ASSEMBLY and OPERATING Instructions

DEARBORN MOTORS CORPORATION — DETROIT 3, MICHIGAN
The Dearborn Lister Planter pictured above is available in two models, 12-26 and 12-28. These two models differ only with respect to the type of seed cans with which they are equipped. Model 12-28 has combination seed cans with a capacity of approximately one bushel for planting either corn or cotton. See Figure 1. Model 12-26 is equipped with corn seed cans as shown in the insert in Figure 1. These seed cans have a capacity of \( \frac{1}{2} \) bushel each. Both models of this planter are equipped with friction trip 14” general purpose high crown bottoms which have soft center steel moldboards and crucible steel shares bolted to a formed steel frog. The bottoms may be set at any desired spacing on the 78” tool bar for plain listing. The planters are equipped with four 10” high carbon steel disc coverers with chilled iron bearings.

The planting mechanism is driven by an 18” ground wheel which features a spring loaded idler sprocket and chain guard. Constant ground engaging pressure is attained by spring tension when the ground wheel is running either on a ridge or at the bottom of the furrow.

The planter frame is made of high carbon heavy angle steel and is clamped to the two inch square high carbon steel tool bar by means of four heavy \( \frac{1}{2} \)” steel clamps. The beams may be attached to the frame for planting row widths of 36” to 42”.

Cell drop plates for planting gin run cottonseed and flat drop plates for planting corn are provided with the combination cans. The corn seed cans are provided with flat drop plates.
only. Special plates are available at additional cost for planting peas, sorghum, maize, beans, shelled peanuts and delinted cottonseed.

The No. 1 chisel point subsoilers are provided with both models of the planter. The wing type and the stub runner type subsoilers are available and may be ordered in place of the No. 1, if desired.

These planters embody triple quick-attachment to the Ford Tractor and are raised or lowered with the Ford Tractor Hydraulic Touch Control.

**NOTE:** Assembly of the Dearborn Lister Planter is the responsibility of the Ford Tractor and Dearborn Farm Equipment dealer. The implement should be delivered completely assembled. The following instructions are for guidance in case of need.

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**BUNDLE INFORMATION**

The Dearborn Lister Planter Models 12-26 and 12-28 are shipped in fourteen bundles each. See the itemized list below Figure 2 and 3 for bundle identification. Check the shipment against the list and the Figure for the model concerned to be sure all parts are received.

**MODEL 12-26**

**Bundle No. 1**
One Standard bottom.

**Bundle No. 2**
One beam assembly.

**Bundle No. 3**
One carton containing two corn cans with bottom attached, two blank plates, one drive chain, two long and two short seed tubes.
Figure 3
Model 12-28 Lister Planter Bundled for Shipment

**Bundle No. 4**
One beam assembly.

**Bundle No. 5**
One standard bottom.

**Bundle No. 6**
One ground wheel drive assembly.

**Bundle No. 7**
Two subsoilers and two root cutters wired together.

**Bundle No. 8**
One carton containing four blank plates and two twelve hole corn plates.

**Bundle No. 9**
One mounting angle with manual tube wired to it.

**Bundle No. 10**
One tool bar.

**Bundle No. 11, 12, 13 and 14**
One disc coverer, each.

**MODEL 12-28**

**Bundle No. 1**
One standard bottom.

**Bundle No. 2**
One beam assembly.

**Bundle No. 3**
One crate containing two combination seed cans, two corn bottom assemblies, two blank seed plates, one drive chain, two long and two short seed tubes.
Bundle No. 4  
One beam assembly.

Bundle No. 5  
One bottom assembly.

Bundle No. 6  
One ground wheel drive assembly.

Bundle No. 7  
Two subsoilers and two root cutters wired together.

Bundle No. 8  
One carton containing two cotton bottom assemblies, two gin run cottonseed plates, four blank plates and two twelve hole corn plates.

