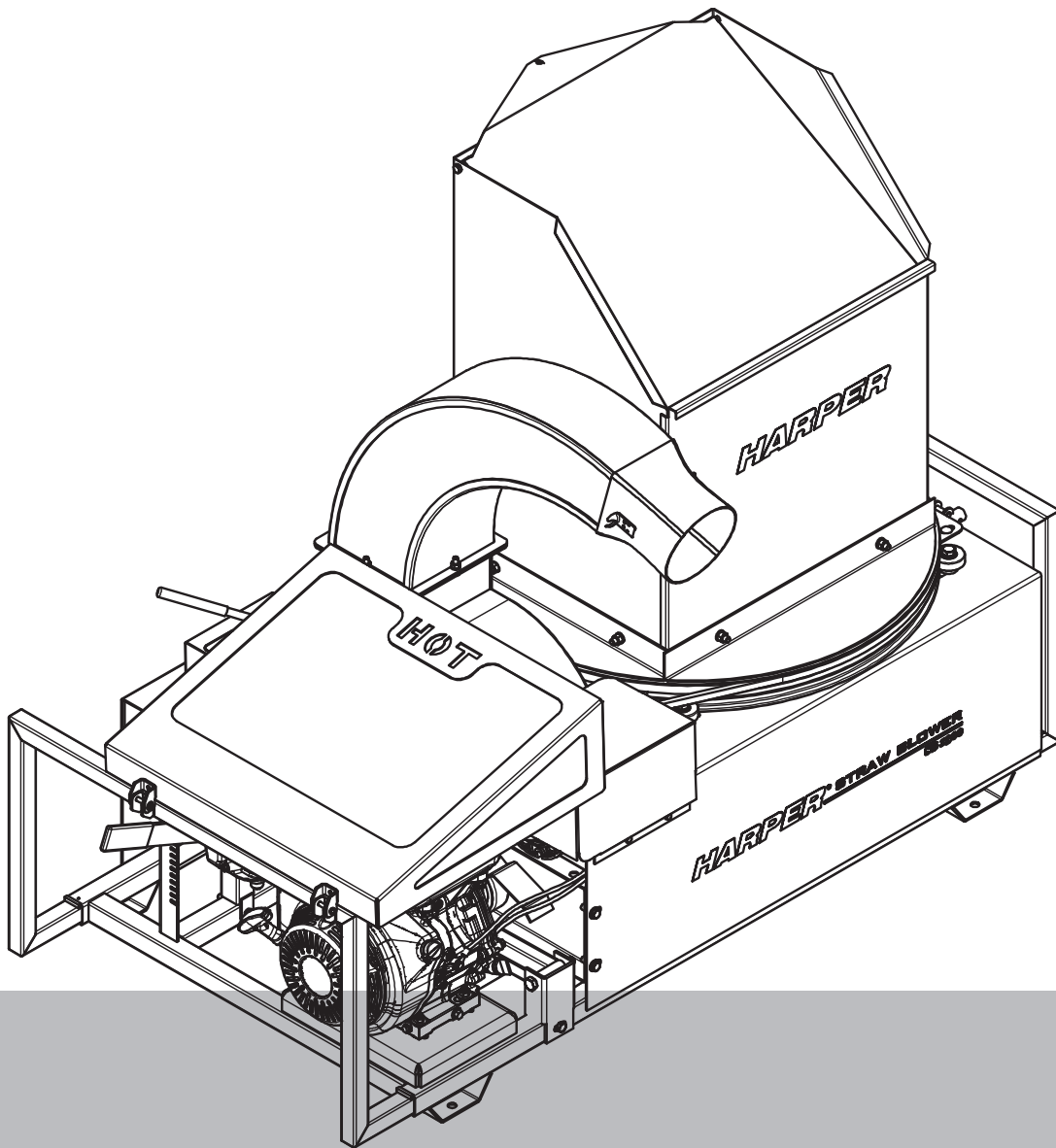


Straw Blower 1300



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 1300. 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:



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.



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.

Not to be sold in California

© 2023 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

Harper Industries, Inc. (HII) warrants to each purchaser of a new Harper Straw Blower from an authorized dealer or representative, that such equipment is free of manufacturer's defects in workmanship and materials which appear while in normal service for a period of ONE YEAR commencing with delivery to the original user.

The obligation of HII under this warranty is expressly limited, at our option, to replacement or repair at a service facility designated by Harper Industries or at the manufacturing plant in Harper, KS. A part will be replaced after inspection discloses it to have been defective. This warranty does not apply to defects caused by damage or unreasonable use (including failure to provide reasonable and necessary maintenance, or by performing functions without genuine Harper Straw Blower accessories) while in the possession of the consumer.

Warranty is limited to parts, labor and ground freight delivery of replacement parts. HII shall not be liable for the consequential damages of any kind, including but not limited to consequential labor costs or transportation charges in connection with replacement or repair of defective parts.

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

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.

Harper Industries makes no warranty with respect to trade accessories. They are subject to the warranties of their respective manufacturers.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. HII makes no other express warranty, nor is anyone authorized to make any on behalf of HII.

For further information please contact your nearest Harper Straw Blower dealer.

Evaporative Emissions Control System Warranty

YOUR WARRANTY RIGHTS AND OBLIGATIONS

Your evaporative emission control system may include parts such as: carburetors, fuel tanks, fuel lines (for liquid fuel and fuel vapors), fuel caps, valves, canisters, filters, clamps, connectors, and other associated components.

MANUFACTURER'S WARRANTY COVERAGE:

This evaporative emission control system is warranted for two years. If any evaporative emission-related part on your equipment is defective, the part will be repaired or replaced by Harper Industries.

OWNER'S WARRANTY RESPONSIBILITIES:

1. As the Straw Blower owner, you are responsible for performance of the required maintenance listed in your owner's manual. Harper Industries recommends that you retain all receipts covering maintenance on your Straw Blower, but Harper Industries cannot deny warranty coverage solely for the lack of receipts.
2. As the Straw Blower owner, you should be aware that Harper Industries may deny you warranty coverage if your Straw Blower or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.
3. You are responsible for presenting your Straw Blower to a Harper Industries dealer as soon as the problem exists. The warranty repairs shall be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact your authorized Harper Straw Blower dealer or Harper Industries at (620) 896-7381.

RECORDS

Date of Purchase _____ / _____ / _____

Serial Number Machine _____

Dealer's Name _____

Serial Number Engine _____

Dealer's Phone _____

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Specifications

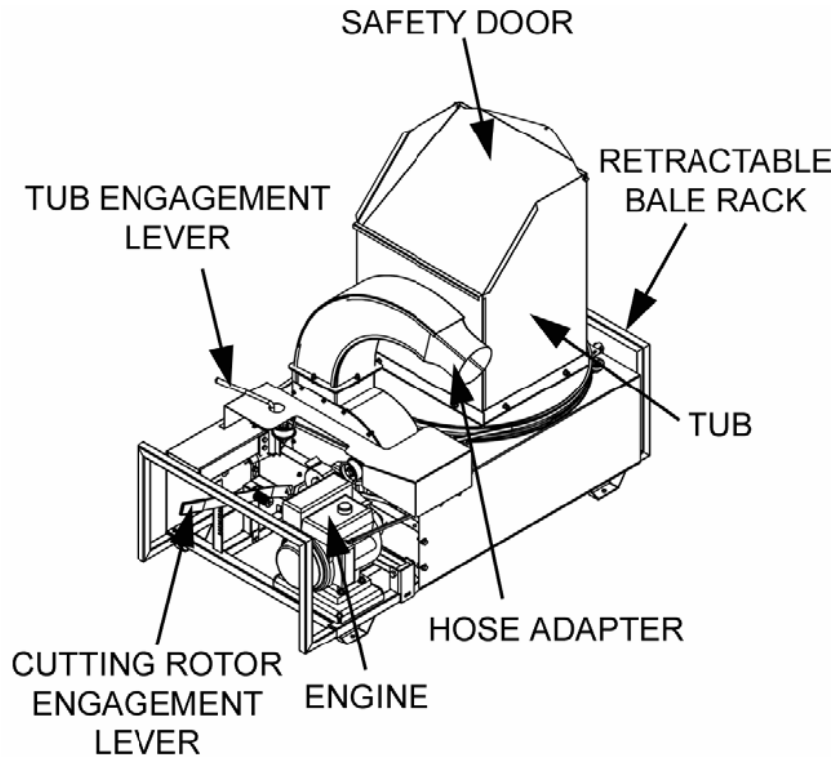
Engine	4-cycle Honda
Horsepower Rating	13 hp
Dimensions	Width - 31" Height - 51" Length - 55"
Weight	490 lbs (shipping weight 565 lbs)
Cutting Device	4 blade impeller - 16.5" diameter
Knives	32
Discharge	6" x 30' Super-flex hose or directional spout

