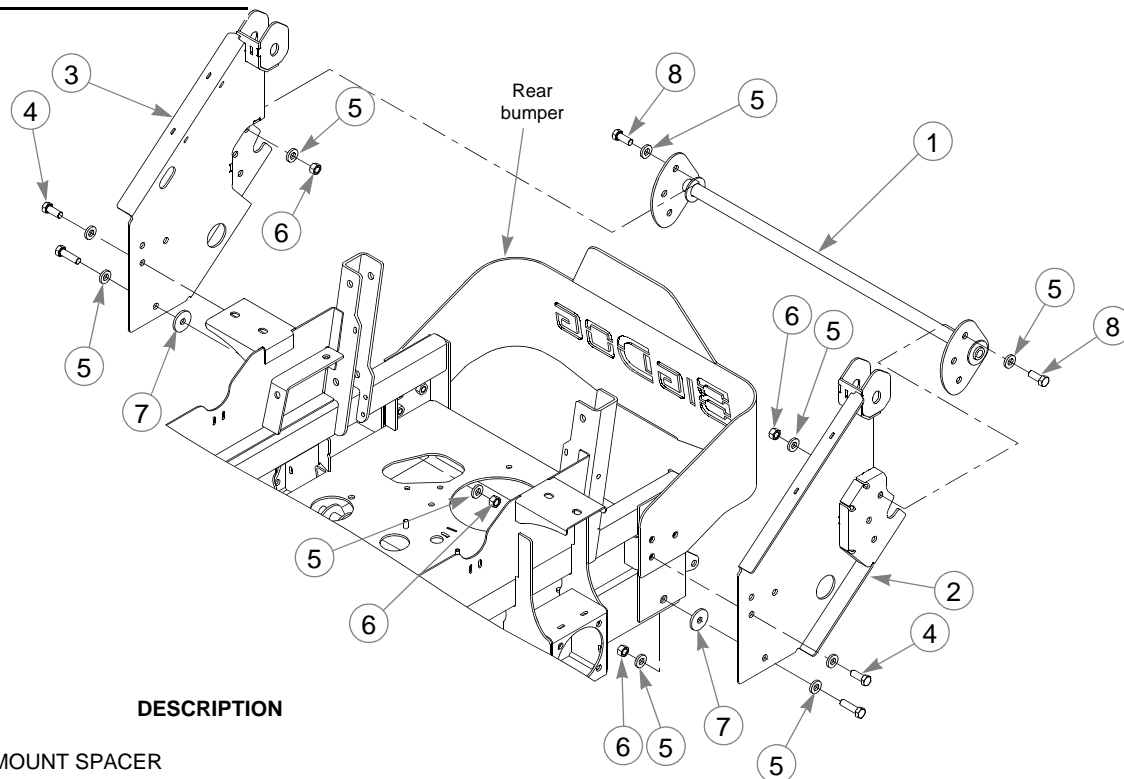


INDEX NO.	PART NO.	DESCRIPTION
1	604576	MUFFLER EXT. 1.5" (KAWASAKI ENGINES)
	604577	MUFFLER EXT. 1.375" (KOHLER ENGINES)
2	769299	SC #10 X.750 PHILLIPS

Figure 3-7

- rear bumper to the mower frame. Figure 3-8
3. Attach the left side mount to the rear bumper and the mower frame using the hardware shown. Figure 3-8
4. Repeat steps 2 & 3 for the opposite side. Figure 3-8
5. Attach the mount spacer to the left and right mounts as shown. Figure 3-8
6. Tighten all hardware.

BAC-VAC™ Mount Assembly



INDEX NO.	PART NO.	DESCRIPTION
1	118243	MOUNT SPACER
2	116739	MOUNT, LS
3	116740	MOUNT, RS
4	017616	CS .500-13 X 1.750 HX G5
5	767962	FW .531 X 1.063 X .090 SAE
6	008193	NT .500-13 HX G5 ZNYC
7	078386	FW .510 X 1.750 X .18 ZNYC
8	705954	CS .500-13 X 1.250 HX G5 ZN

Figure 3-8

Frame Cover Assembly Installation

1. Raise the seat and seat platform to allow access to the

area underneath the seat.

2. The BAC-VAC™ frame harness should be routed on the mower as shown. Figure 3-9

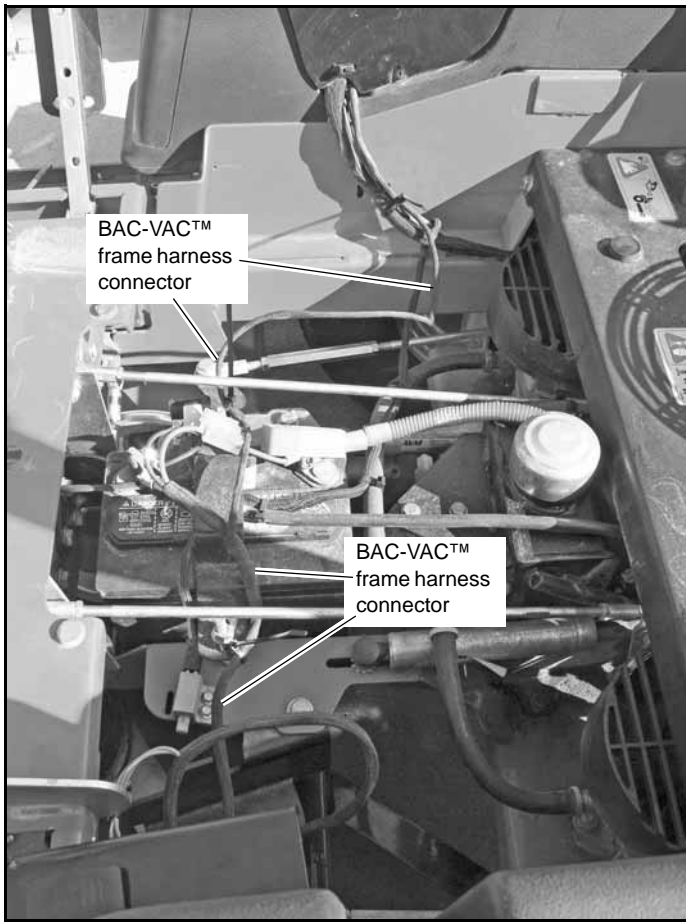


Figure 3-9

3. Remove the mower's control panel.
4. Locate the auxiliary connector body underneath the control panel and remove the cap. Figure 3-10

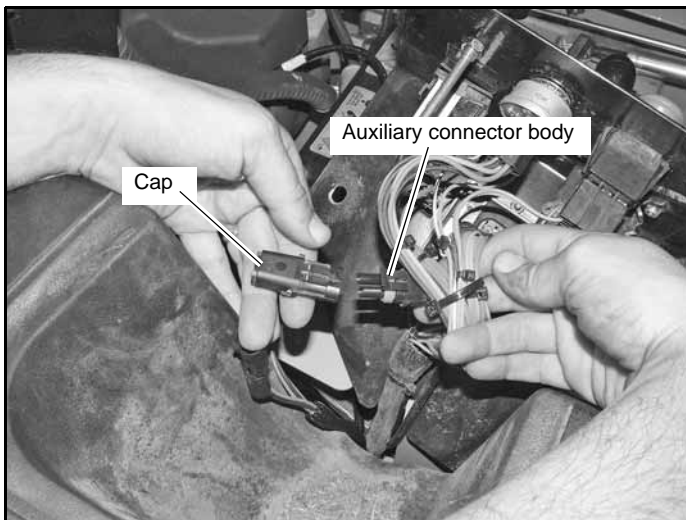


Figure 3-10

5. Plug the BAC-VAC™ frame harness connector into the auxiliary plug. Figure 3-11
6. Secure the BAC-VAC™ frame harness to the main mower harness with a wire tie. Figure 3-12
7. Re-attach the mower control panel. Make sure that the

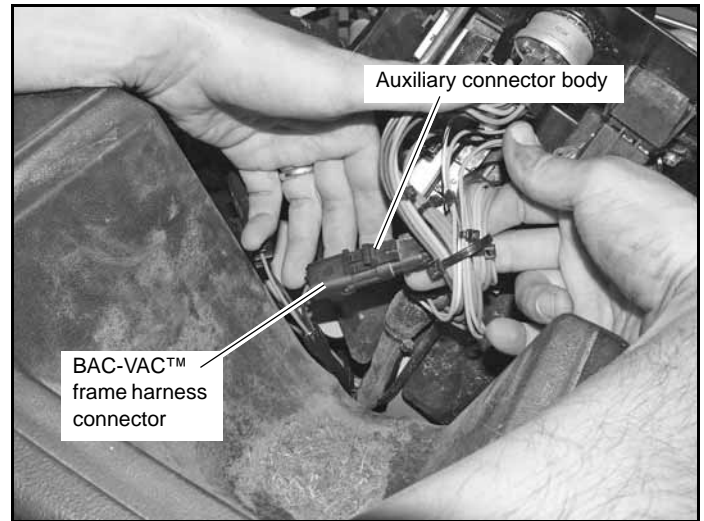


Figure 3-11

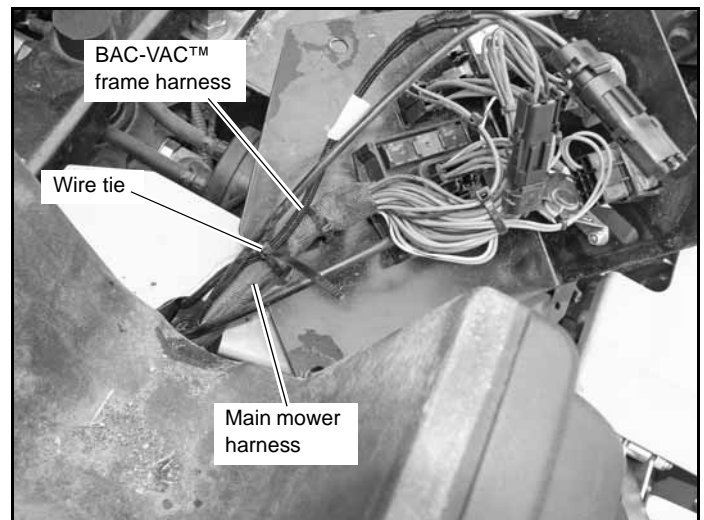


Figure 3-12

wiring harnesses are routed through the slot in the bottom of the control panel correctly. Secure the BAC-VAC™ frame harness to the main mower harness. Figure 3-13

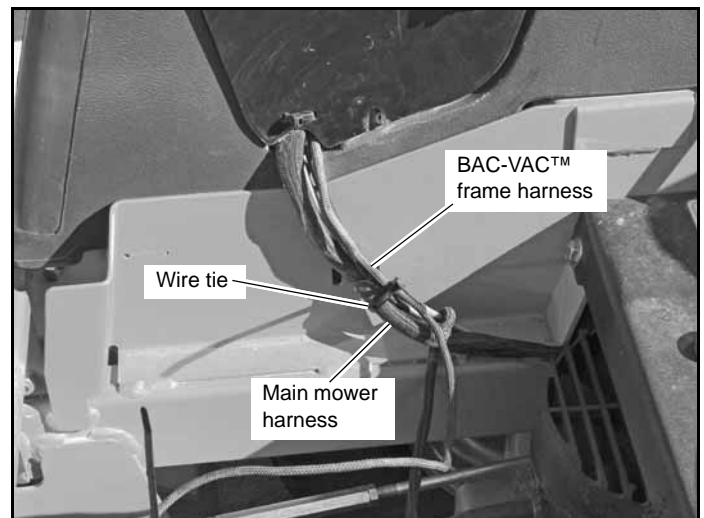


Figure 3-13

8. Route the BAC-VAC™ frame harness as shown and connect the appropriate wires to the battery terminals. Secure the BAC-VAC™ frame harness to the mower using the wire ties as shown. Make sure that none of the harness will come in contact with any moving parts. Figure 3-9

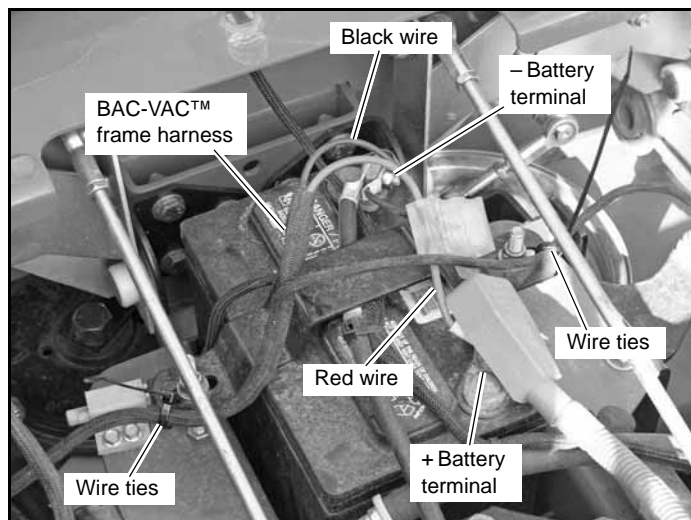


Figure 3-14

9. Attach the three wires on the wiring harness to the BAC-VAC™ switch. Figure 3-15

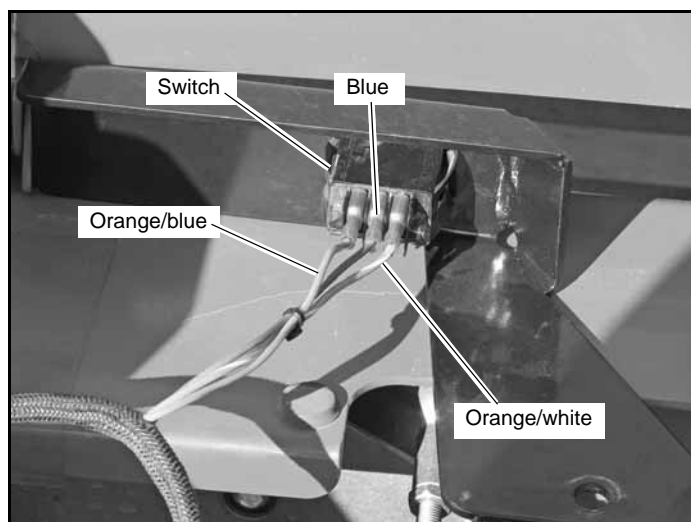


Figure 3-15

10. Attach the BAC-VAC™ control panel to the left side of the mower using the existing hardware. Figure 3-16
11. Route the BAC-VAC™ frame harness along the left side of the mower frame as shown. Secure the harness to the mower using the wire ties as shown. Figure 3-17 & Figure 3-18

Final Connection

1. Park the mower on a flat surface. Always place the deck clutch switch in the disengaged position, place the steering control levers in the park brake position and shut off the ignition switch, and remove the key from the switch. Disconnect the negative battery cable.