Bundle No. 9  
One mounting angle with manual tube wired to it.

Bundle No. 10  
One tool bar.

Bundle No. 11, 12, 13 and 14  
One disc coverer, each.

ASSEMBLY PROCEDURE

Note: The model 12-26 and 12-28 Lister Planters are assembled in the same manner up to the attachment of the seed cans. At that point the procedure treats each model separately.

1. Assemble the standard bottoms, subsoilers and seed tubes to the beam assemblies (6) and (8), Figure 6, as follows:
   a. Remove the bolt (8), Figure 4, from the beam (2) and insert the beam between the frog (12) as shown.
   b. Align the lower hole in the beam with the lower hole in the frog and position the forward end of supports (10) and (11) as shown in Figure 4. Secure with bolt, lock washer and nut (8) provided.
   c. Loosen the bolt (7), Figure 4, and position the bottom (9) so the slotted hole on the frog (12) fits securely on the bolt between the covering frame side bars.
   d. Remove the bolt (4) from the covering frame side bars and position the subsoiler (5) as shown in Figure 4.
e. Attach the subsoiler (5) to the covering frame side bars at the desired working depth with bolt (4), Figure 4. Place the free end of the long support (10) on bolt (4) and tighten nut finger tight.

f. Attach the free end of the short supports (11), Figure 4, to each side of the subsoiler shank (5), and secure with lock washer and nut.

g. Insert the long seed tube (3) between the covering frame side bars as shown in Figure 4 and secure the lower end with tube clamp (6).

h. Tighten nut (4) securely and place the small end of short seed tube (1) inside the large end of the long tube as shown in Figure 4.

NOTE: The No. 1 chisel point type subsoilers (B), Figure 5, are provided with model 12-26 and 12-28 Lister Planters. The stub runner type (C), for use in trashy soil and the wing type (A), for use in stoney soil, are both available and may be ordered in place of the No. 1 subsoiler if desired.

2. Place the bottom assemblies (6) and (8), Figure 6, in the position shown, and place the mounting angle (4), on the support angles (5) and (7) of the beam assemblies.

NOTE: Figure 6 shows the seed can brackets (2) and (3) bolted to the mounting angle (4) for planting rows 40 inches apart. Refer to the in-
sert Figure 6 to find the proper setting for the brackets at the desired row spacing; 36, 38, 40 or 42 inches.

a. Bolt the mounting angle (4) to the seed can brackets (2) and (3), Figure 6, at the desired row spacing.

b. Bolt the mounting angle (4) to the support angles (5) and (7) of the beam assemblies as shown in Figure 6.

c. Bolt the short seed tubes to the seed outlet casting with a stove bolt (1), Figure 6.

d. Remove the clamps (9), Figure 6, from each beam assembly (6) and (8).

3. Tilt the implement backward as shown in Figure 7, until it rests on the seed outlets (6) and the disc coverer supports (7) to facilitate attaching the tool bar.

a. Position the tool bar (2) as shown in Figure 7 and replace clamps (1) and (3), loosely.
b. Position the tool bar so the tool bar struts are exactly centered between the clamps (1) and (3), Figure 7, and tighten the clamps securely.

c. Bolt one root cutter (5) to the bracket (4) of each standard bottom as shown in Figure 7.

d. Set the implement in an upright position as shown in Figure 8.

4. Position the ground wheel as shown in Figure 8 with the frame (4) between the brackets (1) and (7).

a. Insert a spacer and bolt the right side of the frame to the right bracket (1), Figure 8.

b. Attach the long bracket of the ground wheel idler to the right side of the center bracket (6), Figure 8, and secure with lock washer and nut.

**NOTE:** Be sure the idler sprocket is to the rear and the spring end of the long idler bracket is forward.

c. Align the idler left bracket and the left side of the ground wheel frame (4) with the bracket (7), Figure 8, and insert the spacer and bolt from the inside. Secure with lock washer and nut.

