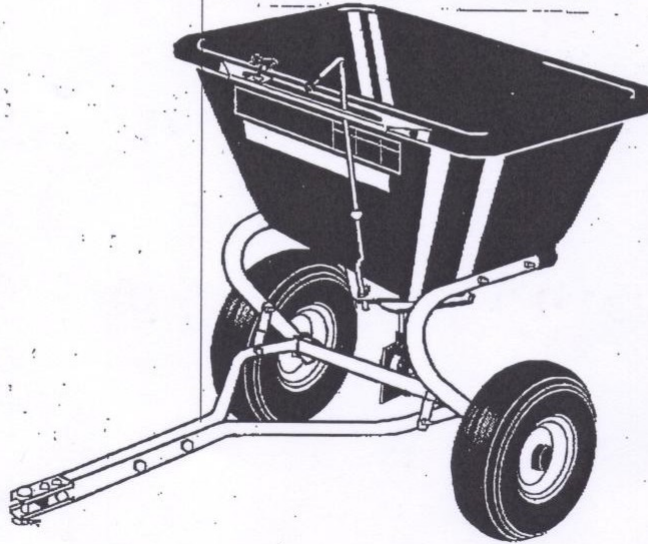


SINCE 1839

**BRINLY**

## OWNER'S MANUAL



### **BST-250S BH**

#### **BROADCAST SPREADER**

**"IMPORTANT: THIS MANUAL CONTAINS INFORMATION FOR THE SAFETY OF PERSONS AND PROPERTY. READ IT CAREFULLY BEFORE ASSEMBLY AND OPERATION OF THE EQUIPMENT!"**

#### **LIMITED WARRANTY**

Brinly-Hardy Company warrants only to the original retail purchaser that this product will remain free of defects in workmanship and materials under normal use and service for a period of two (2) years (NOTE: ninety (90) days for commercial or rental use) commencing with the date of purchase.

Any parts found to be defective within the warranty period will be replaced, with proof of date of purchase at Brinly-Hardy Company's expense. Our obligation under this warranty is expressly limited to replacement or repair, at our option of parts which are defective in material or workmanship within thirty (30) days of receipt of the parts. This warranty does not apply to damage caused by unreasonable use, including failure to provide necessary maintenance, nor does it apply to any transportation or labor charges.

WE MAKE NO OTHER EXPRESS WARRANTY NOR IS ANYONE AUTHORIZED TO MAKE ANY ON OUR BEHALF. ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. WE SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND.

BRINLY-HARDY COMPANY (877) 728-8224

**MADE IN U.S.A.**

# HARDWARE



No. 29  
1M1040P  
5/16" x 2 1/2"  
Hex Bolt



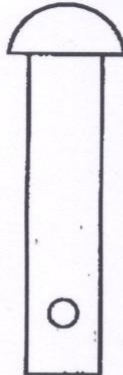
No. 43  
1M1032P  
5/16" x 2"  
Hex Bolt



No. 24  
1M1024P  
5/16" x 1 1/2"  
Hex Bolt



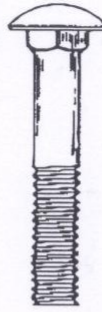
No. 8  
F-365 3/8"  
I.D. "O" Ring



No. 31  
B-3861  
Drawbar Pin



No. 25  
1M0828P  
1/4" x 1 3/4"  
Hex Bolt



No. 44  
10M1032P  
5/16" x 2"  
Carriage  
Bolt



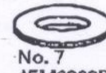
No. 12  
F-577  
"E" Type  
Snap Ring



No. 28  
B-4785  
1/4" Nylon  
Insert Nut



No. 38  
B-4786  
5/16" Nylon  
Insert Nut



No. 7  
45M0909P  
1/4" Flat  
Washer



No. 20  
45M2121P  
5/8" Flat Washer



No. 1  
F-313 1/4"  
Gate "O" Ring



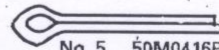
No. 2  
F-575 1/4"  
Thrust Washer



No. 3  
B-1673P  
1/4" Hex  
Lock Nut



No. 23  
F-846 Vinyl Cap



No. 5 50M0416P  
1/8" x 1" Cotter Pin



No. 45  
R-618  
5/16" Heavy Washer



No. 37  
10M1012P  
5/16" x 3/4"  
Carriage Bolt



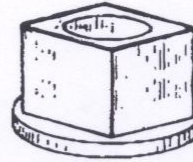
No. 33  
20M0814P  
1/4" x 7/8" Round  
Head Screw



