

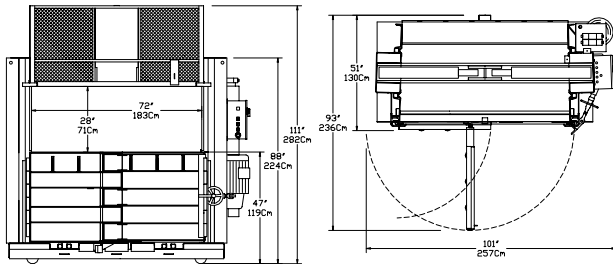
# ***Features and Specifications of the V72HS Hydraulic Baler***

## **SPECIFICATIONS**

BALE SIZE	40" X 72" X UP TO 39"
RAM PRESSURE	86,400 LBS MAX
BALE WEIGHT (CORRUGATED CARDBOARD)	UP TO 1,100 LBS
CYCLE TIME	24 SECONDS, ADJUSTABLE
CYLINDERS	TWO 5" BORE, 3" ROD 28" STROKE
MOTOR	20 HORSEPOWER, TEFC
PUMP	12 GPM
ELECTRICAL	208/230/460V- 3PH.
BALE EJECTION	DUAL HYDRAULIC
BALE TYING	WIRE, BANDING, or TWINE

## **DIMENSIONS**

LOADING DOOR OPENING	28" X 72"
LOADING DOOR HEIGHT	47"
OVERALL HEIGHT	111"
OVERALL DEPTH	51"
OVERALL WIDTH	101"
DEPTH WITH DOOR OPEN	93"
WIDTH WITH DOOR OPEN	101"
SHIPPING HEIGHT	88"
SHIPPING WEIGHT	6,340 LBS
INSTALLATION AND OPERATING AREA	69 SQ. FT.



Specifications Subject To Change without Notice

## **Harmony Enterprises, Inc.**

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Phone: (507) 886-6666  
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## **FEATURES of the V72HS**

- ❖ **Powerful Twin 5" Cylinders with Heavy Duty 3" Rods for Extra Long Life**
- ❖ **Heavy Duty 20 Horsepower Motor for Extra Long Life**
- ❖ **Unique Hydraulic Circuit for High Speed Applications**
- ❖ **UL Listed Control Panel**
- ❖ **Operates Under a 10 Foot Ceiling**
- ❖ **Standard Retractable Bale Dogs for Maximum Material Containment**
- ❖ **Standard Voltage Electrical Disconnect Included**
- ❖ **Enclosed Counterbalance for Upper Door Lifting Ease**
- ❖ **Dual Hydraulic Ejection for Extra Dense Bales**
- ❖ **Stronger Heavy Duty Construction than Comparable Balers**
- ❖ **No Fluffing of Material Necessary**
- ❖ **Six Slots for Tying Bales**
- ❖ **Meets or Exceeds All ANSI and OSHA Safety Standards**

***Another Great Idea From.....***

**Harmony**  
ENTERPRISES, INC.

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## INTRODUCTION TO V72HS BALER

The V72HS baler is a mill sized baler. This baler produces a bale which is 40" x 35" x 72" in size, out of any compressible type material.

**NOTE: Check with the distributor for recommendations on additional types of material to be baled with this baler.**

### General Safety Information

The V72HS Baler is intended to bale recyclable materials including corrugated cardboard, newspapers, and high and low density recyclable plastics. Any materials other than these common commodities should be authorized and verified by your local distributor. Any unauthorized material baled in this machine could injure the operator as well as cause substantial damage to the baler and void the manufacture's warranty.

This baler is intended for use in an indoor protected environment and not designed for outdoor unprotected use. Drastic temperature changes and high moisture levels can affect the performance of this machine. Please consult your local distributor or the factory for any questions or concerns.

### **Safety - Read Before Operating**

Safety of the operator has been of prime importance in designing Harmony Enterprises, Inc. balers. All balers are equipped with numerous safety devices to protect the operator. The V72HS is equipped with several important safety features.

The V72HS is designed so that all controls are accessible from the front of the baler. This feature provides easy access in emergencies and protects the operator from personal injury. With the key-operated selector switch, the switch may be locked in the off or on position and cannot be altered without access to the key.

The V72HS platen will not start down unless both doors, loading and unloading, are closed and secured. This prevents access to the bale chamber, protecting the operator from potential injury. Any attempt to open the loading door after the baling cycle has been engaged will cause the baler to shut off.

### **Safe Operating Procedures**

It is the employer's responsibility to take appropriate action to insure all employees and operating personnel understand and adhere to all safe operating procedures. In the event that the operator of this baler is unable to read in English, it is the employer's responsibility to translate these instructions either verbally or in writing so that the operator fully understands the operation of this baler.

All employees and qualified operating personnel must completely understand the following procedures for safe operation of the baler.



**Warning:** Never enter the baler chamber. Do not put hands or feet in or near the baler chamber when the machine is in operation. Always disconnect power before servicing machine and place a sign on baler stating “UNDER REPAIR DO NOT USE”.



**Warning:** No one under the age of 18 may operate this baler. No one under 16 may load material into this unit. Failure to abide may violate federal law.



**Warning:** Locate and install baler to meet all OSHA and ANSI safety requirements.



**Warning:** Do not bale any volatile or combustible materials in baler.



**Warning:** Any attempts to process unauthorized materials such as glass, concrete, steel, wood, tanks, or containers could cause serious injury and damage to the baler.



**Warning:** Stand clear of the baler while in operation and when ejecting a bale. Keep working area clean and dry with no obstructions. Do not stack things on baler.



**Warning:** Safety shields, access panels, and all safety switches and devices shall be maintained to function at all times to protect personnel and meet safety standards.



**Warning:** Avoid all contact with hydraulic fluid. If injury results from contact with fluid consult a doctor immediately. Do not operate baler if hydraulic fluid is leaking in any area.

## **Installation and Start-Up Procedures**

It is the responsibility of the end user to properly install the baler in accordance with all local, state, and federal codes, and within manufacture's guidelines. It is highly recommended that installation only be attempted by trained professionals specializing in this line of work. Consult the your distributor or the factory with any questions before attempting installation.



**Warning: All personnel involved with the installation of this baler should read this manual completely before proceeding. Only trained professionals should attempt baler installation. All safety precautions should be followed and all manufacturers instructions should be adhered to. Be sure installation area is free and clear of debris and remove all unnecessary personnel.**