5. Bolt the spring rod support bracket (3), Figure 9, to the front of the mounting angle as shown, with the center bearing support bolt (7).
a. Secure the forward end of the spring rod support bracket (3) to the center of the tool bar with the U-bolt (1), Figure 9. Figure 8 shows a front view of this attachment.

b. Hook one end of the idler spring (5), Figure 8, on the forward end of the long idler bracket and the other end to the support bracket (3) as shown in Figure 9.

c. Remove the nut from one end of the spring rod (2), Figure 8, and insert the rod through the hole in the ground wheel frame center support (3). Secure with large flat washer and nut.

d. Remove the cotter pin, nut and set collar from the free end of the spring rod (2), Figure 8, and insert the rod through the hole on the support bracket (3), Figure 9.

e. Raise the ground wheel so the rod will protrude above the support bracket (3), Figure 9, and secure with set collar, nut and cotter pin (2) as shown.
6. Align the sprocket (4), Figure 9, with the idler sprocket (8) and the ground wheel drive sprocket (6) and tighten the set screw securely.

a. Attach the No. 32 chain (5), Figure 9, to the drive sprocket (6), driven sprocket (4) and idler sprocket (8).

b. Remove extra chain links as necessary to give the chain proper length and tension.

7. Attach two disc coverers (10) to the support (9) of each covering assembly as shown in Figure 9.

**NOTE:** One pair of 12 hole corn plates and three pair of blank plates are provided with each Lister Planter. Blank plates may be drilled according to the chart on page 19 for the desired seed sizes and dropping distance.

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**ATTACHING CORN SEED CANS MODEL 12-26**

8. To complete the assembly of Model 12-26 attach the can bottoms (6), Figure 10, to the corn cans (2), Figure 11, with the bolts provided on the bottoms.

a. Place the retaining ring (4) and the seed can over each ring gear (5), Figure 11, and secure the forward end to the seed can brackets with hinge bolts and cotter pins provided.

b. Tilt the seed can forward and place the drilled plate (3), Figure 11, on the retaining ring (4) with the driving lugs down.

c. Secure the retaining ring and the seed plate to the seed can bottoms with the latch (1), Figure 11.
ATTACHING COMBINATION SEED CANS
MODEL 12-28

For Planting Gin Run Cotton:
9. To complete the assembly of Model 12-28, attach a cotton bottom (4), Figure 10, to each combination seed can (3) with the three bolts provided on the corn bottoms (6).
   a. Bolt a long agitator (1) to each cotton plate as shown in Figure 10.
   b. Place a retaining ring (5) and seed can (3), Figure 10, over the ring gear (5), Figure 12, on each seed can bracket as shown. Secure the forward end with hinge bolts and cotter pins (2), Figure 10.
   c. Tilt the seed can (1) forward as shown in Figure 12 and insert the cotton plate (3).
   d. Secure the retaining ring and the cotton plate to the cotton bottom with the latch (2), Figure 12.
   e. Secure the rear end of the seed cans to the seed outlet with the eye bolt, washer and wing nut (6), Figure 12.

For Planting Corn:
10. Attach a corn bottom (6), Figure 10, to each combination seed can (3) with the three bolts provided.
   a. Place a retaining ring (5), Figure 10, and one seed can over the ring gear of each seed can bracket and secure with hinge bolts and cotter pins (2) provided.
b. Tilt the seed can forward and place the drilled plate (7), Figure 10, on the retaining ring with the driving lugs down.

c. Secure the retaining ring and the seed plate to the seed can bottoms with the latch (2), Figure 12.

d. Secure the rear end of the seed cans to each seed outlet with the eye bolt, washer and wing nut (6), Figure 12.