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

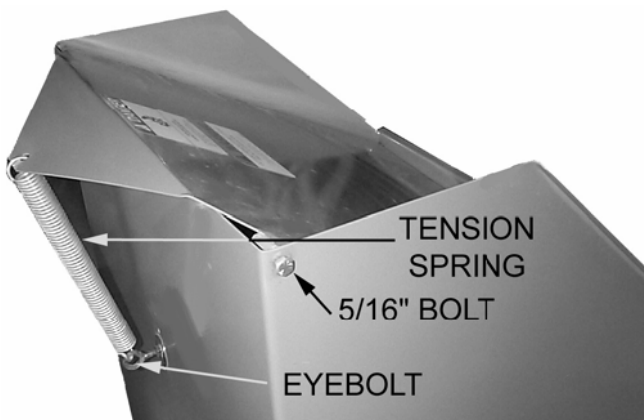
- If safety related or instructional decals become illegible or are removed, replace them immediately. New decals may be obtained from your local Harper Dealer.
- If you replace parts that have such decals attached to them, make sure the decals are replaced with current versions, and are on the replacement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

Assembly

TUB COVER SAFETY SHIELD

Using the Hardware supplied:

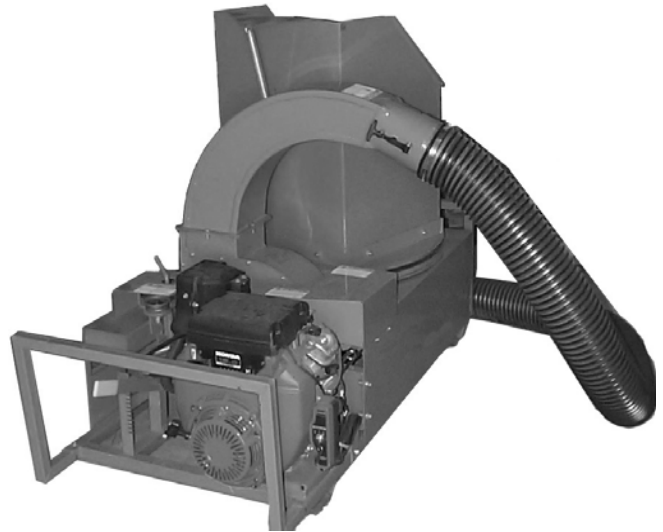
1. Install the eyebolt through the top hole in the rear tub wall with a flat washer, lock washer and nut on each side of the wall.
2. Mount the tub to the tub base with the truss-head bolts, lock washers and nuts provided. Put the bolt heads inside the tub to provide a smooth inside surface.
3. Insert 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.

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

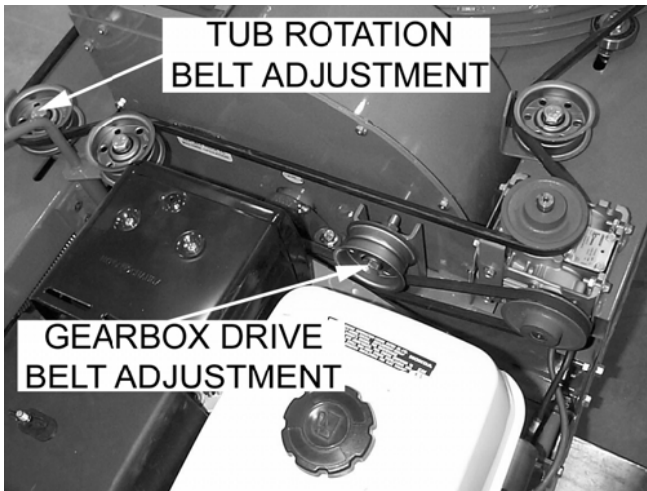
NOTE: Use only industrial V-belts. Do not use automotive belts.

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.

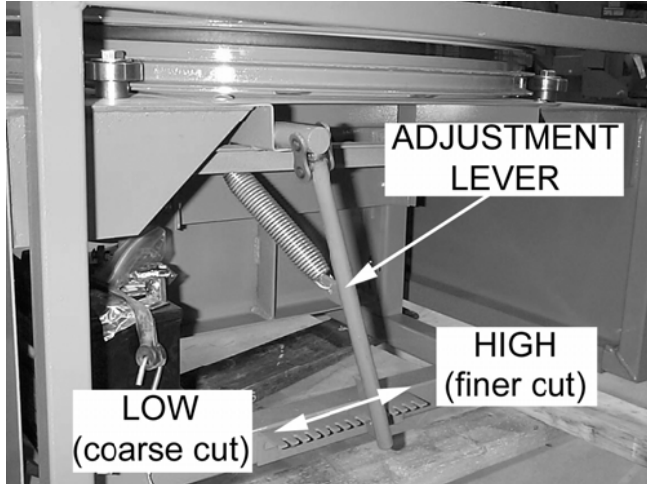
Engine Powered Models

- 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



SAFETY WARNING!

- **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:

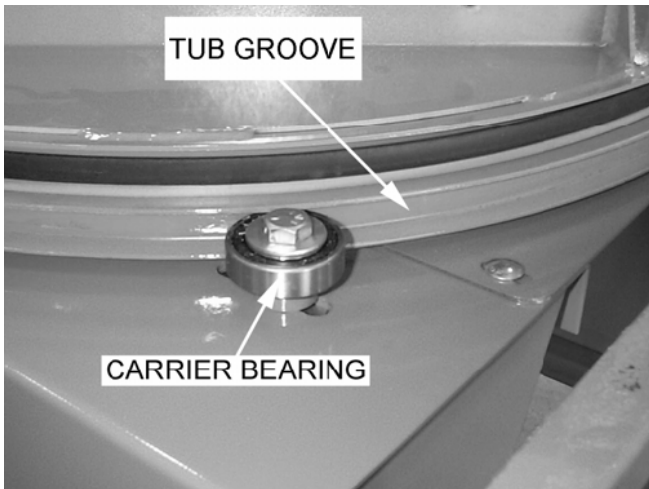
1. Remove the belt from around the tub.
2. Loosen the bolts mounting the rear tub carrier bearings.
3. Slide the loosened bearings toward the rear and remove the tub from the Straw Blower.
4. Unbolt and remove the grate guide.
5. With the grate adjustment lever, rotate the grate upwards and clear of the knives.
6. 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.
7. Return the grate to its original position.
8. 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

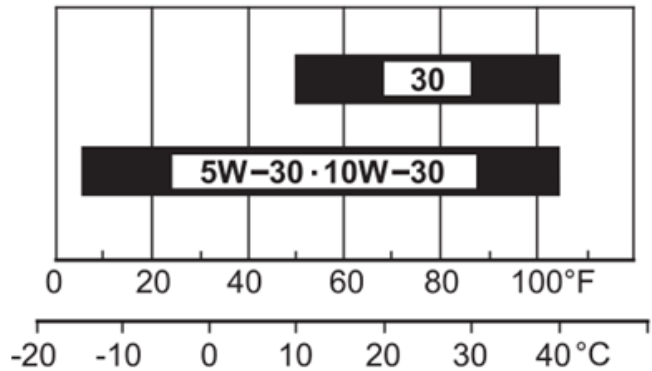
- The bearings are sealed and require no lubrication.

GEARBOX

- No maintenance is required for the gearbox on the engine powered models unless the unit leaks.
- The gearbox uses 2.71 oz of Mobil SHC 634 worm gear lubricant or equivalent.

ENGINE

- Follow the manufacturer's maintenance recommendations located in the engine manual.



AMBIENT TEMPERATURE

- The engine is filled with SAE 10W-30 from the factory, 1.1 L (1.2 US qt) capacity. Change engine oil after the first 20 hours and every 100 hours after.
- Contact a certified Honda 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. (540 RPM max is recommended for PTO model. Adjust throttle to increase RPM to required levels. DO NOT adjust engine governor on engine models. • 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