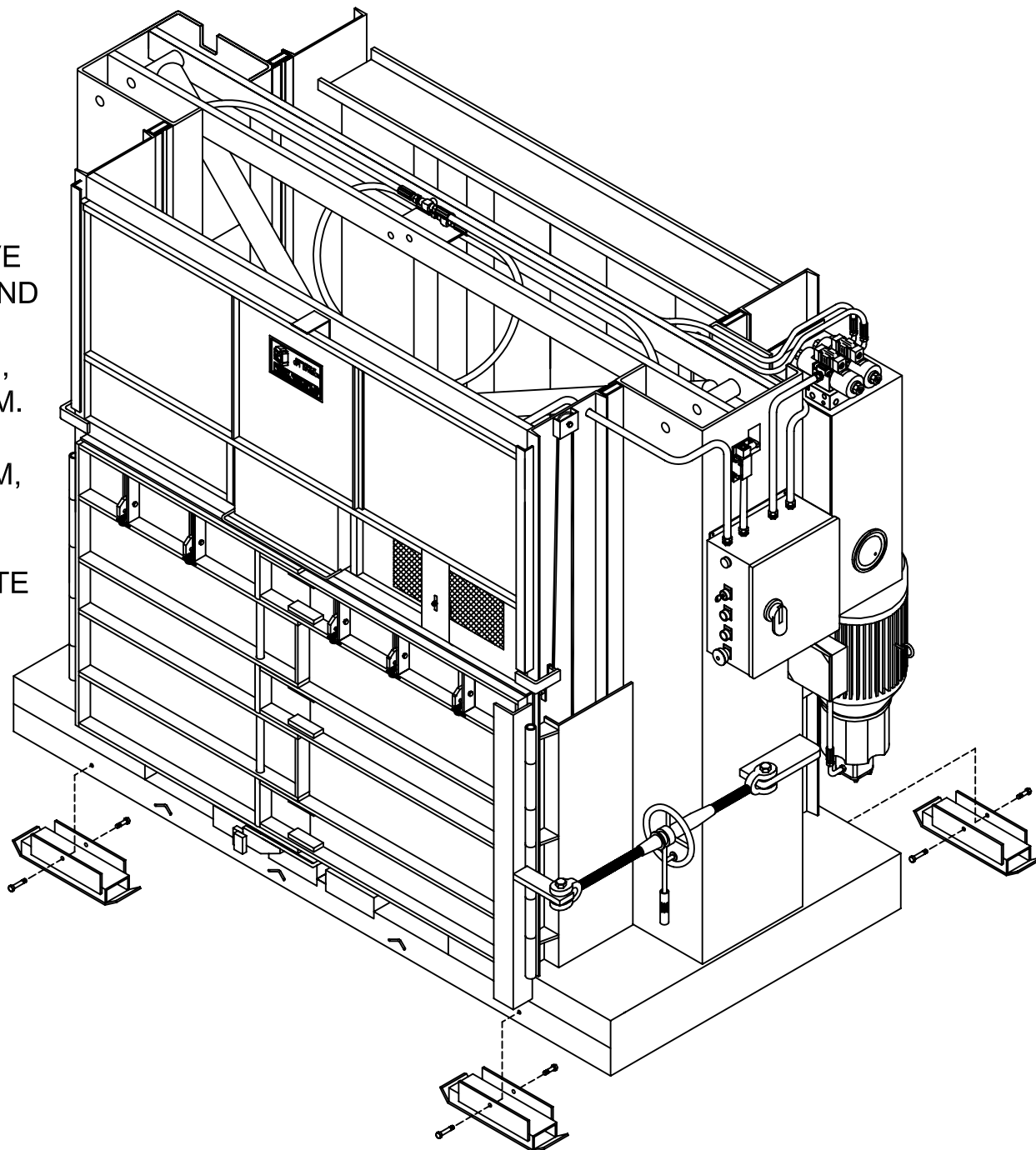
### **Mechanical Set-Up**

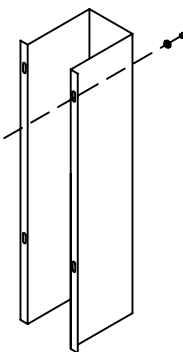
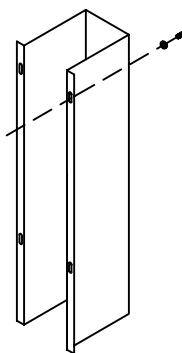
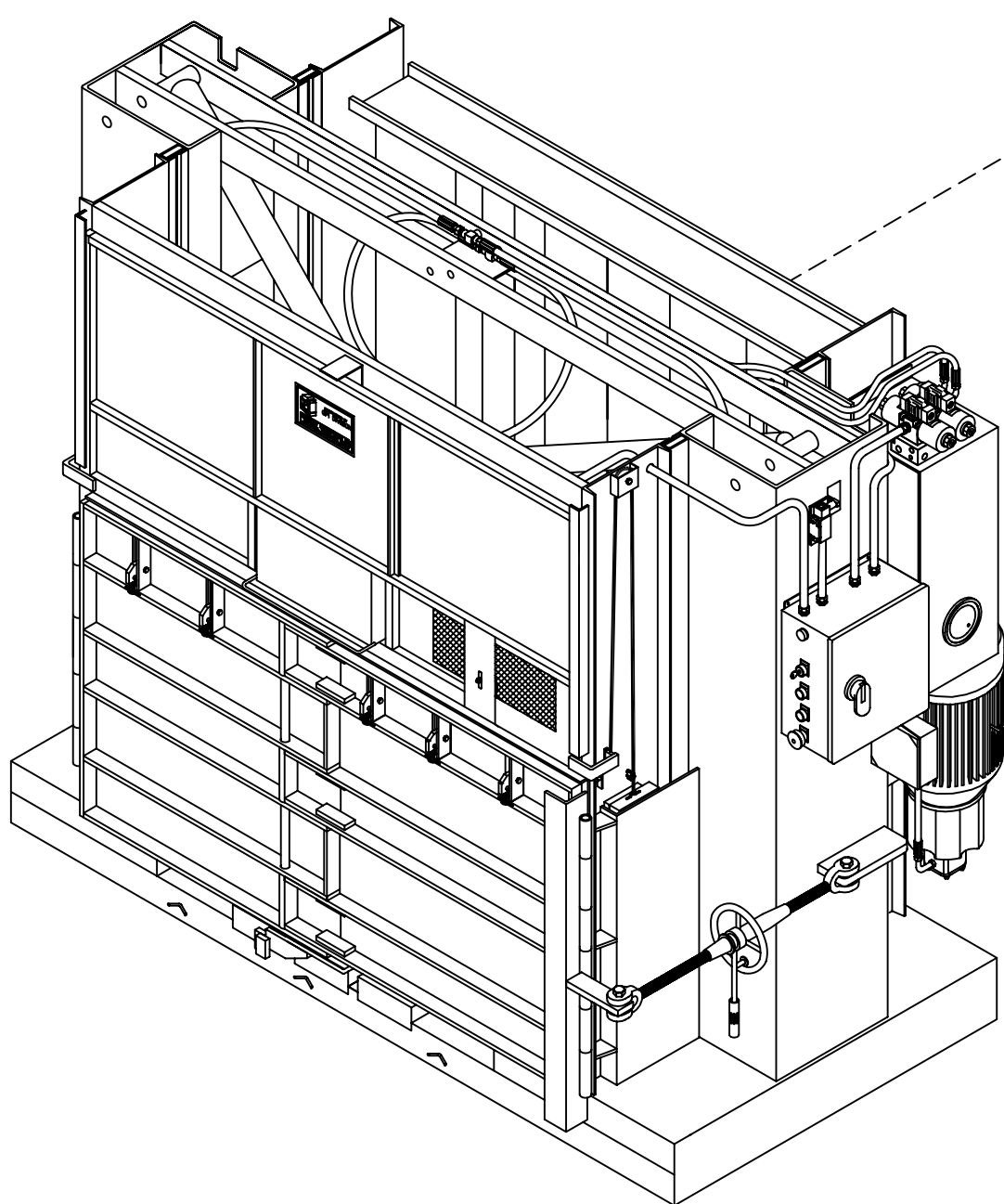
1. Inspect the overall condition of the baler for damage during transit.
2. Open the electrical box and remove the owner's manual, breather cap, and keys. Close the electrical box.
3. Remove shipping skids from the baler. See Figure 1.
4. Remove the shipping tie down wires on both door weights.
5. Raise the upper loading door to its fully open position.
6. Open the lower unloading door to its fully open position.
7. On the floor of the baler you will find two ejector hook guards with hardware. These guards are to be assembled on the back of the baler. See Figure 2 for installation instructions.
8. Remove the twine hook found on the top of the platen. Keep the hook in a convenient location for later use.
9. The hydraulic reservoir is shipped from the factory filled with a high quality all weather hydraulic oil. The hydraulic system has been completely operated and tested at the factory. Install oil breather cap after removing plug.

TOOLS REQUIRED: (1) RATCHET WITH  
9/16" SOCKET

**INSTRUCTIONS:**

- 1) USING RATCHET WITH SOCKET, REMOVE THE (4) 3/8" BOLTS FROM SKIDS AT ONE END OF BALER.
- 2) AT THE END YOU REMOVED THE BOLTS, LIFT THE BALER USING YOUR LIFT SYSTEM.
- 3) SLIDE SKIDS OUT FROM BALER.
- 4) LOWER BALER WITH YOUR LIFT SYSTEM, MAKING SURE HANDS AND ARMS ARE CLEAR OF BALER.
- 5) REPEAT STEPS 2 ,3 AND 4 FOR OPPOSITE SIDE OF BALER.





TOOLS REQUIRED: (1) 7/16" WRENCH

**INSTRUCTIONS:**

- 1) REMOVE EJECTOR GUARDS FROM ITS SHIPPING POSITION. (UNDER THE PLATEN)
- 2) GO TO THE BACK SIDE OF THE BALER.
- 3) REMOVE THE (8) 1/4" WASHERS AND (8) 1/4" X 3/4" BOLTS FROM THE PACKAGE TAPED TO THE EJECTOR GUARDS.
- 4) POSITION EJECTOR GUARDS TO BACK OF BALER, LINE HOLES OF EJECTOR GUARDS TO THE FACTORY DRILLED HOLES.
- 5) INSERT THE BOLTS THROUGH THE WASHERS INTO THE HOLES AND TIGHTEN.

10. If using twine to tie bales, place balls of twine on top of the twine shelf located on the back of the baler. See Figure 2.
11. Check the voltage and frequency marking at the installation site main power supply disconnect box, to be certain that the electrical current characteristics (voltage, etc.) are compatible. (Refer to sections entitled Electrical Requirements and Changing Voltage.)
12. As a final check, carefully inspect for leaky hydraulic connections, loose electrical connections, and loose or missing bolts.

## Electrical Requirements



**Warning:** The incoming voltage must be the same as the baler voltage, and the circuit must be capable of handling the amperage load. The use of any phase conversion is not recommended.

The model V72HS baler comes standard from the factory wired for 3-phase service in either 208, 230, or 460 VAC - 60 Hertz. The baler will arrive pre-wired for the voltage specified at the time of purchase. If the voltage must be changed, please refer to the section in the manual entitled Changing Voltage.

The V72HS must be connected to a properly installed and inspected branch circuit. The baler should be wired to the proper branch circuit using correct wire size, conduit, and connections. All wiring must comply with local codes as well as the National Electric Code. Please note the recommended circuit sizes:

### **20 HP Three Phase Motor**

Operating  
Surge

### **208/230 Volt**

60/52 Amps  
67/57 Amps

### **20 HP Three Phase Motor (Optional)**

Operating  
Surge

### **460 Volt**

27 Amps  
31 Amps

## Final Set-Up and Testing





**Warning: Do not test this unit until you have completely read and fully understand the instructions in this manual. Make sure all access covers are closed and secured and all safety devices are engaged. Clear all persons from the operating area before testing the baler.**

1. Read the section entitled Operating Controls and refer to the drawing in the front of this manual, to become familiar with the control panel and function of each selector button.
2. Careful consideration should be given to the site selected for the V72HS baler. Position the baler in desired location. The baler must be at least 10" away from the wall. This is measured from the back of the ejector guards.
3. Level the baler. Lower all leveling screws (under each corner of the baler) so the weight of the baler is off the casters.
4. At this point a licensed electrician should connect the main power to the baler.
5. With the baler disconnect in the off position, visually inspect all hydraulic, mechanical, and electrical connections.
6. Remove the breather cap from the top of the oil reservoir and check the oil level. The oil should be level with the "Fill to Here" decal on the side of the tank with the platen in the UP position.
7. Reactivate the power supply
8. Turn the key switch to the ON position.
9. Push the UP button momentarily. Observe the rotation of the motor. The motor should rotate in the direction of the arrow on the motor housing. If motor rotation is incorrect, turn the key switch of OFF **IMMEDIATELY**.