**INSTALLATION OF SPECIAL SEED PLATES**

**NOTE:** The following special parts are for use with the corn bottoms of the models 12-26 and 12-28 Lister Planter. For planting peas, sorghum, maize, beans, shelled peanuts, round corn and delinted cottonseed a special THICK seed plate No. 120421 and THIN retaining ring No. 120420 must be used. These items are available at additional cost from your Ford Tractor and Dearborn Farm Equipment dealer.

11. Assemble the seed cans in the same manner as outlined in step 8 for Model 12-26 and step 10 for Model 12-28, using the thin retaining ring and thick seed plate drilled to size in place of the ones provided.

12. Attach the planter to the tractor using the conventional three-point hook-up.
The Dearborn Lister Planter is well suited for many uses such as plain listing, seed bed preparation, contour listing, listing to control water and wind erosion, building beds for crops planted on the bed, bedding for irrigation and for planting all listed crops.

This planter, when coupled to the Ford Tractor, is easily operated from the tractor seat. It is raised or lowered with the Ford Tractor Hydraulic Touch Control. When lowered, the chain-driven planting mechanism is engaged and the planter drops seeds. The lift feature permits easy turning at row ends, backing into field corners, controls the planting depth and enables the operator to transport the planter to and from the field with all ground engaging parts raised clear of the ground.

The Fertilizer Attachment for this planter which is available as an extra, is easily mounted on the toolbar. It is driven by the right rear tractor wheel to avoid overloading the ground wheel. Each fertilizer can will hold approximately 40 lbs. This attachment may be adjusted to deliver from 10 to 220 lbs. to the acre.

Proper setting and adjustment will assure efficient planter operation. The following information on lubrication, adjustments and maintenance is provided to aid the operator in getting maximum use from the Dearborn Lister Planter.

LUBRICATION

The Dearborn Lister Planter Models 12-26 and 12-28 each have five grease fittings as shown in Figure 14 and one on each of the four disc coverers, one of which is indicated by (6), Figure 14.
To locate the grease fittings on the model 12-20 Fertilizer Attachment see Figure 15. In addition to the seven fittings shown in Figure 15 one fitting may be found on the bottom of each fertilizer can.

When the Press Wheel Attachment is used there are four additional fittings, one on each press wheel bearing.

Wipe each fitting clean and lubricate with a good grade of gun grease, before first operation and daily thereafter.

**ADJUSTMENTS**

**Furrow Opener**

The working depth of the furrow opener or general purpose bottoms (8), Figure 8, is controlled by the Ford Tractor Hydraulic Touch Control Lever. To obtain the proper suck for listing, the tractor top link should be set as short as possible. Should it be necessary to further increase the suck of the bottoms, loosen the nuts on bolts (7) and (8), Figure 4, tilt the bottom as desired and tighten the nuts securely. When rebusting lengthen the tractor top link to obtain the desired pitch.

**NOTE**: *Any type furrow opener that will fit an open type foot, may be used on this planter.*

**Subsoiler**

To adjust the depth of the subsoiler (5), Figure 4, remove the bolt (4) and replace it through the desired hole on the subsoiler shank. The long seed tube (3) may be raised or lowered to conform with the depth of the subsoiler.

**Disc Coverers**

The disc coverers (10), Figure 9, may be moved in or out on the support (9), raised or lowered, and set at the desired angle by loosening one bolt on the clamp. To avoid throwing fertilizer
directly on the seed, attach the two outside disc coverers with the clamps reversed so the disc shanks are in front of the support (9), Figure 9. In this position the outside discs will throw soil on the seed first and the inside discs will follow up with a mixture of fertilizer and soil. If it is desired to leave the fertilizer alongside the seed, remove the two inside disc coverers.

**Tool Bar Clamps**

During the breaking in of a new planter, it may be necessary to tighten the beam clamps (1) and (3), Figure 7, to the tool bar (2) two or three times. To hold the bottoms in uniform pitch, tighten the lower clamp bolts securely first, then tighten the upper bolts.