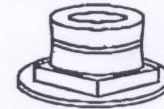
No. 13  
20M0812P  
1/4" x 3/4"  
Round Head  
Screw



No. 16  
F-591 Fan Driver



No. 19  
F-283 5/8" I.D.  
Axle Bearing



No. 9  
F-384 Fan Shaft  
Bearing w/Groove



No. 17  
F-595  
Lock Clip



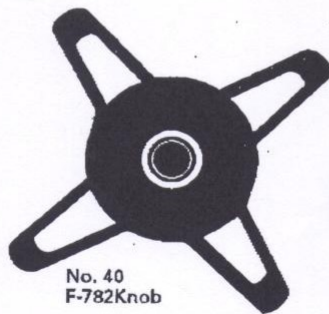
No. 6 F-847  
Flow Control Spring



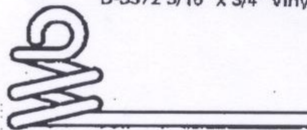
No. 35  
B-3372 5/16" x 3/4" Vinyl Grip



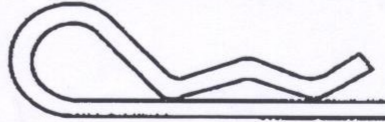
No. 39  
F-785 Gage Stop



No. 40  
F-782 Knob



No. 4  
F-436 Torsion Spring Agitator



No. 32  
D-146P 1/8" Hairpin Cotter



No. 21  
F-620 Hairpin Cotter

## ASSEMBLY

### TOOLS REQUIRED FOR ASSEMBLY:

- 1 - Pair of Pliers (Slip-joint recommended).
- 1 - Screwdriver (Flat).
- 2 - 7/16" Wrenches.
- 1 - Pair of Work Gloves.

#### Refer to FIG 1.

- Turn the hopper upside down and insert the grooved fan shaft bearing through the square hole in the bottom of hopper from INSIDE the hopper.
- Place the shutter plate on the hopper base (with the triangular openings aligned) and the bearing (grooved end) protruding through the matching round hole in the shutter plate.
- Secure the assembly by sliding the "E" ring into the groove with a pair of pliers.

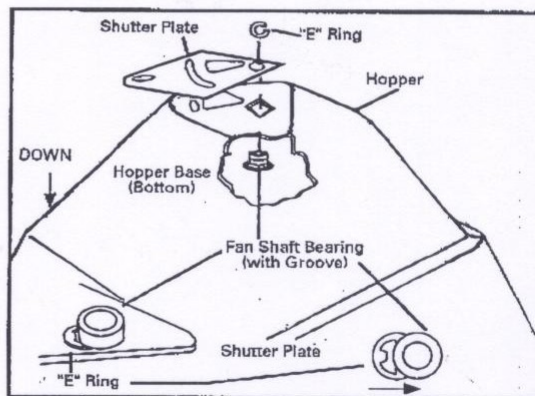


FIG 1.

#### Refer to FIG. 2.

- With the hopper still upside down, insert one 1/4" x 3/4" round head screw through one 1/4" nylon thrust washer and then the curved slot in shutter plate and corresponding round hole in hopper base.
- Complete this assembly by slipping the 1/4" gate "O" ring and remaining 1/4" nylon thrust washer onto the round head screw.
- Secure with one 1/4" hex lock nut. Must have domed head. NOTE: Do not tighten the shutter to the point of binding; there should be a "slight" amount of friction between the shutter and the hopper body.