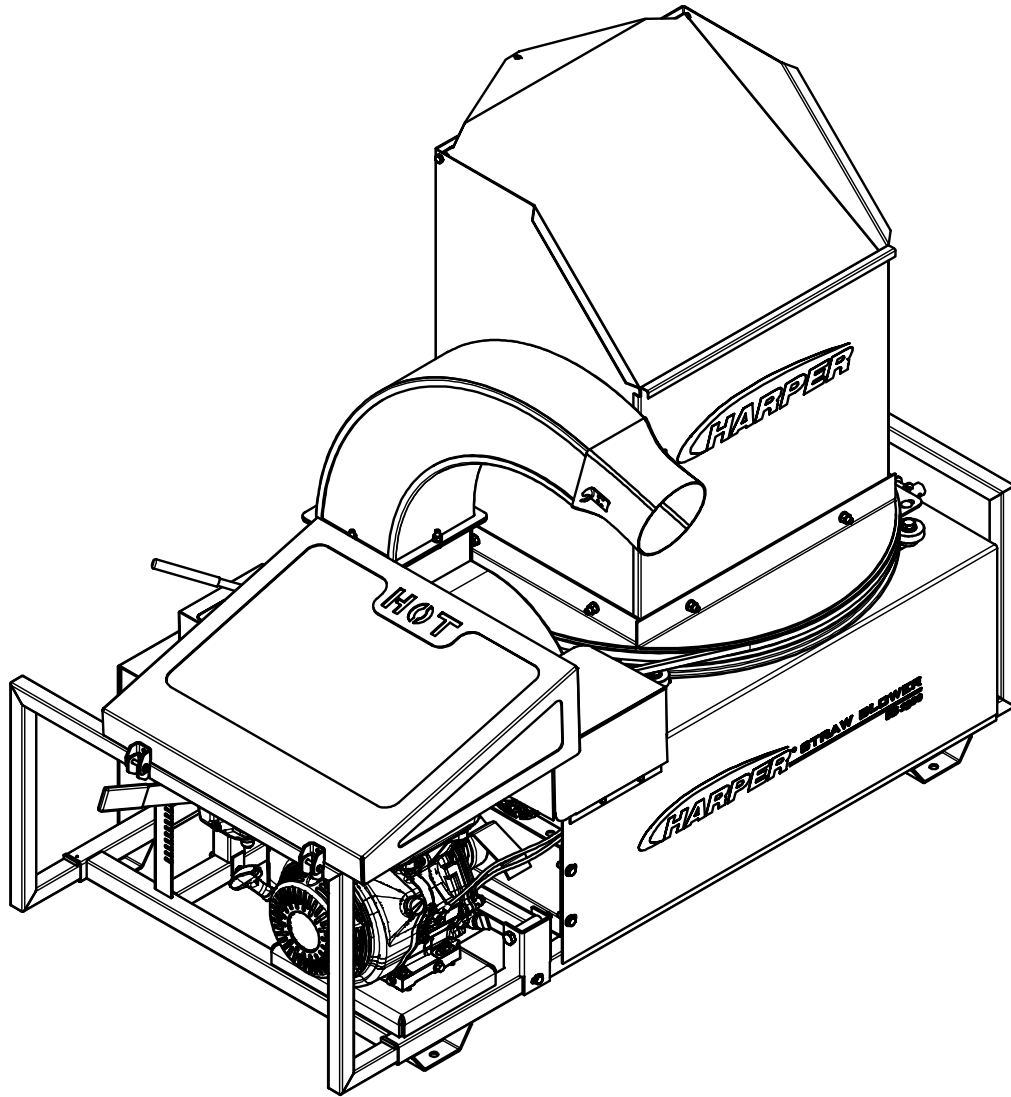
Standard Torque Chart



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.



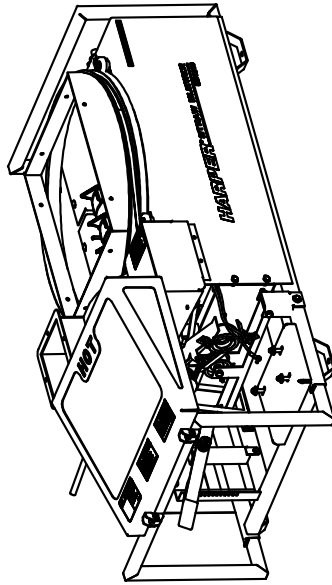
PARTS

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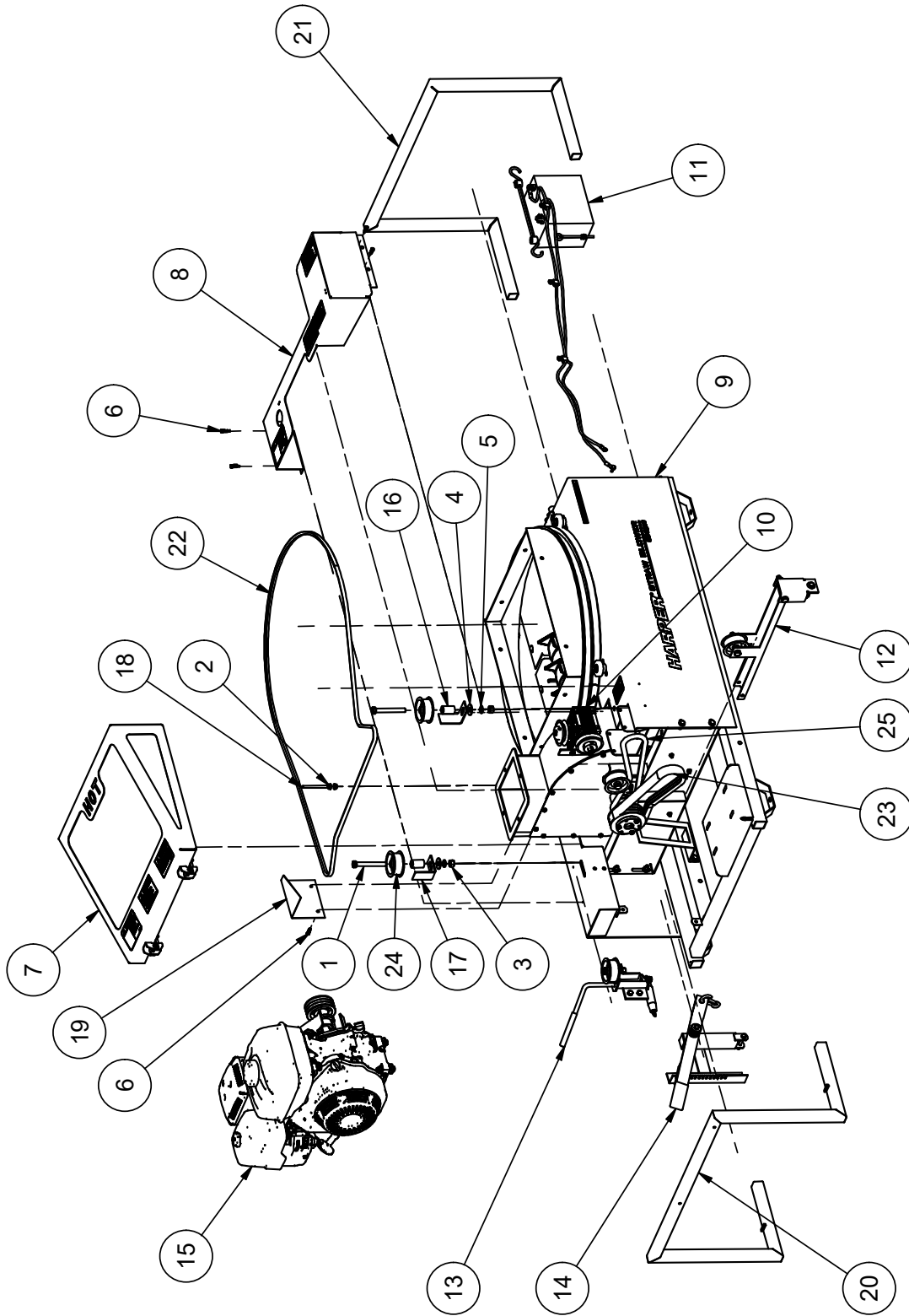
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MAIN FRAME ASSEMBLY



Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	2	110003	BOLT, 1/2-13 X 4.0
2	2	110606	NUT, 5/16-18 WIZ FLANGE
3	2	110610	NUT, 1/2-13
4	2	110658	WASHER, 1/2" FLAT STANDARD
5	2	110666	WASHER, 1/2" LOCK
6	6	710586	SCREW, 1/4 X 1 TEK SELF-TAP
7	1	905089	ENGINE SCREEN ASSY, STRAW BLOWER
8	1	905117	SHIELD ASSY FRONT BELT
9	1	905163	ASSEMBLY, BASE ASSY W/DECAL
10	1	905165	ASSEMBLY, GEAR BOX
11	1	905166	ASSEMBLY, ELECTRICAL
12	1	905167	ASSEMBLY, ENGAGING HANDLE ARM
13	1	905168	ASSEMBLY, TUB SHIFT
14	1	905169	ASSEMBLY, ENGAGING HANDLE
15	1	905171	ASSEMBLY, ENGINE
16	2	910005	IDLER PULLEY SPACER
17	2	910006	BELT GUIDE
18	1	910027	GUIDE, BELT
19	1	910056	SHIELD, TUB BELT
20	1	915013	HANDLE, FRONT LIFT
21	1	915020	HANDLE, REAR LIFT
22	1	940002	DRIVE BELT, BLOWER TUB (A128)
23	1	940020	BANDED DRIVE BELT (3/8V X 315)
24	2	940027	IDLER ASSY, 2.75 FLAT X 1.125 WLD
25	1	942291	Belt, Gear Box, A36

MAIN FRAME ASSEMBLY

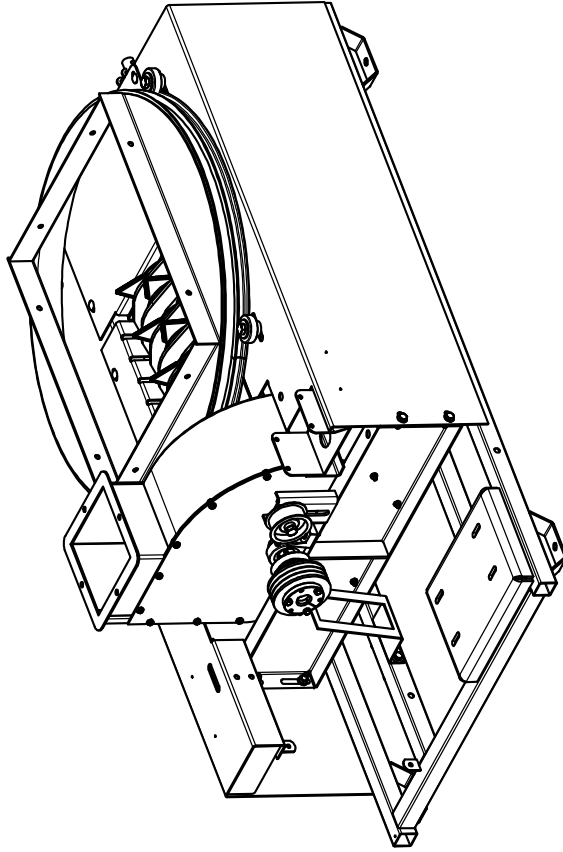


GEARBOX: Belt (25) should deflect .20" at midpoint when 5 lb is applied.

