

Important!

Do Not Destroy!

Please Read!

Herd

SURE-FEED BROADCASTER

Herd

MODEL F-160

**WITH 3-POINT HOOKUP
(5 BU. CAPACITY)**

**INSTRUCTIONS FOR
ASSEMBLY, MOUNTING, SEEDING,
OPERATING AND MAINTENANCE**

REPAIR PARTS LIST



FEMA

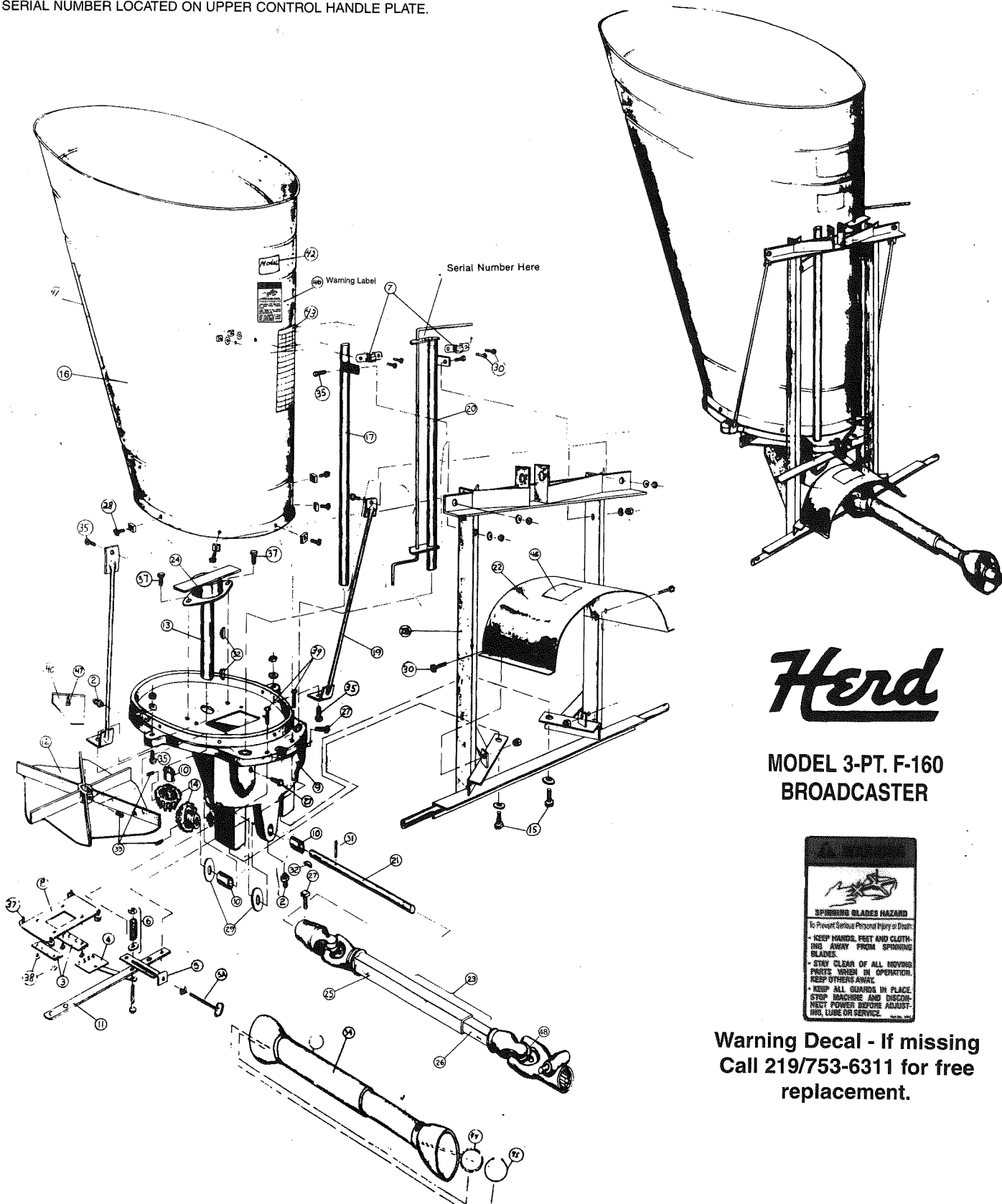
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LOGANSPORT, INDIANA 46947-0448

PHONE NO. 219-753-6311
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SERIAL NUMBER LOCATED ON UPPER CONTROL HANDLE PLATE.



