

# *Bale King*

*Avenger 2880*

*Bale Processor*



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Your Authorized Dealer



## FEATURES AND SPECIFICATIONS

Number flails .....	18
Oil impregnated Bushing .....	18
Rotor Diameter extended tips .....	25"
Flail tip speed @ 1000 RPM.....	6550 FPM
Disc type twine guard .....	Standard
Beaters (2).....	Hydraulically Driven
Main Frame.....	3" x 6"
Bale Chamber Length .....	72"
Discharge opening .....	8" x 72"
Hydraulic lift cylinder (2 used).....	2.5" x 20"
Overall weight.....	2700 lbs.
Overall Transport width.....	8' 6"
Overall Transport Length.....	12' 1"
Tires .....	9.5L x 15 - 8 ply
PTO Shaft.....	80° CV U-Joint Standard
Horsepower Required .....	50 – Maximum 85 HP

## INTRODUCTION

Thank you for purchasing your new **BALE KING**  
model **Avenger 2880**.

With proper service and operation as outlined in this manual, the  
Avenger 2880 will provide you with years of trouble- free  
operation.

The Serial number is located on the front upper left hand corner of the  
machine.

## WARRANTY INFORMATION

Bridgeview Manufacturing Inc. Warrants the **Bale King Avenger 2880** to its original owner for a period of **one** year from the date of purchase with the following provision:

Warranty covers Parts and Labour for 1 year.

**Exception: Flails** are considered a wearing part and are covered for breakage for **60 days** from original equipment purchase.

- Warranty covers **defects** in materials and workmanship.
- Warranty **does not** cover damage to the machine and its components if the operator does not follow the operating instructions in the operator’s manual.
- Warranty does not cover normal wear and tear.
- Warranty will be **VOID** and Bridgeview Manufacturing Inc. is not liable in any way if the Bale King Avenger 2880 is used for any other purpose than its intended use.
- Tire Warranty is covered by the **Tire Manufacturer**.
- Warranty repair is at the dealership and **no** travel time is allowed.

All warranty service must be handled through an authorized Bale King Dealer. Any repairs after the Warranty period are the owner’s responsibility. Any **Overtime** requested by the owner to have the machine repaired during the warranty period will be the owner’s responsibility.

Warranty will be **VOID** if any component is altered or modified in any way, unless written permission is given by Bridgeview Manufacturing Inc.

Bridgeview Manufacturing Inc. reserves the right to make changes or improvements at any time without notice or obligation.

## TROUBLE SHOOTING GUIDE

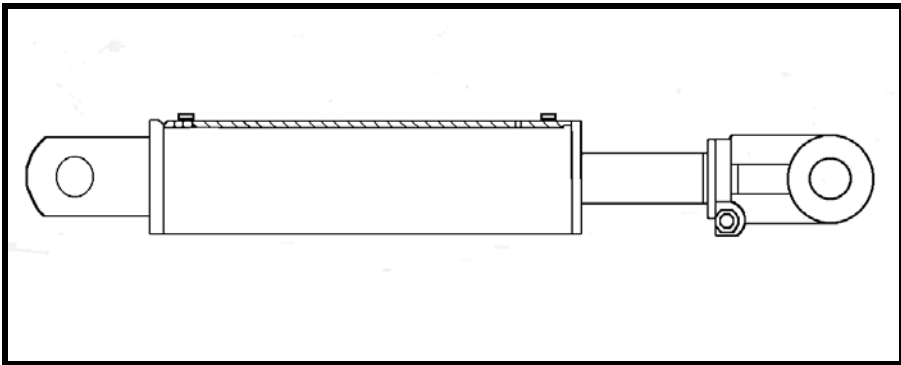
Problem	Possible Cause	Remedy
Excessive Vibration while processing	Excessive twine wrapped around rotor restricting flail movement	Remove twine from rotor
	Broken and or missing flails	Replace broken or missing flails (in pairs, opposite each other)
	Hoops set in too aggressive a position for the type of material being processed causing overload situation	Adjust hoops to less aggressive position
	Rotating bale too fast causing rotor overload	Slow rotation of the bale
	Running the rotor at less than 1000 PTO rpm	Operate at 1000 PTO RPM
	Main bearing failure	Replace failed parts
	PTO shaft bent or damaged	Replace failed parts
	Operating machine at angles greater than 80 deg.	Operate at angles less than 80 degrees.
Flails "backslapping" excessively	Rotor overload	Slow speed of processing
	Running machine at less than 1000 PTO RPM	Operate at 1000 PTO RPM
	Hoop grate set too low	Raise hoop grate
	Flails not sharp	Replace worn flails
Beaters stopping	Excessive amounts of material between tub and beaters	Stop and reverse direction of bale
	Hydraulic tips jamming	Replace failed parts
	Drive link damaged or broken in motor	Replace failed parts
	Hydraulic flow divider/combiner not functioning properly	Replace failed parts
Beaters digging channels in bale	Running beaters too fast	Slow rotation of beaters
	Building up too much loose material in bale chamber	Change direction of rotation to clear chamber
	Not processing fast enough	Lower hoop grate to allow more material to rotor