Verify alignment at final assembly:

- 1. Sheaves between engine and cutter shaft.
- 2. Sheaves between cutter shaft and gearbox
- 3. Tub drive sheaves

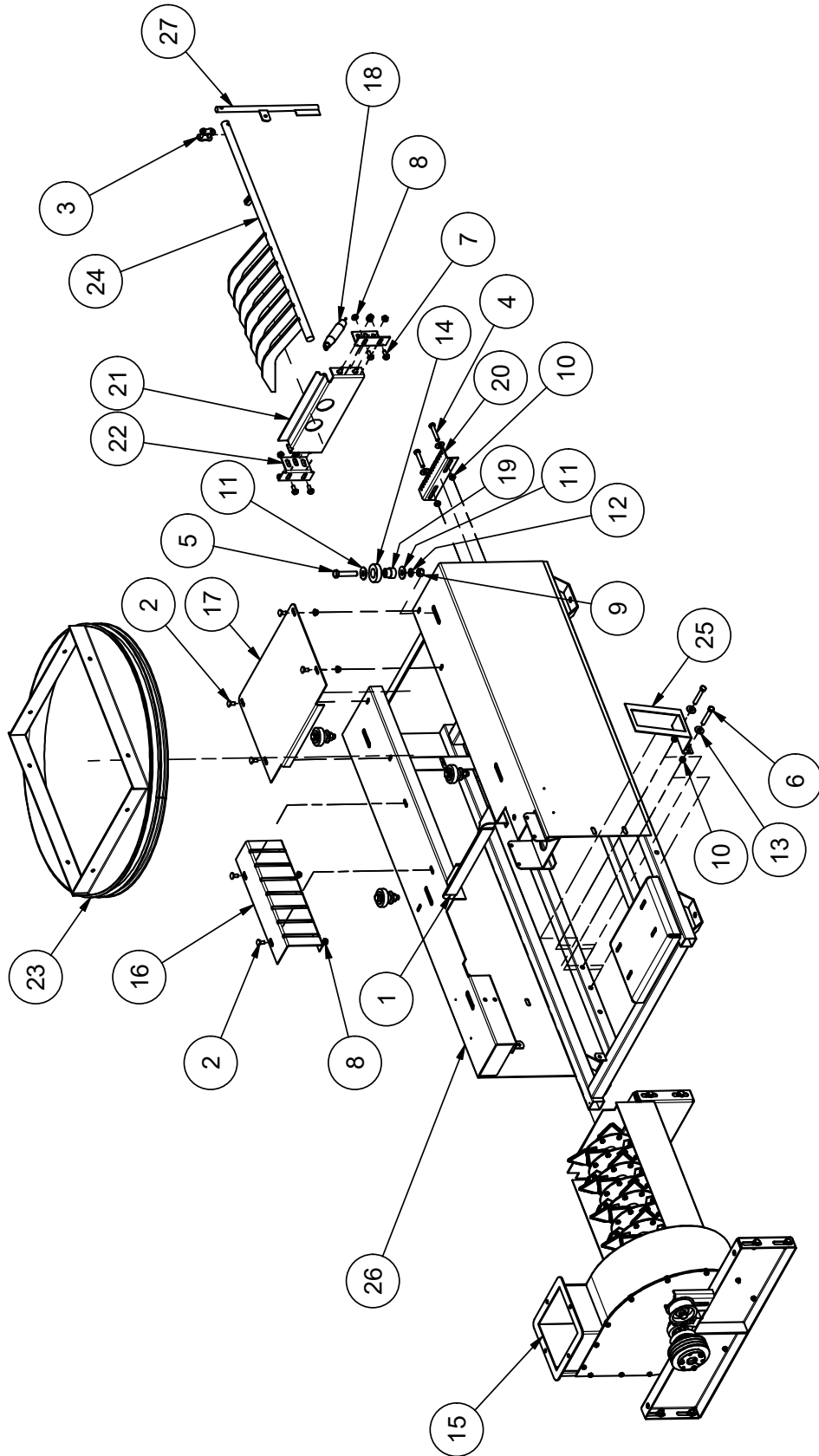
BASE ASSEMBLY



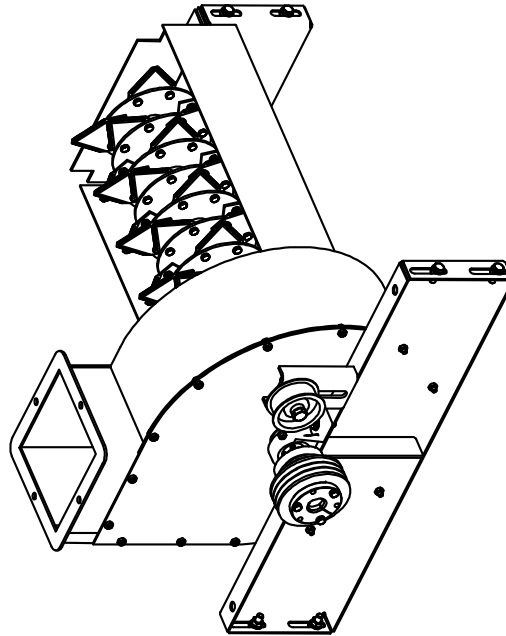
Parts List

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	2	110436	BOLT, 3/8-16 X 2.5
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	4	110621	NUT, 3/8-16, UNITORQUE LOCK
11	8	110658	WASHER, 1/2" FLAT STANDARD
12	4	110666	WASHER, 1/2" LOCK
13	4	110676	WASHER, 3/8" FLAT STANDARD
14	4	742054	BEARING, 52M OD X 25M ID 6205
15	1	905160	ASSEMBLY, BLOWER TROUGH
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	915015	GUIDE, ENGAGING CHANNEL
26	1	915017	FRAME, MAIN
27	1	915019	ASSY, GRATE LEVER

