Ford Tractor
FERGUSON SYSTEM

FERGUSON
DISC HARROWS
A-BO-21 and 50-A-BO-21

★

OPERATING and ASSEMBLY INSTRUCTIONS

HARRY FERGUSON, INC. • DETROIT 3, MICHIGAN

FERGUSON
DISC HARROWS
A-BO-21 and 50-A-BO-21

Ferguson Disc Harrows are designed to utilize the exclusive Ferguson system. The disc gangs can be straightened or angled, while the tractor is in motion, by the use of the Ferguson fingertip control lever. Moving the control lever forward opens the gangs. By moving the lever rearward, the gangs are straightened. This permits straightening the disc for crossing grass waterways and turning at the end of the field.

The Ferguson control makes it possible to do this while the tractor is in motion. It permits relieving the tractor of loads when turning, reduces wear on the tires when turning, and eliminates mounting of dirt on the head-lands and the forming of low spots which collect water after heavy rain.

Frames are made of strong steel angle bars. Discs are made of high carbon steel, heat treated to give long life and cutting edges. Axle bearings are of hard maple wood, lubricated with two (2) high pressure grease fittings on each bearing housing.

This manual contains definite illustrations and information concerning the adjustment, operation, service and maintenance of the Ferguson disc harrows. Read this book, study and retain it. Follow the instructions and suggestions in this manual and you will receive the satisfaction, the long life, and the performance built into this equipment. If any questions arise, contact your Ferguson dealer. He is interested in your satisfaction, carries repair parts, and has personnel who is familiar with and thoroughly understands the operation of this equipment.

Install only *GENUINE REPAIR* parts purchased from your *FERGUSON* dealer. These parts are manufactured with the same care and precision exercised in production of the original implements. This insures exact dimensions, uniformity, hardness, quality of material and interchangeability of parts.