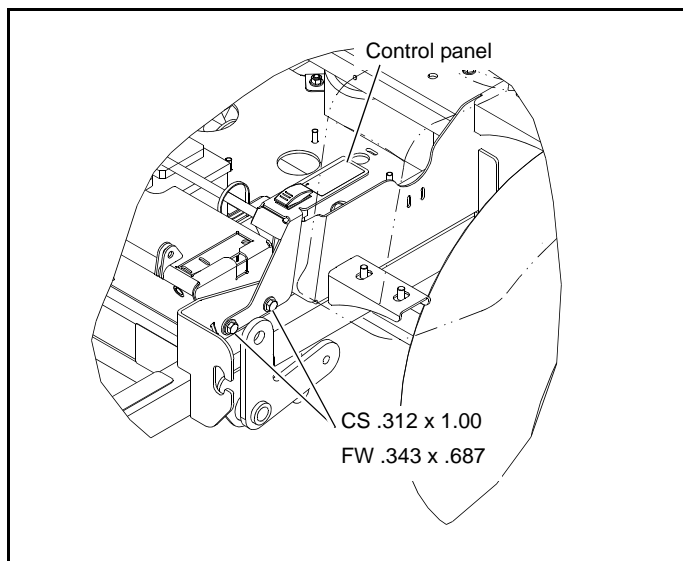


Figure 3-16

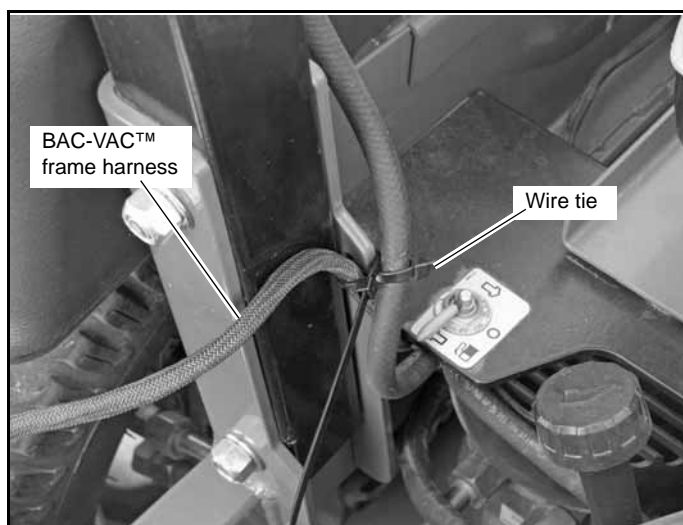


Figure 3-17

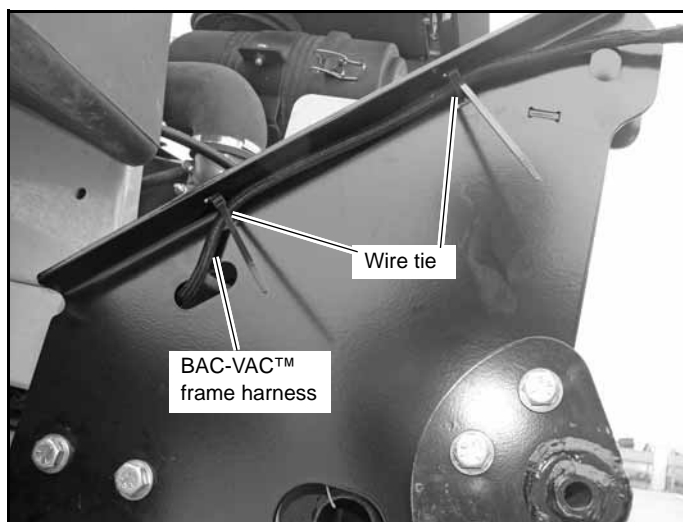


Figure 3-18

2. Roll the BAC-VAC™ to the mower and slide the lower hooks over the rod on the mount tube. Figure 3-20

BAC-VAC™ Assembly

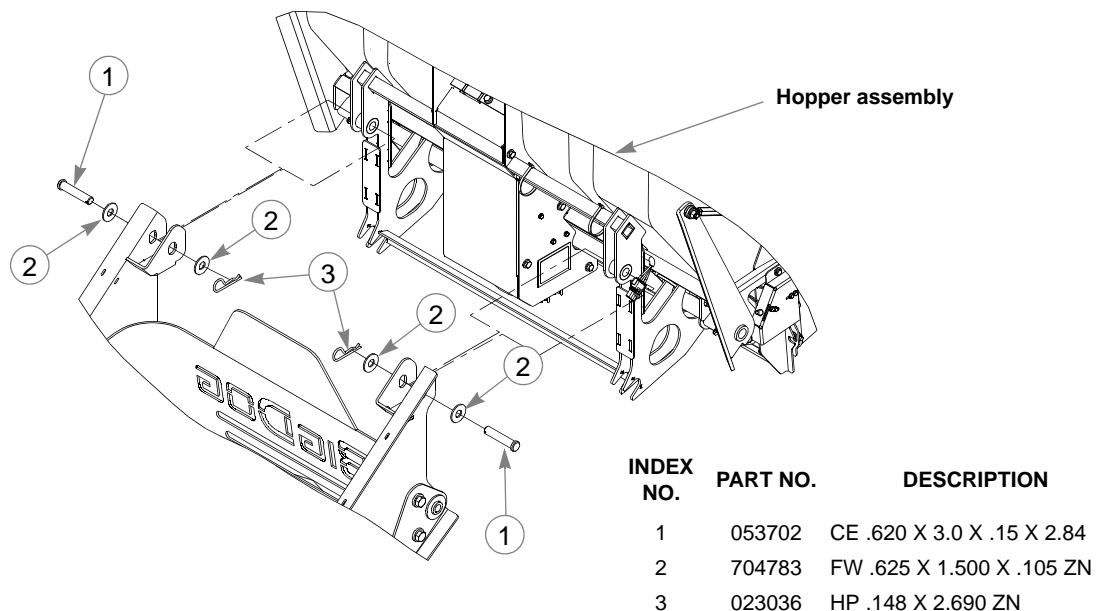


Figure 3-19

NOTE: It is recommended that two people attach the hopper to the mower mounts. One person to roll the hopper into position, slide the lower hooks onto the mount spacer and pivot it into position. The second person to insert the clevis pins, flat washers, and hair pins through the side mount brackets and the BAC-VAC™ mount tubes. Figure 3-19

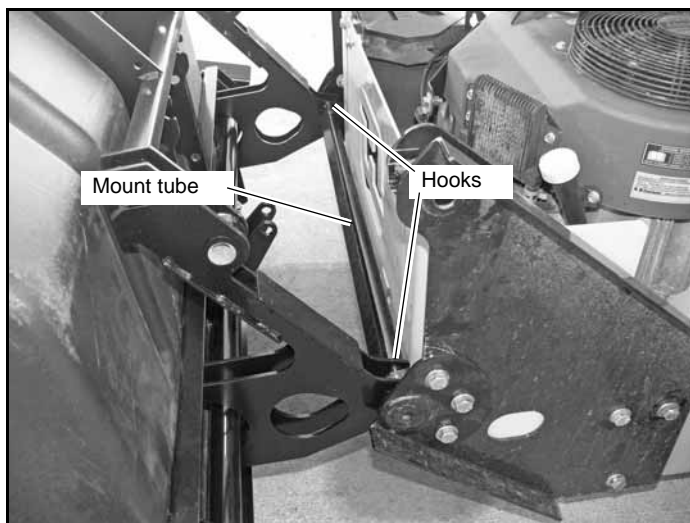


Figure 3-20

3. Connect the BAC-VAC™ frame harness connector body to the hopper's harness connector body. Figure 3-21
4. Raise the discharge cover on the blower housing. Slide the outlet adapter into place on the blower outlet. Secure the discharge cover in place with the discharge cover latching the rod handle of the outlet adapter. Refer to Figure 3-3, Figure 3-4 or Figure 3-5
5. Slide one end of the flex tube onto the blower outlet tube. Figure 3-22

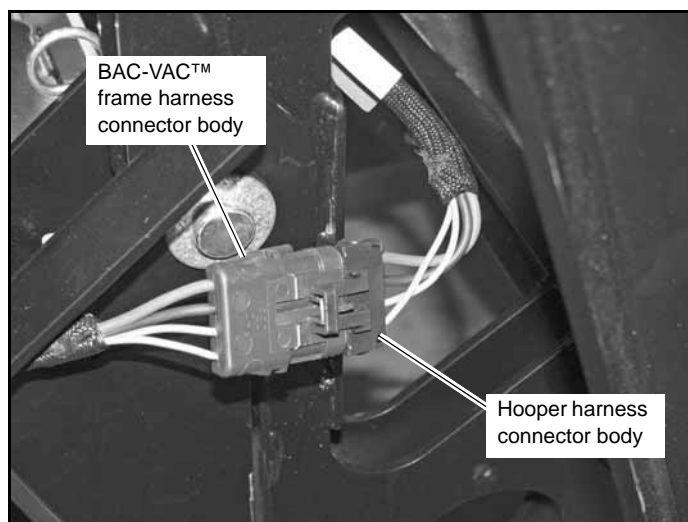


Figure 3-21

6. Slide the other end of the flex tube over the inlet tube. Figure 3-22
7. Attach the counter weight mount to the front of the mower. Figure 3-23
8. Slide the weights vertically onto the mount and lock in place using the weight lock plate and tighten knobs. Figure 3-23
9. Reconnect the negative battery cable.
10. Increase the mower's drive tires' pressure to 16 psi (110 KPa). The drive tires will need to have to the air pressure increased to support the additional weight of the BAC-VAC™ system and when grass clippings are in the hopper.

NOTE: When the BAC-VAC™ system is removed the air pressure in the tires should be decreased to the normal operating range of 8 - 12 psi (55 - 83 KPa).

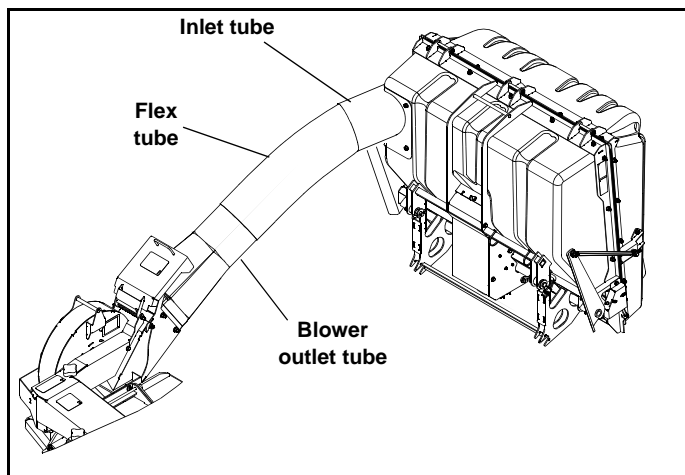
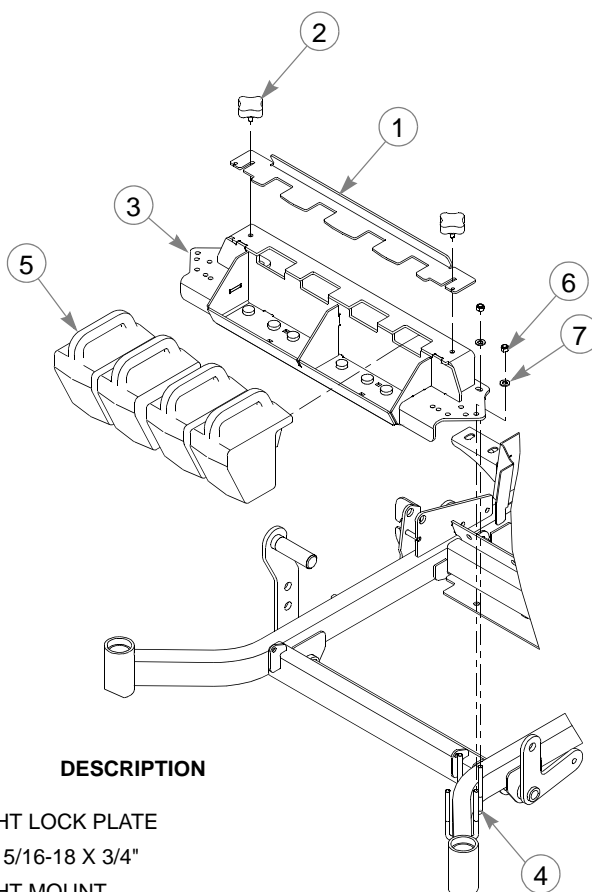


Figure 3-22

Weight Assembly



INDEX NO.	PART NO.	DESCRIPTION
1	118240	WEIGHT LOCK PLATE
2	792002	KNOB 5/16-18 X 3/4"
3	118242	WEIGHT MOUNT
4	604423	UB .375-16 X 2.00 X 4.50 SQ
5	603207	WEIGHT
6	086660	NT .375-16 HXZY NL
7	767954	FW .406 X .812 X .060 SAE

Figure 3-23

OPERATION

Collecting and Vacuum Pickup

Follow normal mower start-up and operating procedures as outlined in the mower's operator's manual. The blower will operate when the mower deck clutch switch is engaged. To stop the blower, return the deck clutch switch to the disengaged position.