Herd

MODEL 3-PT. F-160
BROADCASTER



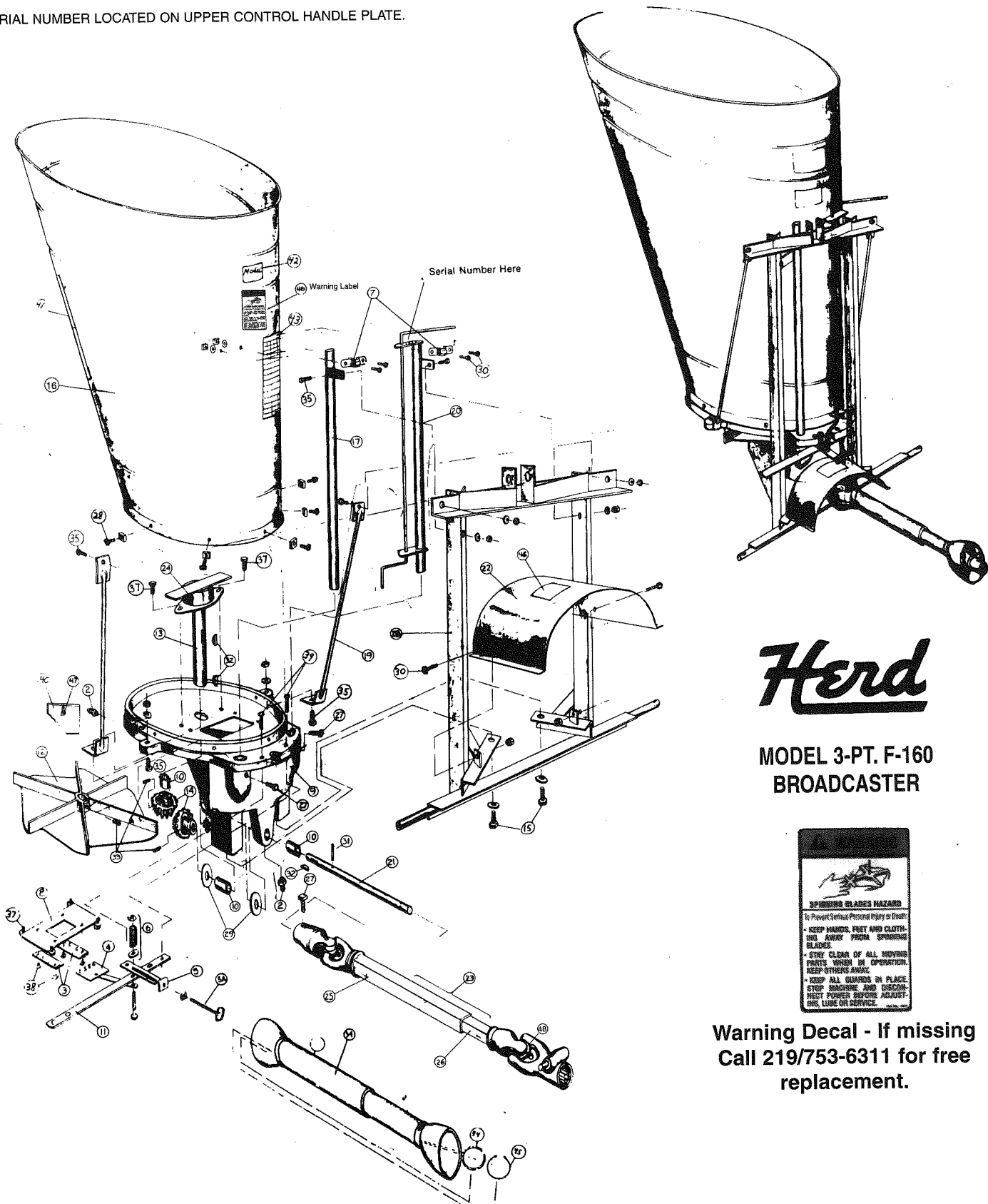
Warning Decal - If missing
Call 219/753-6311 for free
replacement.