BASE ASSEMBLY



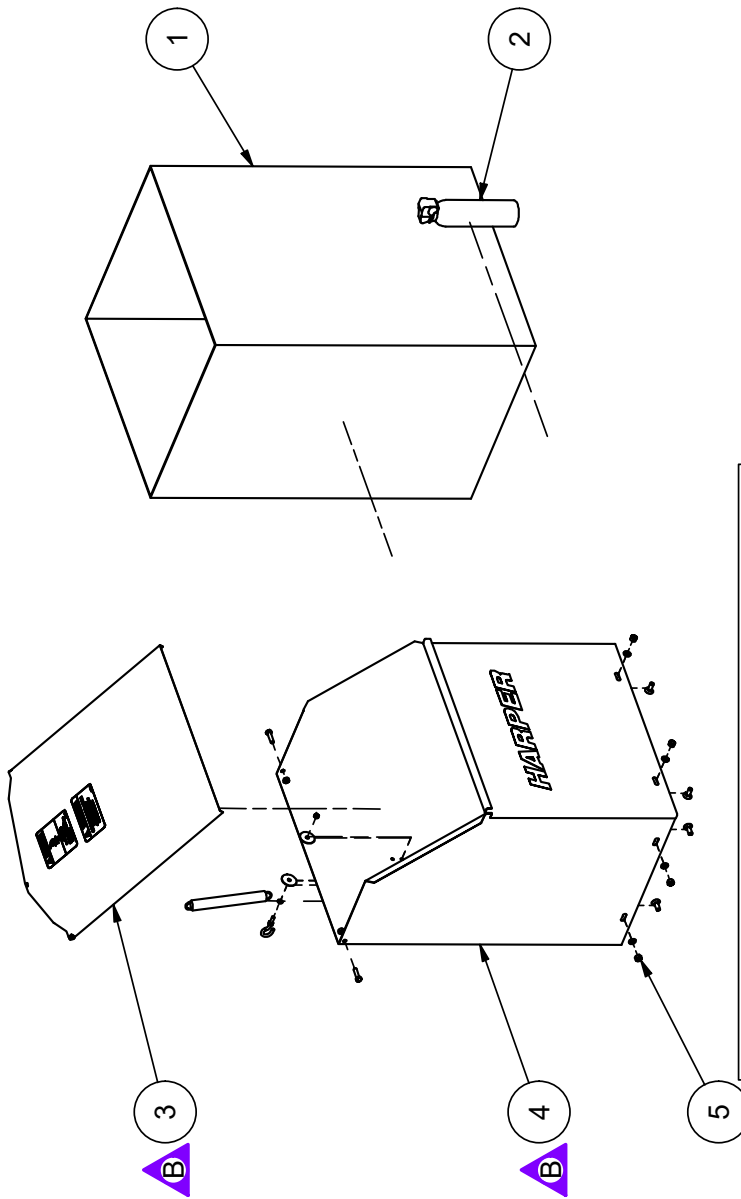
BLOWER TROUGH ASSEMBLY



Parts List

ITEM	QTY	PART #	DESCRIPTION
1	1	110129	BOLT, 1/2-13 X 2.75 HEX
2	4	110161	BOLT, 3/8-16 X 1.25, WIZ FLANGE
3	78	110174	NUT, 1/4-20, UNITORQUE LOCK
4	2	110239	SetScrew, 5/16-18 X 0.3125
5	1	110340	KEY, 1/4 X 1/4 X 3.25
6	3	110430	BOLT, 1/4-20 X 1-1/4
7	10	110440	BOLT, 3/8-16 X 1, WIZ FLANGE
8	74	110515	BOLT, 1/4-20 X .50
9	4	110561	BOLT, 1/4-20 X .75
10	1	110610	NUT, 1/2-13
11	14	110645	NUT, 3/8-16 WIZ FLANGE
12	1	110658	WASHER, 1/2" FLAT STANDARD
13	1	110666	WASHER, 1/2" LOCK
14	3	110667	WASHER, 1/4" LOCK
15	1	500230	GREASE ZERK, 1/4-28 90deg
16	1	510241	BUSHING, QD 1" SDS
17	1	900277	SPACER, .320
18	32	910039	STRAW BLOWER KNIFE
19	1	915011	ASSY, REAR BEARING GUARD
20	1	915021	BLOWER TROUGH FRONT
21	1	915022	BLOWER TROUGH ASSY
22	1	915026	ROTOR AND FAN ASSY
23	2	940009	BEARING, PB SD 1
24	1	940011	SHEAVE, 1A3.05 X 1.0 KSS
25	1	940027	IDLER ASSY, 2.75 FLAT X 1.125 WLD
26	1	942170	SHEAVE, 3/3V4.50 SDS QD

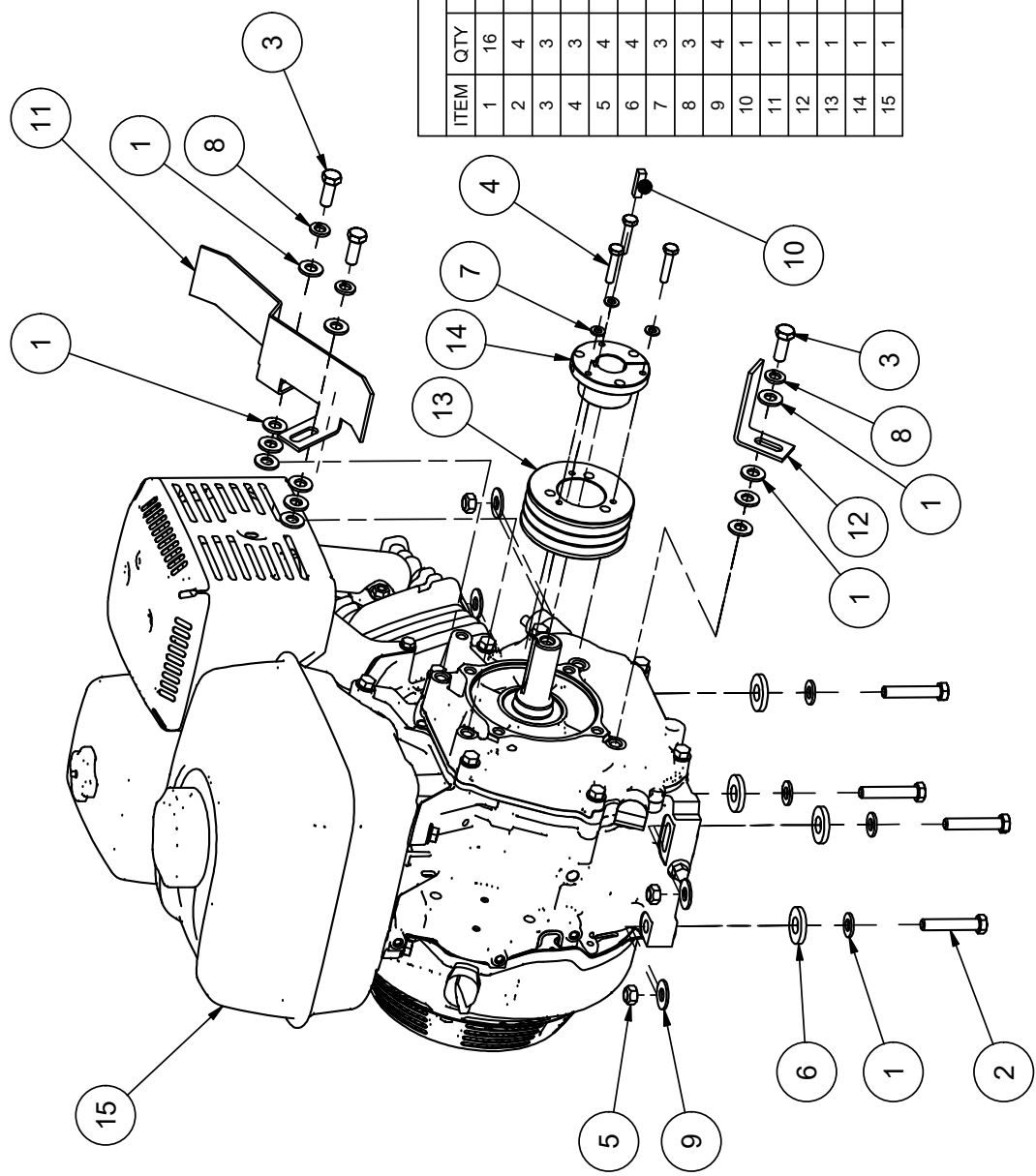
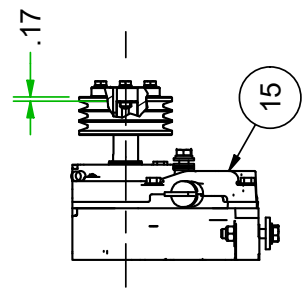
BALE TUB ASSEMBLY



910163 BOLT KIT BOM	
QTY	PART # DESCRIPTION
2	110049 WASHER, 5/16 X 1.50 FENDER
1	110174 NUT, 1/4-20, UNITORQUE LOCK
2	110421 BOLT, 5/16-18 X 1-1/4
8	110556 Bolt, 3/8-16 X 1 in Carriage
2	110608 NUT, 5/16-18
1	110667 WASHER, 1/4" LOCK
8	110672 WASHER, 3/8" LOCK
8	110826 NUT, 3/8-16 GR 5
1	910032 LID EYEBOLT
1	910033 SPRING, 1.0 OD X 8.75 L X .120

Parts List			
ITEM	QTY	PART #	DESCRIPTION
1	1	100575	BOX
2	1	900023	FIRE EXTINGUISHER
3	1	905161	ASSEMBLY, TUB LID W/DECAL
4	1	905162	ASSEMBLY, TUB W/DECAL
5	1	910163	BOLT KIT