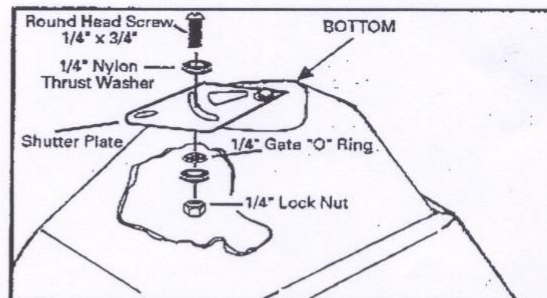


FIG. 2.

#### Refer to FIG. 3.

- Inspect the gearbox assembly and note the following: The fan shaft extends from the center of the gear housings at the gearbox cap and is smaller in diameter than the axle which extends from the end of each gearbox housing half.
- Slide the lock clip down the fan shaft with a pair of pliers, then slide the fan driver (WITH THE LARGE DIAMETER FLANGE FACING UP) down the shaft and follow with fan.

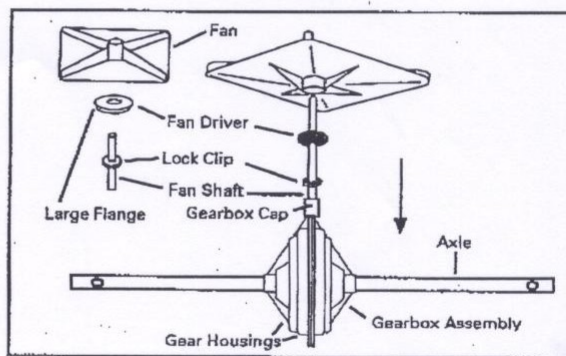


FIG 3.

**Refer to FIG. 4.**

NOTE: The shutter protrudes out the FRONT of the hopper. Do not tighten any bolts until all steps in Fig.4 are complete.

- While looking at the REAR of hopper (hopper is still upside down), insert the fan shaft of the gearbox assembly into the fanshaft bearing in the hopper.
- Determine the direction of rotation of the fan shaft by grasping both sides of gearbox axle and rotating it TOWARDS you and observe the direction the fan is rotating- it must turn CLOCKWISE

NOTE: Should the fan rotate COUNTER-CLOCKWISE, turn the gearbox axle to the opposite side- 1/2 a complete turn (right side of axle to left side of hopper).

- Push a large vinyl cap onto round end of each hopper support.
- Slip the hopper supports (ends with square hole and formed section facing forward) over each end of axle. Position supports at the two mounting holes in each side of hopper and attach using 1/4" x 1-3/4" hex bolts, 1/4" flat washer (next to hopper) and 1/4" nylon insert nuts.
- Remove the vinyl protector caps from ends of gearbox axle. Place the axle bearings (WITH FLANGES FACING OUTWARD) on the ends of the axle and insert the bearings into square holes in ends of hopper supports.
- Again, check proper rotation of fan, then tighten all bolts securely.

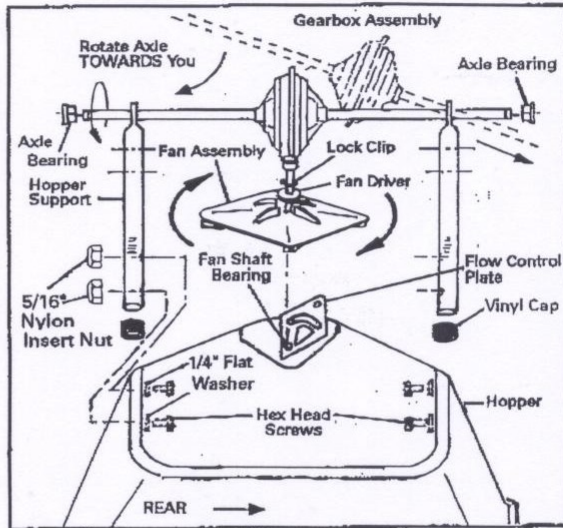


FIG. 4.

**Refer to FIG. 5.**

- Slide a 5/8" flat washer on each end of the axle followed by a wheel and then another 5/8" flat washer.
- Secure each axle end by installing a 5/8" "E" ring into the groove located at each end of the axle.
- Rotate either wheel until the hole in the hub lines up with the matching hole in the axle and then insert one hairpin cotter as shown.

