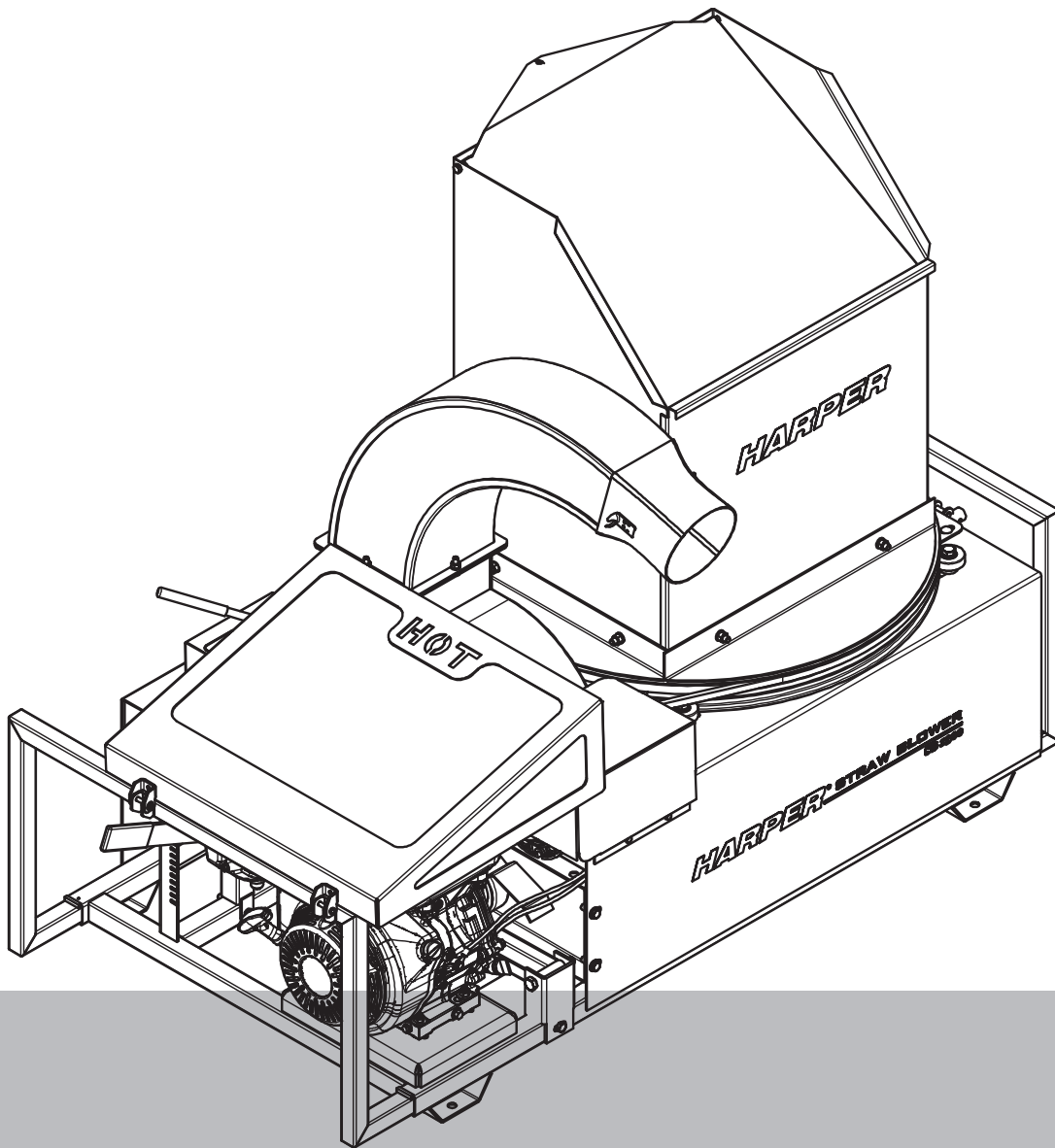


Straw Blower 1800



OPERATOR'S MANUAL

Thank you for purchasing a Harper Straw Blower.

As with all Harper products, the Straw Blower has been developed through tough design and testing procedures to produce a top quality machine. This manual gives assembly, operating, and service information for the models 1800. Please read and understand all instructional material included with the Straw Blower or its components before assembling and operating the equipment.

A Straw Blower can present hazards to an operator who follows unsafe procedures in either the operation or maintenance of the unit. Therefore, **SAFETY WARNINGS** are presented at certain locations in the text.

THIS SYMBOL:



SAFETY WARNING!



MEANING: Failure to understand and obey this warning may result in injury to you or others. Whenever this symbol is used, please pay very close attention to the information presented, and make sure you fully understand. If you do not, contact your dealer or Harper Industries, Inc. for clarification.



SAFETY WARNING!



ALL SHIELDS AND GUARDS MUST BE IN PLACE FOR PROPER AND SAFE OPERATION OF THIS EQUIPMENT. WHERE THEY ARE SHOWN REMOVED IN THIS MANUAL, IT IS FOR PURPOSES OF ILLUSTRATION AND INSTRUCTION ONLY. DO NOT OPERATE THIS EQUIPMENT UNLESS ALL SHIELDS AND GUARDS ARE IN PLACE.

Harper Industries, Inc. is continually striving to improve the design and performance of its products. We reserve the right to make changes in specifications and design without thereby incurring any obligation relative to previously manufactured products.

© 2021 Harper Industries, Inc.

The Harper name is a registered trademark of Harper Industries, Inc. All other brand and product names are trademarks or registered trademarks of their respective companies.

LIMITED WARRANTY

The Harper SB 1800 Straw Blower is warranted against defects in workmanship and materials for a period of TWELVE MONTHS from the original date of retail purchase to the original purchaser.

Harper Industries will repair or replace, at our option, any part which our examination shows to be defective. Warranty is limited to parts, labor and ground freight delivery of replacement parts. The user will pay freight charges for parts submitted under this warranty.

No product or part may be returned for warranty consideration without prior approval from Harper Industries.

This warranty does not apply to parts subjected to misuse, abuse, alteration, improper or inadequate maintenance, or normal wear (including belts and broom).

Gasoline engines are not covered under this warranty. Refer to manufacturer's warranty for specific warranty information. Harper Industries, its agents or representatives, make or imply no other warranties.

Evaporative Emissions Control System Warranty

The evaporative emission control system is warranted for two (2) years. If any evaporative emission-related part on your equipment is defective in material or workmanship, the part will be repaired or replaced by Harper Industries Inc..

Your evaporative emission control system may include parts such as: fuel tanks, fuel lines, fuel line fittings, fuel caps, carbon canisters, canister mounting brackets, carburetor purge port connection, filters, vapor hoses, clamps, control valves, control solenoids, electronic controls, vacuum control diaphragms, purge valves, liquid/vapor separator and other associated components.

RECORDS

Date of Purchase _____ / _____ / _____

Serial Number Machine _____

Dealer's Name _____

Serial Number Engine _____

Dealer's Phone _____

Table of Contents

OPERATOR SECTION

To the Owner or Operator.....	1
Warranty Statement.....	2
Table of Contents.....	3
Specifications.....	4
Control Identification	
Tub.....	5
Tub Engagement Lever.....	5
Engine.....	5
Safety Door.....	5
Hose Adapter (option).....	5
Cutting Knife Engagement Lever.....	5
Retractable Bale Rack.....	5
Safety Guidelines	
Gasoline.....	7
Guards & Shields.....	7
Safety Decals.....	7
Assembly	
Tub Cover Shield.....	8
Super-Flex Hose Installation.....	8
Directional Spout Installation.....	8
Battery.....	9
Fuel Tank.....	10
Operation	
To Begin Operation.....	11
To Stop Operation.....	11
Adjustments	
Belt Tension.....	12
Cutting Depth.....	13
Knife Replacement.....	13
Service & Maintenance.....	14
Troubleshooting.....	15
Standard Torque Chart.....	16

Parts

Blower Through Assembly.....	1.1
Blower Through & Bale Tub Base Installation.....	1.2
Engaging Handle Arm Assembly.....	1.3
Engaging Handle Stop Assembly.....	1.4
Gear Box Assembly.....	1.5
Tub Shift Assembly.....	1.6
Main Frame Components.....	1.7
Bale Tub Assembly.....	1.8
Electrical Assembly.....	1.9
Engine Screen Assembly.....	1.10
Final Assembly.....	1.11
Decal Placement.....	1.12
Hose Adapter Assembly.....	1.13
Directional Spout Assembly.....	1.14

Specifications

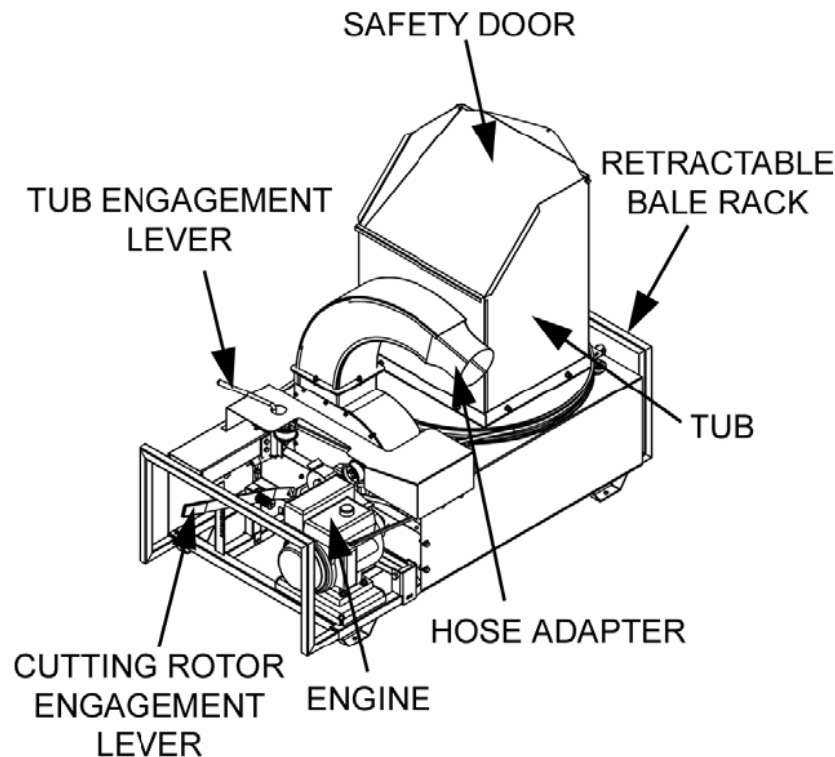
Engine	Kohler gasoline powered
Horsepower Rating	14 hp
Dimensions	Width - 31" Height - 51" Length - 55"
Weight	490 lbs (shipping weight 565 lbs)
Cutting Device	4 blade impeller - 16.5" diameter
Knives	32
Discharge	6" x 30' Super-flex hose or directional spout

Harper Industries, Inc. is continually striving to improve the design and performance of its products. We reserve the right to make changes in specifications and design without thereby incurring any obligation relative to previously manufactured products.

The Harper Straw Blower chops and applies straw for erosion control, bedding and mulching. The depth of the cut is easily adjustable while in operation to handle a variety of materials* and conditions. The standard 30' hose provides even layering and pinpoint placement. The hose is pliable down to 20° F. Temperatures below 20° may cause polyurethane to crack when stretched. A 360° directional spout is available for broadcast operations.

***NOTE:** Do not shred cardboard with a Harper Straw Blower. The density of cardboard will cause damage to the cutting knives and the rotor.

Control Identification



Tub – the tub secures the bale as it rotates and gravity pulls the bale down into the cutting knives.

Tub Engagement Lever – engages the rotation of the tub.

Engine – powers the Straw Blower.

Safety Door – the door on the tub is spring loaded to prevent objects from falling into the cutting knives, and debris from flying out of hopper when no bale is present.

Hose Adapter (option) – feeds the straw into the Super-flex hose. The direction spout may also be mounted in the same location.

Cutting Knife Engagement Lever – engages the cutting knives and controls belt tension.

Retractable Bale Rack – pulls out to hold an extra bale.

Safety Guidelines

- Use genuine factory parts or parts with equivalent characteristics, including type, strength and material. Failure to do so may result in product malfunction and possible injury to the operator and/or others.
- If hardware is not secure, or if some of the hardware is over-tightened, equipment failure may result, posing possible safety hazards.
- To prevent possible eye injury, always wear SAFETY GLASSES while operating equipment.
- Replace locknuts and locking screws if you can tighten them without feeling considerable resistance for several turns before they are completely tight. Replace them with factory authorized parts or their equivalent.

Gasoline



SAFETY WARNING!



Gasoline is extremely flammable and can be highly explosive.

- Always use an approved container for gasoline.
- Do not allow open flames or sparks while performing maintenance or refueling.
- Never remove the fuel tank cap or add gasoline when the engine is running or while it is hot.
- Never fill the fuel tank indoors (fumes can collect).
- Wipe up spilled gasoline immediately and completely.
- Do not store gasoline in a room with an appliance that has a pilot light to where electrical appliances or switches may cause sparks.
- Always store gasoline outside, in a safety can (a can which has a flame

arrestor and pressure relief valve in pour spout).