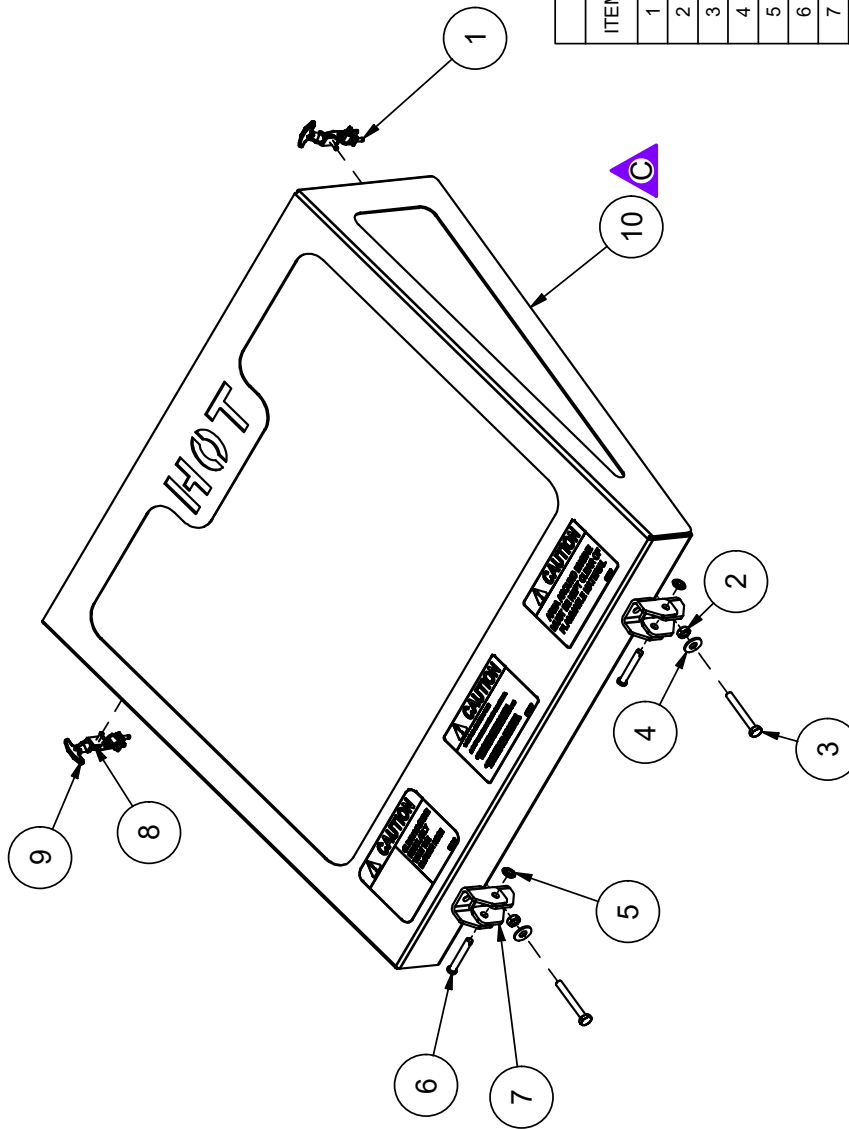
ENGINE ASSEMBLY



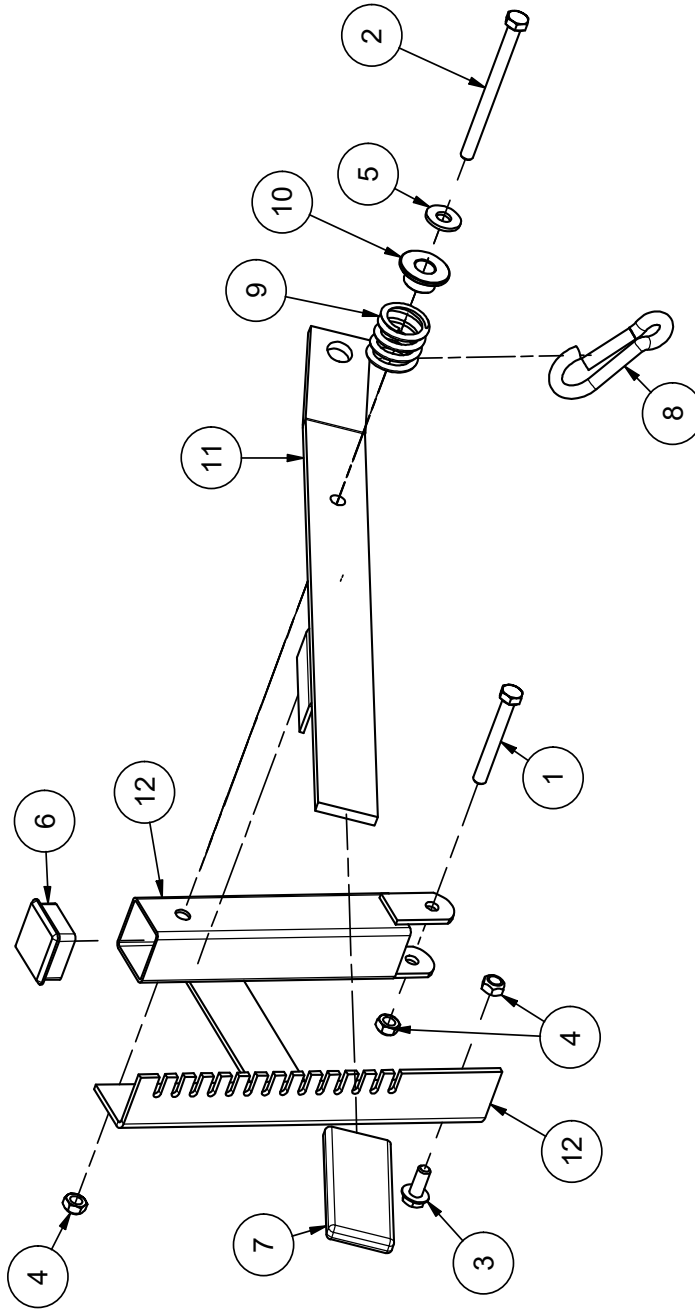
Parts List

ITEM	QTY	PART #	DESCRIPTION
1	16	110155	WASHER, 3/8" FLAT SAE
2	4	110400	BOLT, 3/8-16 X 2.0
3	3	110420	BOLT, 3/8-16 X 1.0
4	3	110430	BOLT, 1/4-20 X 1-1/4
5	4	110621	NUT, 3/8-16, UNITORQUE LOCK
6	4	110662	WASHER, 1/2" FLAT SPECIAL 1.250d
7	3	110667	WASHER, 1/4" LOCK
8	3	110672	WASHER, 3/8" LOCK
9	4	110676	WASHER, 3/8" FLAT STANDARD
10	1	510228	KEY, 1/4 X 1/4 X 1.0 UNDER
11	1	910064	GUIDE, UPPER DRIVE BELT
12	1	910065	GUIDE, LOWER DRIVE BELT
13	1	942172	SHEAVE, 3/3v3.65 SH QD
14	1	942179	BUSHING, QD 1" SH
15	1	943044	ENGINE, 13HP HONDA, TIER 3

ENGINE SCREEN ASSEMBLY



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	8	110063	POP RIVET, 1/8
2	2	110174	NUT, 1/4-20, UNITORQUE LOCK
3	2	110354	BOLT, 1/4-20 X 2.0 HEX HEAD
4	2	110673	WASHER, 1/4" FLAT STANDARD
5	2	112011	PUSH NUT, WASHER CAP STYLE
6	2	112095	CLEVIS PIN, STD ZP 1/4 X 1 5/8
7	2	211660	TOOL BOX DOOR HINGE, INNER HALF
8	2	810126	LATCH, FEMALE
9	2	810127	LATCH, MALE
10	1	905164	ASSEMBLY, SCREEN W/DECAL

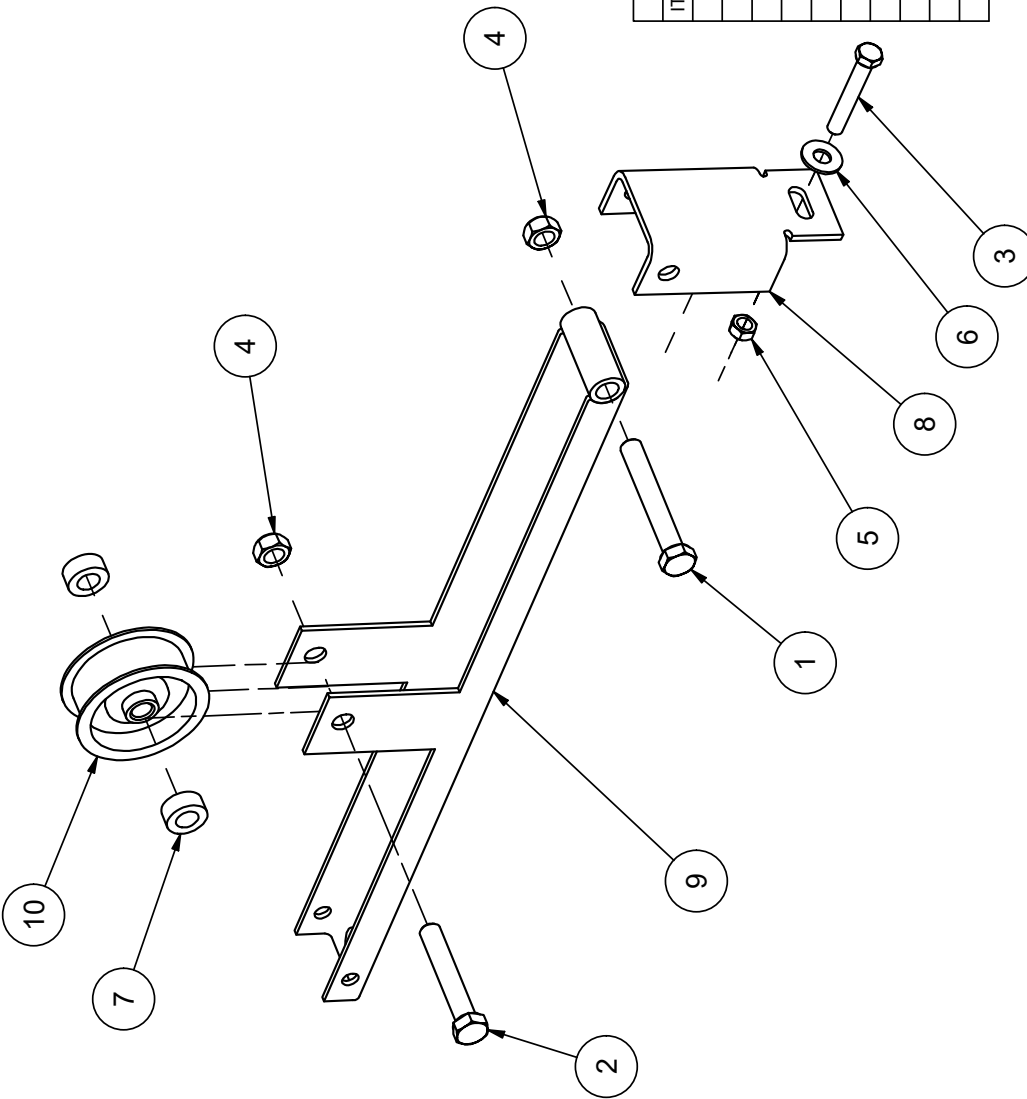


Parts List

ITEM	QTY	PART #	DESCRIPTION
1	1	110396	BOLT, 5/16-18 X 2.5
2	1	110441	BOLT, 5/16-18 X 4.0
3	1	110444	BOLT, 5/16-18 X 0.75, WIZ FLANGE
4	3	110600	NUT, 5/16-18, UNITORQUE LOCK
5	1	110665	WASHER, 5/16" FLAT STANDARD
6	1	910003	PLUG, CAP 1-1/2" X 1-1/2"
7	1	910044	COVER, VINYL .25 X 1.5 X 4 GRIP
8	1	910046	ENGAGING CHANNEL CLIP
9	1	910047	SPRING, 1.25 X .91 X 2.28; .17 DIA
10	1	910048	Bushing, .78 X .5 X .1 Fng. Zinc Plated
11	1	915014	ENGAGING HANDLE ASSY
12	1	915016	ENGAGING HANDLE STOP ASSY