To correct motor rotation, proceed as follows:

A. Disconnect the machine from the power supply.

B. Open the electrical control box on the baler.

C. Reverse any two of the three-phase wire leads on the starter. This reverses the motor rotation.

- D. Reactivate the power supply.
  - E. Push the up button and run the platen up until it stops.
10. Close and secure all doors on the baler. Cycle the baler by positioning the key switch to ON. Push the DOWN button. The baler will start and make one complete cycle and then stop with the platen and the loading door at the top.
  11. After completion of the packing cycle, the unit should stop automatically. If it does not, press the EMERGENCY STOP button. Refer to the Service Section for pressure setting and adjusting procedures.
  12. The baler is now ready for operation. Apply paraffin wax to the inside of the bale chamber before beginning to make the first bale.

## **Baler Operating Controls and Operation**

The end user is responsible for insuring that the baler has been properly installed and is maintained up to the manufacture's recommendations to keep the baler performing at peak performance levels. The end user is also responsible for all local, state, and federal code compliance.

The employer is responsible for operator training in so far as instruction of the baler's safety features and operation. If a language barrier exists, it is the employer's responsibility to translate these instructions either in written form or verbally, so that the operator has a complete working knowledge and understanding of this baler. This responsibility exists throughout the functional lifetime of this machine regardless of employee turnover.

The employer is responsible for monitoring the employees operation of the baler and take the appropriate action to ensure that only acceptable material is baled in a safe manner. All safety features must be maintained at a fully operational level. This baler should not operate unless all aspects and components are in complete working order as per manufacturer's recommendations.

### **Operating Controls**

The control panel is equipped with a 2 position key switch, DOWN, UP, and EMERGENCY STOP button as well as a BALE FULL light, and an ELECTRICAL DISCONNECT. The following is a brief explanation of the function of each control.

#### **2 POSITION KEY SWITCH**

The key switch must be turned to the ON position to activate power to the baler.

#### **DOWN**

This button begins the automatic cycling of the baler, only if both doors are completely closed.

#### **UP**

This button raises the platen.

#### **EMERGENCY STOP**

This button will disengage the machine and stop the platen at any time. To reset twist button clockwise or pullout.

#### **BALE FULL LIGHT**

This becomes illuminated when the bale has reached the desired size. The platen will remain in the down position and the indicator light will be on. The bale is ready to be tied and ejected, please refer to instruction on Tying the Bale.

#### **ELECTRICAL DISCONNECT**

This is a safety feature that prevents access to the inside of the control panel without first disengaging power to the interior circuits.

## Threading Twine – Standard Eyebolts

If tying with twine, pre-thread the baler before starting to compact material. Tying with wire is optional and requires no prethreading.

1. Place 6 balls (leave balls in boxes) of twine on the twine shelf on top of the baler.
2. Starting from the center of each ball, thread the twine down through the eyebolts located between the channels on rear of baler.
3. Bring the twine down the inside of slots in the rear wall of the baler.
4. Lay the twine in the floor slots on the inside of the bale chamber.
5. Tie a loop in the end of the twine and secure to the twine holders on the front face of the floor.

## Loading the Baler

1. Disconnect power source.
2. Open the upper and lower doors.
3. Apply paraffin wax to the inside of the baler chamber before beginning to form a bale.
4. Place a sheet of cardboard into the chamber so that it lays flat and covers the entire floor. This will ease the effort in tying the bale once it is complete.
5. Close and latch the lower unloading door.
6. Reconnect power.
7. Fill the baler chamber. Make sure that material is spread evenly, front to back, and side to side, to ensure more uniform bales. When baling corrugated material, place boxes upside down to prevent flaps from lodging in the platen.



**Warning:** Any objects in the path of the loading door will keep the door from closing and prevent the baler from operating. Never use hands or feet to release any obstruction in the upper doors path. Serious and permanent injury could result.

## **Compacting Material**

1. After the baler chamber is filled, close the upper loading door.
2. Place the key switch in the ON position and push the DOWN button. The platen will come down compressing the material in the chamber. After reaching a preset time, the platen will reverse and return to the top position. The baler will then shut off.
3. Refill the baler chamber and repeat the above procedure until the bale is completed.
4. The bale is complete when the BALE FULL light comes on and the platen stops in the down position.

## **Tying the Bale**

1. After the baler shuts off indicating a full bale, open the loading door. Push the UP button to raise the platen far enough to place a flat piece of cardboard across the top of the bale. This will help in tying the bale.
2. Close the loading door and push the DOWN button.
3. When the platen stops going down, push the EMERGENCY STOP button to shut off the baler. Pull out the E-stop button and push the UP button to raise the platen up 2 inches. Again push the EMERGENCY STOP button. This releases some of the pressure off the bale, making tying with twine easier.
4. Open both the upper loading and lower unloading door.
5. If tying with twine, slide the twine hook through the slots in the platen.
6. Hook the twine below the twine tension holder and pull the twine out far enough to tie the end retained under the twine holder in front of the baler floor.
7. Cut off the twine and firmly secure bale by tying two ends of twine together.
8. Repeat steps 5-7 for each twine tie.
9. If tying the bale with wire repeat steps 1-4.
10. Push a looped end of wire through the slots in the platen.
11. Return the wire through slots in the floor.
12. Put the straight end of wire through the looped end, pull tight, and twist securely.

## Ejecting the Bale



**Warning:** Stand clear from the front of the baler while the bale is being ejected from the bale chamber. Failure to do so may result in serious injury or death.

1. Reset the EMERGENCY STOP button.
2. Depress the UP button until the arrow on the platen is level with the “Engage Ejector” line on the inside of the baler wall.
3. Go to the rear of the baler. Place the ejector chains on the hooks on the backside of the platen.
4. Depress the UP button and tip bale onto pallet or truck, etc.
5. After bale is removed, close the lower door and upper door.
6. Press the DOWN button. The platen will go down and the ejector hooks will slide off and cancel. NOTE: Check backside of baler to be sure of cancellation.

## Getting Ready for the Next Bale

1. Disconnect the baler from its power source.
2. Paraffin wax the inside of the baler chamber.
3. Thread the twine and secure ends on twine holders.
4. Place a large flat piece of cardboard inside the bale chamber.
5. Close and latch the lower door.
6. Reconnect the power supply.
7. Turn the key switch to the ON position.
8. You are now ready to start the next bale.



**Warning:** A suitable device must be manually installed in the bale chamber to prevent inadvertent downward motion of the platen whenever a person is to enter the bale chamber for any reason. A blocking device can be fabricated from readily available materials.

## **Maintenance**



**Warning:** A suitable device must be manually installed in the bale chamber to prevent inadvertent downward motion of the platen whenever a person is to enter the bale chamber for any reason. A suitable blocking device can be fabricated from readily available materials.

The end user is responsible for the care and maintenance of the baler and to keep the machine operating at peak efficiency for productivity and safety of the operator. A maintenance schedule should be set up following the guidelines established in this manual and accurate record keeping maintained for future reference. If the baler is not properly maintained and kept in clean running condition, then operator safety could be compromised and damage could occur to the machine. Failure to properly maintain all aspects of the baler could void the manufacture's warranty.

### **Lockout / Tagout**

It is the responsibility of the employer whose employees are engaged in installing, repairing, adjusting, inspecting, operating, or maintaining the baler to develop, document, and implement a policy and procedure for locking / tagging out any potentially hazardous energy source. This is of paramount importance and must be completed before any work is done to the baler.

### **Recommended Lockout Procedure**

1. Disconnect all power to the baler.
2. Place a lock on the power source and place a warning tag that reads "UNDER REPAIR, DO NOT USE" on the power source and on the baler.
3. Double check to confirm that the baler has no power by putting the key switch on the ON position and pushing the down button.
4. The baler is now locked out.
5. When the job is complete, be sure everyone is out of danger before removing the lock and tags.
6. Reconnect the power to the baler.

## **Preventive Maintenance**

Regularly scheduled maintenance is critical for a long productive service life expected from your baler. Failure to properly maintain your baler leads to added repair costs, extended down time, and safety concerns. A regularly scheduled program should include the following items.

### **Weekly**

1. Inspect all nuts and bolts during the first week of use, and then monthly thereafter.
2. Check hydraulic oil reservoir for proper oil level with the cylinder fully retracted. Maintain proper oil level in the reservoir with a high quality, all weather, hydraulic oil such as Conoco 5W-20 or equivalent. A "Fill to Here" decal is provided to help maintain the proper level. In addition, check for any leakage, kinks, or other damage to the hydraulic hoses and replace if necessary.
3. Check the power unit. Keep the power unit clean and free of debris in order to provide a clean airflow around the unit. Wipe all grease, dust, and dirt from the outside of the control box.
4. Check that all safety guards and access covers are secure and in the proper condition before operation.

### **Monthly**

1. Lubricate. Grease upper and lower hydraulic cylinder pivot tubes. Grease or oil all door hinges, latch, and slide mechanisms.
2. Check all nut and bolts. Inspect the overall condition of the baler and the surrounding work area.