- Gasoline fumes are heavy and will sink to the lowest point, collecting and becoming more and more hazardous. 1 part gasoline in 20 parts air will explode easily and violently.
- Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
- Be certain to provide adequate ventilation if an engine must be run indoors - exhaust fumes are dangerous.

Guards & Shields

- Keep all safety devices in place.
- Replace all worn, damaged, unusable, missing or lost safety shields and guards before operating the equipment.
- Keep the equipment in good operating condition.

Safety Decals

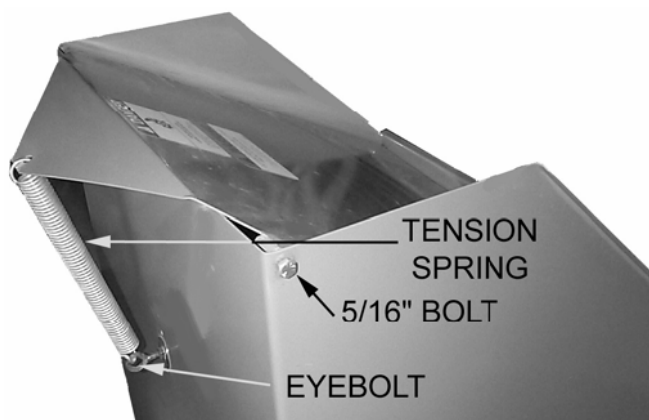
- If safety related or instructional decals become illegible or are removed, replace them immediately. New decals may be obtained from your local Harper Dealer.
- If you replace parts that have such decals attached to them, make sure the decals are replaced with current versions, and are on the replacement parts before the machine is operated again.

Assembly

TUB COVER SAFETY SHIELD

Using the Hardware supplied:

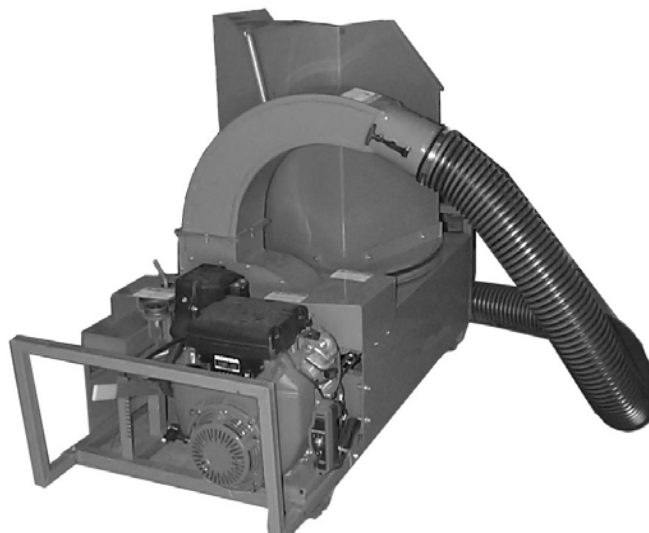
1. Install the eyebolt through the top hole in the rear tub wall with a flat washer, lock washer and nut on each side of the wall.
2. Mount the tub to the tub base with the truss-head bolts, lock washers and nuts provided. Put the bolt heads inside the tub to provide a smooth inside surface.
3. Insert a 5/16" nut just past the first thread of each bolt. Put the front lip of the safety shield (lid) down inside the tub and screw one bolt into each coupler on the lid. Center the shield in the opening, and then lock it into position by tightening the 5/16" nuts against the edges of the shield.
4. Connect the tensioning spring from the eyebolt to the hole in the rear of the safety shield.



SUPER-FLEX HOSE INSTALLATION

Using the hardware supplied:

1. Mount the hose adapter to the Straw Blower.



2. Attach the hose to the hose adapter with a 6" hose clamp, and secure the hose handle to the other end of the hose with two 6" hose clamps.

DIRECTIONAL SPOUT INSTALLATION

Using the hardware supplied:

1. Follow the instructions given in the Parts Section of this manual for the Directional Spout Assembly.
2. Mount the directional spout to the Straw Blower in the same location as the hose adapter.

Engine Powered Models

BATTERY

The battery is shipped without electrolyte. Therefore, the battery must be filled with sulfuric acid electrolyte before the Straw Blower can be used.

SAFETY WARNING!

- Battery electrolyte can cause severe burns if handled improperly.
- Observe all poison/ danger warnings on electrolyte cartons and on the battery.
- Wear splash-proof goggles and protective clothing when adding electrolyte to batteries.
- Avoid contact of electrolyte with the skin, eyes, or clothing.
- **KEEP BATTERIES AND ELECTROLYTE OUT OF REACH OF CHILDREN.**
- If electrolyte is spilled or splashed on the body, **IMMEDIATELY FLUSH WITH WATER.**
- If electrolyte comes into contact with the eyes, **FLUSH WITH WATER FOR 15 MINUTES AND GET PROMPT MEDICAL ATTENTION.**
- If electrolyte is taken internally, **DRINK LARGE QUANTITIES OF WATER OR MILK, FOLLOWED WITH MILK OF MAGNESIA, BEATEN EGGS, OR VEGETABLE OIL.**

To fill the battery with electrolyte:

1. Place the battery on a level surface and remove the vent caps. If the battery has thin plastic shields in the cell openings, remove and discard them.
2. Fill the battery with battery grade sulfuric acids to just above the separators. **DO NOT OVERFILL.**

3. Reinstall the vent caps, and charge the battery as instructed below. **AFTER** charging, check the acid level, and fill to the bottom of the vent well openings. **DO NOT OVERFILL.**

Charging the battery:

SAFETY WARNING!

- The battery can produce explosive gasses.
 - Ventilate when charging or using in an en-closed space.
 - **DO NOT** produce sparks from cable clamps, tools, or other sources; and **DO NOT** allow flames or smoking in the vicinity of the battery.
 - **Shield eyes when working near the battery.**
 - **Always keep the vent caps tight and level.**
1. Make sure the vent caps included with the battery are installed.
 2. Connect the battery to the charger according to the manufacturer's instructions and charge at 10 amperes for 50 minutes, or 2-9 amperes for 2 hours (depending on capabilities of charger).

Installing the battery:

1. Make sure the cable terminals and any hard hold-down wires are clean. If the battery is a replacement and the connectors and hold-down have been used before, clean them with a wire brush.
2. Place the battery in the tray, located at the right rear of the machine, and secure the battery in position with the hold-down provided.

3. Connect the cables to the proper terminals, connecting the UNGROUNDED cable first. Do not over tighten. Apply a commercial battery anti-corrosion material or petroleum jelly to the terminals, to minimize corrosion.



FUEL TANK



SAFETY WARNING!



Gasoline is extremely flammable and can be highly explosive.

Operation



SAFETY WARNING!



- Wear approved eye and ear protection while operating the machine.
- Keep all guards in place during operation. Never operate machine with the tub removed.
- Before operating the machine, check to ensure that all the belt guides and snubbers are in place, to prevent belts from slipping off the pulleys and systems from being accidentally engaged.
- Check the bale tub for children, pets and foreign objects before operating.
- Never push material onto the cutters with your hands or feet.
- Periodically clean chopped material away from engines to lessen the possibility of fire.
- Always keep the fire extinguisher near the Straw Blower during operation.

To begin operation:

1. Make sure tub and cutting rotor are NOT engaged.
2. Fill fuel tank with gas.
3. Make sure the vent on the fuel tank is open at least a quarter turn. (If it is closed the engine will vapor lock and will not run). 1300 model has no manual vent.
4. Start the engine. Refer to engine manual for more information.
5. Engage the cutting rotor by pushing the rotor engagement lever down.
6. Place a bale into the tub.
7. Engage the tub rotation by moving the tub engagement lever towards the engine.
8. Add another bale when there is about 1/3 bale left in the tub.

To stop operation:

1. Stop the tub rotation.
2. Disengage the rotor mechanism.

Adjustments

BELT TENSION

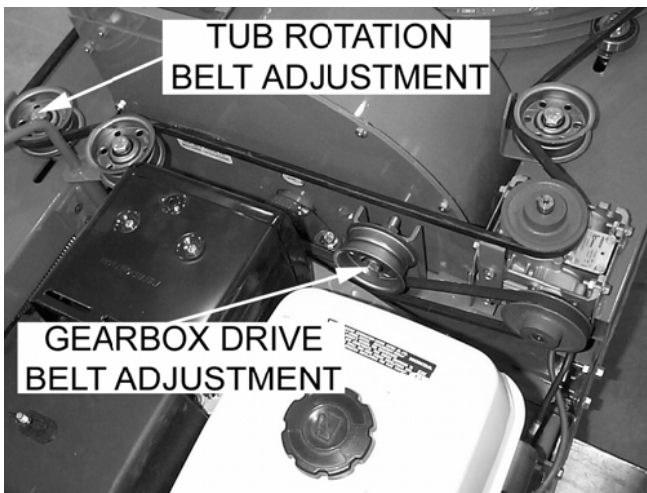
NOTE: Use only industrial V-belts. Do not use automotive belts.

NOTE: Use a straightedge to check alignment across the faces of pulleys after adjusting belt tension, to ensure that the belts will run true.

IMPORTANT: Do not over tighten belts. Excessive tension can cause premature bearing, gearbox and clutch failure.

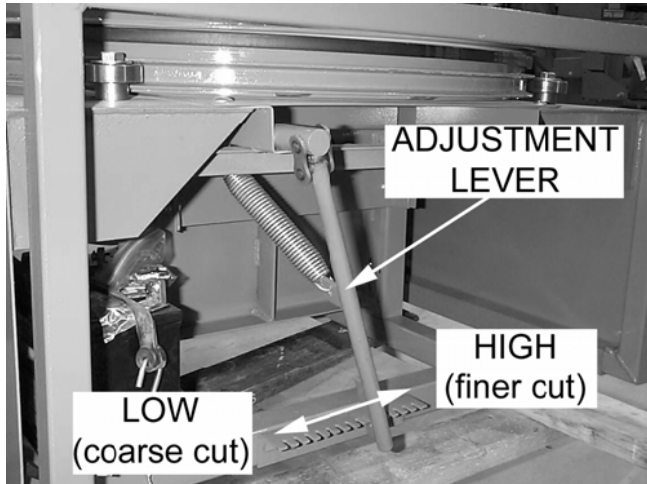
Engine Powered Models

- The tub rotation belt and the gearbox drive belt can both be adjusted by moving their respective idler pulleys in the slotted holes.



CUTTING DEPTH

- The cutting depth is adjusted by moving a lever and putting it into the slot that gives the desired cutting depth. The adjustment is located at the rear of the machine.



KNIFE REPLACEMENT



- Wear protective gloves whenever handling blades or working near them.**
- Knives and their retaining hardware rotate at high speeds. It is essential that they be mounted securely to prevent accidents.**

NOTE: If the serrations are worn down but the tip of the knife is still intact, the knife may be turned around and remounted.

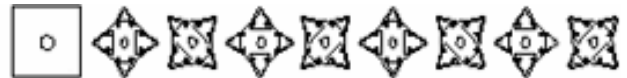
To maintain balance:

- Mount replacement knives only in the

places from which the worn knives were removed.

- Mount additional knives only as opposing pairs on each plate, and in the patterns shown below.
- Do not remove nuts and bolts installed as weights, unless mounting knives in those holes.

NOTE: Mount the knives with bevel facing impeller and alternate between the front and back side of the plate.



IMPELLER

To replace knives:

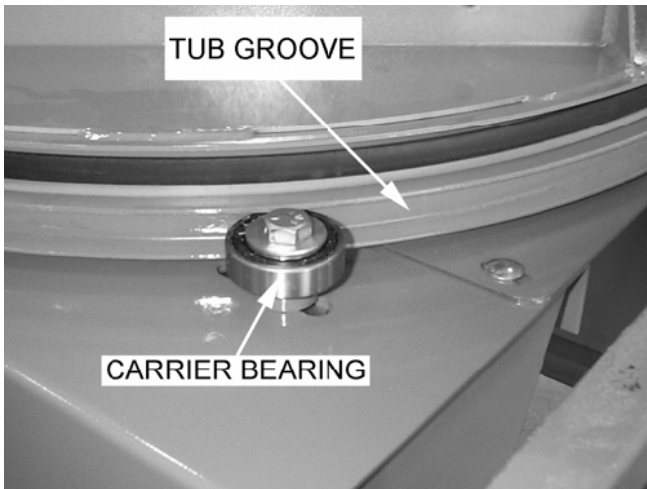
- Remove the belt from around the tub.
- Loosen the bolts mounting the rear tub carrier bearings.
- Slide the loosened bearings toward the rear and remove the tub from the Straw Blower.
- Unbolt and remove the grate guide.
- With the grate adjustment lever, rotate the grate upwards and clear of the knives.
- Remove and replace the knives as necessary, using only Grade 5, 1/4"-20 x 1/2" bolts and lock nuts, treated with Loctite® (or equivalent). Tighten lock nuts to 18 in. lbs.
- Return the grate to its original position.
- Reinstall the tub.