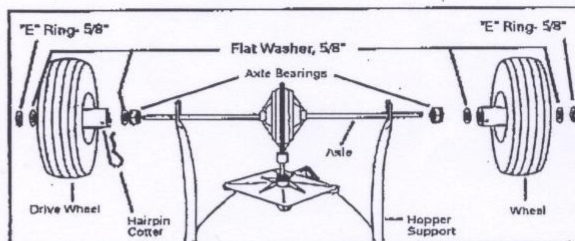


FIG 5.

**Refer to FIG. 6.**

- Turn the spreader right side up (on its wheels) and slip the 3/8" "O" ring onto the fan shaft.
- Install the spring agitator with the long leg on the bottom and the small loop at the top - on the fan shaft.
- Align the hole in the shaft with the spring's loop and then insert one 1/8" x 1" cotter pin (from the loop side) through the assembly and bend the legs over with pliers.

NOTE: Again check the direction of rotation. While viewing the inside of hopper from above, the agitator MUST rotate COUNTER-CLOCKWISE, when pulling the unit forward. If the agitator rotates clockwise, repeat the steps described in FIGURE 4.

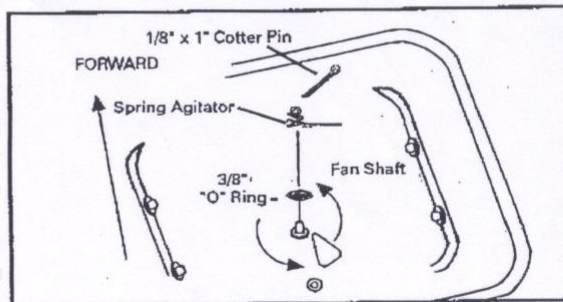


FIG 6.

Refer to FIG. 7.

- Attach gage plate to three holes in top lip at front of hopper using three 1/4" x 3/4" round head screws, flat washers (next to slots in gage plate) and nylon insert nuts (inside hopper). Do NOT tighten at this time.
- Slide formed end of shutter handle through long slot in gage plate; position opposite end of shutter handle into hole in previously assembled shutter plate at bottom of hopper.
- Match the hole in center of shutter handle with hole in hopper. Attach using 1/4" x 7/8" round head screw (with 1/4" washer next to head) through handle, 1/4" plastic washer inside and outside of hopper and securing with 1/4" hex lock nut (has domed head). Tighten snugly to allow pivoting without binding.
- Place the 5/16" vinyl cap over the shutter handle.

GAGE PLATE CALIBRATION

- Close the shutter completely by moving the handle all the way to the right.
- Position gage plate so shutter handle aligns with "O" on calibration plate. Tighten three retaining screws securely.
- Install the gage stop onto gage plate - formed tab towards handle and inside the slot.
- Secure with 5/16" x 3/4" carriage bolt, flow control spring (under carriage bolt head) as shown in Fig. 7- Illustration "A". Insert from under gage plate, up through gage stop, securing with plastic knob. Slide to the left and tighten.

NOTE: Flow control spring holds shutter handle in place.

Refer to FIG. 8

NOTE. Do not tighten bolts until all steps in Fig. 8 are complete.

- Assemble cross bar and two tow tubes to lower holes at inside of hopper supports- SHORT ENDS OF TOW TUBES ASSEMBLE TO HOPPER SUPPORT. Secure using two 5/16" x 2" hex bolts (from outside of tubes) and 5/16" nylon insert nuts.
- Align holes in straight section of tow tubes and bolt together using two 5/16" x 2-1/2" hex bolts and 5/16" nylon insert nuts.
- (Refer to inset of Fig. 8) Move the tow tubes UP, toward hopper supports. Attach tow tubes to hopper supports at the two mounting holes at each side using the two (offset) braces. Attach using four 5/16" x 1-1/2" hex bolts and 5/16" nylon insert nuts.
- Assemble the two hitch clevis pieces, with curved sides saddling the flattened ends of tow tubes, above and below the tow tubes. Attach using two 5/16" x 2" carriage bolts, BETWEEN tow tubes. Position so that two carriage bolts are between holes in tow tubes and secure with 5/16" nylon insert nuts.
- Insert a 5/16" x 1-1/2" hex bolt through holes at front (sides) of tow tubes, BETWEEN the carriage bolts previously installed. Secure with 5/16" nylon insert nuts. Slide the hitch clevis pieces forward as far as possible.