### **Yearly**

1. Have a licensed electrician inspect the electrical system. All electrical connections should be examined and the motor resistance should be checked. Recording successive readings helps prevent future failures.
2. Maintain the hydraulic system. Drain the reservoir, clean, replace strainer and refill with 30 gallons of high quality all weather hydraulic fluid equal or better than Conoco 5W-20. Prior to the winter season check all hoses and connections for leakage or wear and replace if necessary. Change the oil filter after the first 50 hours of operation and every 250 hours thereafter. Modify this schedule if the baler operates in hot, dusty conditions.



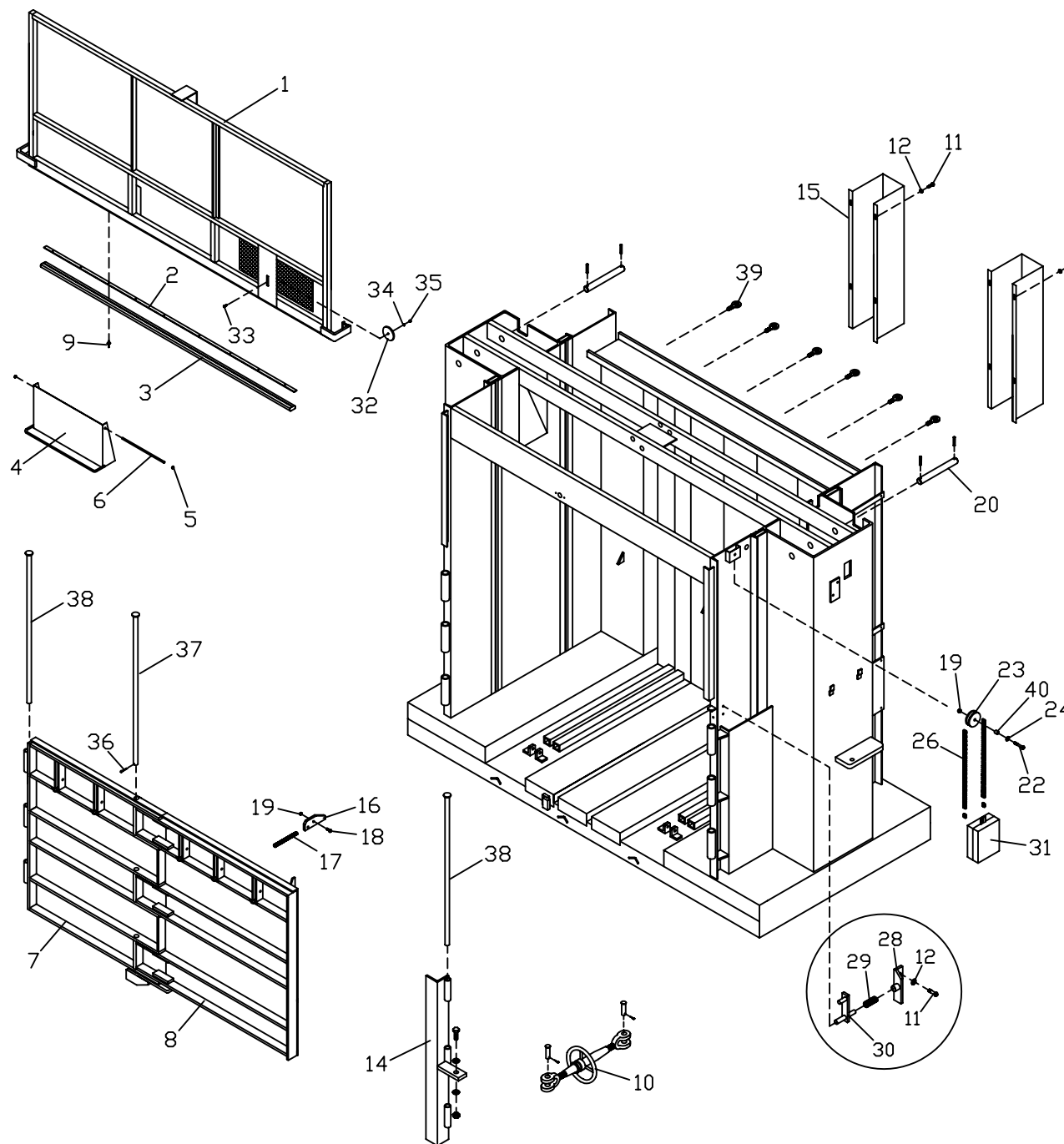
## **Parts Section**

The following illustrated parts section has been compiled to reflect part numbers required to order parts, and support assembly with descriptions of all parts, bolts, pins, etc. The operator can also identify part names to clarify proper operational steps.

# V72HS CHAMBER ASSEMBLY

PAGE 18

NO	REVISIONS	ECO	DATE	BY
8	ADDED A BRONZE BUSHING (1387) TO PULLEYS (M72HD-7201) STARTING SERIAL NO: 72506VHS	2178	9/30/04	REC

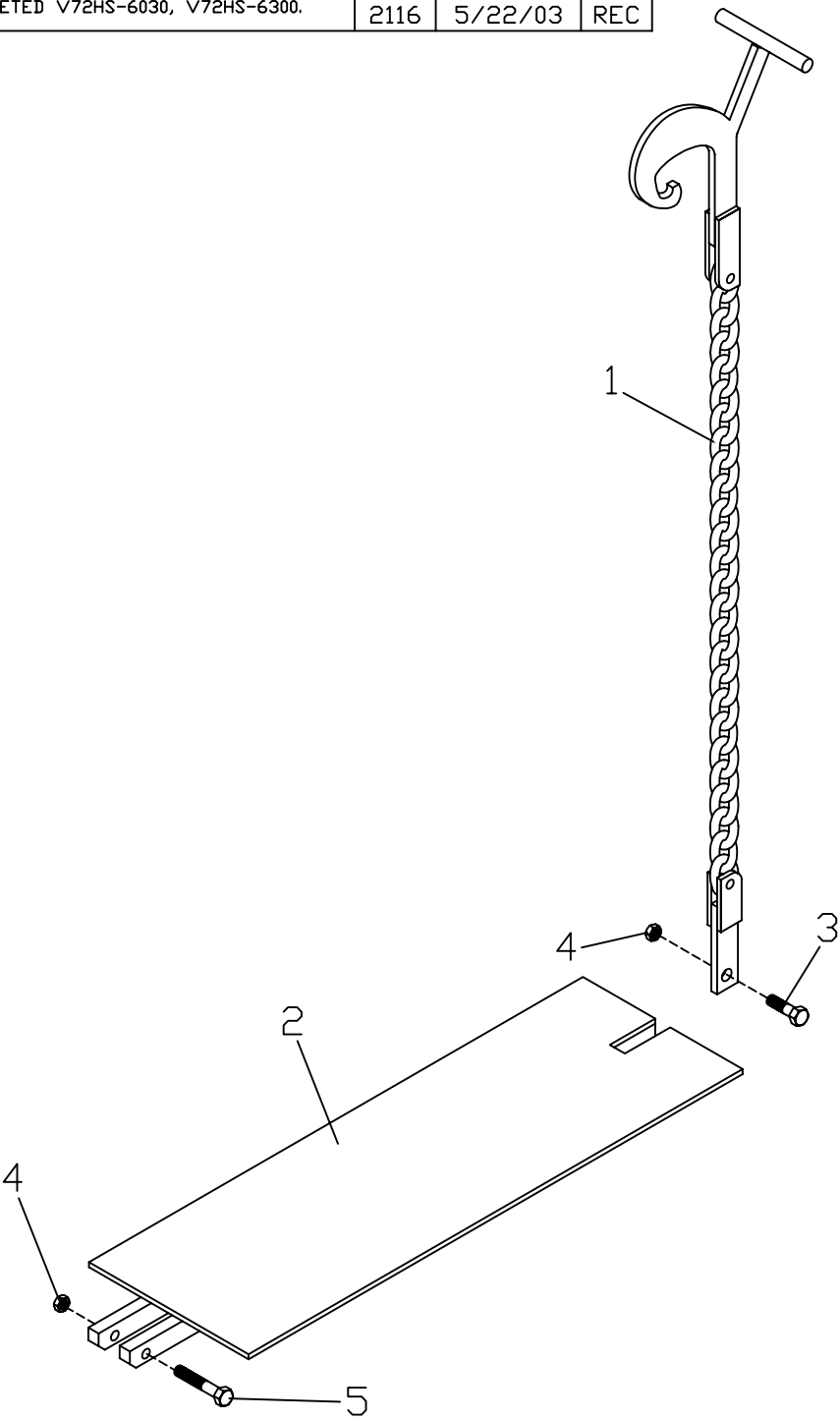


ITEM	QTY	DESCRIPTION	PART NO.
1	1	UPPER LOADING DOOR	V72HS-7000
2	1	FLAT-DOOR	V72HS-7032
3	1	RUBBER DOOR GASKET	V72HS-7033
4	1	HANDLE ASSEMBLY	V72HS-7025
5	2	5/16 END CAPS	9065
6	1	HANDLE ROD	V72HS-7009
7	1	LEFT HAND LOWER DOOR	V72HS-5601
8	1	RIGHT HAND LOWER DOOR	V72HS-5602
9	11	POP RIVET	9137
10	1	TURNBUCKLE	M30HD-1310
11	10	1/4-20X3/4 HEX HD CAP SC	9176
12	10	1/4 LOCKWASHER	9012
14	1	DOOR LATCH	V72HS-5400
15	2	EJECTOR GUARD	V72HS-6292
16	5	RETRACTABLE DOG (FRONT)	V72HS-5006
	5	RETRACTABLE DOG (BACK)	N60STD-5006
17	5	SPRING	9073
	5	SPRING (BACK)	9064
18	10	3/8-16 X 2 HEX HD CAP SC	9214
19	12	3/8-16 UNITORQUE LOCKNUT	9143
20	2	UPPER CYL. SHAFT	V72HS-2017
22	2	3/8 X 2 1/4 HEX HD BOLT	9022
23	2	CHAIN PULLEY	M72HD-7201
24	2	3/8" FLAT WASHER	9037
26	2	CHAIN-76 1/2"	U-379
27	4	CHAIN LINK	M60-7207
28	1	INTERLOCK ANGLE	M60-5433
29	1	SPRING	M72-6321
30	1	DOOR INTERLOCK	M60-5430
31	2	DOOR WEIGHT	M60STD-7210
32	1	REFLECTOR	M60HPRC-9104
33	1	10-24 X 3/4 BOLT	9155
34	2	LOCKWASHER	9192
35	1	10-24 NUT	9196
36	1	COTTER KEY	9164
37	1	HINGE PIN ASSEMBLY	V72HS-5500
38	2	HINGE PIN ASSEMBLY	V72HS-5502
39	6	TWINE HOLDER-EYE BOLT	9035
40	2	BRONZE BUSHING	1387