## FLAIL REPLACEMENT

The rotor has a total of 18 flails installed in four rows. To replace a worn or broken flail, remove lock nut and push the special bolt out. Inspect parts for wear and replace as needed. **ALWAYS** use a new lock nut when replacing a flail and or bushing. The bolt must be kept tight.

Bridgeview Manufacturing recommends when changing flails to **change in pairs** (opposite each other). Processing bales with broken or missing flails causes the rotor to be out of balance. Excessive vibration may cause machine deterioration.

## HYDRAULIC CYLINDER MAINTENANCE



The Bale King Avenger 2880 is equipped with two hydraulic cylinders to lift and carry the round bale.

Under normal operating conditions no maintenance is required other than keeping the area free from debris.

**Storage:** In the event that the processor is not used for extended periods of time, the cylinders should be left **fully retracted** so that the chrome rod is not exposed. If for some reason this can't be done the exposed shaft must be coated with grease to protect the shaft.

**WARRANTY DOES NOT** cover rusted and pitted shafts!

## SAFETY PRECAUTIONS

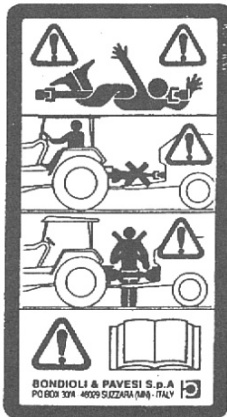
The following safety precautions **MUST** be followed to ensure safe operation of the Bale King Processor.

1. **Always** turn off the tractor when leaving the operating platform.
2. **DO NOT** stand in front of the discharge chute while the machine is running.
3. **DO NOT** walk or move under the bale forks when in upward position.
4. **DO NOT** enter the machine while it is running or while the tractor is running. **Always** shut tractor off and remove the key.
5. **DO NOT** clean and service the machine while in operation. **Always** shut tractor off and remove the key.
6. **DO NOT** stick any device into the machine to clear debris while the machine is in operation.
7. **ALWAYS** turn tractor off and remove key while removing twines or hooking / unhooking the machine.
8. **ALWAYS** use safety chain tow ring, located directly behind the hitch on the underside of the frame, when towing machine on the highway.
9. **DO NOT** operate if any PTO safety shielding is missing or is not secure.
10. **DO NOT** operate or tow the machine at unsafe speeds. Tires and hubs are agricultural rated.

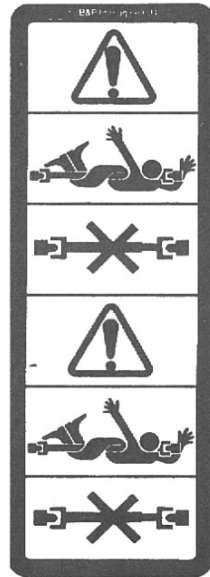
## PTO SAFETY LABELS

The operator must obey all labels and must maintain the proper shielding. A high percentage of drive-line injuries occur when safety shielding is missing or not functioning properly.