Service & Maintenance

BREAK-IN SERVICE

After the first 10-15 bales:

1. Check belts, tighten if necessary.
2. Tighten setscrews on bearings.
3. Check the tub carrier bearings and make necessary adjustments.



- The carrier bearing should run in the tub bearing groove. This keeps the tub spinning even.

BEARINGS

- The bearings are sealed and require no lubrication.

GEARBOX

- No maintenance is required for the gearbox on the engine powered models unless the unit leaks. Use Mobil SHC 634 worm gear lubricant or equivalent.

ENGINE

- Follow the manufacturer's maintenance recommendations located in the engine manual.
- Contact a certified Kohler repair center whenever warranty repair work is needed on the Straw Blower engine.

More Information

Your Harper dealer is the best source of up-to-date information concerning Harper products.

Additional information is also available from the Harper Industries Service Department at 800-835-1042.

Troubleshooting

ENGINE

Problem:	What to Check:
Engine shuts off during operation	<ul style="list-style-type: none"> • Engine may be low on fuel • Engine may be low on oil (The Honda engine is equipped with an “Oil Alert” automatic shut off) • Air breather may be clogged or closed.

BELTS

Problem:	What to Check:
Belts slip	<ul style="list-style-type: none"> • Tension Adjustment • Load may be excessive • Knives may be too dull • Grate setting may be too low (cutting too deeply) • Foreign material may be lodged in the chopper (on knives or blower paddles) • Bearings may have seized
Belts wear rapidly, jump, catch or twist	<ul style="list-style-type: none"> • Pulleys may not be properly aligned. Check with a straightedge across the faces of pulleys.

CUTTING AND DISCHARGE

Problem:	What to Check:
Hose plugs	<ul style="list-style-type: none"> • Material being chopped may have too much moisture in it. • RPM may not be high enough. Adjust throttle to increase RPM to required levels. DO NOT adjust engine governor. • Foreign material may be lodged in the hose • Grate setting may be set too low
Slow cutting time	<ul style="list-style-type: none"> • Grate setting may be too high • Material being cut may be too wet • Knives may be too dull • RPM may be too low

GEARBOX

Problem:	What to Check:
Oil leaks	<ul style="list-style-type: none">• Housing bolts may be loose• Oil seals may need replaced
Gearbox overheats	<ul style="list-style-type: none">• Oil level may be too low• Dirt or grease may have accumulated around the gearbox
Gearbox vibrates, is very noisy	<ul style="list-style-type: none">• Oil level may be too low• Components may be worn or damaged• Load may be excessive

Standard Torque Chart



SAFETY WARNING!



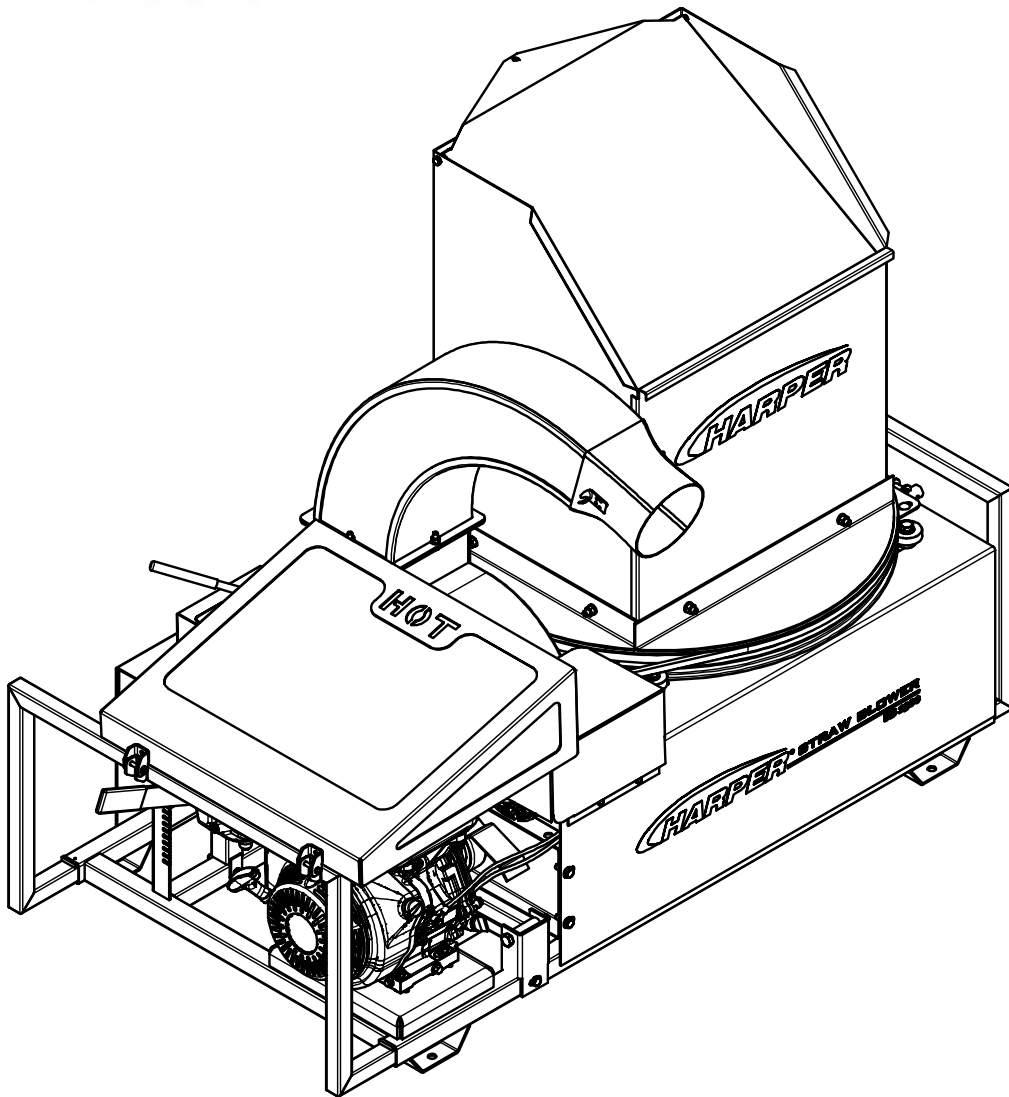
Refer to the Standard Torque Chart whenever bolts, nuts or screws are tightened.

Size	In-Lbs	Ft-Lbs	N-m
No. 10-24	25-35	5-7	2.8-4.0
1/4 in.	60-80	18-20	7-9
5/16 in.	120-140	28-30	14-16
3/8 in.	340-360	64-74	24-27
1/2 in.		126-150	90-100

Note: When tightening two or more fasteners on the same part, DO NOT tighten the fasteners completely one at a time. To avoid distortion, first tighten all fasteners in sequence to one-third of torque value, then tighten to two-thirds of torque value, then tighten to full value.



Straw Blower



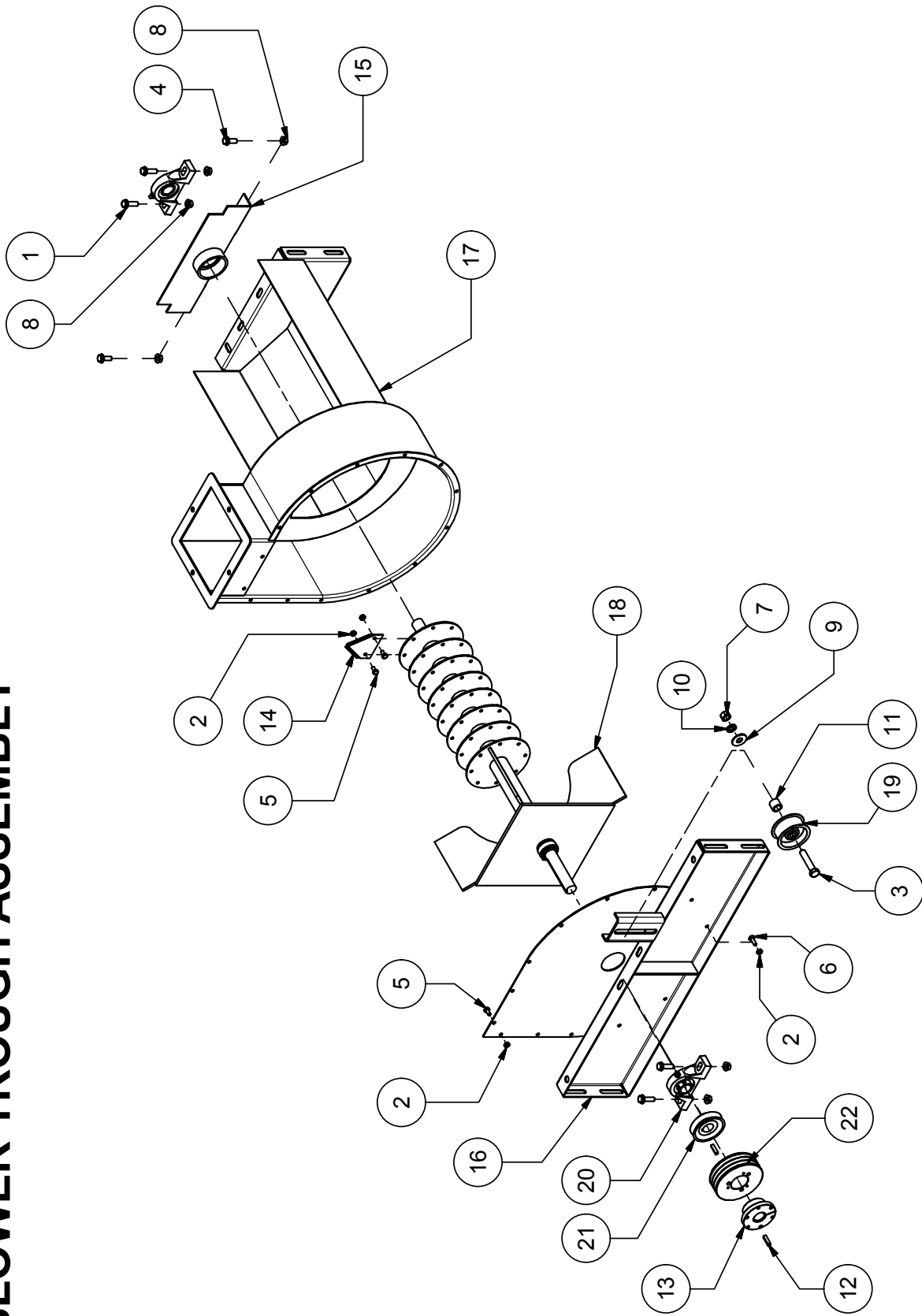
PARTS

Table of Contents

Parts

Blower Through Assembly.....	1.1
Blower Through & Bale Tub Base Installation.....	1.2
Engaging Handle Arm Assembly.....	1.3
Engaging Handle Stop Assembly.....	1.4
Gear Box Assembly.....	1.5
Tub Shift Assembly.....	1.6
Main Frame Components.....	1.7
Bale Tub Assembly.....	1.8
Electrical Assembly.....	1.9
Engine Screen Assembly.....	1.10
Final Assembly.....	1.11
Decal Placement.....	1.12
Hose Adapter Assembly.....	1.13
Directional Spout Assembly.....	1.14