Proceed to mow in the normal manner and occasionally glance at the flex tube. When the hopper is full, the speed of debris through the tube will decrease. When the hopper is filled, move the deck clutch switch to the disengaged position and drive the machine to the unloading area.

It is best that the hopper be unloaded before the discharge chute and flex tube areas become clogged. If clogging occurs, it will be necessary to clear the blower chute and flex tube areas of all material before starting to mow again.



WARNING



Make certain the engine is turned off, the steering control levers are in the park brake position and the ignition key is removed from the ignition switch and be sure blades have stopped before clearing the blower chute and flex tube areas.



WARNING



Never place hands or feet into the discharge area. The impeller is relatively close to the housing and will cause severe injury. Use a probe to clean debris from blower housing discharge area. The discharge cover must remain closed whenever the blower chute is removed.



WARNING



Never engage the mower deck unless the BAC-VAC™ flex tube is in place on the BAC-VAC™ inlet tube and inserted onto blower chute outlet tube.



WARNING



Prevent objects being thrown and the accumulation of grass clippings and other debris in the engine compartment by NEVER operating the mower deck unless:

- BAC-VAC™ is in the catching position.
- Flex tube is in place on the blower chute and on the BAC-VAC™ inlet tube.
- And the hopper door is fully closed.

Unloading the BAC-VAC™



WARNING



Make certain the deck clutch switch is in the disengaged position before unloading.

The BAC-VAC™ is designed to dump the load in a designated area on the ground while the mower is stationary.

To dump the BAC-VAC™, place the steering control levers in the park brake position to prevent accidental mower movement or engine cutting in and out.

NOTE: The mower's ignition switch must be in the "ON" position to open or close the hopper door.



WARNING



Never approach the BAC-VAC™ hopper while the mower's ignition switch is in the "ON" position.

Hold the BAC-VAC™ operating switch in the "open" position until the hopper door comes to a stop. Keep the hopper door open until all of the clippings have been discharged from the hopper. Then close the hopper door by holding the operating switch in the "closed" position until the hopper door has closed all the way. The deck clutch switch may then be engaged to continue mowing.



WARNING



Never work on the blower assembly or the mower deck when the mower engine is running.

Converting To Side Discharge Mode

1. Park the mower on a flat surface. Turn the engine off, place the steering control levers in the park brake position and remove the ignition key. Be sure the blades have stopped before dismounting from the mower.
2. Remove the flex tube from the BAC-VAC™ inlet tube and blower outlet tube. Figure 4-1
3. Remove the blower outlet tube from the blower assembly. Figure 4-1
4. Remove the blower belt cover from the deck. Figure 4-1
5. Release the tension from the blower drive belt and remove it. Figure 4-2
NOTE: It is not necessary to remove the double pulley on the deck spindle.
6. Remove the pin that connects the blower to the discharge chute bracket tabs and remove the blower housing. Figure 4-2
7. Assemble the torsion spring, original discharge chute and pin to the bracket tabs. Make sure the torsion spring is

assembled as shown so that it applies pressure to the discharge chute and keeps it in the down position. Figure 4-3

8. Remove the blower baffle and replace it with the right side adjustable baffle that was provided with the deck. Figure 3-3, Figure 3-4 & Figure 3-5
9. Remove the BAC-VAC™ from the rear of the machine. (See *Removing the BAC-VAC™* section below.)

NOTE: It is not necessary to remove the BAC-VAC™ frame that is attached to the rear of the mower.

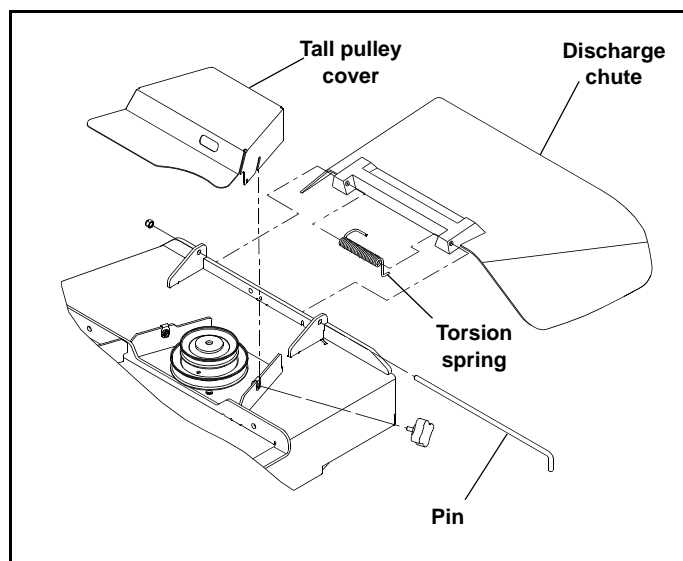


Figure 4-3

Removing the BAC-VAC™

Use the following procedure when removing the BAC-VAC™ from the mower.

1. Park the mower on a flat surface. Turn the engine off, place the steering control levers in the park brake position and remove the ignition key. Be sure the blades have stopped before dismounting from the mower.
2. Disconnect the BAC-VAC™ frame harness from the hopper's wire harness.
3. Remove the flex tube from the BAC-VAC™ inlet tube. Figure 4-1
4. Unpin the BAC-VAC™ assembly from the side mount brackets and pivot it until the lower hooks clear the mount spacer. Figure 4-4

WARNING

Never operate the mower deck with the side deflector damaged, altered, removed or in raised position, except when the entire BAC-VAC™ attachment or mulching system is being used.

WARNING

Always operate with complete BAC-VAC™, mulching system or side discharge chute in place and in the lowest position.

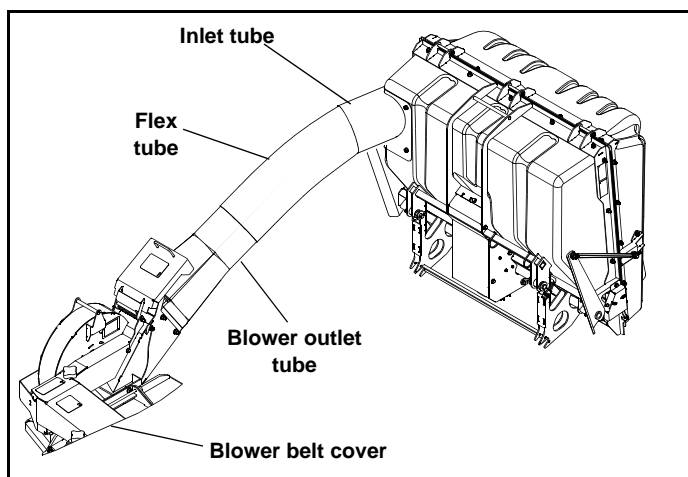


Figure 4-1

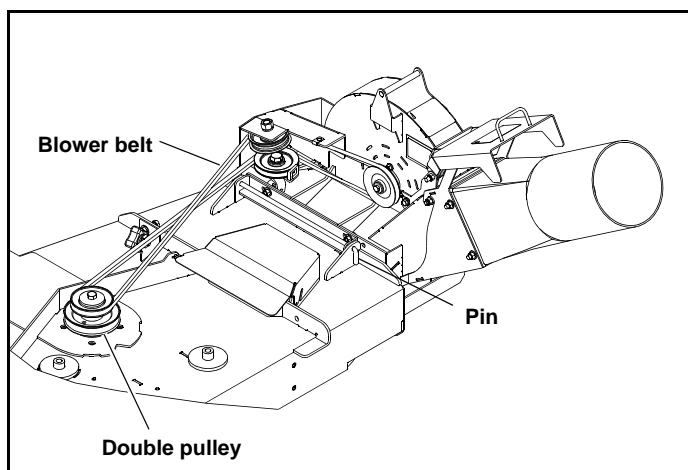


Figure 4-2

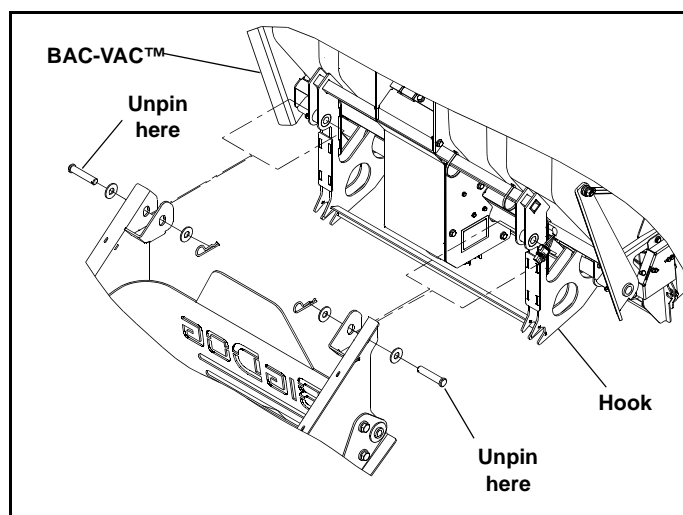


Figure 4-4

NOTE: It is recommended that two people remove the hopper from the mower mounts. The first person to hold the hopper in place while the second person removes the clevis pins, flat washers, and hair pins from the side mount brackets and the BAC-VAC™ mount tubes. The first person will then pivot the hopper away from the side

mount brackets, slide the lower hooks off the mount tube and roll it away from the mower.

5. Re-insert the latching pins into frame mount for storage. Secure in place with the hair pins. Tuck the BAC-VAC™ frame harness under the left side latching pin for protection. Figure 4-5
6. Roll the BAC-VAC™ away from the mower.

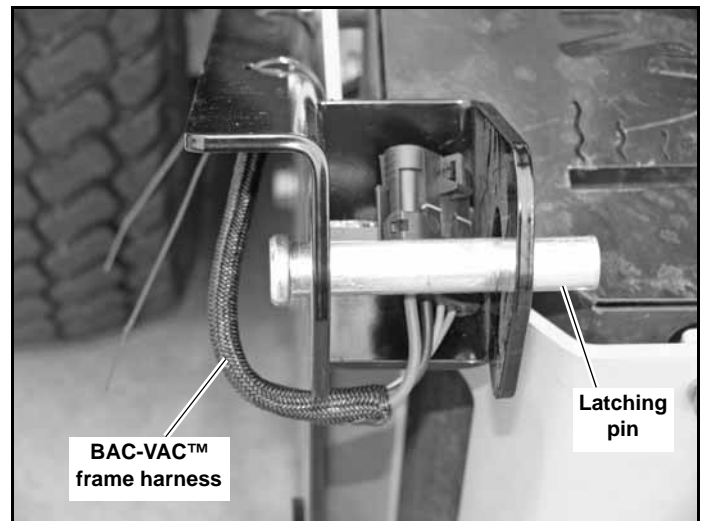


Figure 4-5

MAINTENANCE & STORAGE

Blower Housing and Flex Tube Maintenance



WARNING



Never work on the blower assembly or mower deck when the engine is running.



WARNING



Clean flammable material from the machine. Prevent fires by keeping the engine compartment, top of the deck, exhaust area, battery, hydraulic lines, fuel line, fuel tank and operator's station clean of accumulated trash, grass clippings, and other debris. Always clean up spilled fuel and oil.

The blower assembly, flex tube and blower outlet tube (Figure 5-1) should be kept clean and free of any accumulation of clippings or other obstructions. Occasional clogging may also occur when working in heavy or wet grass.



WARNING



Never place hands or feet into the blower chute. There is an impeller located inside the housing that will cause severe injury. Use a probe to clear debris from blower chute.



WARNING



Never operate the mower deck with side deflector damaged, altered, removed or in raised position, except when the entire BAC-VAC™ or mulching system is being used.



WARNING



Prevent objects being thrown and the accumulation of grass clippings and other debris in engine compartment by NEVER operating mower deck unless:

- BAC-VAC™ is in the catching position.
- Flex tube is in place on the blower chute and on the BAC-VAC™ inlet tube.
- And the hopper door is fully closed.

To service the blower housing, remove the blower belt cover from the top of the deck and blower housing.

To service the flex tube, remove the tube from the unit. The tube can be cleaned by using soapy water and washing the inside of the tube with a pressure washer. Rinse with water.

To clean the hopper, hand wash with soap and water; rinse with clean water.