Cod.399CEE001



Cod.399CEE002



Cod.399143000



Cod.399141000

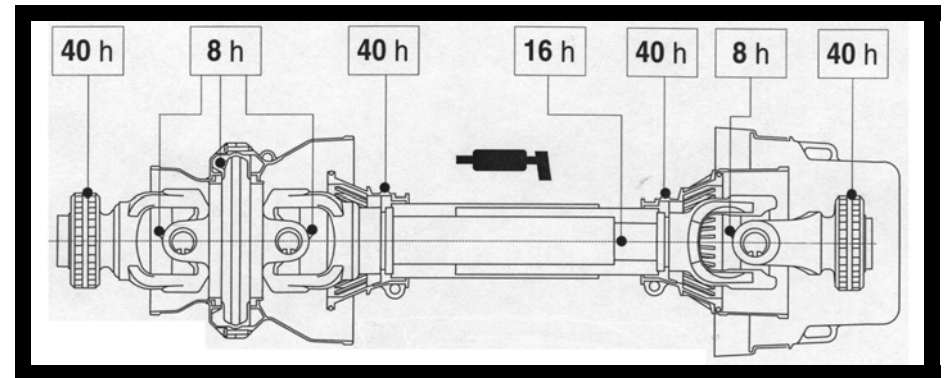


## LUBRICATION

Greasing the Avenger 2880 should be done on a regular basis.

The grease zerks are located:

- On each wheel hub (Grease annually or more often in high use situations).
- The main bearing blocks on each end of rotor (Grease every 250 bales).
- Two zerks on the rear fork Pivot (Grease every 250 bales)
- The rear bearings on the beaters (Grease every 250 bales)
- PTO shaft as per chart below (All numbers are hours)



## TWINE REMOVAL

**Before** attempting to remove the twine from the rotor, be sure the machine is stopped and the tractor is shut off with the key removed and the tractor brake set.

Twines can be removed with the use of a utility knife or other knife. An electric iron is also available to melt through the plastic twine.

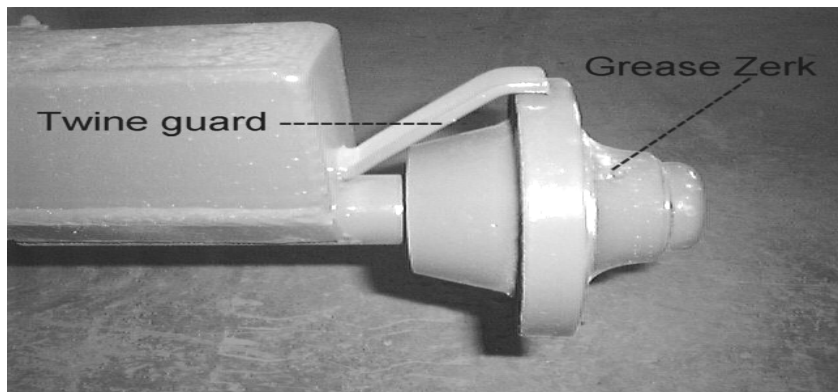
**DO NOT leave the melted twine in the processor or anywhere near anything flammable. A fire could occur!!**

**DO NOT** burn the twine off the rotor. Warranty is **VOID** if burning occurs.

## MAINTENANCE

The wheel bearings should be inspected periodically for adjustment and lubricated annually. The hub is equipped with a grease zerk for your convenience.

To adjust the wheel bearings, lift up each wheel (one at a time) until the wheel spins freely. Remove dust cap the cotter pin which retains the nut. Tighten the nut until the wheel will rotate approximately two turns when given a firm spin. Align castle nut to closest hole and insert cotter pin. Re-install dust cap and lube if required.



The twine guard will help keep twines away from the bearing seal. Remove twine any time you notice it on the axle.

### ***TIRE INFLATION AND RATING***

The proper tire inflation for the model Avenger 2880 with 9.5L x 15 8 ply tire Rib implement is **40 psi**.