PARTS FOR MODEL 3-PT F-160 SHOWN IN DRAWING

When ordering parts, order by both part name and number. Also, be sure to give model number of your Broadcaster (3-Pt. F-160), and serial number. The serial number will be found on upper control handle plate (No. 20 in photo).

“CAUTION” KEEP all guards and shields in place at all times. Disengage power take-off and shut off tractor engine before making any adjustments or repairs to seeder. KEEP hands, fingers and loose clothing well away from any and all moving parts at all times.

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| NO. | NUMBER | NAME | NUMBER REQUIRED |
|-----|--------|--|-----------------|
| 2. | 915 | Grease Fittings - 1/4" Straight | 3 |
| 3. | 925 | Seed Gate Guides or Slides | 2 pr. |
| 4. | 926 | Seed Gate with Connecting Link | 1 |
| 5. | 927 | Seed Opening Gauge - Complete with Rivet & Thumbscrew | 1 |
| 5A. | 927B | Thumbscrew only for Seed Gauge | 1 |
| 6. | 930 | Tension Spring with Bolt - Used on Control Arm | 1 |
| 7. | 939 | Bracket for Hopper Brace | 2 |
| 8. | 946 | Seed Opening - On Which Seed Gate Operates | 1 |
| 9. | 953 | Casting with Bearings and 991 Fan Shaft | 1 |
| 10. | 954 | Bearings for Casting - 5/8" x 1" | 3 |
| 11. | 955 | Control Handle, Lower | 1 |
| 12. | 956 | Fan with 5/8" Bore | 1 |
| 13. | 991 | Fan Shaft with Agitator Pin, to be used with Sealed Bearing | 1 |
| 14. | 958 | Gears - 5/8" Bore (Sold in pairs only) Includes 5/16" x 5/16" Socket Set screws | 1 pr. |
| 15. | 410A | Machine Bolts - 1/2" x 1", with Lockwasher | 2 |
| 16. | 961 | Hopper for Model F-160 | 1 |
| 17. | 963 | Brace Bar - Back Hopper - Right Side - on which is welded Clip | 1 |
| 18. | 427 | Complete 3-pt. Kit, Includes 975 Carriage & two 976 Brace Rods | 1 |
| 19. | 976 | Brace Rods - Clip Welded on each end | 2 |
| 20. | 977 | Brace Bar with Upper Control Handle Attached. Left Side | 1 |
| 21. | 978 | Driven Shaft - 5/8" x 9" | 1 |
| 22. | 979 | Shield for Universal Drive - Used on Frame | 1 |
| 23. | 414P | Complete Power Take-Off Shaft with Q.T. Yoke. 1 3/8" spline. 22-1/2" overall length. | 1 |
| 24. | 992 | Sealed Bearing, complete (Does not include 991 Shaft) | 1 |
| 25. | 414FP | Seeder end only, of Power Take-Off Shaft | 1 |
| 26. | 414MP | Tractor end only, of Power Take-Off Shaft | 1 |
| 27. | 401 | Square Head set screws, 3/8" x 3/4" | 3 |
| 28. | 405 | Hex Head Machine Screws - 1/4" x 3/4", with nuts | 5 |
| 29. | 994 | Steel Washers for spacing behind Gears | Var. |
| 30. | 409 | Hex Head Machine Screws - 1/4" x 3/4", with nuts and washers | 6 |
| 31. | 998 | Spring-Pin, 1/8" x 1" | 1 |
| 32. | 999 | Half-Moon Keys, for Keyways | 3 |
| 33. | 65 | Square Head Setscrew, 5/16" x 3/4", used in 956 Fan | 1 |
| 34. | 415P | Complete Shield only, for Power Take-Off Shaft | 1 |
| | 415 FP | Shield only for tractor end of power take-off shaft | 1 |
| | 415 MP | Shield only for seeder end of power take-off shaft | 1 |
| 35. | 407 | Machine Bolts - 5/16" x 1", with Nuts and Lockwashers | 6 |
| 37. | 412A | Hex Head Capscrews - 5/16" x 1/2", with Flat washers | 4 |
| 38. | 404 | Round Head Machine Screws - 3/16" x 3/16" | 4 |
| 39. | 402 | Rivets - 3/16" x 1" | 2 |
| 40. | 430 | Gear Guard for 3-pt. F-160 after Serial No. 38246 | 1 |
| 41. | 831 | "Herd Sure -Feed Broadcaster" Pressure Sensitive Decal | 1 |
| 42. | 974 | Model Number Decal (3-pt. F-160) | 1 |
| 43. | 989A | Seeding Chart Decal | 1 |
| 44. | 46 | Nylon Bearing for G & G P.T.O. Shield Only | 1 |
| | 37P | Nylon Bearing for Weasler P.T.O. Shield Only | 1 |
| 45. | 38P | Bearing Retainer for Weasler P.T.O. Shield Only | 1 |
| | 47 | Bearing Retainer for G & G P.T.O. Shield Only | 1 |
| 46. | 1091 | "Warning" - "Spinning Blades" Decal | 2 |
| 47. | 412B | Hex Head Capscrews - 5/16" x 1/2", with Lockwashers | 2 |
| 48. | 843 | Cross and Bearing Kit (G & G P.T.O. Shaft Only) | 2 |