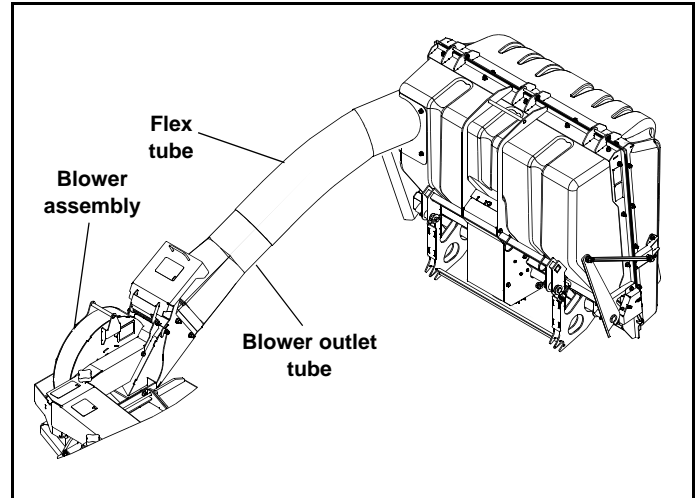


Figure 5-1

Blower Drive Belt

The blower drive belt (Figure 5-2) is located under the blower belt cover. This belt is spring tensioned and should not need adjustment.

To inspect or replace the belt, remove the blower belt cover from the top of the deck and the blower housing.

When belt replacement becomes necessary, check the condition of the pulleys. Clean the grooves and check for excessive wear. A new belt should not run against the bottom of groove. If it does bottom out, the pulley needs replacing.

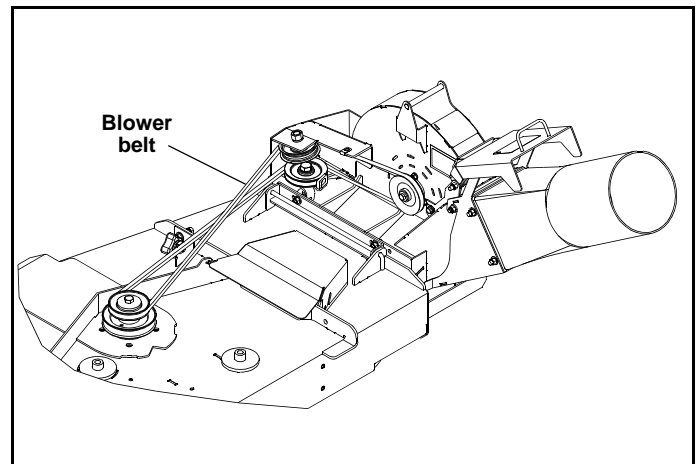


Figure 5-2

BAC-VAC™ Hopper

Use a pressure washer to clean the inside and outside of the hopper.

NOTE: Do not spray the linear actuator with the pressure washer.

It will be necessary to **lubricate the three grease points** shown in Figure 5-3 every 40 hours or after every power washing. **NOTE:** It will be necessary to remove the actuator

cover to access the center grease zerk.

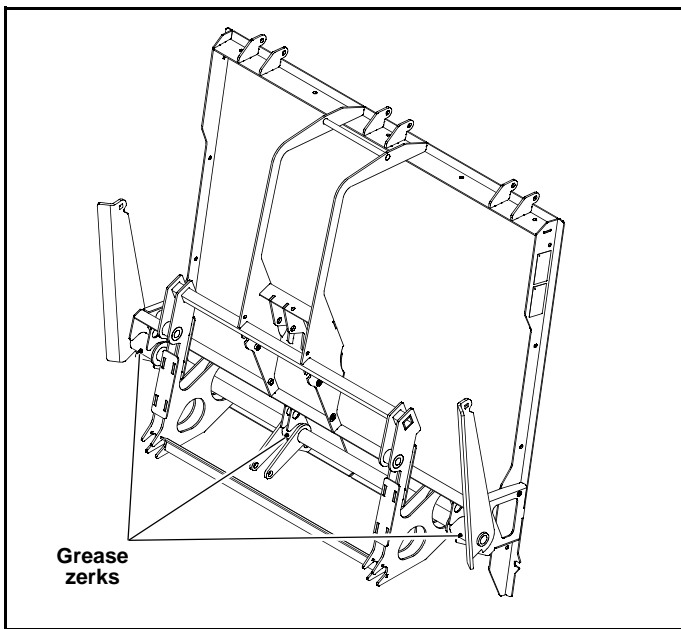


Figure 5-3

BAC-VAC™ Hopper Switch Adjustment

Occasionally it may be necessary to adjust the sensor switches on the hopper door. These switches, when adjusted properly, make sure that the hopper door is closing and sealing properly.

1. Ensure that the BAC-VAC™ is fully mounted and that the hopper wire harness and the mower frame harness are connected.

2. With the hopper door closed and the ignition switch in the "ON" position, press the control switch on the mower so that the door opens.

Allow the door to open fully. If the actuator makes a ratcheting sound before the door stops moving, then the angled sensor switch needs to be adjusted so that more of the plunger is exposed out of the switch's control body. The plunger depth is adjusted by loosening the two screws, repositioning the switch body, and then tightening the screws.

Repeat the test and adjustment until the door stops its opening motion before the actuator ratchets.

3. With the door open, press the switch on the mower so that the door closes.

The sensor switch should have a .5 second delay. Allow the door to close. The door should close and compress the door/shell joint and the actuator should ratchet and after approximately .5 seconds the ratcheting should stop.

If the actuator does not ratchet then the horizontal sensor switch needs to be adjusted so that less of the plunger is exposed out of the switch's control body.

If the actuator does not stop ratcheting then the horizontal sensor switch needs to be adjusted so that more of the plunger is exposed out of the switch's control body.

4. After the switches are correctly set, open the door and adjust the two turnbuckles by tightening them by two complete revolutions. Tighten the jam nuts on the turnbuckles. Figure 5-5

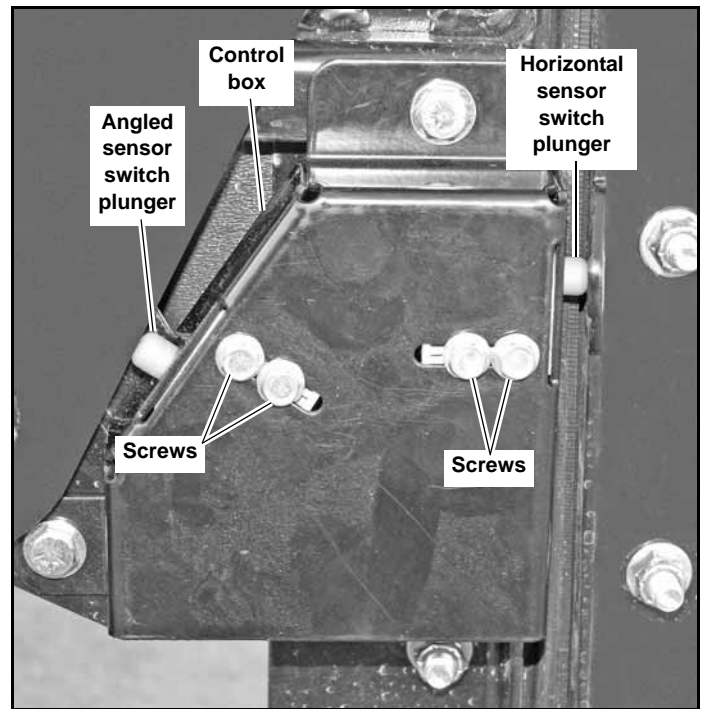


Figure 5-4

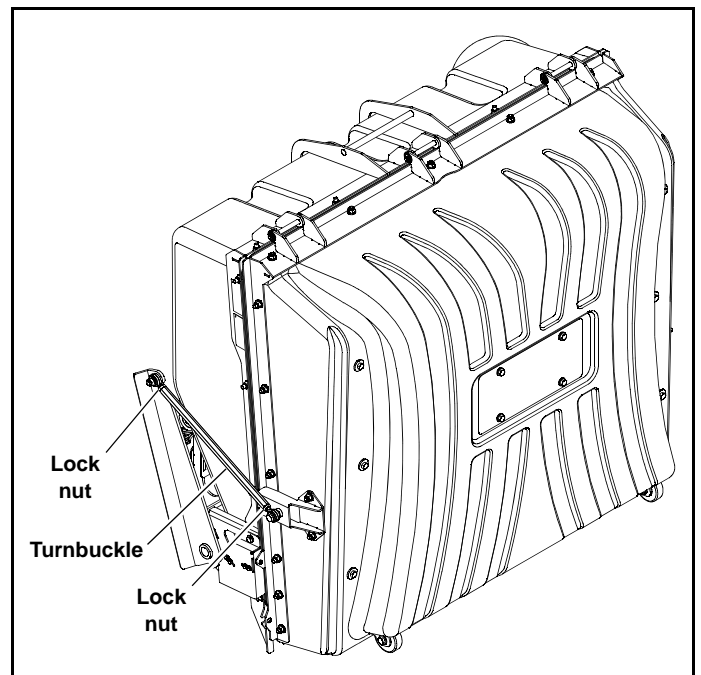


Figure 5-5

Blower Impeller

The blower impeller shaft bearings do not require lubrication.



WARNING



Normal wear can cause the impeller and edges of the blower to become sharp. Wear gloves and use caution when servicing the blower.

Storage

When your mower is to sit idle for a period of time, scrape and power wash to remove the grass material from inside the BAC-VAC™.

Check for loose or missing hardware, tighten or replace. Also check for badly worn or damaged parts, consider replacing them at this time. Touch up chipped paint areas; your dealer has aerosol spray paint available.

Parts Manual

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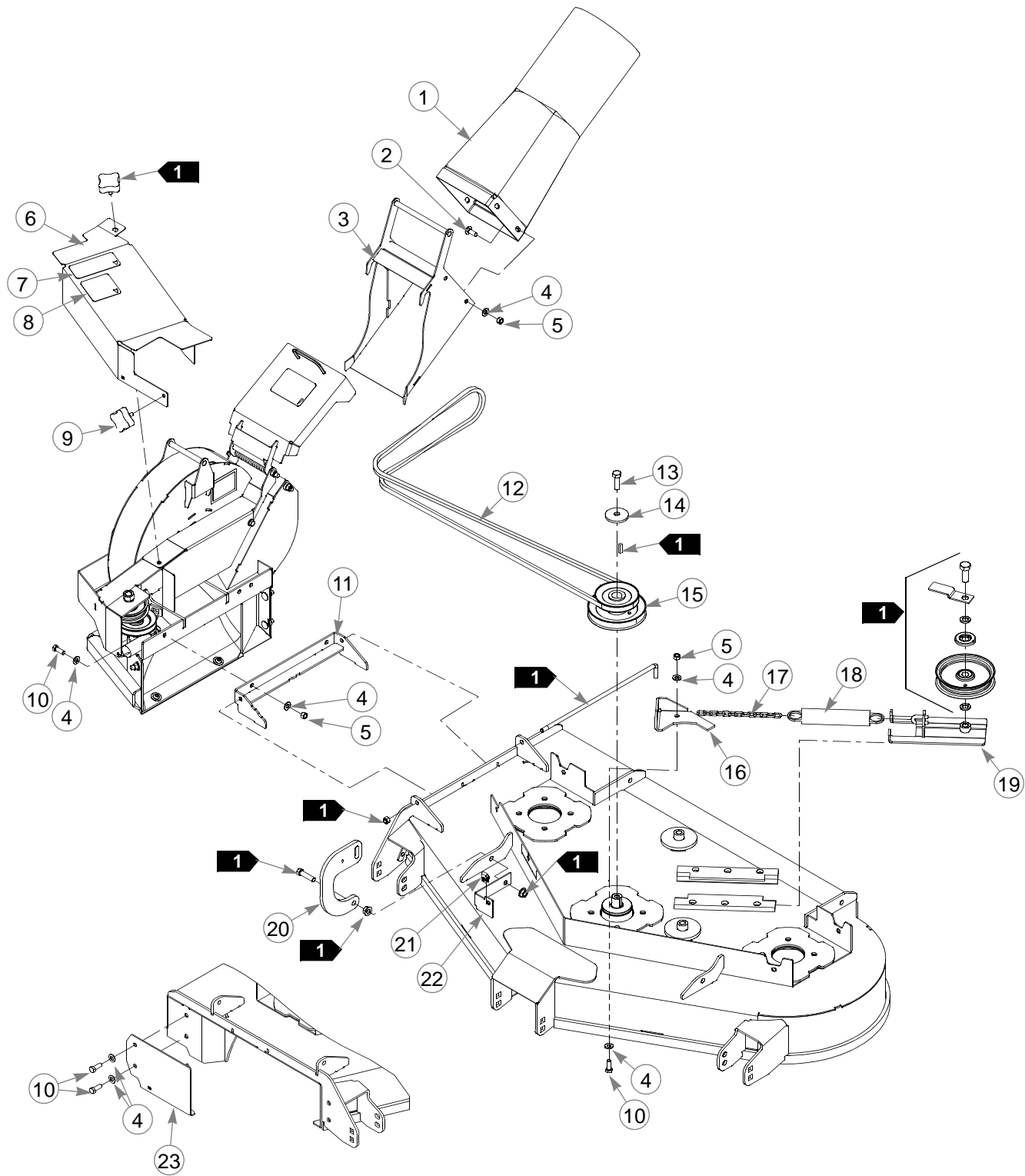
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52" Deck Adapter