Proper tire inflation will help to alleviate puncture problems when pulling and operating on rough terrain.

**Maximum speed for agricultural tires is 25 mph or 40 km/h.**

**NOTE: Check and tighten wheel bolts regularly to ensure that the bolts are secure !**

Warranty **does not** cover damaged rims and hubs due to loose wheel bolts!

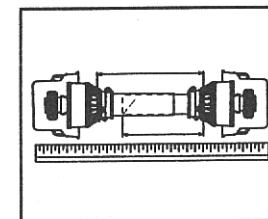
### **Safety:**

Shut off tractor engine and remove key before coming close to the implement or doing any maintenance. **Use genuine Bondioli & Pavesi parts when replacing worn or damaged parts.**



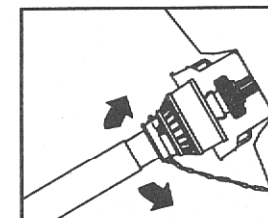
### **Length:**

Confirm the minimum and maximum working lengths of the drive-line. The telescoping tubes must overlap at least by 1/3 of their length when in use.



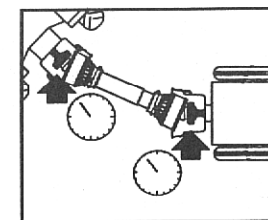
### **Shielding:**

Be sure the shielding is not damaged and rotates freely on the drive-line. Attach safety chains to allow sufficient slack for turns.

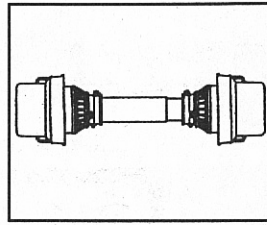


### **Working Angles:**

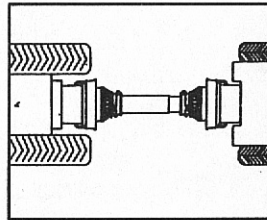
Disengage the tractor PTO whenever the angle of the joints exceed 35 (steering, lifting the three point hitch, etc.) Constant velocity joints can operate up to 50, 70 , or 80 depending upon type during turns. Do not allow the joint to bottom out during tight turns.



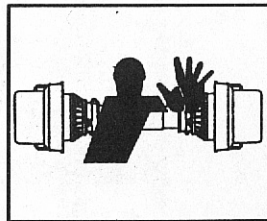
Do not operate machine without all drive-line, tractor, and implement shields in place. Drive-line shields must turn freely on the drive-line.



Before operating the machine, be sure drive-lines are attached **securely** to the **tractor** and to the implement. Check the tractor yoke.



Keep operators and bystanders away from all moving parts.



**NOTE: Contact with a rotating drive-line can cause serious injury or death.**

## PTO SHAFT AND HOLDER

The PTO shaft holder is standard with your new Bale King. It provides safe storage of the shaft when the processor is not in use.

When unhooking the PTO shaft from the tractor, lift the free end of the shaft and place it in the holder .

This will keep the shaft out of the way when hooking the machine to the tractor and keep it clear of debris.

**DO NOT** transport the processor without securing the PTO shaft. It may bounce off and be damaged.

The CV PTO shaft is Standard on your Avenger 2880. The tractor end has the CV joint and 1 3/8-21 spline as standard with a optional 1 3/4"-20 spline yoke available from your local dealer. The implement end is 1 3/4"-20 spline no CV joint.

**DO NOT** use a PTO adaptor to operate the machine. Warranty does not cover damage to drivelines damaged by PTO adaptors.

### *Drawer bar Adjustment*

**Always** ensure that the drawbar is adjusted 16" from the end of the tractor PTO to the center of the hole in the drawbar.

## ***HORSEPOWER REQUIREMENTS***

The Avenger 2880 is designed to be used with tractors ranging in horsepower from 50 HP to 85 HP.

**Always operate the Avenger 2880 at 1000 PTO RPM.** Damage to rotor and flails can occur if run at less than rated speed.