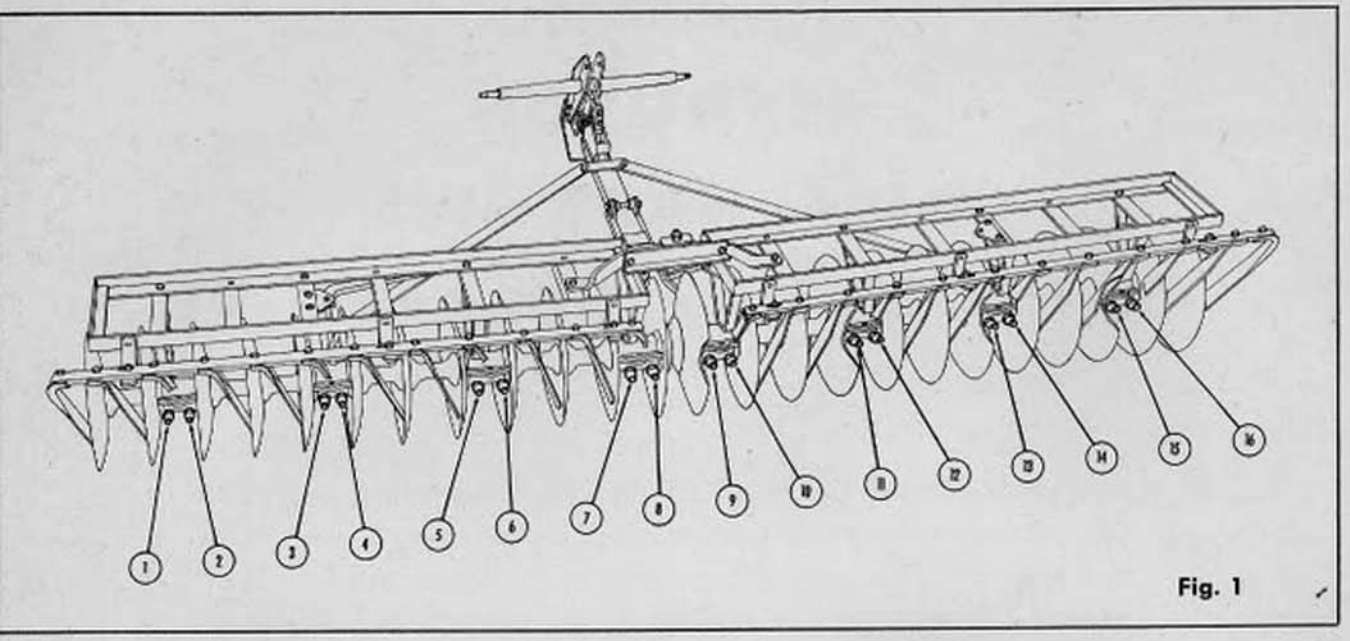

Fig. 1

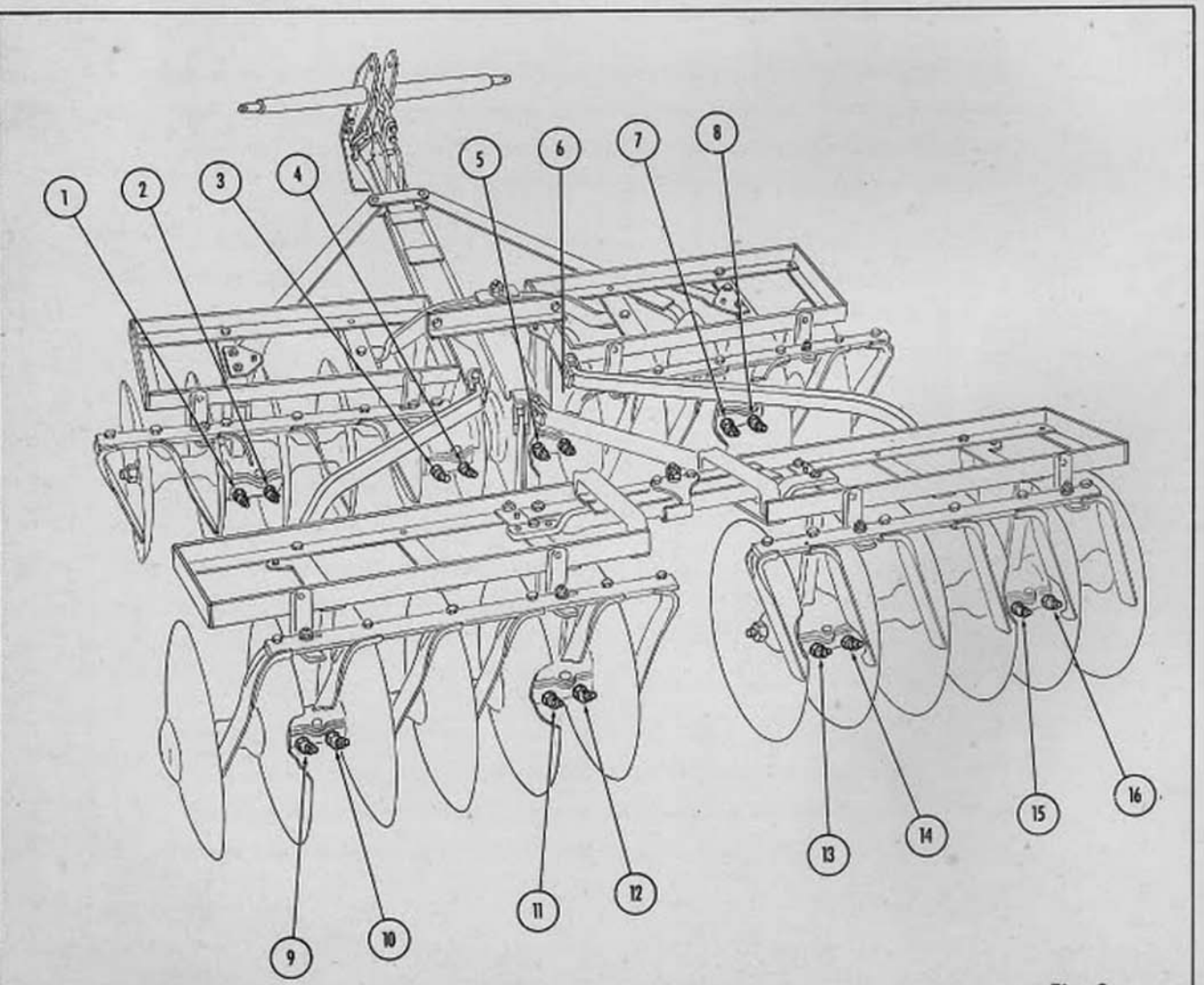

Fig. 2

LUBRICATION

Lubricate points 1 though 16 every four hours with the tractor grease gun. (Chassis lubricant) Fig. 1 and 2.