IMPORTANT: Refer to Figures 5 & 8

- Rotate the "drive wheel", checking the amount of resistance in the gear and fan system. If there is any excessive side movement, realign the gearbox by adding additional 5/8" flat washers behind the wheels.
- Insert drawbar pin through front holes in tow tubes and secure with hairpin cotter.

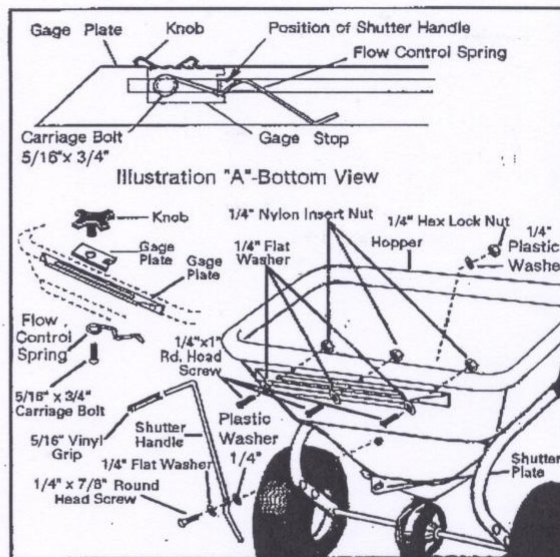


FIG. 7.

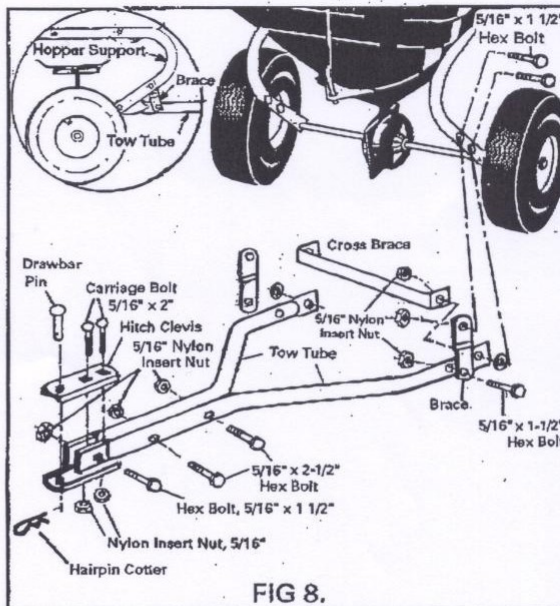


FIG. 8.

- Tighten all tow tubes mounting bolts securely, careful not to overtighten and collapse tubes.
- If Logo Decal is not applied to rear of Hopper, see parts page for location, and apply.

## OPERATION

- The fan speed and the spread width are controlled by the speed at which you pull the spreader. The recommended operating speed is slightly faster than that of a brisk walk, 3 to 4 MPH.
- The control lever operates the flow control shutter. The flow gage plate (Fig.7) is marked 0 to 10. The position selected determines the amount of material to be broadcast. The higher the number, the heavier the application of material.

NOTE: Close shutter before filling hopper. Keep the knob, (Fig.7) and shutter control stop tight at all times.



### CAUTION

Do not load the hopper with more than the maximum weight capacity of 125 pounds.

- Determine the flow control number setting required for your job using the Application Rate Chart. After determining the correct setting number for your material, set shutter handle (adjust shutter) to that position. This is done by loosening the wing nut and moving the stop clamp brackets, then re-tightening nut.

## OPERATING TIPS

- When spreading ice melters, use 2 hairpin cotters - 1 in each wheel hub, for better traction.
- When spreading seed, fertilizer, etc., insert only 1 hairpin cotter in either the right or left wheel hub.
- Do not fill hopper and transport over long distances. This may result in packing, causing poor or erratic discharge. Fill only at operation site.
- Break up any lumps as you fill the hopper.
- Do not use on windy days, especially when spreading fine grass seed or herbicides.
- For best results, select a LOWER (smaller number) shutter setting and spread material using TWO light applications - use a "criss-cross" or overlap pattern on the second application.

