



Herd

**MODEL STANDARD F-160
SEEDER OR BROADCASTER
(5-BU. CAPACITY)**

PHOTO NO.	PART NO.	NAME AND DESCRIPTION	NUME NEED
2.	AF-915	GREASE FITTINGS - 1/4" STRAIGHT.....	3
3.	AF-924	BRACE ROD CLAMPS.....	8
4.	AF-925	SEED GATE SLIDES OR GUIDES.....	2 Set
5.	AF-926	SEED GATE WITH CONNECTING LINK.....	1
6.	AF-927	SEED OPENING GAUGE - COMPLETE.....	1
6A.	AF-927B	1/4" x 2-1/2" THUMBSCREW W/NUT FOR SEED GAUGE.....	1
7.	AF-930	TENSION SPRING WITH BOLT - USED ON CONTROL ARM.....	1
8.	AF-934	BRACE RODS - 5/16" HOLE IN END.....	4
9.	AF-936	BRACE RODS - 5/8" HOLE IN END.....	4
10.	AF-938	V-BELT - 36" LONG.....	1
11.	AF-939	BRACKETS FOR HOPPER BRACES.....	2
12.	AF-946	SEED OPENING PLATE - ON WHICH SEED GATE OPERATES.....	1
13.	AF-947	2-STEP PULLEY, WITH 1-5/8" BORE.....	1
14.	AF-948	DRIVE ASSEMBLY - FOR 1-3/8" PTO - 1-5/8" O.D.....	1
15.	AF-949	PULLEY - SINGLE GROOVE - 5/8" BORE.....	1
16.	AF-952	IDLER PULLEY - 5/8" BORE.....	1
17.	AF-953	CASTING WITH BEARINGS AND FAN SHAFT.....	1
18.	AF-954	BEARINGS - FOR CASTING AND IDLER PULLEY - 5/8" x 1".....	4
19.	AF-955	CONTROL HANDLE.....	1
20.	AF-956	FAN - 6 BLADED WITH 5/8" BORE.....	1
21.	AF-991	FAN SHAFT WITH AGITATOR PIN - 5/8" (TO BE USED WITH SEALED BEARING AF-992).....	1
22.	AF-958	GEARS - 5/8" BORE (SOLD IN PAIRS ONLY).....	1 Pair
23.	AF-959	COLLAR - 5/8" BORE.....	1
24.	AF-960	DRIVEN SHAFT - 5/8" x 12".....	1
25.	AF-961	HOPPER FOR MODEL F-160.....	1
26.	AF-963	BRACE BAR - BACK OF HOPPER - RIGHT SIDE WITH CLIP WELDED ON IT.....	1
27.	AF-969	INSIDE CHANNEL OF ADJUSTABLE STAND, WITH 6 HOLES (BOTTOM SECTION).....	1
28.	AF-970	OUTSIDE CHANNEL OF ADJUSTABLE STAND, WITH 6 HOLES (TOP SECTION).....	1
29.	AF-971	IDLER ASSEMBLY FOR ADJUSTABLE STAND ONLY.....	1
30.	AF-972	SPRING FOR IDLER ASSEMBLY AF-971.....	1
31.	AF-977	BRACE BAR WITH UPPER CONTROL HANDLE ATTACHED - LEFT SIDE.....	1
32.	AF-992	SEALED BEARING COMPLETE (DOES NOT INCLUDE AF-991 FAN SHAFT).....	1
33.	AF-973	PULLEY - 3-3/4", 5/8" BORE (USED WHEN BROADCASTING FERTILIZER AND OTHER MATERIAL OTHER THAN SEEDS).....	1
34.	AF-994	STEEL WASHERS OR SPACERS, 5/8" BORE - TO BE USED BEHIND GEARS.....	1
35.	AF-410A	MACHINE BOLTS - 1/2" x 1" WITH LOCKWASHER.....	2
36.	AF-411	SQ. HD. SETSCREWS - 1/2" x 3" (USED ON IDLER ASSEMBLY).....	1
37.	AF-401	SQ. HD. SETSCREWS - 3/8" x 3/4".....	3
38.	AF-887	SOCKET S.S. - 5/16" x 5/16" (USED IN PULLEYS AND GEARS).....	5
39.	AF-412A	HEX. HD. CAPSCREWS - 5/16" x 1/2", WITH FLAT WASHERS.....	4
40.	AF-404	RD. HD. MACHINE SCREWS - 3/16" x 3/16".....	4
41.	AF-999	HALF-MOON KEYS FOR KEYWAYS.....	3
42.	AF-405	RD. HD. MACHINE SCREWS - 1/4" x 1/2" WITH NUTS & WASHERS.....	5
43.	AF-407	MACHINE BOLTS - 5/16" x 1", WITH NUTS & LOCKWASHERS.....	4
44.	AF-409	RD. HD. MACHINE SCREWS - 1/4" x 3/4", WITH NUTS AND WASHERS.....	4
45.	AF-402	RIVETS - 3/16" x 1".....	2
46.	AF-413	FLAT STEEL WASHERS - 1/2", FOR SPACERS IN IDLER CONTROL.....	2
47.	AF-430	GEAR GUARD.....	1
48.	AF-412B	HEX HEAD CAPSCREWS - 5/16" x 1/2", WITH LOCK WASHER.....	2
49.	AF-989	SEEDING CHART DECAL - 7-1/2" x 13".....	1
50.	AF-831	HERD SURE-FEED BROADCASTER DECAL (NEEDS MODEL NUMBER DECAL WITH IT).....	1
51.	AF-988	MODEL NUMBER DECAL FOR STANDARD F-160 (USE WITH #831 DECAL.....	1
52.	AF-1091	"CAUTION - SPINNING BLADES" DECAL.....	1
	AF-519	SMALL BOX OF PARTS IN STANDARD F-160 SEEDER CARTON. INCLUDES 1 @ AF-969, AF-970, AF-971, AF-972, AF-973, AF-952, AF-938, AF-947, AF-948, AF-955; 2 @ 1/2" NUTS; 3 @ 1/2" LOCK-WASHERS; 4 @ AF-934, AF-936, AF-407; 8 @ AF-924; INSTRUCTION BOOK.....	1