ENGAGING HANDLE ASSEMBLY

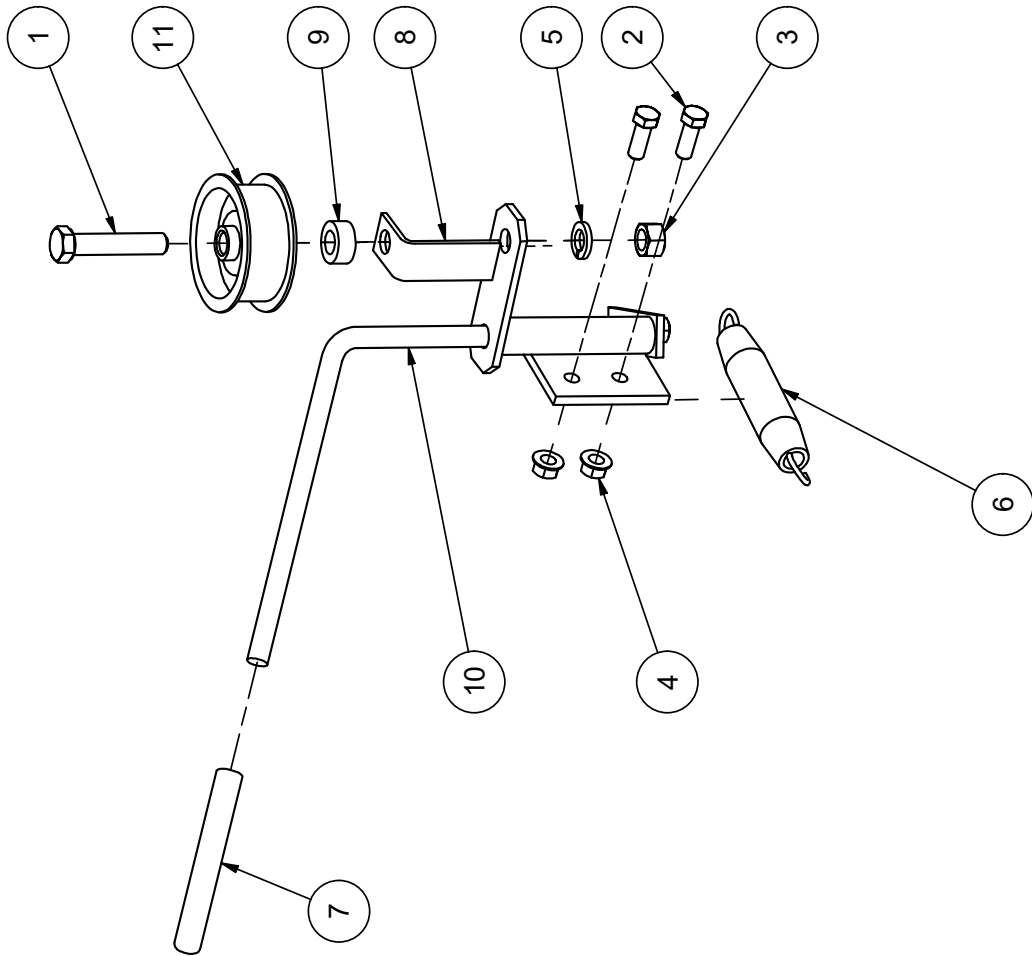
ENGAGING HANDLE ARM ASSEMBLY



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	1	110436	BOLT, 3/8-16 X 2.5
4	2	110615	NUT, 1/2-13, UNITORQUE LOCK
5	1	110621	NUT, 3/8-16, UNITORQUE LOCK
6	1	110676	WASHER, 3/8" FLAT STANDARD
7	2	910050	ENGAGING CHANNEL SPACER
8	1	910063	ENGAGING CHANNEL SWIVEL
9	1	915024	WELDMENT, ENGAGING CHANNEL
10	1	940027	IDLER ASSY. 2.75 FLAT X 1.125 WLD

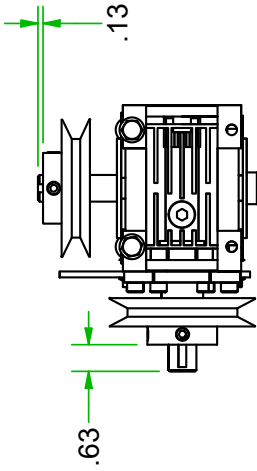
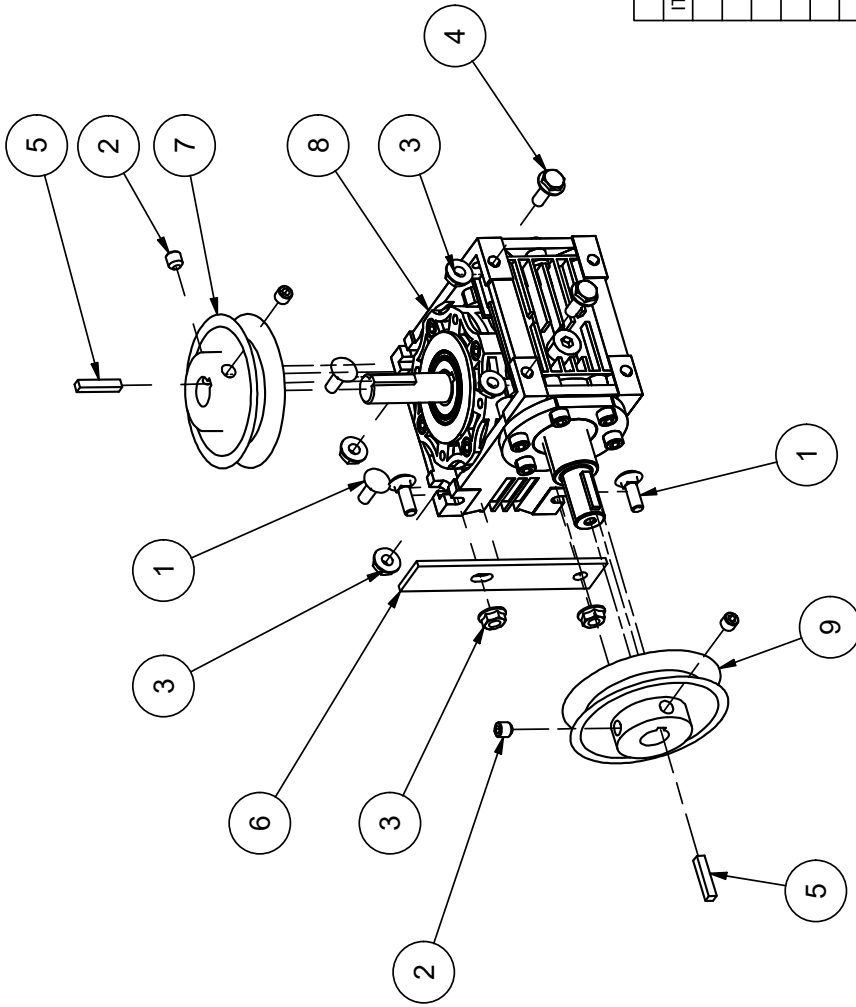
TUB SHIFT ASSEMBLY



Parts List

ITEM	QTY	PART #	DESCRIPTION
1	1	110403	BOLT, 1/2-13 X 2.5
2	2	110420	BOLT, 3/8-16 X 1.0
3	1	110610	NUT, 1/2-13
4	2	110645	NUT, 3/8-16 W/IZ FLANGE
5	1	110666	WASHER, 1/2" LOCK
6	1	910018	SPRING, FINGER ADJUSTER
7	1	910024	COVER, VINYL, 1/2 RND X 4.0 GRIP
8	1	910026	SHIFT ASSY STOP
9	1	910050	ENGAGING CHANNEL SPACER
10	1	915018	SHIFT ASSY
11	1	940027	IDLER ASSY. 2.75 FLAT X 1.125 WLD