PARTS USED BUT NOT SHOWN:

| | | |
|-----|--|---|
| 518 | Small Box of Parts in 3-pt. F-160 Seeder Carton. Includes: One each 414P, 955; two each 409, 1/2" Lockwashers; four each 407; Instruction Book | 1 |
| 965 | 18: Hopper Extension - 3-3/4" bu. capacity - Not recommended for spreading fertilizer | 1 |
| 907 | Angle Grease Fitting For Power Take-Off Shaft | 2 |

3-PT. F-160 ASSEMBLY AND MOUNTING INSTRUCTIONS:

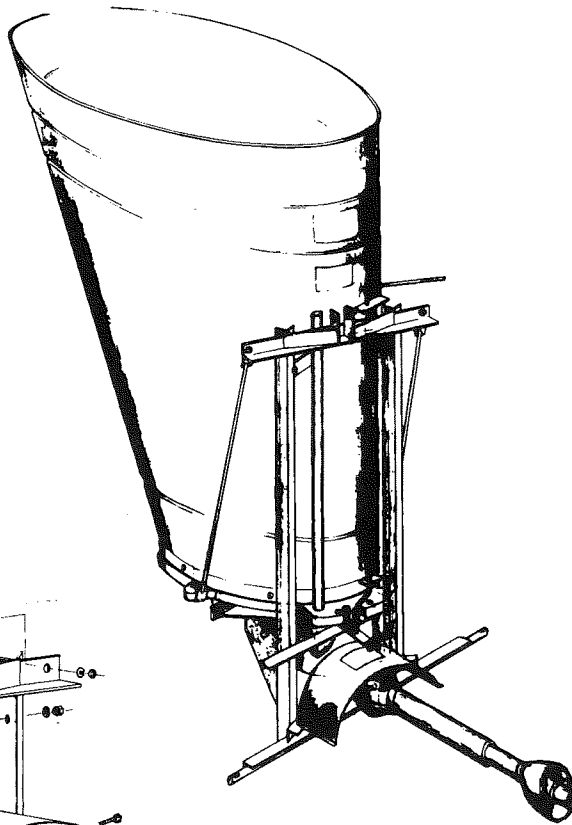
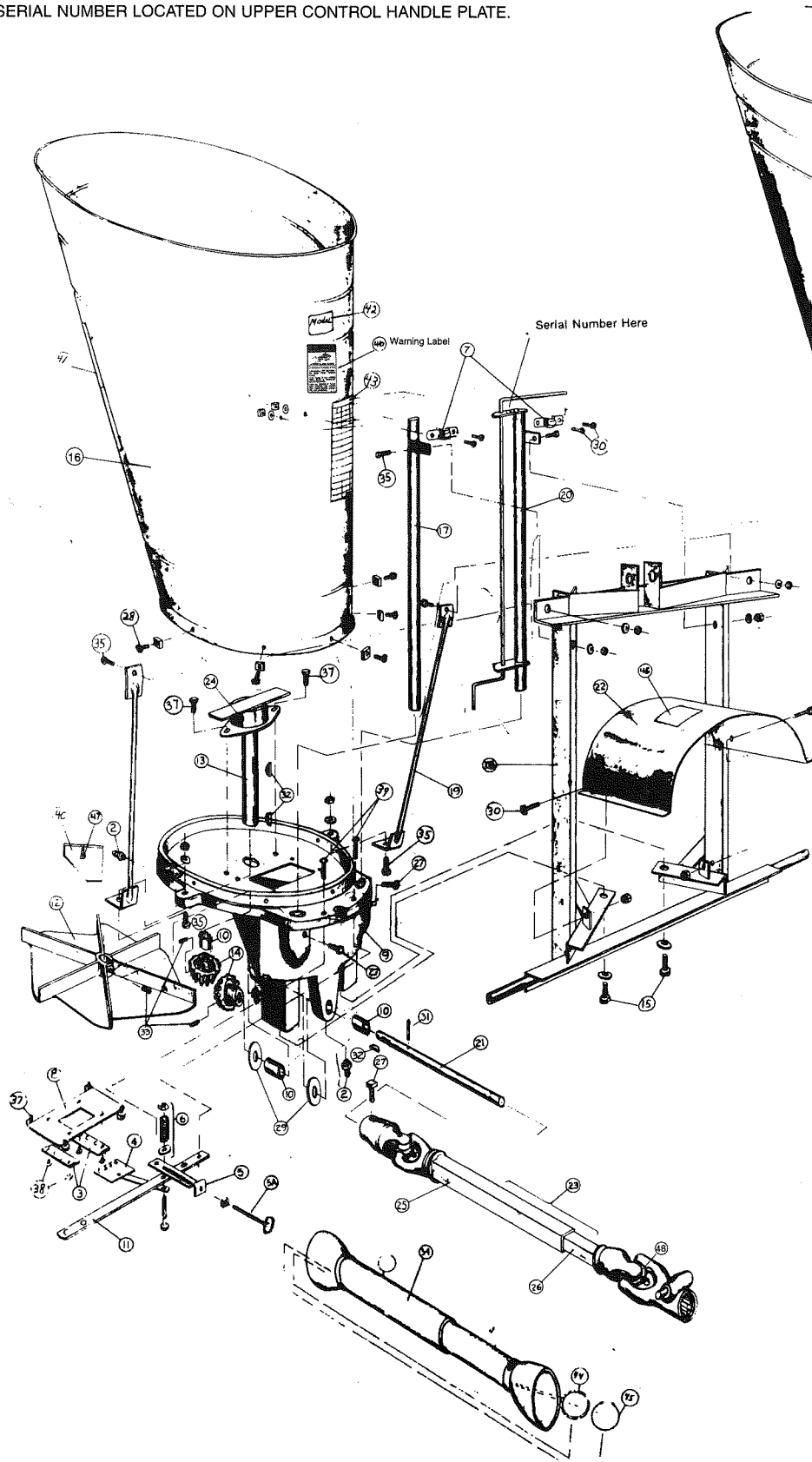
1. Place broadcaster wrong side up for ease in assembly. Remove small tension bolt and spring assembly (item No. 6). Free opening plate (item No. 4). Oil so it will work freely. Place handle (item No. 11) with off-center hole towards broadcaster and rivet handle onto base casting where rivet is placed. Slide handle between seed gauge and seed opening linkage. Replace bolt through assembly, then place washer, spring and nut on top. Tighten nut so there is good tension on spring, so that opening will not vary when in use.
2. Check seed opening handle to see that opening works freely. If not, check for paint in operating grooves, and oil so it will work freely.
3. To connect upper handle, loosen setscrew in casting. Remove clamp (item No. 7) on upper end of handle assembly (item No. 20). Slide brace bar out far enough so that point of handle will slide into hole provided in flat handle. Slide brace bar back down as far as possible and center over rivet. Tighten setscrew and replace clamp on hopper.
4. Turn brace bar (item No. 17) on opposite side so that welded flanges are the same angle.
5. Place 3-pt. carriage assembly (item No. 18) over broadcaster with frame on outside of welded flanges. Bolt frame and base together with 1/2" bolts furnished. Do not tighten these bolts.
6. To attach brace rods (items No. 19) - bend one clip-end of a brace rod to an approximate 45 degree angle and bend the other clip-end to an approximate 30 degree angle. Be sure to not bend the brace rod, only the clip-ends! Attach end with 45 degree angle to ear on casting, making sure it is bolted to the BOTTOM side of casting ear. **This is important!