**ATTACHMENTS**

**Model 12-20 Fertilizer Attachment:**

The Dearborn Fertilizer Attachment Model 12-20, available at extra cost, is shipped in three bundles consisting of the parts listed below. Check shipment against this list to be sure all parts are received.

**Bundle No. 1**

One carton containing two fertilizer cans, two can bottoms, two flexible tubes, two delivery tubes and two tube clamps.

**Bundle No. 2**

One fertilizer frame and driveshaft assembly with one No. 32 chain wired to it.

**Bundle No. 3**

One tractor drive sprocket with one No. 51 chain and one countershaft assembly wired to it.

The model 12-20 Fertilizer Attachment is mounted on either the model 12-26 or model 12-28 Lister Planter as follows:

1. Detach the planter from the tractor to facilitate changing the tractor wheels.
2. Remove both tractor rear wheels and attach the right rear tractor wheel to the left rear axle.

3. Place the tractor drive sprocket assembly (1), Figure 17, over the right rear brake drum and secure with the sprocket brake drum clamp.

4. Attach the left rear tractor wheel to the right rear tractor axle. Rear tractor wheels should now be 72 inches apart, center to center.

5. Attach the planter to the tractor using the standard three point hook-up.

6. Attach the fertilizer frame (1) to the tool bar (7) between the lower link struts (6) and (8) with the two U-bolts (3) and (5) as shown in Figure 16.

7. Mount the countershaft assembly (8), Figure 17, on the right end of the tool bar as shown and attach it loosely with two U-bolts (7) and (9).

a. Slide the countershaft assembly (8), Figure 17, on the tool bar until the sprocket (4) is aligned with the fertilizer drive-shaft sprocket (6).

b. Securely tighten the four nuts on the U-bolts (7) and (9), Figure 17, evenly.
c. Attach the No. 32 chain (5) to sprockets (4) and (6), Figure 17, and the No. 51 chain to the tractor drive sprocket (1) and driven sprocket (3).

d. Remove extra chain links as necessary to give chain proper length and tension.

e. Place the lower strand of the No. 51 chain over the roller idler (2), Figure 17.

8. Raise the planter to transport position with the tractor hydraulic lift control and attach the fertilizer clutch throwout bracket as follows:

a. Attach the clutch throwout rod (5), Figure 18, to the lever (3) on the sliding half of the clutch and secure with cotter pin.

b. Attach the clutch throwout rod bracket (2) to the tractor right lower link (4) as shown in Figure 18.

c. Slide the bracket (2) on the tractor lift arm (4), Figure 18, until the throwout lever (3) and the cam lobes (1) are in the position shown.
d. Tighten the nuts on the throwout bracket (2), Figure 18, securely and lower the planter to the ground.

9. Attach two fertilizer cans (1), Figure 19, to each can bottom (2) and secure with three bolts, washers and wing nuts (3) as shown.

a. Loosen the nuts on the two bolts (4) and (2), Figure 16.

**NOTE:** Fertilizer cans are stenciled RIGHT and LEFT on the under side of the can covers. Due to the reverse drive of the can bottoms, it is very important to have the cans attached to the proper side.

b. Place the fertilizer cans on the frame so the slotted hole (4), Figure 19, fits on the bolts (4) and (2), Figure 16, and tighten the nuts securely.

10. Attach one flexible tube (6) to each fertilizer outlet on the can bottoms (2) with the long cotter pins (5) as shown in Figure 19.

a. Attach one fertilizer delivery tube clamp (8), Figure 19, to the inside of each planter subsoiler with the bolt (9) provided on the seed tube clamp.

b. Twist the free end of the flexible tubes (6), Figure 19, into the large end of the delivery tubes (7).

c. Secure the delivery tubes (7) in the desired position with tube clamps (8), Figure 19.

11. To adjust the flow of fertilizer from the cans (1), Figure 19, loosen the wing nuts on the three bolts (3). To increase the flow of fertilizer, turn the can to the right and tighten the wing nuts when the desired amount is obtained. The fertilizer spout is closed when the can is turned as far as possible to the left.