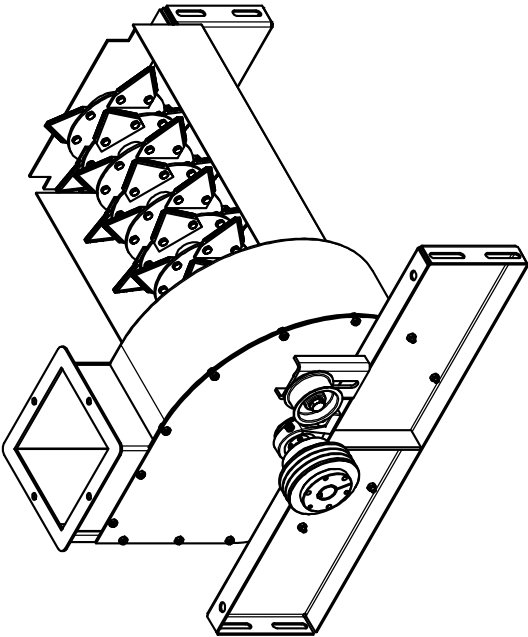
BLOWER TROUGH ASSEMBLY



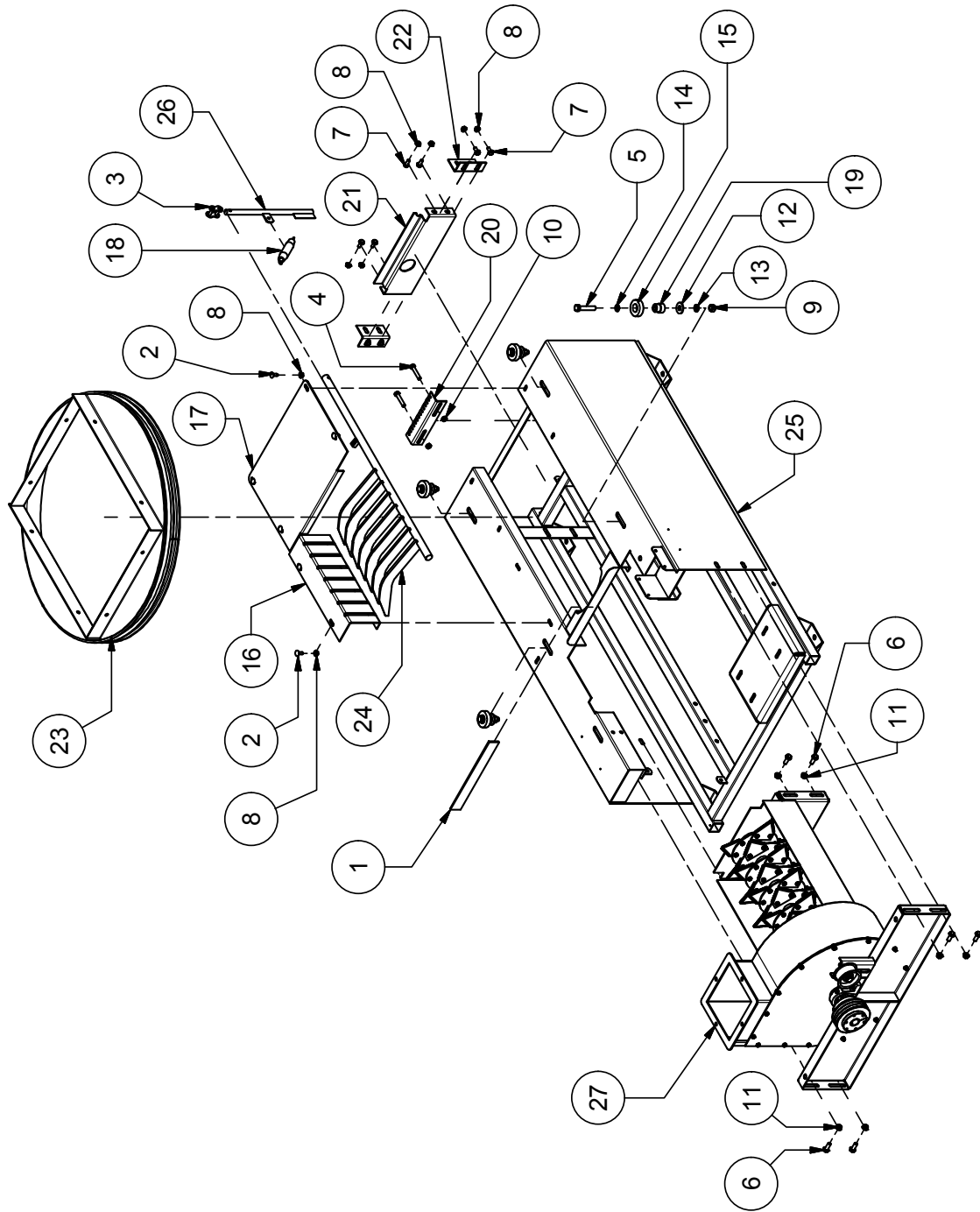
7/18/2014

BLOWER TROUGH ASSEMBLY

PARTS LIST		
ITEM	QTY	PART # DESCRIPTION
1	4	110161 BOLT, 3/8-16 X 1.25, WIZ FLANGE
2	78	110174 NUT, 1/4-20, UNITORQUE LOCK
3	1	110403 BOLT, 1/2-13 X 2.5
4	2	110440 BOLT, 3/8-16 X 1, WIZ FLANGE
5	74	110515 BOLT, 1/4-20 X .50
6	4	110561 BOLT, 1/4-20 X .75
7	1	110610 NUT, 1/2-13
8	6	110645 NUT, 3/8-16 WIZ FLANGE
9	1	110658 WASHER, 1/2" FLAT STANDARD
10	1	110666 WASHER, 1/2" LOCK
11	1	311677 BUSHING, .875 X .625 X .73
12	2	510228 KEY, 1/4 X 1/4 X 1.0 UNDER
13	1	510241 BUSHING, QD 1" SDS
14	32	910039 STRAW BLOWER KNIFE
15	1	915011 ASSY, REAR BEARING GUARD
16	1	915021 BLOWER TROUGH FRONT
17	1	915022 BLOWER TROUGH ASSY
18	1	915026 ROTOR AND FAN ASSY
19	1	940001 IDLER ASSY, 2.75 FLAT X 1 WELD
20	2	940009 BEARING, PB SD 1
21	1	940011 SHEAVE, 1A3.05 X 1.0 KSS
22	1	942170 SHEAVE, 3/3x3.65 SH QD



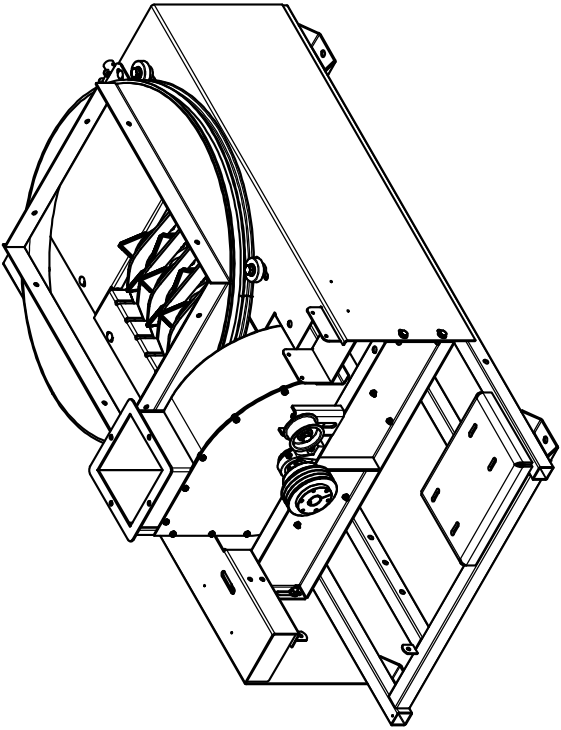
BLOWER TROUGH AND BALE TUB BASE INSTALLATION



7/18/2014

BLOWER TROUGH AND BALE TUB BASE INSTALLATION

PARTS LIST		
ITEM	QTY	PART # DESCRIPTION
1	1	100442 SEAL
2	6	110020 Bolt, 5/16-18 X 0.75 in Carriage
3	1	110287 CONNECTING LINK, #80
4	2	110400 BOLT, 3/8-16 X 2.0
5	4	110403 BOLT, 1/2-13 X 2.5
6	8	110440 BOLT, 3/8-16 X 1, WIZ FLANGE
7	8	110444 BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	14	110606 NUT, 5/16-18 WIZ FLANGE
9	4	110610 NUT, 1/2-13
10	2	110621 NUT, 3/8-16, UNITORQUE LOCK
11	8	110645 NUT, 3/8-16 WIZ FLANGE
12	4	110658 WASHER, 1/2" FLAT STANDARD
13	4	110666 WASHER, 1/2" LOCK
14	4	110690 WASHER, 12 mm LOCK
15	4	742054 BEARING, 52M OD X 25M ID 6205
16	1	910014 GUIDE, 7 FINGER GRATE
17	1	910016 COVER, REAR ROTOR
18	1	910018 SPRING, FINGER ADJUSTER
19	4	910019 TUB BASE SPACER
20	1	910021 BRACKET, GRATE ADJUSTMENT
21	1	910068 PLATE, REAR FRAME
22	2	910069 BRACKET, REAR FRAME PLATE
23	1	915002 TUB BASE ASSY
24	1	915003 ADJUSTABLE GRATE, 7-FINGER
25	1	915017 FRAME, MAIN
26	1	915019 ASSY, GRATE LEVER

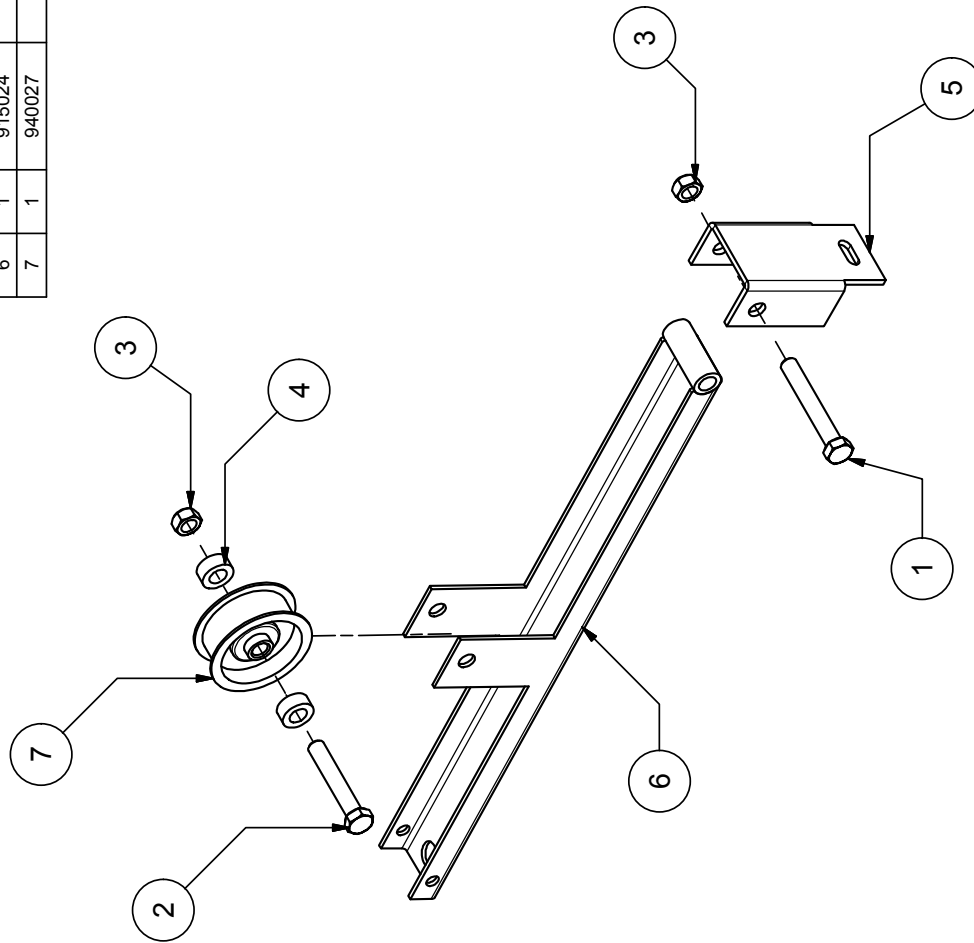


ASSEMBLIES LIST		
ITEM	QTY	DESCRIPTION
27	1	BLOWER TROUGH ASSEMBLY

NOTE: EXPLODED VIEWS OF ASSEMBLIES ON PRECEDING PAGES.