** Attach upper end with 30 degree angle to hole found on upper part of 3-pt. carriage. Put through the 5/16" bolt, but do not tighten. Now bend the clip-ends of the other brace bar as you did before and bolt to opposite side of the casting on BOTTOM side of casting ear and to 3-pt. carriage. Use two remaining 5/16" bolts to bolt welded flange and 3-pt. frame together in slots provided. Tighten the two 1/2" bolts on base of broadcaster and the 5/16" bolts at both corners. There should be tension on these bolts when tightened. If there is not, you have not placed the lower end of brace bars in correct place, for they **MUST BE PLACED ON BOTTOM OF EARS** of casting, and not on top. Tighten all remaining bolts snugly. Check after one hour of field use and retighten if necessary.
7. Fasten safety shield (item No. 22) to special clips welded on carriage frame with 1/4" bolts furnished.
8. Slide 5/8" end of PTO universal over 5/8" shaft extending from back of base of broadcaster. Tighten setscrew securley. Make sure it is tight against base with no end-play — as it is end-play that ruins gears.
9. Turn the broadcaster right-side up. Fasten one side of the 3-pt. carriage assembly (item No. 18) to the tractor's 3-pt. hitch, then fasten the other side. Place the tractor end of the power take-off shaft into the broadcaster end of the power take-off shaft on the tractor's PTO. "CAUTION"!-Now check to see that the power take-off shaft (part No. 414P) is not too long before raising the broadcaster up with the 3-pt. hitch. If it is too long it will bottom out and cause damage to the driven shaft, gears and/or main casting. If the power take-off shaft is too long you will need to cut equal amounts off of both ends of the power take-off shaft before raising the seeder on the 3-pt. hitch and attaching the upper center link arm to the seeder.
10. Raise up until power take-off shaft runs level and adjust linkage so that broadcaster sets level or tilts slightly forward towards tractor.
11. Sway bars or some other means should be used to keep broadcaster from swaying or swinging from side to side. Broadcaster may be run a few inches above or below tractor P.T.O. but not enough to bind universal joints.