V72HS EJECTOR ASSEMBLY

NO	REVISIONS	ECO	DATE	BY
4	ADDED V72HS-6130, V72HS-6301. DELETED V72HS-6030, V72HS-6300. STARTING SERIAL # 72495VHS	2116	5/22/03	REC

ITEM	QTY	DESCRIPTION	PART NO.
1	2	EJECTOR HOOK ASSEMBLY	V72HS-6130
2	2	EJECTOR BASE	V72HS-6301
3	2	5/8-11 X 2 1/2 HX HD BOLT	9165
4	4	5/8" NYLOCK NUT	9170
5	2	5/8-11 X 3 HEX HEAD BOLT	9208

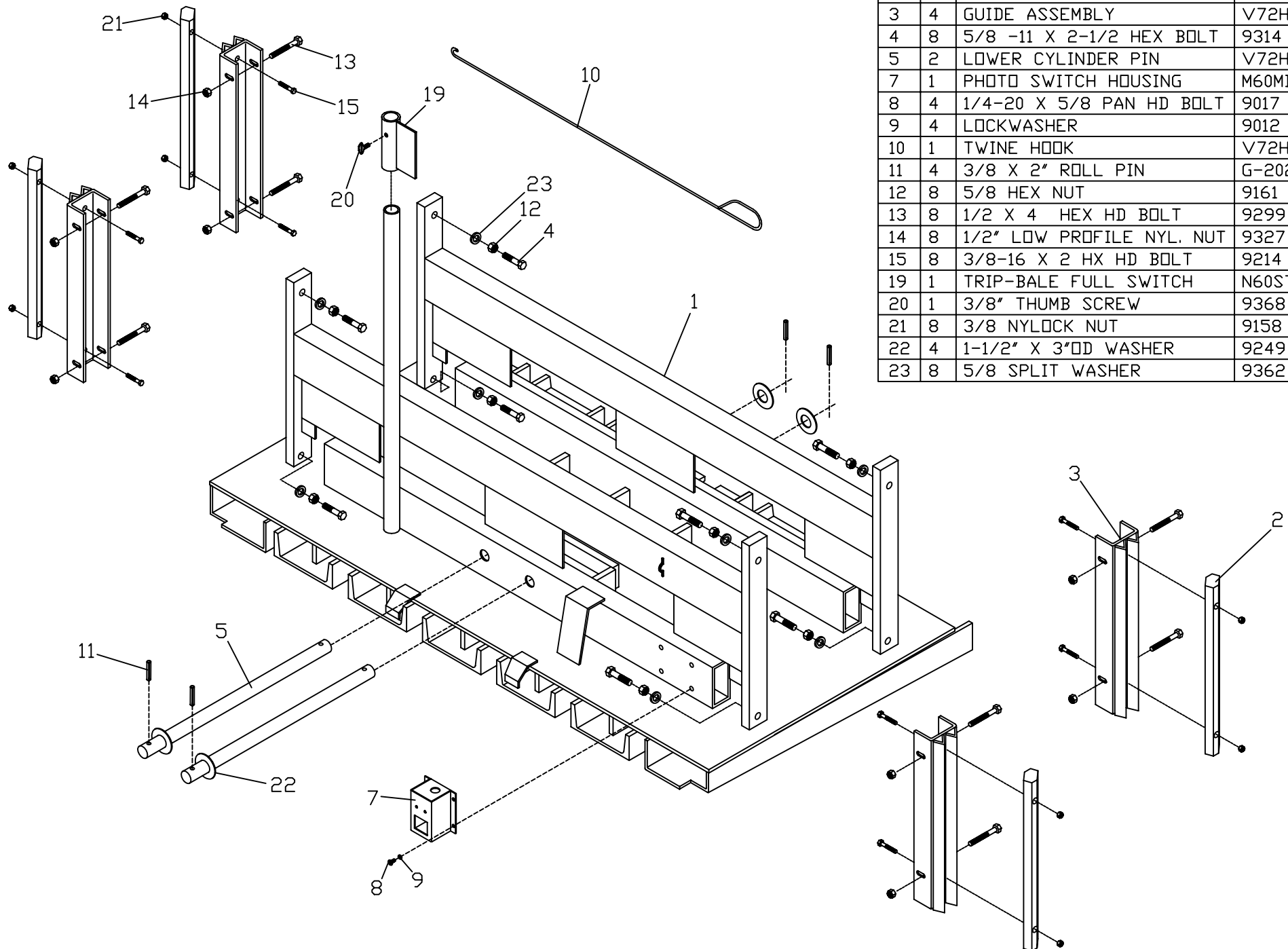


# V72HS PLATEN ASSEMBLY

PAGE 20

NO	REVISIONS	ECO	DATE	BY
9	9368 REPLACED N60STD-3013	2153	2/18/04	REC

ITEM	QTY	DESCRIPTION	PART NO.
1	1	PLATEN	V72HS-3200
2	4	PLATEN GUIDE	V72HS-3020
3	4	GUIDE ASSEMBLY	V72HS-3015
4	8	5/8 -11 X 2-1/2 HEX BOLT	9314
5	2	LOWER CYLINDER PIN	V72HS-2018
7	1	PHOTO SWITCH HOUSING	M60MD-3018
8	4	1/4-20 X 5/8 PAN HD BOLT	9017
9	4	LOCKWASHER	9012
10	1	TWINE HOOK	V72HS-6015
11	4	3/8 X 2" ROLL PIN	G-2020
12	8	5/8 HEX NUT	9161
13	8	1/2 X 4 HEX HD BOLT	9299
14	8	1/2" LOW PROFILE NYL. NUT	9327
15	8	3/8-16 X 2 HX HD BOLT	9214
19	1	TRIP-BALE FULL SWITCH	N60STD-3016
20	1	3/8" THUMB SCREW	9368
21	8	3/8 NYLOCK NUT	9158
22	4	1-1/2" X 3"OD WASHER	9249
23	8	5/8 SPLIT WASHER	9362