**NOTE: Spread yokes and twisted drive shafts are signs of overload, not a manufacturer's defect and therefore not covered under warranty.**

## ***HYDRAULIC REQUIREMENTS***

The Avenger 2880 requires two sets of hydraulic hoses to operate the machine. One set to operate the rear forks and the other to rotate the bale with the hydraulic motors.

The hydraulic motor beater circuit can operate on 10 – 20 gals of oil. **Always operate the beaters as slow as possible and still allowing good rotation of the bale.**

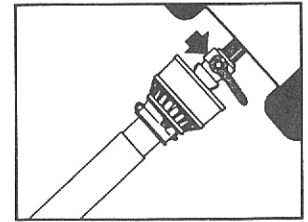
The rear bale fork is operated with two 2.5 x 20 hydraulic cylinders



**WARNING!** Always stand clear of the rear forks. Never walk under the raised forks.

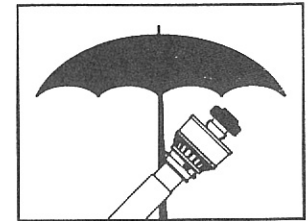
### **Attachment:**

Be sure the drive-line is properly attached and all bolts and screws are tight on the implement input shaft and on the tractor PTO shaft.

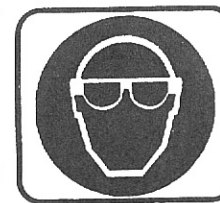


### **Storage:**

When not in use, cover or protect the drive-line from the weather. Follow clutch storage instructions. When removed from the machine, store both half shafts together to prevent damage. Check all components for proper function and lubrication before use.



**BEFORE ATTEMPTING ANY REPAIR PROCEDURES, ALWAYS USE APPROPRIATE EQUIPMENT SUCH AS SAFETY GLASSES, SAFETY SHOES, AND GLOVES.**



# OPERATION OF AVENGER 2880

## PREPARATION

- Hook processor to tractor.
- Install pto shaft onto tractor
- Couple hydraulic hoses. 1 set for rear forks and the other for the beaters.
- Adjust hydraulic flow to run the beaters approx. 30-40 rpm further adjustment can be made once processing begins.
- Put Rear forks in working position. Remove top bolt which locks the fork in transport position. Lower tine to ground and install bolt in slot. Tighten enough to allow tine to pivot up and down. Repeat for other tine.

## LOADING AND TRANSPORTING BALES

- Position tractor and Bale King in straight line in front of bale to be loaded.
- Lower forks completely to the ground.
- Back completely under the bale.
- Allow the tractor to move forward as you raise the bale.
- If you are loading the next bale in the row, dump the first bale into the tub and lower the forks completely to the ground.
- Back under the next bale and raise enough that it off the ground. Transport to area to process.
- **NOTE:** If loading the second at a different location, it is easier to see if you leave the first bale on the forks until you have aligned the tractor and processor with the next bale.

**Note:** Carrying the bale with the fork near fully extended is not recommended. Transporting over rough terrain could cause the cylinder rods to deflect and bend. Carrying the bale low allows the shafts to be supported by the cylinder barrel.

## HOOP GRATE ADJUSTMENT

The Avenger 2880 has 3 positions to adjust the height of the hoop grate above the rotor. These settings determine the aggressiveness of the machine.

Highest position is used to process tough bales

The lower positions are used to process quicker and bales which are easier to process.

Adjustments should be made as needed when using different types of feed and bedding.

**NOTE:** Processing tough and difficult bales too quickly may cause unnecessary machine deterioration.

## PREPARING TO PROCESS A BALE

- Transport to the desired location.
- If required to put the processed feed in a windrow, manually lower the side discharge deflector to an appropriate height. Once desired height is achieved, the deflector can be latched back into the transport position by using the excess chain end as the attaching linkage. (this makes it rather simple for further use)
- Select the appropriate speed for your tractor
- Start the PTO and run at **1000 RPM**
- Slowly rotate bale enough for the twines to get cut and pulled on to the rotor.
- Continue rotating the bale until it is finished processing.
- If bedding, leave the side deflector up and blow straw as needed.



**Stay Clear of Discharge area while machine is running!**