OPERATING INSTRUCTIONS FOR MODEL 3-POINT F-160

In operating this broadcaster, keep the following factors in mind:

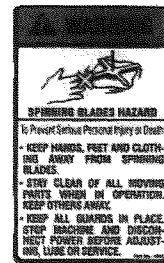
1. Broadcaster should be operated level, or tilted slightly forward toward tractor. Broadcaster may be run a few inches above or below tractor P.T.O., but not enough to bind universal joints.
2. The gears of the broadcaster should not be greased. This would cause dust to accumulate and cause gear failure.
3. To prevent the hopper from rusting when fertilizer is used, fill the space where hopper and base meet, with grease, remove any excess.
4. Be sure to run tractor full throttle — the P.T.O. never below 540 R.P.M.! Operate P.T.O. only when using broadcaster.
5. Broadcaster should be greased hourly and more often, if fertilizer or nitrates are being spread.
6. Keep in mind the rate your tractor travels in M.P.H. in using the broadcasting chart. The seed opening must be opened wider for fast speeds and set narrower for slow speeds. (Settings given are for a speed of 4 M.P.H.)
7. Do not attempt to adjust, while machine is running.
8. After operating broadcaster a few minutes, check and tighten all setscrews.
9. The seed plate of your broadcaster is fastened to bottom of casting by four bolts. This has been designed because different seeds and fertilizers or materials, all leave the fan differently, according to weight, size and quality, and the spread would not be even behind tractor. If the material being spread is heavy to the right, loosen the 4 bolts and move the seed plate to the right or toward the side it is spreading heavy on. If it is spreading heavy to the left, move the seed plate to the left. Always move the seed plate in the same direction that it is spreading heavy on. Do not move seed plate more than 1/4" before checking for a very small movement makes a great difference. Be sure and tighten bolts on seed plate.
10. You may lower the broadcaster to fill hopper then raise it to proper level to operate.
11. This Model 3-pt. F-160 broadcaster is not recommended for spreading granular insecticides and herbicides. The spread cannot be properly centered, due to the lightness of the material and the agitator will grind up the material causing uneven feeding and dusting of material. Our electric Models I-92 and I-44 were specially designed for this purpose.