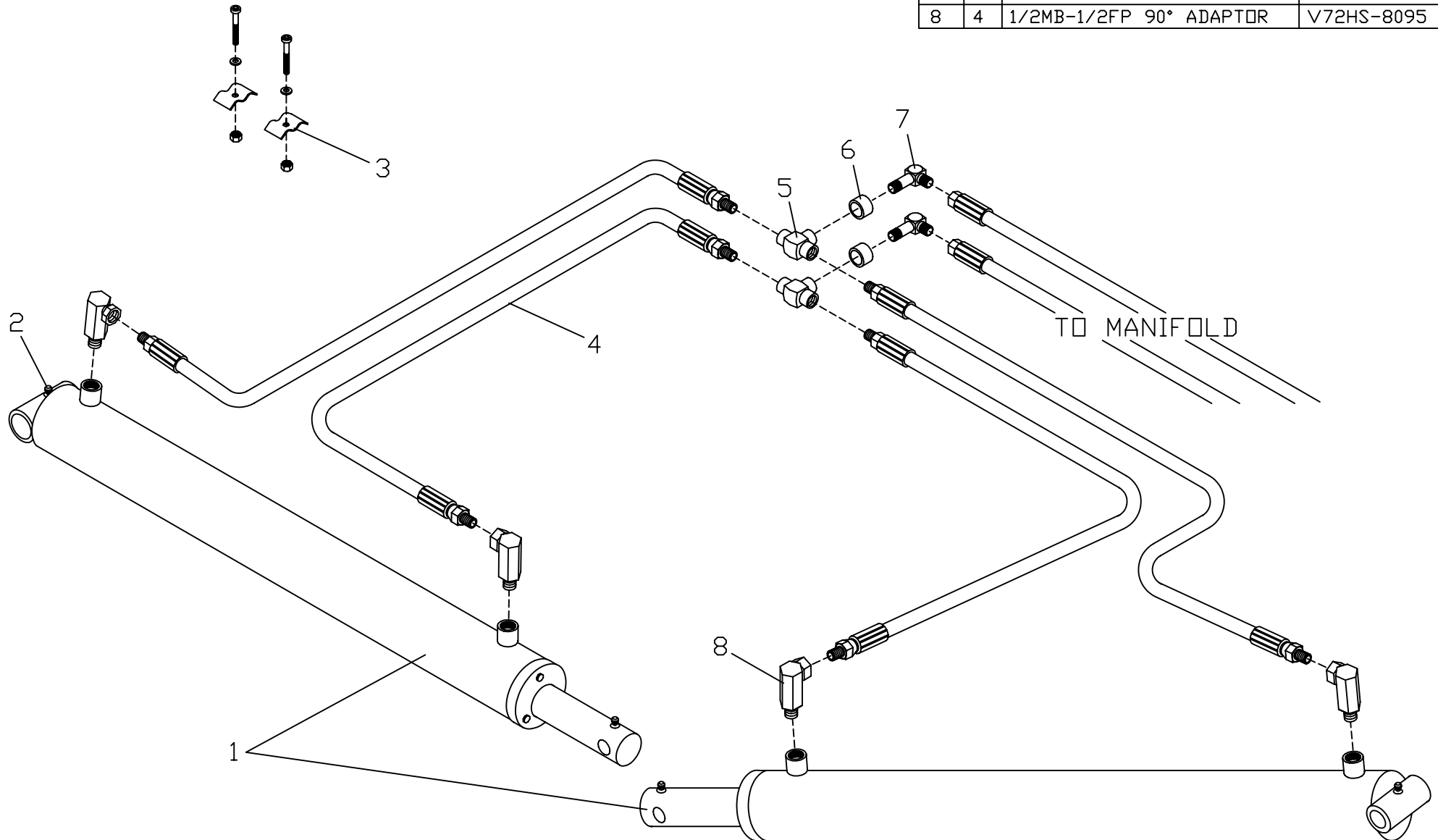


# V72HS CYLINDERS

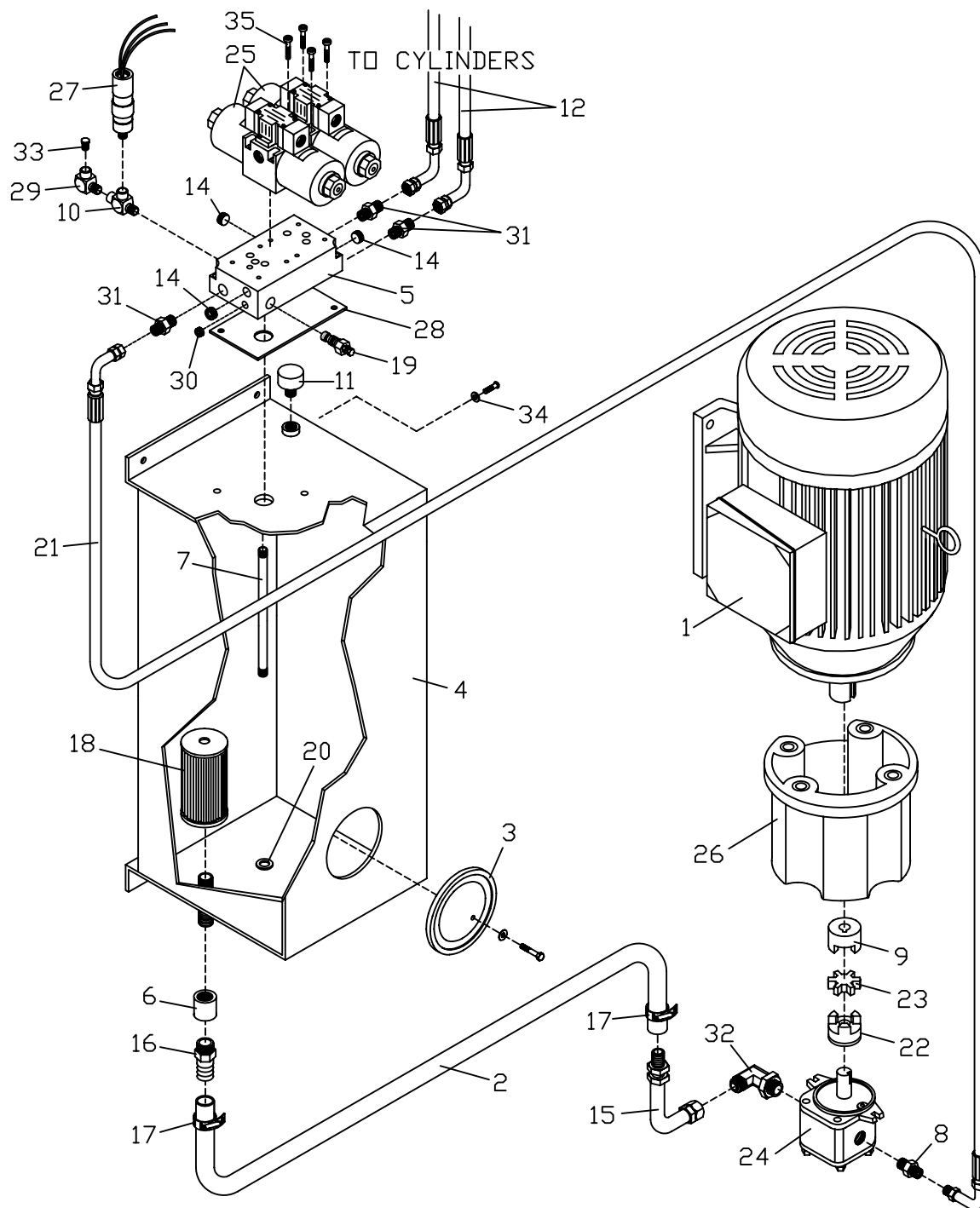
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NO	REVISIONS	ECO	DATE	BY
2	PORT CHANGE-V72HS-8095 REPLACES M60STD-8095 STARTING SERIAL # 72495VHS	2116	5/22/03	REC

ITEM	QTY	DESCRIPTION	PART NO.
1	2	HYDRAULIC CYLINDER	V72HS-8100
2	4	GREASE ZERK	M-2517
3	2	HOSE CLAMP	V72HS-8482
4	4	1/2 X 41" HYDRAULIC HOSE	V72HS-8401
5	2	1/2" PIPE TEE	C75-8207
6	2	SPACER	V72HS-8208
7	2	1/2MP-3/4MJIC ADAPTOR	V72HS-8437
8	4	1/2MB-1/2FP 90° ADAPTOR	V72HS-8095