OPTIONAL EQUIPMENT AVAILABLE:

F-35	SPECIAL 15" LONG EXTENSION ADAPTER FOR FERGUSON 35 TRACTORS WITH NO DRAWBAR, AND 1-3/8" SPLINE.....	1
AF-923	BUSHING TO REDUCE 1-3/8" PTO ADAPTER TO 1-1/8".....	1

AF-932	SPECIAL FORD EXTENSION ADAPTER - FOR FORD, FERGUSON, FORD-FERGUSON AND OLDER MODEL ALLIS-CHALMERS "C" TRACTORS, WHEN TRACTOR HAS NO STANDARDIZATION KIT. (TO BE USED w/AF-948 - 1-3/8" DRIVE ASSEMBLY)	1
AF-965	18" HOPPER EXTENSION (3-3/4 BU. CAPACITY)	1
AF-996	SPECIAL 24" LONG EXTENSION ADAPTER FOR FARMALL 140 FAST HITCH, MASSEY-FERGUSON 95, OR SIMILAR TRACTORS	1

PARTS USED ON PREVIOUS MODEL STANDARD F-160 SEEDERS (Not Shown)

AF-950	STAND FOR SEEDER - NON-ADJUSTABLE	1
AF-951	IDLER ASSEMBLY FOR AF-950 NON-ADJUSTABLE STAND, LESS IDLER AND SPRING	1
AF-962	BRACE BAR - BACK OF HOPPER - LEFT SIDE WITH CLIP WELDED ON IT (WITHOUT ELEVATED CONTROL HANDLE)	1
AF-964	SPRING FOR AF-951 IDLER ASSEMBLY	1
AF-967	IDLER PULLEY - 1/2" BORE	1
AF-968	CONTROL HANDLE (USED ON EARLY 1953 MODELS ONLY)	1
AF-957	FAN SHAFT WITH AGITATOR (TO BE USED WITH BRONZE BEARING)	1

DESIGNS SUBJECT TO CHANGE WITHOUT NOTICE.

STANDARD F-160 ASSEMBLY AND MOUNTING INSTRUCTIONS:

1. Place seeder wrong side up for ease in assembly. Remove small tension bolt and spring assembly. Free seed opening gate and oil so it will work freely. Place flat control handle with off-center hole towards seeder and rivet handle onto seeder casting where rivet is placed. Slide handle between seed gauge and seed opening gate linkage.
2. Replace bolt through assembly, then place washer, spring and nut on top. Tighten nut so there is enough tension on spring, so that the opening gate will not move by itself when in use.
3. Operate seed opening handle to see that opening gate works feely. If it does not, check for paint in seed opening slides or guides and oil, so it will work freely.
4. To connect upper control handle, loosen setscrew in casting. Loosen clamp on upper end of handle assembly. Slide brace bar out far enough so that point of upper control handle will slide into hole provided in flat control handle. Slide brace bar back down as far as possible and center over rivet. Retighten setscrew and replace clamp on hopper.
5. Turn other brace bar on opposite side, so that the welded flange is at the same angle as the brace rod with upper control handle attached. Retighten setscrew.
6. Loosen setscrews on the gear and collar on driven shaft. Remove paint from the 5/8" driven shaft that extends through the gear. Slide the shaft so that key aligns with the keyway in gear, then into gear so that end of shaft is even with gear. Tighten setscrew in gear. **SLIDE COLLAR TOWARD GEAR TO TAKE OUT END-PLAY IN SHAFT** so that gear will not ride in matching gear, and tighten. Make sure the setscrews in gears and collar are tight!
7. Place gear shield in place and tighten both hexhead capscrews.
8. For proper assembly of stand, see No. 3 in Mounting Instructions, and also, see drawing on Page 1.