## MAINTENANCE

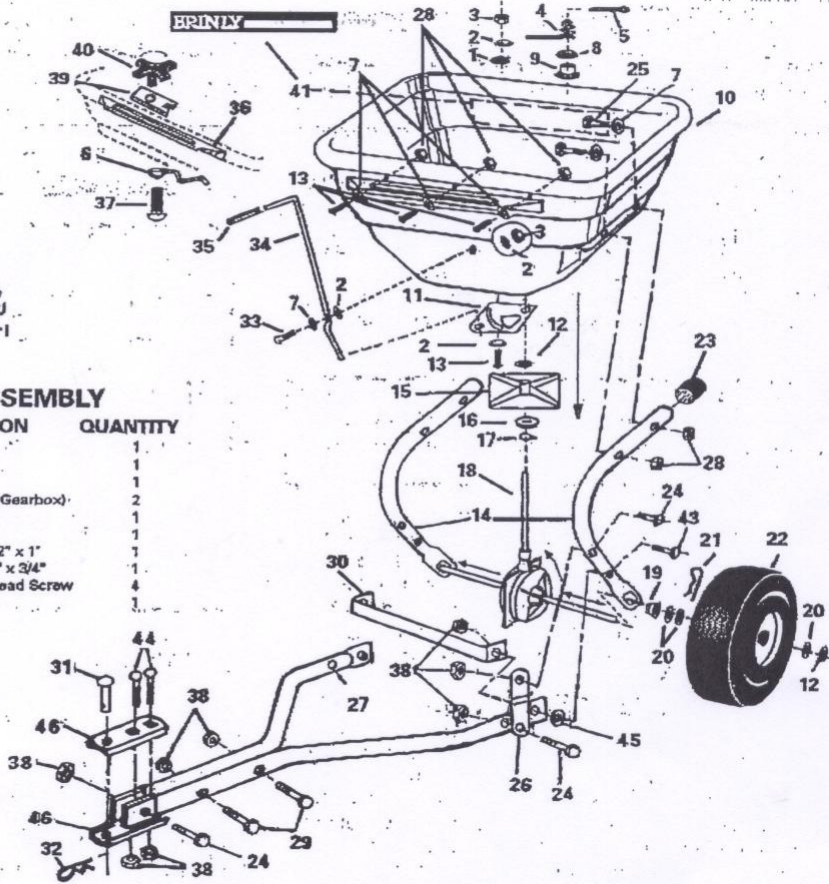
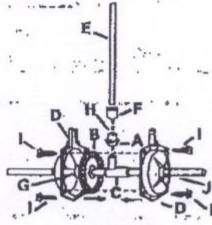
- To ensure years of trouble-free service, clean the spreader thoroughly with water after each use.
- For rust on frame parts, sand lightly and paint with enamel.
- Periodically lubricate all bearing surfaces.

## APPLICATION RATE CHART

Fertilizer application rates (as shown on the chart) are affected by humidity and the moisture content of the material (granular and pellet). Therefore, minor setting adjustments may be necessary to compensate for these conditions.

Material Type	Average Recommended Usage	Push Speed	Shutter Setting	Spread Width
<b>SEED</b>				
KY BLUEGRASS	2 lb./1,000 sq. ft.	3 MPH	7 1/2	5 ft.
RYE	4 lb./1,000 sq. ft.	3 MPH	10	8 1/2 ft.
TALL LAWN FESCUE	6 lb./1,000 ft.	3 MPH	10	10 ft.
<b>FERTILIZER</b>				
10-10-10	50 lb./5,000 sq. ft.	3 MPH	9 1/2	16 ft.
10-20-10 WONDER GRO	40 lb./10,000 sq. ft.	3 MPH	9 1/2	16 ft.
10-18-10 GREEN VIEW WINTER GREEN 2 WAY	20 lb./5,000 sq. ft.	3 MPH	5	9 ft.
18-24-6 SCOTT'S STARTER FERTILIZER	20 lb./3,000 sq. ft. 20 lb./5,000 sq. ft.	3 MPH 3 MPH	7 5 1/2	6 ft. 6 ft.
SCOTT'S TURF BUILDER	13 1/4 lb./5,000 sq. ft.	3 MPH	4 1/2	6 ft.
<b>LAWN WEED AND INSECT CONTROL</b>				
WONDER-GRO LAWN WEED KILLER	8 lb./5,000 sq. ft.	3 MPH	6	4 ft.
SCOTT'S LAWN INSECT CONTROL	12 1/2 lb./5,000 sq. ft.	3 MPH	4 1/2	6 ft.