**NOTE:** If at any time it is necessary to lengthen the tractor top link, such as for rebusting, it will be necessary to relocate the throwout bracket (2), Figure 18, on the tractor lift arm (4) as outlined in assembly step 8, page 16.

**ATTACHMENTS**

**Model 12-8 Press Wheel Attachment:**
The press wheel attachment for the Dearborn Lister Planter shown in Figure 20, is quickly and easily attached. A four hole adjustment (1), Figure 20, is provided to obtain the desired spring tension.
The press wheels (2), Figure 20, turn individually to prevent the dirt bridging between them. An adjustable scraper (3) is also provided.

NOTE: The Press Wheel Attachment, Model 12-8, is extra equipment available at additional cost from your Ford Tractor and Dearborn Farm Equipment Dealer.
## SEED CHART

### SEEDING CHART FOR D.M.C.-12 SERIES LISTERS

**Dropping Distances**

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<th>10-Tooth</th>
<th>11-Tooth</th>
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### RECOMMENDATIONS FOR SEED PLATES WHEN PLANTING HYBRID SEED CORN.

**IT IS RECOMMENDED THAT PLATES BE DRILLED AS FOLLOWS:**

- Large Flat .................... 9½" Hole
- Medium Flat .................. 17/82" Hole
- Small Flat ................... 15/82" Hole
- Large Round .................. 15/32" Hole
- Medium Round ................. 7/16" Hole
- Small Round ................. 13/32" Hole
PROCEDURE FOR DRILLING BLANK SEED PLATES

Each blank seed plate is provided with a locator circle, as shown in Figure 23, to facilitate locating holes. Make a drawing the same size as the locator circle and draw a straight line from the center to the outside. See line (A) (B), Figure 23. Determine the number of holes desired from the dropping distance chart on page 19. Divide the number of holes to be drilled into 360 (number of degrees in a circle) which will give the angle line (A) (C) in relation to line (A) (B), Figure 23. With a protractor mark the angle and draw in line (A) (C). Set a pair of dividers at the distance given between where line (A) (C) and line (A)(B) cross the locator circle. Place the dividers on the locator circle of the seed plate and mark off the holes. Mark the location of each hole on the plate with a center punch and drill the holes. If the holes are to be elongated, work them to the desired shape with a rat-tail file.

Still another method of locating the holes is to divide the circumference of the locator circle, 21.20 inches, by the number of holes to be drilled and mark their position on the locator circle.

For Example: To drill 10 holes in the seed plate divide 10 into 21.20 which will be 2.12. The holes would then be drilled every 2\(\frac{1}{8}\) inches around the locator circle.
MAINTENANCE

1. Keep all cutting edges sharp.

2. Clean the planter after each use and cover the ground engaging surfaces with a good grade of rust preventive.

3. Keep all nuts tight and check sprockets occasionally to be sure set screws are tight and proper alignment is maintained.

4. Store the planter in a clean dry place.

5. Use touch-up paint as necessary to prevent rust and maintain appearance of the implement.

6. Prompt replacement of worn parts will add to the life of the planter. Your Dearborn dealer stocks a supply of genuine Ford Tractor and Dearborn Farm Equipment repair parts. These parts are manufactured and inspected to assure high quality and accurate fit. Insist on genuine Ford Tractor and Dearborn Farm Equipment repair parts.

SAFETY PRECAUTIONS

Most farm implement accidents can be avoided by following these simple safety precautions:

1. Extreme care should be taken when making adjustments near cutting edges of the implement.

2. Never attempt to make adjustments on the tractor or implement when the tractor is in motion.

3. Do not permit anyone but the operator to ride the tractor at any time.

4. The operator should never get off the tractor while it is in motion.

5. Always lower the implement to the ground and shut off the tractor engine when leaving the tractor.