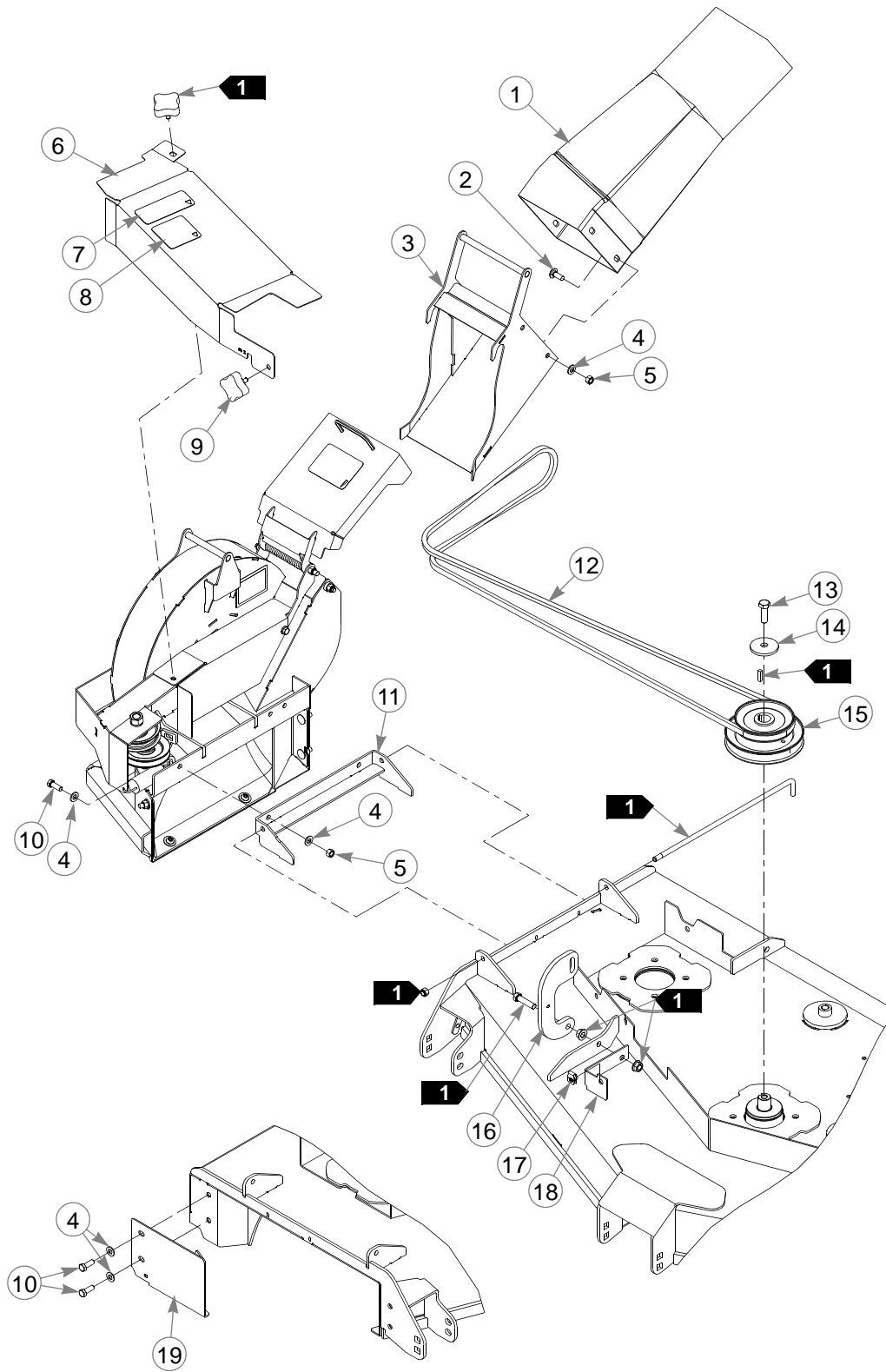
52" Deck Adapter

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	603213	1	BLOWER OUTLET TUBE
2	025395	4	CB .375-16 X 1.00 G5 ZNY
3	114066	1	OUTLET ADAPTER
4	767954	12	FW .406 X .812 X .060 SAE
5	054502	7	NT .375-16 HX G5 ZNY
6	552103	1	CENTER DRIVE COVER (WITH DECALS)
7	601624	1	DISCHARGE CHUTE DECAL
8	601837	1	DECK DANGERS DECAL
9	792002	1	KNOB 5/16-18 X 3/4"
10	036244	5	CS .375-16 X 1.00 HX G5
11	117783	1	BLOWER MOUNT
12	604728	1	BELT A SEC 100" EL
13	074252	1	CS .500-13 X 1.50 HX G5
14	752386	1	CW .515 X 2.25 X .204 BLK
15	603310	1	54" DOUBLE DRIVE
16	117809	1	CHAIN MOUNT
17	259812	1	CHAIN, 13 LINK
18	781302	1	TENSION SPRING
19	117814	1	IDLER SLED
20	117791	1	RIGID LINK
21	601069	1	CN .312-18 X .20 MAX THK
22	115773	1	CENTER DRIVE BRACKET
23	117696	1	BAFFLE

NOTES:

1. Use existing parts and hardware.

60" Deck Adapter



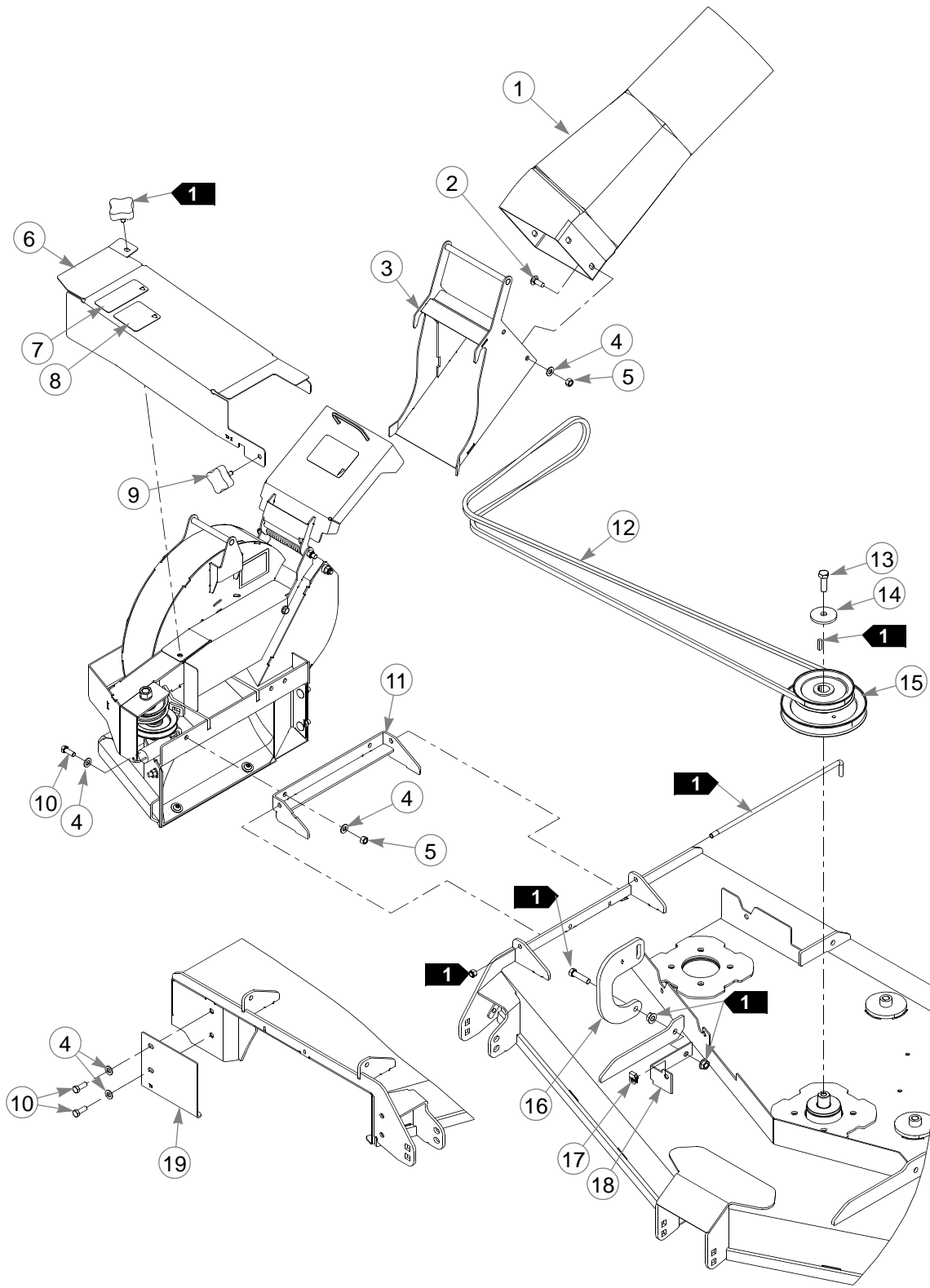
60" Deck Adapter

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	603213	1	BLOWER OUTLET TUBE
2	025395	4	CB .375-16 X 1.00 G5 ZNY
3	114066	1	OUTLET ADAPTER
4	767954	10	FW .406 X .812 X .060 SAE
5	054502	6	NT .375-16 HX G5 ZNY
6	552104	1	CENTER DRIVE COVER (WITH DECALS)
7	601624	1	DISCHARGE CHUTE DECAL
8	601837	1	DECK DANGERS DECAL
9	792002	1	KNOB 5/16-18 X 3/4"
10	036244	4	CS .375-16 X 1.00 HX G5
11	117758	1	BLOWER MOUNT
12	603806	1	110.5" EL A-SEC BELT
13	074252	1	CS .500-13 X 1.50 HX G5
14	752386	1	CW .515 X 2.25 X .204 BLK
15	603311	1	DOUBLE DRIVE PULLEY
16	117722	1	RIGID LINK
17	601069	1	CN .312-18 X .20 MAX THK
18	115773	1	CENTER DRIVE BRACKET
19	117699	1	BAFFLE

NOTES:

1. Use existing parts and hardware.

72" Deck Adapter



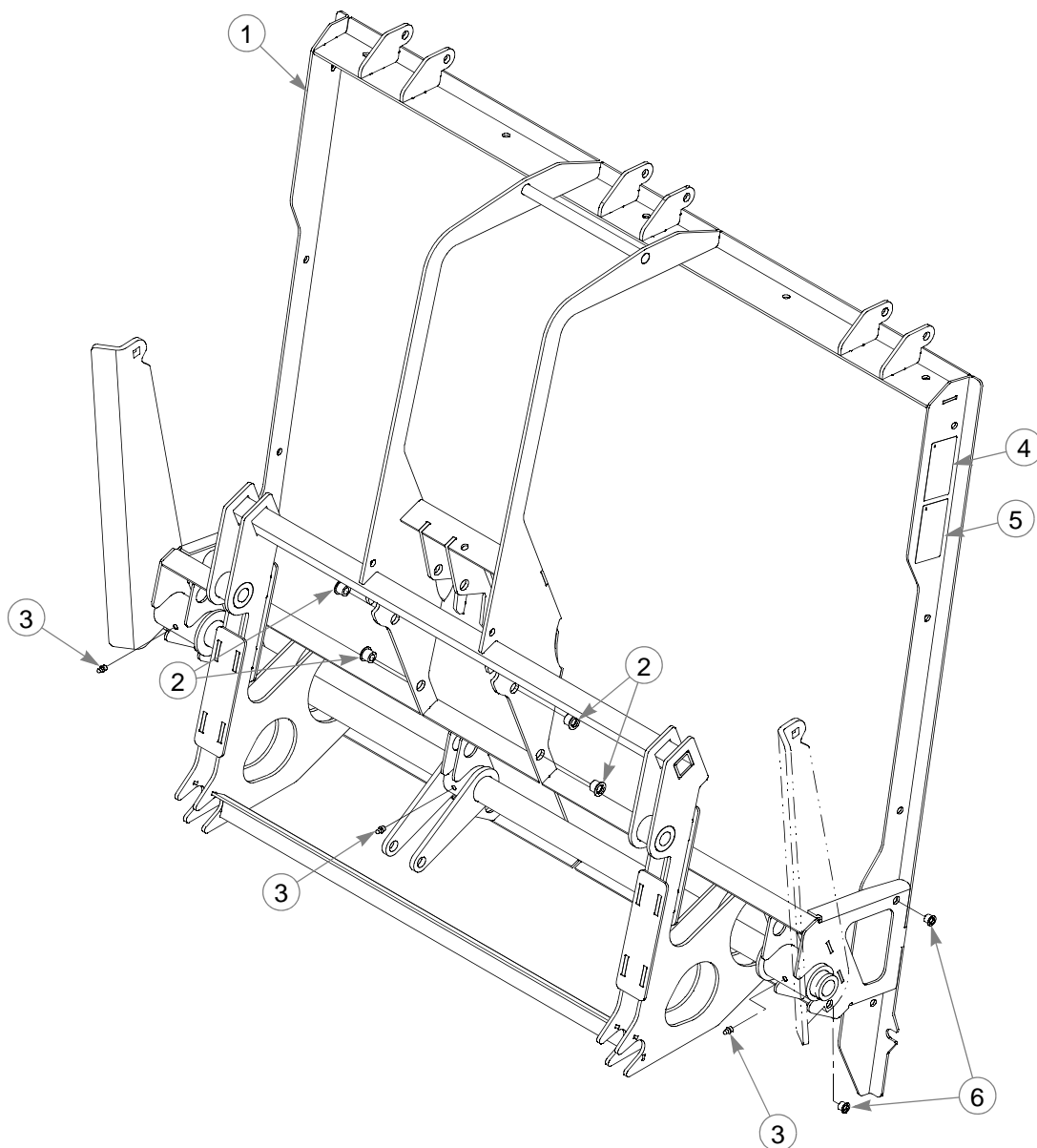
72" Deck Adapter

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	603213	1	BLOWER OUTLET TUBE
2	025395	4	CB .375-16 X 1.00 G5 ZNY
3	114066	1	OUTLET ADAPTER
4	767954	10	FW .406 X .812 X .060 SAE
5	054502	6	NT .375-16 HX G5 ZNY
6	552105	1	CENTER DRIVE COVER (WITH DECALS)
7	601624	1	DISCHARGE CHUTE DECAL
8	601837	1	DECK DANGERS DECAL
9	792002	1	KNOB 5/16-18 X 3/4"
10	036244	4	CS .375-16 X 1.00 HX G5
11	117758	1	BLOWER MOUNT
12	604703	1	BELT, A 119.00" EL
13	074252	1	CS .500-13 X 1.50 HX G5
14	752386	1	CW .515 X 2.25 X .204 BLK
15	603712	1	DOUBLE DRIVE PULLEY
16	117791	1	RIGID LINK
17	601069	1	CN .312-18 X .20 MAX THK
18	115773	1	CENTER DRIVE BRACKET
19	117702	1	BAFFLE