ENGAGING HANDLE ARM ASSEMBLY

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	110002	BOLT, 1/2-13 X 3.5
2	1	110428	BOLT, 1/2-13 X 3.0
3	2	110615	NUT, 1/2-13, UNITORQUE LOCK
4	2	910050	ENGAGING CHANNEL SPACER
5	1	910063	ENGAGING CHANNEL SWIVEL
6	1	915024	WELDMENT, ENGAGING CHANNEL
7	1	940027	IDLER ASSY, 2.75 FLAT X 1.125 WLD

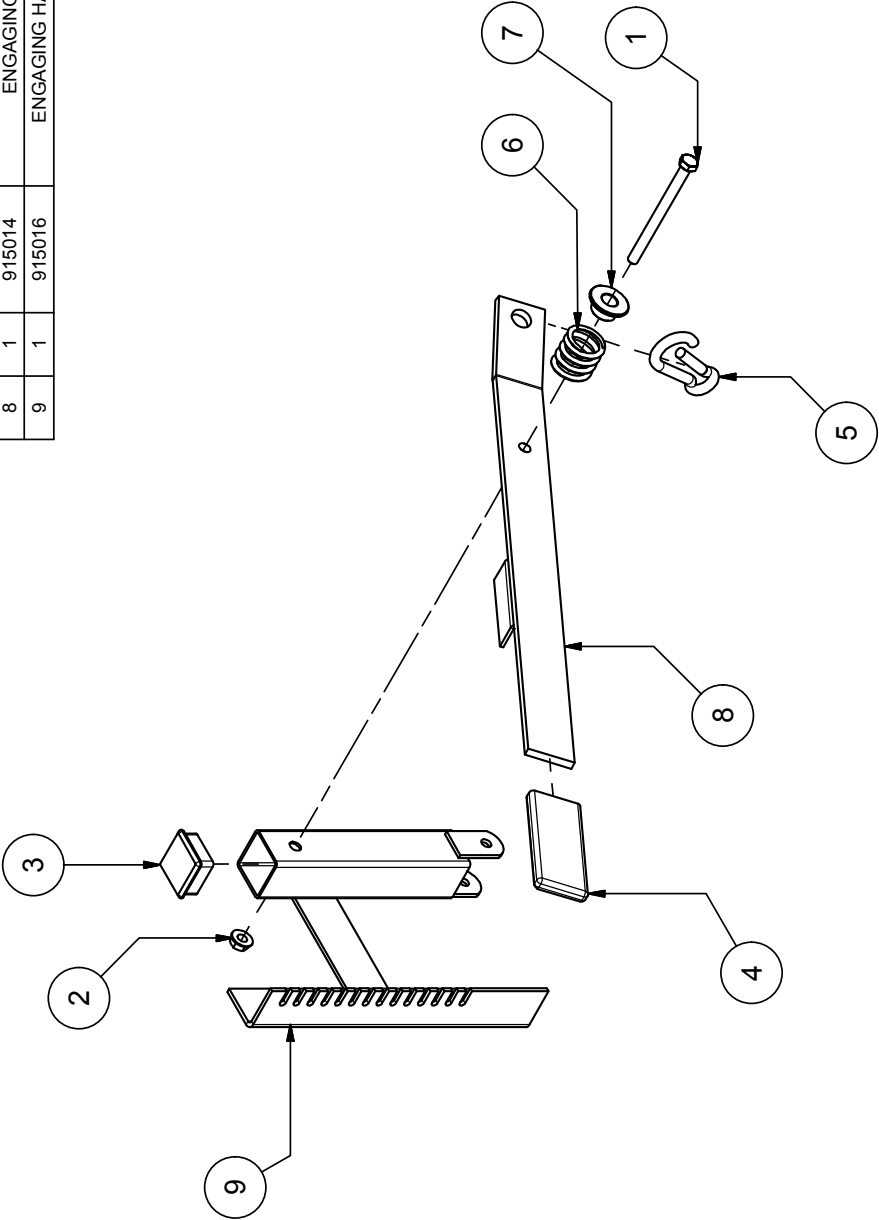


7/21/2014

**ENGAGING HANDLE
STOP ASSEMBLY**

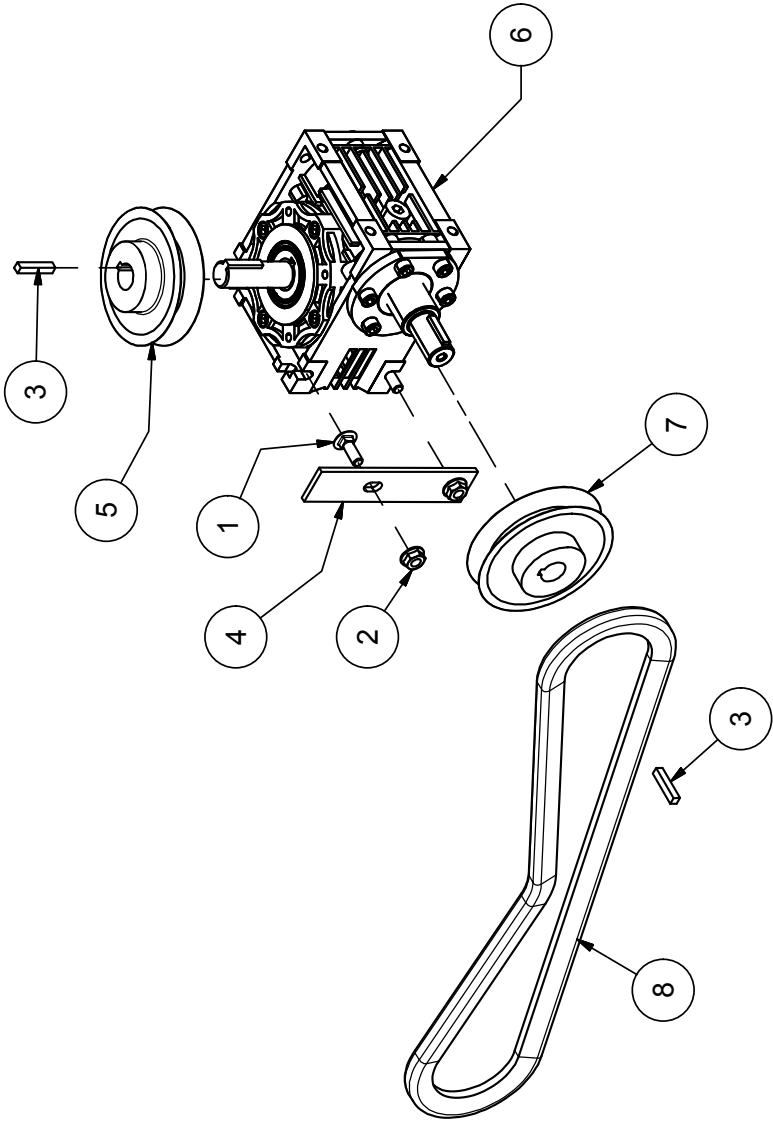
PARTS LIST

ITEM	QTY	PART #	DESCRIPTION
1	1	110441	BOLT, 5/16-18 X 4.0
2	1	110606	NUT, 5/16-18 W/IZ FLANGE
3	1	910003	PLUG, CAP 1-1/2" X 1-1/2"
4	1	910044	COVER, VINYL .25 X 1.5 X 4 GRIP
5	1	910046	ENGAGING CHANNEL CLIP
6	1	910047	SPRING, 1.25 X .91 X 2.28; .17 DIA
7	1	910048	BUSHING, .78 X .5 X .1 FNG
8	1	915014	ENGAGING HANDLE ASSY
9	1	915016	ENGAGING HANDLE STOP ASSY

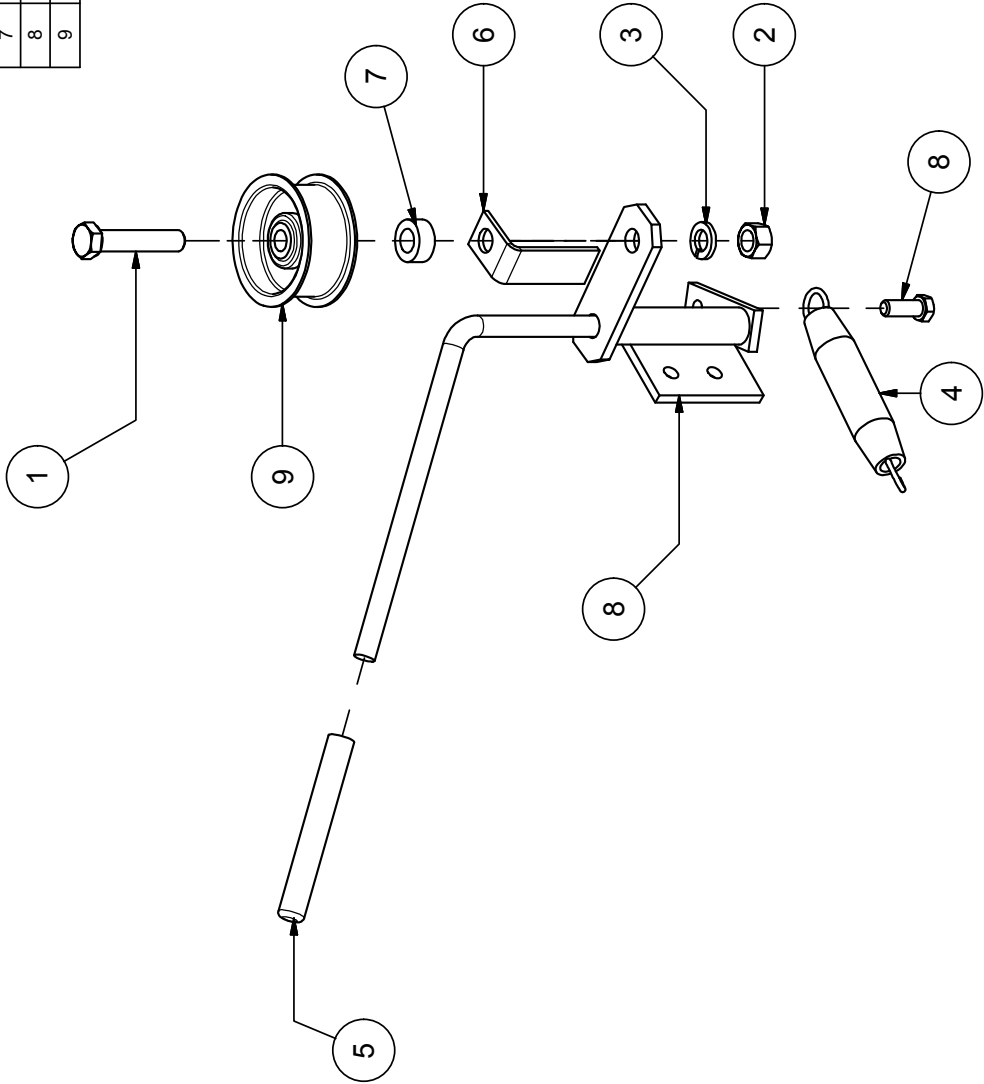


GEAR BOX ASSEMBLY

PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	110154	Bolt, 1/4-20 X 0.75 in Carriage
2	2	110290	NUT, 1/4-20 W/IZ FLANGE
3	2	510282	KEY, 3/16 X 3/16 X 1.0 UNDER
4	1	910062	GUIDE, BELT
5	1	940004	SHEAVE, 1A 3.25 X 5/8 KSS
6	1	940016	GEARBOX, 15:1
7	1	940017	SHEAVE, 1A 3.45 X 5/8 KSS
8	1	940018	BELT, GEAR BOX

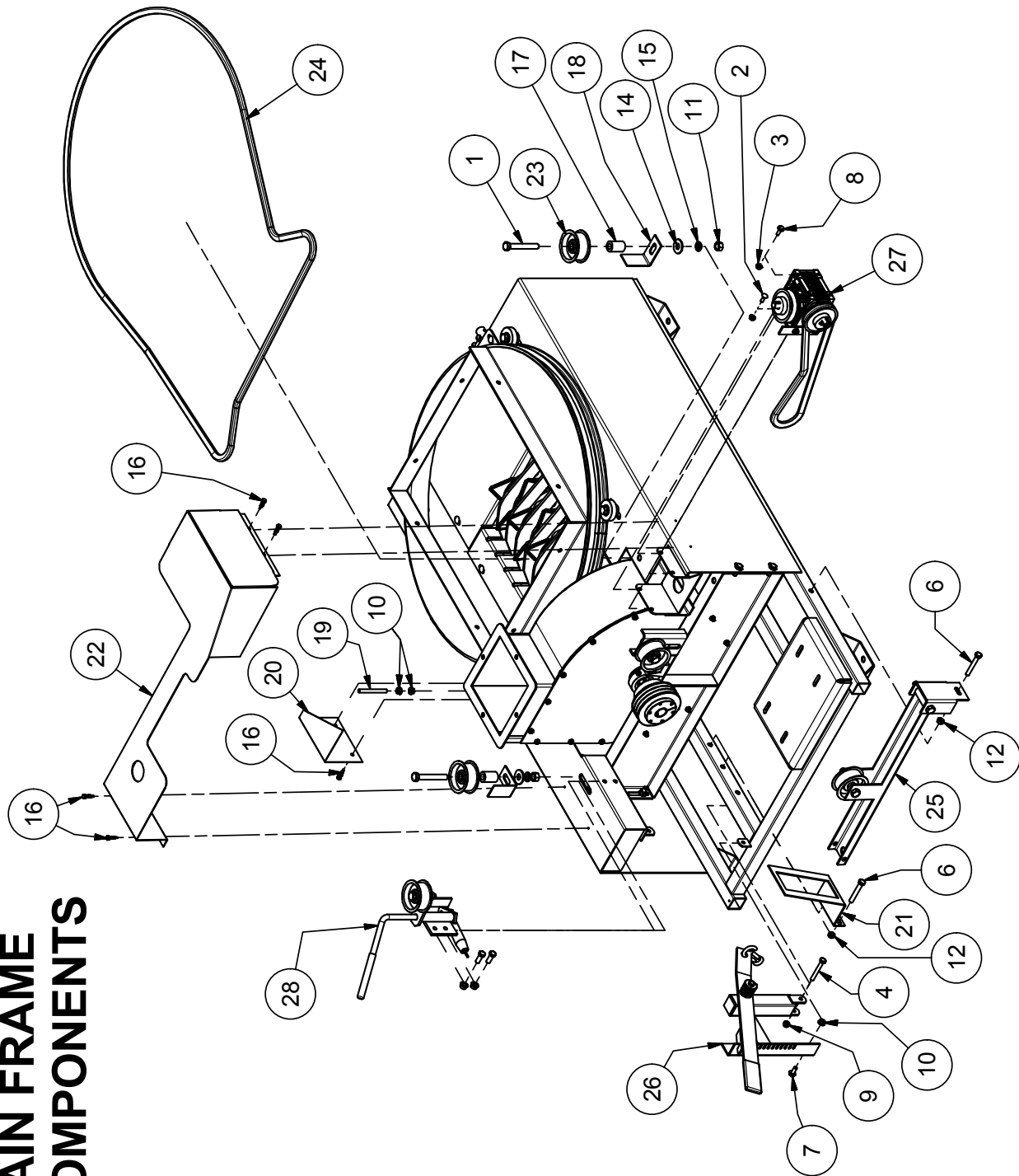


TUB SHIFT ASSEMBLY



PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	1	110403	BOLT, 1/2-13 X 2.5
2	1	110610	NUT, 1/2-13
3	1	110666	WASHER, 1/2" LOCK
4	1	910018	SPRING, FINGER ADJUSTER
5	1	910024	COVER, VINYL, 1/2 RND X 4.0 GRIP
6	1	910026	SHIFT ASSY STOP
7	3	910050	ENGAGING CHANNEL SPACER
8	1	915018	SHIFT ASSY
9	1	940001	IDLER ASSY, 2.75 FLAT X 1 WELD