Continue to use gun until grease appears at bearings ends. This will force all the grit out and lengthen the life of the bearings.

Coat discs with rustproof compound when disc is to remain idle for a few days or at the end of each season.

Lubricate disc hitch angle slide members with heavy grease daily except in sandy or abrasive soils.

OPERATING HINTS

1. When a new harrow is being put into operation, do not set at full angle for a few hours until bearings are run in.
2. Scrapers should be adjusted to touch discs very lightly, and thus keep down draft and unnecessary wear.
3. On steep hills with heavy soil, the rear gang can be removed and the front gang only used.
4. When discing newly plowed sod, reduce the angle of the disc and add weight to the front gang only. This will prevent turning the sod excessively, particularly at high speeds.
5. Check disc regularly for loose nuts and bolts.
6. Examine all bearings each season and replace when worn. Bearings in good condition reduce draft and save fuel and strain on the tractor.
7. Do not drive disc on hard surfaced roads. Drive slowly when operating on rocky ground.

SUGGESTIONS

1. The ORDINARY disc harrow overloads the tractor when turning. The disc is being drawn forward and sidewise as it is being turned. The draft is greater at this time than at any other period in the operation of the disc harrow. This condition contributes towards hard steering and excessive tire slippage when turning, toward the ridging of dirt on the headlands and the forming of low spots which collect water after heavy rain. The Ferguson disc harrow has been designed to overcome these serious objections. By making use of the Ferguson System of hydraulic finger tip control the disc gangs can be straightened quickly and easily, thus relieving the strain on the tractor and saving time, fuel and tires. It permits turning short and relieves the tractor of overload while turning.
2. We strongly urge that the control lever always be used to straighten the gangs when turning on the headland so that the whole of the tractor mechanism will get relief, and tire wear be reduced to a minimum.
3. Never, under any circumstances, overload the tractor, because overloading is highly destruc-

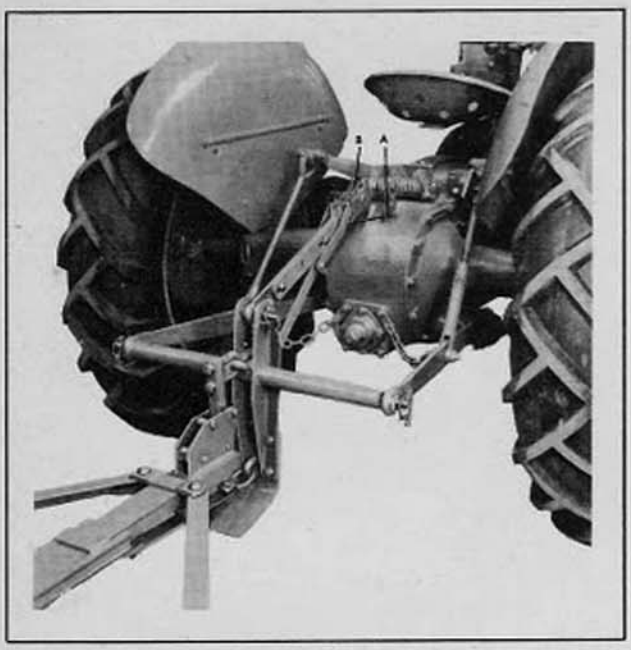

Fig. 8
Showing hitch held at working position.

ANGLE ADJUSTING RACK

The Angle Adjusting Rack consists of six (6) notches or positions. The yoke (A) fits into the notches in the Angle Adjusting Rack (B). When the yoke is in the last notch, the notch farthest from the seat, it allows the greatest angle to be taken by the disc gangs. Placed in the notch nearest the seat, it gives the least angle to the disc gangs.

Place the yoke in the third or fourth notches and operate the disc in the field. If this is too deep, move the yoke a notch nearer the seat. If it is too shallow, move it away from the seat. Move until the desired notch and cutting depth are obtained. The condition of the land and the vegetation thereon have an influence on which notch should be used.