GEAR BOX ASSEMBLY

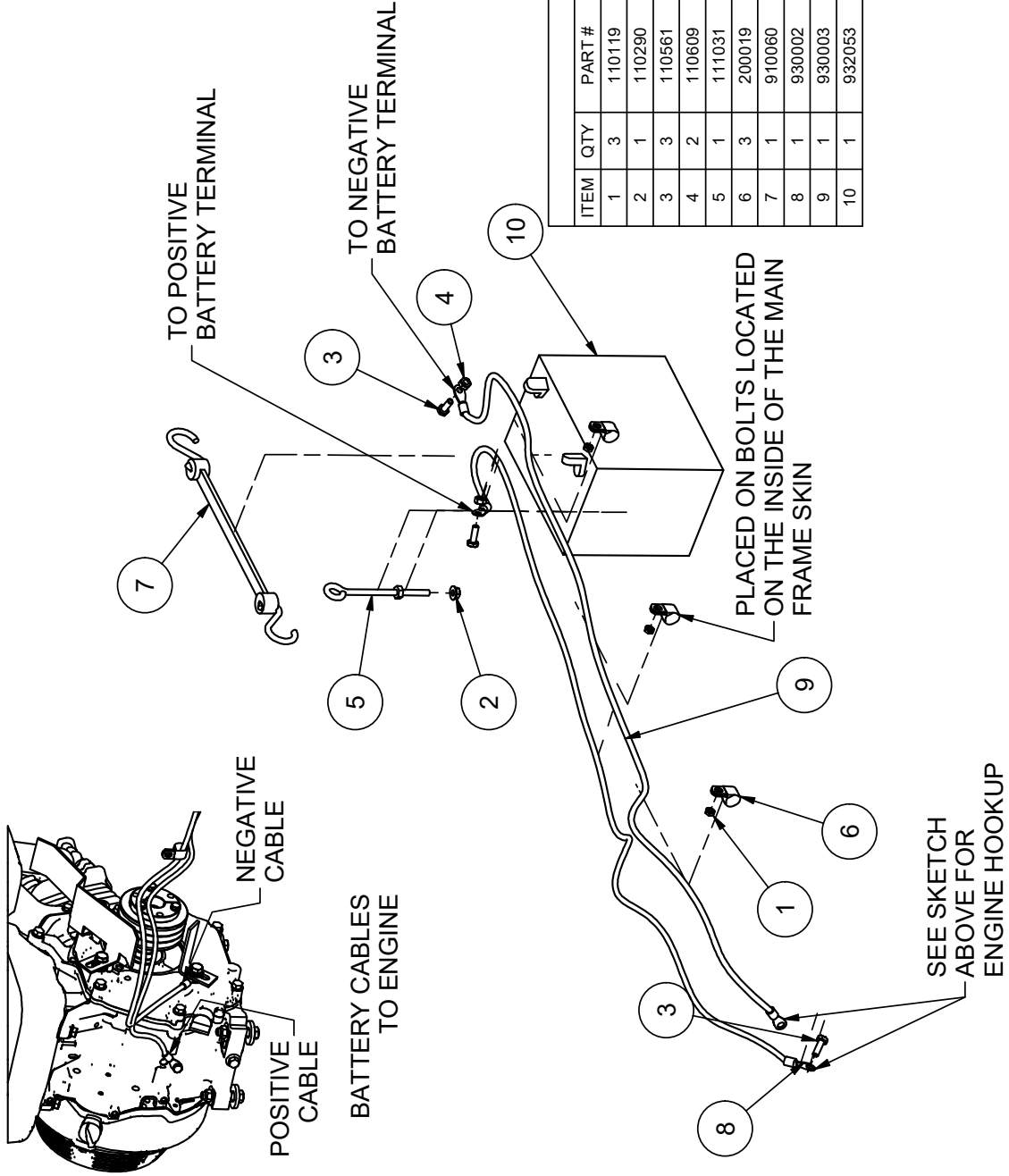


END VIEW
SHOWING PULLEY POSITIONING

Parts List

ITEM	QTY	PART #	DESCRIPTION
1	4	110154	Bolt, 1/4-20 X 0.75 in Carriage
2	4	110239	SetScrew, 5/16-18 X 0.3125
3	6	110290	NUT, 1/4-20 WIZ FLANGE
4	2	110468	BOLT, 1/4-20 X 0.75, WIZ FLANGE
5	2	510282	KEY, 3/16 X 3/16 X 1.0 UNDER
6	1	910062	GUIDE, BELT
7	1	940004	SHEAVE, 1A 3.25 X 5/8 KSS
8	1	940016	GEARBOX, 15:1
9	1	940017	SHEAVE, 1A 3.45 X 5/8 KSS

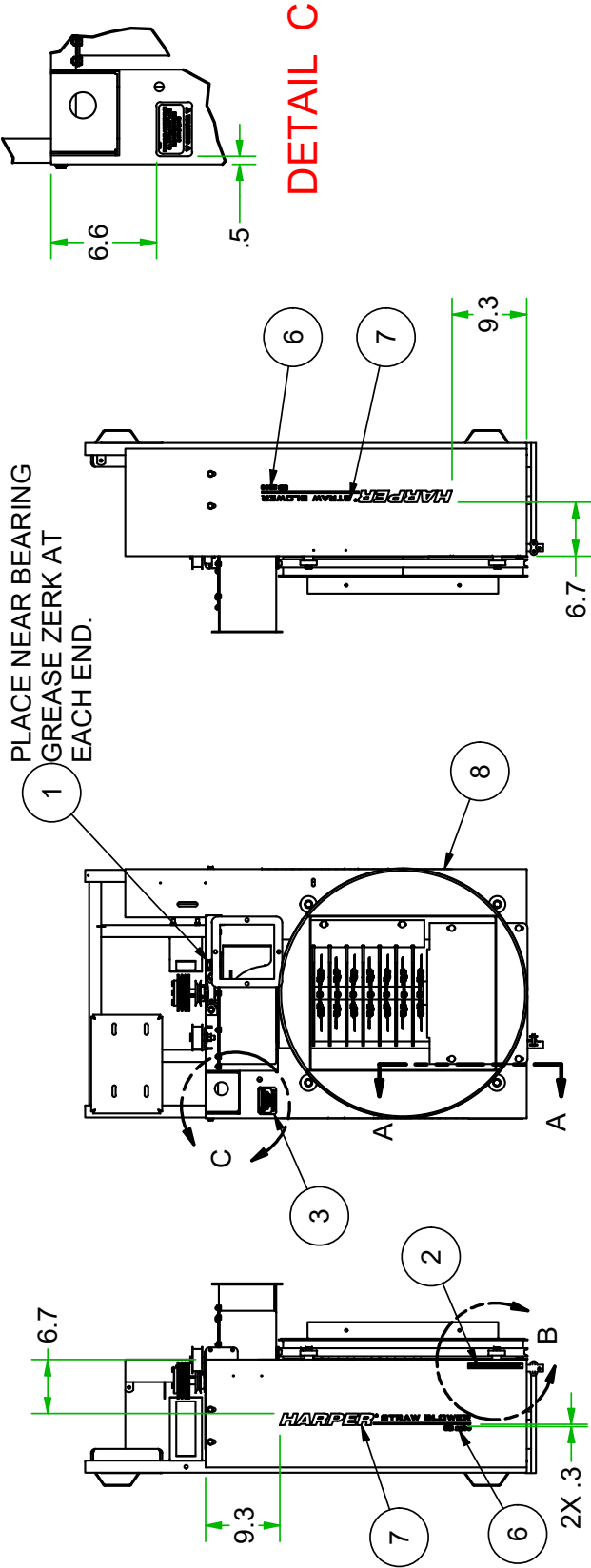
ELECTRICAL ASSEMBLY



Parts List

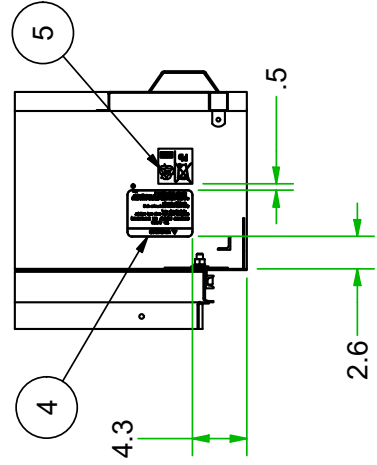
ITEM	QTY	PART #	DESCRIPTION
1	3	110119	NUT, 10-24 LOCK
2	1	110290	NUT, 1/4-20 WIZ FLANGE
3	3	110561	BOLT, 1/4-20 X .75
4	2	110609	NUT, 1/4-20
5	1	111031	Bolt, 1/4-20 X 4, Eye, Zinc
6	3	200019	CLAMP, ADEL AC10 .265 HOLE
7	1	910060	BATTERY STRAP
8	1	930002	BATTERY CABLE, POSITIVE
9	1	930003	BATTERY CABLE, NEGATIVE
10	1	932053	BATTERY, 12V GEL

DECAL INSTALLATION

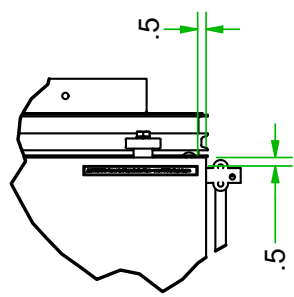


Parts List

ITEM	QTY	PART #	DESCRIPTION
1	2	160008	DECAL GREASE EVERY 40 HRS
2	1	202134	Decal, Prop 65, Short Form
3	1	400014	DECAL, SHIELD REMOVED
4	1	500255	DECAL, BATTERY
5	1	800195	DECAL, RECYCLE BATTERY
6	2	900016	DECAL, SB 1300, BLACK
7	2	902201	DECAL, HARPER STRAW BLOWER. 26", BLACK
8	1	905159	ASSEMBLY, BASE



SECTION A-A



DETAIL B

DETAIL C

NOTES

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HARPER
TURF EQUIPMENT

Straw Blower