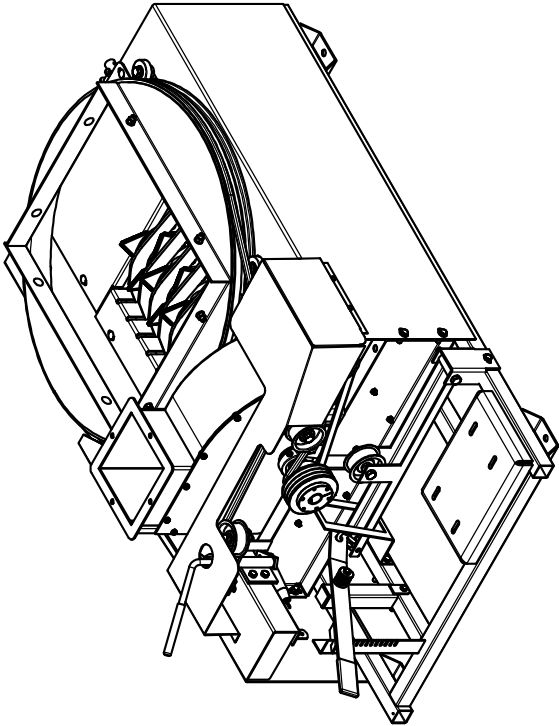
MAIN FRAME COMPONENTS



5/20/2016

MAIN FRAME COMPONENTS

PARTS LIST		
ITEM	QTY	PART # DESCRIPTION
1	2	110002 BOLT, 1/2-13 X 3.5
2	4	110154 Bolt, 1/4-20 X 0.75 in Carriage
3	4	110290 NUT, 1/4-20 WIZ FLANGE
4	1	110396 BOLT, 5/16-18 X 2.5
5	2	110420 BOLT, 3/8-16 X 1.0
6	3	110436 BOLT, 3/8-16 X 2.5
7	1	110444 BOLT, 5/16-18 X 0.75, WIZ FLANGE
8	4	110468 BOLT, 1/4-20 X 0.75, WIZ FLANGE
9	1	110603 NUT, 5/16-18 LOCK (NYLON)
10	3	110606 NUT, 5/16-18 WIZ FLANGE
11	2	110610 NUT, 1/2-13
12	3	110621 NUT, 3/8-16, UNITORQUE LOCK
13	2	110645 NUT, 3/8-16 WIZ FLANGE
14	2	110658 WASHER, 1/2" FLAT STANDARD
15	2	110666 WASHER, 1/2" LOCK
16	6	710586 SCREW, 1/4 X 1 TEK SELF-TAP
17	2	910005 IDLER PULLEY SPACER
18	2	910006 BELT GUIDE
19	1	910027 GUIDE, BELT
20	1	910056 SHIELD, TUB BELT
21	1	915015 GUIDE, ENGAGING CHANNEL
22	1	915032 SHIELD ASSY FRONT BELT
23	2	940001 IDLER ASSY, 2.75 FLAT X 1 WELD
24	1	940002 DRIVE BELT, BLOWER TUB (A128)

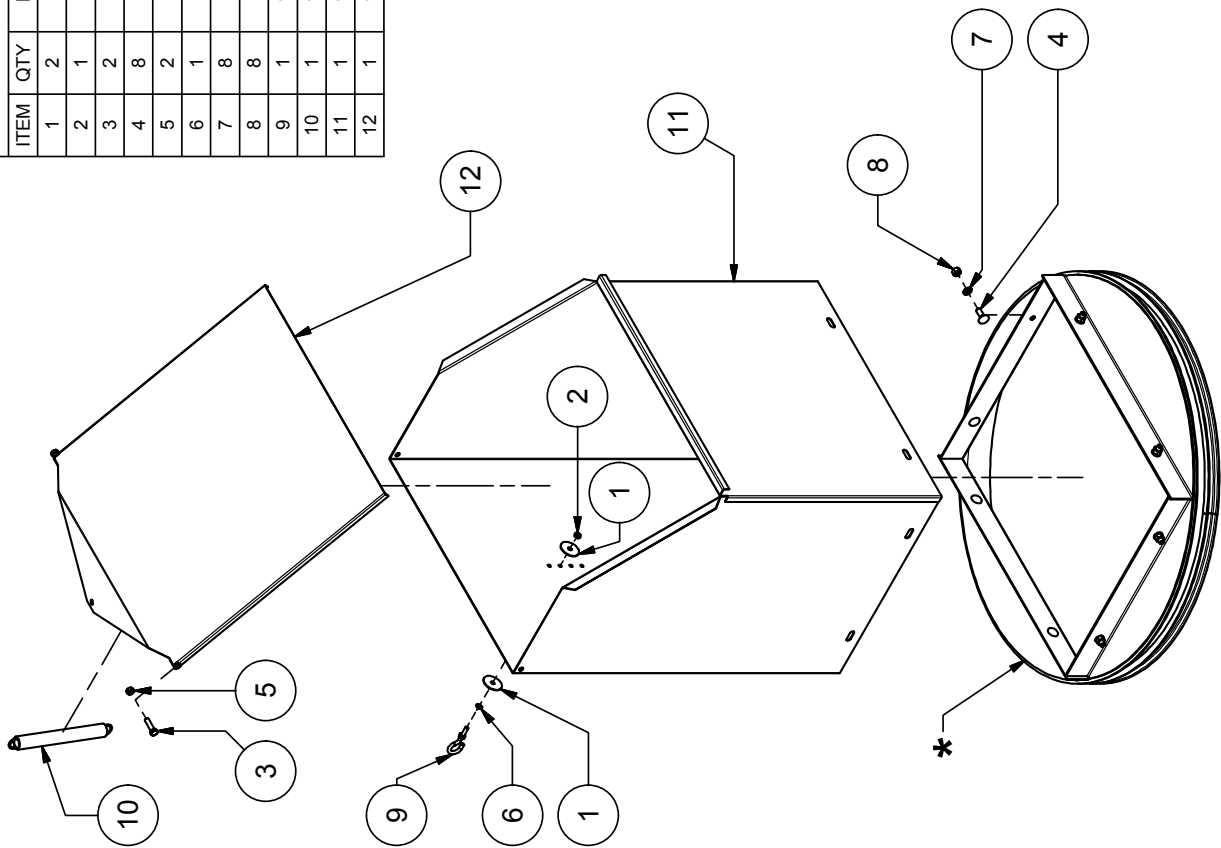


ASSEMBLIES LIST		
ITEM	QTY	DESCRIPTION
25	1	ENGAGING HANDLE ARM ASSEMBLY
26	1	ENGAGING HANDLE STOP ASSEMBLY
27	1	GEAR BOX ASSEMBLY
28	1	TUB SHIFT ASSEMBLY

NOTE: EXPLODED VIEWS OF ASSEMBLIES ON PRECEDING PAGES.

BALE TUB ASSEMBLY

PARTS LIST				DESCRIPTION
ITEM	QTY	PART #		
1	2	110049	WASHER, 5/16 X 1.50 FENDER	
2	1	110174	NUT, 1/4-20, UNITORQUE LOCK	
3	2	110421	BOLT, 5/16-18 X 1-1/4	
4	8	110556	Bolt, 3/8-16 X 1 in Carriage	
5	2	110608	NUT, 5/16-18	
6	1	110667	WASHER, 1/4" LOCK	
7	8	110672	WASHER, 3/8" LOCK	
8	8	110826	NUT, 3/8-16 GR 5	
9	1	910032	LID EYEBOLT	
10	1	910033	SPRING, 1.0 OD X 8.75 L X .120	
11	1	915007	BALE TUB ASSY	
12	1	915029	SAFETY LID ASSEMBLY	

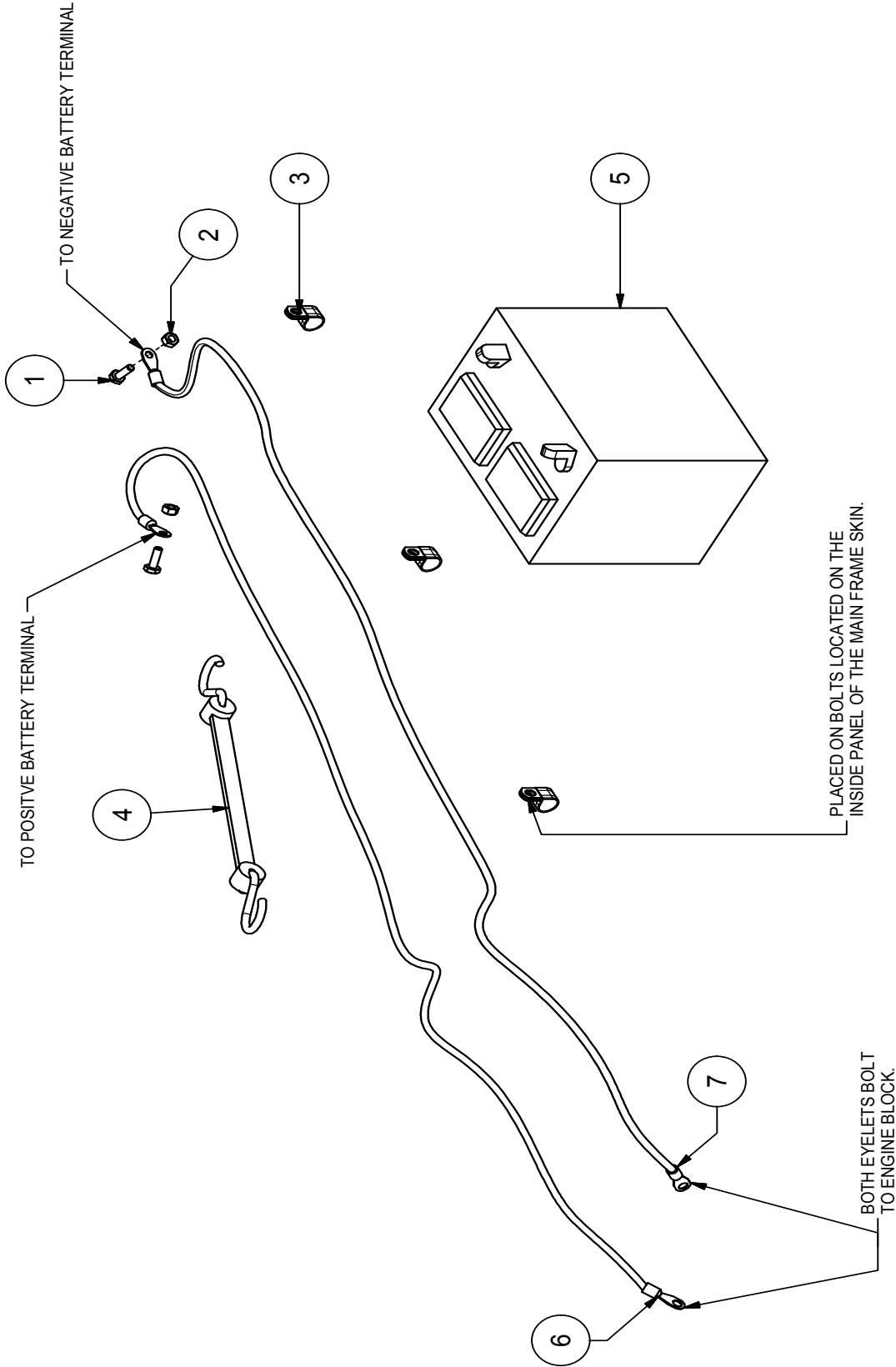


* SHOWN FOR REFERENCE, P/N IS ON
BLOWER TROUGH INSTALLATION PAGE.