NOTCHED ADJUSTING RACK—CUTTING ANGLE CONTROL FOR SMALL TOP LINK (2N-576)

The notched adjusting rack fits over and on the tractor top link. *It is a part of the disc harrow—not a part of the tractor.*

The small top link can be identified as follows:
It contains only two (2) bolt holes—"A" and "B". (Fig. 9)

Adjusting Rack for Tractors With Small Top Link

The correct adjusting racks (ABO-6810) for the small top links can be identified as follows:
It is a riveted assembly with only one (1) hole drilled through the rack body.

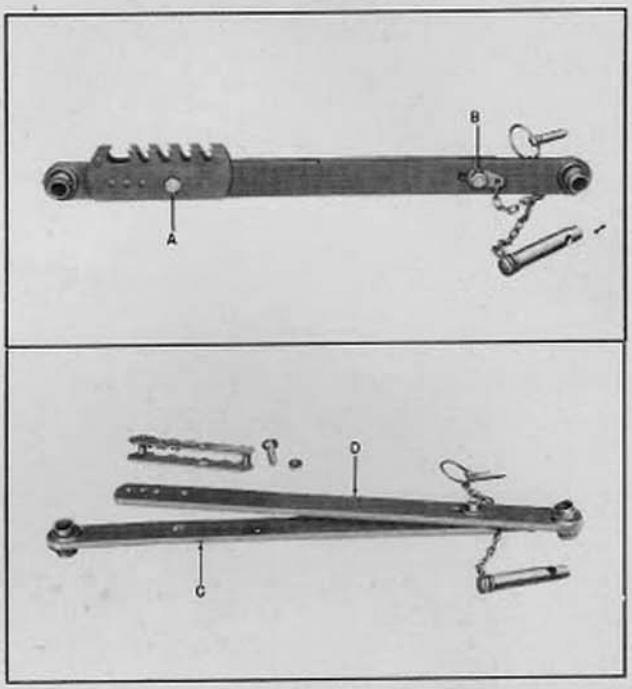

Fig. 9

Figure 9 shows two views of the top link, one where it is completely assembled ready for use. Should it ever be necessary to remove the angle control rack, remove bolt "A" and loosen nut "B". Separate the two sections of the top link, "C" and "D", then remove the angle control rack from section "D".

WARNING: Do not alter angle control rack, nor change the length of the top link when the angle control rack is attached to it. (Small top link 2N-576) Alterations can seriously affect the operation of the hydraulic system.

NOTCHED ADJUSTING RACK—CUTTING ANGLE CONTROL—FOR HEAVY TOP LINK (2N-576-B)

IDENTIFICATION: The large heavy top link has: Five (5) holes in both links, three (3) slotted holes located as follows: One (1) slotted hole at each end, and one (1) in the center.

It contains two (2) round holes—each located between slotted holes.

Adjusting Rack for Tractors with Heavy Top Link

This rack (A-BO-6810-A) can be identified by: The rack is bolted to top link by two (2) bolts (not riveted as used in the rack with the small tractor top link).

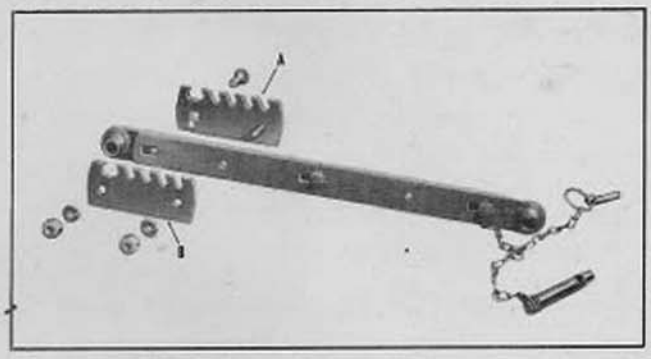

Fig. 10

NOTE: A and B, Fig. 10 are bolted on rack by the welded bolt on A and additional bolt furnished with rack. The racks must be removed for those operations where it is desirable to adjust the length of the top link. It can not be adjusted with the rack in place.

WARNING: The correct notched adjusting rack must be supplied to fit the top link of the tractor which is to operate the disc. When the heavier link is installed on a tractor that formerly had a small top link, the new style disc rack number (ABO-6810-A) will have to be purchased to permit operation of the disc harrow with the tractor after this top link change has been made.