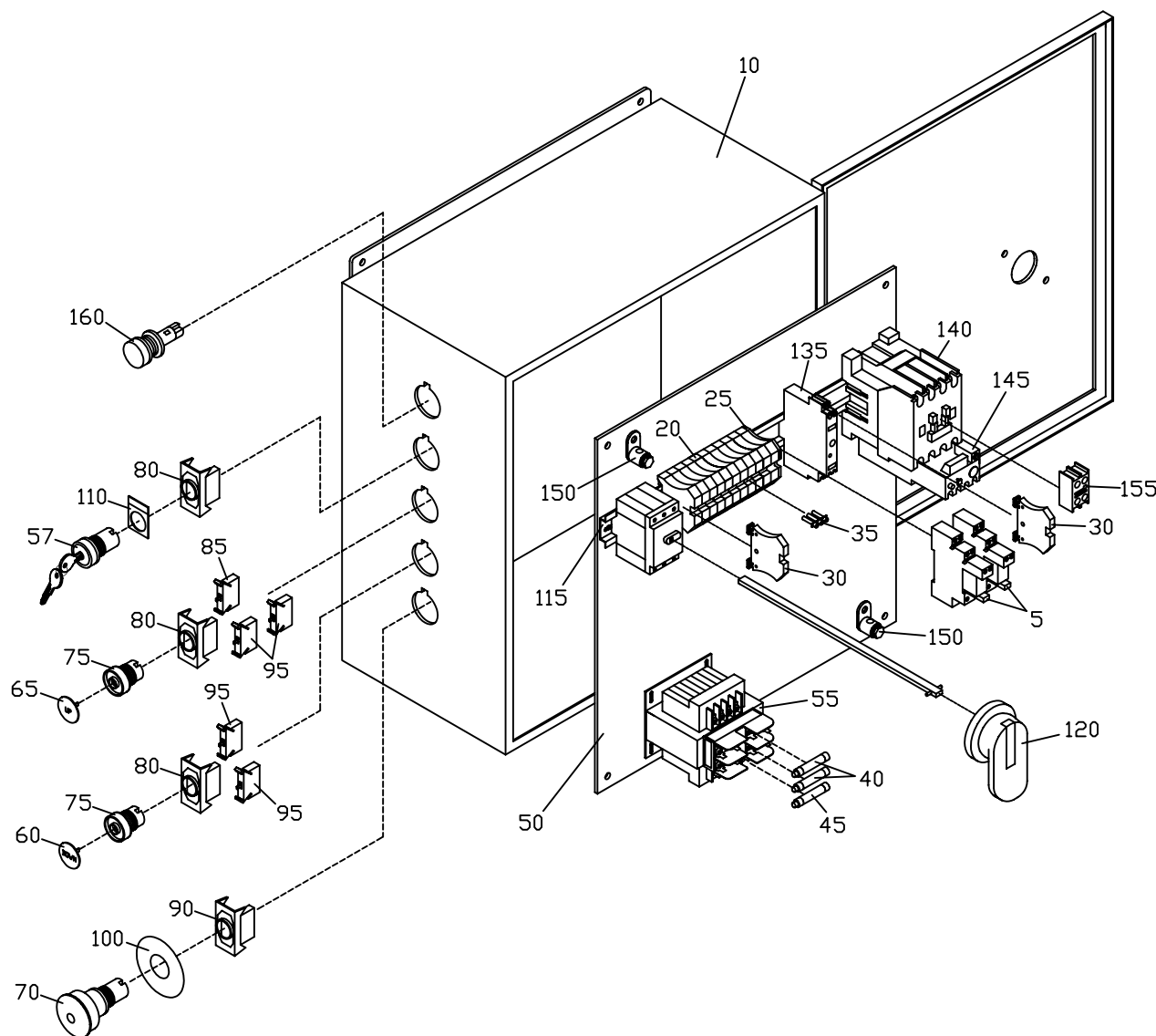


NO	REVISIONS	ECO	DATE	BY
9	NEW PUMP, BCB2003-8851 REPLACED BCB2003-8850 STARTING SERIAL NO: V72513HS	2310	2/9/07	REC



ITEM	QTY	DESCRIPTION	PART NO.
1	1	20HP MOTOR	T60XD-8136
2	1	SUCTION HOSE-28"	1826
3	1	ACCESS COVER	N60STD-8001
4	1	TANK ASSEMBLY	V72HS-8010
5	1	REGEN MANIFOLD	V72HS-8440
6	1	1" PIPE COUPLING	T60XD-8122
7	1	1/2" X 8" PIPE NIPPLE	S60XD-8092
8	1	3/4JIC X 5/8MB W/O-RING	S60XD-8108
9	1	COUPLING LOVEJOY	C200-8550
10	1	1/4 MP-1/4 FP-1/4 FP	C200-8423
11	1	FILLER CAP	M72-8431
12	2	HYDRAULIC HOSE	U60STD-8103
14	3	1/2" PIPE PLUG	V72HS-8441
15	1	1" 90° BARB FITTING	C200-8056
16	1	BARB FITTING	M60HP-8478
17	2	HOSE CLAMP	M60HP-8479
18	1	SUCTION STRAINER	M72-8533
19	1	RELIEF VALVE CARTRIDGE	M60HP-8535
20	1	MAGNET	M-8640
21	1	PRESSURE HOSE ASSEMBLY	U60STD-8102
22	1	LOVEJOY COUPLING (5/8")	C200-8554
23	1	SPIDER LOVEJOY	C200-8552
24	1	HYDRAULIC PUMP	BCB2003-8851
25	2	DIRECTIONAL VALVE	BCB2003-8102
26	1	PUMP MOTOR ADAPTOR	V72HS-9401
27	1	PRESSURE SWITCH	M72-9700
28	1	MANIFOLD GASKET	V72HS-8440A
29	1	1/4"-90° STREET ELL	M72-8457
30	1	1/4" PIPE PLUG SOCK HD	C200-8621
31	3	1/2 MP-3/4 MJIC	C200-8446
32	1	1" MJIC X 3/4" ORB 90° ADAPT	C200-8060
33	1	1/4" PIPE PLUG HEX HD	M72-8621
34	1	O-RING 3/16ID X 5/16OD	M72-8621
35	4	1/4-20 X 1 1/2 SCK HD SCR	9234

NO	REVISIONS	ECO	DATE	BY
7	CHANGED TO "F" SERIES SWITCHES STARTING SERIAL # 72513VHS	2306	1/22/07	REC

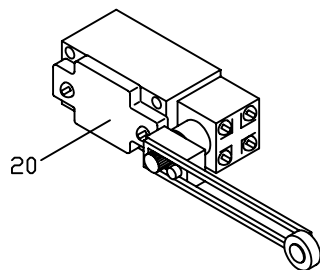


ITEM	QTY	DESCRIPTION	PART NO.
5	2	CREDIT CARD RELAY BASE	M42-9140A
	2	RELAY BASE (ONLY)	M42-9139
	2	CREDIT CARD RELAY (ONLY)	M42-9140
10	1	ELECTRICAL BOX	U60STD-9153
20	17	TERMINAL BLOCK	N60STD-9200
25	1	END CAP	N60STD-9201
30	2	TERMINAL BLOCK ANCHOR	N60STD-9202
35	1	3-WAY JUMPER	N60STD-9206
40	2	2 AMP FUSE-KLDR(208/230V)	M72-9402
	2	8/10 AMP FUSE-KLDR(460V)	M72-9417
45	1	2 AMP FUSE-CCMR	M72-9403
50	1	ELECTRICAL PANEL	M60HP-9406
55	1	TRANSFORMER	M72-9407
57	1	2 POSITION KEY SWITCH	TB04-9446
60	1	GREEN (DOWN) CAP	TB04-9450
65	1	YELLOW (UP) CAP	TB04-9451
70	1	RED PUSH BUTTON	TB04-9452
75	2	PUSH BUTTON	TB04-9453
80	3	CONTACT BASE W/1NO	TB04-9455
85	1	1 NO CONTACT BLOCK	TB04-9455-F
90	1	CONTACT BASE W/1NC	TB04-9456
95	4	1 NC CONTACT BLOCK	TB04-9456-F
100	1	EMERG. STOP LEGEND PLATE	TB04-9459
110	1	OFF-ON LEGEND PLATE	TB04-9462
115	1	DIN RAIL	N60STD-9465
120	1	DISCONNECT/SHAFT/HANDLE	N60STD-9470
	1	SHAFT (ONLY)	N60STD-9466
	1	HANDLE (ONLY)	N60STD-9479
135	1	TIME DELAY RELAY	N60STD-9500
140	1	MOTOR STARTER (208/230V)	V72HS-9603
	1	MOTOR STARTER (460V)	V72HS-9601
145	1	MOTOR OVERLOAD(208/230V)	V72HS-9604
	1	MOTOR OVERLOAD (460V)	V72HS-9602
150	2	GROUND LUG	M60HP-9644
155	1	FRONT MNT CONTACT 1NO,1NC	M60-9705
160	1	RED LIGHT ASSEMBLY	BCB2003-9728
	1	LIGHT BULB	BCB2003-9729

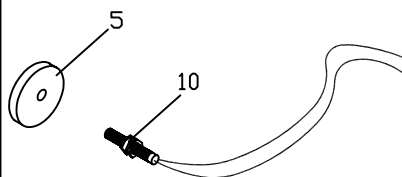
NO	REVISIONS	ECO	DATE	BY
7	CHANGED TO "F" SERIES SWITCHES STARTING SERIAL NO: 72513VHS	2306	1/22/07	REC

ITEM	QTY	DESCRIPTION	PART NO.
5	1	MAGNET	SC45-8610
10	1	MAGNETIC SWITCH	SC45-9103
15	1	REFLECTOR	M60HPRC-9104
20	2	LIMIT SWITCH	N60STD-9481
25	1	LIMIT SWITCH	V72HS-9481
30	1	BELL BOX	M72-9484
35	1	ALUMINUM COVER	M72-9485
40	1	SPLICE BOX	M72-9498
45	1	PHOTO EYE	M72-9676
50	1	18/4 COILED CORD	M72-9677

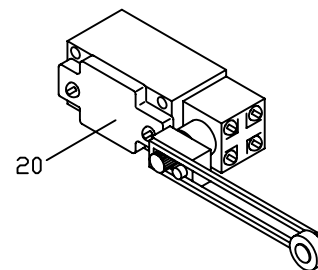
PLATEN UPPER  
LIMIT SWITCH  
LS1



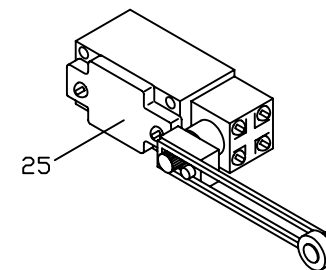
LOAD DOOR  
TO PLATEN  
SWITCH  
LS2



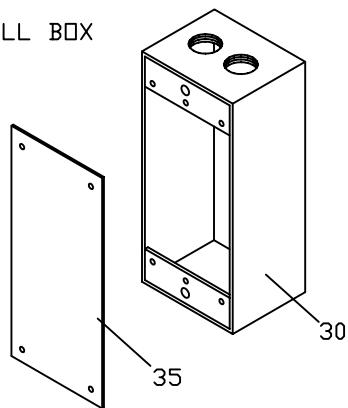
BALE FULL  
LIMIT SWITCH  
LS3



LOWER LIMIT  
SWITCH  
LS4



BELL BOX



SPLICE BOX

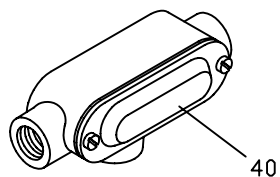
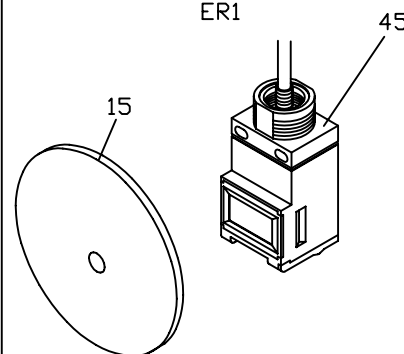
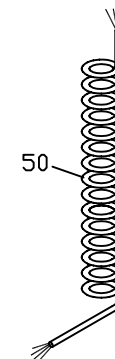