NOTES:

1. Use existing parts and hardware.

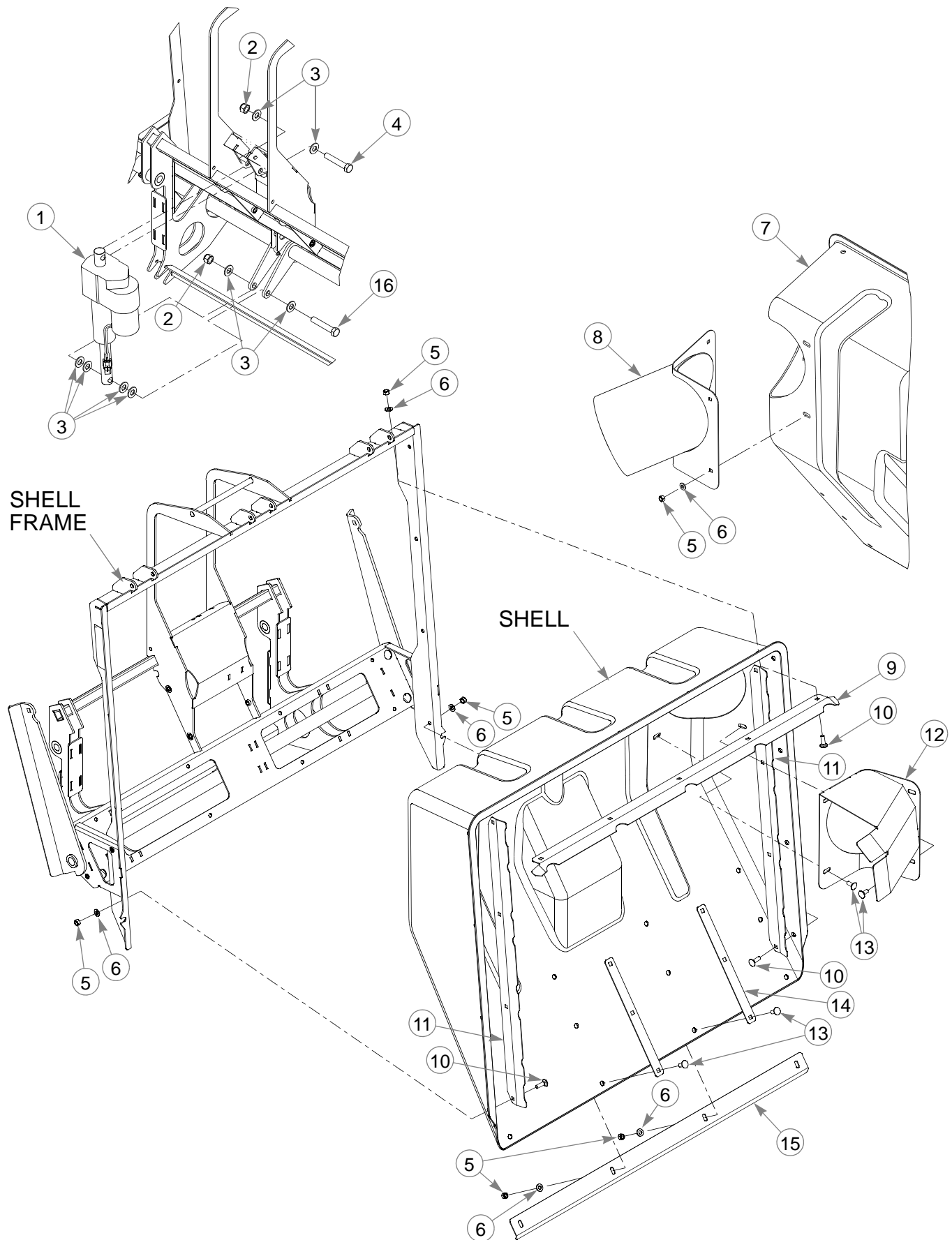
Frame



Frame

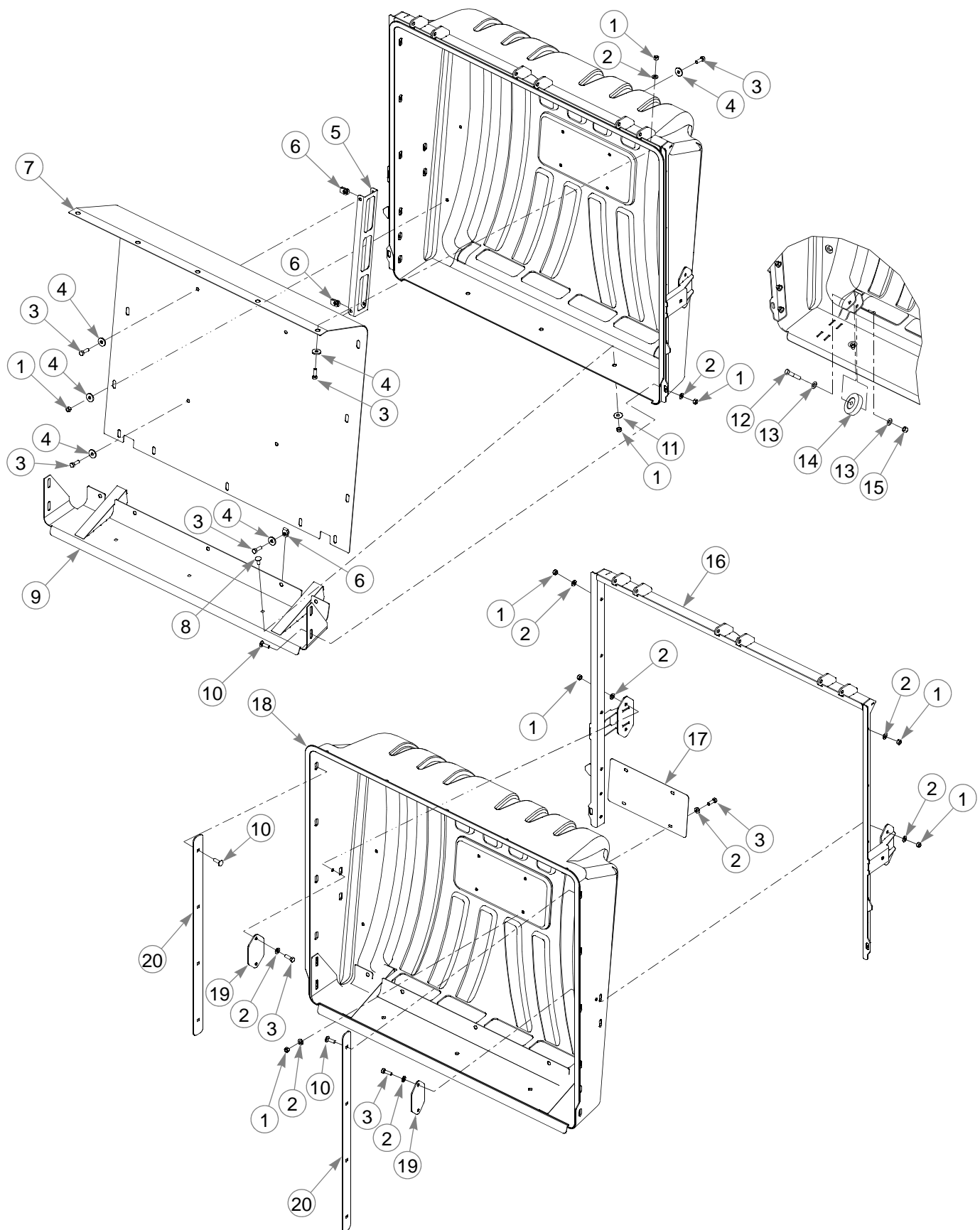
INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	115706	1	FRAME
2	808485	4	RIVET NUT, 5/16-18 THREAD
3	015495	3	GREASE FITTING STRAIGHT
4	603940	2	DFS CATCHER DECAL
5	603967	2	PINCH POINT DECAL
6	808477	2	1/4-20 THREAD RIVET NUT

NOTES:



INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	603794	1	LINEAR ACTUATOR
2	781567	2	NT .500-13 HX G8 ZY NL
3	767962	8	FW .531 X 1.063 X .090 SAE
4	721910	1	CS .500-13 X 2.75 HX G5 Z
5	058776	29	NT .312-18 HXZY NL
6	768523	29	FW .343 X .687 X .051/.080H
7	603796	1	SHELL
8	115875	1	INLET TUBE
9	115785	1	TOP BAFFLE
10	037887	13	CB .312-18 X 1.000 FULL ZN
11	115782	2	SIDE BAFFLE
12	115878	1	INSIDE CORNER
13	016253	16	CB .312-18 X .750 FUL ZN
14	115701	4	VERTICAL SPANNER
15	115740	1	SKID PLATE
16	077859	1	CS .500-13 X 3.250 HX G5

NOTES:

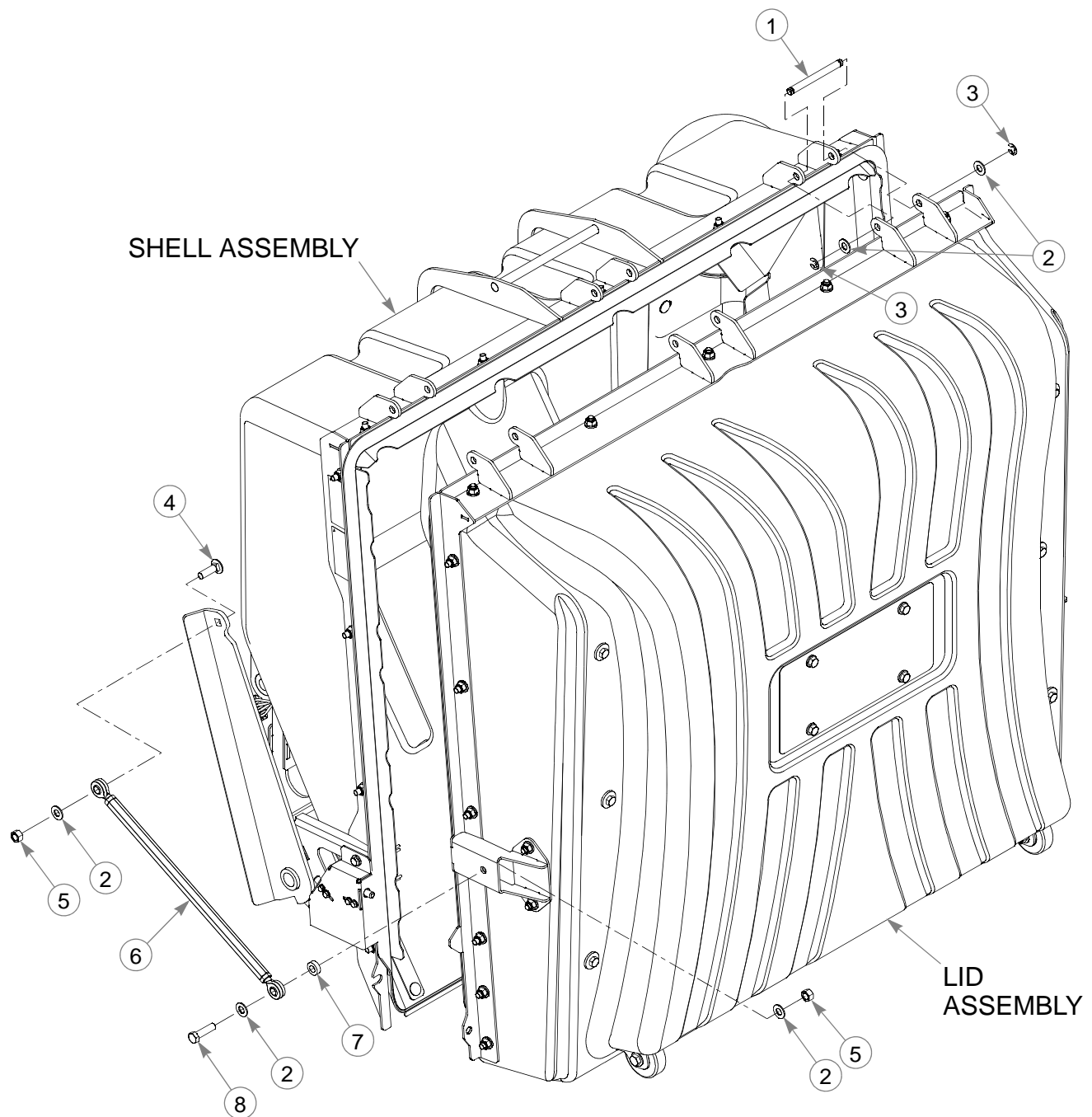


Lid

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	058776	34	NT .312-18 HX ZY NL
2	768523	33	FW .343 X .687 X .051/.080H
3	036236	28	CS .312-18 X 1.00 HX G5
4	712927	26	FW .344 X 1.00 X .12 HRD Z
5	115919	2	SPACER
6	601069	9	CN .312-18 X .20 MAX THK
7	115882	1	SCREEN
8	016253	3	CB .312-18 X .75 FUL ZN
9	115846	1	BOTTOM PLATE
10	037887	12	CB .312-18 X 1.00 FULL ZN
11	079210	3	FW .344 X 1.00 X .06 ZNYC
12	705178	2	CS .375-16 X 1.75 HX G5
13	767954	4	FW .406 X .812 X .060 SAE
14	760181	2	WHEEL
15	086660	2	NT .375-16 HX ZY NL
16	115723	1	LID FRAME
17	604046	1	LICENSE PLATE
18	603797	1	LID
19	116116	2	ANCHOR BRACKET
20	115783	2	SIDE BAFFLE