ASSEMBLY INSTRUCTIONS

1. Place each front gang in working position, as indicated by stencilling on end discs. Block each gang in an upright position.
2. Remove triangular plates A-A-A-A and draft pins B-B-B-B. (Fig. 11)

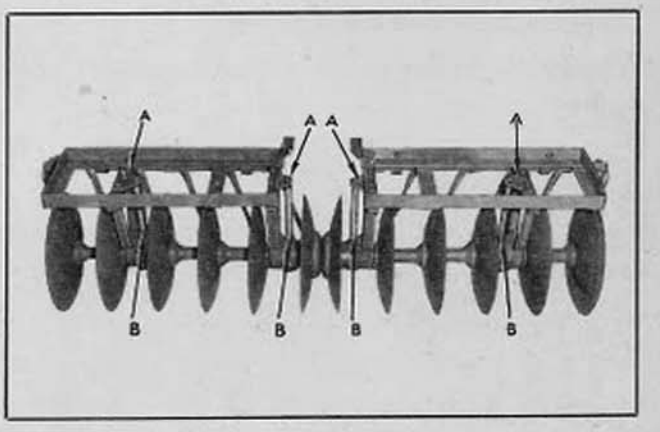

Fig. 11

1. Assemble center draft fork A-A to the draft pins B-B. (Fig. 12)
2. Note that the inside gang braces C-C are marked "Right" and "Left" and fitted on the OUTSIDE of the center draft fork, as shown.
3. The outside draft bars D-D, and the outside gang braces E-E are attached as shown.
4. The snubber F is marked "Front". Attach it as shown.

5. Note that the ends of the snubber are UNDERNEATH the cross bars K-K. Note the flanged bushing L-L are assembled with the flange UPWARD.

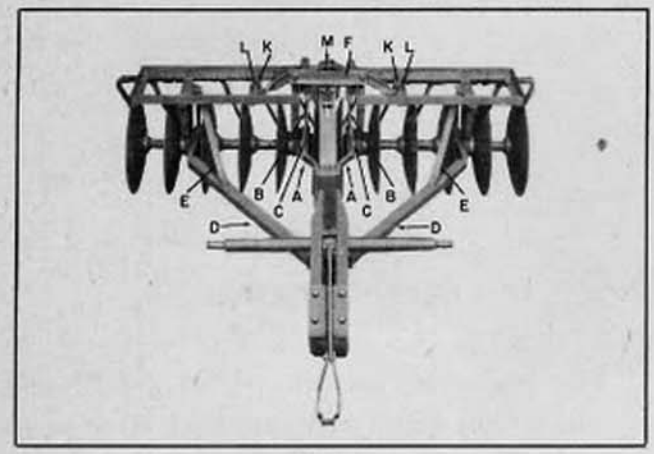

Fig. 12

6. The adjustment for the downward pressure for the center of the gangs is at M. When assembing leave the top nut flush as shown. Final adjustment can be made in the field.

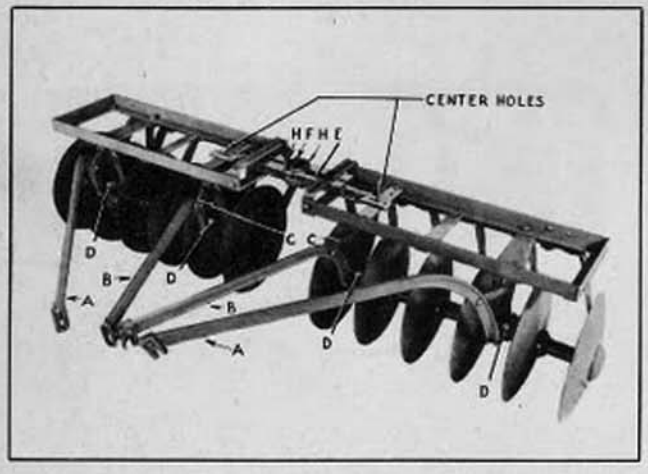

Fig. 13

1. The outside trailer reaches A-A are marked "right" and "left" and should be fitted as shown. (Fig. 13)
2. The inside trailer reaches B-B are interchangeable. Note that the braces C-C are fitted on the INSIDE.
3. The four pins D-D-D-D are the short pins supplied in bag.
4. The snubber E is fitted as shown, in the center hole, for normal conditions.
5. In this case the flange washers are UNDERNEATH.
6. The nut F should be screwed down until it is about flush, as shown. The cap screws H-H should then be screwed down TIGHTLY. Final adjustments can be made in the field.

