The Ford Utility Blade which you have purchased, is designed and field tested to perform efficiently and economically under a wide variety of conditions. We are happy to have you as a Ford owner and are confident that you will receive unequaled performance from your blade.

This manual has been prepared to acquaint you with the preparation for use, operation, and care of your new Ford Utility Blade. Read the manual carefully at your first opportunity and keep it in a convenient location for later reference.

If, at any time, you have a question or problem concerning your new blade, remember that your Ford Tractor and Equipment Dealer is best qualified and equipped to serve your needs. With the proper treatment and service, your Ford Utility Blade should provide you with a long life of dependable and profitable service.
GENERAL INFORMATION

The Ford Utility Blade, Model 19-344, Figure 1, is a sturdy, lightweight implement that is easily mounted on tractors equipped with a Category I three-point hitch. The compact mounting of the utility blade allows maximum use in cramped working areas. The blade is well adapted to jobs that require scraping, leveling, or cutting. This includes building and maintaining roads, cutting ditches, terracing, snow removal, cleaning feed lots or barnyards, and back-filling erosion gullies or ditches.

Blade adjustments are provided for maximum versatility in pitch and angle. The blade cutting edge may also be inverted for longer life. A Model 19-189 Gauge Wheel, sold separately, is available for use with the utility blade to provide more accurate depth control.

ATTACHING

Attach the blade to the tractor three-point hitch, as shown in Figure 1, and secure with the linch pins provided. Attach the top link to the tractor rocker arm. For heavy grading, attach the top link in the lower hole of the tractor rocker arm. The upper hole setting permits additional force to be applied to the draft control spring and compensates for lighter pull of the blade during finish grading. With the pitch bar positioned in the middle hole as shown at (3), Figure 3, the tractor top link should be adjusted to provide a level blade frame position. However, finish grading may require a pitch adjustment, which is accomplished by adjusting the pitch bar. See "ADJUSTMENTS."

NOTE: The Drawbar Stabilizer Kit, available as extra equipment, can be installed on the tractor to
OPERATION

Preparing the Tractor

With the implement resting on the ground, move the tractor hydraulic selector lever down to the constant draft control position (3), Figure 2, and check the load of the draft control spring (2). As a starting point, it is recommended that the spring be loose, not under compression. If necessary to adjust, remove the yoke-to-rocker pin and turn the yoke until the spring can be turned slightly by hand. Replace the pin and cotter pin.

NOTE: For best performance in constant draft control, the draft control spring must be adjusted properly to respond to the draft load imposed by varying soil conditions.

Grading

Operate the tractor at medium throttle (1400-1600 rpm) for best hydraulic action. The tractor will not spin its wheels or dig in unless the draft is set too heavy. The constant draft control will adjust the blade setting instantly, allowing the tractor to move forward without disturbing the finish grade.

To spread soil “on the go”, pump the lift control lever between the extreme top of the quadrant and the upper side of the lever stop. The blade will raise approximately 1” per stroke. Using this method, the blade can be raised just enough to spread the desired amount of soil. Do not attempt to reset the lift control lever by inching it up, or the blade will raise quickly and dump the load.

Backfilling

1. Install a drawbar stabilizer kit (sold separately) on the tractor to prevent the blade from swaying. Place the tractor selector lever in position control (4), Figure 2. Attach the top link in the lower hole of the tractor rocker arm, and tighten the draft control spring three full turns.

NOTE: If the blade is equipped with a gauge wheel, remove it while backfilling.

2. Turn the blade 180° from the straight forward
position and lock it in place. This is accomplished by removing the drop pin (5), Figure 3, and rotating the turntable assembly 180°.

3. Set the throttle at 1400-1600 rpm. Using the hydraulic control lever, lower the blade until it contacts the ground. Do not move the control lever lower than necessary. Back the tractor straight into the pile and continue to push the load into the ditch. Raise the blade and drive the tractor forward in a pattern as shown in Figure 4. Repeat this operation until the pile is removed.

In backfilling, efficient operation results from the tractor pushing the most soil possible without losing speed due to reduced engine rpm or wheel slippage.
ADJUSTMENTS

The following adjustments are provided to cover a wide variety of operating conditions.

Blade Angle

Seven holes are provided for angling the blade; five in the forward position and two in the reverse position. In the forward position, the blade can be angled horizontally to $45^\circ$ each side of center, in $15^\circ$ increments. In the reverse position, the blade can be angled $15^\circ$ each side of center. Remove the drop pin (5), Figure 3, swing the blade to the desired angle or reversed position, then insert the pin into the hole in the turntable.