MOUNTING INSTRUCTIONS:

1. Place PTO drive assembly (AF-948) and 2-step pulley (AF-947) on tractor PTO. Mount seeder as close to tractor as possible. Make sure that the drawbar is bolted securely and does not have any up-and-down motion or cross-wise motion. If this is not done, the seeder will not set securely or work properly and trouble will result . . . the belt will slip.
2. When seeder is to be used on a Ford or Ferguson tractor that has not been standardized (has no drawbar and requiring seeder to be mounted on swinging drawbar) and having 1-1/8" PTO, Part No. AF-932 is necessary to extend PTO to desired position. Also available is a reducer, Part No. AF-923, for other makes of tractors having 1-1/8" PTOs.
3. To assemble stand, place section with foot attached (inside channel) (AF-969) on tractor drawbar. This stand is adjustable both up and down in 1/2" variations. The bottom part of the stand may either be faced toward tractor or away from tractor, but the top of the stand must always have the smooth side toward tractor. In mounting, set seeder as close to tractor as possible.
4. When drawbar is in LONG position, bolt foot on drawbar away from tractor and it should be assembled this way when the drawbar is in the SHORT position, whenever possible. If the foot must be reversed, see No. 5 below for proper assembly.
 - (a) To use this seeder with 36" belt, which is furnished with seeder, the correct way to assemble stand so that the distance between drive assembly and seeder will be correct for belt tension: First, place drive assembly and 2-step pulley on tractor PTO. Bolt bottom of stand to drawbar of tractor, making SURE drawbar does NOT give sideways or up and down.
 - (b) The following setup is recommended when using pellet or granular fertilizer and is satisfactory for other types

of seeding when a large amount of power is required to run agitator: Tractor must be operated at full throttle. The distance between the top edge of drive assembly (not 2-step pulley) and top edge of "T" of adjustable stand, is 10". This will be the correct position when using extra 3-3/4" pulley furnished with seeder, and operating from larger of 2-step pulley on PTO drive assembly. NEVER OPERATE FROM SMALLER PULLEY OF 2-STEP PULLEY ON PTO DRIVE ASSEMBLY TO LARGER PULLEY ON SEEDER . . . R.P.M. WILL BE TOO SLOW.

(c) When you wish to operate tractor at one-half throttle (recommended for seeding only), use small 2-1/2" single pulley that is assembled on seeder (this pulley is not recommended for use with pellet fertilizer, granular fertilizer or nitrates), use larger pulley of 2-step pulley on PTO drive assembly and use 36" belt. The distance between top of PTO drive assembly and top edge of "T" of stand should be a strong 11".

(d) To operate tractor at full throttle when seeding, when using small 2-1/2" single pulley assembled on seeder, using the 36" belt, and operating from smaller pulley of 2-step pulley, the distance between top of PTO drive assembly and top edge of "T" of stand should be a strong 12".

(e) For any adjustments above or below setups given above, each 1/2" up or 1/2" down requires a belt 1" different in length; or add 1" more to length of belt to 1/2" measurement above and subtract 1" from length of belt for each 1/2" measurement below. (This is for your convenience in the event you should lose the 36" V-belt that is furnished.)

(f) To bolt channels together, use 1/2 x 3" Square Head Setscrew with 1/2" Nut (AF-411) found in Idler Assembly (AF-971). Place setscrew through holes in channels from inside of channel. Place extra nut on setscrew and tighten channels or stands together firmly, at height desired. Make sure this nut is tight! Place tension spring over setscrew and nut, so that hook will catch on right side of idler assembly and left side of stand. Place washer, then idler (belt tightener) assembly, then washer, then 1/2" nut. Tighten nut so that idler assembly will work freely between washers against tension spring. Use remaining 1/2" nut to tighten against nut that you have just placed and tightened, using this top nut as a "jam" nut.