7/18/2014

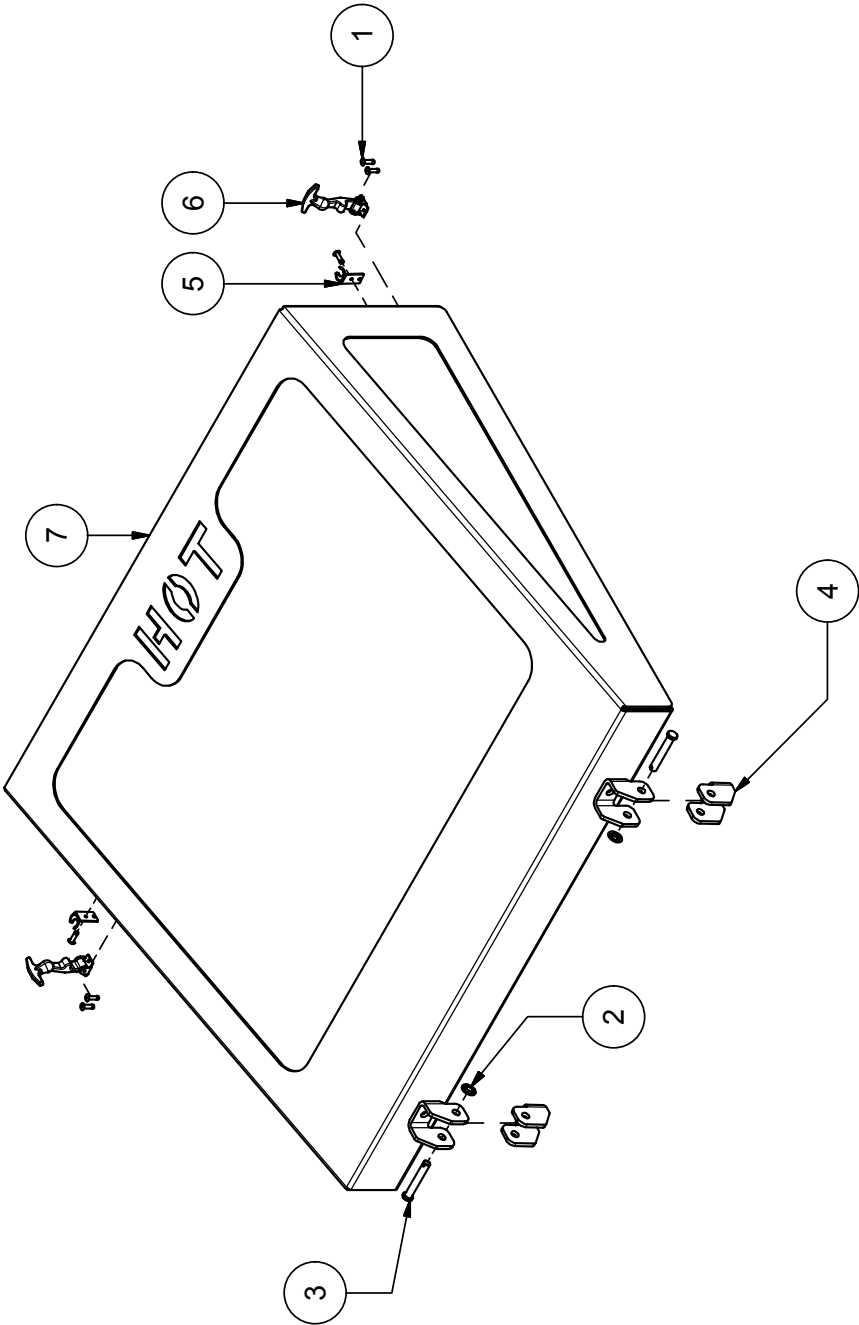
ELECTRICAL ASSEMBLY

PARTS LIST				
ITEM	QTY	PART #	DESCRIPTION	
1	2	110561	BOLT, 1/4-20 X .75	
2	2	110609	NUT, 1/4-20	
3	3	200019	CLAMP, ADEL AC10 .265 HOLE	
4	1	910060	BATTERY STRAP	
5	1	930001	BATTERY	
6	1	930002	BATTERY CABLE, POSITIVE	
7	1	930003	BATTERY CABLE, NEGATIVE	

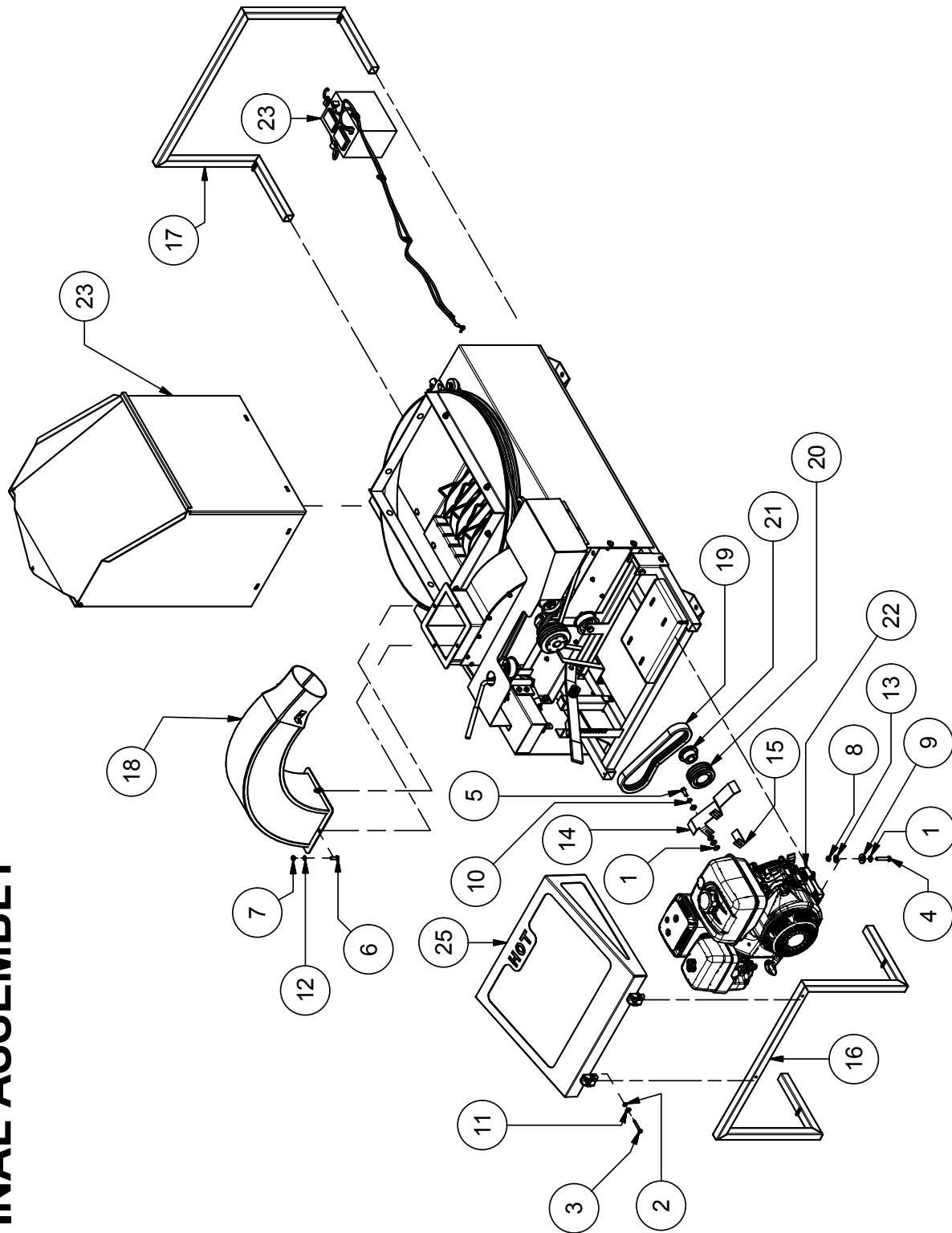


ENGINE SCREEN ASSEMBLY

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	6	110063	POP RIVET, 1/8
2	2	112011	PUSH NUT, WASHER CAP STYLE
3	2	112095	CLEVIS PIN, STD ZP 1/4 X 1 5/8
4	2	211660	TOOL BOX DOOR HINGE, INNER HALF
5	2	810126	LATCH, FEMALE
6	2	810127	LATCH, MALE
7	1	915214	ENGINE SCREEN WELDMENT



FINAL ASSEMBLY

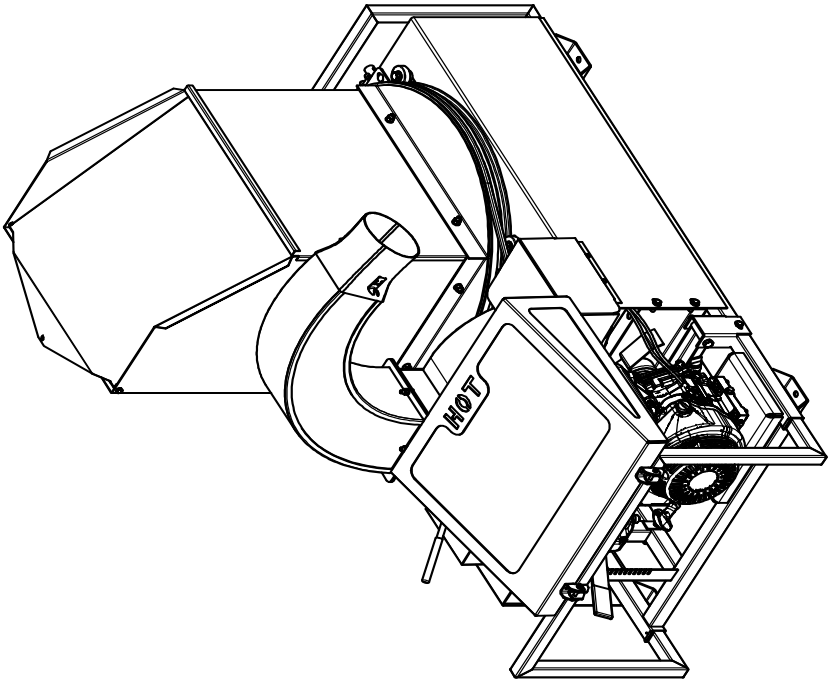


7/21/2014

FINAL ASSEMBLY

PARTS LIST		
ITEM	QTY	DESCRIPTION
1	8	WASHER, 3/8" FLAT SAE
2	2	NUT, 1/4-20, UNITORQUE LOCK
3	2	BOLT, 1/4-20 X 2.0 HEX HEAD
4	6	BOLT, 3/8-16 X 2.0
5	3	BOLT, 3/8-16 X 1.0
6	4	BOLT, 5/16-18 X 1.0
7	4	NUT, 5/16-18
8	4	NUT, 3/8-16, UNITORQUE LOCK
9	4	WASHER, 1/2" FLAT SPECIAL 1.250d
10	3	WASHER, 3/8" LOCK
11	2	WASHER, 1/4" FLAT STANDARD
12	4	WASHER, 5/16" LOCK
13	4	WASHER, 3/8" FLAT STANDARD
14	1	GUIDE, UPPER DRIVE BELT
15	1	GUIDE, LOWER DRIVE BELT
16	1	HANDLE, FRONT LIFT
17	1	HANDLE, REAR LIFT
18	1	HOSE ADAPTER, 6"
19	1	BANDED DRIVE BELT (3/3V X 315)
20	1	SHEAVE, 3/3V3.65 SH QD
21	1	BUSHING, QD 1" SH
22	1	ENGINE, KOHLER, 440-14, TIER 3