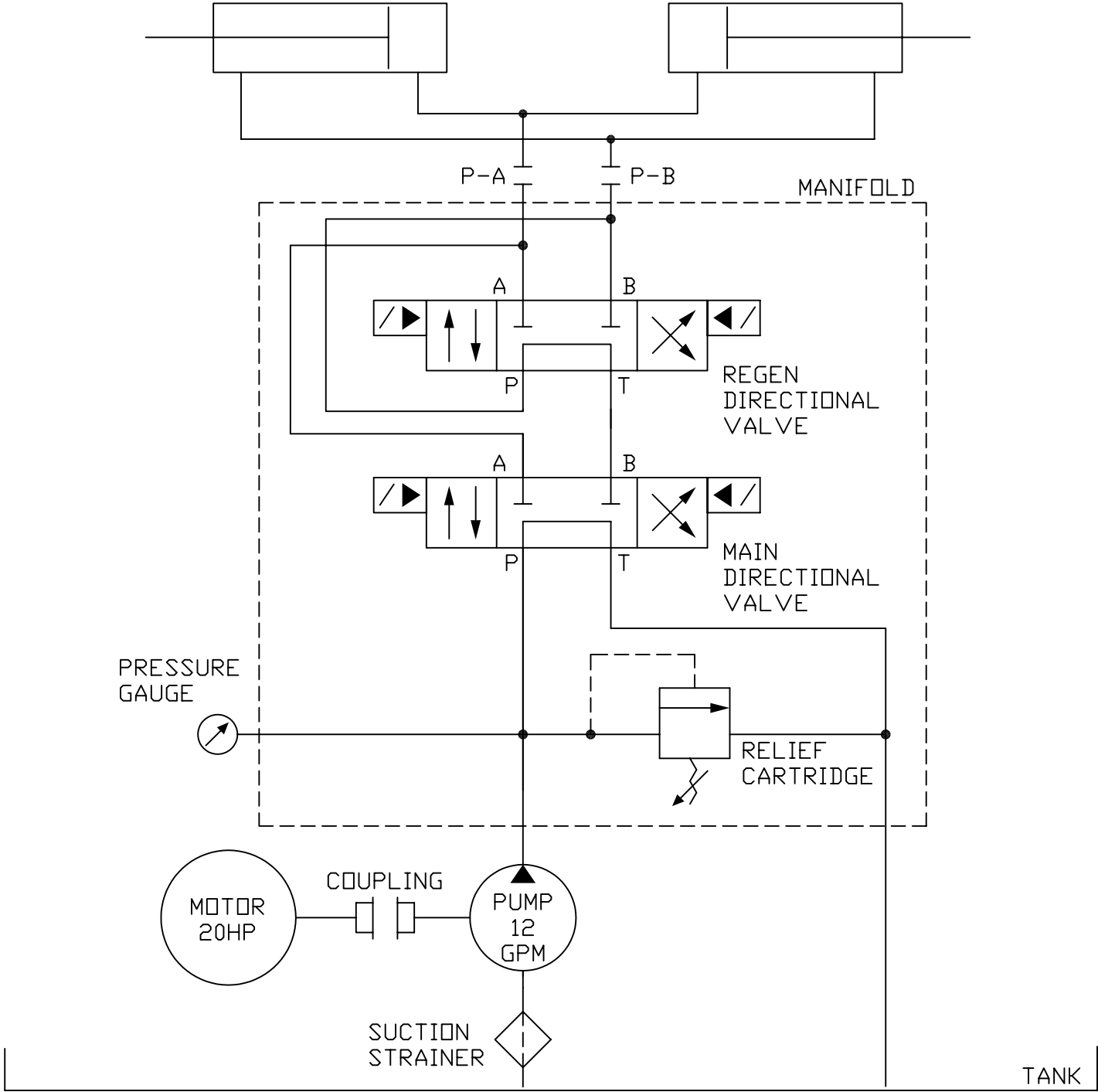
PHOTO EYE  
ER1



18/4 COILED CORD







## **SERVICE SECTION**

The following service section has been included in this manual to provide more detailed service information, which may be required by a qualified service technician.

## **Service Section**



**Warning:** Baler service should be performed by qualified maintenance technicians only.

### **Limit Switches**

Control the down and up direction of the platen and act as safety devices.

#### **Platen Upper Limit Switch - LS1**

The function of this limit switch is to stop the platen when it reaches its highest position. Adjust switch lever arm so the platen will stop its upward travel when the bottom of the platen is 65" inches from the floor of the baler chamber.

#### **Door Closed Switch - LS2 (Magnetic Proximity Switch)**

Adjust the magnet so the platen starts down when the upper door is ½" from closing.

#### **Bale Full Switch – LS3**

Adjust the trip flag so the switch will activate at 4" below top of unloading door.

#### **Lower Limit Switch – LS4**

Adjust switch arm so platen will stop when bottom of platen is 18" from the floor of the baler.

### **Hydraulic Relief Valve-Cycle**

The relief valve protects the pump, motor, and hoses if the timer should fail to function.

1. The adjustment must be made with a full bale in the chamber.
2. Install a hydraulic pressure gauge in the valve manifold. Turn the key switch to ON.
3. Have an assistant hold the DOWN button while you read the pressure gauge.
4. Factory set at 2200 PSI maximum by turning the adjusting screw in for greater pressure and out for less pressure.

### **SETTINGS**

Relief Valve  
Regen Valve

Set at 2200 PSI  
Set at 1200 PSI

## Cylinder Stroke Timer

The V72HS features a timer that controls the cylinder stroke. This timer is factory preset for most applications. However, for extreme baling conditions this timer can be increased or decreased depending on the application. Consult your distributor before attempting this adjustment.

## Changing Voltage

Read the section Installation Procedures before changing voltage.

1. Please refer to the section entitled Lockout / Tagout for instructions on disengaging the baler's power source.
2. Study the enclosed wiring diagram that came with your machine.
3. Install the correct size contactor and overload to match motor voltage and horsepower.
4. Change connections on the transformer to match the incoming voltage.
5. Change motor wires to match incoming voltage.
6. Reactivate the power and test the unit following the Final Set-Up and Testing instructions

## Trouble Shooting



**Warning:** Trouble shooting should be performed by qualified maintenance technicians only.

<u>Problem</u>	<u>Possible Cause</u>	<u>Solution</u>
Motor will not start.	Selector switch is in the OFF position.	Turn to ON.
	No power to baler.	Check power source.
	Starter overloads tripped.	Reset. Check amperage draw if overload trips again.
	Control circuit fuse blown	Check for short circuit then replace fuse.
Platen chatters on up stroke.	Low control voltage.	Check incoming voltage.
	Wear pads adjusted to tight	Readjust and test.
	Low oil level.	Add oil.
Platen does not return setting to top.	Low hydraulic pressure	Adjust pressure
	See Adjustments. Defective timer.	Replace.
	Directional valve not operating.	Check coil for power.
Platen drifts down.	Seals and O-rings have become worn.	Check each cylinder one at a time. Support platen with a jack.
	Defective directional valve.	Worn. Replace.

## Trouble Shooting

<b><u>Problem</u></b>	<b><u>Possible Cause</u></b>	<b><u>Solution</u></b>
<b>Platen comes up until the loading door starts to open then stops.</b>	<b>Material has piled up on the platen between the electric eye and the reflector.</b>	<b>Clean any material from the area in front of the electric eye.</b>
	<b>The electric eye is dirty.</b>	<b>Clean the lens on the electric eye.</b>
	<b>The reflector mounted on the loading door is out of adjustment.</b>	<b>Adjust the reflector by loosening the bolt that holds the reflector on and position it to be parallel with the photo eye.</b>
	<b>Defective electric eye.</b>	<b>Replace electric eye. See Electrical Schematics</b>
<b>Ejector base raised up off of floor after bale has ejected.</b>	<b>Material built up under Base.</b>	<b>Clean out under base. See Clean out procedure.</b>
	<b>Base did not cancel off of platen slide.</b>	<b>Insert ejector hook into hole on ejector base and lift up. Hook will cancel from slide. Then lower base to floor with Ejector hook.</b>
	<b>Hook keeps getting stuck on ejector slide.</b>	<b>Check upper limit switch for correct platen height.  Make sure platen is level and Guides are adjusted correct.</b>

## **BALER/COMPACTOR WARRANTY**

Harmony Enterprises, Inc. warrants that if any part of the Harmony Enterprises baler/compactor proves defective in material or workmanship within one year of the date of delivery to the customer, it will provide necessary replacement parts free of charge.

To obtain service from this warranty:

1. If a defect in material or workmanship is suspected, contact the distributor who sold you this baler/compactor. The distributor will provide further instructions on how to proceed. If necessary, contact Harmony Enterprises, Inc., 704 Main Ave N., Harmony, MN 55939, for the identity of the distributor.
2. If the distributor directs, return any parts suspected to be defective, shipping charges prepaid, to Harmony Enterprises, Inc., 704 Main Ave, Harmony, MN 55939. If Harmony Enterprises, Inc. inspection establishes a defect in material or workmanship; we will supply a replacement part free of charge, F.O.B., Harmony, MN.

This warranty does not apply to problems caused by misuse, abuse, negligence or failure to follow instructions in the Parts and Service Manual. This warranty does not cover labor charges for inspection, removal and installation of parts.

**THE TERMS OF THIS WARRANTY CONSTITUTE THE BUYER'S SOLE AND EXCLUSIVE REMEDY. THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY, AND NO IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT AND UNDER NO CIRCUMSTANCE, INCLUDING BREACH OF THIS EXPRESS WARRANTY (OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), NEGLIGENCE AND STRICT TORT, SHALL HARMONY ENTERPRISES, INC. LIABILITY EXCEED THE PURCHASE PRICE OF THIS BALER/COMPACTOR OR INCLUDE CONSEQUENTIAL AND INCIDENTAL DAMAGES.**

No person, dealer, distributor or agent has authority to alter the terms of this warranty on behalf of Harmony Enterprises, Inc. or to represent that Harmony Enterprises, Inc. will undertake any obligation except that specifically set forth in this warranty.