5. If the tractor drawbar is too short and the foot must be turned toward tractor to assemble: Place outside channel (AF-970) on bottom section with smooth side toward tractor and sides overlapping inside channel, using the measurements given above for correct distances between top edge of PTO drive assembly and top edge of "T".

(a) To bolt the channels together, place 1/2 x 3" Square Head Setscrew (AF-411) with one 1/2" nut and place on it the washer, then idler assembly, then washer and the nut. Tighten until there is no excess play between washers. Place tension spring over square nut so that hook on spring will catch right side of tightener and left side of stand, using top hole in stand whenever possible, and tighten stand with the remaining nut. Idler must clear pulleys.

(b) An extra bolt, not furnished, may be used to bolt stand together, if desired.

6. Set seeder upon leg and place 1/2" bolts, which were used in packing, through holes in top of stand and into base of seeder. Tighten securely.

7. Make sure that V-pulleys align and belt runs straight.

8. Bolt brace rods on each side and back of seeder to tractor. Bend plate on end of rod to desired angle before attaching to tractor . . . always bend against weld. Small holes are attached to seeder and large holes to convenient place on tractor axle or fender. In mounting brace rods to back of hopper, fasten to plate on 7/8" brace bar.

OPERATING INSTRUCTIONS FOR STANDARD MODEL F-160:

1. The unit should be greased hourly and more often if fertilizer or nitrates are being distributed.
2. The seed opening must be opened wider for fast speeds and must be set narrower for slow speeds.
3. After operating broadcaster a few minutes, check and tighten all setscrews.
4. 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 evenly divided behind tractor. If the seed or material spread should be too wide to the direction that the fan is traveling, loosen plate and move the opposite direction that fan travels. If spread is the opposite, and comes off to your right while setting on tractor and facing forward, move the seed plate the opposite from above directions. 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.

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

TO REMOVE GEARS OR DRIVEN SHAFT:

1. Loosen collar on shaft behind gear and bearing.
2. Loosen setscrew in gear. Drive shaft forward through gear.
3. Remove half-moon key and drive shaft back through gear. Do not lose space washer.
4. Loosen setscrew holding gear to fanshaft and remove gear . . . then remove half-moon key.
5. 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 and remove two capscrews in hopper holding sealed bearing to base of hopper. **PAGE 4**

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 three washers are in place. Two small ones lay in cup of bearing and the spinner washer on top.
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 key 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. Tighten setscrew holding fan to shaft, making sure that fan sets against the lower bronze bearing 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 to correct mesh.

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 standard F-160 is being used for nitrates, fertilizer or any type of highly corrosive material, be sure to clean Broadcast Seeder thoroughly when through, by flushing out with water. Lubricate seed opening guides and plate, and also, all parts that may corrode, before storing. In doing this, your Broadcast Seeder will give much better service when you are ready to use it the next time and it will prolong the life of the machine.
4. This Broadcast Seeder 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 and following operating instructions completely, will pay dividends over the years, for these Broadcast Seeders were built for years of service.

BROADCASTING INSTRUCTIONS FOR STANDARD MODEL F-160

FIGURED AT 4 M.P.H. (SEE 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"	1 BU.	28 FT.
BLUE GRASS	1/2"	1 BU.	12 FT.
BROME GRASS	1/2"	1 BU.	12 FT.
CLOVER	3/16"	8 LBS.	18 FT.
FERTILIZER, PELLET OR GRANULAR	1/2"	100 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"	2 BU.	24 FT.
ORCHARD GRASS	3/8"	1 BU.	12 FT.
RED TOP	3/16"	7 PTS.	12 FT.
RYE	1/2"	1 BU.	26 FT.
RYE GRASS	1/2"	17 LBS.	14 FT.
SOYBEANS	3/4"	2 BU.	36 FT.
SUDAN GRASS	3/8"	18 LBS.	18 FT.
SWEET SUDAN GRASS	1/2"	20 LBS.	18 FT.
TIMOTHY	3/16"	8 PTS.	16 FT.
TURNIP SEED	1/4"	10 LBS.	24 FT.
VETCH	3/8"	1 BU.	26 FT.
WHEAT	1/2"	1 BU.	26 FT.

(1 BUSHEL OF BLUE GRASS, BROME GRASS AND ORCHARD GRASS WEIGHS APPROXIMATELY 14 POUNDS. 8 PINTS OF ALFALFA AND CLOVER WEIGH ABOUT 7-1/2 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 PTS. 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. OR, TO SPREAD 1 BU. 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" OPENING 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 BROADCAST SEEDER ARE TIGHT.