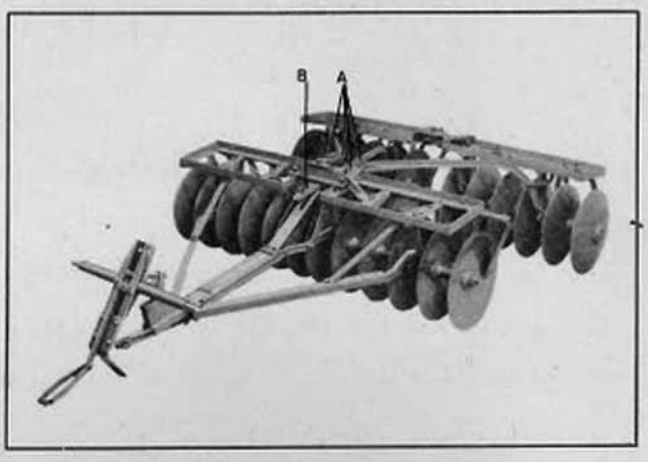

Fig. 14

1. Note how the rear gang has been attached to the front by the four pins A. (Fig. 14). See that the washers in the bag are fitted to the lower ends of these pins before the cotter pins are fitted.
2. The rear gang adjusting pin B is placed in the marked hole for usual conditions.

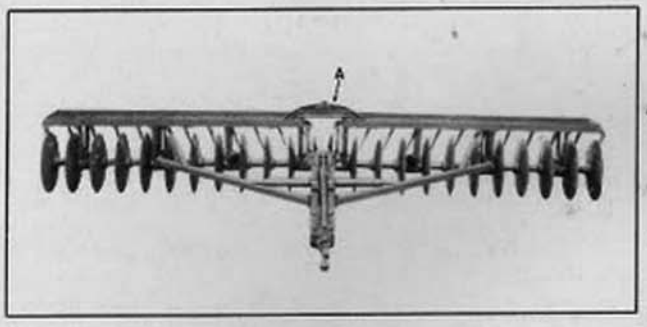

Fig. 15

Assembly of the single disc harrow is accomplished in exactly the same manner as shown in Figures 11 and 12. Make sure that the snubber (A) (Fig. 15) is correctly installed and later adjusted under field conditions so that the gangs are level and each disc can penetrate the same depth.

A SIMPLE TEST FOR CHECKING TRACTOR OVERLOADING

With the tractor in motion set the throttle lever half way down the quadrant. Then quickly flick the throttle fully open. If the tractor speeds up rapidly the engine is not overloaded—if slowly, the engine is overloaded. These remarks apply to ANY tractor. The overloading should be remedied at once to avoid serious damage.

When operating up a steep hill the above test might indicate overloading. This is not harmful, as it is compensated for when coming down the hill.

It is CONTINUOUS overloading that must be avoided.

See Your Dealer for Information on the

FORD-FERGUSON TRACTOR

THE FERGUSON LINE

Of Implements Includes

Single-Bottom Plows	Row-Crop Cultivators
Double-Bottom Plows	Spring-Tine Cultivators
Disc Plows	Four-Row Weeders
Disc Terracers	Farm Mowers
Blade Terracers	Heavy Duty Mowers
Middlebusters	Wood Bros. Corn Pickers
Lister Planters	Wood Bros. Combines
Corn and Cotton Planters	Transport Boxes
Ridgers	Sweep Rakes
Tillers	Feed Grinders
Single Disc Harrows	Two-Way Plows
Tandem Disc Harrows	Cordwood Saws
Spring Tooth Harrows	¾ Ton 2 Wheel Wagon
Heavy Duty Disc Harrows	Hydraulic Scoops

Ford Tractor

FERGUSON SYSTEM

LITHO U.S.A.

FORM Z-3041-B