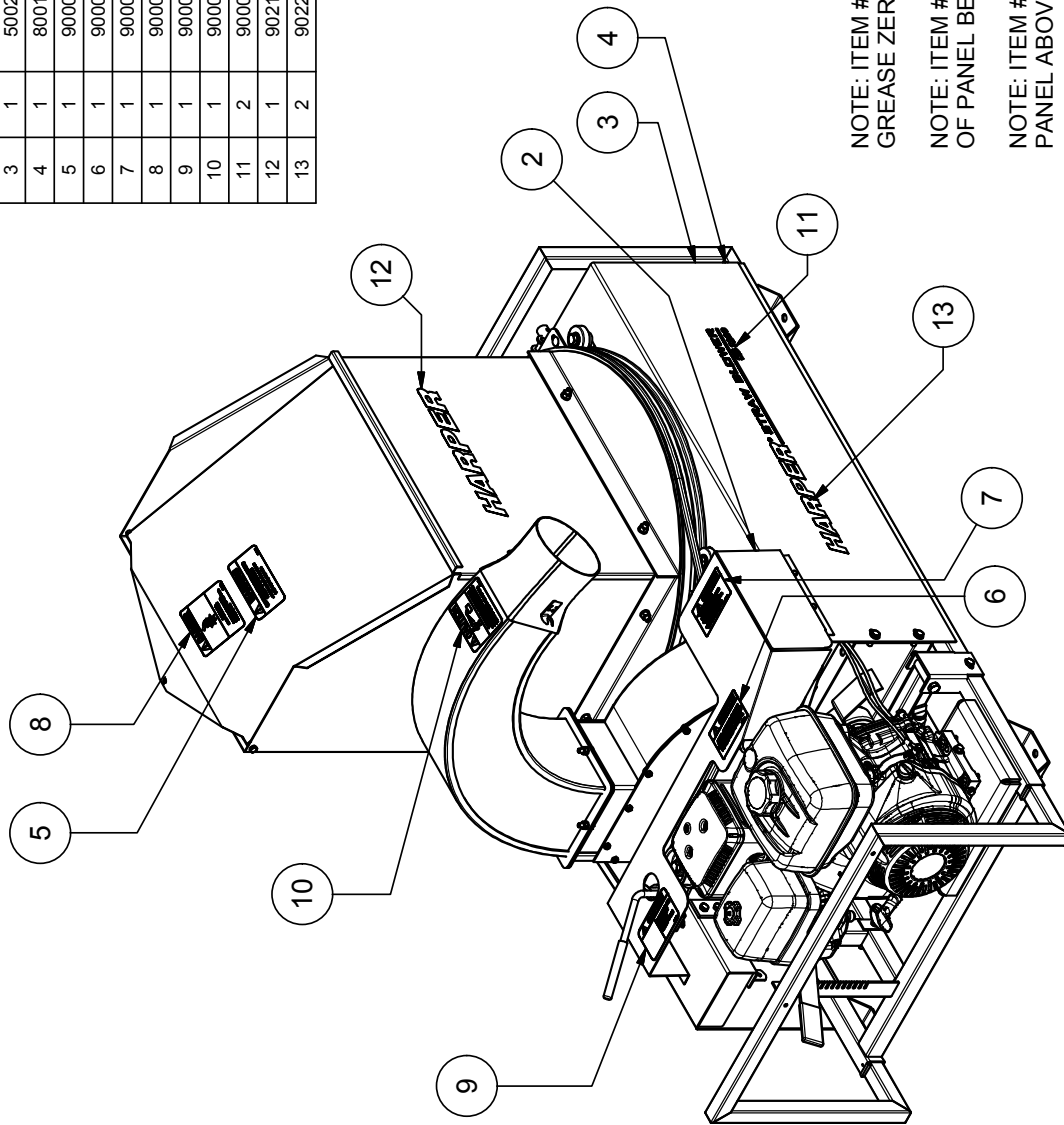
ASSEMBLIES LIST	
ITEM	DESCRIPTION
23	BALE TUB ASSEMBLY
24	ELECTRICAL ASSEMBLY
25	ENGINE SCREEN ASSEMBLY



NOTE: EXPLODED VIEWS OF ASSEMBLIES ON PRECEDING PAGES.

DECAL PLACEMENT

Parts List				DESCRIPTION
ITEM	QTY	PART #		
1	2	160008		DECAL GREASE EVERY 40 HRS
2	1	400014		DECAL, SHIELD REMOVED
3	1	500255		DECAL, BATTERY
4	1	800195		DECAL, RECYCLE BATTERY
5	1	900006		DECAL, REMOVE WIRE/STRING
6	1	900007		DECAL, KEEP AREA CLEAN
7	1	900008		DECAL, CAUTION
8	1	900009		DECAL, DANGER ROTATING CHOPPER
9	1	900010		DECAL, CLEAN BLOWER W/ HOSE
10	1	900011		DECAL, CAUTION/THROWN OBJECTS
11	2	900016		DECAL, SB 1300, BLACK
12	1	902197		DECAL, HARPER, 16.61" X 3.13", BLACK
13	2	902201		DECAL, HARPER STRAW BLOWER, 26", BLACK



NOTE: ITEM #1 (P/N 160008) LOCATED NEAR GREASE ZERKS.

NOTE: ITEM #2 (P/N) 400014 LOCATED ON TOP OF PANEL BELOW SHIELD.

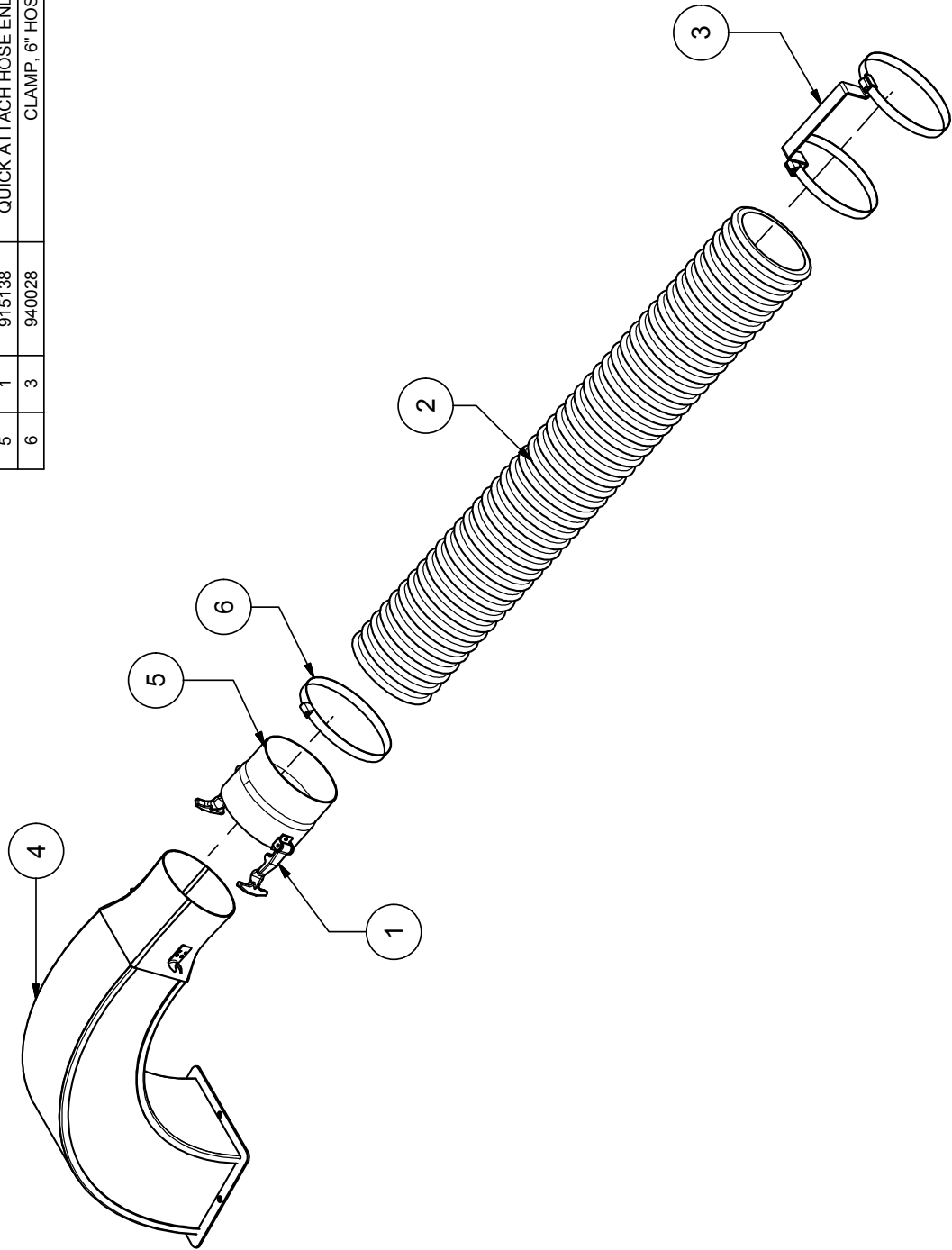
NOTE: ITEM #3 (P/N 500255) AND # 4 LOCATED INSIDE PANEL ABOVE BATTERY.

NOTE: ITEMS #11 (P/N 900016) AND #13 (P/N 902170) ALSO LOCATED ON REVERSE SIDE OF STRAW BLOWER.

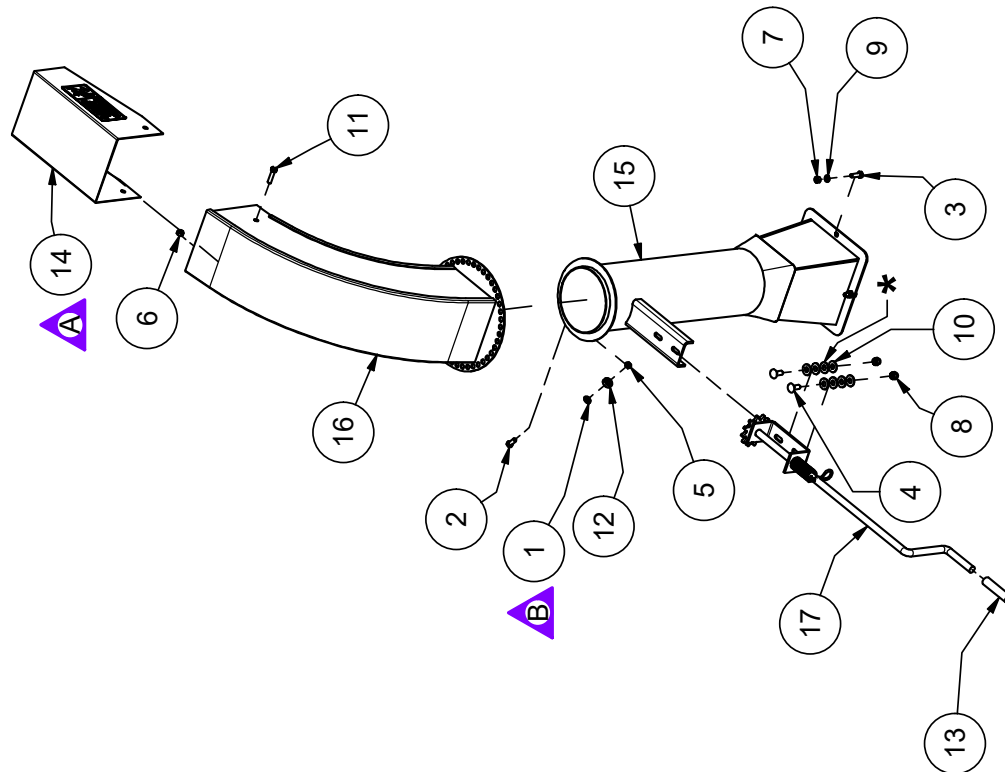
7/17/2014

HOSE ADAPTER ASSEMBLY

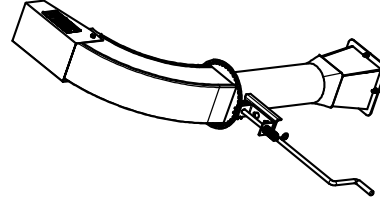
PARTS LIST			
ITEM	QTY	PART #	DESCRIPTION
1	2	500307	LATCH, HOOD
2	1	900022	HOSE, 6' STRAW BLOWER
3	1	910131	HANDLE, HOSE
4	1	915023	HOSE ADAPTER, 6"
5	1	915138	QUICK ATTACH HOSE END WELDMENT
6	3	940028	CLAMP, 6" HOSE



7/17/2014



- * NOTE: USE WASHERS TO BUSH UP CRANK SO THAT SPROCKET TEETH FULLY MESH INTO HOLES IN UPPER SPOUT. CRANK AND SPOUT SHOULD TURN FREELY.
- NOTE: PLACE ITEM #1 (P/N 110069) BETWEEN BEARING AND FLANGE SO THAT BEARING TURNS FREELY. GREASE AREA WHERE LOWER SPOUT CONTACTS UPPER SPOUT.



PARTS LIST

ITEM	QTY	PART #	DESCRIPTION
1	3	110069	WASHER, 5/16" FLAT SAE
2	3	110422	BOLT, 5/16-18 X .75
3	4	110423	BOLT, 5/16-18 X 1.0
4	2	110556	Bolt, 3/8-16 X 1 in Carriage
5	3	110600	NUT, 5/16-18, UNITORQUE LOCK
6	2	110603	NUT, 5/16-18 LOCK (NYLON)
7	4	110608	NUT, 5/16-18
8	2	110618	NUT, 3/8-16 LOCK NYLON INSERT
9	4	110674	WASHER, 5/16" LOCK
10	8	110676	WASHER, 3/8" FLAT STANDARD
11	2	111005	SCREW, 5/16-18 X .75 MACH RH SLT
12	3	540079	BEARING, BALL, 1620RS
13	1	902012	COVER, CRANK HANDLE
14	1	905141	ASSEMBLY, DEFLECTOR SPOUT
15	1	915060	SPOUT ASSY, LOWER DIRECTIONAL
16	1	915062	Upper Directional Spout Assy
17	1	915119	CRANK ASSY, LONG HANDLE

NOTES

Harper Industries, Inc.
151 E. Highway 160
Harper, KS 67058

Telephone: 620-896-7381
Toll-Free: 800-835-1042
Fax: 620-896-7129

Website: www.harperindustries.com

E-mail: info@harperindustries.com

HARPER
TURF EQUIPMENT

Straw Blower