**TO ORDER PARTS:**  
 Brinly-Hardy Company  
 P.O. Box 18  
 Jeffersonville, IN 47131-0018  
 (877) 728-8224



**GEARBOX/AXLE ASSEMBLY**

REF. NO.	PART NO.	DESCRIPTION	QUANTITY
A	F-378	Pinion	1
B	F-454	Gear	1
C	F-457	Pinion Carrier	1
D	F-458-G	Housing Half (Gearbox)	2
E	F-844	Fan Shaft	1
F	F-398	Gearbox Cap	1
G	F-413	Spiral Pin, 5/32" x 1"	1
H	F-414	Spiral Pin, 1/8" x 3/4"	1
I	F-415	Hex Washer Head Screw	4
J	F-731-01	Axle	1

**PARTS LIST**

REF. NO.	PART NO.	DESCRIPTION	QUANTITY	REF. NO.	PART NO.	DESCRIPTION	QUANTITY
1	F313	Gate "O" Ring	1	24	1M1024P	Hex Bolt, 5/16" x 1 1/2"	5
2	F575	Nylon Thrust Washer	4	25	1M0828P	Hex Bolt, 1/4" x 1 3/4"	4
3	B1673P	Hex Lock Nut (Dorned) - 1/4"	2	26	F-839-10	Brace	2
4	F-436	Torsion Spring Agitator	1	27	F-759-10	Tow Tube	2
5	50M0416P	Cotter Pin, 1/8" D. x 1	1	28	B-4785	Nylon Insert Nut, 1/4"	7
6	F-847	Flow Control Spring	1	29	1M1040P	Hex Bolt, 5/16" x 2 1/2"	2
7	45M0909P	Flat Washer, 1/4"	8	30	F-734-10	Cross Brace	1
8	F-365	"O" Ring, 3/8" (Fan Shaft)	1	31	B-3861	Hitch Pin	1
9	F-394	Fan Shaft Bearing, 3/8"	1	32	D-146P	Hair Pin Cotter	1
10	F-836	Hopper	1	33	20M0814P	Round Head Screw, 1/4" x 7/8"	1
11	F-689	Shutter Plate	1	34	F-840	Shutter Handle	1
12	F-577	"E" Ring - 5/8"	3	35	B-3372	Vinyl Grip	1
13	20M0812P	Round Head Screw, 1/4" x 3/4"	4	36	F-771	Gage Plate	1
14	F-837-10	Hopper Support	2	37	10M1012P	Carriage Bolt, 5/16" x 3/4"	1
15	F-573	Fan	1	38	B-4786	Nylon Insert Nut, 5/16"	11
16	F-591	Fan Driver	1	39	F-785	Gage Stop	1
17	F-595	Lock Clip	1	40	F-782	Knob	1
18	F-845	Gearbox & Axle Assembly	1	41	B-5924	Logo Decal	1
19	F-283	Axle Bearing	2	42	L-1602-BH	Instructions	1
20	45M2121P	Flat Washer, 5/8"	6	43	1M1032P	Hex Bolt, 5/16" x 2"	2
21	F-620	Hairpin Cotter	2	44	10M1032P	Carriage Bolt, 5/16" x 2"	2
22	F-842	Wheel	2	45	R-518	Heavy Washer, 5/16"	2
23	F-846	Vinyl Cap	2	46	R-892-10	Hitch Clevis	2

L-1602 BH