Blade Pitch

The pitch of the blade can be changed by removing the bolt (3), Figure 3, and moving the pitch bar to any of the three holes in the adjustment bracket (4). After selecting the desired blade pitch, replace the bolt. Intermediate pitch adjustment is also possible with the tractor top link.

Depth of Cut

The depth of cut is controlled by the tractor hydraulic system. When a gauge wheel assembly is used, depth is controlled with the gauge wheel hand crank, Figure 3.

Blade Cutting Edge

The blade has two ground engaging edges that may be inverted when one of the edges is worn.

Blade Reverse

The blade can be reversed for various backfilling operations. To reverse the blade, remove the gauge wheel (if so equipped) and install a drawbar stabilizer kit, available as extra equipment. Then, remove the drop pin (5), Figure 3, rotate the turntable $180^\circ$ and secure it with the drop pin.

ATTACHMENTS

The following attachments are available from your Ford Tractor-Equipment Dealer as extra equipment.
Gauge Wheel

The gauge wheel assembly, Figure 3, is mounted on the rear of the blade assembly to provide more accurate depth control where desired.

Ditching Point

The ditching points (A), Figure 5, are bolted to the blade ends and are useful for cutting and ditching.

Skid Shoes

The skid shoes (B), Figure 5, are mounted on the rear of the blade to reduce blade wear and control penetration.

End Plates

The end plates (C), Figure 5, are attached to the blade edges for moving and holding loose material in the blade.

LUBRICATION

A lubrication fitting is provided on the gauge wheel assembly (6), Figure 3. This fitting should be lubricated daily when the blade is in use, and before storing the blade. A few drops of oil applied occasionally on the adjusting screw will keep it free and easy to use.

SHIPPING

The Ford Utility Blade, Model 19-344, is shipped in two bundles as shown in Figure 6. Check the shipment against the following information to be sure that all the parts have been received.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Bundle No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-344</td>
<td>Frame Assembly, Pitch Bar, and the Assembly and Operating Manual</td>
<td>290515</td>
</tr>
<tr>
<td></td>
<td>Blade Assembly</td>
<td>290516</td>
</tr>
</tbody>
</table>
Assembly of the Ford Utility Blade is the responsibility of the Ford Tractor-Equipment Dealer and is assembled as follows:

1. Remove the pitch bar, Figure 3, from the frame assembly. Swing the two "A" frame braces (1) to the upright position as shown.

2. Position the pitch bar, Figure 3, as shown. Secure the flatted end of the bar to the "A" frame braces (1) with the 5/8" - 11 x 3" bolt, lock washer, and nut provided.

3. Secure the lower end of the pitch bar to the adjustment bracket (4), Figure 3, using a 5/8" - 11 x 3-1/4" bolt, lock washer, and nut.

4. Attach the frame assembly to the tractor three-point hitch to facilitate attaching the blade.

5. Assemble the frame to the blade turntable using the flat washer and cotter pin provided.

6. If a gauge wheel assembly is used with the blade, position the gauge wheel frame as shown in Figure 3, and install the three bolts (2), lock washers, and nuts. Position the hand crank, and secure it with the pin and cotter pin as shown.
SAFETY PRECAUTIONS

MOST ACCIDENTS THAT OCCUR ARE THE RESULT OF NEGLIGENCE AND CARELESSNESS AND ARE USUALLY CAUSED BY THE FAILURE TO FOLLOW SIMPLE SAFETY RULES OR PRECAUTIONS. THE FOLLOWING SAFETY PRECAUTIONS ARE SUGGESTED TO HELP PREVENT SUCH ACCIDENTS.

1. KEEP ALERT AND WATCH THE FRONT AS WELL AS THE REAR WHEN WORKING WITH THE BLADE.

2. ALWAYS BE SURE THE BLADE IS IN THE FULL RAISED POSITION WHEN IN TRANSPORT.

3. USE EXTRA CAUTION WHEN BACKFILLING DEEP HOLES OR TRENCHES.

4. WHEN TURNING CLOSE TO BUILDINGS OR PASSING THROUGH NARROW AREAS, BE SURE TO ALLOW SUFFICIENT CLEARANCE FOR THE BLADE.

5. USE CARE WHEN DITCHING ON SLOPES.

6. WHEN LEAVING THE TRACTOR, ALWAYS TURN OFF THE ENGINE.

7. KEEP THE TRACTOR KEYS WHERE THEY ARE NOT AVAILABLE TO CHILDREN.

8. ALWAYS LOWER THE BLADE TO THE GROUND BEFORE LEAVING THE TRACTOR.

The Tractor and Implement Division of the Ford Motor Company, being a member of the National Safety Council, is privileged to use the Green Cross to denote safety instructions in operators manuals.