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CAUTION KEEP all guards and shields in place at all times. Disengage power take-off and shut off tractor engine before making any adjustments or repairs to seeder. KEEP hands, fingers and loose clothing well away from any and all moving parts at all times.

MAINTENANCE:

1. The broadcaster should be greased hourly and more often if fertilizer or nitrates are being distributed.
2. To prevent the hopper from rusting, when fertilizer is used, fill the space where hopper and base meet, with grease. Remove any excess.
3. When this broadcaster is being used for nitrates, fertilizer or any type of highly concentrated material, be sure to clean machine when through. Lubricate seed opening guides and plate when storing. Also, lubricate all parts that may corrode from being exposed to fertilizer. In doing this, your broadcaster will give much better service when you are ready to use it next time.
4. This broadcaster was thoroughly tested and will do the job efficiently and properly if the instructions are followed. A little extra time spent in setting up this machine the first time, and in reading the following operating instructions thoroughly, will pay dividends over the years, for these broadcasters were built for years of service.

INSTRUCTIONS FOR REMOVAL AND REPLACEMENT OF BRONZE AF-954 BEARINGS

1. Remove gears, driven shaft, fan and agitator. (See instructions below for removing gears.)
2. Remove grease fittings.
3. Press out old bronze bushing.
4. The new bushing should be pressed into place by exerting even pressure to the whole bearing edge and pressing it into place.
5. After they are in place, they must be reamed out to a 5/8 I.D. or the shaft will not fit. A reamer is best, but a 3 or 4 flute drill bit will work if you are very cautious. Do not use a 2 flute drill, as it will chatter and tear up the new bearing.
6. Check to see if shaft will fit bronze bushing.
7. Using a small 1/8" drill, drill bushing through grease fitting hole so grease will get between shaft and bearing. Replace grease fitting.
8. Replace shafts and grease. Every 1 hour of use, regrease the bushings for long life.

INSTRUCTIONS FOR REMOVING GEARS, SHAFTING, FAN AND SEALED BEARINGS:

TO REMOVE GEARS OR DRIVEN SHAFT:

1. Loosen setscrew holding power take-off shaft to broadcaster and remove power take-off shaft.
2. Remove 1/8" pin in shaft behind gear and bearing.
3. Loosen setscrew in gear. Drive shaft forward through gear.
4. Remove half-moon key and drive shaft back through gear. Do not lose space washers.
5. Loosen setscrew holding gear to fanshaft and remove gear...then remove half-moon key.
6. To reassemble, reverse above procedure.

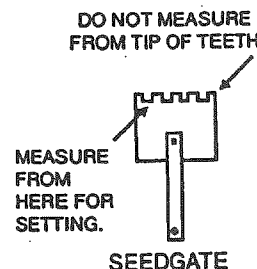
TO REMOVE FAN AND FAN SHAFT:

1. Follow above procedure for removing driven shaft and gears.
2. Loosen setscrew in fan shaft and remove two capscrews in hopper holding sealed bearing to base of hopper.
3. Drive shaft upward through base of hopper, making sure half-moon key does not turn and catch as it passes through base of hopper.
4. To reassemble: If fan shaft has been removed from bearing, before placing fan shaft through bearing make sure the two washers are in place.
5. Place fan shaft through bearing till practically all excess end-play is removed, but do not force so that washers will bind.
6. Place half-moon key in middle of shaft. Slide shaft through base of hopper into fan, making sure that half-moon keys aligns with keyway in fan.
7. Drive shaft on through fan and lower bearing until flanged sealed bearing may be bolted to base of hopper.
8. Then tighten the setscrew that holds the fan to the shaft. Make sure that the fan sets against the lower bronze bearing in base.
9. Place space washers, then half-moon key, then gear and tighten setscrew. Make sure there is no end-play in shaft between fan and gear.
10. Make sure gears mesh properly—if not, use spacers for correct mesh.