NOTES:

Linkage

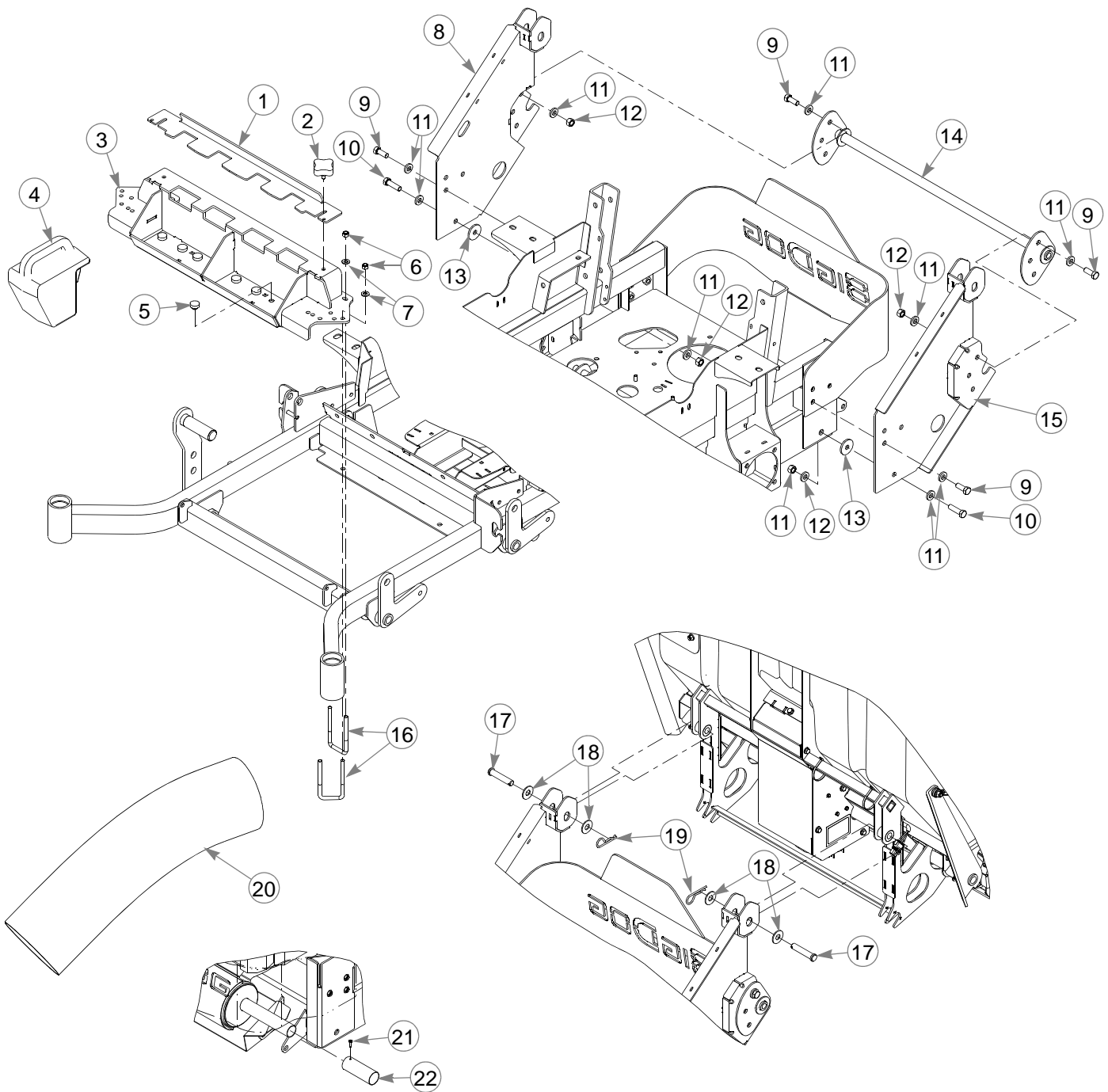


Linkage

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	603879	3	HINGE PIN
2	767954	12	FW .406 X .812 X .060 SAE
3	603332	6	CLIP
4	603113	2	CB .375-13 X 1.25 G5 ZN
5	054502	4	NT .375-16 HX G5 ZNY
6	603878	2	TURNBUCKLE
7	073858	2	FW .406 X .75 X .25 ZNYC
8	005116	2	CS .375-16 X 1.375 HX G5

NOTES:

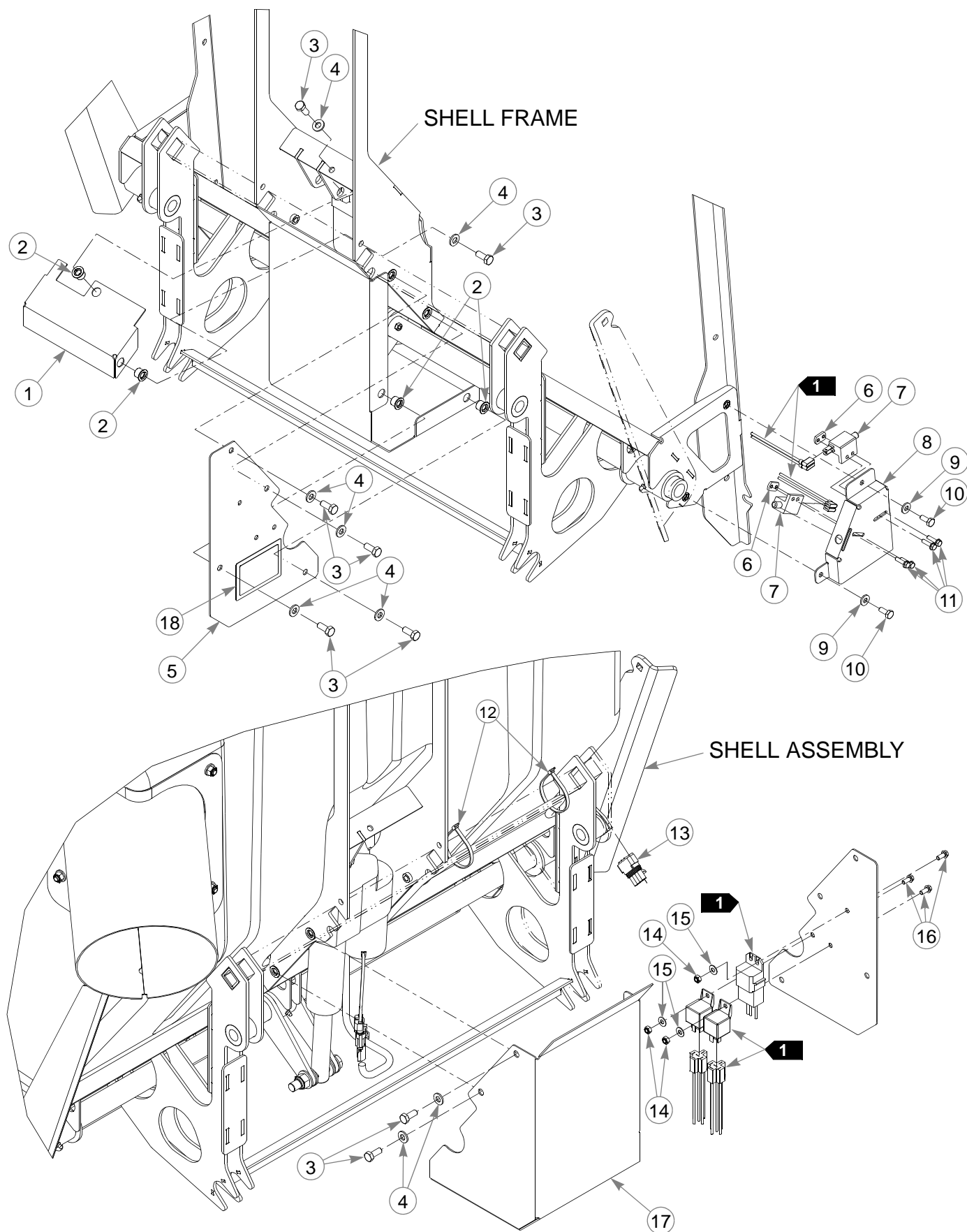
Frame Adapter



Frame Adapter

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	118240	1	PLATE WEIGHT LOCK
2	792002	2	KNOB 5/16-18 X 3/4"
3	118242	1	WEIGHT MOUNT
4	603207	4	WEIGHT
5	781880	8	BUMPER
6	086660	8	NT .375-16 HX ZY NL
7	767954	8	FW .406 X .812 X .060 SAE
8	116740	1	RS MOUNT
9	705954	12	CS .500-13 X 1.25 HX G5 ZN
10	017616	2	CS .500-13 X 1.75 HX G5
11	767962	22	FW .531 X 1.063 X .090 SAE
12	008193	8	NT .500-13 HX G5 ZNYC
13	078386	2	FW .510 X 1.75 X .18 ZNYC
14	118243	1	MOUNT SPACER
15	116739	1	LS MOUNT
16	604423	4	UB .375-16 X 2.00 X 4.50
17	053702	2	CE .620 X 3.0 X .15 X 2.84
18	704783	4	FW .625 X 1.50 X .105 ZN
19	023036	2	HP .148 X 2.69 ZN
20	603356	1	8" CLEAR FLEX TUBE
21	769299	1	SC #10 X .750 PHILLIPS T
22	604577	1	MUFFLER EXTENSION 1.375"

NOTES:



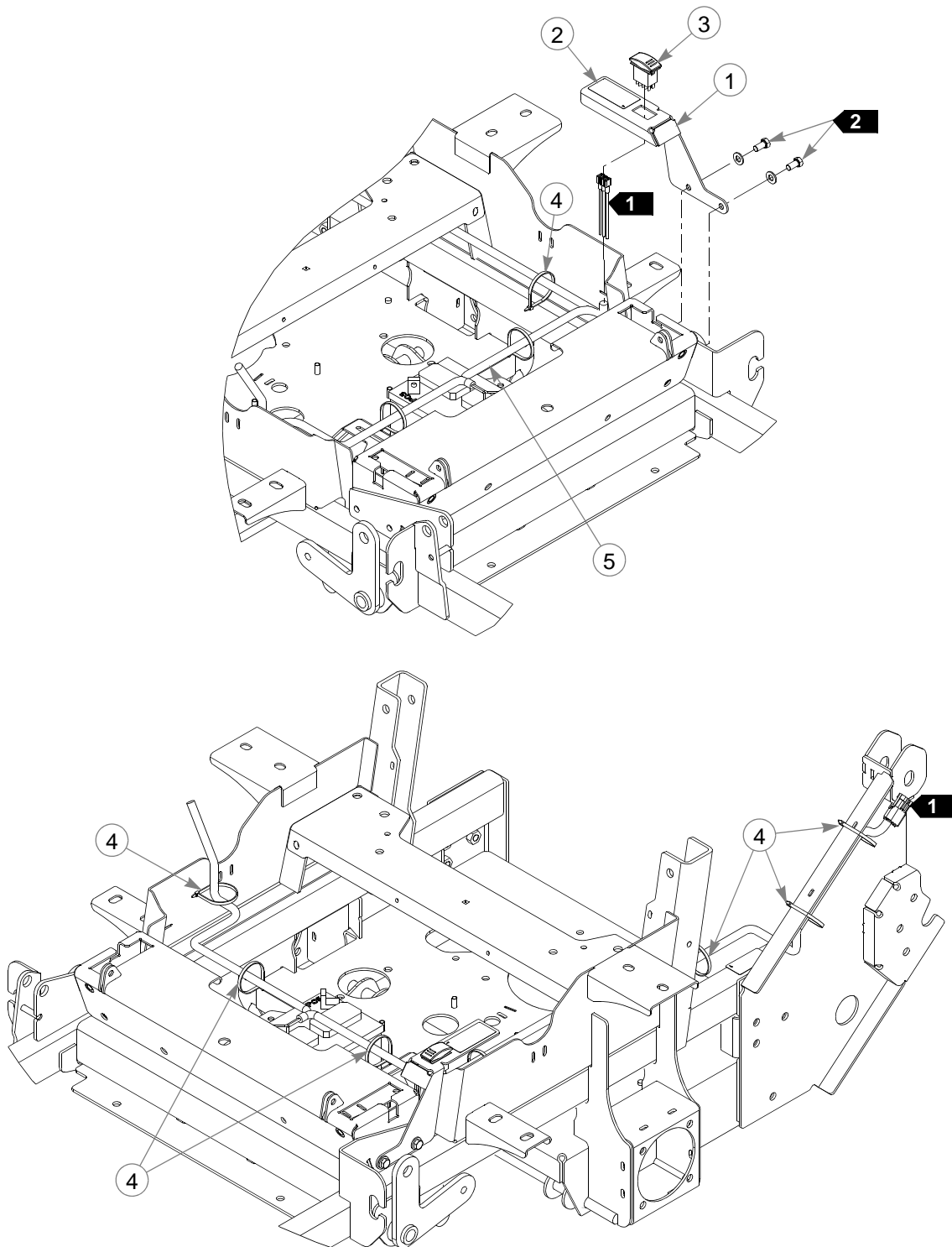
Shell Electric

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	115711	1	ACTUATOR TOP LID
2	808485	5	5/16-18 THREAD RIVET NUT
3	034280	9	CS .312-18 X .75 HX G5
4	768523	9	FW .343 X .687 X .051/.080H
5	116213	1	CONTROL BOX COVER
6	601822	2	NUT PLATE .420 CENTERS
7	603937	2	PLUNGER SWITCH
8	116200	1	CONTROL BOX SWITCH
9	768515	2	FW .281 X .625 X .051/.080 HD ZN/YL
10	064329	2	CS .250-20 X .625 HX G5
11	063198	4	CS 10-24 X .75 HX FLK ZN
12	000331	4	WIRE TIE
13	603936	1	WIRE HARNESS
14	059832	3	NT #10-24 HX NL ZN
15	017079	3	FW .250 X .56 X .04 SAE Z
16	060731	3	CS 10-24 X .50 HX FLK ZN
17	115731	1	ACTUATOR BOTTOM LID
18	N/A	1	SERIAL NO. / SPEC DECAL

NOTES:

1. Part of wire harness.

Wire Harness



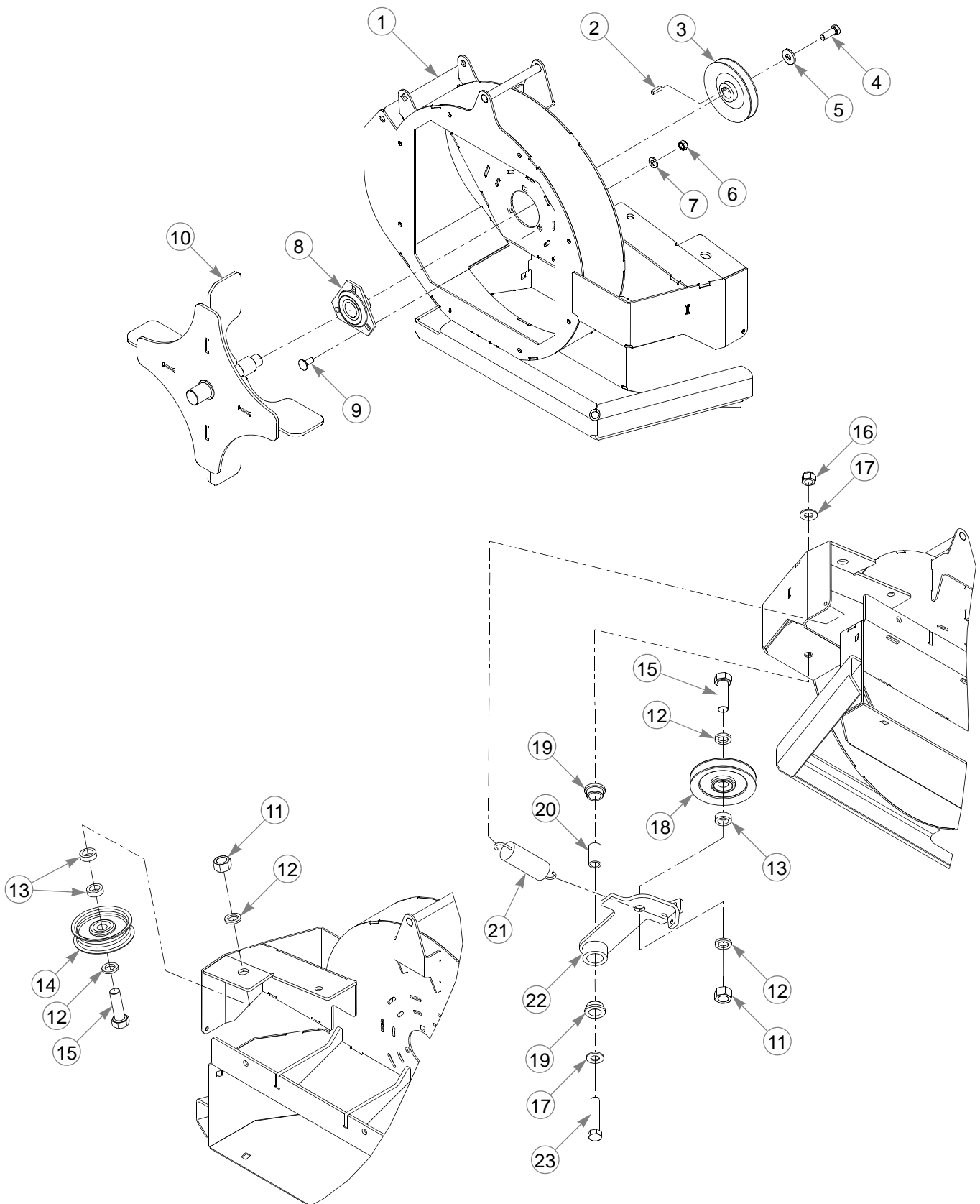
Wire Harness

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	552145	1	SWITCH BRACKET (WITH DECAL)
2	604049	1	HOPPER POSITION DECAL
3	797308	1	ROCKER SWITCH
4	000331	7	WIRE TIE
5	603935	1	WIRE HARNESS

NOTES:

1. Part of the wire harness.
2. Existing hardware.

Blower—550996

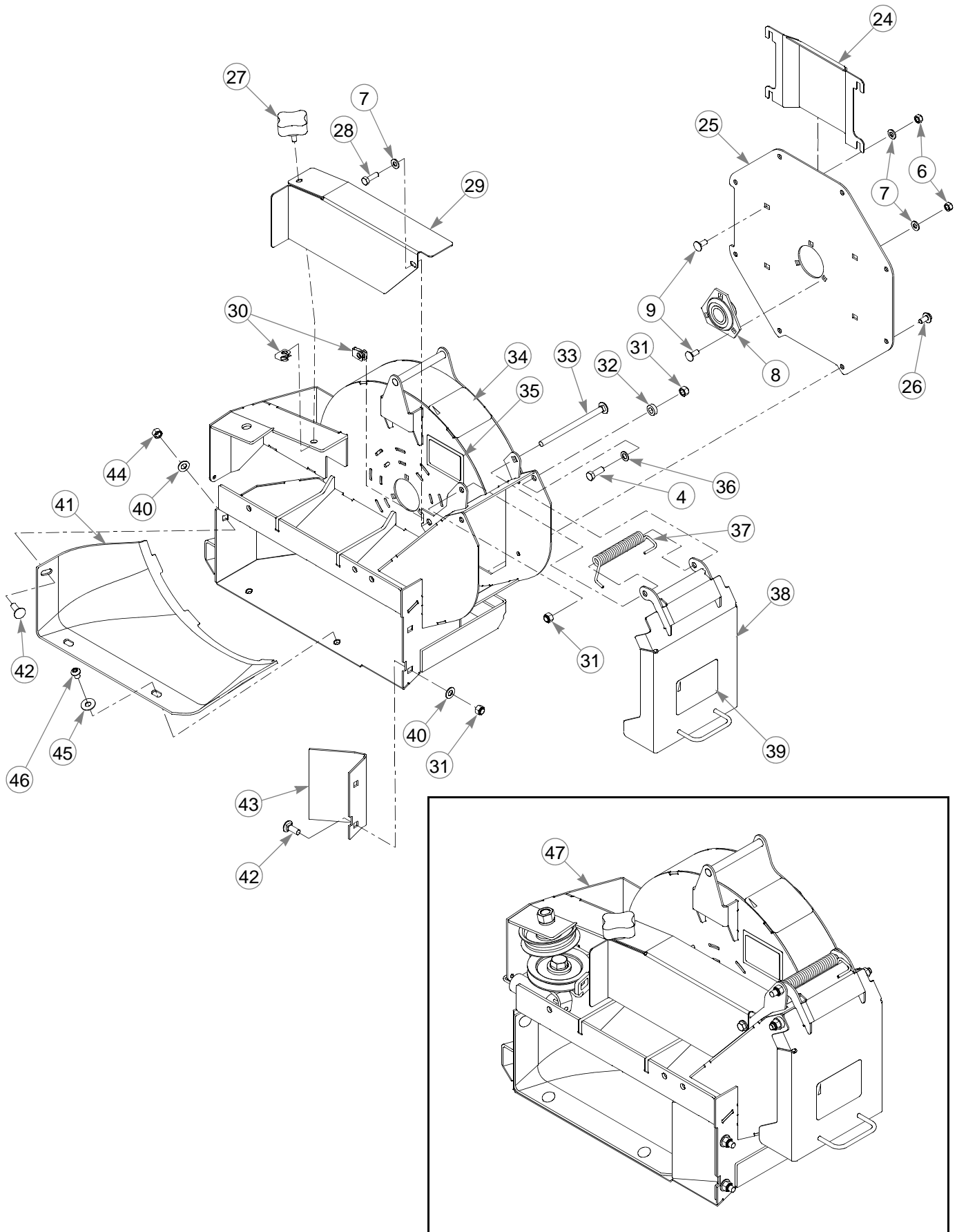


Blower—550996

INDEX NO.	PART NO.	QTY.	DESCRIPTION
1	N/A	1	BLOWER HOUSING (NOT SOLD SEPARATELY)
2	322529	1	KEY .187 SQ X .75 LONG
3	602912	1	PULLEY
4	036244	3	CS .375-16 X 1.00 HX G5
5	712919	1	FW .406 X 1.00 X .12 HRD Z
6	058776	10	NT .312-18 HX ZY NL
7	768523	11	FW .343 X .687 X .051/.080H
8	604264	2	BEARING 1.0" BORE FLANGE
9	016253	10	CB .312-18 X .75 FUL ZN
10	113120	1	BLOWER IMPELLER
11	016972	2	NT .625-11 HX G5 ZNYC
12	028118	4	FW .625 X 1.00 X .134 ZNYC
13	600296	3	DECK IDLER SPACER
14	791566	1	IDLER PULLEY 3.25" OD X .6
15	016642	2	CS .625-11 X 2.00 HX G5 Z
16	781567	1	NT .500-13 HX G8 ZY NL
17	767962	2	FW .531 X 1.063 X .090 SAE
18	602913	1	V-IDLER PULLEY
19	770867	2	BUSHING
20	109549	1	BUSHING
21	036384	1	SPRING 1/4 COIL PL 1.23
22	113406	1	BLOWER IDLER ARM
23	008573	1	CS .500-13 X 2.50 HX G5

NOTES:

Blower—550996



Blower—550996

INDEX NO.	PART NO.	QTY.	DESCRIPTION
24	114337	1	BEARING COVER
25	113119	1	BLOWER COVER
26	799130	8	CS .312-18 X .50 HXFL
27	792002	1	KNOB 5/16-18 X 3/4"
28	036236	1	CS .312-18 X 1.00 HX G5
29	114338	1	DRIVEN PULLEY COVER
30	601069	2	CN .312-18 X .20 MAX THK
31	086660	5	NT .375-16 HX ZY NL
32	073858	2	FW .406 X .75 X .25 ZNYC
33	602674	1	CB .375-16 X 6.00 STD
34	602757	1	BLOWER DANGERS DECAL
35	N/A	1	SERIAL NO. / SPEC DECAL
36	704718	2	FW .406 X .688 X .060 ZNYC
37	602435	1	TORSION SPRING
38	550995	1	BLOWER LID (WITH DECALS)
39	602758	1	EYES/EARS/FOOT DECAL
40	767954	3	FW .406 X .812 X .060 SAE
41	603191	1	BLOWER CHUTE INLET
42	025395	3	CB .375-16 X 1.00 G5 ZNY
43	113128	1	BLOWER INLET BAFFLE
44	054502	1	NT .375-16 HX G5 ZNY
45	076422	2	FW .406 X 1.00 X .06 ZNYC
46	774919	2	CS .375-16 X .50 SOC BH
47	550996	1	BLOWER ASSEMBLY

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