BROADCASTING INSTRUCTIONS For Model 3-Pt. F-160

Figured at 4 M.P.H. (See information below chart for instructions for other speeds.)

| SEED OR MATERIAL | SIZE OPENING | PER ACRE | SPREAD WIDTH |
|--------------------------------------|--------------|----------|--------------|
| ALFALFA | 3/16" | 8 Lbs. | 18 Ft. |
| AMMONIUM NITRATE | 3/8" | 80 Lbs. | 18 Ft. |
| AUSTRALIAN PEA | 3/8" | 60 Lbs. | 28 Ft. |
| BLUE GRASS | 1/2" | 14 Lbs. | 12 Ft. |
| BROME GRASS | 1/2" | 14 Lbs. | 12 Ft. |
| CLOVER | 3/16" | 8 Lbs. | 18 Ft. |
| FERTILIZER, PELLET OR GRANULAR | 5/8" | 83 Lbs. | 18 Ft. |
| FESCUE | 1/2" | 17 Lbs. | 14 Ft. |
| FLAX AND MILLET | 1/4" | 10 Pts. | 20 Ft. |
| LADINO CLOVER | 1/32" | 1 Lb. | 18 Ft. |
| LESPEDEZA | 3/16" | 8 Lbs. | 18 Ft. |
| OATS..... | 1" | 64 Lbs. | 24 Ft. |
| ORCHARD GRASS | 3/8" | 14 Lbs. | 12 Ft. |
| RED TOP | 3/16" | 7 Pts. | 12 Ft. |
| RYE | 1/2" | 56 Lbs. | 26 Ft. |
| RYE GRASS | 1/2" | 17 Lbs. | 14 Ft. |
| SOYBEANS | 3/4" | 120 Lbs. | 36 Ft. |
| SUDAN GRASS | 3/8" | 18 Lbs. | 18 Ft. |
| SWEET SUDAN GRASS | 1/2" | 20 Lbs. | 18 Ft. |
| TIMOTHY | 3/16" | 6 Lbs. | 16 Ft. |
| TURNIP SEED..... | 1/4" | 10 Lbs. | 24 Ft. |
| VETCH | 3/8" | 60 Lbs. | 26 Ft. |
| WHEAT | 1/2" | 60 Lbs. | 26 Ft. |



(1 Bushel of Blue Grass, Brome Grass or Orchard Grass weighs approximately 14 lbs.)

| | | |
|-------------------|-----------------|-----------------|
| 1 Lb. = 0.45 KG. | 1 Mile = 1.6 KM | 1 Foot = 30 CM |
| 8 Lbs. = 3.6 KG. | 4 Mile = 6.4 KM | 12 Feet = 3.6 M |
| 14 Lbs. = 6.3 KG. | 6 Mile = 9.6 KM | 18 Feet = 5.4 M |

At 6 M.P.H. the opening should be opened half-again as much, or 50% more. At 8 M.P.H. the opening should be opened twice as much, or doubled. Or, as examples: to spread 8 lbs. of Alfalfa a width of 18 ft. the opening will be 3/16" at 4 M.P.H., or 9/32" at 6 M.P.H. or 3/8" at 8 M.P.H. To spread 1 bu. of Blue Grass 12 ft. wide, an opening of 1/2" is for 4 M.P.H., a 1" opening is for 8 M.P.H. and a 3/4" is for 6 M.P.H. Seed openings must be opened wider for fast speeds and set narrower for slow speeds. When opening is opened past 5/16" (or length of teeth), the amount feeding through the opening will increase 40%.

Width of spread varies according to quality and weight of seed or material, speed of tractor and wind conditions. After making one run through the field, check spread. Make sure that all setscrews on broadcaster are tight.

LIMITED WARRANTY

This Herd Broadcaster was thoroughly tested before it left the factory. We warrant each Broadcaster sold by us to be free from defects in material and workmanship when used according to our directions. **OUR OBLIGATION UNDER THIS WARRANTY IS LIMITED TO MAKING GOOD AT THE FACTORY ANY DEFECTIVE PART OR PARTS THEREOF WHICH SHALL WITHIN THREE MONTHS AFTER DELIVERY OF SUCH HERD BROADCASTER TO THE ORIGINAL PURCHASER, TO BE RETURNED TO US.** No person or company is authorized to make further warranty.

This warranty shall not apply to any Herd Broadcaster which shall have been repaired or altered outside of our factory in any way so as to affect its stability or reliability, nor which has been subject to misuse, negligence or accidents, or was caused by damage while in possession of the consumer or resulted from failure to the consumer to provide reasonable and necessary maintenance.

DAVID E. HERD, President
HERD SEEDER CO., INC. - P.O. Box 448 Logansport, IN 46947

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